

Town of Westwood, MA
Stormwater Management Program (SWMP):
Volume 1
NPDES Phase II Small MS4 General Permit
June 2019

STORMWATER MANAGEMENT PLAN



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Stormwater Management Program (SWMP): Volume 1

Town of Westwood, MA
NPDES Phase II Small MS4 General Permit

STORMWATER MANAGEMENT PLAN

Prepared by: BETA GROUP, INC.
Prepared for: Town of Westwood

June 2019

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Certification:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature:  Date: 6/28/19

Printed Name: Todd Korchin Title: Director of Public Works

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1.0 EXECUTIVE SUMMARY

Each community with a municipal separate storm sewer system (MS4) in designated urbanized areas must develop a Stormwater Management Program (SWMP) that will guide its activities under the 2016 MS4 general permit. This SWMP was developed by the Town of Westwood to protect water quality and reduce the discharge of pollutants from the municipality's storm sewer system to the maximum extent practicable (MEP) as described herein.

The SWMP is comprised of four volumes. This report is Volume 1 of 4.

- SWMP Volume 1 – Stormwater Management Plan
- SWMP Volume 2 – Illicit Discharge Detection and Elimination (IDDE) Plan
- SWMP Volume 3 – Good Housekeeping and Pollution Prevention
- SWMP Volume 4 – Annual Reporting

Written plans for SWMP Volumes 1 and 2 are required to be completed by the end of year 1 of the permit term (June 30, 2019). Written plan for Volume 3 is required to be completed by the end of year 2 of the permit term (June 30, 2020). Volume 4 compiles the documentation required over each reporting period (July 1 to June 30) for assembly of annual reports due September 30th each year.

All documents are available for review and comment on the Town of Westwood Stormwater (WSW):

WSW Website is located here:

<http://www.townhall.westwood.ma.us/gov/depts/commdevdepts/conservation/sma.htm>.

WSW Bylaw is located here:

<http://www.townhall.westwood.ma.us/civicax/filebank/blobdload.aspx?BlobID=27779>

WSW Regulations is located here:

<http://www.townhall.westwood.ma.us/civicax/filebank/blobdload.aspx?BlobID=27361>

2.0 INTRODUCTION & BACKGROUND

2.1 STORMWATER REGULATION

The Stormwater Phase II Final Rule was promulgated in 1999 and was the next step after the 1987 Phase I Rule in EPA's effort to preserve, protect, and improve the Nation's water resources from polluted stormwater runoff. The Phase II program expands the Phase I program by requiring additional operators of MS4s in urbanized areas and operators of small construction sites, through the use of NPDES permits, to implement programs and practices to control polluted stormwater runoff. Phase II is intended to further reduce adverse impacts to water quality and aquatic habitat by instituting the use of controls on the unregulated sources of stormwater discharges that have the greatest likelihood of causing continued environmental degradation. Under the Phase II rule all MS4s with stormwater discharges from Census designated Urbanized Areas are required to seek NPDES permit coverage for those stormwater discharges.

2.2 PERMIT PROGRAM BACKGROUND

On May 1, 2003, EPA Region I issued its Final General Permit for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems (MS4-2003 permit) consistent with the Phase II rule. The MS4-2003 permit covered "traditional" (i.e., cities and towns) and "non-traditional" (i.e., Federal and state agencies) MS4 Operators located in the states of Massachusetts and New Hampshire. This permit expired on May 1, 2008 but remained in effect until operators were authorized under the 2016 MS4 general permit, hereinafter referred to as the Permit, which became effective on July 1, 2018.

2.3 TOWN SPECIFIC MS4 BACKGROUND

Westwood has thirteen water body segments that receive flow from the MS4 with six designated as Category 5 Waters and two designated as Category 4A. Charles River segments has a TMDL for phosphorous (total). Germany Brook and Rock Meadow are impaired for phosphorous. Four of the receiving waters have a TMDL for bacteria/pathogens including Purgatory Brook, Germany Brook, Neponset River and Charles River. Plantingfield Brook is also impaired for bacteria. The Neponset River also has turbidity (solids) and unspecified metals listed as impairments. Phosphorous, bacteria/pathogen and solids are impairments requiring specific action under the Permit. Additional impairments and required action are described in detail in Section 4.3 of this report.

The Town of Westwood's MS4 is composed of pipes, catch basins, manholes, culverts, swales and outfalls discharging to wetland areas, streams, lakes, ponds and rivers. A GIS database has been established which contains Town-wide information for all of the drainage structures including:

- 2,719 Catchbasins
- 334 Outfalls
- 58 Miles of Storm Drain Pipe
- 1,512 Storm Drain Manholes
- 16 Town-owned structural BMPs

A storm sewer system map is included as part of the Illicit Discharge Detection and Elimination (IDDE) report, which is located in SWMP Volume 2. The map includes stormwater system structures and identifies the impaired water bodies and the MS4 areas tributary to each.

Massachusetts Department of Transportation (MassDOT) has several roads within Westwood including a portion of 109, Route 1, Blue Hill Drive and I-95. MassDOT is required to have their own NPDES MS4 Permit for their properties, which are therefore not the responsibility of the Town.

2.4 STORMWATER MANAGEMENT PROGRAM (SWMP)

The Town was previously authorized by the MS4-2003 permit which had established six minimum control measures, Best Management Practice (BMPs) and measurable goals to meet the terms and conditions of that permit. This SWMP is a modification and update to the previous plan and efforts.

The SWMP describes and details the activities and measures that will be implemented to meet the terms and conditions of the permit. The SWMP accurately describes the Town's plans and activities. The document will be updated and/or modified during the permit term as the permittee's activities are modified, changed or updated to meet permit conditions during the permit term. The main elements of the stormwater management program are (1) a public education program in order to change public behavior causing stormwater pollution, (2) an opportunity for the public to participate in and provide comments on the stormwater program, (3) a program to effectively find and eliminate illicit discharges within the MS4, (4) a program to effectively control construction site stormwater discharges to the MS4, (5) a program to ensure that stormwater from development projects entering the MS4 is adequately controlled by the construction of stormwater controls, and (6) a good housekeeping program to ensure that stormwater pollution sources on municipal properties and from municipal operations are minimized.

This document will be made available at the office of the Department of Public Works and on WSW website. The Permit covers the following which are included in this SWMP Plan:

- Identification of Responsible Parties
- Endangered and Threatened Species and Historic Properties Protection
- Increased Discharges and Discharges to Waters with TMDLs or Subject to Additional Requirements
- Implementation of Six Minimum Control Measures
- Sanitary Sewer Overflow Inventory
- Surface Drinking Water Supply Protection
- Annual Program Evaluation

2.5 IMPLEMENTATION SCHEDULE AND STATUS

MS4 General Permit implementation timeline and current status is shown in Figure 2-1.

Figure 2-1: MS4 Permit Compliance Schedule

CM	Task	Date Required	Complete During/By Year (Yr 1 is July 2018- June 2019)																	
			1	2	3	4	5	6	7	8	9	10								
	Notice of Intent (NOI)	9/30/2018	█																	
	Stormwater Management Plan - SWMP (update/develop)	6/30/2019	█																	
	SWMP update	Annually	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
MINIMUM CONTROL MEASURES																				
1	Public Education and Outreach Messages																			
	Residents - 2 messages*	By yr 5, min. 1 year apart	█*	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
	Businesses & Institutions- 2 messages*	By yr 5, min. 1 year apart	█*	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
	Developers - 2 messages	By yr 5, min. 1 year apart	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
	Industrial Facilities - 2 messages	By yr 5, min. 1 year apart	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
2	Public Involvement and Participation																			
	Public Review of SWMP & Annual Report	Annually	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
	Opportunities for Public Participation	Annually	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
3	Illicit Discharge Detection & Elimination (IDDE)*																			
	Sanitary Sewer Overflows Inventory	6/30/2019	█																	
	System Mapping - Phase 1, inc. catchment delineations	6/30/2020	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
	System Mapping - Phase 2	Update Annually	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
	Written IDDE Program	6/30/2019	█																	
	Outfall/Interconnects Inventory & Initial Catchment Ranking*	6/30/2019	█																	
	Outfall/Interconnects Catchment Ranking Updates	Update Annually	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
	Dry Weather Screening & Sampling	By yr 3 & every 5 yrs	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
	Catchment Investigations Procedures	12/30/2019	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
	Catchment Investigations Problem Outfalls	6/30/2025	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
	Catchment Investigations All Outfalls	6/30/2028	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
	Wet Weather Sampling	part of catchment invest.	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
	Illicit Discharge Elimination (Locate & Remove)	60 Days from source ID	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
	Confirmatory Dry Weather Screening	1 yr after removal	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
	Training	annually	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
4	Construction Site Runoff Control																			
	Construction Site Inspections & Enforcement Procedures	6/30/2019	█																	
	Site Plan Review Procedures	6/30/2019	█																	
	Requirement for Construction Site Erosion Controls	6/30/2019	█																	
	Construction Site Waste Control Requirements	6/30/2019	█																	
5	New Development and Redevelopment																			
	Update Regulations - Retention/Treatment	6/30/2020	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
	Assess Street Design & Parking Guidelines	6/30/2022	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
	Assess Regulations to allow Green Infrastructure	6/30/2022	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
	Locate 5 Properties for Impervious Area Reduction	6/30/2022	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
6	Good Housekeeping																			
	Winter Road Maintenance Procedures	6/30/2019	█																	
	O&M, SWPPP & Infrastructure Program	6/30/2020	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
	Training for O&M and SWPPP Program Activities	Regularly/As Needed	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
	Catchbasin Cleaning Schedule	6/30/2019	█																	
	Catchbasin Cleaning	when 50% full	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
	Street Sweeping*	Spring (& Fall for Phosphorus)	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
	Inspections for SWPPP	Quarterly	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
	Inspection of Structural BMPs	Annually	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
	Maintenance of Structural BMPs	as needed	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
Phosphorus Control Plan (PCP)																				
	Funding Source Assessment		█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
	Define Scope of PCP Area		█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
	Written Phase 1 PCP		█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
	Implement Phase 1 PCP		█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
	Written Phase 2 PCP		█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
	Annual Reports	by 9/30 annually	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
*Supplement requirements for Bacteria TMDL to Purgatory Brook, Germany Brook, and Neponset River and Phosphorus Impairment to Germany Brook and Rock Meadow Brook			█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█

█ Due 6/30/2019
█ Complete █ Future Year Task



3.0 SMALL MS4 AUTHORIZATION

The Notice of Intent (NOI) containing the information in Appendix E of the Permit was submitted to EPA on or prior to September 29, 2018.

EPA has completed its initial review and posted the NOI on the following website:
<https://www.epa.gov/npdes-permits/regulated-ms4-massachusetts-communities>

The Town will be authorized to discharge under the Permit upon receipt of written notice from EPA following a 30 day public review and comment. Responses to comments received and the authorization letter will also be posted to the above website.

4.0 IDENTIFICATION OF RESPONSIBLE PARTIES FOR IMPLEMENTATION OF PROGRAM

The implementation and coordination of this program is the responsibility of Department of Public Works, specifically the Director.

SWMP Team Coordinator

Name:	Todd Korchin	Title:	Director	Department:	Department of Public Works
Phone:	781-326-8661	Email:	tkorchin@townhall.westwood.ma.us		
Responsibilities: MS4 Coordinator, IDDE Program, Good Housekeeping, Reporting & Record Keeping					

SWMP Team

Name:	Brendan Ryan	Title:	Superintendent	Department:	Highway & Grounds
Phone:	781-320-1038	Email:	bryan@townhall.westwood.ma.us		
Responsibilities: MS4 Co-Coordinator IDDE Program, Good Housekeeping, Reporting & Record Keeping					

Name:	Karon Skinner Catrone	Title:	Conservation Agent	Department:	Conservation Commission/ Stormwater Authority
Phone:	781-251-2580	Email:	kcatrone@townhall.westwood.ma.us		
Responsibilities: Public Education and Outreach, Public Participation, Stormwater Bylaw/Regulations Construction Site SW Control, Post Construction SWM, Plan Review, Inspection					

Name:	Abigail McCabe	Title:	Town Planner	Department:	Planning Board
Phone:	781-251-2581	Email:	amccabe@townhall.westwood.ma.us		
Responsibilities: Public Education and Outreach, Public Participation, Stormwater Bylaw/Regulations Construction Site SW Control, Post Construction SWM, Plan Review, Inspection					

Name:	Jim McCarthy	Title:	Manager	Department:	Facilities
Phone:	781-320-1024	Email:	jmccarthy@townhall.westwood.ma.us		
Responsibilities: Good housekeeping, O&M of facilities, SWPPP					

Name:	Joseph Doyle	Title:	Inspector	Department:	Buildings
Phone:	781-320-1091	Email:	jdoyle@townhall.westwood.ma.us		
Responsibilities: Inspections					

Additional detail on program responsibilities and assisting parties are summarized in Section 7.0.

5.0 RESOURCE PROTECTION

5.1 ENDANGERED AND THREATENED SPECIES

The Permit requires applicants to assess the impacts of their stormwater discharges and discharge related activities on federally listed endangered and threatened species and designated critical habitat.

The NOI submitted in September of 2018 for coverage under the Permit identified one federally listed endangered species of concern, the Northern Long-eared Bat, and determined eligibility for Endangered Species Act (ESA) under Criteria C. An ESA section 7 consultation was provided for the NOI certifying the activities under the Permit, and as described in this SWMP, will not adversely affect the Northern Long-eared Bat. There is no reason to believe that the stormwater discharges, allowable non-stormwater discharges and discharge related activities will have any effect on this or any other listed species or critical habitat. This is based on the following:

1. All stormwater discharges are pre-existing or previously permitted by EPA;
2. Any planned operations and maintenance work covered by this permit will only affect previously disturbed areas where stormwater controls are already installed. In these situations the chance of encountering and of the subject species is discountable;
3. The project implements EPA MS4 Best Management Practices (BMPs) and meets Clean Water Act and Massachusetts Water Quality Standards. Although permitted discharges may reach the environment used by these species, BMPs reduce pollutants to the extent that discharges are not known to have measurable impacts on these species or their habitat;
4. No new construction or structural BMPs are proposed under this permit at this time; and
5. It is agreed that if, during the course of the permit term, it is planned to install a structural BMP not identified in the Notice of Intent (NOI), the Town will re-initiate with the U.S. Fish and Wildlife Services as necessary.

The aforementioned requirements are all met under this Permit and as such there is no reason to believe that the stormwater discharges, allowable non-stormwater discharges and discharge related activities will have any adverse effect on the aforementioned species or any other listed species or critical habitat. If any future stormwater projects or activities are proposed the Town acknowledges that they will have to re-initiate either informal or formal consultation with USFWS as required under the MA MS4 General Permit Appendix C: Step 2(5).

The Environmental Overview Map in Appendix A includes Natural Heritage and Endangered Species Program (NHESP) estimated habitats of rare wildlife, priority habitats of rare species, certified vernal pools and wetlands. Future stormwater projects and activities proposed within these areas will require review for compliance with the Massachusetts ESA and the Wetlands Protection Act.

5.2 HISTORIC PROPERTIES

The MS4 Permit requires applicants to take into account the effects of Federal undertakings on historical properties that are either listed on or eligible for listing on the National Register of Historic Places. The NOI identified eligibility for National Historic Preservation Act under Criteria A. The proposed BMPs outlined in this program have no potential to affect any historic properties because no changes are proposed to the existing MS4 infrastructure.

The Environmental Overview Map in Appendix A includes the Massachusetts Historical Commission's (MHC) inventory of historic points and areas. Future stormwater projects and activities proposed in and around these properties should be referenced against this map as well as the state register. The state

register provides an up to date comprehensive listing of buildings, structures objects and sites that have received local, state or national designations based on their historical or archaeological significance.

5.3 SUMMARY OF RECEIVING WATERS & IMPAIRMENTS, REQUIRED ACTIONS

Surface Water Quality Standards (SWQS) are provided by the Massachusetts Department of Environmental Protection (DEP). They are determined for a water body's designated use. The SWQS designate the uses that surface waters are protected for, and an assessment is performed to determine if the designated uses are met by the water bodies. The use is not assessed in instances when there is insufficient data or information. Assessment information is maintained by the DEP in the Water Body System (WBS) database, which is updated every two years. Designated uses include:

- Aquatic Life
- Fish Consumption
- Primary Contact Recreation (Swimming)
- Secondary Contact Recreation (Boating)
- Aesthetics

The aquatic life use is supported when suitable habitat is available in the water body to sustain a native and diverse aquatic environment. Impairments to the aquatic life use can result from anthropogenic sources of pollution. Organic enrichment, flow and habitat alteration, sedimentation (habitat destruction), and whole effluent toxicity are potential causes of water body impairment for this use.

The fish consumption use is met when pollutant concentrations are acceptable for edible marketable fish or shellfish or for the use of recreationally caught fish or other aquatic life for human ingestion.

The primary contact recreational use is any activity that involves prolonged contact with the water with a significant risk of ingestion. Activities include swimming, diving, water skiing, and wading, among others. The secondary contact recreational use includes any activity with incidental water contact including boating, fishing, and other activities.

The aesthetic use is supported when water bodies do not contain objectionable deposits, floating debris, scum, or other matter, which produces offensive odors, colors, taste or turbidity or produces noxious aquatic life.

Total Maximum Daily Loads (TMDLs) are the amount of a pollutant allowed to be discharged into a water body per day to assure attainment of the SWQS. The sum total of all pollutant load allocations cannot exceed the total maximum allowable pollutant load calculated for the water body.

Impaired water bodies are those that are not expected to meet the SWQS due to specific pollutants or stressors. However, numerical data is not available for every pollution indicator, so best available guidance in the literature may be applied. Not all water bodies are assessed; many small and/or unnamed water bodies are currently not assessed.

According to the proposed Massachusetts Year 2014/2016 Integrated List of Waters, there are five categories for water quality assessment.

- Category 1 — Waters attaining all designated uses
- Category 2 — Attaining some uses; other uses not assessed
- Category 3 — No uses assessed
- Category 4A — TMDL is completed
- Category 4B — Impairment controlled by alternative pollution control requirements
- Category 4C — Impairment not caused by a pollutant – TMDL not required

- Category 5 — Waters requiring a TMDL (i.e. the 303(d) List)

5.4 WESTWOOD’S IMPAIRMENTS AND REQUIRED ACTION

Westwood has 13 categorized water body segments that receive flow from the MS4 with six designated as Category 5 Waters and three designated as Category 4A. Table 5-1 summarizes these water bodies and the associated impairments and TMDLs requiring action as described in the permit and this SWMP based on the proposed Massachusetts Year 2014 and 2016 Integrated List of Waters.

These impaired water bodies and the MS4 areas tributary to them can be found on the storm sewer system map included as part of the IDDE report, which is located in SWMP Volume 2.

Appendix H of the Permit identifies specific requirements for water bodies that are Water Quality Limited in five categories of impairments (Nitrogen, Phosphorus, Bacteria/Pathogens, Chloride and Solids, Metals or Oil and Grease). These requirements apply to water bodies and their tributaries that do not meet applicable water quality standards, including but not limited to waters listed in category 5 and waters without an EPA approved TMDL.

Westwood WQLW Impairment(s): Phosphorus, Bacteria/Pathogens and Solids and Metals

Appendix F of the Permit identifies specific requirements for discharges to impaired waters or their tributaries with an approved TMDL.

Westwood TMDL(s): Phosphorus and Bacteria/Pathogens

The requirements specific to impairments and TMDLs of Westwood’s receiving waters are summarized as follows:

Table 5-1: Town Impaired Water Bodies

NAME	CATEGORY	SEGMENT ID	IMPAIRMENT CAUSE (EPA TMDL No.)
Pettee Pond	4A	MA73036	Mercury in Fish Tissue (33880)
Willet Pond	4A	MA73062	Mercury in Fish Tissue (33880)
Rock Meadow Brook	5	MA72-21	Aquatic Macroinvertebrate Bioassessments Excess Algal, Dissolved Oxygen Nutrient/Eutrophication Biological Indicators Phosphorus (Total) (40317)
Powissett Brook	5	MA72-20	Combined Biota/Habitat Bioassessments
Plantingfield Brook	5	MA73-23	Escherichia Coli (WQLW)
Purgatory Brook	4A	MA73-24	Fecal Coliform (2592) Escherichia Coli (2592) Debris/Floatables/Trash
Germany Brook	5	MA73-15	Escherichia Coli (2592) Fecal Coliform (2592) pH, High Phosphorus (Total) (WQLW)
Neponset River	5	MA73-02	Foam/Floc/Scum/Oil Slick Debris/Floatables/Trash

			DDT in Fish Tissue, PCB in Fish Tissue Escherichia Coli (2592) Fecal Coliform (2592) Dissolved Oxygen Turbidity (WQLW) Other (unspecified metals) (WQLW)
Charles River	5	MA72-07	Non-Native Aquatic Plants PCB in Fish Tissue DDT in Fish Tissue Harmful Algae Bloom Nutrient/Eutrophication Biological Indicators Eurasian Water Milfoil, Myriophyllum Spicatum Fishes Bioassessments Fish-Passage Barrier Phosphorus (Total) (40317) Other Flow Regime Alterations Escherichia Coli (32370)

Table 5-1 NOTE: Table Based on the proposed Massachusetts Year 2016 Integrated List of Waters with exceptions/clarifications where 2014 Integrated List of Waters (ILW) are more stringent as noted below. Impairments in Italics are proposed to be removed if 2016 ILW is approved. Certain Pollutants (in BOLD) result in Total Maximum Daily Load (TMDL) or Water Quality Limited Water Bodies (WQLW) requirements defined in Appendix H & F of the Permit.

Charles River Watershed Phosphorus TMDL Requirements

On October 17, 2007, EPA approved the *Final TMDL for Nutrients in the Lower Charles River Basin* (Lower Charles TMDL) - *Massachusetts Department of Environmental Protection. 2007. Final TMDL for Nutrients in the Lower Charles River Basin. CN 301.1* and on June 10, 2011 EPA approved the *Total Maximum Daily Load for Nutrients in the Upper/Middle Charles River* (Upper/Middle Charles TMDL)-*Massachusetts Department of Environmental Protection. 2011. Total Maximum Daily Load for Nutrients in the Upper/Middle Charles River Basin, Massachusetts. CN 272.0.* Section 8.0 of this plan includes the requirements address phosphorus in MS4 discharges.

Phosphorus WQLW Requirements

Applicable Receiving Waters: Germany Brook (MA73-15) and Charles River (MA73-07)

Requirement: Any catchment area that discharges to a water body impaired for phosphorus must comply with enhanced BMPs in addition to the requirements to reduce pollutants to the maximum extent practicable outlined in Section 2.3 of the Permit and covered in Section 7.0 of this report. Required additional and enhanced BMPs include:

Public education and outreach: Supplement Residential and Business/Commercial/Institution program with annual timed messages on specific topics. Distribute an annual message in the spring (April/May) timeframe that encourages the proper use and disposal of grass clippings and encourages the proper use of slow-release fertilizers. Distribute an annual message in the summer (June/July) timeframe encouraging the proper management of pet waste, including noting any existing ordinances where appropriate. Distribute an annual message in the fall (August/September/October) timeframe encouraging the proper disposal of leaf litter. Deliver an annual message on each of these topics, unless the Town determines that one or more of

these issues is not a significant contributor of nitrogen to discharges from the MS4 and the Town retains documentation of this finding in the SWMP.

Stormwater Management in New Development and Redevelopment: Adoption/amendment of the Towns' ordinance or other regulatory mechanism shall include a requirement that new development and redevelopment stormwater management BMPs be optimized for phosphorus removal; retrofit inventory and priority ranking under 2.3.6.1.b shall include consideration of BMPs that infiltrate stormwater where feasible.

Good Housekeeping and Pollution Prevention for Permittee Owned Operations: Permittee Owned Operations: Establish procedures to properly manage grass cuttings and leaf litter on permittee property, including prohibiting blowing organic waste materials onto adjacent impervious surfaces; increased street sweeping frequency of all municipal owned streets and parking lots subject to Permit part 2.3.7.a.iii.(c) to a minimum of two times per year, once in the spring (following winter activities such as sanding) and at least once in the fall (Sept 1 – Dec 1; following leaf fall).

Phosphorus Source Identification Report: Within four years of the Permit effective date the Town shall complete a Phosphorus Source Identification Report. The report shall include the following elements:

1. Calculation of total MS4 area draining to the water quality limited receiving water segments or their tributaries, incorporating updated mapping of the MS4 and catchment delineations produced pursuant to part 2.3.4.6,
2. All screening and monitoring results pursuant to part 2.3.4.7.d., targeting the receiving water segment(s)
3. Impervious area and DCIA for the target catchment
4. Identification, delineation and prioritization of potential catchments with high phosphorus loading
5. Identification of potential retrofit opportunities or opportunities for the installation of structural BMPs during redevelopment, including the removal of impervious area

The final Phosphorus Source Identification Report shall be submitted to EPA as part of the year 4 annual report.

Potential Structural BMPs: Within five years of the permit effective date, the permittee shall evaluate all permittee-owned properties identified as presenting retrofit opportunities or areas for structural BMP installation under permit part 2.3.6.d.ii or identified in the Phosphorus Source Identification Report that are within the drainage area of the water quality limited water or its tributaries. The evaluation shall include:

1. The next planned infrastructure, resurfacing or redevelopment activity planned for the property (if applicable) OR planned retrofit date;
2. The estimated cost of redevelopment or retrofit BMPs; and
3. The engineering and regulatory feasibility of redevelopment or retrofit BMPs.

The Town shall provide a listing of planned structural BMPs and a plan and schedule for implementation in the year 5 annual report. The Town shall plan and install a minimum of one structural BMP as a demonstration project within the drainage area of the water quality limited

water or its tributaries within six years of the permit effective date. The demonstration project shall be installed targeting a catchment with high phosphorus load potential. The Town shall install the remainder of the structural BMPs in accordance with the plan and schedule provided in the year 5 annual report.

Any structural BMPs installed in the regulated area by the permittee or its agents shall be tracked and the permittee shall estimate the phosphorus removal by the BMP consistent with Attachment 3 to Appendix F. The permittee shall document the BMP type, total area treated by the BMP, the design storage volume of the BMP and the estimated phosphorus removed in mass per year by the BMP in each annual report.

Status: The Town has incorporated these enhancements into the BMPs in Section 7.0 of this report.

Bacteria and Pathogen TMDL and WQLW Requirements

Applicable Westwood Receiving Waters: Purgatory Brook (MA 73-24), Germany Brook (MA73-15), Neponset River (MA73-02) and Charles River (MA72-07)

Requirement: Any catchment area that discharges to a water body impaired for solids, oil and grease (hydrocarbons), or metals must comply with enhanced BMPs in addition to the requirements to reduce pollutants to the maximum extent practicable outlined in Section 2.3 of the permit and covered in Section 7.0 of this report. Required enhancement of BMPs include:

Public Education – Supplement residential program with an annual message encouraging proper management of pet waste, distribute education materials to dog owners at the time of licensing and provide information to owners of septic systems about proper maintenance.

Illicit Discharge – Catchment area will be designation of either “Problem Catchment” or “HIGH Priority” in the implementation of the IDDE program.

Status: The Town has incorporated these enhancements into the BMPs in Section 7.0 of this report.

Solids (turbidity) and Metals WQLW Requirements

Applicable Westwood Receiving Waters: Neponset River (MA73-02)

Requirement: Any catchment area that discharges to a water body impaired for bacteria or pathogens must comply with enhanced BMPs in addition to the requirements to reduce pollutants to the maximum extent practicable outlined in Section 2.3 of the permit and covered in Section 7.0 of this report.

Stormwater Management in New Development and Redevelopment: stormwater management systems designed on commercial and industrial land use area draining to the water quality limited waterbody shall incorporate designs that allow for shutdown and containment where appropriate to isolate the system in the event of an emergency spill or other unexpected event. EPA also encourages the permittee to require any stormwater management system designed to infiltrate stormwater on commercial or industrial sites to provide the level of pollutant removal equal to or greater than the level of pollutant removal provided through the use of biofiltration of the same volume of runoff to be infiltrated, prior to infiltration.

Good House Keeping and Pollution Prevention for Permittee Owned Operations: increased street sweeping frequency of all municipal owned streets and parking lots to a schedule determined by the permittee to target areas with potential for high pollutant loads. This may include, but is not limited to, increased street sweeping frequency in commercial areas and high density residential areas, or drainage areas with a large amount of impervious area. Prioritize

inspection and maintenance for catch basins to ensure that no sump shall be more than 50 percent full. Clean catch basins more frequently if inspection and maintenance activities indicate excessive sediment or debris loadings. Each annual report shall include the street sweeping schedule determined by the permittee to target high pollutant loads.

Status: The Town has incorporated these enhancements into the BMPs in Section 7.0 of this report.

Mercury TMDL Requirements

Applicable Receiving Waters: Whiting Pond (MA52042)

Requirement: No requirements related to this TMDL are imposed on MS4 discharges under this part. The Northeast Regional Mercury TMDL does not specify a wasteload allocation or other requirements either individually or categorically for MS4 discharges and specifies that load reductions are to be achieved through reduction in atmospheric deposition sources.

If it is identified that an MS4 discharge is causing or contributing to such impairment to an extent that cannot be explained by atmospheric deposition, the Town shall comply with the requirements outlined in part 2.1.1.d and 2.3.4 of the Permit.

Status: No further action required at this time.

Relief of Requirements to Address Impairments

The permit states that at any time during the permit term the permittee may be relieved of additional requirements in Appendix F and H as follows:

TMDLs (Appendix F):

- a. The permittee is relieved of its additional requirements as of the date when the following conditions are met:
 - i. The applicable TMDL has been modified, revised or withdrawn and EPA has approved a new TMDL applicable for the receiving water that indicates that no additional stormwater controls for the control of phosphorus are necessary for the permittee's discharge based on wasteload allocations in the newly approved TMDL.
- b. In such a case, the permittee shall document the date of the approved TMDL in its SWMP and is relieved of any remaining requirements of Appendix F as of that date and the permittee shall comply with the following:
 - i. The permittee shall identify in its SWMP all activities implemented in accordance with the requirements of Appendix F to date to reduce the pollutant load in their discharges including implementation schedules for non-structural BMPs and any maintenance requirements for structural BMPs.
 - ii. The permittee shall continue to implement all requirements of Appendix F required to be implemented prior to the date of the newly approved TMDL, including ongoing implementation of identified non-structural BMPs and routine maintenance and replacement of all structural BMPs in accordance with manufacturer or design specifications.

Water Quality Limited Waterbodies (Appendix H):

- a. The permittee is relieved of its additional requirements as of the date when one of the following criteria are met:
 - i. The receiving water and all downstream segments are determined to no longer be impaired due to the named pollutant by MassDEP and EPA concurs with such determination.
 - ii. An EPA approved TMDL for the receiving water or downstream receiving water indicates that no additional stormwater controls for the control of said pollutant are necessary for the permittee's discharge based on wasteload allocations as part of the approved TMDL.

- b. In such a case, the permittee shall document the date of the determination provided for in the paragraph above or the approved TMDL date in its SWMP and is relieved of any additional requirements of Appendix H as of the applicable date and the permittee shall comply with the following:
 - i. The permittee shall identify in its SWMP all activities that have been implemented in accordance with the requirements of Appendix H. as of the applicable date to reduce the pollutant in its discharges, including implementation schedules for non-structural BMPs and any maintenance requirements for structural BMPs
 - ii. The permittee shall continue to implement all requirements of Appendix H required to be done prior to the date of determination or the date of the approved TMDL, including ongoing implementation of identified nonstructural BMPs and routine maintenance and replacement of all structural BMPs in accordance with manufacturer or design specifications.

6.0 DISCHARGES

EPA has written the permit to meet Massachusetts state water quality standards. Antidegradation provisions at 314 CMR § 4.04 are part of the current EPA-approved water quality standards for Massachusetts. As such, the permit requires compliance with 314 CMR § 4.04 and increased discharges from MS4s remain subject to 314 CMR § 4.04.

6.1 INCREASED DISCHARGES AUTHORIZATION

The Massachusetts Stormwater Management regulations, current site development review practices and stormwater regulations drafted by the Town prohibit increased discharges. They all require that any new development or re-development (including new impervious area) is subject to the Post-Construction Stormwater Management requirements, which include infiltration standards that are intended to mimic pre-development conditions. New impervious areas require the implementation of best management practices (BMPs). In a case where these conditions cannot be met, authorization for an increased discharge may be required.

All listed water bodies in Town are identified as impaired waters on the proposed Massachusetts Year 2016 Integrated List of Waters. As discussed in Section 5.4, this SWMP incorporates the required actions outlined in Appendix F and H of the Permit aimed at decreasing pollutants causing impairments to those water bodies. These actions combined with the implementation of post construction stormwater requirements will decrease the overall pollutant loading to all receiving waters over time. Town compliance with these requirements of the permit, including all reporting and documentation, demonstrates no net increase in pollutant loading from the MS4.

6.2 DISCHARGES TO TMDL OR WATER QUALITY LIMITED WATERS

As previously noted, several discharges in Town are to either TMDL or Water Quality Limited Waters. Table 5-1 highlights the TMDL(s) and/or Water Quality Limitations for each of Westwood's listed water bodies. The MS4 area tributary to each water body is subject to the TMDL and/or Water Quality Limited Waters requirements (described in Section 5.4) based that water body's stormwater related impairments. A map of the MS4 discharge locations (i.e. outfalls and interconnections), the MS4 area tributary to each receiving water and the TMDL and/or Water Quality Limitation triggering additional requirements to reduce pollutant loading and protect water quality can be found in the IDDE report, which is located in SWMP Volume 2.

7.0 IMPLEMENTATION OF MINIMUM CONTROL MEASURES

The 2016 MS4 Permit states that the permittee shall continue to implement their 2003 MS4 SWMP while updating it pursuant to meet the requirements of the new permit. Upon adoption, this new SWMP supersedes the 2003 SWMP and all related deadlines and expectations. As indicated in the 2003 and 2016 MS4 permits, the permittee shall reduce the discharge of pollutants from the MS4 to the maximum extent practicable (MEP) using these 6 minimum control measures (MCM):

1. Public Education and Outreach
2. Public Involvement and Participation
3. Illicit Discharge Detection and Elimination (IDDE) Program
4. Construction Site Stormwater Runoff Control
5. Stormwater Management in New Development and Redevelopment (Post-Construction Stormwater Management)
6. Good House Keeping and Pollution Prevention for Permittee Owned Operations

7.1 PUBLIC EDUCATION AND OUTREACH (MCM 1)

The Stormwater Authority/Conservation Agent is responsible for ensuring the implementation of the public education and outreach program including measurable goals and reporting. Assisting departments for particular BMPs are listed below.

Public education and outreach materials can be found on the WSW website and DPW office. Web Links and locations for specific BMPs are listed below. Referenced websites are listed in Executive Summary.

Reporting forms and logs to document public education and outreach efforts can be found in Appendix B. Requirements and documentation measures for specific BMPs are identified below and annual reporting requirements are described in Section 10.

Objective and Requirements

The main objective of this control measure is to implement an education program that includes education goals based on stormwater issues of significance within the MS4 area. The ultimate objective of a public education program is to increase knowledge and change behavior of the public so that pollutants in stormwater are reduced.

The minimum requirements specified in section 2.3.2 of the Permit are as follows:

1. Distribute at a minimum two (2) educational messages over the five (5) year permit term to each of the following audiences: (1) residents, (2) businesses, institutions (churches, hospitals), and commercial facilities, (3) developers (construction), and (4) industrial facilities. Message shall focus on topics most relevant to the community.
2. Document in each annual report the message for each audience, method of distribution, the measures/methods used to assess the effectiveness of the messages, and the method/measures used to assess the overall effectiveness of the education program.
3. Comply with enhanced requirements related to WQLW Impairment Requirements for Phosphorus which includes:
 - Supplement Residential and Business/Commercial/Institution program with annual timed messages on specific topics
In Westwood, this includes Germany Brook (MA73-15)
4. Comply with enhanced requirements related to approved TMDL for bacteria and pathogens which include:

- Supplementing residential education program with an annual message encouraging proper management of pet waste.
 - Distributing education materials to dog owners at the time of licensing.
 - Providing information to owners of septic systems about proper maintenance.
- In Westwood, this includes Purgatory Brook (MA73-24), Germany Brook (MA73-15), Neponset River (MA73-02) and Charles River (MA72-07)

Best Management Practices and Measurable Goals

BMP-1.1. Educate Residents I

Distribute first education message targeted to residents within the Town’s MS4 area.

Media/Location:	Mailing, website, event, phone contact, site visit, and/or other means
Responsible Party:	Conservation Agent
Measureable Goal(s):	<ul style="list-style-type: none"> • Distribute message to all residents within the Town’s MS4 area. • Record number of hard copies distributed, locations posted, attendance, webpage hits, etc. as applicable. • Complete within 2 years of effective date of permit

BMP-1.2. Educate Businesses, Institutions, and Commercial Facilities I

Distribute first education message targeted to business, institution, and commercial facility property owners within the Town’s MS4 area.

Media/Location:	Mailing, website, event, phone contact, site visit, and/or other means
Responsible Party:	Conservation Agent
Measureable Goal(s):	<ul style="list-style-type: none"> • Distribute message to all business, institution, and commercial facility property owners within the Town’s MS4 area. • Record number of hard copies distributed, locations posted, attendance, webpage hits, etc. as applicable. • Complete within 2 years of effective date of permit

BMP-1.3. Educate Developers and Contractors I
Distribute first education message targeted to developers and contractors within the Town's MS4 area.

Media/Location:	Mailing, website, event, phone contact, site visit, and/or other means
Responsible Party:	Conservation Agent
Measureable Goal(s):	<ul style="list-style-type: none"> • Distribute message to all developers and contractors with active projects within the Town's MS4 area. • Record number of hard copies distributed, locations posted, attendance, webpage hits, etc. as applicable. • Complete within 3 years of effective date of permit

BMP-1.4. Educate Industrial Facility Owners I
Distribute first education message targeted to industrial property owners within the Town's MS4 area.

Media/Location:	Mailing, website, event, phone contact, site visit, and/or other means
Responsible Party:	Conservation Agent
Measureable Goal(s):	<ul style="list-style-type: none"> • Distribute message to all industrial property owners within the Town's MS4 area. • Record number of hard copies distributed, locations posted, attendance, webpage hits, etc. as applicable. • Complete within 3 years of effective date of permit

BMP-1.5. Educate Residents II
Distribute second education message targeted to residents within the Town's MS4 area.

Media/Location:	Mailing, website, event, phone contact, site visit, and/or other means
Responsible Party:	Conservation Agent
Measureable Goal(s):	<ul style="list-style-type: none"> • Distribute message to all residents within the Town's MS4 area. • Record number of hard copies distributed, locations posted, attendance, webpage hits, etc. as applicable. • Complete within 4 years of effective date of permit

BMP-1.6. Educate Businesses, Institutions, and Commercial Facilities II
Distribute second education message targeted to business, institution, and commercial facility property owners within the Town’s MS4 area.

Media/Location:	Mailing, website, event, phone contact, site visit, and/or other means
Responsible Party:	Conservation Agent
Measureable Goal(s):	<ul style="list-style-type: none"> • Distribute message to all business, institution, and commercial facility property owners within the Town’s MS4 area. • Record number of hard copies distributed, locations posted, attendance, webpage hits, etc. as applicable. • Complete within 4 years of effective date of permit

BMP-1.7. Educate Developers and Contractors II
Distribute second education message targeted to developers and contractors within the Town’s MS4 area.

Media/Location:	Mailing, website, event, phone contact, site visit, and/or other means
Responsible Party:	Conservation Agent
Measureable Goal(s):	<ul style="list-style-type: none"> • Distribute message to all developers and contractors with active projects within the Town’s MS4 area. • Record number of hard copies distributed, locations posted, attendance, webpage hits, etc. as applicable. • Complete within 5 years of effective date of permit

BMP-1.8. Educate Industrial Facility Owners II
Distribute second education message targeted to industrial property owners within the Town’s MS4 area.

Media/Location:	Mailing, website, event, phone contact, site visit, and/or other means
Responsible Party:	Conservation Agent
Measureable Goal(s):	<ul style="list-style-type: none"> • Distribute message to all industrial property owners within the Town’s MS4 area. • Record number of hard copies distributed, locations posted, attendance, webpage hits, etc. as applicable. • Complete within 5 years of effective date of permit

- BMP-1.9. Educate Residents Annually on Proper Management of Pet Waste with Dog License Applications
Distribute annual education message targeted to pet owners in watershed areas with bacteria/pathogens TMDL or impairments.

Media/Location:	Brochures or pamphlets distributed with dog license
Responsible Party:	Town Clerk
Measureable Goal(s):	<ul style="list-style-type: none"> • Distribute message to all residents when they (re)apply for a dog license. • Record number of hard copies distributed and locations posted.

- BMP-1.10. Educate Residents Annually on Proper Management of Septic Systems
Distribute annual education message targeted to septic system owners in watershed areas with bacteria/pathogens TMDL or impairments.

Media/Location:	Brochures or pamphlets by mail and posted to website
Responsible Party:	Board of Health
Measureable Goal(s):	<ul style="list-style-type: none"> • Distribute message to all residents who have septic systems. • Record number of hard copies distributed and locations posted.

- BMP-1.11. Educate Residents, Businesses, Institutions, and Commercial Audiences Annually on Proper Lawn Care
Distribute annual spring education message regarding proper use and disposal of lawn clippings and proper use of slow-release fertilizers targeted to Residents, Businesses, Institutions, and Commercial Facilities in watershed areas with phosphorus TMDL or impairment.

Media/Location:	Brochures or pamphlets by mail and posted to website
Responsible Party:	Conservation Agent
Measureable Goal(s):	<ul style="list-style-type: none"> • Distribute message to all residents in watershed areas with a nitrogen TMDL or impairment in the spring (April/May). • Record number of hard copies distributed and locations posted.

BMP-1.12. Educate Residents, Businesses, Institutions, and Commercial Audiences Annually on Proper Management of Pet Waste
 Distribute annual summer education message regarding proper management of pet waste with regulation cited targeted to Residents, Businesses, Institutions, and Commercial Facilities in watershed areas with bacteria/pathogens TMDL or impairment.

Media/Location:	Brochures or pamphlets posted to website
Responsible Party:	Conservation Agent
Measureable Goal(s):	<ul style="list-style-type: none"> • Distribute message in watershed areas with a bacteria/pathogens TMDL or impairment in the summer (June/July). • Record locations posted and number of hits on website.

BMP-1.13. Educate Residents, Businesses, Institutions, and Commercial Audiences Annually on Proper Disposal of Leaf Litter
 Distribute annual fall education message targeted to Residents, Businesses, Institutions, and Commercial Facilities in watershed areas with phosphorus TMDL or impairment.

Media/Location:	Brochures or pamphlets by mail and posted to website
Responsible Party:	Conservation Agent
Measureable Goal(s):	<ul style="list-style-type: none"> • Distribute message in watershed areas with a phosphorus TMDL or impairment in the Fall (Aug/Sept/Oct) • Record number of hard copies distributed and locations posted.

7.2 PUBLIC INVOLVEMENT AND PARTICIPATION (MCM 2)

The Conservation Agent is responsible for ensuring the implementation of proposed BMPs including measurable goals and reporting. Assisting departments for particular BMPs are listed below.

Reporting forms and logs to document public involvement and participation efforts can be found in Appendix B. Web Links, posting locations, requirements and documentation measures for specific BMPs are identified below and annual reporting requirements are described in Section 10.

Objective and Requirements

The main objective of this control measure is for the Town to provide opportunities to engage the public to participate in the review and implementation of the Town’s Stormwater Management Program (SWMP).

The minimum requirements specified in section 2.3.3 of the Permit are as follows:

1. Public involvement activities shall comply with state notice requirements (MGL Chapter 30A, Section 18-25 effective 7/10/2010). The SWMP and all annual reports shall be available to the public.
2. Annually provide the public an opportunity to participate in the review and implementation of the SWMP. Public participation opportunities may include, but are not limited to, websites; hotlines; clean-up teams; monitoring teams; or an advisory committee.
3. Report on the activities undertaken to provide public participation opportunities including compliance with state public notice requirements referenced above.

Best Management Practices and Measurable Goals

- BMP-2.1. Public Review of Stormwater Management Program
Make SWMP available to review by Town residents.

Media/Location:	WSW website and DPW office
Responsible Party:	Conservation Agent
Measureable Goal(s):	<ul style="list-style-type: none"> · Encourage residents to view the SWMP online and allow public access to the printed document. · Record web page hits and requests to view printed document. · Update posted plan annually

- BMP-2.2. Public Participation and Comment of Stormwater Management Program
Record and review comments received by residents upon review of SWMP.

Media/Location:	Conservation Commission and DPW offices
Responsible Party:	Conservation Agent and IT Department
Measureable Goal(s):	<ul style="list-style-type: none"> · Keep a log of comments for review and consideration when annually updating the SWMP. · Include comment log in the annual report.

- BMP-2.3. Public Participation Activities

Public participation activities may include meetings, cleanup teams, monitoring teams, hazmat drop off events, watershed organization events, hotlines, or an advisory committee.

Media/Location:	WSW website, Conservation, DPW and BOH offices
Responsible Party:	Conservation Agent and Board of Health
Measureable Goal(s):	<ul style="list-style-type: none"> • Advertise at least one activity per year. • Record method of advertising. Record the number of attendees and/or quantity of cleanup achieved. • Record compliance with state public notice requirements where applicable.

7.3 ILLICIT DISCHARGE DETECTION AND ELIMINATION (IDDE) PROGRAM (MCM 3)

The DPW is responsible for ensuring the implementation of proposed BMPs including measurable goals and reporting. Assisting departments for particular BMPs are listed below.

Reporting forms and logs to document IDDE efforts can be found in Appendix B and are expanded on in SWMP Volume 2. Requirements and documentation measures for specific BMPs are identified below and annual reporting requirements are described in Section 10.

Objective and Requirements

The main objective of this control measure is to systematically find and eliminate illicit sources of non-stormwater discharge to its municipal storm sewer system and implement procedures to prevent such discharges.

The minimum requirements specified in section 2.3.4 of the Permit are as follows:

1. Develop and implement a regulatory mechanism to provide adequate legal authority to the Town to implement and enforce the Illicit Discharge Detection and Elimination (IDDE) Program.
2. Develop an SSO inventory covering the previous five (5) years within one (1) year of the effective date of the Permit.
3. Develop a system wide storm sewer system map within ten (10) years of permit effective date.
4. Develop an IDDE Program within one year of the effective date of the permit.
5. Develop a priority ranking of outfalls/interconnections within one (1) year of the effective date of the permit.
6. Develop a catchment investigation program within 18 months of the effective date of the Permit.
7. Record and report in each annual report about the IDDE program progress and overall effectiveness.
8. Ongoing screening plan of outfalls once every five years.
9. Provide training to employees involved in the IDDE program annually. The training frequency and type shall be reported in the annual report.
10. Comply with enhanced requirements related to Impaired Waters and TMDL requirements as follows:

- Automatic designation of either “Problem Catchment” or “High Priority” in the implementation of the IDDE program for catchments discharging to waters where illicit discharges have potential to contain pollutant identified as the cause of the water quality impairment. In Westwood, this includes Purgatory Brook (MA73-24), Germany Brook (MA73-15), Neponset River (MA73-02) and Charles River (MA72-07) for bacteria and pathogens and Germany Brook and Charles River (MA72-07) for phosphorus.
- 11. Comply with additional requirements for discharges to surface drinking water supplies and their tributaries include the following:
 - Automatic designation of “High Priority” in the implementation of the IDDE program for catchments discharging to public surface drinking water supply sources and their tributaries. In Westwood, at this time there are no public surface drinking water supplies in Town.

Best Management Practices and Measurable Goals

BMP-3.1. IDDE Legal Authority

The IDDE Legal Authority was adopted as a General bylaw “Stormwater Management Bylaw” at the June 10, 2015 Town meeting with the authorized enforcement agency identified as the Town Conservation Commission/Stormwater Authority, its employee or designated agents.

Media/Location:	WSW Bylaw
Responsible Party:	Conservation Commission/Stormwater Authority
Measureable Goal(s):	· Bylaw Adopted (June 10, 2015)

BMP-3.2. Sanitary Sewer Overflow (SSO) Inventory

Develop and maintain a SSO inventory that covers the previous five years in accordance of permit conditions.

Media/Location:	The inventory is included as Appendix G of the SWMP Volume 2: IDDE Plan.
Responsible Party:	Department of Public Works
Measureable Goal(s):	<ul style="list-style-type: none"> · Inventory completed (by year 1). · In the event of an overflow or bypass, provide notification with 24 hrs to MassDEP & EPA followed by a written report within 5 calendar days. · Update annually.

BMP-3.3. Storm Sewer System Map

Update storm sewer system map in accordance permit mapping requirements.

Media/Location:	The map is included as Appendix A of the SWMP Volume 2: IDDE Plan. Located on WSW website & DPW Office
Responsible Party:	Department of Public Works
Measureable Goal(s):	<ul style="list-style-type: none"> • Update map within 2 years of effective date of permit for Phase 1 mapping • Update annually as new/corrected information is discovered. • Complete full system map (Phase 2) within 10 years of effective date of permit

BMP-3.4. Written IDDE program

Develop/update written IDDE program.

Media/Location:	SWMP Volume 2: IDDE Plan/WSW website & DPW Office
Responsible Party:	Department of Public Works
Measureable Goal(s):	<ul style="list-style-type: none"> • Written program completed (by year 1). • Update as required.

BMP-3.5. Implement IDDE Program

Implement catchment investigations according to IDDE program and permit conditions and based on the outfall/interconnection inventory, initial ranking and dry weather outfall and interconnection screening and sampling results.

Media/Location:	SWMP Volume 2: IDDE Plan/WSW website & DPW Office
Responsible Party:	Department of Public Works
Measureable Goal(s):	<ul style="list-style-type: none"> • Conduct 100% of catchment investigations for "Problem" outfalls within 7 years of effective date of permit. • Conduct 100% of catchment investigations for all outfalls within 10 years of effective date of permit. • Report results and progress in annual report.

- BMP-3.6. Employee Training
Provide annual training on IDDE implementation in accordance with IDDE program.

Media/Location:	SWMP Volume 2: IDDE Plan/WSW website & DPW Office
Responsible Party:	Department of Public Works
Measureable Goal(s):	<ul style="list-style-type: none"> • Conduct annual IDDE training • Provide record of training and attendance in annual report.

- BMP-3.7. Dry Weather Screening and Sampling
Conduct dry outfall screening and sampling of outfalls/interconnections in MS4 area in accordance IDDE program

Media/Location:	SWMP Volume 2: IDDE Plan/WSW website & DPW Office
Responsible Party:	Department of Public Works
Measureable Goal(s):	<ul style="list-style-type: none"> • Complete dry outfall screening and sampling within 3 years of effective date of permit. • Report results and progress in annual report.

- BMP-3.8. Wet Weather Sampling of Outfalls
Conduct wet weather outfall sampling in accordance with IDDE program.

Media/Location:	SWMP Volume 2: IDDE Plan/WSW website & DPW Office
Responsible Party:	Department of Public Works
Measureable Goal(s):	<ul style="list-style-type: none"> • Complete wet weather outfall sampling of “Problem” outfalls within 7 years of effective date of permit • Complete wet weather outfall sampling of all outfalls within 10 years of effective date of permit. • Report results and progress in annual report.

- BMP-3.9. Ongoing Screening
Conduct ongoing dry weather and wet weather screening and sampling (as necessary) of outfalls in accordance with IDDE program.

Media/Location:	SWMP Volume 2: IDDE Plan/WSW website & DPW Office
Responsible Party:	Department of Public Works
Measureable Goal(s):	<ul style="list-style-type: none"> • Complete ongoing outfall screening within 5 years of completing catchment investigations. • Report results and progress in annual report.

7.4 CONSTRUCTION SITE STORMWATER RUNOFF CONTROL (MCM 4)

The Department of Public Works and the Conservation Commission/Stormwater Authority are responsible for ensuring the implementation of proposed BMPs and measurable goals. Assisting departments for particular BMPs are listed below.

Regulations, requirements and guidance on construction site stormwater runoff control can be found on the WSW website and Conservation Commission Office. Website Links and locations for specific BMPs are listed below.

Reporting forms and logs to document these efforts can be found in Appendix B. Reporting measures for specific BMPs are identified below and reporting requirements are described in Section 10.

Objective and Requirements

The objective of this construction stormwater runoff control program is to minimize or eliminate erosion and maintain sediments on site so that it is not transported in stormwater and allowed to discharge to a water of the U.S through the Town’s MS4.

The minimum permit requirements in accordance to MS4-2016 section 2.3.5 are as follow:

1. Implement and enforce a program to reduce pollutants in stormwater runoff discharge to the MS4 from all construction activities that result in land disturbance greater than or equal to one acre within regulated area.
2. Develop and implement a construction site runoff control program with written procedures and a regulatory mechanism for site plan review and enforcement within one (1) year from effective date of the permit. Program must include the following elements for sediment and erosion control:
 - a. Regulatory mechanism that requires the use of sediment and erosion control practices at construction sites including controls for other wastes on construction sites
 - b. Written procedures for site inspection and enforcement
 - c. Sediment and erosion control requirements for construction site operators performing land disturbance activities
 - d. Requirements to control waste from construction sites
 - e. Written procedures for site plan review and inspection and enforcement
3. Comply with additional requirements for discharges to surface drinking water supplies and their tributaries include the following:
 - Pretreatment and spill control measures shall be provided to the extent feasible to stormwater discharges to public drinking water supply sources or their tributaries.
 - Direct discharges to Class A waters should be avoided to the extent feasible.

In Westwood, at this time there are no public surface drinking water supplies in Town.

Best Management Practices and Measurable Goals

- BMP-4.1. Sediment and Erosion Control Regulation
 A bylaw/regulations is necessary to meet permit requirements for sediment and erosion control practices

Media/Location:	Cite bylaw section or reference to procedure (reference to webpage and hard copy locations)
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Responsible Party:	Conservation Commission/Stormwater Authority
Measureable Goal(s):	<ul style="list-style-type: none"> • Regulation Adopted (June, 2015) • Implement for 100% of applicable projects

BMP-4.2. Site Inspections and Enforcement of Erosion and Sediment Control Measures.
Provide/update written requirements for site inspections and enforcement procedures.

Media/Location:	WSW Regulations
Responsible Party:	Conservation Commission/Stormwater Authority
Measureable Goal(s):	<ul style="list-style-type: none"> • Written procedures completed (by year 1) • Implement for 100% of applicable projects. • Conduct construction site inspections consistent with the written procedures. Keep records of inspections.

BMP-4.3. Site Plan Review
Provide/update written procedures for site plan review and begin implementation.

Media/Location:	WSW Regulations
Responsible Party:	Conservation Commission/Stormwater Authority
Measureable Goal(s):	<ul style="list-style-type: none"> • Written procedures completed (by year 1) • Implement for 100% of applicable projects. • Keep records of projects submitted for site plan review.

BMP-4.4. Construction Site Operators Erosion and Sediment Control Program
Provide/update written requirements for construction operators to implement a sediment and erosion control program.

Media/Location:	WSW Regulations
Responsible Party:	Conservation Commission/Stormwater Authority
Measureable Goal(s):	<ul style="list-style-type: none"> • Written procedures completed (by year 1) • Implement for 100% of applicable projects. • During construction site inspections review for erosion controls and make note of compliance status. Keep records of inspections.

BMP-4.5. Construction Waste Control

Adopt requirements to control wastes, including but not limited to, discarded building materials, concrete truck wash out, chemicals, litter, and sanitary wastes

Media/Location:	WSW Regulations
Responsible Party:	Conservation Commission/Stormwater Authority
Measureable Goal(s):	<ul style="list-style-type: none">• Written procedures completed (by year 1)• Implement for 100% of applicable projects.• During construction site inspections review for waste control and make note of compliance status. Keep records of inspections.

7.5 STORMWATER MANAGEMENT IN NEW DEVELOPMENT AND REDEVELOPMENT (POST CONSTRUCTION STORMWATER MANAGEMENT) (MCM 5)

The Conservation Commission/Stormwater Authority is responsible for ensuring the implementation of proposed BMPs and measurable goals. Assisting departments for particular BMPs are listed below.

Regulations, requirements and guidance on post construction stormwater management can be found on WSW Regulations website and at Conservation Commission office. Web Links and locations for specific BMPs are listed below.

Reporting forms and logs to document these efforts can be found in Appendix B. Reporting measures for specific BMPs are identified below and reporting requirements are described in Section 10.

Objective and Requirements

The objective of an effective post construction stormwater management program is to reduce the discharge of pollutants found in stormwater to the MS4 through the retention or treatment of stormwater after construction on new or redeveloped sites and to ensure proper maintenance of installed stormwater controls.

The minimum permit requirements in accordance to MS4-2016 section 2.3.6 are as follow:

1. Develop, implement, and enforce a program to address post-construction stormwater runoff from all new development and redevelopment sites that disturb one or more acres and discharge into the permittees MS4 at a minimum. Permittees authorized under the MS4-2003 permit shall continue to implement and enforce their program and modify as necessary to meet the requirements MS4-2016.
2. Develop a report assessing current street design and parking lot guidelines and other local requirements that affect the creation of impervious cover within four (4) years from effective date of the permit.
3. Develop a report assessing existing local regulation to determine if green infrastructures are allowable when appropriate site conditions exist. This report shall be completed within four (4) years from the effective date of the permit.
4. Identify within four (4) years from the effective date of the permit a minimum of 5 permittee-owned properties that could potentially be modify or retrofitted with BMPs.
5. Comply with enhanced requirements related to WQLW Impairment Requirements for phosphorus which includes:
 - Adopt/amend the Town's ordinance or other regulatory mechanism to include a requirement that new development and redevelopment stormwater management BMPs be optimized for nitrogen removal
 - Include consideration of BMPs to reduce nitrogen discharges retrofit inventory and priority ranking

In Westwood, this includes Germany Brook (MA73-15).

6. Comply with additional requirements for discharges to surface drinking water supplies and their tributaries include the following:
 - Pretreatment and spill control measures shall be provided to the extent feasible to stormwater discharges to public drinking water supply sources or their tributaries.
 - Direct discharges to Class A waters should be avoided to the extent feasible.

In Westwood, this includes the Westwood Reservoir (MA62174).

Best Management Practices and Measurable Goals

- BMP-5.1. Low Impact Development (LID) Techniques
Update permit requirement and regulations to require for development projects the use of LID techniques to the maximum extent feasible.

Media/Location:	WSW Regulations
Responsible Party:	Conservation Commission/Stormwater Authority
Measureable Goal(s):	<ul style="list-style-type: none"> • Complete within 2 year of the effective date of permit. • Implement for 100% of applicable projects. • Keep records of development projects approved with LIDs.

- BMP-5.2. New Development and Redevelopment (Post-Construction) Design Regulations
Develop/update permit requirements and stormwater regulations to meet new development and redevelopment design requirements of permit

Media/Location:	WSW Regulations
Responsible Party:	Conservation Commission/Stormwater Authority
Measureable Goal(s):	<ul style="list-style-type: none"> • Complete within 2 year of the effective date of permit. • Implement for 100% of applicable projects. • Keep records of development projects approved to meet regulations.

- BMP-5.3. As-Built Plans
Update permit requirement and regulations to require submission of as-built drawings and ensure long term operation and maintenance will be a part of the SWMP

Media/Location:	WSW Regulations
Responsible Party:	Conservation Commission/Stormwater Authority
Measureable Goal(s):	<ul style="list-style-type: none"> • Complete within 2 year of the effective date of permit. • Implement for 100% of applicable projects. • Keep records of projects requiring and fulfilling as-built and O&M requirements.

- BMP-5.4. Street Design and Parking Lot Guidelines Report
Develop a report assessing requirements that affect the creation of impervious cover. The assessment will help determine if changes to design standards for streets and parking lots can be modified to support low impact design options.

Media/Location:	WSW Website, Conservation and DPW Offices
Responsible Party:	Conservation Commission/Stormwater Authority
Measureable Goal(s):	<ul style="list-style-type: none"> • Complete within 4 year of the effective date of permit. • Implement recommendations of the report. • Report progress of implementation annually.

BMP-5.5. Green Infrastructure Report

Develop a report assessing local regulations to determine feasibility of allowing green roofs, raingardens, water harvesting and other similar practices.

Media/Location:	WSW Website, Conservation and DPW Offices
Responsible Party:	Conservation Commission/Stormwater Authority
Measureable Goal(s):	<ul style="list-style-type: none"> • Complete within 4 year of the effective date of permit. • Implement recommendations of the report. • Report progress of implementation annually.

BMP-5.6. List of 5 properties to Provide (effective) Reduction of Impervious area

Identify and maintain a list of at least 5 permittee-owned properties that could be modified or retrofitted with BMPs to reduce impervious areas and update annually

Measureable Goal: Complete within 4 years of effective date of permit and report annually on retrofitted properties

Media/Location:	WSW Website, Conservation and DPW Offices
Responsible Party:	Conservation Commission/Stormwater Authority
Measureable Goal(s):	<ul style="list-style-type: none"> • Complete list within 4 year of the effective date of permit. • Update list as needed and report annually on retrofitted properties.

7.6 GOOD HOUSEKEEPING AND POLLUTION PREVENTION FOR PERMITTEE OWNED OPERATIONS (MCM 6)

The Department of Public Works is responsible for ensuring the implementation of proposed BMPs and measurable goals. Assisting departments for particular BMPs are listed below.

Reporting forms and logs to document these efforts can be found in Appendix B and are to be expanded upon in SWMP Volume 3. Reporting measures for specific BMPs are identified below and reporting requirements are described in Section 10.

Objective and Requirements

The Town will implement an operations and maintenance program for permittee-owned operations that has a goal of preventing or reducing pollutant runoff and protecting water quality from all permittee-owned operations.

The minimum permit requirements in accordance to MS4-2016 section 2.3.7 are as follow:

1. Develop an Operations and Maintenance (O&M) Program for Permittee Owned Facilities within two (2) years from effective date of the permit.
2. Inventory of all Town owned facilities within two (2) years from the effective date of the permit.
3. Develop an Infrastructure Operations and Maintenance Program within two (2) years from the effective date of the permit.
4. Optimize routine inspections, cleaning and maintenance of catch basins.
5. Establish and implement procedures for sweeping and/or cleaning streets and permittee-owned parking lots.
6. Ensure proper storage of catch basins cleanings and street sweepings prior to disposal.
7. Establish and implement procedures for winter road maintenance.
8. Establish and implement inspections and maintenance of stormwater treatment structures.
9. Develop a Stormwater Pollution Prevention Plans (SWPPP) within two (2) years from effective date of the permit.
10. Comply with enhanced requirements related to WQLW Impairment Requirements for phosphorus which includes:
 - Establish requirements for use of slow release fertilizers on Town owned property currently using fertilizer
 - Reduce and manage fertilizer use
 - Establish procedures to properly manage grass cuttings and leaf litter on Town property
 - Prohibit blowing organic waste materials onto adjacent impervious surfaces
 - Increase street sweeping frequency of all municipal owned streets and parking

In Westwood, this includes Germany Brook (MA73-15).
11. Comply with additional requirements for discharges to surface drinking water supplies and their tributaries including the following:
 - Pretreatment and spill control measures shall be provided to the extent feasible to stormwater discharges to public drinking water supply sources or their tributaries.
 - Direct discharges to Class A waters should be avoided to the extent feasible.

At this time there are no Class A waters within the Westwood MS4 area.

Best Management Practices and Measurable Goals

- BMP-6.1. Parks and Open Space Operations and Maintenance Procedures
Create written O&M procedures including all requirements of the permit for Town owned parks and open spaces.

Media/Location:	SWMP Volume 3: O&M Plan/WSW Website & DPW Office
Responsible Party:	Department of Public Works
Measureable Goal(s):	<ul style="list-style-type: none"> • Complete within 2 years of effective date of permit. • Implement on 100% of Town owned parks and open spaces. • Keep records of O&M performed and report annually.

- BMP-6.2. Buildings and Facilities Operations and Maintenance Procedures
Create written O&M procedures including all requirements of the permit for Town owned buildings and facilities.

Media/Location:	SWMP Volume 3: O&M Plan/WSW Website & DPW Office
Responsible Party:	Buildings & Facilities Department
Measureable Goal(s):	<ul style="list-style-type: none"> • Complete within 2 years of effective date of permit. • Implement on 100% of Town owned buildings and facilities. • Keep records of O&M performed and report annually.

- BMP-6.3. Vehicles and Equipment Operations and Maintenance Procedures
Create written O&M procedures including all requirements of the permit for Town owned vehicles and equipment.

Media/Location:	SWMP Volume 3: O&M Plan/WSW Website & DPW Office
Responsible Party:	Department of Public Works
Measureable Goal(s):	<ul style="list-style-type: none"> • Complete within 2 years of effective date of permit. • Implement on 100% of Town owned vehicles and equipment. • Keep records of O&M performed and report annually.

- BMP-6.4. Inventory all Permittee-Owned Parks and Open Spaces, Buildings and Facilities, and Vehicles and Equipment
Create an inventory of Town owned parks and open spaces, buildings and facilities, and vehicles and equipment facilities for implementation of O&M Plan.

Media/Location:	SWMP Volume 3: O&M Plan/WSW Website & DPW Office
Responsible Party:	Department of Public Works
Measureable Goal(s):	<ul style="list-style-type: none"> • Complete within 2 years of effective date of permit. • Update inventory annually.

- BMP-6.5. Municipal Infrastructure Operation and Maintenance Program
Develop and implement program to ensure proper function of the MS4 stormwater infrastructure.

Media/Location:	SWMP Volume 3: O&M Plan/WSW Website & DPW Office
Responsible Party:	Department of Public Works
Measureable Goal(s):	<ul style="list-style-type: none"> • Complete within 2 years of effective date of permit. • Implement so that 100% of infrastructure is maintained and functioning properly. • Keep records of O&M performed and report annually.

BMP-6.6. Catch Basin Cleaning Program

Develop written program for catch basin cleaning with a goal that each catch basin is no more than 50% full at any given time.

Media/Location:	SWMP Volume 3: O&M Plan/WSW Website & DPW Office
Responsible Party:	Department of Public Works
Measureable Goal(s):	<ul style="list-style-type: none"> • Written program complete (by year 1). • Clean catch basins on established schedule. • Report number of catch basins cleaned and volume of material moved annually.

BMP-6.7. Street Sweeping Program

Develop and implement a street sweeping program so that all streets and municipal parking lots are swept in accordance with permit conditions. In the tributary areas of Germany Brook (MA73-15) and Charles River (MA73-07) sweeping is to be done twice per year due to phosphorous impairment.

Media/Location:	SWMP Volume 3: O&M Plan/WSW Website & DPW Office
Responsible Party:	Department of Public Works
Measureable Goal(s):	<ul style="list-style-type: none"> • Written program complete (by year 1). • Annually sweep all streets and municipal parking lots in accordance with established schedule. • Keep records of sweeping performed and report annually.

BMP-6.8. Winter Road Maintenance Program

Develop and implement a program to manage storage and use of road salt.

Media/Location:	SWMP Volume 3: O&M Plan/WSW Website & DPW Office
Responsible Party:	Department of Public Works
Measureable Goal(s):	<ul style="list-style-type: none"> • Written program complete (by year 1). • Implement program annually. • Evaluate at least one salt/chloride alternative for use in the Town.

BMP-6.9.

BMP-6.10. Stormwater Treatment Structures Inspections and Maintenance Procedures
Develop and implement inspection and maintenance procedures and frequencies for Town-owner stormwater BMPs.

Measureable Goals: Complete within 1 year of effective date of permit. Inspect and maintain 100% of BMPs treatment structures at least annually

Media/Location:	SWMP Volume 3: O&M Plan/WSW Website & DPW Office
Responsible Party:	Department of Public Works
Measureable Goal(s):	<ul style="list-style-type: none"> • Written procedures complete (by year 1). • Inspect and maintain 100% of BMPs treatment structures at least annually. • Keep records of inspection and maintenance performed and report annually.

BMP-6.11. Stormwater pollution prevention plan (SWPPP)
Develop and implement SWPPPs for maintenance garages, transfer stations, and other waste-handling facilities.

Measureable Goal: Complete and implement within 2 years of effective date of permit implement SWPPPs for all required facilities.

Media/Location:	SWMP Volume 3: O&M Plan/WSW Website & DPW Office
Responsible Party:	Department of Public Works
Measureable Goal(s):	<ul style="list-style-type: none"> • Develop and implement SWPPPs within 2 years of effective date of permit. • Keep records of inspection and maintenance performed and report as required in the SWPPPs.

8.0 PHOSPHOROUS CONTROL PLAN

To address the discharge of phosphorus from its MS4, the Town will develop a Phosphorus Control Plan (PCP) designed to reduce the amount of phosphorus in stormwater (SW) discharges from its MS4 to the Charles River and its tributaries. The PCP will be completed in phases and the Town will add it as an attachment to its written SWMP upon completion and report in annual reports pursuant to part 4.4 of the Permit on its progress toward achieving its Phosphorus Reduction Requirement. The PCP will be developed and fully implemented as soon as possible but no later than 20 years after the permit effective date in accordance with the phases and schedule outlined below. Each Phase will contain the elements required of each phase as described in parts a. through c below. The timing of each phase over 20 years from the permit effective date (*) is:

1-5 years	5-10 years	10-15 years	15-20 years
Create Phase 1 Plan	Implement Phase 1 Plan		
	Create Phase 2 Plan	Implement Phase 2 Plan	
		Create Phase 3 Plan	Implement Phase 3 Plan

8.1 PHASE 1

1. The Town will complete a written Phase 1 plan of the PCP five years after the permit effective date and fully implement the Phase 1 plan of the PCP as soon as possible but no longer than 10 years after the permit effective date.
2. The Phase 1 plan of the PCP will contain the following elements and has the following required milestones:

Item No.	Phase 1 of the PCP Component and Milestones	Completion Date*
1-1	Legal analysis	2 years
1-2	Funding source assessment.	3 years
1-3	Define scope of PCP (PCP Area) Baseline Phosphorus Load and Phosphorus Reduction Requirement & Allowable Phosphorus Load	4 years
1-4	Description of Phase 1 planned nonstructural controls	5 years
1-5	Description of Phase 1 planned structural controls	5 years
1-6	Description of Operation and Maintenance program for structural controls	5 years
1-7	Phase 1 implementation schedule	5 years
1-8	Estimated cost for implementing Phase 1 of the PCP	5 years
1-9	Complete Written Phase 1 PCP	5 years
1-10	Full implementation of nonstructural controls	6 years
1-11	Performance Evaluation	6 & 7 years

1-12	Performance Evaluation. Full implementation of all structural controls used to demonstrate that the total phosphorus export rate (P_{exp}) from the PCP Area in mass/yr is equal to or less than the applicable Allowable Phosphorus Load (P_{allow}) plus the applicable Phosphorus Reduction Requirement (PRR) multiplied by 0.80 $P_{exp} < P_{allow} + (PRR \times 0.80)$	8 years
1-13	Performance Evaluation	9 years
1-14	1. Performance Evaluation. 2. Full implementation of all structural controls used to demonstrate that the total phosphorus export rate (P_{exp}) from the PCP Area in mass/yr is equal to or less than the applicable Allowable Phosphorus Load (P_{allow}) plus the applicable Phosphorus Reduction Requirement (PRR) multiplied by 0.75 $P_{exp} < P_{allow} + (PRR \times 0.75)$	10 years

Table F-1:Phase 1 of the PCP components and Milestones
(*after permit effective date)

3. Description of Phase 1 PCP Components

Legal Analysis- The Town will 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 PCP. This may include the creation or amendment of financial and regulatory authorities. The Town will adopt necessary regulatory changes by the end of the permit term.

Funding Source Assessment – The Town will describe known and anticipated funding mechanisms (e.g. general funding, enterprise funding, stormwater utilities) that will be used to fund PCP implementation. The Town will 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.

Scope of the PCP, Baseline Phosphorus Load (P_{base}), Phosphorus Reduction Requirement (PRR) and Allowable Phosphorus Load (P_{allow}) - The Town will indicate the area in which it plans to implement the PCP. The Town must choose one of the following: (1) to implement its PCP in the entire area within its jurisdiction (for municipalities this would be the municipal boundary) within the Charles River Watershed; or (2) to implement its PCP only in the urbanized area portion of the Town’s jurisdiction within the Charles River Watershed. The implementation area selected by the Town is known as the “PCP Area” for that Town. Table F-2³ and Table F-3⁴ list the Towns subject to phosphorus reduction requirements along with the estimated Baseline Phosphorous Loads in mass/yr, the calculated Allowable Stormwater Phosphorus Load in mass/yr, the Stormwater Phosphorus Reduction Requirement in mass/yr and the respective percent reductions necessary. The two tables contain different reduction requirements for each Town based on the PCP Area they choose (see above). If the Town chooses to implement the PCP in its entire jurisdiction, the Town 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 outside the regulated area. If the Town chooses to implement the PCP in its regulated area only, the Town must 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 within the regulated area only.

The Town will select the Baseline Phosphorus Load, Stormwater Phosphorus Reduction Requirement and Allowable Phosphorus Load that corresponds to the PCP Area selected. The selected Stormwater Phosphorus Reduction Requirement and Allowable Phosphorus Load will be used to determine compliance with PCP milestones of this Phase and Phase 2 and Phase 3. If the Town chooses to implement its PCP in all areas within its jurisdiction within the Charles River Watershed, then the Town will use Table F-2 to determine the Baseline Phosphorus Load, Stormwater Phosphorus Reduction Requirement and Allowable Phosphorus Load for its PCP Area. If the Town chooses to implement its PCP only within the regulated area within the Charles River Watershed, then the Town will use Table F-3 to determine the Baseline Phosphorus Load, Stormwater Phosphorus Reduction Requirement and Allowable Phosphorus Load for its PCP Area.

The Town may submit more accurate land use data from 2005, which is the year chosen as the baseline land use for the purposes of permit compliance, for EPA to recalculate baseline phosphorus stormwater loads for use in future permit reissuances. Updated land use maps, land areas, characteristics, and MS4 area and catchment delineations will be submitted to EPA along with the year 4 annual report in electronic GIS data layer form for consideration for future permit requirements⁵. Until such a time as future permit requirements reflect information submitted in the year 4 annual report, the Town will use the Baseline Phosphorus Load, Stormwater Phosphorus Reduction Requirement and Allowable Phosphorus Load Table F-2 (if its PCP Area is the Town's entire jurisdiction) or Table F-3 (if its PCP Area is the regulated area only) to calculate compliance with milestones for Phase 1, 2, and 3 of the PCP.

Non-structural Controls Description - Phase 1 – The Town will describe the non-structural stormwater control measures necessary to support achievement of the phosphorus export milestones in Table F-1. The description of non-structural controls will include the planned measures, the areas where the measures will be implemented, and the annual phosphorus reductions that are expected to result from their implementation in units of mass/yr. Annual phosphorus reduction from non-structural BMPs will be calculated consistent with Attachment 2 to Appendix F.

Structural Controls Description - Phase 1 – The Town will develop a priority ranking of areas and infrastructure within the municipality for potential implementation of structural phosphorus controls during Phase 1. The ranking will be developed through the use of available screening and monitoring results collected during the permit term either by the Town or another entity and the mapping required pursuant to part 2.3.4.6 of the Permit. The Town will also include in this priority ranking a detailed assessment of site suitability for potential phosphorus control measures based on soil types and other factors. The Town will coordinate this activity with the requirements of part 2.3.6.8.b of the Permit. A description and the results of this priority ranking will be included in Phase 1 of the PCP. The Town will describe the structural stormwater control measures necessary to support achievement of the phosphorus export milestones in Table F-1. The description of structural controls will include the planned and existing measures, the areas where the measures will be implemented or are currently 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 a municipal PCP. Annual phosphorus reductions from structural BMPs will be calculated consistent with Attachment 3 to Appendix F.

Operation and Maintenance (O&M) Program for all Structural BMPs – The Town will establish an Operation and Maintenance Program for all structural BMPs being claimed for phosphorus reduction credit as part of Phase 1 of the PCP. This includes BMPs implemented to date as well as BMPs to be implemented during Phase 1 of the PCP. The Operation and Maintenance

Program will become part of the PCP 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.

Implementation Schedule - Phase 1 – A schedule for implementation of all planned Phase 1 BMPs, including, as appropriate: obtaining funding, training, purchasing, construction, inspections, monitoring, operation and maintenance activities, and other assessment and evaluation components of implementation. Implementation of planned BMPs must begin upon completion of the Phase 1 Plan, and all non-structural BMPs will be fully implemented within six years of the permit effective date. Structural BMPs will be designed and constructed to ensure the Town will comply with the 8 and 10 year phosphorus load milestones established in Table F-1. The Phase 1 plan will be fully implemented as soon as possible, but no later than 10 years after the effective date of permit.

Implementation Cost - Estimated Phase 1 – The Town will estimate the cost of implementing the Phase 1 non-structural and structural controls and associated Operation and Maintenance Program. This cost estimate can be used to assess the validity of the funding source assessment completed by year 3 after the permit effective date and to update funding sources as necessary to complete Phase 1.

Written Plan - Phase 1 – The Town must complete the written Phase 1 Plan of the PCP no later than 5 years after the permit effective date. The complete Phase 1 Plan will include Phase 1 PCP item numbers 1-1 through 1-7 in Table F-1. The Town will make the Phase 1 Plan available to the public for public comment during Phase 1 Plan development. EPA encourages the Town to post the Phase I Plan online to facilitate public involvement.

Performance Evaluation –The Town will evaluate the effectiveness of the PCP by tracking the phosphorus reductions achieved through implementation of structural and non-structural BMPs⁶ and tracking increases resulting from development. Phosphorus reductions will be calculated consistent with Attachment 2 to Appendix F (non-structural BMP performance) and Attachment 3 to Appendix F (structural BMP performance) for all BMPs implemented to date. Phosphorus export increases since 2005 due to development will be calculated consistent with Attachment 1 to Appendix F. Phosphorus loading increases and reductions in unit of mass/yr will be added or subtracted from the applicable Baseline Phosphorus Load given in Table F-2 or Table F-3 depending on the Scope of PCP chosen to estimate the yearly phosphorous export rate from the PCP Area. The Town will also include all information required in part I.2 of this Appendix in each performance evaluation. Performance evaluations will be included as part of each Town’s annual report as required by part 4.4 of the Permit.

Community Annual Stormwater Phosphorus Load Reduction by Town, Charles River Watershed				
Community	Baseline Phosphorus	Stormwater Phosphorus Reduction Requirement	Allowable Phosphorus	Stormwater Percent Reduction in Phosphorus
	Load kg/yr			Load (%)
Westwood	376	114	262	30%

Table F-2: Baseline Phosphorus Load, Phosphorus Reduction Requirement, Allowable Phosphorus Load and Percent Reduction in Phosphorus Load from Charles River Watershed. For use when PCP Area is chosen to be the entire community within the Charles River Watershed.

Urbanized Area Annual Stormwater Phosphorus Load Reduction by Town, Charles River Watershed				
Community	Baseline Phosphorus	Stormwater Phosphorus Reduction Requirement	Allowable Phosphorus	Stormwater Percent Reduction in Phosphorus
	Load kg/yr			Load (%)
Westwood	346	108	238	31%

Table F-3: Baseline Phosphorus Load, Phosphorus Reduction Requirement, Allowable Phosphorus Load and Percent Reduction in Phosphorus Load from Charles River Watershed. For use when PCP Area is chosen to be only the urbanized area portion of a Town’s jurisdiction within the Charles River Watershed.

8.2 PHASE 2

1. The Town will complete the Phase 2 Plan of the PCP 10 years after the permit effective date and fully implement the Phase 2 plan of the PCP as soon as possible but no longer than 15 years after the permit effective date.
2. The Phase 2 plan of the PCP will be added to the Phase 1 Plan and contain the following elements and has the following required milestones:

Item No.	Phase 2 of the PCP Component and Milestones	Completion Date*
2-1	Update Legal analysis	As necessary
2-2	Description of Phase 2 planned nonstructural controls	10 years
2-3	Description of Phase 2 planned structural controls	10 years
2-4	Updated description of Operation and Maintenance Program	10 years
2-5	Phase 2 implementation schedule	10 years
2-6	Estimated cost for implementing Phase 2 of the PCP	10 years
2-7	Complete written Phase 2 Plan	10 years
2-8	Performance Evaluation.	11 & 12 years
2-9	1. Performance Evaluation. 2. Full implementation of all structural controls used to demonstrate that the total phosphorus export rate (P_{exp}) from the PCP Area in mass/yr is equal to or less than the applicable Allowable Phosphorus Load (P_{allow}) plus the applicable Phosphorus Reduction Requirement (P_{RR}) multiplied by 0.65 $P_{exp} < P_{allow} + (P_{RR} \times 0.65)$	13 years
2-10	Performance Evaluation	14 years

2-11	<p>Performance Evaluation.</p> <p>2. Full implementation of all structural controls used to demonstrate that the total phosphorus export rate (P_{exp}) from the PCP Area in mass/yr is equal to or less than the applicable Allowable Phosphorus Load (P_{allow}) plus the applicable Phosphorus Reduction Requirement (P_{RR}) multiplied by 0.50</p> $P_{exp} < P_{allow} + (P_{RR} \times 0.50)$	15 years
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Table F-4: Phase 2 of the PCP components and Milestones (*after permit effective date)

3. Description of Phase 2 PCP Components

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

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

Description of planned Phase 2 structural controls – The Town will develop a priority ranking of areas and infrastructure within the municipality for potential implementation of phosphorus control practices during Phase 2. The ranking will build upon the ranking developed for Phase 1. The Town will describe the structural stormwater control measures necessary to support achievement of the phosphorus export milestones in Table F-4. The description of structural controls will 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 a municipal PCP. Annual phosphorus reductions from structural BMPs will be calculated consistent with Attachment 3 to Appendix F.

Updated description of Operation and Maintenance (O&M) Program for all planned and existing structural BMPs – The Town will establish an Operation and Maintenance Program for all structural BMPs being claimed for phosphorus reduction credit as part of Phase 1 and 2 of the PCP. This includes BMPs implemented to date as well as BMPs to be implemented during Phase 2 of the PCP. The Operation and Maintenance Program will become part of the PCP 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.

Phase 2 Implementation Schedule – A schedule for implementation of all planned Phase 2 BMPs, including, as appropriate: funding, training, purchasing, construction, inspections, monitoring, O&M activities and other assessment and evaluation components of implementation. Implementation of planned BMPs must begin upon completion of the Phase 2 Plan. Structural BMPs will be designed and constructed to ensure the Town will comply with the 13 and 15 year milestones established in Table F-4. The Phase 2 plan will be fully implemented as soon as possible, but no later than 15 years after the effective date of permit.

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

Complete written Phase 2 Plan – The Town must complete a written Phase 2 Plan of the PCP no later than 10 years after the permit effective date. The complete Phase 2 Plan will include Phase 2 PCP item numbers 2-1 through 2-6 in Table F-4. The Town will make the Phase 2 Plan available to the public for public comment during Phase 2 plan development. EPA encourages the Town to post the Phase 2 Plan online to facilitate public involvement.

Performance Evaluation – The Town will evaluate the effectiveness of the PCP by tracking the phosphorus reductions achieved through implementation of structural and non-structural BMPs⁸ and tracking increases resulting from development. Phosphorus reductions will be calculated consistent with Attachment 2 to Appendix F (non-structural BMP performance) and Attachment 3 to Appendix F (structural BMP performance) for all BMPs implemented to date. Phosphorus export increases due to development will be calculated consistent with Attachment 1 to Appendix F. Phosphorus loading increases and reductions in unit of mass/yr will be added or subtracted from the applicable Baseline Phosphorus Load given in Table F-2 or Table F-3 depending on the Scope of PCP chosen to estimate the yearly phosphorous export rate from the PCP Area. The Town will also include all information required in part I.2 of this Appendix in each performance evaluation. Performance evaluations will be included as part of each Town’s annual report as required by part 4.4 of the Permit.

8.3 PHASE 3

1. The Town will complete the Phase 3 Plan of the PCP 15 years after the permit effective date and fully implement the Phase 3 plan of the PCP as soon as possible but no longer than 20 years after the permit effective date.
2. The Phase 3 plan of the PCP will be added to the Phase 1 Plan and the Phase 2 Plan to create the comprehensive PCP and contain the following elements and has the following required milestones:

Item No.	Phase 3 of the PCP Component and Milestones	Completion Date*
3-1	Update Legal analysis	As necessary
3-2	Description of Phase 3 planned nonstructural controls	15 years
3-3	Description of Phase 3 planned structural controls	15 years
3-4	Updated description of Operation and Maintenance (O&M) Program	15 years
3-5	Phase 3 implementation schedule	15 years
3-6	Estimated cost for implementing Phase 3 of the PCP	15 years
3-7	Complete written Phase 3 Plan	15 years
3-8	Performance Evaluation.	16 & 17 yrs

3-9	Performance Evaluation. 2. Full implementation of all structural controls used to demonstrate that the total phosphorus export rate (P_{exp}) from the PCP Area in mass/yr is equal to or less than the applicable Allowable Phosphorus Load (P_{allow}) plus the applicable Phosphorus Reduction Requirement (P_{RR}) multiplied by 0.30 $P_{ep} \leq P_{allow} + (P_{RR} \times 0.30)$	18 years
3-10	Performance Evaluation	19 years
3-11	Performance Evaluation. 2. Full implementation of all structural controls used to demonstrate that the total phosphorus export rate (P_{exp}) from the PCP Area in mass/yr is equal to or less than the applicable Allowable Phosphorus Load (P_{allow}) $P_{ep} \leq P_{allow}$	20 years

Table F-5:Phase 3 of the PCP components and Milestones
(*after permit effective date)

3. Description of Phase 3 PCP Components

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

Description of Phase 3 planned non-structural controls – The Town will describe the non-structural stormwater control measures necessary to support achievement of the phosphorus export milestones in Table F-5. The description of non-structural controls will include the planned measures, the areas where the measures will be implemented, and the annual phosphorus reductions that are expected to result from their implementation in units of mass/yr. Annual phosphorus reduction from non-structural BMPs will be calculated consistent with Attachment 2 to Appendix F.

Description of planned Phase 3 structural controls – The Town will develop a priority ranking of areas and infrastructure within the municipality for potential implementation of phosphorus control practices during Phase 3. The ranking will build upon the ranking developed for Phase 1 and 2. The Town will describe the structural stormwater control measures necessary to support achievement of the phosphorus export milestones in Table F-5. The description of structural controls will 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 a municipal PCP. Annual phosphorus reduction from structural BMPs will be calculated consistent with Attachment 3 to Appendix F.

Updated description of Operation and Maintenance (O&M) Program for all planned and existing structural BMPs – The Town will establish an Operation and Maintenance Program for all structural BMPs being claimed for phosphorus reduction credit as part of Phase 1, 2 and 3 of the PCP. This includes BMPs implemented to date as well as BMPs to be implemented during Phase 3 of the PCP. The Operation and Maintenance Program will become part of the PCP 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.

Phase 3 Implementation Schedule – A schedule for implementation of all planned Phase 3 BMPs, including, as appropriate: funding, training, purchasing, construction, inspections, monitoring, O&M activities and other assessment and evaluation components of implementation. Implementation of planned BMPs must begin upon completion of the Phase 3 Plan. Structural BMPs will be designed and constructed to ensure the Town will comply with the 18 and 20 year milestones established in Table F-5. The Phase 3 plan will be fully implemented as soon as possible, but no later than 20 years after the effective date of permit.

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

Complete written Phase 3 Plan – The Town must complete the written Phase 3 Plan of the PCP no later than 15 years after the permit effective date. The complete Phase 3 Plan will include Phase 3 PCP item numbers 31 through 3-6 in Table F-5. The Town will make the Phase 3 Plan available to the public for public comment during Phase 3 Plan development. EPA encourages the Town to post the Phase 3 Plan online to facilitate public involvement.

Performance Evaluation – The Town will evaluate the effectiveness of the PCP by tracking the phosphorus reductions achieved through implementation of structural and non-structural BMPs⁹ and tracking increases resulting from development. Phosphorus reductions will be calculated consistent with Attachment 2 to Appendix F (non-structural BMP performance) and Attachment 3 to Appendix F (structural BMP performance) for all BMPs implemented to date. Phosphorus export increases due to development will be calculated consistent with Attachment 1 to Appendix F. Phosphorus loading increases and reductions in unit of mass/yr will be added or subtracted from the applicable Baseline Phosphorus Load given in Table F-2 or Table F-3 depending on the Scope of PCP chosen to estimate the yearly phosphorous export rate from the PCP Area. The Town will also include all information required in part I.2 of this Appendix in each performance evaluation. Performance evaluations will be included as part of each Town's annual report as required by part 4.4 of the Permit.

8.4 REPORTING

Beginning 1 year after the permit effective date, the Town will include a progress report in each annual report on the planning and implementation of the PCP.

Beginning five (5) years after the permit effective date, the Town will include the following in each annual report submitted pursuant to part 4.4 of the Permit:

1. All non-structural control measures implemented during the reporting year along with the phosphorus reduction in mass/yr (P_{NSred}) calculated consistent with Attachment 2 to Appendix F
2. Structural controls implemented during the reporting year and all previous years including:
 - a. Location information of structural BMPs (GPS coordinates or street address)
 - b. Phosphorus reduction from all structural BMPs implemented to date in mass/yr (P_{Sred}) calculated consistent with Attachment 3 to Appendix F

- c. Date of last completed maintenance and inspection for each Structural control
3. Phosphorus load increases due to development over the previous reporting period and incurred since 2005 (P_{DEVinc}) calculated consistent with Attachment 1 to Appendix F.
4. Estimated yearly phosphorus export rate (P_{exp}) from the PCP Area calculated using Equation 2. Equation 2 calculates the yearly phosphorus export rate by subtracting yearly phosphorus reductions through implemented nonstructural controls and structural controls to date from the Baseline Phosphorus Load and adding loading increases incurred through development to date. This equation will be used to demonstrate compliance with the phosphorus reduction milestones required as part of each phase of the PCP.

$$P_{exp} = P_{base} - (P_{Sred} + P_{NSred}) + P_{DEVinc}$$

Equation 1. Equation used to calculate yearly phosphorus export rate from the chosen PCP Area where:

P_{exp} = Current phosphorus export rate from the PCP Area in mass/year.

P_{base} = baseline phosphorus export rate from LPCP Area in mass/year.

P_{Sred} = yearly phosphorus reduction from implemented structural controls in the PCP Area in mass/year.

P_{NSred} = yearly phosphorus reduction from implemented non-structural controls in the PCP Area in mass/year.

P_{DEVinc} = yearly phosphorus increase resulting from development since 2005 in the PCP Area in mass/year.

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

I certify under penalty of law that all source control and treatment Best

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

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

9.0 SANITARY SEWER OVERFLOWS INVENTORY

The Town has identified and inventoried all known locations where SSOs have discharged to the MS4 within the previous five (5) years. This inventory is provided and maintained as part of SWMP Volume 2: IDDE Plan.

10.0 SURFACE DRINKING WATER SUPPLY SOURCES

Section 3.0 of the Permit addresses requirements for MS4 systems that discharge to public surface drinking water supply sources (Class A and Class B surface waters used for drinking water) or their tributaries. According to 314 CMR 4.00, Massachusetts Surface Water Quality Standards, 4.05: Classes and Criteria and 4.06: Basin Classification and Maps, Westwood does not have mapped Class A or Class B surface waters within Town limits

11.0 ANNUAL PROGRAM EVALUATION

Program evaluation, record keeping and reporting are required annually to document what the Town has done during the previous reporting period, judge compliance with permit provisions, and to verify that efforts are resulting in an improvement to the stormwater, and ultimately the receiving water's quality.

The Town is required to submit annual reports each year of the permit term. The reporting period is a one year period commencing on the permit effective date (July 1, 2018) and each anniversary thereafter. The exception is that the first annual report will also include the period from May 1, 2018 to June 30, 2019. Annual reports are due ninety days from the close of the reporting period. The annual reports will review compliance with the permit terms and conditions including assessment of selected BMPs, status and progress assessment of planned activities, description of IDDE and O&M program activities and evaluation of construction and post construction stormwater management. Description of activities for the next reporting cycle and any changes in identified BMPs or measurable goals will be included. The following data will be collected and reported by the Town using the reporting forms in Appendix B to support the ongoing efforts mandated by the Permit:

- Public education and outreach materials with dated distribution/attendance list(s)
- Public involvement and participation materials with dated distribution/attendance list(s)
- Data related to Implementation of the IDDE Program including:
 - SSO reporting forms and updated inventory table
 - Illicit discharge reporting forms and inventory table
 - Outfall screening and sampling data
 - Record of mapping updates
 - Inventory of catchment investigations, data collected and illicit connections removed
 - Outfall and catchment ranking and assessment updates (Updated Matrix)
 - IDDE program training attendance log
- Inventory of construction runoff management including number of projects reviewed, inspected and enforcement actions
- Inventory of site plan review and BMP implementation for new/re-development projects
- O&M inspection and maintenance forms and logs including:
 - Catch basin cleaning and activities
 - Street sweeping and parking lot sweeping logs
 - MS4 infrastructure BMP inspection forms and logs
 - Town facilities inspection forms and logs
 - SWPPP inspection reports
- Phosphorous Control Plan
 - Progress report on the planning and implementation of the PCP

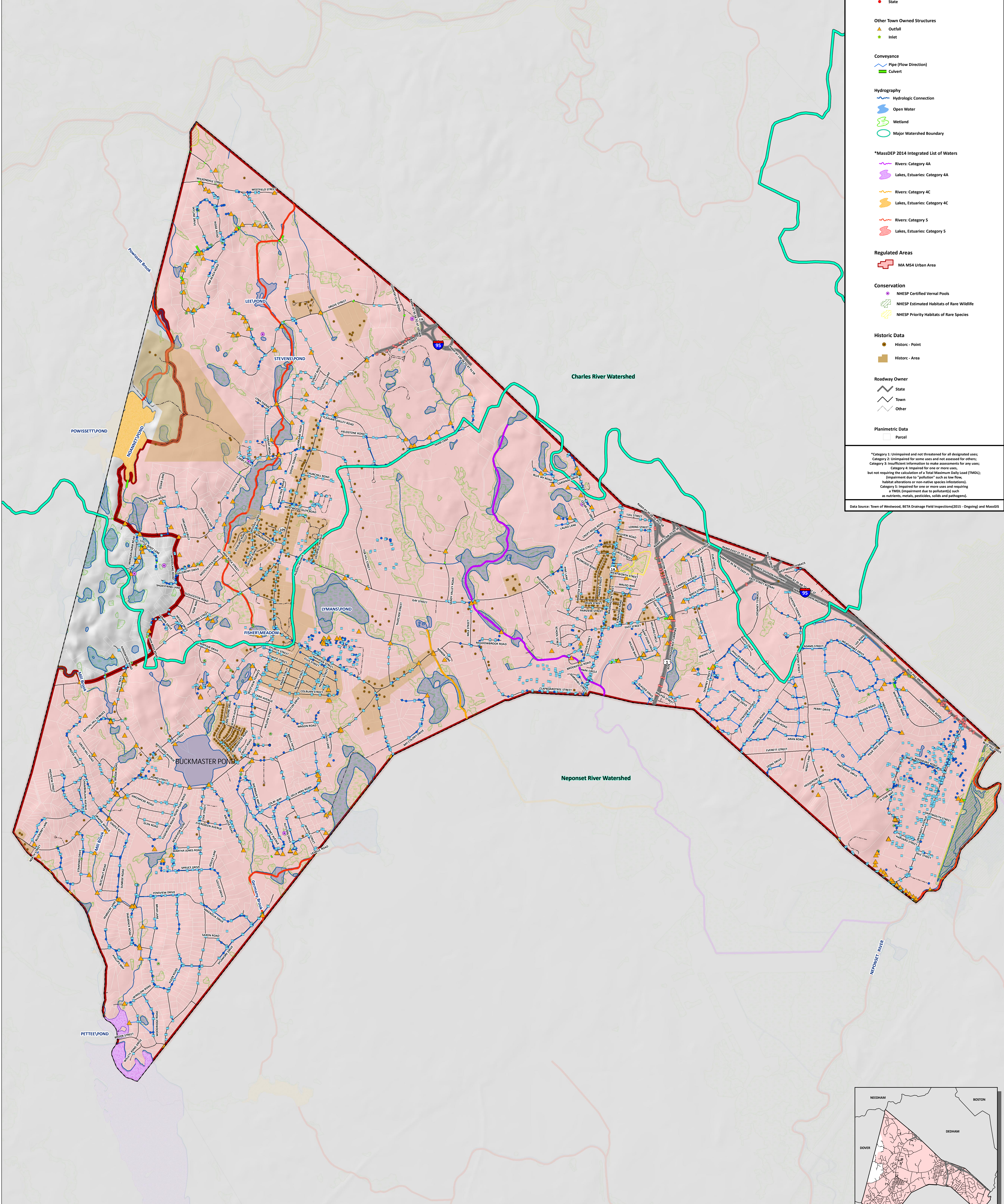
EPA has indicated they are developing an annual report template for MS4s which will populate information from the NOI and be in the form of an electronic fillable .pdf. When it is available, the Town will review the annual report template to determine the best method for data management to be compatible.

APPENDIX A

Environmental Overview Map

Town of Westwood, Massachusetts

MS4 Environmental Overview Map

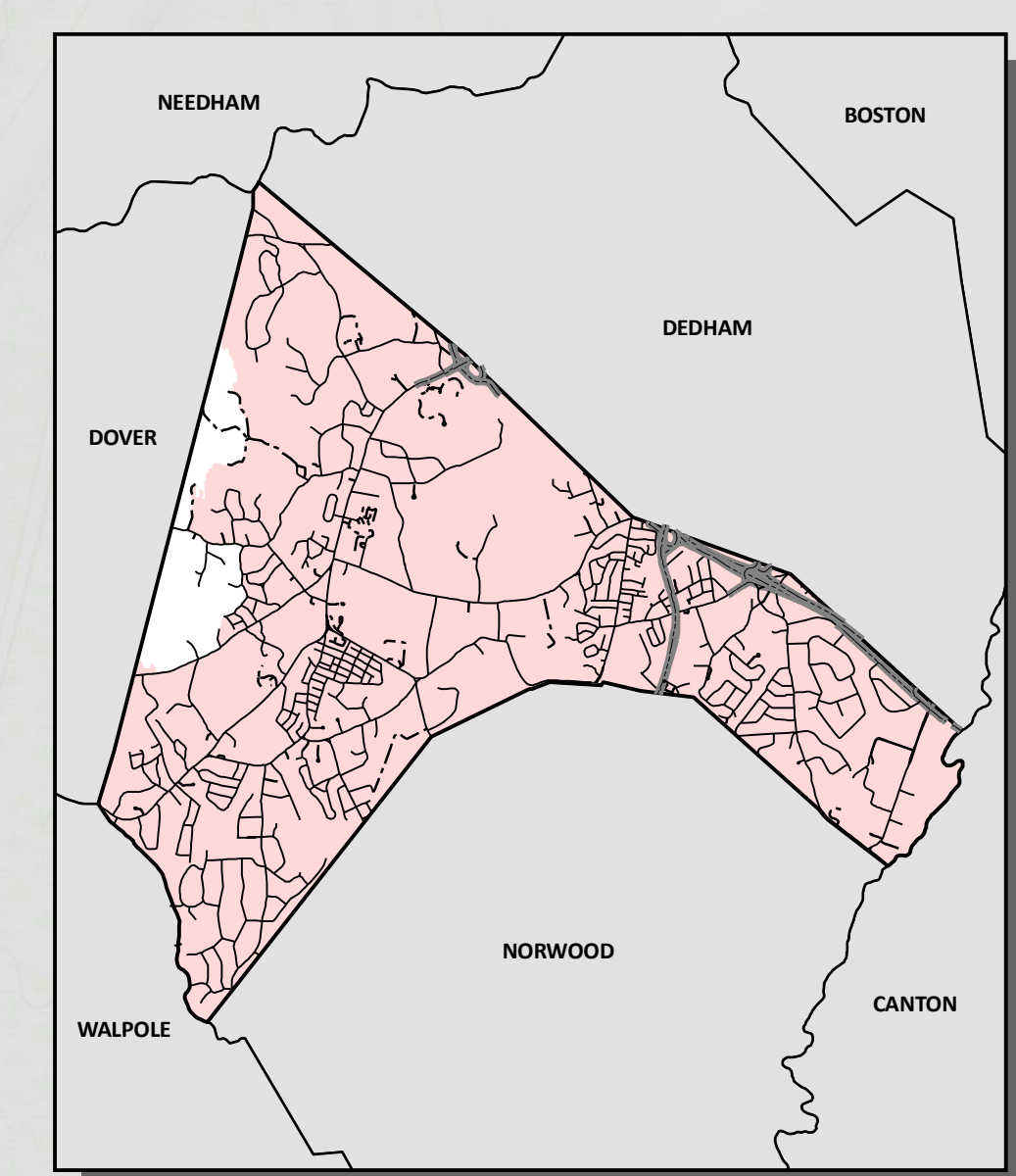


Map Legend

- Catch Basin Owner**
 - Town
 - State
- Manhole Owner**
 - Town
 - State
- Other Town Owned Structures**
 - Outfall
 - Inlet
- Conveyance**
 - Pipe (Flow Direction)
 - Culvert
- Hydrography**
 - Hydrologic Connection
 - Open Water
 - Wetland
 - Major Watershed Boundary
- *MassDEP 2014 Integrated List of Waters**
 - Rivers: Category 4A
 - Lakes, Estuaries: Category 4A
 - Rivers: Category 4C
 - Lakes, Estuaries: Category 4C
 - Rivers: Category 5
 - Lakes, Estuaries: Category 5
- Regulated Areas**
 - MA MS4 Urban Area
- Conservation**
 - NHESP Certified Vernal Pools
 - NHESP Estimated Habitats of Rare Wildlife
 - NHESP Priority Habitats of Rare Species
- Historic Data**
 - Historic - Point
 - Historic - Area
- Roadway Owner**
 - State
 - Town
 - Other
- Planimetric Data**
 - Parcel

*Category 1: Unimpaired and not threatened for all designated uses;
Category 2: Unimpaired for some uses and not assessed for others;
Category 3: Insufficient information to make assessments for any uses;
Category 4: Impaired for one or more uses, but not requiring the calculation of a Total Maximum Daily Load (TMDL); (impairment due to "pollution" such as low flow, habitat alterations or non-native species infestations);
Category 5: Impaired for one or more uses and requiring a TMDL (impairment due to pollutant(s) such as nutrients, metals, pesticides, solids and pathogens).

Data Source: Town of Westwood, BETA Drainage Field Inspections(2015 - Ongoing) and MassGIS



APPENDIX B

Reporting Forms

Index

- **MCM 1: Public Participation and Outreach**
 - Public Education and Outreach Log
 - Public Education Reporting Form

- **MCM 2: Public Involvement & Participation Log**
 - Public Participation Opportunity Reporting Form
 - Public Participation Comment Form

- **MCM 3: Illicit Discharge Detection & Elimination Program**
 - IDDE Program Reporting Summary Log
 - Sanitary Sewer Overflows – Inventory
 - Illicit Discharge Incident Reporting Form
 - Screening & Sampling Form
 - Employee Training Record
 - IDDE Training Summary Form

- **MCM 4: Construction Site Runoff Control**
 - Construction Site Inspection Log
 - Construction Site Inspection Form
 - Construction Site Enforcement Action Log
 - Site Plan Review

- **MCM 5: Post Construction Stormwater Management**
 - Post Construction Stormwater Management Implementation Log

- **MCM 6: Good House Keeping & Pollution Prevention**
 - Town Facilities Operations & Maintenance Log
 - Municipal Infrastructure Operations & Maintenance Log
 - Catch Basin Inspection Form
 - Street/Pavement Sweeping Record Form
 - Stormwater Treatment Structures Inspection & Maintenance
 - Stormwater BMP Inspection Form – Surface Structures
 - Stormwater BMP Inspection Form – Subsurface Structures

MCM 1: PUBLIC EDUCATION AND OUTREACH LOG

Reporting Period: _____ – _____

BMP #	Title/Description	Audience	Responsible Party	Method of Delivery	Date	Record of Measurable Goal*
1.9	Management of Pet Waste: Dog License	Residents	Town Clerk	Distributed with Dog Licenses	Ongoing	
1.10	Septic System Maintenance	Residents	Board of Health	Mail and post to website		
1.11	Lawn Care: grass clippings & fertilizer	Residents & Bus/Inst/Com	Town Planner	Mail and post to website		
1.12	Management of Pet Waste	Residents & Bus/Inst/Com	Town Planner	Post to website		
1.13	Disposal of Leaf Litter	Residents & Bus/Inst/Com	Town Planner	Mail and post to website		

*May include: # distributed, attendees, web page hits, social media likes, etc.

Note: See section 7.1 of SWMP for BMP reporting descriptions and requirements.

Town of Westwood, MA

PUBLIC EDUCATION REPORTING FORM

Reporter Name:		Dept.		Date	
Target Audience					
<input type="checkbox"/> Residents	<input type="checkbox"/> Businesses, Institutions (Churches, Hospitals), and Commercial Facilities	<input type="checkbox"/> Developers (Construction)	<input type="checkbox"/> Industrial Facilities		
Requirement*					
<input type="checkbox"/> Standard	Impairments:	<input type="checkbox"/> Spring (Apr/May)	<input type="checkbox"/> Summer (Jun/Jul)	<input type="checkbox"/> Fall (Aug/Sep/Oct)	
Document Publishing/Distribution:				Dater	
Developed/Provided By:	<input type="checkbox"/> Town	<input type="checkbox"/> NepRWA	<input type="checkbox"/> EPA	<input type="checkbox"/> NSP	<input checked="" type="checkbox"/>
	Other: _____				

BMP Media/Category*	Title/Description
<input type="checkbox"/> Brochure/Pamphlet	
<input type="checkbox"/> Flyer	
<input type="checkbox"/> Web Page Article/Notice	
<input type="checkbox"/> Social Media	
<input type="checkbox"/> Newspaper Articles/Press Releases	
<input type="checkbox"/> Local Public Service Announcements	
<input type="checkbox"/> School Curricular/Programs	
<input type="checkbox"/> Contests	
<input type="checkbox"/> Special Events/Festivals/Fairs	
<input type="checkbox"/> Displays/Posters/Kiosks	
<input type="checkbox"/> Videos	
<input type="checkbox"/> Other	

*Please attach a printed copy of the BMP to this form.



PUBLIC EDUCATION REPORTING FORM (CONT.)

Method of Delivery				
<input type="checkbox"/> Printed hard copy	Location:		Quantity:	
<input type="checkbox"/> Mailed hard copy	Recipient Group:		# Recipients:	
<input type="checkbox"/> Email	Recipient Group:		# Recipients:	
<input type="checkbox"/> Digital: E-News	Recipient Group:		# Recipients:	
<input type="checkbox"/> Digital: Website	Web Page URL:		# Hits	
<input type="checkbox"/> Digital: Social Media	Network Site:		User/Profile Name:	
<input type="checkbox"/> Event	Description:		# Attendees	
<input type="checkbox"/> Other:				

Comments:

MCM 2: PUBLIC INVOLVEMENT & PARTICIPATION LOG

Reporting Period: _____ – _____

RECORD OF SWMP AND ANNUAL REPORT POSTING FOR PUBLIC REVIEW

Date	Responsible Party	Public Notice Provided	Location of Posting	Record of Measurable Goal*

**May include: web page hits, requests to view printed document, # of comments received*

RECORD OF PUBLIC COMMENTS

Date	Comment From	Received Via	Comment

RECORD OF PUBLIC PARTICIPATION ACTIVITIES

Date	Responsible Party	Public Notice Provided	Activity	Record of Measurable Goal*

**May include: # of participants, attendees, and/or quantity of cleanup achieved*

Note: See section 7.2 of SWMP for BMP reporting descriptions and requirements.

PUBLIC PARTICIPATION OPPORTUNITY REPORTING FORM

Reporter Name:		Dept.		Date	
----------------	--	-------	--	------	--

Public Participation Minimum Control Measure:		
<input type="checkbox"/> Notice of Intent	<input type="checkbox"/> Stormwater Management Program	<input type="checkbox"/> Public Education
<input type="checkbox"/> Public Involvement and Participation	<input type="checkbox"/> IDDE	<input type="checkbox"/> Construction Site Runoff Control
<input type="checkbox"/> New Development	<input type="checkbox"/> Good Housekeeping	<input type="checkbox"/> Other:

Title of Document:	
Date of Public Participation:	

Type/Location of Public Participation Posting:		
<input type="checkbox"/> Web Page	<input type="checkbox"/> Town Office	<input type="checkbox"/> Public Venue
<input type="checkbox"/> Mass Media (newspaper, public service announcement, etc.)	<input type="checkbox"/> Other:	

PUBLIC PARTICIPATION COMMENT FORM

Reporter Name:		Dept.		Date	
Date of Public Participation:					
Date(s) of Comment Period:					
Title of Document:					

Type/Location of Public Participation Posting:		
<input type="checkbox"/> Web Page	<input type="checkbox"/> Town Office	<input type="checkbox"/> Public Venue
<input type="checkbox"/> Mass Media (newspaper, public service announcement, etc.)	<input type="checkbox"/> Other:	

Comments Made By:		Date:	
Comments Received via:			
<input type="checkbox"/> Email	<input type="checkbox"/> Phone	<input type="checkbox"/> Web Page	
<input type="checkbox"/> Letter/hard copy	<input type="checkbox"/> Other:		

Comment:

Action Taken (if any):

MCM 3: IDDE PROGRAM REPORTING SUMMARY LOG

Reporting Period: _____ – _____

EMPLOYEE TRAINING

Date	# of Attendees	Location	Presenter	Topic/Discussion Items

SSO INVENTORY

Report #	Date	Reporter	Location	Status & Comments

ILLICIT DISCHARGE INVENTORY

Report #	Date	Reporter	Location	Status & Comments

STORM SEWER MAPPING UPDATES

Type	Date	Updated by	Location	Description

OUTFALL SCREENING AND SAMPLING

Dry/Wet	Date(s)	Inspector	Location(s)	Comments

CATCHMENT INVESTIGATIONS

Category	Date(s)	Inspector	Location	Description/Results

Note: See section 7.3 of SWMP for BMP reporting descriptions and requirements.

SANITARY SEWER OVERFLOWS (SSOs) – INVENTORY

Incident No.	Location (Closest Address)	Discharge to: (Yes or No)		Occurrence			Volume Discharge (gal. ±)	Mitigation / Corrective Measures		
		Waters	MS4	Date:	Time			Measures	Date:	
					Start	End			Complete	Planned

This Inventory includes reported SSO's from 2014 to Present

ILLICIT DISCHARGE INCIDENT REPORTING FORM

Incident ID			Logged By:		
Location, Nearest Street Address,:				Outfall #	
				Latitude	
				Longitude	
Reported by:				Date:	
Contact Info					
Discharge Type:	<input type="checkbox"/> Sewer Overflow <input type="checkbox"/> Sewer Connection		<input type="checkbox"/> Spill <input type="checkbox"/> Dumping		<input type="checkbox"/> Wash <input type="checkbox"/> Other
Incident Description:					
Area Impacted	<input type="checkbox"/> Stream/River (name) _____ <input type="checkbox"/> Upland (name) _____		<input type="checkbox"/> Wetland (near) _____ <input type="checkbox"/> Other _____		
Stormwater System Impacted	<input type="checkbox"/> Catchbasin (ID #) _____ <input type="checkbox"/> Drain Manhole (ID #) _____ <input type="checkbox"/> Surface Basin (ID #) _____		<input type="checkbox"/> Subsurface Basin (near) _____ <input type="checkbox"/> Outfall (ID #) _____ <input type="checkbox"/> None		
Recent Rain:					
Add. Info:					

AREA ACTIVES – POSSIBLE CAUSE OF ISSUE

Dumping:	<input type="checkbox"/> Yes <input type="checkbox"/> No	Oil/Chemicals	<input type="checkbox"/> Yes <input type="checkbox"/> No	Sewerage	<input type="checkbox"/> Yes <input type="checkbox"/> No
Septic System:	<input type="checkbox"/> Yes <input type="checkbox"/> No	Wash Water:	<input type="checkbox"/> Yes <input type="checkbox"/> No	Staining	<input type="checkbox"/> Yes <input type="checkbox"/> No
Other:				Suds:	<input type="checkbox"/> Yes <input type="checkbox"/> No

INDICATORS OF POTENTIAL ISSUES – FURTHER INVESTIGATION RECOMMENDED

Odor:	<input type="checkbox"/> None <input type="checkbox"/> Sewer <input type="checkbox"/> Eggs <input type="checkbox"/> Petroleum <input type="checkbox"/> Laundry <input type="checkbox"/> Unknown			Floatables	<input type="checkbox"/> Yes <input type="checkbox"/> No
Oil Sheen:	<input type="checkbox"/> Yes <input type="checkbox"/> No	Cloudy::	<input type="checkbox"/> Yes <input type="checkbox"/> No	Staining	<input type="checkbox"/> Yes <input type="checkbox"/> No
Other:				Suds:	<input type="checkbox"/> Yes <input type="checkbox"/> No

SUSPECTED VIOLATOR KNOWN: YES NO

Name		Address	
Description		License Plate	

ILLICIT DISCHARGE INCIDENT INVESTIGATION REPORT FORM (CONT.)

LOCATION MAP/SKETCH/PHOTOS

RESPONSE ACTION(S)

Date Investigated:		Investigator:	
<input type="checkbox"/> No Investigation		Reason:	
<input type="checkbox"/> Referred to another Department		Department	
<input type="checkbox"/> Investigated – No Action Required	Action Description		
<input type="checkbox"/> Investigated – Action Required			
<input type="checkbox"/> Action Completed		Date:	
<input type="checkbox"/> Incident Closed		Date:	

Notes:

Town of Westwood, MA

SCREENING AND SAMPLING FORM

Type:	<input type="checkbox"/> Outfall <input type="checkbox"/> Interconnection <input type="checkbox"/> Key Junction	<input type="checkbox"/> Pipe <input type="checkbox"/> DMH <input type="checkbox"/> CB <input type="checkbox"/> Other	ID:	
Location:		Material:		Size:
Inspector:		Date:		Time:
Weather:	<input type="checkbox"/> Sunny <input type="checkbox"/> Cloudy <input type="checkbox"/> Rain <input type="checkbox"/> Snow	Recent Rainfall:		

ENVIRONMENTAL INSPECTION

Area:	<input type="checkbox"/> Residential <input type="checkbox"/> Commercial <input type="checkbox"/> Industrial <input type="checkbox"/> Municipal <input type="checkbox"/> Open Space <input type="checkbox"/> Unknown				
Flowing To:	<input type="checkbox"/> Upland <input type="checkbox"/> Wetland/Marsh <input type="checkbox"/> Stream/River <input type="checkbox"/> Lake/Pond <input type="checkbox"/> Open Space <input type="checkbox"/> Other MS4 <input type="checkbox"/> Outfall				
Submerged:	<input type="checkbox"/> Yes <input type="checkbox"/> No	Accessible:	<input type="checkbox"/> Yes... <input type="checkbox"/> No	Other Info:	

FLOW

Amount:	<input type="checkbox"/> None <input type="checkbox"/> Drip <input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial	Clarity:	<input type="checkbox"/> None <input type="checkbox"/> Clear <input type="checkbox"/> Cloudy <input type="checkbox"/> Opaque
Color:		Other Info:	

INDICATORS OF POTENTIAL ISSUES – FURTHER INVESTIGATION RECOMMENDED

Sediment:	<input type="checkbox"/> Yes <input type="checkbox"/> No	Scouring:	<input type="checkbox"/> Yes <input type="checkbox"/> No	Staining:	<input type="checkbox"/> Yes <input type="checkbox"/> No
Algae Growth:	<input type="checkbox"/> Yes <input type="checkbox"/> No	Stressed Vegetation:	<input type="checkbox"/> Yes <input type="checkbox"/> No	Floatables:	<input type="checkbox"/> Yes <input type="checkbox"/> No
Oil Sheen:	<input type="checkbox"/> Yes <input type="checkbox"/> No	Turbidity:	<input type="checkbox"/> Yes <input type="checkbox"/> No	Other:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Odor:	<input type="checkbox"/> None <input type="checkbox"/> Sewer <input type="checkbox"/> Eggs <input type="checkbox"/> Fuel <input type="checkbox"/> Laundry <input type="checkbox"/> Unknown				

SAMPLING

Sampling Required:	<input type="checkbox"/> Yes <input type="checkbox"/> No	Sampling Performed:	<input type="checkbox"/> Yes <input type="checkbox"/> No	Struct. ID	
--------------------	----------------------------------------------------------	---------------------	----------------------------------------------------------	------------	--

RECORDED DATA

Ammonia:		Salinity:		Temp:		pH:	
Chlorine:		Conductivity:		Surfactant:			

LAB SAMPLES TAKEN

<input type="checkbox"/> E. coli		<input type="checkbox"/> Phosphorus		<input type="checkbox"/> Nitrogen		<input type="checkbox"/> DO	
<input type="checkbox"/> Enterococcus		<input type="checkbox"/> Fecal Coliform		<input type="checkbox"/> Metals		<input type="checkbox"/> TSS	
Sent To			Date:		Date Received:		



Town of Westwood, MA

EMPLOYEE TRAINING RECORD

Topic: _____ Date: _____ Duration: _____ Sheet ___ of ___.

Name	Title	Signature

IDDE TRAINING SUMMARY FORM

Training By:		Dept./ Organization	
Date		Time:	
Location:			

Public Participation Minimum Control Measure:			
Subject:			
Audience:		No. Participants	
Goals:			

Summary of Training:	•
Handouts	•

Comments :	•
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MCM 4: CONSTRUCTION SITE INSPECTION LOG

Reporting Period: _____ – _____

Report #	Date	Inspector	Project/Location	Status & Comments

Note: See section 7.4 of SWMP for BMP reporting descriptions and requirements.



Town of Westwood, MA

Report No. _____

CONSTRUCTION SITE INSPECTION FORM

Project:		Date:		Last Insp:	
Location:		Arrive:		Leave:	
Operator:		Site Rep:			
Inspector:					
Type	<input type="checkbox"/> Regular	<input type="checkbox"/> Pre-Storm	<input type="checkbox"/> During Storm	<input type="checkbox"/> Post Storm	
Recent Rainfall:			Current Weather:		
Description of Current Site Work:					
Add. Info:					

EROSION AND SEDIMENT CONTROL MAINTENANCE/ACTION REQUIRED: YES NO

(Inspect for all applicable controls listed – ECB = Erosion Control Barrier)

Control	Condition	Required Action	Completed (by)	Date
<input type="checkbox"/> SWPPP Report(s)			<input type="checkbox"/>	
<input type="checkbox"/> Adjacent Street			<input type="checkbox"/>	
<input type="checkbox"/> Const. Access Dr.			<input type="checkbox"/>	
<input type="checkbox"/> Perimeter ECB			<input type="checkbox"/>	
<input type="checkbox"/> Outside ECB			<input type="checkbox"/>	
<input type="checkbox"/> Sediment Basin(s)			<input type="checkbox"/>	
<input type="checkbox"/> CB Protection			<input type="checkbox"/>	
<input type="checkbox"/> Stockpiles			<input type="checkbox"/>	
<input type="checkbox"/> Exposed Soils			<input type="checkbox"/>	
<input type="checkbox"/> Exposed Slopes			<input type="checkbox"/>	
<input type="checkbox"/> Outlet(s)			<input type="checkbox"/>	
<input type="checkbox"/> Receiving Waters			<input type="checkbox"/>	
<input type="checkbox"/> Other			<input type="checkbox"/>	

CONSTRUCTION WASTE CONTROL MAINTENANCE/ACTION REQUIRED: YES NO

(Inspect for all applicable controls listed)

Control	Condition	Required Action	Completed (by)	Date
<input type="checkbox"/> Trash/Litter			<input type="checkbox"/>	
<input type="checkbox"/> Dumpsters			<input type="checkbox"/>	
<input type="checkbox"/> Fueling Areas			<input type="checkbox"/>	
<input type="checkbox"/> Sanitary Facilities			<input type="checkbox"/>	
<input type="checkbox"/> Dewatering			<input type="checkbox"/>	
<input type="checkbox"/> Haz Mat Storage			<input type="checkbox"/>	

SITE PHOTOS

MCM 4: CONSTRUCTION SITE ENFORCEMENT ACTION LOG

Year 1 Reporting Period: _____ - _____

Project/Location	Date	Action Taken	Status & Comments

Note: See section 7.4 of SWMP for BMP reporting descriptions and requirements.



MCM 4: SITE PLAN REVIEW LOG

Year 1 Reporting Period: _____ - _____

Project/Location	Filing Date	Reviewer	Comments	Status

Note: See section 7.4 of SWMP for BMP reporting descriptions and requirements.

MCM 5: POST CONSTRUCTION STORMWATER MANAGEMENT IMPLEMENTATION LOG

Reporting Period: _____ - _____

Project/Location	Filing Date	Reviewer	Requirements Met	Project Status
			<input type="checkbox"/> LIDs <input type="checkbox"/> SW Design Regs <input type="checkbox"/> As-built <input type="checkbox"/> Long-term O&M	
Description/Comments:				
			<input type="checkbox"/> LIDs <input type="checkbox"/> SW Design Regs <input type="checkbox"/> As-built <input type="checkbox"/> Long-term O&M	
Description/Comments:				
			<input type="checkbox"/> LIDs <input type="checkbox"/> SW Design Regs <input type="checkbox"/> As-built <input type="checkbox"/> Long-term O&M	
Description/Comments:				
			<input type="checkbox"/> LIDs <input type="checkbox"/> SW Design Regs <input type="checkbox"/> As-built <input type="checkbox"/> Long-term O&M	
Description/Comments:				
			<input type="checkbox"/> LIDs <input type="checkbox"/> SW Design Regs <input type="checkbox"/> As-built <input type="checkbox"/> Long-term O&M	
Description/Comments:				
			<input type="checkbox"/> LIDs <input type="checkbox"/> SW Design Regs <input type="checkbox"/> As-built <input type="checkbox"/> Long-term O&M	
Description/Comments:				
			<input type="checkbox"/> LIDs <input type="checkbox"/> SW Design Regs <input type="checkbox"/> As-built <input type="checkbox"/> Long-term O&M	
Description/Comments:				

Note: See section 7.4 of SWMP for BMP reporting descriptions and requirements.

MCM 6: TOWN FACILITIES OPERATIONS AND MAINTENANCE LOG

Reporting Period: _____ – _____

PARKS AND OPEN SPACE

Report #	Date	Inspector	Location	Status & Comments

BUILDINGS AND FACILITIES

Report #	Date	Inspector	Location	Status & Comments

VEHICLES AND EQUIPMENT

Report #	Date	Inspector	Location	Status & Comments

Note: See section 7.6 of SWMP for BMP reporting descriptions and requirements.

MCM 6: MUNICIPAL INFRASTRUCTURE OPERATIONS AND MAINTENANCE LOG

Reporting Period: _____ – _____

RECORD OF CATCHBASIN CLEANING

Date(s)	Location(s)	Responsible Party	# CBs Cleaned	Volume of Cleaning

RECORD OF STREET AND PARKING LOT SWEEPING

Date(s)	Location(s)	Responsible Party	Length/# lots	Volume of Cleaning

BMP INSPECTION AND MAINTENANCE

Report #	Date	Inspector	BMP/Location	Status & Comments

SWPPP INSPECTION AND MAINTENANCE

Report #	Date	Inspector	Location	Status & Comments

Note: See section 7.6 of SWMP for BMP reporting descriptions and requirements.

CATCHBASIN INSPECTION FORM

Inspector: _____

Date: _____

Sheet ___ of ___

CB ID	<25%	25-50%	>50%	CB ID	<25%	25-50%	>50%	CB ID	<25%	25-50%	>50%
_____ St/Rd/Ave				_____ St/Rd/Ave				_____ St/Rd/Ave			
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

STREET/PAVEMENT SWEEPING RECORD FORM

Operator: _____

Date: _____

Sheet ___ of ___.

Street/Location	Street/Location	Street/Location



STORMWATER BMP INSPECTION FORM – SURFACE STRUCTURES

BMP ID:						
Location:			Length	±ft.	Depth	±ft.
Description:			Top Width	±ft.	Bot Width	±ft.
Type:	<input type="checkbox"/> Detention	<input type="checkbox"/> Retention	<input type="checkbox"/> Infiltration	<input type="checkbox"/> Bioretention		
	<input type="checkbox"/> Swale	<input type="checkbox"/> Infiltration Trench	<input type="checkbox"/> Other			
Inspector:				Date:		
Recent Rainfall:						
Notes:						

LOCATION MAP



MAINTENANCE REQUIRED: YES NO

(Inspect for all problems listed – provide information for required maintenance only)

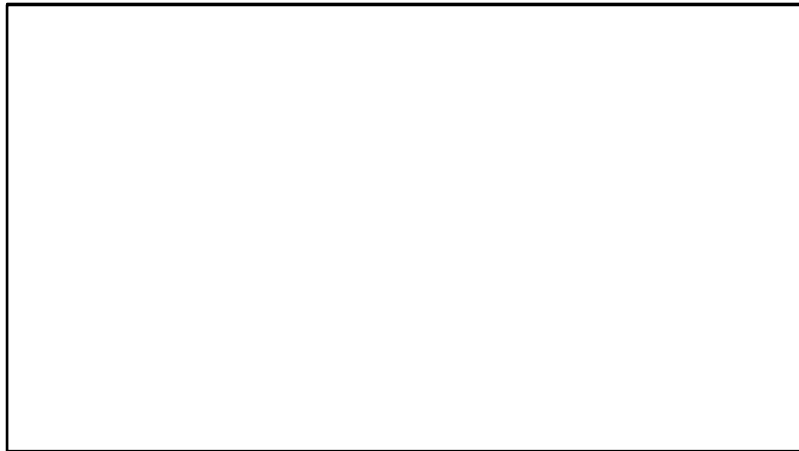
Problem	Description	Quantity (±)	Completed (personnel)	Date
<input type="checkbox"/> Sediment/Debris			<input type="checkbox"/>	
<input type="checkbox"/> Vegetation			<input type="checkbox"/>	
<input type="checkbox"/> Erosion			<input type="checkbox"/>	
<input type="checkbox"/> Water Pond			<input type="checkbox"/>	
<input type="checkbox"/> Sediment Forebay			<input type="checkbox"/>	
<input type="checkbox"/> Outlet Struct			<input type="checkbox"/>	
<input type="checkbox"/> Intlet			<input type="checkbox"/>	
<input type="checkbox"/> Outlet			<input type="checkbox"/>	
<input type="checkbox"/> Riprap			<input type="checkbox"/>	
<input type="checkbox"/> Check Dam			<input type="checkbox"/>	
<input type="checkbox"/> Access			<input type="checkbox"/>	
<input type="checkbox"/> Fence			<input type="checkbox"/>	
<input type="checkbox"/> Other			<input type="checkbox"/>	

BMP PHOTOS

STORMWATER BMP INSPECTION FORM – SUBSURFACE STRUCTURES

BMP ID:					
Location:		Cover/Grate size	±ft.	Cover/Grate shape	±ft.
Description:		Structure Diameter	±ft.	Depth	±ft.
		Structure Material			
Type:	<input type="checkbox"/> Oil-Grit Separator	<input type="checkbox"/> Proprietary Structure	<input type="checkbox"/> Leaching CB		
	<input type="checkbox"/> Infiltration Chamber/Pipe	<input type="checkbox"/> Sand Filter	<input type="checkbox"/> Other		
Inspector:				Date:	
Recent Rainfall:					
Add. Info:					

LOCATION MAP



MAINTENANCE REQUIRED: YES NO

(Inspect for all problems listed – provide information for required maintenance only)

Problem	Description	Quantity (±)	Completed (personnel)	Date
<input type="checkbox"/> Grate/Cover			<input type="checkbox"/>	
<input type="checkbox"/> Structure			<input type="checkbox"/>	
<input type="checkbox"/> Hood/Trap/Insert			<input type="checkbox"/>	
<input type="checkbox"/> Pipes & Joints			<input type="checkbox"/>	
<input type="checkbox"/> Ladder			<input type="checkbox"/>	
<input type="checkbox"/> Sediment/Debris			<input type="checkbox"/>	
<input type="checkbox"/> Vegetation/Roots			<input type="checkbox"/>	
<input type="checkbox"/> Contaminants/Pollution			<input type="checkbox"/>	
<input type="checkbox"/> Infiltration Capability			<input type="checkbox"/>	
<input type="checkbox"/> Discharge			<input type="checkbox"/>	
<input type="checkbox"/> Fence			<input type="checkbox"/>	
<input type="checkbox"/> Access			<input type="checkbox"/>	
<input type="checkbox"/> Other			<input type="checkbox"/>	

BMP PHOTOS