Stormwater Management Program (SWMP) Plan

City of Amesbury, Massachusetts

Revised December 1, 2021

Prepared For:

City of Amesbury
62 Friend St
Amesbury, MA 01913

Prepared By:

Comprehensive Environmental Inc.
41 Main Street
Bolton, MA 01740

Stormwater Management Program (SWMP) Plan Revision Log

Revision Date	Section(s) Revised	Revisions Made	Revisions Made by
June 30, 2019	All	Original SWMP Plan prepared.	City of Amesbury
December 1, 2021	All	SWMP Plan amended to document work completed during Permit Year 2 and Permit Year 3.	Nick Cristofori, CEI

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Stormwater Management Program (SWMP) Plan 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, I certify that the information submitted is, to 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.

Name: _____ Title: _____

Signature: _____ Date: _____

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1 Introduction

Amesbury is one of many Massachusetts communities regulated under the Environmental Protection Agency's (USEPA) National Pollutant Discharge Elimination System (NPDES) Phase II rule (40 CFR 122). The rule requires regulated operators of municipal separate storm sewer systems (MS4) to develop a Stormwater Management Program (SWMP) and Best Management Practices (BMPs) to reduce the impacts of stormwater discharges. The requirements are outlined in the NPDES General Permits for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems in Massachusetts, which was signed on April 4, 2016, with an effective date of July 1, 2018, hereinafter referred to as the 2016 MS4 Permit.

This SWMP Plan describes and details the activities and measures that are being implemented to meet the terms and conditions of the permit.

1.1 Regulatory Background

The Stormwater Phase II Final Rule was promulgated in 1999 and was the next step after the 1987 Phase I Rule in USEPA'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 operators of Small MS4s in urbanized areas, through the use of National Pollutant Discharge Elimination System (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 Area are required to seek NPDES permit coverage for those stormwater discharges.

On May 1, 2003, EPA Region 1 issued its Final General Permit for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems (2003 MS4 Permit) consistent with the Phase II rule. The 2003 MS4 Permit covered "traditional" (i.e., cities and towns) and "non-traditional" (i.e., certain Federal and state agencies and/or facilities) 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 USEPA's 2016 NPDES General Permit for Stormwater Discharges from MS4 in Massachusetts, hereafter referred to as the "2016 Massachusetts MS4 Permit", "2016 Permit", "MS4 Permit, and/or "2016 MS4 Permit" which replaces the 2003 MS4 Permit.

The 2016 Massachusetts MS4 Permit was signed on April 4, 2016 with an original effective date of July 1, 2017, however was postponed by 1 year to a new effective date of July 1, 2018. The permit was cosigned by the Massachusetts Department of Environmental Protection (MassDEP) and thus is jointly regulated by EPA and MassDEP for Massachusetts permittees. After several years of litigation, the permit was updated in December 2020 with a revised effective date of January 6, 2021. Authorization to discharge expires at June 30, 2022.

The following sections outline how the City of Amesbury is meeting Phase II regulatory and schedule requirements.

1.2 MS4 Program

As required by the 2016 MS4 Permit, the City of Amesbury submitted an NOI and required accompanying information, including endangered species, historic preservation, and an outfall map to EPA Region 1 on October 1, 2018 (**Appendix A**) requesting authorization to discharge under the new permit. Amesbury received official authorization to discharge stormwater from its MS4 on April 22, 2019 as per the letter from USEPA provided in **Appendix A**. Authorization to discharge expires at June 30, 2022.

This Stormwater Management Program Plan has been developed by the City of Amesbury to detail the activities and measures outlined in the NOI to address the requirements of the 2016 MS4 Permit. This SWMP Plan documents BMPs, plans, activities, and measures that have been implemented to date, those that are ongoing, and those proposed for the future to comply with the 2016 MA MS4 Permit. This is a "living" document and will be updated and/or modified as required during the permit term as the City's activities are modified, changed or updated to meet permit conditions. The plan has been organized to allow these updates to primarily occur within the appendices.

This permit in part requires that each permittee, or regulated community, address 6 Minimum Control Measures (MCMs). These measures include the following:

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

In addition to the 6 MCMs above, permittees must also address water quality impacts from waterbodies with approved Total Maximum Daily Loads (TMDLs) and certain impairments, generally known as water quality limited waterbodies.

The City of Amesbury is a member of the Merrimack Valley Stormwater Collaborative (MVPC) (www.merrimackvalleystormwater.org) which is a coalition of 15 communities working together on regional approaches to cost-effective stormwater management. The Collaborative is focused on intermunicipal coordination in training, public education and best management practices implementation, all key elements in each community's Stormwater Management Program and compliance with federal Environmental Protection Agency's NPDES Phase II regulations and the MS4 Permit for Massachusetts.

1.3 Regulated Area

Requirements of the 2016 MS4 Permit are limited to a regulated area, defined as the City's Urbanized Area (UA) which generally constitute the largest and most dense areas of settlement in a region. The Bureau of the Census determines UAs by applying a detailed set of published UA criteria to the latest decennial census data. Although the full UA definition is complex, the Bureau of the Census' general definition of a UA, based on population and population density, is provided below:

> *"An urbanized area (UA) is a densely settled core of census tracts and/or census blocks that have population of at least 50,000, along with adjacent territory containing non-residential urban land uses as well as territory with low population density included to link outlying densely settled territory with the densely settled core. It is a calculation used by the Bureau of the Census to determine the geographic boundaries of the most heavily developed and dense urban areas."*

Figure 1-1 shows the UA in the City of Amesbury which covers the entirety of the city limits.

1.4 How to Use this Plan

For the purposes of the 2016 MS4 Permit and ease of use, the City's SWMP encompasses four separate written documents:

1. SWMP Plan (this document);
2. Illicit Discharge Detection and Elimination (IDDE) Plan (standalone document);
3. Operation and Maintenance (O&M) Plan (standalone document);
4. Stormwater Pollution Prevention Plan (SWPPP) (standalone document);

This SWMP Plan is divided into several sections and includes the following components:

Section 2 **City Characteristics** – Section 2 provides an overview of relevant characteristics, focusing on those aspects related to stormwater runoff and the water quality of surface waters.

Section 3 **MCM 1: Public Education and Outreach** – regulated operators of MS4s are required to implement a public education program. Section 3 discusses activities to comply with this measure.

Section 4 **MCM 2: Public Participation and Involvement** – regulated MS4s are required to obtain public participation throughout the stormwater management program. Section 4 discusses activities to comply with this measure.

Section 5 **MCM 3: Illicit Discharge, Detection, and Elimination** – regulated MS4s must develop and implement an illicit discharge detection and elimination program and develop a regulation to prohibit illicit discharges

to the storm drain system. Section 5 discusses activities to comply with this measure.

Section 6 **MCM 4: Construction Site Stormwater Runoff Control** – regulated MS4s are required to implement and enforce a program to reduce pollutants in stormwater runoff from construction activities that disturb 1 or more acres. This requires the development of a local regulation requiring implementation of proper erosion and sediment controls. Permittees are also responsible for inspections and enforcement. Section 6 discusses activities to comply with this measure.

Section 7 **MCM 5: Stormwater Management in New Development and Redevelopment** – regulated MS4s are required to develop and enforce a regulation requiring implementation of post-construction runoff controls at sites where construction activities disturb 1 or more acres. The controls must be designed to treat stormwater runoff from post-development sites and must be maintained over the long-term. Section 7 discusses activities to comply with this measure.

Section 8 **MCM 6: Good Housekeeping and Pollution Prevention** – regulated MS4s must review their infrastructure operations and those at specific facilities and make improvements where needed to minimize stormwater pollution. Operations and maintenance procedures must be documented in writing. Section 8 discusses activities to comply with this measure.

Section 9 **TMDL and Impaired Waters Controls** – regulated MS4s are required to evaluate and address stormwater contributions to impaired waters. Section 9 discusses activities to comply with this measure.

Section 10 **Annual Reporting** – Section 10 provides a summary of annual reporting requirements in order to meet the 2016 MS4 Permit.

Section 11 **Program Evaluation, Records, and Reporting** – Section 11 provides a summary of ongoing program updates, recordkeeping, and reporting requirements.

1.5 Program Responsibilities

This plan is intended to be used by City of Amesbury staff whose job involves administering the MS4 permit and associated requirements. The City's MS4 program is headed by the following personnel (**Table 1-1**):

Table 1-1. MS4 Responsible Personnel

Name	Title, Department	Contact
Robert Desmarais, P.E..	Director of Public Works	(978) 388-8166 rob@amesburyma.gov
Peter Manor	City Engineer	(978) 388-8116 manorp@amesburyma.gov

The City of Amesbury has six departments responsible for implementing portions of its MS4 program as identified in the NOI. **Table 1-2** provides a list of responsible departments and their general responsibilities within the MS4 program. The responsible person is the most senior person within each department listed below. The names of the responsible personnel are not provided so as to avoid the plan frequently becoming out of date due to changes in personnel and positions.

Table 1-2. Program Responsibilities

Department / Division	General Responsibilities
Engineering	Information distribution for public education; public participation; sanitary sewer overflows; system mapping; IDDE program development and implementation; employee training; system screening; site plan review; site inspections and enforcement; regulatory review and updates; target properties to reduce impervious areas and for BMP retrofit; as-built review; develop O&M procedures; and SWPPP development.
Conservation Commission	Information distribution for public education; site plan review; and site inspections and enforcement
Planning Board	Information distribution for public education; ordinance and regulation development; site inspections and enforcement; regulatory review and updates; target properties to reduce impervious areas and for BMP retrofit; and as-built review.
Public Works	Information distribution for public education; public participation; sanitary sewer overflows; employee training; develop O&M procedures; catch basin cleaning; street sweeping; winter road maintenance; stormwater BMP inspections; and SWPPP development.
Lakes and Waterways Commission	Public participation.
Inspectional Services	As-built review and develop O&M procedures.

2 City Characteristics

This section provides some background information on the City of Amesbury, Massachusetts, useful in understanding the City's characteristics and resources to develop a tailored Stormwater Management Plan. City characteristics are described below.

2.1 Community Information

Amesbury is a community located on the Massachusetts and New Hampshire border situated directly on the Merrimack River. It is generally bordered by Merrimac to the west, West Newbury and Newburyport to the south across the river, Salisbury to the east, and Southampton to the north. Select relevant community profile information is provided below:

- Total Area = 13.7 square miles *(source: Wikipedia)*
- 2120 Full-Time Population = 16,270 *(source: EPA maps based on 2010 US Census)*
- 2010 Urbanized Area Population = 16,270 *(source: EPA maps based on 2010 US Census)*

2.2 Land Use

The types of land use within the regulated area of the City of Amesbury as of 2018 are shown on **Figure 2-1** and provided below. Impervious area is shown on **Figure 2-2**.

- Commercial 3.0%
- Forest 45.2%
- Industrial 2.3%
- Open Land and Agriculture 15.5%
- Residential 21.7%
- Highway 2.3%
- Water 9.9%

As shown above, Amesbury has substantial forest, open land, and water/wetland area (approximately 70%), with much of the remaining land uses consisting of residential development (approximately 22%). Remaining land use (approximately 8%) consists largely of roadways and commercial/industrial development.

2.3 303(d) Impaired Waterbodies

The ultimate goal of this Stormwater Management Plan is to outline a program to effectively maintain the City's stormwater infrastructure and to improve the water quality of receiving waters (waters which receive stormwater discharges from the MS4) in compliance with the 2016 MS4 Permit. As part of the 2016 MS4 Permit, communities must implement BMPs to address waters with an approved Total Maximum Daily Load (TMDL) as of the issuance date of the permit (April 4, 2016) and to address water quality limited waters, including but not limited to waters listed in categories 4a, 4c, or 5 on the Massachusetts Integrated Report of waters listed pursuant to Clean Water Act section 303(d) and 305(b). **Table 2-1** lists the "impaired waters" for which Amesbury must meet MS4 permit requirements based on the Final 2016 Massachusetts Integrated List of Waters produced by MassDEP every 2 years[1].

[1]Note that at the time of preparation of this plan (December 2021), the 2016 303d list is the most up to date finalized 303d List as approved by USEPA on December 2019

These waterbodies are shown on **Figure 2-3**. Amesbury will review changes as new lists are published and update this plan as required .

Table 2-1. Impaired Waters

Waterbody Name	Segment ID and Category		Impairment(s)	Approved TMDL[2]
Back River	MA84A-16	5	Turbidity	
			E.coli	
			Sedimentation / Siltation	
Lake Attitash	MA84002	5	Harmful Algal Blooms	
			Mercury in Fish Tissue	
Merrimack River	MA84A-05	5	Enterococcus	
			PCB in Fish Tissue	
Merrimack River	MA84A-06	5	Enterococcus	
			PCB in Fish Tissue	
			Fecal Coliform	
Powwow River	MA84A-08	5	E.coli	
Powwow River	MA84A-25	5	E.coli	
Powwow River	MA84A-28	5	Fecal Coliform	
			Total Suspended Solids	
			Turbidity	
Unnamed Tributary	MA84A-30	5	E.coli	

Category 5 Waters – impaired waters that require a TMDL.

Amesbury will meet the requirements for water quality limited waterbodies related to bacteria, turbidity, total suspended solids (TSS) sedimentation / siltation as outlined further in **Section 9**. Remaining parameters do not have any requirements as outlined in the 2016 MS4 Permit.

2.4 Measures to Protect Surface Drinking Water Supplies

Amesbury's drinking water source watershed encompasses approximately 55 square miles, most of which reside in New Hampshire. Tuxbury Pond feeds the Powow River, which the treatment plant draws from. Lake Attitash and Meadowbrook also supplement the water source seasonally and in times of drought. Much of the contributing watershed around Tuxbury Pond and the Powow River is forested or wetland area, with only small areas of low density residential located primarily along Tuxbury Pond. Drainage infrastructure around Tuxbury Pond and the Powow River is generally limited to one or two catch basins that then discharge to an outfall pipe. Approximately 10 outfalls are located in this area, all of which discharge stormwater from minimally traveled roadways meaning that major spill likelihood is minimal. Previously completed dry weather outfall screening has not indicated the presence of likely sanitary sewer illicit discharges in this area.

[2]"Approved TMDLs" are those that have been approved by EPA as of the date of issuance of the 2016 Permit.

Development around Lake Attitash is more extensive, with medium to high density residential development located around the shore of much of the lake. Approximately 20 outfalls are located around Lake Attitash and generally receive runoff from more extensive drainage systems, however, roadways are still minimally traveled and service mostly residential properties meaning that major spill likelihood is minimal. In response to threats posed to water quality within Lake Attitash, the City has completed multiple projects over the years, including completion of the following reports:

- Lake Attitash Watershed Management Plan completed by CDM Smith in 1999;
- Lake Attitash Assessment Report completed by H. Snook/EPA in 2014;
- Development of a Management Plan for Lake Attitash, Amesbury and Merrimac, Massachusetts by WRS in 2016; and
- Lake Attitash Watershed Based Plan completed by the City of Amesbury Department of Public Works in 2017.

As a result of the above efforts, the following implementation projects have been successfully completed in and around Lake Attitash to date:

- Watershed Restoration/Assessment: DCR Watershed Demonstration BMPs, completed in 2006;
- Stormwater Treatment Program: structural and outreach/education BMPs funded through a s319 grant, completed in 2006;
- Watershed Restoration: structural and outreach/education BMPs funded through a s319 grant, completed in 2014; and
- Internal Phosphorus Load Inactivation project funding through a s319 grant, completed in 2020.

The above projects outline the steps that the City has taken to date to help protect its surface drinking water supplies over the past two decades. The city does not currently plan on using any additional surface waterbodies located within city boundaries for public drinking water supplies in the near future and implementation of the SWMP helps protect water quality in all receiving waterbodies. **Figure 2-4** shows the surface drinking water supply as well as other mapped stormwater infrastructure.

2.5 Endangered Species Act Determination

In order to be eligible to discharge stormwater under the 2016 MS4 Permit, the City of Amesbury must certify that its stormwater system is not impacting federally listed rare or endangered species habitat or other critical environmental locations. This was completed in the summer of 2018 as meeting "Criterion C" on the Notice of Intent (**Appendix A**). The Northern Long-eared Bat *(Myotis septentrionalis)* was the only species identified as potentially being present within Amesbury's regulated area. No critical habitats were identified.

2.6 National Historic Preservation Act Determination

Regulated MS4s must also evaluate whether its discharges have the potential to affect historic properties. If there have been no relevant changes in existing discharges since the 2003 MS4 General Permit, the discharge can still be considered to have no potential to have an effect on historic properties. This has been documented as "Criterion A" on the Notice of Intent (**Appendix A**) and thus no additional information is required for documentation.

Where there is disturbance of land through the construction and/or installation of control measures, there is a possibility that artifacts, records, or remains associated with historic properties could be impacted. In these cases, such as during future construction of structural stormwater BMPs, the City will ensure that historic properties will not be impacted by their activities, or that they are in compliance with a written agreement with the State Historic Preservation Officer (SHPO), Tribal Historic Preservation Officer (THPO), or other tribal representative that outlines all measures the applicant will carry out to mitigate or prevent any adverse effects on historic properties. This will be completed as required.

3 MCM 1: Public Education and Outreach

3.1 Summary of Permit Requirements

3.1.1 Core Permit Requirements

Under MCM 1, permittees must develop an educational program, define educational goals, express specific messages, define the targeted audience for each message, and identify responsible parties for program implementation. At a minimum, the program must provide information concerning the impact of stormwater discharges on water bodies within the community, especially those waters that are impaired or identified as priority waters. The program must identify steps and/or activities that the public can take to reduce the pollutants in stormwater runoff and their impacts to the environment.

Permittees must address 4 core target audiences, unless 1 of these audiences is not present in the MS4 community. The targeted audiences and educational topics requiring consideration under the permit are outlined below:

1. Residents
   - Effects of outdoor activities such as lawn care (use of pesticides, herbicides, and fertilizers) on water quality;
   - Benefits of appropriate on-site infiltration of stormwater;
   - Effects of automotive work and car washing on water quality;
   - Proper disposal of swimming pool water;
   - Proper management of pet waste; and
   - Maintenance of septic systems.

2. Businesses, Institutions, and Commercial Facilities
   - Proper lawn maintenance (use of pesticides, herbicides and fertilizer);
   - Benefits of appropriate on-site infiltration of stormwater;
   - Building maintenance and storage of materials;
   - Proper use and storage of salt or other de-icing and anti-icing materials;
   - Proper management of waste materials and dumpsters;
   - Proper management of parking lot surfaces;
   - Proper car care activities; and
   - Proper disposal of swimming pool water by entities such as motels, hotels, and health and country clubs.

3. Developers and Construction
   - Proper sediment and erosion control management practices;
   - Information about Low Impact Development (LID) principles and technologies; and
   - Information about EPA's construction general permit (CGP).

4. Industrial facilities
    - Equipment inspection and maintenance;
    - Proper storage of industrial materials (emphasizing pollution prevention);
    - Proper management of dumpsters;
    - Minimization of use of salt or other de-icing/anti-icing materials;
    - Proper storage of salt or other de-icing/anti-icing materials;
    - Benefits of appropriate on-site infiltration of stormwater runoff from areas with low exposure to industrial materials such as roofs or employee parking;
    - Proper maintenance of parking lot surfaces (sweeping); and
    - Requirements for coverage under EPA's multisector general permit (MSGP).

At least 2 educational messages must be distributed to each audience over the permit term spaced at least a year apart. See sections below for more information.

3.1.2 TMDL & Impaired Waters Requirements

Public education and outreach programs must also address impaired waterbodies or those identified as priority waters. As noted in **Table 2-1**, Amesbury has several waterbodies throughout the community that are listed as impaired for bacteria which are considered high priority. Therefore, relevant public information on bacteria topics as outlined in the 2016 MS4 Permit, and summarized below, are included within the education program:

- Annual message encouraging the proper management of pet waste, including noting any existing ordinances where appropriate;
- Distribute educational materials to dog owners with license issuance or renewal;
- Describe detrimental impacts of improper pet waste management, requirements for waste collection and disposal, and penalties for non-compliance; and
- Provide information to owners of septic systems about proper maintenance.

Due to the extent of impaired waters present throughout the City, each message will be distributed community-wide. For details, see the following sections.

3.2 Objectives and Goals

The City of Amesbury implements an education program that includes educational goals based on stormwater issues of significance within the MS4 area, increase knowledge, and change behavior of the public so that pollutants in stormwater are reduced.

3.3 Public Education Program

The City is a member of the Greenscapes North Shore Coalition (www.greenscapes.org) which is a collaborative of municipalities and partner organizations, focusing on stormwater and watershed related issues. Specifically, Greenscapes provides outreach and education to support municipal compliance with water-related regulatory requirements, including the MS4 Stormwater and the Water Management Act permits. **Tables 3-1** through **3-4**

summarize Amesbury's public education program, by targeted audience, to meet the requirements of the 2016 MS4 Permit.

3.4 Measuring Public Education Program Effectiveness

During completion of the City's annual report as detailed further under **Section 10**, Amesbury will review the effectiveness of each message and the City's overall education program. Effectiveness is expected to vary by message, however will generally be measured based on the quantity of materials distributed and feedback from applicable city employees based on general observations in their area of work. Educational messages and/or distribution techniques for any of the target audiences will be modified as needed, should program managers determine that they are ineffective.

Table 3-1. Residential Public Outreach (BMP ID# 1-1)

BMP	BMP Description	Responsible Parties	Measurable Goal
2020-2021 Trash and Recycling Flyer	Six page flyer mailed to residents annually and posted on the City's website with information on the disposal of yard waste at the Compost Site.	Engineering	Track number of visitors to web page and notices published annually.
Household Hazardous Waste Program	Publish dates for community HHW events on the City's website and in the local newspaper.	Engineering	Track volume of HHW collected annually.
Stormwater Management and BMPs	Overall plan for public education and outreach on stormwater management and BMPs at both local and regional levels.	Engineering	Review and expand on-going public education program to all 4 target audiences by updating web page and printed materials on a periodic basis
Storm Drain Markers and Stenciling	Continue program of marking and stenciling storm drain and catch basin locations to alert public of receiving waters impacted by stormwater discharges.	Engineering with volunteers	Complete installation of markers on curbs and painted stencils

Table 3-2. Businesses, Institutions, and Commercial Public Outreach (BMP ID# 1-2)

BMP	BMP Description	Responsible Parties	Measurable Goal
Snow Removal and Ice Control Policy & Procedures	Policy and procedures for snow removal and ice control available for viewing on the City's website and for distribution in brochure/pamphlet format.	Engineering	Distribute and maintain list of businesses that receive brochures/pamphlets annually
Landscaping Practices and Fertilizer Use	Provide guidance on landscaping practices and fertilizer use available for viewing on the City's website and for distribution in brochure/pamphlet format.	Engineering	Distribute and maintain list of businesses that receive brochures/pamphlets annually.
Stormwater Management and BMPs	Overall plan for public education and outreach on stormwater management and BMPs at both local and regional levels.	Engineering	Review and expand on-going public education program to all 4 target audiences by updating web page and printed materials on a periodic basis
Storm Drain Markers and Stenciling	Continue program of marking and stenciling storm drain and catch basin locations to alert public of receiving waters impacted by stormwater discharges.	Engineering with volunteers	Complete installation of markers on curbs and painted stencils
Pet Waste Signs and Bag Dispensers	Provide information on managing pet waste properly through the City's Dog License Application available for viewing on the City's website and the installation of pet waste signs and bag dispensers at high use areas.	Public Works and Engineering	Install pet waste signs and bag dispensers at high use areas.

Table 3-3. Developers and Construction Public Outreach (BMP ID# 1-3)

BMP	BMP Description	Responsible Parties	Measurable Goal
Erosion and Sedimentation Control	Provide guidance on erosion and sedimentation control available for viewing on the City's website and for distribution in brochure/pamphlet format.	Conservation Commission, Planning Board, and Engineering	Distribute and maintain list of developers that receive brochures/pamphlets annually

Table 3-3 (continued). Developers and Construction Public Outreach (BMP ID# 1-3)

BMP	BMP Description	Responsible Parties	Measurable Goal
Low Impact Development Practices	Provide guidance on low impact development practices available for viewing on the City's website and for distribution in brochure/pamphlet format.	Planning Board	Distribute and maintain list of developers that receive brochures/pamphlets annually.
Stormwater Management and BMPs	Overall plan for public education and outreach on stormwater management and BMPs at both local and regional levels.	Engineering	Review and expand on-going public education program to all 4 target audiences by updating web page and printed materials on a periodic basis
Storm Drain Markers and Stenciling	Continue program of marking and stenciling storm drain and catch basin locations to alert public of receiving waters impacted by stormwater discharges.	Engineering with volunteers	Complete installation of markers on curbs and painted stencils

Table 3-4. Industrial Public Outreach (BMP ID# 1-4)

BMP	BMP Description	Responsible Parties	Measurable Goal
Spill Prevention and Response	Provide guidance on spill prevention and response through the City's Industrial Pretreatment Program available for viewing on the City's website and for distribution in brochure/pamphlet format.	Waste Water (DPW) and Engineering	Distribute and maintain list of facilities that receive brochures/pamphlets annually
Chemical Storage and Waste Disposal Practices	Provide guidance on chemical storage and waste disposal practices through the City's Industrial Pretreatment Program available for viewing on the City's website and for distribution in brochure/pamphlet format.	Waste Water (DPW) and Engineering	Distribute and maintain list of facilities that receive brochures/pamphlets annually.

Table 3-4 (continued). Industrial Public Outreach (BMP ID# 1-4)

BMP	BMP Description	Responsible Parties	Measurable Goal
Stormwater Management and BMPs	Overall plan for public education and outreach on stormwater management and BMPs at both local and regional levels.	Engineering	Review and expand on-going public education program to all 4 target audiences by updating web page and printed materials on a periodic basis
Storm Drain Markers and Stenciling	Continue program of marking and stenciling storm drain and catch basin locations to alert public of receiving waters impacted by stormwater discharges.	Engineering with volunteers	Complete installation of markers on curbs and painted stencils

4 MCM 2: Public Participation and Involvement

4.1 Summary of Permit Requirements

Under MCM 2, permittees must provide annual opportunities for public participation in the review and implementation of the City's SWMP as part of a public education and involvement program. All public involvement activities must comply with state public notice requirements. The SWMP and annual reports must be made available so that the public has opportunities to review and comment.

4.2 Objectives and Goals

Amesbury implements a public participation and involvement program that provides opportunities for review and implementation of the City's SWMP. This helps support public education and outreach items under MCM 1.

4.3 Public Participation and Involvement Opportunities

This written SWMP Plan and annual reports are available for review and comment via the City's website, along with the name, email address and/or phone number of a contact person from the City government to request additional information or submit comments. This allows the public to comment on the program at least once per year. An updated SWMP Plan will be posted to the website as additional tasks are completed.

Table 4-1 summarizes Amesbury's Public Participation and Involvement Opportunities BMPs to meet the requirements of the 2016 MS4 Permit.

Table 4-1. Public Participation and Involvement Summary

BMP ID#	BMP	Description	Responsible Parties	Measurable Goal
2-1	Public Review of Stormwater Management Program		Public Works, Engineering, and Energy & Environmental Affairs	Allow annual review and posting of Stormwater Management Plan on City's website.
2-2	Public Participation in Stormwater Management Program Development	Conduct meetings to coordinate on stormwater topics.	Lakes and Waterways Commission	Allow public to comment on Stormwater Management Plan annually.

Table 4-1 (continued). Public Participation and Involvement Summary

BMP ID#	BMP	Description	Responsible Parties	Measurable Goal
2-3	Voluntary Yard Waste Disposal Program	Maintain operation of the City's Compost Site for voluntary disposal of yard waste.	Public Works	Conduct annually April through November
2-4	Catch Basin Stenciling/Markers	Schedule volunteer groups to perform stenciling of catch basins to identify receiving waters impacted by stormwater runoff discharges.	Public Works	Maintain and/or replace markers and paint faded stencils as needed.
2-5	HHW/Used Oil Collection	Schedule HHW/used oil collection events on a periodic basis annually.	Engineering	Explore alternative advertising methods to increase community awareness and participation
2-6	Pet Waste Disposal	Solicit input on proposed locations for the installation of pet waste signs and bag dispensers.	Public Works and Engineering	Maintain dispensers and restock as needed and look for additional locations to install dispensers as budget allows.

5 MCM 3: Illicit Discharge, Detection, and Elimination

5.1 Summary of Permit Requirements

Under MCM 3, permittees must implement an IDDE program to systematically find and eliminate sources of non-stormwater discharges to its MS4 and implement procedures to prevent such discharges. An "illicit discharge" is any discharge to a municipal separate storm sewer that is not composed entirely of stormwater except discharges pursuant to a NPDES permit (other than the NPDES permit for discharges from the MS4) and discharges resulting from fire-fighting activities. A summary of the required IDDE activities and timelines are provided below.

- **Legal Authority** – The IDDE program shall include adequate legal authority in the form of a currently effective ordinance, bylaw, or other regulatory mechanism to prohibit, investigate, and eliminate illicit discharges. For permittees authorized by the MS4-2003 permit such as Amesbury, the ordinance, bylaw, or other regulatory mechanism was required to be effective by May 1, 2008.

- **Sanitary Sewer Overflow** – SSOs are discharges of untreated sanitary wastewater from a municipal sanitary sewer that can contaminate surface waters, cause serious water quality problems and property damage, and threaten public health. SSOs can be caused by blockages, line breaks, sewer defects that allow stormwater and groundwater to overload the system, power failures, improper sewer design, and vandalism. Regulated communities must identify all known locations where sanitary sewer overflows (SSOs) have discharged to the MS4 within the previous 5-years. Permittees must also develop an inventory within 1-year of the effective date and update it annually. Upon detection of an SSO, the permittee must eliminate it as quickly as possible and take interim mitigation measures to minimize or eliminate the discharge of pollutants until remediation work is complete.

- **System Mapping** – Regulated communities must complete a comprehensive map of their stormwater system in 2 phases. Phase 1 must be completed within 2 years and include infrastructure such as outfalls and preliminary catchment delineations, waterbodies, open channel conveyances, interconnections with other MS4s, and structural stormwater BMPs. Phase 2 must be completed within 10 years and include information such as outfalls with high accuracy GPS location and refined catchment delineations, catch basins, manholes, pipe connectivity, and sanitary or combined sewer systems as available/applicable.

- **Written Illicit Discharge, Detection, and Elimination Plan** – The 2016 MS4 Permit requires preparation of a comprehensive written IDDE Program or IDDE Plan that provides detailed procedures for assessment and priority ranking of outfalls and interconnections, dry and wet weather outfall sampling, catchment investigation procedures, system vulnerability factor (SVF) assessment, identification of an illicit discharge, illicit discharge removal, and ongoing screening requirements. The

written IDDE Program must be prepared as a standalone IDDE Plan separate from this SWMP Plan.

- **Annual IDDE Training** – The 2016 MS4 Permit requires annual IDDE training to be provided to all employees involved in the IDDE program. Training shall, at a minimum, include information on how to identify illicit discharges and SSOs and may also include additional training specific to the functions of particular personnel and their function within the framework of the IDDE program.

5.2 Objectives and Goals

The City of Amesbury implements an IDDE program to systematically find and eliminate sources of non-stormwater discharges to its MS4 and implement procedures to prevent such discharges. The ultimate goal is to remove sources of pollution and improve water quality in receiving waterbodies.

5.3 IDDE Program

Amesbury has conducted multiple activities to identify illicit discharges. A separate written IDDE plan is available and outlines legal authority, program responsibilities, ranks catchment areas, and outlines procedures for investigation and removal in accordance with the permit. This written is updated and refined as needed to incorporate findings of field investigations. The following sections outlines Amesbury's IDDE program to meet the requirements of the 2016 MS4 Permit.

5.3.1 Establish Legal Authority

The City of Amesbury recently establish a revised ordinance to:

- Prohibit illicit discharges;
- Investigate suspected illicit discharges;
- Eliminate illicit discharges, including discharges from properties not owned by or controlled by the MS4 that discharge into the MS4 system; and
- Implement appropriate enforcement procedures and actions.

The City of Amesbury has adopted an Illicit Discharge and Connection Stormwater Ordinance under Bill Number 2020-077, adopted August 17, 2020, that addresses illicit discharges into the MS4 as required under the 2016 MS4 Permit and is provided under **Appendix B**.

5.3.2 Complete System Mapping

The City of Amesbury has already begun mapping some aspects of its stormwater system. Mapping status and accompanying maps are provided in **Appendix C**, and are being continuously updated. The City of Amesbury will continue to update its stormwater mapping by the required deadlines to include the above information. All information is

incorporated into its GIS library. Where applicable, GIS information can be exported into other formats, such as Microsoft Excel, for use with annual reporting or tracking.

5.3.3 Complete Sanitary Sewer Overflow Inventory

The City of Amesbury completed an inventory of SSOs that have discharged to the MS4 within the previous 5 years. The inventory is also included in the IDDE Plan, including the status of mitigation and corrective measures to address each identified SSO. The inventory is updated annually to as part of the City's annual report submittal to EPA in September of each year.

5.3.4 Develop and Implement Written IDDE Program

Amesbury has developed a written IDDE Plan as a separate standalone document to address the illicit discharge requirements of the 2016 MS4 Permit. This includes procedures for dry and wet weather screening on City outfalls, including those with SVFs where applicable and address select requirements of bacteria-impaired water quality limited waterbody requirements. Ongoing screening will also be performed after the conclusion of the initial sampling rounds. Amesbury is working towards implementing a comprehensive IDDE Plan and program, according to the schedule set forth in the permit.

5.3.5 Perform Dry and Wet Weather Outfall Screening

Amesbury developed an outfall sampling program under the IDDE Plan which is being implemented moving forward according to the schedule outlined in the 2016 MS4 Permit. This will include dry and wet weather screening on City outfalls, including those with SVFs where applicable. Ongoing screening will also be performed after the conclusion of the initial sampling rounds.

5.3.6 Perform Annual IDDE Training

The 2016 MS4 Permit requires annual IDDE training to be provided to all employees involved in the IDDE program. Amesbury provides annual training that at a minimum includes information on how to identify illicit discharges and may also include additional training specific to the functions of particular personnel and their function within the framework of the IDDE program. Frequency and type(s) of training will be included in the annual report.

5.4 IDDE Program Summary

The following table outlines Amesbury's IDDE program to meet permit requirements.

Table 5-1. IDDE Program Summary

BMP ID#	BMP	Description	Responsible Parties	Measurable Goal
3-1	IDDE Legal Authority		Planning Board	
3-2	Sanitary Sewer Overflow (SSO) Inventory	Develop SSO inventory in accordance with permit conditions.	Waste Water (DPW) and Engineering	Annually track and report SSO information.
3-3	Map of Storm Sewer System	Create map and update during IDDE program.	Engineering	Complete preliminary system map within 2 years of effective date of permit. Complete full system map 10 years after effective date of permit.
3-4	IDDE Program	Create written IDDE program and complete implementation within 10 years of effective date of permit.	Engineering	Conduct screening and catchment investigations in accordance with permit requirements and schedule.
3-5	Employee Training	Train employees on IDDE implementation.	Public Works and Engineering	Training occurs annually.
3-6	Conduct Dry Weather Screening	Conduct dry weather screening in accordance with outfall screening procedures and permit conditions.	Engineering	Complete within 3 years of effective date of permit.
3-7	Conduct Wet Weather Screening	Conduct wet weather screening in accordance with outfall screening procedures and permit conditions.	Engineering	Complete within 10 years of effective date of permit.

Table 5-1 (continued). IDDE Program Summary

BMP ID#	BMP	Description	Responsible Parties	Measurable Goal
3-8	On-going Screening	Conduct dry and wet weather screening as necessary.	Engineering	Complete on-going outfall screening upon completion of IDDE program.
3-9	Outfall Inventory and Priority Ranking	Identify each outfall and interconnection discharging from MS4, classify into the relevant category, and priority rank each catchment for investigation.	Engineering	Complete within one year of permit effective date.
3-10	Follow-up Ranking	Update catchment prioritization and ranking as dry weather screening information becomes available.	Engineering	Complete within three years of permit effective date.
3-11	Catchment Investigation Procedures	Develop written catchment investigation procedures and incorporate into IDDE Plan.	Engineering	Complete within 18 months of permit effective date.

5.5 Measuring IDDE Program Effectiveness

The success of the IDDE Program will be evaluated according to the following parameters:

- Storm system mapping progress;
- Number of SSOs and illicit discharges identified and removed;
- Number and percent of total outfall catchments served by the MS4 evaluated using the catchment investigation procedures;
- Updated SVF and catchment inventory and ranking;
- Dry weather and wet weather screening and sampling results;
- Estimated volume or quantity of sewage removed; and
- Number of employees successfully trained on IDDE.

The above will be tracked throughout the year and reported as part of each annual report submitted to EPA each year by September 28.

6 MCM 4: Construction Site Stormwater Runoff Control

6.1 Summary of Permit Requirements

Under MCM 4, permittees are required to implement and enforce a program to reduce pollutants in stormwater runoff discharged to the MS4 from all construction activities that result in a land disturbance of greater than or equal to 1 acre within the regulated area. This program shall also regulate disturbances less than 1 acre if they are part of a larger common plan of development or sale that would disturb 1 or more acres. A summary of the required Construction Site Stormwater Runoff Control Program activities and timelines are provided below:

- **Legal Authority** – The Construction Site Stormwater Runoff Control Program shall include adequate legal authority in the form of a currently effective ordinance, bylaw, or other regulatory mechanism to:
    - Require the use of sediment and erosion control practices at construction sites; and
    - Include controls for other wastes on construction sites.

  For permittees authorized by the 2003 MS4 permit such as Amesbury, the ordinance, bylaw, or other regulatory mechanism was required to be effective by May 1, 2008.

- **Construction Site Stormwater Runoff Control Program** – The 2016 MS4 Permit requires preparation of written Construction Site Stormwater Runoff Control Program procedures that includes the following:
    - Pre-construction plan review of the site design, planned operations, planned BMPs during the construction phase, and planned BMPs to manage runoff after development;
    - Site inspections and enforcement actions to take place both during construction of BMPs and after construction of BMPs; and
    - Requirements for construction site to implement a sediment and erosion control program that includes BMPs appropriate for the conditions at the construction site.

6.2 Objectives and Goals

The City of Amesbury implements an effective construction stormwater runoff control program to minimize or eliminate erosion and maintain sediment onsite so that it is not transported in stormwater and allowed to discharge to a water of the U.S through the permittee's MS4.

6.3 Construction Site Stormwater Runoff Control Program

The following sections outlines Amesbury's Construction Site Stormwater Runoff Control program is meeting the requirements of the 2016 MS4 Permit.

6.3.1 Establish Legal Authority

The City adopted ordinance 2020-077, An Order to Establish an Illicit Discharge and Connection Stormwater Ordinance on August 17, 2021 that regulates stormwater runoff from construction sites that disturb one or more acre and allows the City to adopt regulations that regulate stormwater runoff which have in part been incorporated into the City's Site Plan Review regulations. The City has also completed proposed revisions to its existing Subdivision Rules and Regulations to meet permit requirements, however, they have not yet been finalized. This requirement is partially met and Amesbury will work to adopt required changes to the Subdivision Rules and Regulations to meet permit requirements. Legal authority is documented in **Appendix B**.

6.3.2 Establish Written Procedures for Site Plan Review

The City adopted ordinance 2020-078, An Ordinance to Adopt Changes to the Procedures for Site Plan Review and Inspection and Enforcement for the City of Amesbury on August 17, 2021 which in part establishes written procedures as part of updated Site Plan Review regulations for site plan review of proposed construction projects, including plans, calculations, and other items as required by the permit.

6.3.3 Establish Procedures for Site Inspections and Enforcement

The City adopted ordinance 2020-078, An Ordinance to Adopt Changes to the Procedures for Site Plan Review and Inspection and Enforcement for the City of Amesbury on August 17, 2021 which in part requires inspections to be completed in accordance with the Subdivision Rules and Regulations requirements, however, these have not yet been adopted. This requirement is partially met and Amesbury will work to adopt required changes to the Subdivision Rules and Regulations to meet permit requirements.

6.3.4 Establish a Sediment and Erosion Control Program

The City adopted ordinance 2020-078, An Ordinance to Adopt Changes to the Procedures for Site Plan Review and Inspection and Enforcement for the City of Amesbury on August 17, 2021 which in part requires establishing erosion and sedimentation controls and also references the Subdivision Rules and Regulations, however, these have not yet been adopted. This requirement is partially met and Amesbury will work to adopt required changes to the Subdivision Rules and Regulations to meet permit requirements.

6.4 Construction Site Stormwater Runoff Control Program Summary

The following table outlines Amesbury's Construction Site Stormwater Runoff Control program to meet permit requirements.

Table 6-1. Construction Site Stormwater Runoff Control Program Summary

BMP ID#	BMP	Description	Responsible Parties	Measurable Goal
4-1	Sediment and Erosion Control Ordinance	Amesbury Subdivision Rules and Regulations, Section 8.08 as amended by DPW	Planning Board	
4-2	Site Plan Review Procedures	Complete written procedures of site plan review and begin implementation.	Planning Board, Conservation Commission, and Engineering	Conduct site plan review of 100% of projects according to the procedures outlined above.
4-3	Site Inspections and Enforcement of Sediment and Erosion Control Measures Procedures	Adoption of requirements for construction operators to implement a sediment and erosion control program.	Planning Board, Conservation Commission, and Engineering	Inspect 100% of construction sites as outlined in the above document and take enforcement actions as needed.
4-4	Waste Control	Adoption of requirements to control wastes, including but not limited to discarded building materials, concrete truck wash out, chemicals, litter, and sanitary wastes.	Planning Board, Conservation Commission, and Engineering	Complete within 1 year of effective date of permit.

7 MCM 5: Stormwater Management in New Development and Redevelopment

7.1 Summary of Permit Requirements

Under MCM 5, permittees shall develop, implement, and enforce a program to address post-construction stormwater runoff from new development and redevelopment sites that disturb 1 or more acres and discharge into an MS4 system. This program shall also regulate disturbances less than 1 acre if they are part of a larger common plan of development or sale that would disturb 1 or more acres. A summary of the required Stormwater Management in New Development and Redevelopment, also known as Post Construction Stormwater Management, activities and timelines are provided below:

- **Legal Authority –** The Post Construction Stormwater Management Program shall include adequate legal authority in the form of a currently effective ordinance, bylaw, or other regulatory mechanism to:
    - Require LID site planning and design strategies;
    - Meet many of the requirements of the Massachusetts Stormwater Handbook and associated stormwater standards;
    - Incorporate runoff volume storage and/or pollutant removal requirements; and
    - Meet additional requirements for TMDL and water quality limited waterbodies.

  Updates must be made within 3 years of the effective permit date.

- **As-Built Submittals –** The permittee must require the submission of as-built drawings within 3 years after completion of construction projects and include structural and non-structural controls.

- **Operation and Maintenance –** The program must include procedures to ensure adequate long-term operation and maintenance of BMPs are established after completion of a construction project, along with a dedicated funding source within 3 years of the effective permit date.

- **Regulatory Assessment –** The permittee must complete an assessment of existing regulations that could affect creation of impervious cover to determine if changes are required to support LID. Additionally, the permittee must assess current regulations to ensure that certain green infrastructure is allowable where feasible. Any required changes must be completed within 4 years of the effective permit date.

- **Inventory of Potential Retrofit Sites –** The permittee must complete an inventory of municipal properties with significant impervious cover within 4 years of the effective permit date to determine at least 5 properties that could be modified or retrofitted with stormwater BMP improvements. As BMPs are constructed, the inventory should be updated so that it always contains at least 5 sites in the inventory

for potential improvement.

7.2 Objectives and Goals

The City of Amesbury implements and enforces a program to reduce pollutants in stormwater runoff discharged to the MS4 from all construction activities that result in a land disturbance greater than or equal to 1 acre within the regulated area.

7.3 Post-Construction Stormwater Management Program

The following sections outlines Amesbury's Post-Construction Stormwater Management Program to meet the requirements of the 2016 MS4 Permit.

7.3.1 Establish Legal Authority

The City has prepared proposed revisions to the existing Subdivision Rules and Regulations that will include the following once adopted:

1. Use LID site planning and design strategies unless in feasible;
2. Stormwater management system designs shall be consistent with, or more stringent than, the requirements of the 2008 Massachusetts Stormwater Handbook, as amended;
3. Stormwater management systems on new development shall be designed to meet an average annual pollutant removal equivalent to 90% of the average annual load of Total Suspended Solids (TSS) related to the total post-construction impervious area on the site AND 60% of the average annual load of Total Phosphorus related to the total postconstruction impervious surface area on the site as calculated based on the average annual loading and not on the basis of any individual storm event.
    a) Average annual pollutant removal requirements are achieved through one of the following methods:
        1) Installing BMPs that meet the pollutant removal percentages based on calculations developed consistent with EPA Region 1's BMP Accounting and Tracking Tool (2016) or other BMP performance evaluation tool provided by EPA Region 1, where available. If EPA Region 1 tools do not address the planned or installed BMP performance, then any federally or State-approved BMP design guidance or performance standards (e.g., State stormwater handbooks and design guidance manuals) may be used to calculate BMP performance; or
        2) Retaining the volume of runoff equivalent to, or greater than, one inch multiplied by the total post-construction impervious surface area on the new development site; or
        3) Meeting a combination of retention and treatment that achieves the above standards; or
        4) Utilizing offsite mitigation that meets the above standards within the same USGS HUC12 as the new development site.

4. Stormwater management systems on redevelopment sites shall be designed to meet an average annual pollutant removal equivalent to 80% of the average annual postconstruction load of TSS related to the total post-construction impervious area on the site AND 50% of the average annual load of Total Phosphorus related to the total post-construction impervious surface area on the site as calculated based on the average annual loading and not on the basis of any individual storm event.
    b) Average annual pollutant removal requirements are achieved through one of the following methods:
        1) Installing BMPs that meet the pollutant removal percentages based on calculations developed consistent with EPA Region 1's BMP Accounting and Tracking Tool (2016) or other BMP performance evaluation tool provided by EPA Region 1, where available. If EPA Region 1 tools do not address the planned or installed BMP performance, then any federally or State-approved BMP design guidance or performance standards (e.g., State stormwater handbooks and design guidance manuals) may be used to calculate BMP performance; or
        2) Retaining the volume of runoff equivalent to, or greater than, 0.8 inch multiplied by the total post-construction impervious surface area on the redeveloped site; or
        3) Meeting a combination of retention and treatment that achieves the above standards; or
        4) Utilizing offsite mitigation that meets the above standards within the same USGS HUC12 as the redevelopment site.
    a) Redevelopment activities that are exclusively limited to maintenance and improvement of existing roadways, (including widening less than a single lane, adding shoulders, correcting substandard intersections, improving existing drainage systems, and repaving projects) shall improve existing conditions unless infeasible are exempt from part a) above. Roadway widening or improvements that increase the amount of impervious area on the redevelopment site by greater than or equal to a single lane width shall meet the requirements of part a) above.

Legal authority is documented in **Appendix B**.

7.3.2 Require Submittal of As-Built Plans

The City adopted ordinance 2020-078, An Ordinance to Adopt Changes to the Procedures for Site Plan Review and Inspection and Enforcement for the City of Amesbury on August 17, 2021 which in part requires compliance with Subdivision Rules and Regulations, however, these have not yet been adopted. Amesbury will work to adopt required changes to the Subdivision Rules and Regulations to meet permit requirements to require submittal of as-built plans.

7.3.3 Require Long Term Operation and Maintenance

The City adopted ordinance 2020-078, An Ordinance to Adopt Changes to the Procedures for Site Plan Review and Inspection and Enforcement for the City of Amesbury on August 17, 2021 which in part requires compliance with Subdivision Rules and Regulations, however, these have not yet been adopted. Amesbury will work to adopt required changes to the Subdivision Rules and Regulations to meet permit requirements to require adequate long-term operation and maintenance.

7.3.4 Complete Regulatory Assessment

The City of Amesbury has not yet performed a comprehensive review of all regulations for the above items. Although no known barriers to LID and GI exist, the City will review and update regulations to include recommendations and proposed schedules to incorporate policies and standards. Any required changes to reduce mandatory creation of impervious cover in support of LID should be made within 4 years of the effective permit date.

7.3.5 Complete Inventory of Potential BMP Retrofit Sites

The City of Amesbury will complete an inventory of municipal properties (**Appendix D**) that could be retrofitted with stormwater BMPs, along with a review of existing site conditions. This inventory will be updated continuously starting in Year 5.

7.4 Stormwater Management in New and Redevelopment Program Summary

The following table outlines Amesbury's Stormwater Management in New Development and Redevelopment program to meet permit requirements.

Table 7-1. Stormwater Management in New and Redevelopment Program Summary

BMP ID#	BMP	Description	Responsible Parties	Measurable Goal
5-1	Post-Construction Ordinance		Planning Board	
5-2	Street Design and Parking Lot Guidelines Report	Develop a report assessing requirements that affect the creation of impervious cover.	Planning and Engineering	Complete within 4 years of effective date of permit and implement recommendations of report.

Table 7-1 (continued). Stormwater Management in New and Redevelopment Program Summary

BMP ID#	BMP	Description	Responsible Parties	Measurable Goal
5-3	Green Infrastructure Report	Develop a report assessing existing local regulations to determine the feasibility of making green infrastructure practices allowable when appropriate site conditions exist.		Complete within 4 years of effective date of permit and implement recommendations of report.
5-4	List of Municipal Retrofit Opportunities	Identify at least 5 permittee-owned properties that could be modified or retrofitted with BMPs to reduce impervious areas and update annually.	Planning and Engineering	Complete within 4 years of effective date of permit and implement recommendations of report.
5-5	As-built Plans for On-site Stormwater Control	The procedures to require submission of as-build drawings and ensure long term operation and maintenance will be a part of SWMP.	Planning Board, Inspectional Services, and Engineering	Require submission of as-built plans for completed projects.

8 MCM 6: Good Housekeeping and Pollution Prevention

8.1 Summary of Permit Requirements

Under MCM 6, permittees shall develop and implement an operations and maintenance program to reduce stormwater pollution from permittee activities. This includes optimizing existing activities related to parks and open space, buildings and facilities, vehicles and equipment, and stormwater infrastructure maintenance. A summary of the required Good Housekeeping and Pollution Prevention for Permittee Owned Operations activities and timelines is provided below.

- **Operations and Maintenance Programs** – Permittees shall develop written operations and maintenance procedures for parks and open space, buildings and facilities, vehicles and equipment, winter road maintenance, stormwater infrastructure, and structural stormwater BMPs within 2 years of the effective permit date. This program shall also optimize catch basin cleaning and street sweeping, along with establishing proper storage techniques for cleaning residuals. All maintenance activities, inspections, and training shall be logged for annual reporting.

- **Stormwater Pollution Prevention Plans** – Develop and implement Stormwater Pollution Prevention Plans (SWPPPs) for municipally-owned maintenance garages, public works yards, transfer stations within 2 years of the effective permit date.

8.2 Good Housekeeping and Pollution Prevention Program

The following sections outline how Amesbury is meeting the requirements of the 2016 MS4 Permit to establish a Good Housekeeping and Pollution Prevention Program.

8.2.1 Complete Facilities O&M Plan

The City of Amesbury completed an inventory of all parks and open space, buildings and facilities where pollutants are exposed to stormwater runoff, including those coming from vehicles and equipment **(Appendix D)**. The inventory must be reviewed annually and updated as necessary. Upon completion, the City then established written procedures as part of an Operation and Maintenance Plan for the following items:

<u>Parks and Open Space</u>

- Proper use, storage, and disposal of pesticides, herbicides, and fertilizers;
- Lawn maintenance and landscaping activities to protect water quality, such as reducing mowing, lawn clippings handling, and use of alternative materials;
- Pet waste handling collection and disposal locations at all locations where pets are permitted, including signage;

- Control of waterfowl in areas where they congregate to reduce waterfowl droppings from entering the MS4s;
- Management of trash containers; and
- Addressing erosion or poor vegetative cover, particularly near a surface waterbody.

Buildings and Facilities

- Use, storage, and disposal of petroleum products and other potential pollutants.
- Materials handling training to applicable employees;
- Ensuring that Spill Prevention, Control, and Countermeasures (SPCC) Plans are in place if needed (aboveground petroleum storage greater than 1,320 gallons or underground petroleum storage greater than 42,000 gallons);
- Dumpsters and other waste management equipment; and
- Sweeping parking lots and keeping facility areas clean to reduce pollutants in runoff.

Vehicles and Equipment

- Storage of vehicles to prevent fluid leaks to stormwater;
- Fueling area evaluation, including feasibility of fueling under cover; and
- Preventing vehicle wash waters from entering surface waters or the MS4.

The City has prepared a comprehensive written O&M Plan, a standalone document separate from this SWMP Plan, that meets the above requirements. This document also includes the inventory of relevant City-owned properties.

8.2.2 Complete Infrastructure O&M Plan

The City of Amesbury has established written procedures as part of an Infrastructure Operation and Maintenance Plan to ensure that MS4 infrastructure is maintained in a timely manner to reduce the discharge of pollutants from the MS4 in accordance with the following:

Street Sweeping Prioritization Plan (**Appendix E**)

- Sweeping all streets and City-owned parking lots, with the exception of rural uncurbed roads with no catch basins or high-speed limited access highways at least 1 per year in the spring following winter sanding events;
- More frequent sweeping of targeted areas based on inspections, land use, or known water quality impacts;
- Increasing street sweeping frequency of all municipal owned streets and parking lots as needed for areas within TSS and solids-impaired watersheds; and
- For rural uncurbed roadways with no catch basins or limited access highways, either an evaluation to meet the minimum frequencies above or development and implementation of an inspection, documentation, and targeted sweeping plan.

Catch Basin Optimization Plan (**Appendix F**)

- Prioritization of catch basins located near construction activities for more frequent inspection and maintenance;
- Establishing a schedule with a goal that at the time of maintenance, no catch basin is more than 50% full;
- For catch basins that are more than 50% full during 2 consecutive inspections or cleaning events, methods for investigating the contributing drainage area for sources of excessive sediment loads;
- Establishing a plan for optimizing catch basin cleaning, inspections, and documentation; and
- Review results each year to determine next steps.

Catch Basin and Street Sweeping Residuals Management

- Ensure proper storage of catch basins cleanings and street sweepings prior to disposal or reuse such that they are not discharged to receiving waters based on available MassDEP policies.

Winter Operation and Maintenance

- Establish and implement procedures for winter road maintenance including the use and storage of salt and sand;
- Minimizing use of sodium chloride and other salts and evaluation of opportunities to use alternative materials; and
- Ensuring that snow disposal activities do not result in disposal of snow into waters of the United States.

8.2.3 Stormwater Pollution Prevention Plans

The permittee must establish written Stormwater Pollution Prevention Plans for the following permittee-owned or operated facilities: maintenance garages, public works yards, transfer stations, and other waste handling facilities where pollutants are exposed to stormwater as determined by the permittee. The City completed a SWPPP for its DPW Facility located at 39 South Hunt Road and meets all permit requirements for this facility. The SWPPP complies with the following permit requirements:

- Pollution Prevention Team;
- Facility description, identification of potential pollutant sources, and identification of stormwater controls;
- Stormwater management practices, including measures to minimize or prevent exposure, good housekeeping and preventative maintenance, spill prevention and response, erosion and sediment control, management of runoff, salt storage, employee training, and control measure maintenance; and
- Procedures for site inspections and sampling.

This SWPPP should be further updated when there is a significant change in design, construction, operation, or maintenance of the DPW Facility that affects the discharge or potential discharge of pollutants. This plan is made available in hardcopy at the DPW

Facility to members of federal, state, or local agencies during normal working hours for review upon request. Copies of the SWPPP are accessible to all persons responsible for implementing and administering it.

The SWPPP also addresses a satellite storage facility at 56 South Hunt Road that is used for storage of catch basin cleanings, street sweepings, and winter snow dumping, however, does not adequately address pollutant sources and stormwater controls at the satellite storage area. The SWPPP document will be updated to address remaining permit requirements.

8.2.4 Structural Stormwater BMP Inspections

The City of Amesbury completed an inventory (**Appendix G**) of known structural stormwater BMPs within the City's regulated area. The City also developed inspection and maintenance procedures for the various types of BMPs located within the City's regulated area. BMP inspection Standard Operating Procedures (SOPs) and results are tracked under the standalone O&M Plan under separate cover. The O&M Plan also provides logs for BMP inspection and maintenance. Stormwater BMPs are inspected annually, with results documented in **Appendix G**.

8.3 Good Housekeeping and Pollution Prevention Program Summary

The following table outlines Amesbury's Good Housekeeping and Pollution Prevention program to meet permit requirements.

Table 8-1. Good Housekeeping and Pollution Prevention Program Summary

BMP ID#	BMP	Description	Responsible Parties	Measurable Goal
5-1	Parks and Open Spaces Operations and Maintenance Procedures	Create written O&M procedures for parks and open spaces.	Public Works, Engineering, and Inspectional Services	Complete and implement within 2 years of effective date of permit.
5-2	Buildings and Facilities Operations and Maintenance Procedures	Create written O&M procedures for buildings and facilities.	Public Works, Engineering, and Inspectional Services	Complete and implement within 2 years of effective date of permit.
5-3	Vehicles and Equipment Operations and Maintenance Procedures	Create written O&M procedures for vehicles and equipment.	Public Works, Engineering, and Inspectional Services	Complete and implement within 2 years of effective date of permit.

Table 8-1 (continued). Good Housekeeping and Pollution Prevention Program Summary

BMP ID#	BMP	Description	Responsible Parties	Measurable Goal
5-4	Infrastructure Operations and Maintenance Procedures	Establish and implement program for repair and rehabilitation of MS4 infrastructure.	Public Works and Engineering	Complete within 2 years of effective date of permit.
5-5	Catch Basin Cleaning Program	Establish schedule for catch basin cleaning such that each catch basin is no more than 50% full and clean catch basins on that schedule.	Public Works	Clean catch basins on established schedule and report number of catch basins cleaned and volume of material removed annually.
5-6	Street Sweeping Program	Sweep streets and permittee-owned parking lots in accordance with permit conditions.	Public Works	Sweep all streets and permittee-owned parking lots once per year in the spring.
5-7	Winter Road Maintenance Program	Establish and implement a program to minimize the use of road salt.	Public Works	Implement salt use optimization during deicing season
5-8	Stormwater Treatment Structures Inspection and Maintenance Procedures	Establish and implement inspection and maintenance procedures and frequencies.	Public Works	Inspect and maintain treatment structures at least annually.
5-9	SWPPP	Create SWPPPs for maintenance garages, transfer stations, and other waste-handling facilities	Public Works and Engineering	Complete and implement within 2 years of effective date of permit.

9 TMDL and Impaired Waters Controls

9.1 Permit Requirements

The 2016 MS4 Permit requires regulated operators of MS4s to determine whether stormwater discharges from their MS4 contribute to any impaired waterbodies, including those subject to an approved TMDL and certain water quality limited waterbodies. Water quality limited waters are any waterbodies that do not meet applicable water quality standards, including waterbodies listed in categories "4a" and "5" on the Massachusetts Integrated List of Waters, also known as the "303(d) List". MassDEP is responsible for preparing TMDLs for many of these listed waters to identify the problem pollutant and establish water quality goals. TMDLs are prepared based on the priority assigned to the waterbody and are being completed over the course of several years.

As outlined in **Section 2.3**, the City of Amesbury is subject to the following TMDL and impaired waters requirements:

Table 9-1. TMDL and Impaired Waters Requirements

Waterbody Name	Impairment	2016 Permit Requirements
• Back River • Powwow River • Unnamed Tributary	E. coli	Appendix H, Part III
• Merrimack River • Powwow River	Fecal coliform	Appendix H, Part III
• Merrimack River	Enterococcus	Appendix H, Part III
• Back River	Sedimentation / Siltation	Appendix H, Part V
• Back River • Powwow River	Turbidity	Appendix H, Part V
• Powwow River	TSS	Appendix H, Part V

Thus, the City of Amesbury must implement control measures for discharges to impaired waters without a TMDL as summarized in the sections below.

9.2 Discharges to Water Quality Limited Waterbodies

Water quality limited waterbodies are those that have been listed on the most recent approved Massachusetts Integrated List of Waters. For Amesbury, existing water quality limited waterbodies listed in **Table 9-1** must adhere to the requirements in Appendix H of the 2016 MS4 Permit. The following sections describe those additional requirements. The City will review the most recent approved list of impaired waters as it is released and outline any additional requirements associated with the most recent list.

9.2.1 Bacteria Water Quality Limited Waterbodies

The City of Amesbury is subject to the bacteria water quality limited waterbody requirements for the waterbodies shown in **Table 9-1** and thus is required to implement the following requirements as outlined under Appendix H, Part III of the 2016 Permit:

- **Public Education** – supplement its Residential program with an annual message encouraging the proper management of pet waste and disseminate educational materials to dog owners at the time of issuance or renewal of a dog license. Education materials shall describe the detrimental impacts of improper management of pet waste, requirements for waste collection and disposal, and penalties for non-compliance. The City also must provide information to owners of septic systems about proper maintenance in any catchment that discharges to a water body impaired for bacteria or pathogens.

- **Illicit Discharge, Detection, and Elimination** – designate catchments draining to bacteria or pathogen impaired segments as "Problem Catchments" or "High" priority.

Public education requirements have been incorporated into future public education outreach components as described in **Section 3**. IDDE requirements have been incorporated into Amesbury's IDDE Plan.

9.2.2 Solids, Oil, and Grease Water Quality Limited Waterbodies

The City of Amesbury is also subject to the solids, oil, and grease water quality limited waterbody requirements for the waterbodies shown in **Table 9-1** and thus is required to implement the following requirements as outlined under Appendix H, Part V of the 2016 Permit:

9.2.3 Additional or Enhanced BMPs

The City of Amesbury must include the following additional or enhanced BMPs, in addition to the 6 MCMs outlined previously:

- **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. Any stormwater management system designed to infiltrate stormwater on commercial or industrial sites must 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 Housekeeping and Pollution Prevention –** increase street sweeping frequency of all municipal streets and parking lots to target areas with potential for high pollutant loads. This may include increased sweeping in commercial and high-density residential areas, or largely impervious drainage areas. Prioritize inspection and maintenance for catch basins to ensure that no sump is more than 50 percent full. Clean catch basins more frequently if inspection and maintenance activities indicate excessive sediment or debris loadings. Include street sweeping schedule developed to target high pollutant loads in each annual report.

Stormwater management requirements for new and redevelopment will be addressed as part of the regulatory and other program updates to be completed during future years. The City of Amesbury has addressed street sweeping requirements under Section 8.3. The catch basin cleaning program is ongoing as outlined under Section 8.3.

9.3 Impaired Waters Controls Program Summary

The following table outlines Amesbury's Impaired Waters Controls program to meet permit requirements.

Table 9-2. TMDL and Impaired Waters Controls Program Summary

BMP ID#	BMP Description	Responsible Parties	Measurable Goal
7-1	Bacteria	Public Works, Engineering, and Energy & Environmental Affairs	Adhere to requirements in part A.III of Appendix F
7-2	Solids, oils and grease	Public Works, Engineering, and Energy & Environmental Affairs	Adhere to requirements in Part V of Appendix H

10 Annual Reporting

The City of Amesbury will submit annual reports each year of the permit term. The reporting period is a one-year period commencing on the permit effective date, and subsequent anniversaries thereof, except that the first annual report under this permit shall also cover the period from May 1, 2018 to the permit effective date. The annual report is due 90 days from the close of each reporting period, or by September 28 of each year. The annual reports must contain the following relevant information which should be tracked throughout the year, and should be filed within **Appendix H**:

- A self-assessment review of compliance with the permit terms and conditions.
- An assessment of the appropriateness of the selected BMPs.
- The status of any plans or activities, including:
    - Identification of all discharges determined to be causing or contributing to an exceedance of water quality standards and description of response;
    - For discharges subject to TMDL or water quality limited waterbody requirements, identification of BMPs used to address the impairment and assessment of the BMPs effectiveness;
    - For discharges to water quality limited waters a description of each BMP and any deliverables required.
- An assessment of the progress towards achieving the measurable goals and objectives of each of the 6 MCMs:
    - Evaluation of the public education program including a description of the targeted messages for each audience; method and dates of distribution; methods used to evaluate the program; and any changes to the program.
    - Description of the activities used to promote public participation including documentation of compliance with state public notice regulations.
    - Description of IDDE activities including: status of mapping and results of the ranking and assessment; identification of problem catchments; status of all IDDE Plan components; number and identifier of catchments evaluated; number and identifier of outfalls screened; number of illicit discharges located and removed; gallons of flow removed; identification of tracking indicators and measures of progress; and employee training.
    - Evaluation of construction runoff management including number of project plans reviewed; number of inspections; and number of enforcement actions.
    - Evaluation of stormwater management for new and redevelopment including status of ordinance development; review and status of the street design and barriers to green infrastructure assessment; and inventory status.
    - Status of the O&M Programs.
    - Status of SWPPPs, including inspection results.
- All outfall screening and monitoring data during the reporting period and cumulative for the permit term; and a description of any additional monitoring data received by the City during the reporting period.
- Description of activities for the next reporting cycle.
- Description of any changes in identified BMPs or measurable goals.
- Description of activities undertaken by any entity contracted for achieving any measurable goal or implementing any control measure.

11 Program Evaluation, Records, and Reporting

In addition to the implementation activities outlined in this plan, the City will also perform the following activities throughout the duration of the permit:

1. **Program Evaluation** – conduct annual evaluations of the Stormwater Management Program for compliance with permit conditions. The evaluation must include a determination of the appropriateness of the selected BMPs in efforts towards achieving the measurable goals.

2. **Record Keeping** – maintain records that pertain to the Stormwater Management Program for a period of at least 5 years. Records need to be made available to the public and the City may charge a reasonable fee for copying. Records need not be submitted to EPA or MassDEP unless specifically requested.

3. **Reporting** – submit an annual report to EPA and MassDEP, including the information as noted in **Section 10**.

Refer to the following link for a copy of the 2016 MA MS4 Permit:
https://www.epa.gov/npdes-permits/massachusetts-small-ms4-general-permit

Figure 1-1
Urbanized Area

Amesbury, MA

Legend

- Urbanized Area
- Lake, Pond, Reservoir
- Wetland, Marsh, Swamp
- Stream, Brook

0 0.25 0.5 0.75 1

Miles

Comprehensive Environmental Incorporated

Data Sources: MassGIS, Town of Amesbury, CEI

12/22/2021

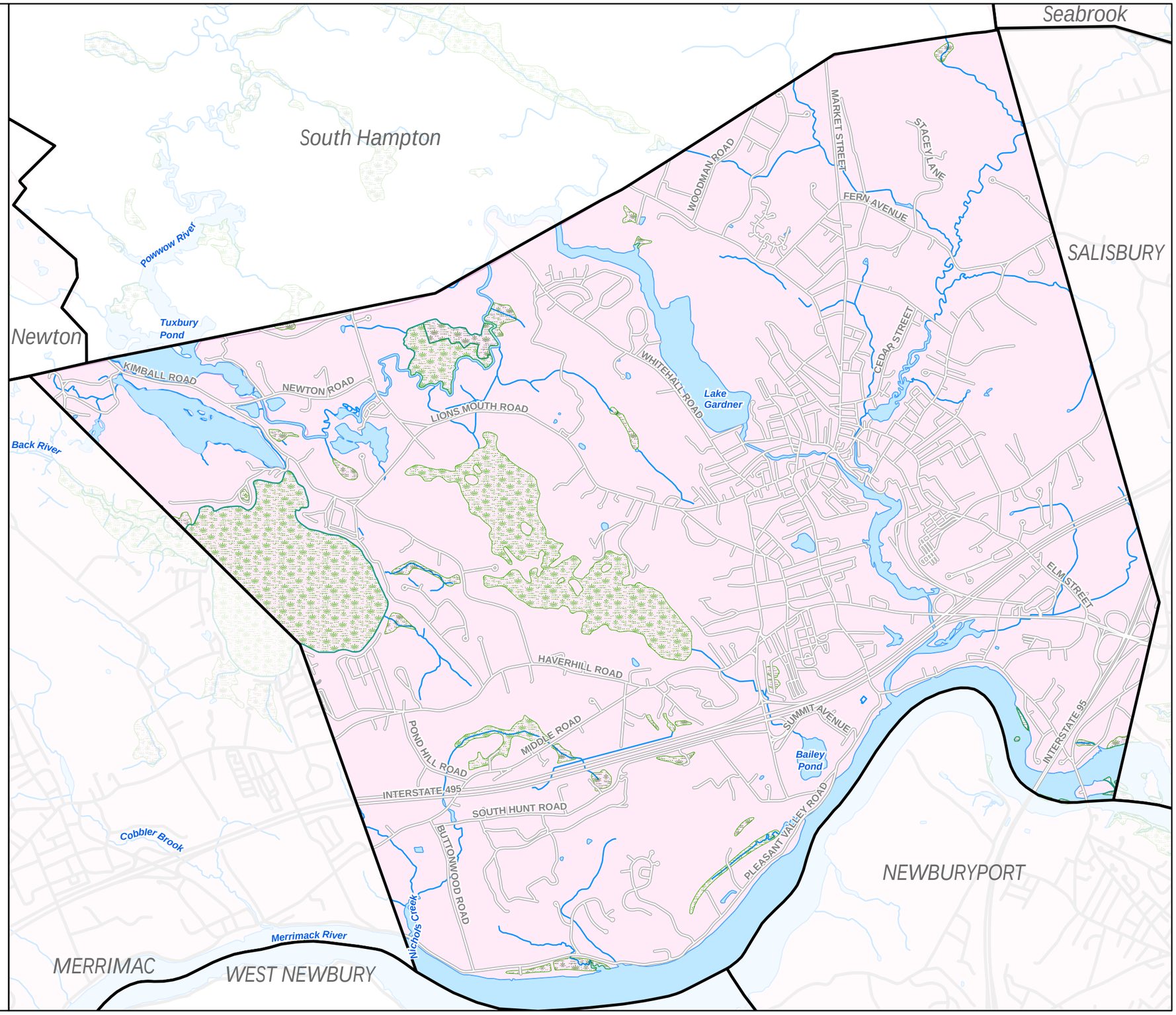

Figure 2-1
Land Use

Amesbury, MA

Legend

Land Use:
- Industrial
- Transportation
- Residential
- Commercial
- Agriculture
- Forest
- Open Land
- Lake, Pond, Reservoir
- Wetland, Marsh, Swamp
- Stream, Brook

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W E
S

0 0.25 0.5 0.75 1
Miles

Comprehensive Environmental Incorporated

Data Sources: MassGIS, Town of Amesbury, CEI

12/22/2021

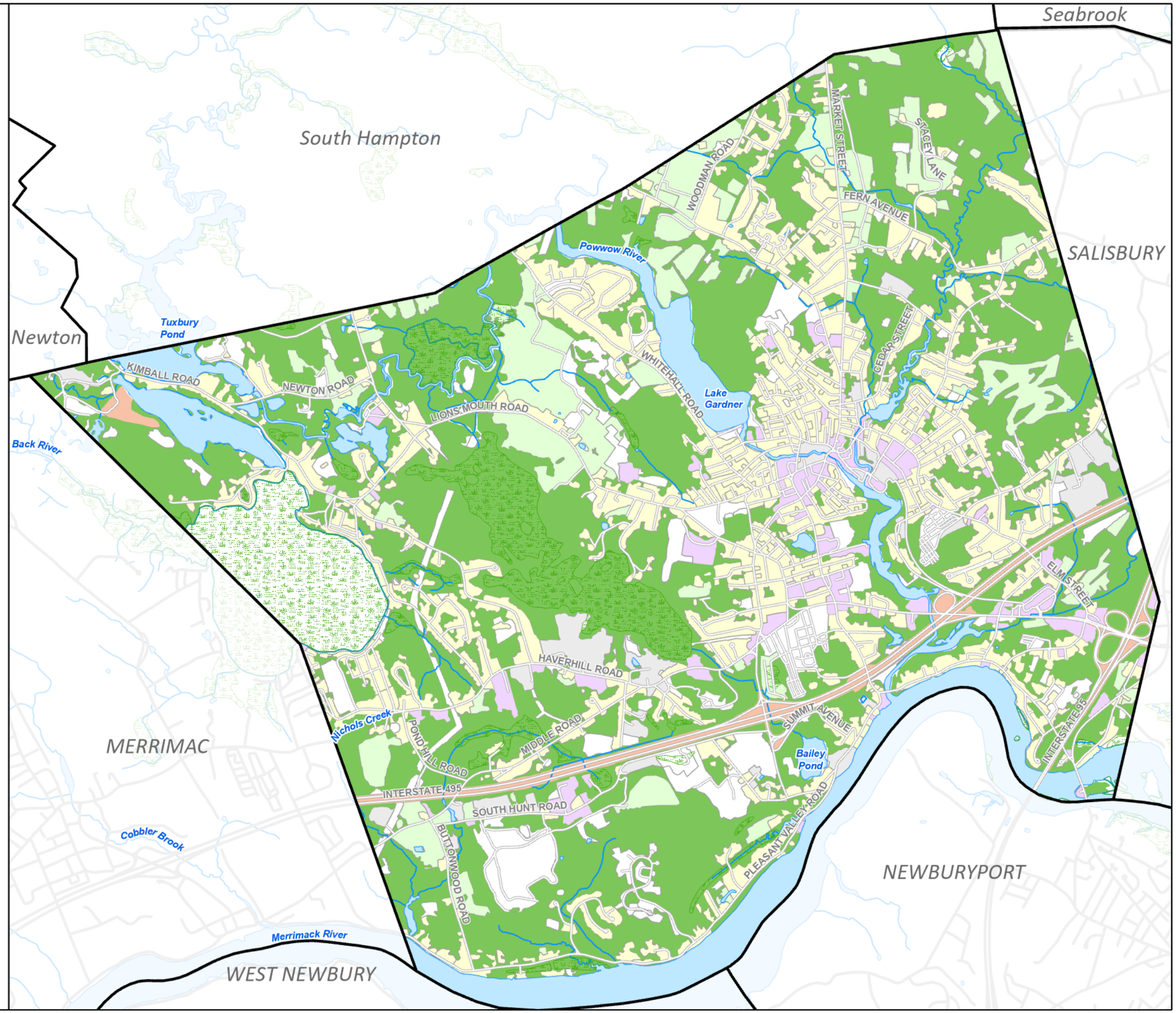

Figure 2-2
Impervious Area

Amesbury, MA

Legend

- Impervious Surface
- Lake, Pond, Reservoir
- Wetland, Marsh, Swamp
- Stream, Brook

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0 0.25 0.5 0.75 1
Miles

Comprehensive Environmental Incorporated

Data Sources: MassGIS, Town of Amesbury, CEI

12/22/2021

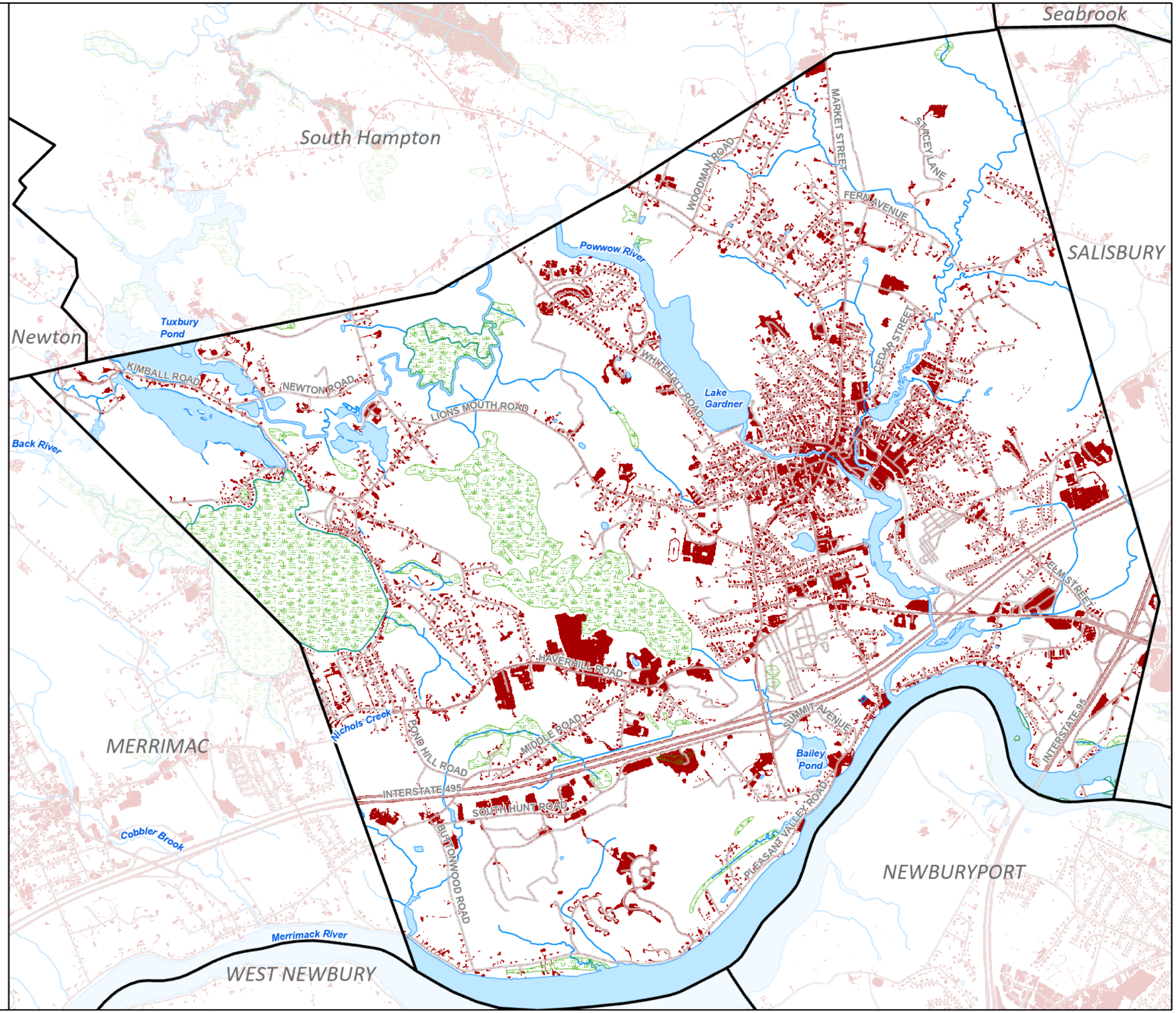

Figure 2-3
Resource Waters

Amesbury, MA

Legend

- Certified Vernal Pool
- MA DFW Coldwater Fisheries
- DEP Approved Zone I
- DEP Approved Zone II

303(d)/305(b) Impaired Waters Categories:

- Category 4C
- Category 5
- Category 3
- Category 5
- Lake, Pond, Reservoir
- Wetland, Marsh, Swamp
- Stream, Brook

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0 0.25 0.5 0.75 1
Miles

Comprehensive Environmental Incorporated

Data Sources: MassGIS, Town of Amesbury, CEI

12/22/2021

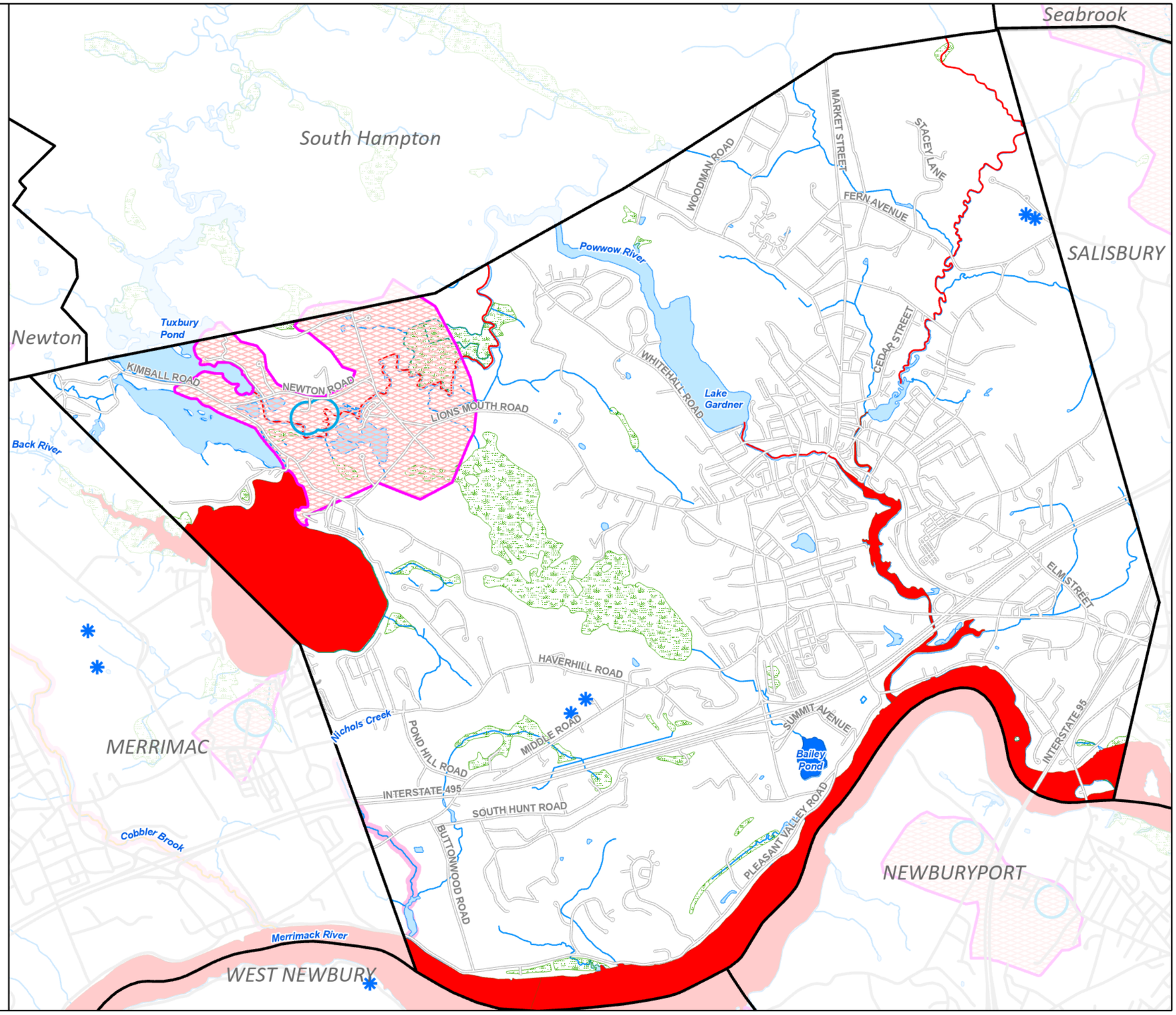


Figure 2-4
Stormwater Infrastructure in Surface Water Supply Watershed

Amesbury, MA

Legend

- Surface Water Intake
- Emergency Surface Water
- Lake Attitash Surface Water Supply Watershed
- Outfall
- Catch Basin
- Manhole
- Leaching Catch Basin
- Other
- Inlet
- Drainage Pipes
- Town Owned BMP
- Private Owned BMP
- Lake, Pond, Reservoir
- Wetland, Marsh, Swamp
- Stream, Brook

N W E S

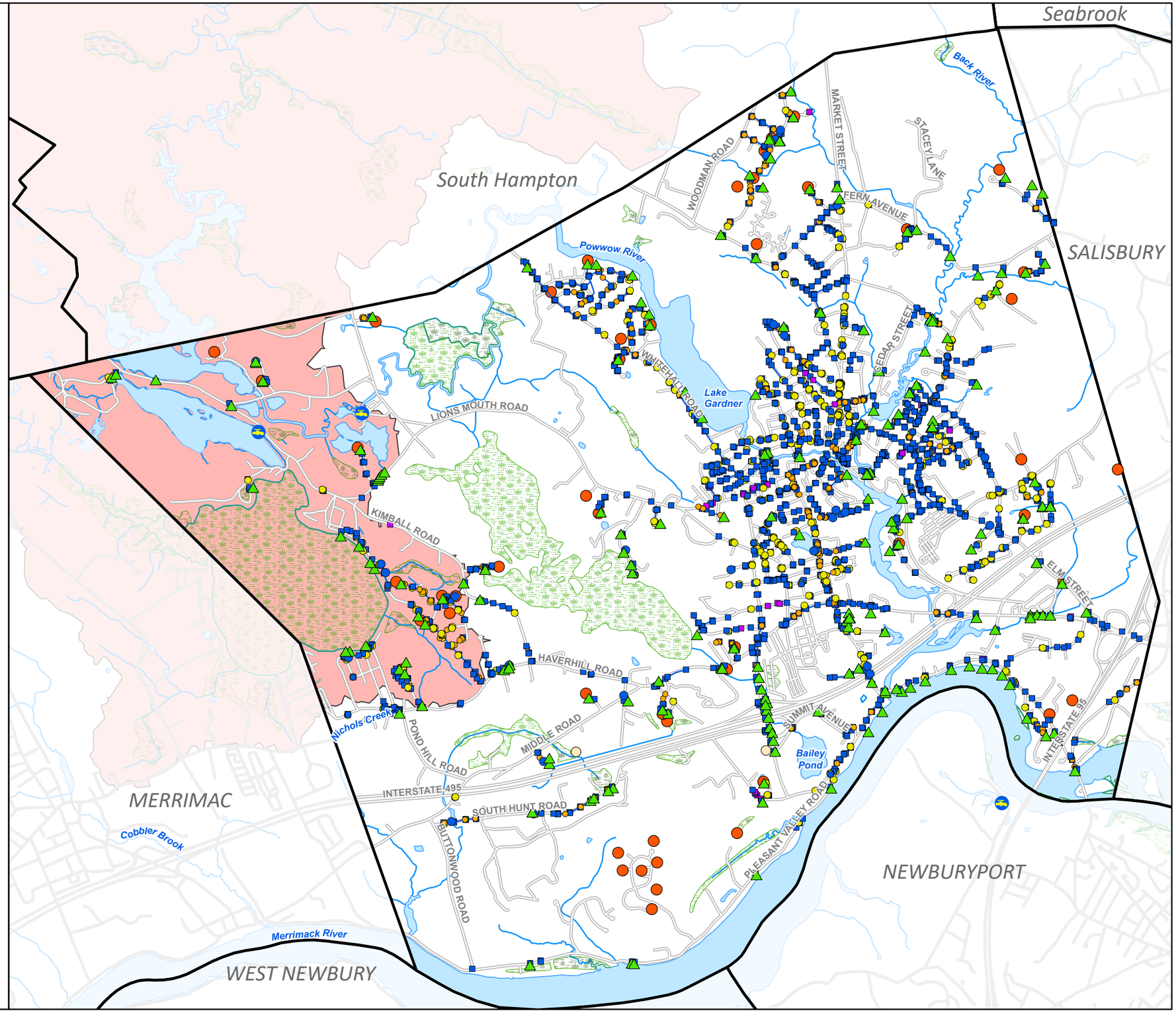
0 0.25 0.5 0.75 1

Miles

Comprehensive Environmental Incorporated

Data Sources: MassGIS, Town of Amesbury, CEI

12/22/2021



Appendix A

Notice of Intent and Authorization to Discharge

Notice of Intent (NOI) for coverage under Small MS4 General Permit

Part I: General Conditions

RECEIVED
OCT 0 3 2018

General Information

Name of Municipality or Organization: City of Amesbury State: MA

EPA NPDES Permit Number (if applicable): MAR041177

Primary MS4 Program Manager Contact Information

Name: Robert Desmarais, P.E. Title: Director of Public Works

Street Address Line 1: 39 South Hunt Road

Street Address Line 2:

City: Amesbury State: MA Zip Code: 01913

Email: rob@amesburyma.gov Phone Number: (978) 388-8116

Fax Number: (978) 388-1769

Other Information

Stormwater Management Program (SWMP) Location (web address or physical location, if already completed):

Eligibility Determination

Endangered Species Act (ESA) Determination Complete? Yes

Eligibility Criteria (check all that apply): ☐ A ☐ B ☒ C

National Historic Preservation Act (NHPA) Determination Complete? Yes

Eligibility Criteria (check all that apply): ☒ A ☐ B ☐ C

☑ Check the box if your municipality or organization was covered under the 2003 MS4 General Permit

MS4 Infrastructure (if covered under the 2003 permit)

Estimated Percent of Outfall Map Complete? *(Part II, III, IV or V, Subpart B.3.(a.) of 2003 permit)* 100%

If 100% of 2003 requirements not met, enter an estimated date of completion (MM/DD/YY):

Web address where MS4 map is published:

If outfall map is unavailable on the internet an electronic or paper copy of the outfall map must be included with NOI submission (see section V for submission options)

www.amesburyma.gov/public-works/pages/ms4-stormwater-program

Regulatory Authorities (if covered under the 2003 permit)

Illicit Discharge Detection and Elimination (IDDE) Authority Adopted? *(Part II, III, IV or V, Subpart B.3.(b.) of 2003 permit)* No

Effective Date or Estimated Date of Adoption (MM/DD/YY): 09/30/19

Construction/Erosion and Sediment Control (ESC) Authority Adopted? *(Part II,III,IV or V, Subpart B.4.(a.) of 2003 permit)* No

Effective Date or Estimated Date of Adoption (MM/DD/YY): 09/30/19

Post- Construction Stormwater Management Adopted? *(Part II, III, IV or V, Subpart B.5.(a.) of 2003 permit)* No

Effective Date or Estimated Date of Adoption (MM/DD/YY): 09/30/19

Notice of Intent (NOI) for coverage under Small MS4 General Perm

Part II: Summary of Receiving Waters

Please list the waterbodies to which your MS4 discharges. For each waterbody, please report the number of outfalls discharging into it and impairments.

Massachusetts list of impaired waters: *Massachusetts 2014 List of Impaired Waters-* http://www.mass.gov/eea/docs/dep/water/resources/07v5

Waterbody that receives flow from the MS4 and segment ID if applicable	Number of outfalls into receiving water segment	Chloride	Chlorophyll-a	Dissolved Oxygen/ DO Saturation	Nitrogen	Oil & Grease/ PAH	Phosphorus	Solids/ TSS/ Turbidity	E. coli	Enterococcus	Other p
Back River (MA84A-16)	28	☐	☐	☐	☐	☐	☐	☒	☒	☐	Sedimentation/Siltation
Bailey Pond (MA84003)	20	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Clarks Pond	10	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Lake Attitash (MA84002)	20	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Lake Gardner	5	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Meadowbrook	2	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Merrimack River (MA84A-05)	17	☐	☐	☐	☐	☐	☐	☐	☐	☒	PCB in Fish Tissue
Merrimack River (MA84A-06)	25	☐	☐	☐	☐	☐	☐	☐	☐	☒	PCB in Fish Tissue, Fecal (
Park Pond	3	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Pattens Pond	4	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Powwow River (MA84A-08)	3	☐	☐	☐	☐	☐	☐	☐	☒	☐	
Powwow River (MA84A-25)	44	☐	☐	☐	☐	☐	☐	☐	☒	☐	
Powwow River (MA84A-28)	14	☐	☐	☐	☐	☐	☐	☒	☐	☐	Fecal Colilform
Tuxbury Pond	4	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Unnamed Tributary (MA84A-30)	11	☐	☐	☐	☐	☐	☐	☐	☒	☐	
		☐	☐	☐	☐	☐	☐	☐	☐	☐	
		☐	☐	☐	☐	☐	☐	☐	☐	☐	
		☐	☐	☐	☐	☐	☐	☐	☐	☐	

Click to lengthen table

Notice of Intent (NOI) for coverage under Small MS4 General Permi

Part III: Stormwater Management Program Summary

Identify the Best Management Practices (BMPs) that will be employed to address each of the six Minimum Control Measures (MCMs). For mu discharges into a receiving water with an approved Total Maximum Daily Load (TMDL) and an applicable waste load allocation (WLA), identif specifically support the achievement of the WLA in the TMDL section at the end of part III.

For each MCM, list each existing or proposed BMP by category and provide a brief description, responsible parties/departments, measurable employed (public education and outreach BMPs also requires a target audience). **Use the drop-down menus in each table or enter your o menu.**

MCM 1: Public Education and Outreach

BMP Media/Category (enter your own text to override the drop down menu)	**BMP Description**	**Targeted Audience**	**Responsible Department/Parties** (enter your own text to override the drop down me
Web Page & Conventional Print Methods	Voluntary Yard Waste Program	Residents	Engineering
Brochures/Pamphlets	Snow and Ice Removal Practices	Businesses, Institutions and Commercial Facilities	Engineering
Brochures/Pamphlets	Erosion and Sedimentation Control	Developers (construction)	Conservation Commission, Planning Board, and Engineering
Brochures/Pamphlets	Spill Prevention and Response	Industrial Facilities	Waste Water and Engineering
Newspaper Articles/Press Releases	Household Hazardous Waste Program	Residents	Engineering
Brochures/Pamphlets	Landscaping Practices and Fertilizer Use	Businesses, Institutions and Commercial Facilities	Engineering

Brochures/Pamphlets	Low Impact Development Practices	Developers (construction)	Planning
Brochures/Pamphlets	Chemical Storage and Waste Disposal Practices	Industrial Facilities	Waste Water and Engineering
Web Page and pamphlets/brocures	Stormwater Management and BMPs	All 4 Target Audiences	Engineering
Displays/Posters/Kiosks	Storm Drain Markers and Stenciling	All 4 Target Audiences	Engineering with Volunteers
Displays/Posters/Kiosks	Pet Waste Signs and Bag Dispensers	Residents and Visitors	Public Works and Engineering

Notice of Intent (NOI) for coverage under Small MS4 General Perm

Part III: Stormwater Management Program Summary (continued)

MCM 2: Public Involvement and Participation

BMP Categorization	**Brief BMP Description** (enter your own text to override the drop down menu)	**Responsible Department/Parties** (enter your own text to override the drop down menu)
Public Review	SWMP Review	Public Works, Engineering, and Energy & Environmental Affairs
Public Participation	Conduct meetings to coordinate on stormwater topics	Lakes and Waterways Commission
Public Participation	Voluntary Yard Waste Disposal Program	Public Works
Public Participation	Catch Basin Stenciling/Markers	City Engineer with Volunteers
Public Participation	Household haz. waste/used oil collection	City Engineer
Public Participation	Pet Waste Disposal	Public Works and Engineering

Notice of Intent (NOI) for coverage under Small MS4 General Permi

Part III: Stormwater Management Program Summary (continued)

MCM 3: Illicit Discharge Detection and Elimination (IDDE)

BMP Categorization (enter your own text to override the drop down menu)	**BMP Description**	**Responsible Department/Parties** (enter your own text to override the drop down menu)	
SSO inventory	Develop SSO inventory in accordance with permit conditions	Engineering	C e
Storm sewer system map	Create map and update during IDDE program completion	Engineering	U e c w d
Written IDDE program	Create written IDDE program	Engineering	C e u
Implement IDDE program	Implement catchment investigations according to program and permit conditions	Engineering	C e
Employee training	Train employees on IDDE implementation	Public Works and Engineering	T
Conduct dry weather screening	Conduct in accordance with outfall screening procedure and permit conditions	Engineering	C e
Conduct wet weather screening	Conduct in accordance with outfall screening procedure	Engineering	C e
Ongoing screening	Conduct dry weather and wet weather screening (as necessary)	Engineering	C s o

Notice of Intent (NOI) for coverage under Small MS4 General Perm

Part III: Stormwater Management Program Summary (continued)

MCM 4: Construction Site Stormwater Runoff Control

BMP Categorization (enter your own text to override the drop down menu or entered text)	**BMP Description**	**Responsible Department/Parties** (enter your own text to override the drop down menu)
Site inspection and enforcement of Erosion and Sediment Control (ESC) measures	Complete written procedures of site inspections and enforcement procedures	Planning Board, Conservation Commission, and Engineering
Site plan review	Complete written procedures of site plan review and begin implementation	Planning Board, Conservation Commission, and Engineering
Erosion and Sediment Control	Adoption of requirements for construction operators to implement a sediment and erosion control program	Planning Board, Conservation Commission, and Engineering
Waste Control	Adoption of requirements to control wastes, including but not limited to, discarded building materials, concrete truck wash out, chemicals, litter, and sanitary wastes	Planning Board, Conservation Commission, and Engineering

Notice of Intent (NOI) for coverage under Small MS4 General Perm

Part III: Stormwater Management Program Summary (continued)

MCM 5: Post-Construction Stormwater Management in New Development and Redevelopment

BMP Categorization (enter your own text to override the drop down menu or entered text)	**BMP Description**	**Responsible Department/Parties** (enter your own text to override the drop down menu)
As-built plans for on-site stormwater control	The procedures to require submission of as-built drawings and ensure long term operation and maintenance will be a part of the SWMP	Planning Board, Inspectional Services, and Engineering
Target properties to reduce impervious areas	Identify at least 5 permittee-owned properties that could be modified or retrofitted with BMPs to reduce impervious areas and update annually	Planning and Engineering
Allow green infrastructure	Develop a report assessing existing local regulations to determine the feasibility of making green infrastructure practices allowable when appropriate site conditions exist	Planning and Engineering
Street design and parking lot guidelines	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.	Planning and Engineering

Ensure any stormwater controls or management practices for new development and redevelopment meet the retention or treatment requirements of the permit and all applicable requirements of the Massachusetts Stormwater Handbook	Adoption, amendment, or modification of a regulatory mechanism to meet permit requirements	Planning and Engineering

Notice of Intent (NOI) for coverage under Small MS4 General Permi

Part III: Stormwater Management Program Summary (continued)

MCM 6: Municipal Good Housekeeping and Pollution Prevention

BMP Categorization (enter your own text to override the drop down menu or entered text)	**BMP Description**	**Responsible Department/Parties** (enter your own text to override the drop down menu)
O&M procedures	Create written O&M procedures including all requirements contained in 2.3.7.a.ii for parks and open spaces, buildings and facilities, and vehicles and equipment	Public Works, Engineering, and Inspectional Services
Inventory all permittee-owned parks and open spaces, buildings and facilities, and vehicles and equipment	Create inventory	Public Works, Engineering, and Inspectional Services
Infrastructure O&M	Establish and implement program for repair and rehabilitation of MS4 infrastructure	Public Works and Engineering
Stormwater Pollution Prevention Plan (SWPPP)	Create SWPPPs for maintenance garages, transfer stations, and other waste-handling facilities	Public Works and Engineering
Catch basin cleaning	Establish schedule for catch basin cleaning such that each catch basin is no more than 50% full and clean catch basins on that schedule	Public Works
Street sweeping program	Sweep all streets and permitee-owned parking lots in accordance with permit conditions	Public Works
Road salt use optimization program	Establish and implement a program to minimize the use of road salt	Public Works

Inspections and maintenance of stormwater treatment structures	Establish and implement inspection and maitenance procedures and frequencies	Public Works

Notice of Intent (NOI) for coverage under Small MS4 General Permi

Part III: Stormwater Management Program Summary (continued)

Actions for Meeting Total Maximum Daily Load (TMDL) Requirements

Use the drop-down menus to select the applicable TMDL, action description to meet the TMDL requirements, and the responsible departme
or more than one, **enter your own text to override drop-down menus.**

Applicable TMDL	Action Description	Resp (enter your
No waterbodies subject to an approved TMDL		

Notice of Intent (NOI) for coverage under Small MS4 General Perm

Part III: Stormwater Management Program Summary (continued)

Actions for Meeting Requirements Related to Water Quality Limited Waters

Use the drop-down menus to select the pollutant causing the water quality limitation and enter the waterbody ID(s) experiencing excursior pollutant. In addition, if you are subject to additional requirements due to a downstream nutrient impairment (see Part 2.2.2 of the permit) indicate applicable waterbody IDs or write "all waterbodies" if applicable. Choose the action description from the dropdown menu and indi are applicable, or more than one, **enter your own text to override drop-down menus.**

Pollutant	Waterbody ID(s)	Action Description	Res (enter you
E. Coli	Back River (MA84A-16), Powwow River (MA84A-08 and MA94A-25), and Unnamed Tributary (MA84A-20)	Adhere to requirements in part III of Appendix H	Public Works, Engi
Enteroccus	Merrimack River (MA84A-05 and MA84A-06)	Adhere to requirements in part III of Appendix H	Public Works, Engi
Fecal Coliform	Powwow River (MA84A-28)	Adhere to requirements in part III of Appendix H	Public Works, Engi
TSS	Powwow River (MA84A-28)	Adhere to requirements in part V of Appendix H	Public Works, Engi
Turbidity	Back River (MA84A-16) and Powwow River (MA84a-28)	Adhere to requirements in part V of Appendix H	Public Works, Engi

Part IV: Notes and additional information

Use the space below to indicate the part(s) of 2.2.1and 2.2.2 that you have identified as not applicable to your MS4 because you do not discharge to the impaired water body or a tributary to an impaired water body due to nitrogen or phosphorus. Provide all supporting documentation below or attach additional documents if necessary. Also, provide any additional information about your MS4 program below.

A copy of the IPaC generated as part of the Endangered Species Act Determination is being submitted together with this NOI. As indicated in the report, the Northern Long Eared Bat is the only endangered species identified within Amesbury. Accordingly, the City agrees that planned actions under the permit will have no effect on the Northern Long Eared Bat and that the City will consult with US Fish and Wildlife as needed during the permit term on any future BMPs.

Notice of Intent (NOI) for coverage under Small MS4 General Permit

Part V: 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, I certify that 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.

Name: Ken Gray

Title: Mayor

Signature:

Date: Oct 1, 2018

[To be signed according to Appendix B, Subparagraph B.11, Standard Conditions]

Note: When prompted during signing, save the document under a new file name

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

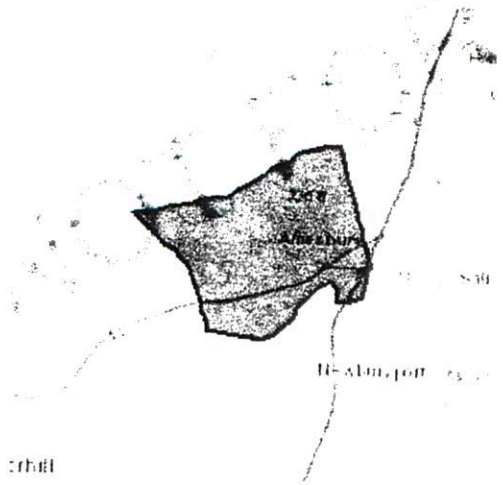
Project information

NAME

Amesbury Stormwater NOI

LOCATION

Massachusetts and New Hampshire



Local office

New England Ecological Services Field Office

(603) 223-2541
(603) 223-0104

70 Commercial Street, Suite 300
Concord, NH 03301-5094

http://www.fws.gov/newengland

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population, even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Log in to IPaC.
2. Go to your My Projects list.
3. Click PROJECT HOME for this project.
4. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information.
2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Mammals

NAME STATUS

Northern Long-eared Bat Myotis septentrionalis — Threatened

No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/9045

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Measures for avoiding and minimizing impacts to birds http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Nationwide conservation measures for birds http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)
Bald Eagle Haliaeetus leucocephalus This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Oct 15 to Aug 31
Black-billed Cuckoo Coccyzus erythropthalmus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9399	Breeds May 15 to Oct 10
Bobolink Dolichonyx oryzivorus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 20 to Jul 31
Canada Warbler Cardellina canadensis This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 20 to Aug 10
Clapper Rail Rallus crepitans This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds Apr 10 to Oct 31
Dunlin Calidris alpina arcticola This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds elsewhere

Eastern Whip-poor-will Antrostomus vociferus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 1 to Aug 20
Hudsonian Godwit Limosa haemastica This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds elsewhere
Least Tern Sterna antillarum This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds Apr 20 to Sep 10
Lesser Yellowlegs Tringa flavipes This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9679	Breeds elsewhere
Long-eared Owl asio otus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3631	Breeds elsewhere
Nelson's Sparrow Ammodramus nelsoni This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 15 to Sep 5
Prairie Warbler Dendroica discolor This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 1 to Jul 31
Purple Sandpiper Calidris maritima This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds elsewhere
Red-headed Woodpecker Melanerpes erythrocephalus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 10 to Sep 10
Red-throated Loon Gavia stellata This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds elsewhere
Ruddy Turnstone Arenaria interpres morinella This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds elsewhere

Rusty Blackbird Euphagus carolinus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds elsewhere
Saltmarsh Sparrow Ammodramus caudacutus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 15 to Sep 5
Seaside Sparrow Ammodramus maritimus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 10 to Aug 20
Semipalmated Sandpiper Calidris pusilla This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds elsewhere
Short-billed Dowitcher Limnodromus griseus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9480	Breeds elsewhere
Snowy Owl Bubo scandiacus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds elsewhere
Whimbrel Numenius phaeopus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9483	Breeds elsewhere
Willet Tringa semipalmata This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Apr 20 to Aug 5
Wood Thrush Hylocichla mustelina This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 10 to Aug 31

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (▪)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season ( )
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

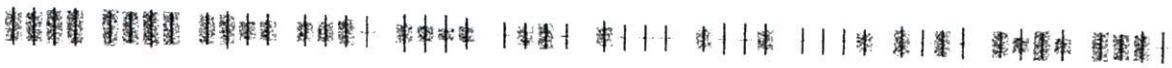
No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

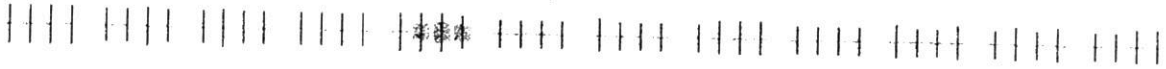
▒ probability of presence breeding season | survey effort – no data

SPECIES	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC

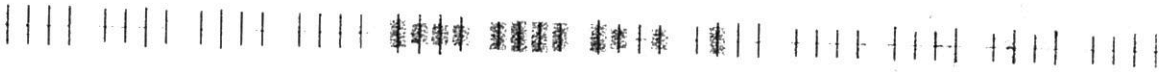
Bald Eagle
Non-BCC Vulnerable (This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.)



Black-billed Cuckoo
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

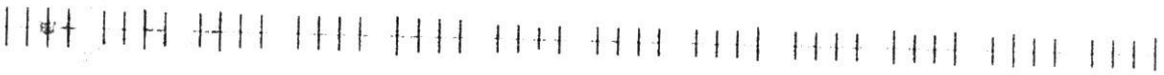


Bobolink
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

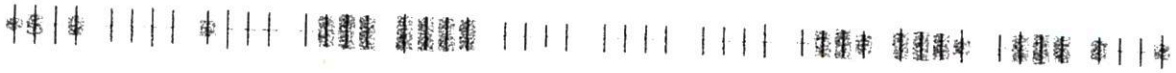


Canada Warbler
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

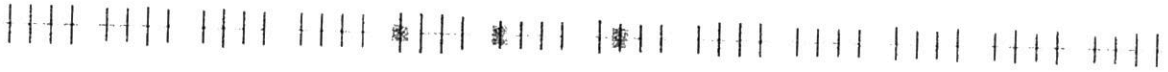
Clapper Rail
BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)



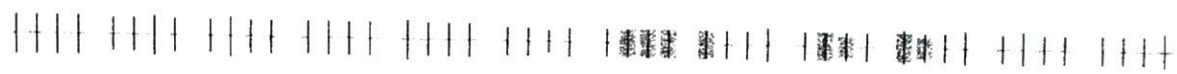
Dunlin
BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)



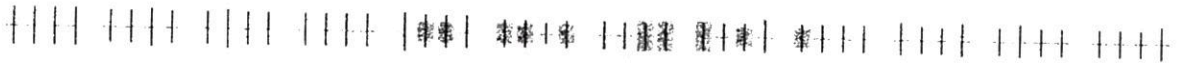
Eastern Whip-poor-will
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Hudsonian Godwit
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



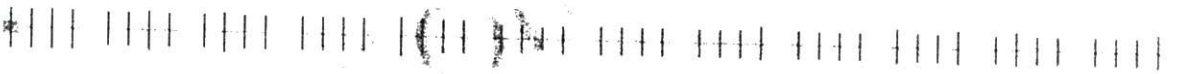
Least Tern
BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)



Lesser Yellowlegs
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

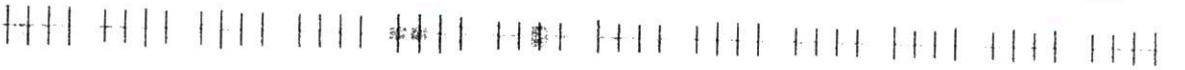
Long-eared Owl
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Nelson's Sparrow
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

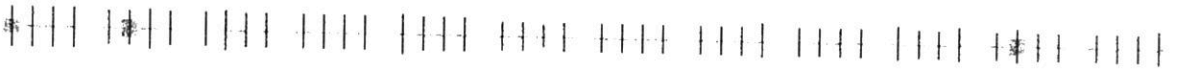


SPECIES JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC

Prairie Warbler
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



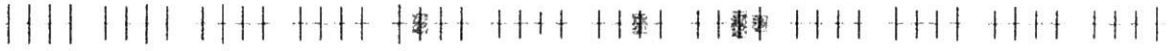
Purple Sandpiper
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Red-headed Woodpecker
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Red-throated Loon
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

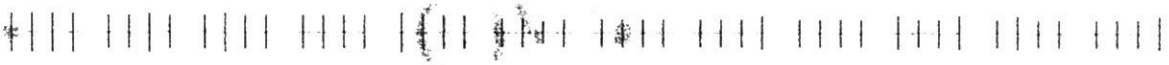
Ruddy Turnstone
BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)



Rusty Blackbird
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Saltmarsh Sparrow
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

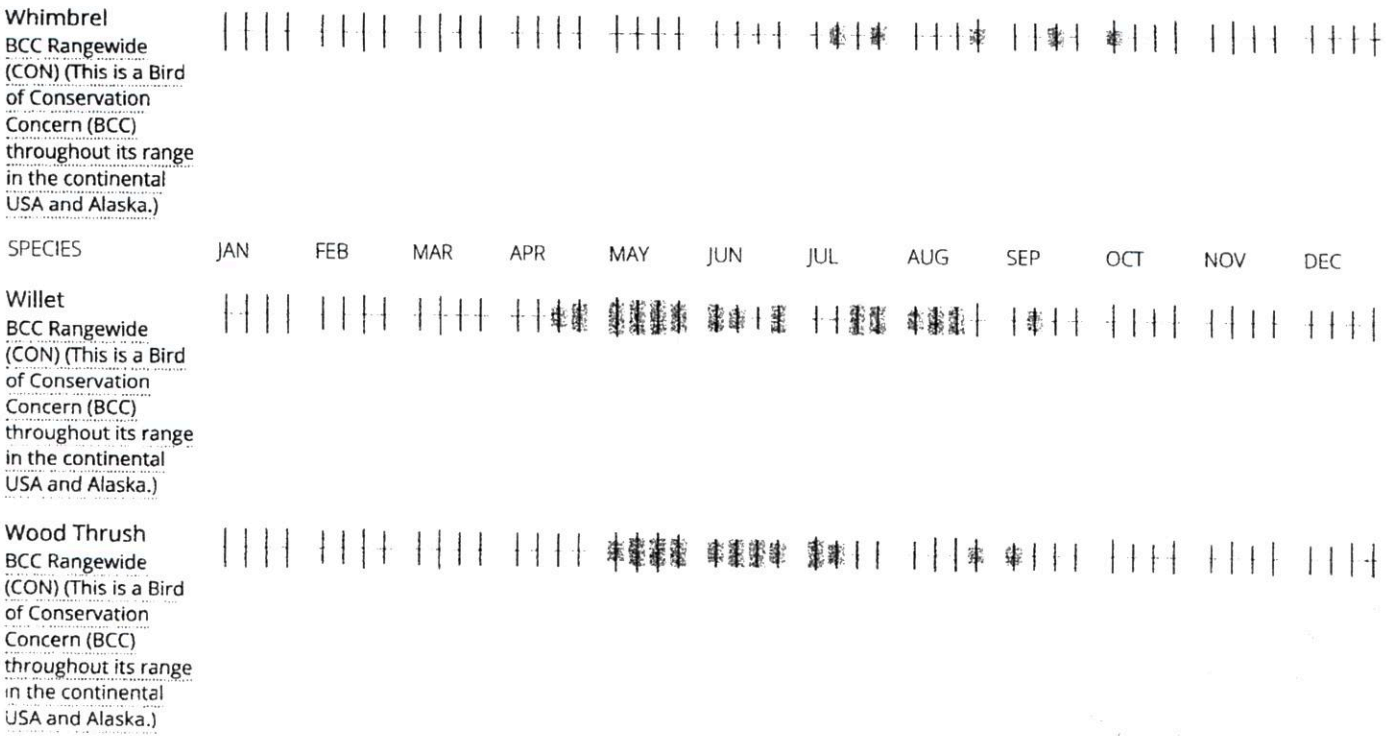
Seaside Sparrow
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Semipalmated Sandpiper
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Short-billed Dowitcher
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Snowy Owl
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures and/or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the E-bird Explore Data Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets .

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: The Cornell Lab of Ornithology All About Birds Bird Guide, or (if you are unsuccessful in locating the bird of interest there), the Cornell Lab of Ornithology Neotropical Birds guide. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look

carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

This location overlaps the following wetlands:

ESTUARINE AND MARINE DEEPWATER

E1UBL

ESTUARINE AND MARINE WETLAND

E2EM1P

FRESHWATER EMERGENT WETLAND

PEM1E
PEM1Ad
PEM1Ed
PEM1Cd
PEM1C
PEM1/SS1E
PEM1A
PEM1R
PEM1F
PEM1Fh
PEM1B
PEM1Fx
PEM1Ex

FRESHWATER FORESTED/SHRUB WETLAND

PFO1E
PFO4/1E
PSS1E
PFO1C
PFO1/4E
PSS1/EM1E
PFO1/SS1E
PFO1A
PSS1F
PSS1/EM1R
PSS1Eh
PFO4E
PSS1/FO1C
PSS1/FO1E
PSS1/EM1Ad
PFO4A
PSS1C
PFO1S
PSS1/EM1Ed
PSS1/EM1Cd
PFO1/SS1R
PFO1Eh
PSS1Fh
PFO1R
PSS1R

FRESHWATER POND

PUB/EM1F
PUBHh
PUBH
PUBV

PUBHx
PABHh
PUB/SS1F
PABFh
PUSA
PUBF
PUBFx
PUBFh

LAKE

L1UBH
L1UBHh

RIVERINE

R1UBV
R2UBH
R5UBH
R4SBC
R3UBH

A full description for each wetland code can be found at the National Wetlands Inventory website

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal,

state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 1
5 POST OFFICE SQUARE, SUITE 100
BOSTON, MA 02109-3912

VIA EMAIL

April 22, 2019

Ken Gray
Mayor

And;

Robert Desmarais, P.E.
Director of Public Works
39 South Hunt Road
Amesbury, MA. 01913
rob@amesburyma.gov

Re: National Pollutant Discharge Elimination System Permit ID #: MAR041177, City of Amesbury

Dear Robert Desmarais, P.E.:

The 2016 NPDES General Permit for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems in Massachusetts (MS4 General Permit) is a jointly issued EPA-MassDEP permit. Your Notice of Intent (NOI) for coverage under this MS4 General Permit has been reviewed by EPA and appears to be complete. You are hereby granted authorization by EPA and MassDEP to discharge stormwater from your MS4 in accordance with the applicable terms and conditions of the MS4 General Permit, including all relevant and applicable Appendices. This authorization to discharge expires at midnight on **June 30, 2022.**

For those permittees that certified Endangered Species Act eligibility under Criterion C in their NOI, this authorization letter also serves as EPA's concurrence with your determination that your discharges will have no effect on the listed species present in your action area, based on the information provided in your NOI.

As a reminder, your first annual report is due by **September 30, 2019** for the reporting period from May 1, 2018 through June 30, 2019.

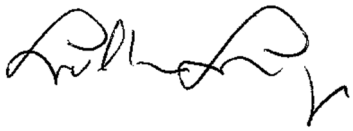
Information about the permit and available resources can be found on our website: https://www.epa.gov/npdes-permits/massachusetts-small-ms4-general-permit. Should you have

any questions regarding this permit please contact Newton Tedder at tedder.newton@epa.gov or (617) 918-1038.

Sincerely,

Thelma Murphy, Chief
Stormwater and Construction Permits Section
Office of Ecosystem Protection
United States Environmental Protection Agency, Region 1

and;



Lealdon Langley, Director
Wetlands and Wastewater Program
Bureau of Water Resources
Massachusetts Department of Environmental Protection

Appendix B

Regulatory Review and Legal Authority

CITY OF AMESBURY
IN THE YEAR TWO THOUSAND TWENTY

SPONSORED BY: Kassandra Gove **BILL No. 2020-077**
Kassandra Gove, Mayor **REVISED**

AN ORDER to Establish an Illicit Discharge and Connection Stormwater Ordinance for the City of Amesbury

Summary: The purpose of this ordinance is to provide for the health, safety, and general welfare of the citizens of the City of Amesbury through the regulation of non-storm water discharges to the storm water drainage system to the maximum extent practicable as required by federal and state law. This ordinance establishes methods for controlling the introduction of pollutants into the municipal separate storm sewer system (MS4) in order to comply with requirements of the National Pollutant Discharge Elimination System (NPDES) permit process.

Be it Ordained by the City Council of the City of Amesbury assembled, and by the authority of the same, that the following Ordinance be and hereby is adopted:

Sec. 1. Purpose
Increased and contaminated stormwater runoff is a major cause of impairment of water quality and flow in lakes, ponds, streams, rivers, wetlands and groundwater; contamination of drinking water supplies; alteration or destruction of aquatic and wildlife habitat; and flooding. Regulation of illicit connections and discharges to the municipal storm drainage system is necessary for the protection of the City's water bodies and groundwater, and to safeguard the public health, safety, welfare and the environment. The Purpose of this Ordinance is as follows:

A. Detection and Elimination of Illicit Discharges, Connections and/or Obstructions

1. To prevent pollutants from entering the City's Municipal Separate Storm Sewer System (MS4) and Waters of the Commonwealth of Massachusetts;
2. To prohibit illicit discharges, connections and obstructions to the MS4;
3. To require the removal of all such illicit discharges, connections and/or obstructions;
4. To comply with state and federal statutes and regulations relating to stormwater discharges; and
5. To establish the legal authority to ensure compliance with the provisions of this Ordinance through inspection, monitoring, and enforcement.

B. Control of Construction and Post-Construction Run-Off

1. This Ordinance is intended to ensure and promote compliance with US Environmental Protection Agency (EPA) stormwater management regulations pertaining to municipal separate storm sewer systems (MS4s);

2. To protect, maintain and enhance the public health, safety, environment and general welfare by establishing minimum requirements and procedures to control construction-site stormwater runoff and post-construction stormwater discharges, which can adversely affect public safety, public and private property, surface water, groundwater resources, drinking water supplies, recreation, and aquatic habitats.

3. To establish minimum construction-site and post-construction stormwater management standards and design criteria for the regulation and control of stormwater runoff generated from new development and redevelopment;

4. To require practices that eliminate soil erosion and sedimentation resulting from land disturbance activities;

5. To control the volume and rate of stormwater runoff resulting from land disturbances;

6. To minimize flooding on abutting properties;

7. To maintain the natural infiltration of stormwater on sites and/or promote recharge to groundwater where appropriately sited and/or treated, with emphasis on the Zones A, B, C and Zone 2 recharge areas in the watershed protection districts;

8. To maintain the integrity of stream channels;

9. To minimize stream bank erosion;

10. To prevent or minimize adverse impacts to water quality in lakes, ponds, streams, rivers, wetlands and groundwater;

11. To promote infiltration and recharge of groundwater;

12. To encourage the use of nonstructural stormwater management practices or "low-impact development practices", wherever practicable;

13. To establish provisions for the long-term responsibility for and maintenance of structural stormwater control facilities and nonstructural stormwater management practices to ensure that they continue to function as designed, are maintained, and pose no threat to public safety;

14. To require practices to control construction waste; and,

15. To prevent pollutants from entering the City's municipal separate storm sewer system (MS4).

Sec. 2. Definitions

ACTIVE GROUNDWATER DEWATERING SYSTEM – Any groundwater dewatering system that is not achieved by means of gravity only (i.e., use of mechanical or pumping apparatus).

APPLICANT - Any person, individual, partnership, association, firm, company, corporation, trust, authority, agency, department, or political subdivision, of the Commonwealth of Massachusetts or the Federal government to the extent permitted by law requesting a Stormwater Management Permit for proposed land disturbances.

AUTHORIZED ENFORCEMENT AGENCY – For the purposes of this Ordinance, the City of Amesbury Planning Board shall be the "Authorized Enforcement Agency."

BEST MANAGEMENT PRACTICE (BMP) - An activity, procedure, restraint, or structural or non-structural improvement that helps to reduce the quantity or improve the quality of stormwater runoff.

CERTIFIED PROFESSIONAL IN EROSION AND SEDIMENT CONTROL (CPESC) - A certified specialist in soil erosion and sediment control. This certification program, sponsored by the Soil and Water Conservation Society in cooperation with the American Society of Agronomy, provides the public with evidence of professional qualifications.

CLEAN WATER ACT - The Federal Water Pollution Control Act (33 U.S.C. § 1251 et seq.) as hereafter amended.

CLEARING - Any activity that removes the vegetative surface cover. Clearing generally includes grubbing as defined below.

CONSTRUCTION PREPARATION - All activity in preparation for construction.

CONSTRUCTION WASTE - Excess or discarded building or construction site materials that may adversely impact Water Quality, including but not limited to concrete truck washout, chemicals, litter and sanitary waste.

DESIGNATED AGENT - (See Director of Public Works)

DEVELOPMENT - The modification of land to accommodate a new use or expansion of use, usually involving construction and redevelopment, rehabilitation, expansion, demolition, or phased projects that disturb the ground surface or increase the Impervious Cover area on previously developed sites.

DIRECTOR OF PUBLIC WORKS - For the purposes of this Ordinance, the Director of Public Works shall be the "Designated Agent." The Director of Public Works shall be the City's designated agent to assist the "Authorized Enforcement Agency" to enforce the provisions of this Ordinance and any regulations, orders, violation notices, enforcement orders and permit conditions relative thereto on behalf of the City.

DISCHARGE OF POLLUTANTS - The addition from any source of any pollutant or combination of pollutants into the municipal storm drainage system or into the waters of the United States or Commonwealth of Massachusetts from any source.

EROSION - The wearing away of the land surface by natural or artificial forces such as wind, water, ice, gravity, or vehicle traffic and the subsequent detachment and transportation of soil particles.

EROSION AND SEDIMENT CONTROL PLAN - A document containing narrative, drawings, and details developed by a Massachusetts Registered Professional Engineer (P.E.) or a Certified Professional in Erosion and Sediment Control (CPESC), which includes BMPs, or equivalent measures designed to control surface runoff, erosion and sedimentation during pre-construction and construction related land disturbances. The plan is required as part of the application for a Stormwater Management Permit.

FACILITY or ACTIVITY means any NPDES "point source" or any other facility or activity (including land or appurtenances thereto) that is subject to regulation under the NPDES program.

GRADING - Changing the level or shape of the ground surface.

GROUNDWATER - Water beneath the surface of the ground.

GRUBBING - The act of clearing land surface by digging up roots and stumps.

ILLICIT CONNECTION - A surface or subsurface drain or conveyance, which allows an illicit discharge into the municipal storm drainage system, including without limitation sewage, process wastewater, or wash water and any connections from indoor drains, sinks, or toilets, regardless of whether said connection was previously allowed, permitted, or approved before the effective date of this ordinance.

IMPERVIOUS COVER - Material covering the ground with a coefficient of runoff greater than 0.7 (as defined in Data Book for Civil Engineers by Seelye; C = runoff divided by rainfall) including, but not limited to, macadam, concrete, pavement and buildings.

ILLICIT DISCHARGE - Direct or indirect discharge to the municipal storm drainage system that is not composed entirely of stormwater, except as exempted pursuant to this Ordinance. The term does not include a discharge in compliance with a NPDES Stormwater Discharge Permit or a Surface Water Discharge Permit, or resulting from fire-fighting activities exempted pursuant to this Ordinance.

IMPERVIOUS SURFACE - Any material or structure on or above the ground that prevents water infiltrating the underlying soil. Impervious surface includes without limitation roads, paved parking lots, sidewalks, and roof tops.

LAND DISTURBANCE - Any action that causes a change in the position, location, or arrangement of soil, sand, rock, gravel, or similar earth material.

MASSACHUSETTS STORMWATER MANAGEMENT POLICY - The Policy issued by the Department of Environmental Protection, and as amended, that coordinates the requirements prescribed by state regulations promulgated under the authority of the Massachusetts Wetlands Protection Act G.L. c. 131 §. 40 and Massachusetts Clean Waters Act G.L. c. 21, §. 23-56. The Policy addresses stormwater impacts through implementation of performance standards to reduce or prevent pollutants from reaching water bodies and control the quantity of runoff from a site. In January 2008, this policy was incorporated into the Massachusetts Wetlands Protection Act Regulations (310 CMR 10.00 et seq).

MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) or MUNICIPAL STORM DRAINAGE SYSTEM - The system of conveyances designed or used for collecting or conveying stormwater, including any road with a drainage system, street, gutter, curb, inlet, piped storm drain, pumping facility, retention or detention basin, natural or man-made or altered drainage channel, reservoir, and other drainage structure that together comprise the storm drainage system owned or operated by the City.

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) STORMWATER DISCHARGE PERMIT - A permit issued by United States Environmental Protection Agency or jointly with the State that authorizes the discharge of pollutants to waters of the United States.

NON-STORMWATER DISCHARGE - Discharge to the municipal storm drainage system not composed entirely of stormwater.

OPERATION AND MAINTENANCE PLAN - A plan prepared by a qualified professional engineer (PE) or a Certified Professional in Erosion and Sedimentation Control (CPESC) setting up the functional, financial, and organizational mechanisms for the ongoing operation and maintenance of a stormwater management system to insure that it continues to function as designed.

OPERATOR - The operator of any "facility or activity" subject to regulation under the NPDES program.

ORDINANCE - Refers to Chapter XX, Stormwater Management Ordinance of the "Code of Ordinances of the City of Amesbury, Massachusetts".

OWNER - A person with a legal or equitable interest in property.

PERMIT HOLDER or PERMITTEE - The Person who holds a Stormwater Management Permit and therefore bears the responsibilities and enjoys the privileges conferred thereby.

PERSON - An individual, partnership, association, firm, company, trust, corporation, agency, authority, department or political subdivision of the Commonwealth of Massachusetts or the federal government, to the extent permitted by law, and any officer, employee, or agent of such person.

POINT SOURCE - Any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, or container from which pollutants are or may be discharged.

POLLUTANT - Any element or property of sewage, agricultural, industrial or commercial waste, runoff, leachate, heated effluent, or other matter whether originating at a point or nonpoint source, that is or may be introduced into any sewage treatment works or waters of the Commonwealth of Massachusetts. Pollutants shall include without limitation:

(a) Paints, varnishes, and solvents;
(b) Oil and other automotive fluids;
(c) Non-hazardous liquid and solid wastes and yard wastes;
(d) Refuse, rubbish, garbage, litter, or other discarded or abandoned objects, ordnances, accumulations and floatables;
(e) Pesticides, herbicides, and fertilizers;
(f) Hazardous materials and wastes;
(g) sewage, fecal coliform and pathogens;
(h) Dissolved and particulate metals;
(i) Animal wastes;
(j) Rock, sand, salt, soils;
(k) Construction wastes and residues; and
(l) Noxious or offensive matter of any kind.

PRE-CONSTRUCTION - All activity in preparation for construction.

PROCESS WASTEWATER - Water which, during manufacturing or processing, comes into direct contact with or results from the production or use of any material, intermediate product, finished product, or waste product.

RECHARGE - Process by which groundwater is replenished by precipitation through the percolation of runoff and surface water through the soil.

REDEVELOPMENT - Development, rehabilitation, expansion, demolition, or phased projects that disturb the ground surface or increase the impervious area on previously developed sites.

RUNOFF - Rainfall, snowmelt, or irrigation water flowing over the ground surface.

SEDIMENT - Mineral or organic soil material that is transported by wind or water, from its origin to another location; the product of erosion processes.

SEDIMENTATION - The process or act of deposition of sediment.

SITE - Any lot or parcel of land or area of property where land disturbances are, were, or will be performed.

SLOPE - The incline of a ground surface expressed as a ratio of horizontal to vertical distance.

SOIL - Any earth, sand, rock, gravel, or similar material.

STORMWATER - Stormwater runoff, snow-melt runoff, and surface water runoff and drainage.

STORMWATER MANAGEMENT PLAN - A document containing narrative, drawings and details prepared by a qualified professional engineer (PE), which includes structural and non-structural Best Management Practices to manage and treat Stormwater generated from regulated Development activity. A Stormwater Management Plan also includes an Operation and Maintenance Plan describing the maintenance requirements for structural Best Management Practices and is required as part of the application for a Stormwater Management Permit.

STREAM - A body of running water, including brooks, creeks, and other water courses, which moves in a definite channel in the ground due to a hydraulic gradient. A portion of a stream may flow through a culvert, is naturally obscured, or beneath a bridge. A stream's flow may be intermittent (i.e., does not flow throughout the year), or perennial.

SURFACE WATER DISCHARGE PERMIT - A permit issued by the Department of Environmental Protection (DEP) pursuant to 314 CMR 3.00 that authorizes the discharge of pollutants to waters of the Commonwealth of Massachusetts.

TOXIC OR HAZARDOUS MATERIAL OR WASTE - Any material, which because of its quantity, concentration, chemical, corrosive, flammable, reactive, toxic, infectious or radioactive characteristics, either separately or in combination with any substance or substances, constitutes a present or potential threat to human health, safety, welfare, or to the environment. Toxic or hazardous materials include any synthetic organic chemical, petroleum product, heavy metal, radioactive or infectious waste, acid and alkali, and any substance defined as Toxic or Hazardous under G.L. Ch.21C and Ch.21E, and the regulations at 310 CMR 30.000 and 310 CMR 40.0000.

UNCONTAMINATED WATER - Water free of Toxic or Hazardous Material or Waste, sewage, agricultural, industrial or commercial waste, runoff, leachate, heated effluent or other matter, whether originating at a point or nonpoint source

WATERCOURSE - A natural or man-made channel through which water flows or a stream of water, including a river, brook or underground stream.

WATER QUALITY - The chemical, physical, and biological integrity of Water Resources.

WATER RESOURCES - All waters within the jurisdiction of the Commonwealth of Massachusetts, including, without limitation, rivers, streams, lakes, ponds, springs, impoundments, estuaries, wetlands, coastal waters, and groundwater.

WASTEWATER - Any sanitary waste, sludge, or septic tank or cesspool overflow, and water that during manufacturing, cleaning or processing, comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, byproduct or waste product.

WETLANDS - Coastal and freshwater wetlands, including wet meadows, marshes, swamps, and bogs, as defined and determined pursuant to G.L. c. 131, § 40 and 310 CMR 10.00 et seq.

ZONE A, B, C and Zone 2 - Groundwater Protection zones as defined by the City.

Sec. 3. Authority

This Ordinance is adopted under authority granted by the Home Rule Amendment of the Massachusetts Constitution, the Home Rule statutes, and pursuant to G.L. c.83, §§ 1, 10, and 16, as amended by St. 2004, c. 149, §§ 135-140, and pursuant to the regulations of the Federal Clean Water Act (40 CFR 122.34).

Sec. 4. Applicability

1. **Municipal Separate Storm Sewer System (MS4) and Waters of the Commonwealth of Massachusetts:** This Ordinance shall apply to flows entering the City's Municipal Separate Storm Sewer System (MS4) and Waters of the Commonwealth of Massachusetts.

2. **Construction and Post-Construction Activities:**
   Any construction activity, including clearing, grading, and excavation that will disturb equal to or greater than 43,560 square feet of land or will disturb less than 43,560 square feet of land but is part of a larger common plan of development or sale that will ultimately disturb equal to or greater than 43,560 square feet of land in the City of Amesbury.

   After the initial common plan construction activity is completed for a particular parcel, any subsequent development or redevelopment of that parcel would be regarded as a new plan of development. Construction activity does not include routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or the original purpose of the site.

Sec. 5. Regulated Activities, Exemptions, Prohibited Activities, Emergencies

Any person that undertakes any construction activity (as defined in Section XX-4, item 2 "Applicability"), including clearing, grading, and excavation that will disturb equal to or greater than 43,560 square feet of land or will disturb less than 43,560 square feet of land but is part of a larger common plan of development or sale that will ultimately disturb equal to or greater than 43,560 square feet of land in the City of Amesbury shall require a Stormwater Management Permit from the Planning Board pursuant to this Ordinance and regulations promulgated hereunder.

1. **Regulated Activities:**
   (1) Regulated activities shall include:

      i. Land disturbance of 43,560 square feet or more of land associated with construction or reconstruction of structures;

      ii. Development or redevelopment involving multiple separate activities in discontinuous locations or on different schedules if the activities are part of a larger common plan of development that all together disturbs 43,560 square feet or more of land;

      iii. Paving or other change in surface material over an area of 43,560 square feet or more of land;

      iv. Construction of a new drainage system or alteration of an existing drainage system or conveyance draining an area of 43,560 square feet or more of land; and

      v. Any other activity, on an area of land of 43,560 square feet or more, that changes the water quality, or the force, quantity, direction, timing or location of runoff flowing from the area. Such changes include, but are not limited to: change from distributed runoff to confined, concentrated discharge; change in the volume of runoff from the area; change in the peak rate of runoff from the area; and change in the recharge to groundwater on the area.

   (2) No person may create or maintain a direct connection or discharge to the MS4 without a connection and discharge permit from the Department of Public Works;

   (3) The City of Amesbury is not exempt from the provisions of this Ordinance.

2. **Exemptions:** The following activities are exempt from the requirements of this Ordinance:

   (1) Construction activities waived from permit coverage under the NPDES General Permit for Stormwater Discharges from Construction Activities;

   (2) Normal maintenance and improvement of land in agricultural use as defined by the Wetlands Protection Act regulation 310 CMR 10.04;

   (3) Maintenance of existing landscaping, gardens or lawn areas associated with a single family or two-family dwelling that will not alter existing terrain or drainage patterns;

   (4) The construction of fencing that will not alter existing terrain or drainage patterns;

(5) Construction of utilities other than drainage (gas, water, electric, telephone, etc.) which will not alter terrain or drainage patterns or result in a permanent Alteration of Runoff or Drainage Characteristics and will comply with the Erosion Control standard in the Massachusetts Stormwater Standards;

(6) Emergency work to protect life, limb, or property;

(7) Normal maintenance of or emergency repairs to any Stormwater treatment facility deemed necessary by the Planning Board or its agents;

(8) Repair of septic systems when required by the Board of Health for the protection of public health; and

(9) Improvement of City-owned public ways and appurtenances that will not result in an expansion of impervious cover of more than 43,560 square feet.

3. **Prohibited activities:** The following activities are prohibited under this Ordinance:

(1) Illicit Discharges. No person shall dump, discharge, cause or allow to be discharged any pollutant or non stormwater discharge into the municipal separate storm sewer system (MS4), into a watercourse, or into the waters of the Commonwealth of Massachusetts;

(2) Illicit Connections. No person shall construct, use, allow, maintain or continue any illicit connection to the municipal storm drainage system, regardless of whether the connection was permissible under applicable law, regulation or custom at the time of connection; and

(3) Obstruction of Municipal Storm Drainage System. No person shall obstruct or interfere with the normal flow of stormwater into or out of the municipal storm drainage system without prior written approval from the Department of Public Works.

4. **Allowable non-stormwater discharges**. The following activities are allowed without the need for approval from the Planning Board:

(1) Discharge or flow resulting from fire-fighting activities;

(2) The following non-stormwater discharges or flows are exempt from the prohibition of non-stormwaters provided that the source is not a significant contributor of a pollutant to the municipal storm drainage system:

i. Waterline flushing;
ii. Flow from potable water sources;
iii. Springs;
iv. Natural flow from riparian habitats and wetlands;
v. Diverted stream flow;
vi. Rising groundwater;
vii. Uncontaminated groundwater infiltration as defined in 40 CFR 35.2005(20), or uncontaminated pumped groundwater (i.e., residential sump pumps);

viii. Water from exterior foundation drains, footing drains (not including active groundwater dewatering systems), crawl space pumps, or air conditioning condensation;
ix. Discharge from landscape irrigation or lawn watering;
x. Water from individual residential car washing;
xi. Discharge from dechlorinated residential, public or semipublic swimming pool water (less than one ppm chlorine) and the pool is drained in such a way as not to cause a nuisance;
xii. Discharge from street sweeping;
xiii. Dye testing, provided written and verbal notification is given to the Department of Public Works prior to the time of the test;
xiv. Non-stormwater discharge permitted under a NPDES permit or a Surface Water Discharge Permit, waiver, or waste discharge order administered under the authority of the United States Environmental Protection Agency or the Department of Environmental Protection, provided that the discharge is in full compliance with the requirements of the permit, waiver, or order and applicable laws and regulations; and
xv. Discharge for which advanced written approval is received from the Department of Public Works as necessary to protect public health, safety, welfare or the environment.

5. **Discharge of Pollutants – Emergency Response and Action:** The following activities shall be enforced by the Designated Agent (Director of Public Works) without the need for approval from the Planning Board:

(1) Emergency suspension of municipal storm drainage system access: The Department of Public Works may suspend municipal storm drainage system access to any person or property without prior written notice when such suspension is necessary to stop an actual or threatened discharge of pollutants that presents imminent risk of harm to the public health, safety, welfare or the environment. In the event any person fails to comply with an emergency suspension order, the Department of Public Works may take all reasonable steps to prevent or minimize harm to the public health, safety, welfare or the environment.

(2) Notification of spills: Notwithstanding other requirements of local, state or federal law, as soon as a person responsible for a facility or operation, or responsible for emergency response for a facility or operation has information of or suspects a release of materials at that facility or operation resulting in or which may result in discharge of pollutants to the municipal drainage system or waters of the Commonwealth of Massachusetts, the person shall take all necessary steps to ensure containment, and cleanup of the release, including the following:

i. In the event of a release of oil or hazardous materials, the person shall immediately notify the Fire and Police Departments, Health Department, and the Department of Public Works;

ii. In the event of a release of non-hazardous material, the reporting person shall notify the Department of Public Works no later than the next business day;

iii. The reporting person shall provide to the Department of Public Works written confirmation of all telephone, facsimile or in-person notifications within three business days thereafter; and

iv. If the discharge of prohibited materials is from a commercial or industrial facility, the facility owner or operator of the facility shall retain on-site a written record of the discharge and the actions taken to prevent its recurrence. Such records shall be retained for at least three years from the date of the incident.

Sec. 6. Permits and Stormwater Management Regulations

1. The Planning Board, as the Authorized Enforcement Agency, shall administer, implement, and enforce this Ordinance. Any powers granted to or duties imposed upon the Planning Board in this Ordinance may be delegated to designated agent as defined in this Ordinance.

2. The Planning Board may adopt and periodically amend rules and regulations to effectuate the purposes of this Ordinance. Said regulations may include, but shall not be limited to provisions regarding: administration; application requirements and fees; permitting procedures and requirements; design standards; surety requirements; inspection and site supervision requirements; waivers and exemptions; and enforcement procedures. Failure by the Board to promulgate such rules and regulations shall not have the effect of suspending or invalidating this Ordinance.

   (1) Adoption of and revisions to regulations may only be made after conducting a public hearing to receive comments on any proposed revisions. Such hearing dates shall be advertised in a newspaper of general local circulation, at least 14 days before the hearing date.

3. The Planning Board shall refer to the criteria and information, including specifications and standards, of the latest edition of the Massachusetts Stormwater Management Policy or to the design criteria as described in the City of Amesbury's Subdivision Rules and Regulations or to the City of Amesbury Stormwater Management and Erosion Control Regulations, whichever is more stringent in the protection of the City's environmental and infrastructure resources, for execution of the provisions of this Ordinance.

4. The Planning Board may waive strict compliance with any requirement of this bylaw or the regulations promulgated hereunder, where such action is:

   (1) allowed by federal, state or local statutes and/or regulations;

   (2) in the public interest; and

   (3) not inconsistent with the purpose and intent of this bylaw and its regulations.

Sec. 7. Consultants

At the applicant's expense, the Planning Board may retain independent consultants as needed to review applications for Stormwater Management Permit and to advise the Board on any and all aspects of a specific project. Independent consultants may include but are not limited to registered professional engineers and environmental site monitors.

Sec. 8. Permit Review Procedures

Projects requiring a stormwater management permit shall be subject to the City of Amesbury Stormwater Management and Erosion Control Regulations promulgated under Section XX-6 of this Ordinance in addition to the procedures as set forth below.

1. **Application**
   (1) An application package shall be filed with the Planning Board and other departments as specified in the regulations.
   (2) The Planning Board shall review the application for completeness and compliance with this Ordinance and its regulations.

2. **Public meetings**
   (1) The Planning Board shall hold a public meeting on all applications for stormwater management permits for the purpose of reviewing the application and accepting public input.
   (2) Notice of the public meeting shall be given by posting and by first class mailings to abutters and abutters to abutters within 300 feet of the property line of the project site at least seven days prior to the meeting.
   (3) The Board shall make the application available for inspection by the public during business hours at the City offices.

3. **Actions**
   The Planning Board may:
   (1) Approve the application and issue a permit if it finds that the proposed plan meets the objectives and requirements of this Ordinance and its regulations;
   (2) Approve the application and issue a permit with conditions, modifications, or restrictions that the Board determines meet the objectives and requirements of this Ordinance and its regulations;
   (3) Disapprove the application and deny a permit if the Planning Board finds that the applicant has submitted insufficient information to describe the site, the work, or the effect of the work on water quality and runoff volume; or
   (4) Disapprove the application and deny a permit if it finds that the proposed plan fails to meet the objectives and requirements of this Ordinance or its regulations.

4. **Time for action by the Board**
   (1) Within 45 days of the filing of an application for a stormwater management permit, the Planning Board or its designated agent shall:
      i. Evaluate the application to ensure that it is complete prior to distribution;
      ii. Distribute the complete application to boards and departments for technical review as specified in the regulations; and
      iii. Arrange agenda time for a public meeting before the Planning Board.

   (2) Within 60 days of the filing of the application, an interdepartmental review shall be held.
      iv. Following the Interdepartmental review but prior to the Planning Board public meeting, the Department of Public Works or the consultants retained by the Board for review of the stormwater management permit application shall provide a written recommendation for action on the application. Such recommendation shall itemize all instances where the applicant has failed to meet the specifications and standards of the latest edition of the Massachusetts Stormwater Management Policy or of the design criteria as described in the City of Amesbury's Subdivision Rules and Regulations or of the City of Amesbury Stormwater Management and Erosion Control Regulations.

(3) Within 90 days of the filing of an application for a stormwater management permit, the Planning Board shall hold a public meeting.
(4) Once begun, the public meeting may not continue for more than 60 days unless such time is extended by written agreement between the applicant and the Board to a date certain announced at the meeting.
(5) The Planning Board shall take final action within 21 days of the close of the public meeting discussion.

5. **Permit duration**
   (1) All activity permitted by this bylaw must be completed within one year of permit issuance. Extensions of time can be granted by the Planning Board upon formal written request by the applicant. If one year passes without an extension being granted, the Board may revoke the permit.

6. **Certificate of completion**
   (1) The Planning Board shall issue a certificate of completion upon receipt and approval of final reports and documentation as specified in the regulations.

7. **Public record**
   (1) The following documents shall be recorded at the Essex Registry of Deeds at the applicant's expense and proof of recording provided to the Planning Board:

      i. The stormwater management permit.
      ii. The approved operation and maintenance plan.
      iii. The certificate of completion.

8. **Failure to act**
   (1) Upon certification by the City Clerk that the allowed time has passed without the Planning Board's action, failure to take such action shall be deemed to be approval of said application and a stormwater management permit shall be issued.

9. **Appeals of action by the Planning Board**
   (1) A written decision of the Planning Board shall be final when it is executed by the Planning Board and filed in the City Clerk's office. Further relief of a decision by the Planning Board made under this Ordinance shall be in the Superior Court or Land Court in accordance with the applicable law. The remedies listed in this bylaw are not exclusive of any other remedies available under any applicable federal, state or local law.

   (2) No work shall commence until the applicable appeal period has passed with no appeal, per MGL c 249 s 4, or, if an appeal has been filed, the appeal has been finally resolved by adjudication or otherwise.

Sec. 9. Persons aggrieved

Any person aggrieved by a decision or action of a designated agent appointed by the Planning Board under Section XX-8, including but not limited to matters regarding completeness of application, inspections, and compliance with technical design criteria, may, within 30 days of such decision or action, request a public meeting with the Planning Board. In such cases, following the decision of the Planning Board, the provisions of Section XX-8.9 shall apply.

Sec. 10. Enforcement

The Planning Board or its designated agent shall enforce this Ordinance and any regulations, orders, violation notices, enforcement orders and permit conditions on behalf of the City, and may pursue all civil and criminal remedies for such violations pursuant thereto.

1. **Civil Relief:**
   If a person violates the provisions of this Ordinance or any regulations, orders, violation notices, enforcement orders and permit conditions issued hereunder, the Planning Board or its designated agent may seek injunctive relief in a court of competent jurisdiction restraining the person from activities which would create further violations or compelling the person to perform abatement or remediation of the violation.

2. **Orders**
   (1) The Planning Board or its designated agent may issue a written order to enforce the provisions of this Ordinance and any regulations, orders, violation notices, enforcement orders and permit conditions hereunder, which may include requirements to:
      i. Cease and desist from construction or land disturbance until there is compliance with this Ordinance, and an approved Stormwater Management Permit, including the stormwater management plan and the erosion and sediment control plan;
      ii. Repair, maintain, or replace the stormwater management system or portions thereof in accordance with the operation and maintenance plan;
      iii. Remediate erosion and sedimentation resulting directly or indirectly from the land-disturbing or construction activity;
      iv. Maintain, install or perform additional erosion and sediment control measures;
      v. Remediate adverse impact resulting directly or indirectly from malfunction of the stormwater management system.
      vi. Eliminate illicit discharges, connections and/or obstructions to the MS4;
      vii. Perform monitoring, analyses, and reporting;
      viii. Cease and desist unlawful discharges, practices, or operations; and
      ix. Remediate of contamination in connection therewith.

   (2) If the Planning Board determines that abatement or remediation of contamination or adverse impacts is required, the order shall set forth a deadline by which such abatement or remediation must be completed by the violator or property owner.

3. **Criminal Penalty**
   Any person who violates any provision of this Ordinance and/or any regulations, orders, violation notices, enforcement orders and permit conditions issued hereunder shall be punished by a fine of $300. Each day or part thereof that such violation occurs or continues to occur by failure to comply with an order or notice from the Planning Board or its designated agent shall constitute a separate violation.

4. **Non-Criminal Disposition**
   As an alternative to criminal prosecution or civil action, the City may elect to utilize the noncriminal disposition procedure set forth in G.L. Ch. 40, § 21D and adopted by the City as a general ordinance in which case the Planning Board or its designate agent shall be the enforcing agency. The penalty for each violation shall be set as follows: a) for the 1st violation (failure to comply with an order or notice) shall be $100; b) for the 2nd violation shall be $200; c) for the 3rd and subsequent offenses shall be $300. Each day or part thereof that such violation occurs or continues to occur shall constitute a separate offense.

5. **Entry to Perform Duties Under this Ordinance**
   To the extent permitted by state law, or if authorized by the owner or other party in control of the property, the Planning Board or its authorized agent and their officers, and employees may enter upon privately owned property for the purpose of performing their duties under this ordinance and regulations and may make or cause to be made such examinations, surveys or sampling as the Planning Board deems reasonably necessary.

6. **Lien**
   If the Planning Board or its authorized agent undertakes work to correct or mitigate any violation of this Chapter, the Planning Board shall (within thirty (30) days after completing the work) notify the permit holder and the Owner(s) of the property (if different) in writing of the costs incurred by the City of Amesbury, including administrative costs, associated with that work. The permit holder and the property Owner(s) (if different) shall be jointly and severally liable to pay the City of Amesbury those costs within thirty (30) days of the receipt of that notice. The permit holder and the property Owner(s) (if different) may file a written protest objecting to the amount or basis of costs with the Planning Board within thirty (30) days of receipt of the notice. If the amount due is not received by the City of Amesbury by the expiration of the time in which to file such a protest, or within sixty (60) after the final decision of the Planning Board or a court of competent jurisdiction resolving that protest, the amount of the City's costs shall be a special assessment against the property and shall constitute a lien on the property pursuant to G.L. c. 40, § 58. Interest shall accrue on any unpaid costs at statutory rate, as provided in G.L. c. 59, § 57.

Sec. 11. Surety

The Planning Board may require the permittee to post before the start of land disturbance or construction activity, a surety bond, irrevocable letter of credit, cash, or other security. The form and amount of any surety shall be determined by the Planning Board, based on the scale and nature of the subject project, to ensure that all work will be completed in accordance with the permit. The surety may not be fully released until the Planning Board has issued a Certificate of Completion and all other requirements stipulated in the Regulations adopted by the Board have been satisfactorily met.

Sec.12. Severability

The provisions of this ordinance are hereby declared to be severable. If any provision, paragraph, sentence, or clause, of this Ordinance or the application thereof to any person, establishment, or circumstances shall be held invalid for any reason, such invalidity shall not affect the other provisions or application of this Ordinance, and all other provisions shall continue in full force and effect.

CITY OF AMESBURY
IN THE YEAR TWO THOUSAND TWENTY

SPONSORED BY: Kassandra Gove **BILL No.** 2020-078
Kassandra Gove, Mayor **REVISED**

An Ordinance to adopt Changes to the Procedures for Site Plan Review and Inspection and Enforcement for the City of Amesbury.

Summary: Part 2.3.5.c.v of the MS4 General Permit specifies that the permittee develop and *implement "written procedures for site plan review and inspection and enforcement".*

For the most part, the permit requirement above is currently addressed in Section XI.C of the Amesbury Zoning Bylaw. However, the bylaw should be revised to consolidate the MS4 permit requirements for Construction Site Stormwater Runoff Control (Part 2.3.5) and Stormwater Management in New Development and Redevelopment (Part 2.3.6) into the Amesbury Subdivision Rules and Regulations. This will eliminate the potential for conflicts between the requirements of the Zoning Bylaw and the Subdivision Rules and Regulations.

To some extent, the consolidation of requirements has already been incorporated into the Zoning Bylaw. For example, under Section 8, Development and Performance Standards, there are separate criteria established for stormwater runoff and erosion control under Paragraphs E and F, respectively. At the same time, Paragraph P specifies that *"the design and construction of stormwater management, erosion control plan, drainage, water, and utilities shall comply with Section 7 (Design Standards) and Section 8 (Construction Standards) of the Amesbury Subdivision Rules and Regulations".*

For ease of reference, the existing text from the Site Plan Review regulations under Section XI.C of the Amesbury Zoning Bylaw are presented below in black text with proposed changes to consolidate the MS4 permit requirements in red italics.

Be it Ordered by the City Council of the City of Amesbury assembled, and by the authority of the same, as follows:

1. INTENT:

These regulations recognize that certain developments of land, though generally suitable for location in a particular zoning district are, because of their nature, size, complexity or other reasons of probable impact, capable of adversely affecting the stated purposes of this Bylaw, unless careful consideration is given to certain critical design elements. It is the intent of these regulations to provide a mechanism for the review of an applicant's attention to such critical design elements within developments that are subject to review.

2. PURPOSES:

A. To promote highway traffic safety and protect the capability of state and local roads to conduct traffic smoothly and efficiently;

B. To promote attractive and viable commercial, industrial or multi-family development projects;

C. To protect the character, aesthetic visual qualities and property values of the City and abutting residential districts;

D. To discourage unlimited commercial "strip development" and curb cuts along highways, and to encourage commercial growth in nodes and clusters;

E. To allow for the preservation of open space; and the protection of natural features and environmentally sensitive areas.

3. APPLICABILITY:

A. Site Plan Review shall be required where so indicated in Section V.D. Table of Use Regulations. Further, where a special permit is required an approved Site Plan pursuant to XI.C shall be required as a condition of granting said permit.

B. An applicant for Site Plan Review shall not be issued a building permit and/or occupancy permit unless in conformance with an approved Site

Plan or unless the Planning Board has authorized changes to an existing Site Plan and/or facility, including change of uses pursuant to Section XI.C.9.

C. Reviewable Projects for Design Review. All projects submitted to the Planning Board which are either listed as "Site Plan Required" under the Table of Use Regulations, Section V.D., or a sign application, shall be reviewed by the Design Review Committee and shall be subject to the design standards contained within the Site Plan Review (SPR), Section XI.C. and the Sign Bylaw, Section VII. All applicants are encouraged to contact the DRC within a pre-application hearing for SPR.

4. PROCEDURE:

A. Submittal Requirement: An applicant shall file a Building Permit Application with the Building Inspector/Code Enforcement Administrator. If said official determines that a Site Plan Review or special permit with Site Plan Review is required, the applicant shall submit the appropriate application to the Planning Board.

B. Pre-application Conference: Prior to submission of an application it is strongly recommended that the applicant confer with the Planning Board to determine the applicability of the information requirements of this subsection and to obtain other information and guidance before entering into binding commitments or incurring substantial expense in the preparation of plans, surveys and other data. If the applicant decides to forgo the pre-application for Site Plan Review, the information and materials for review as noted in Sections 5 and 6 shall be required. If the applicant schedules a pre-application conference the Planning Board suggests that the information provided by the applicant be designed to assist the Planning Board to understand the scope and impact of the project. Said information may include a conceptual drawing of the proposed project indicating general building design, potential locations of curb cuts, parking areas, signs, wetlands, the location and type of surrounding uses and information regarding environmental access or infrastructure issues relevant to the project.

C. Application for Site Plan Review:

1. Filing: An application for Site Plan shall be filed by the current owner of record to the Planning Board on the form provided by the Planning Board, along with application fee(s) which shall be set forth in the Planning Board Regulations.

2. Required Submittals: An applicant shall file the Site Plan Review application, required materials for review and other submittals as set forth in the Planning Board regulations with the Planning Board in one (1) original and fourteen (14) copies. The application, Site Plans and all supporting documents shall also be submitted in Portable Document File (PDF) format on Compact Disk (CD).

3. Application Completeness: Upon receipt of an application, the Board shall determine if the application is complete, including information and requirements listed under Sections XI.C.5 and XI.C.6. If it is determined that the application is incomplete, the Board shall take no further action on said application. An application which is determined to be incomplete may be revised and resubmitted at a subsequent meeting of the Board.

4. Circulation to Town Departments and other Boards: Within seven (7) days of receipt of a complete application, the Board shall transmit a copy to the Design Review Committee, Engineering Department, Board of Health, Building Inspector/Code Enforcement Officer, Fire Department, Police Department, Conservation Commission, Town Planner and Town Clerk for comments. The Boards and Departments herein named shall review the application and report their recommendations in writing to the Board no later than twenty-one (21) days after receipt of the application and information required by this subsection.

5. Public Hearing: The Planning Board shall hold a public hearing within sixty-five (65) days of submission of a completed application for which notice has been given as provided in Section X.J.3 of the Bylaw. The decision of the Board shall be made within ninety (90) days of completion of the public hearing, except where the application has submitted a written request for extension of time.

6. Peer Review: The applicant shall be required to pay for reasonable consulting fees to provide peer review of the Site Plan Review application, pursuant to GL chapter 40a Section 53G. Such fees shall be held by the Town of Amesbury in a separate account and used only for expenses associated with the review of the application by outside consultants, including, but not limited to, attorneys, civil engineers, landscape and urban designers, traffic engineers and others. Any surplus remaining after the completion of such review, including any interest accrued shall be returned to the applicant forthwith. (2012-032)

5. MATERIALS FOR REVIEW:

All Site Plans shall be prepared by a registered architect, landscape architect, or professional engineer who shall sign and date a designer's certificate (Form D) as required by the Town's subdivision regulations and place their seal upon all pertinent documents unless this requirement is waived by the Planning Board because of unusually simple circumstances. All original Site Plans shall be prepared on standard 24" x 36" mylar sheets at a minimum scale of 1" = 40'. Elevations drawings, where required, shall be drawn at a minimum scale of 1" = 8'.

The Planning Board may waive any information requirements it judges to be unnecessary to the review of small scale developments. Said waiver(s) shall be made to the applicant in writing with stated reasons for granting the waiver. The following information shall be included in the Site Plan set:

A. Parcel Information: The location and boundaries of the lot, adjacent public or private ways, total parcel area, frontage, setback boundaries, required open space and parking, other applicable information from Section VI - Dimensional and Density Regulations, easements affecting the use, access and building layout on the parcel, the location and owners names of all adjacent properties.

B. Topography and existing land features: Existing and proposed topography including contours (two foot intervals), the location of wetlands, streams, water bodies, aquifers, aquifer recharge areas, marshes, drainage swales, areas subject to flooding, and unique natural land features, including all trees over eight (8) inches in caliper, and the general location of the tree line. Existing walls, fences, culverts, bridges, recreation trails, land- fills, gravel pits and other significant man-made features.

C. Buildings: Existing and proposed structures, including dimensions, footprint, total gross floor area, number of stories, floor finished elevations and building height(s).

D. Parking & driveways: The location of parking and loading areas, driveways, access and egress points from existing ways.

E. Sidewalks, bike paths, and recreation trails: Walkways between building and parking areas, pedestrian access to and from the site to existing sidewalks and bike paths.

F. Utilities: The locations and description of all existing and proposed septic systems, sanitary sewer water supply, storm drainage systems (including method and calculations for 10 and 100-year storm events), utilities, and refuse and other waste disposal methods.

G. Grading and stormwater drainage: Limit of work, proposed finished elevations, slopes, stabilization measures, storm water and erosion control structures and features.

H. Landscaping: Proposed landscape features including the locations and a description of buffer areas, screening, fencing, and plantings. A planting plan shall be prepared by a registered landscape architect, unless a licensed plant nursery person is deemed appropriate by the Planning Board.

I. Lighting: Existing and proposed lighting, including locations, lighting source, and fixture types. The Planning Board may require photometric analysis of proposed lighting.

J. Signs: The location, dimensions, height, and characteristics of proposed signs.

K. Open Space: The location and description of proposed open space or recreation areas.

L. Traffic Generation: The plan shall describe estimated daily and peak hour vehicle trips to be generated by the site and traffic flow patterns for vehicles and pedestrians showing adequate access to and from the site and adequate circulation within the site.

M. Building Facades and Floor Plans: Architectural elevations of all sides of all new buildings and of those sides of existing buildings which are proposed to be altered; roof plans and floor plans showing existing and/or proposed uses with floor areas for each use. Elevation drawings should indicate exterior material and colors, size and spacing of windows, doors and other openings. (2012-032)

6. ADDITIONAL REVIEW MATERIALS:

In each case where a new building(s) or a use of more than 15,000 square feet total floor area is proposed, the following information shall be required and submitted along with the information and documents required under paragraph 5. If a project requires review under MEPA and issuance of a Certificate on Environmental Notification Form or Environmental Impact Report, a complete information package as required under the MEPA Certificate on ENF of Draft EIR shall also be submitted to the Board. In all other circumstances related to significant environmental or public safety issues or where the proposed intensity of use requires more detailed review, the Planning Board shall require materials or information in paragraph 6 it deems necessary. If not requested at the time of the pre-application conference this information shall be requested not more than 28 days from the date of submission and will not extend the review period, unless mutually agreed.

A. Surface and water pollution: A report on the impact of storm water runoff on adjacent and downstream water bodies, subsurface ground water and water tables.

B. Soils: A report on the potential dangers of erosion and sedimentation caused by the operation and maintenance of the proposed development and the mitigation efforts proposed. To this end, high intensity soil mapping, i.e., test borings and analysis, may be required.

C. General environmental impact: A report on the relationship of the proposed development to the major botanical, zoological, geological, and hydrological resources on the site, and compatibility of the proposed development with adjacent or surrounding land uses and neighborhoods. At the discretion of the Planning Board, an EIS required through the MEPA process which addresses the Planning Board's concerns may be substituted in lieu of this report.

D. Traffic impacts: A report on existing traffic volume, composition, peak hour levels, and existing street capabilities, analysis of existing and resulting level of services (LOS) for:

1. The nearest and/or most impacted public roadway intersection.

2. Estimated average daily traffic generation composition, peak hour levels.

3. Directional flows resulting from the proposed development.

4. Proposed methods to mitigate the estimated traffic impact.

5. The methodology and sources used to derive existing data and estimations.

Further, in an instance where the proposed project will result in an intersection level of service below a rating of LOS D, or result in a roadway volume to capacity rating greater than 1.0; then the applicant shall provide detailed plans (including reconstruction concepts), that when implemented would result in an intersection level of service rating of D or better. The Planning Board may engage a traffic consultant to review said report and make its recommendations to the Planning Board thirty (30) days before final action is required.

E. Architectural Drawings: Building elevations, roof plans and other drawings and documentation, architectural elevations of all sides of all new buildings and of those sides of existing buildings which are proposed to be altered in any way. The elevations shall be prepared by a registered architect who shall sign the plan and place his/her seal upon it. The drawings shall be prepared at a minimum scale of 1/8" = 1' and shall show the following:

1. Exterior material and colors.

2. Type and pitch of roofs.

3. Size and spacing of windows, doors and other openings.

4. Size, location, colors, and copy of signs affixed to or hanging from the building.

5. The relationship in bulk and height of other existing structure in the vicinity.

6. Renderings (or model may be provided at the option of the applicant).

7. Cross-sections of the site and buildings.

8. Product literature on proposed light fixtures.

F. Legal Documents: Drafts of deeds, easements, agreements and other legal documents, including the following where applicable:

1. Deeds of land to be conveyed to the Town for streets or other public purposes.

2. Deeds of easement and right-of-way.

3. Covenants and any other agreements affecting the use of the site.

4. Articles of incorporation of a landowner's association and the by-laws of the association.

5. Agreements between the applicant and the Town regarding public improvements or other matters.

G. Additional Information: Certification of the following:

1. Any and all actions of the Zoning Board of Appeals relative to the application.

2. Assurances from public utility companies that necessary non-municipal utilities will be installed in accordance with plans submitted with the application.

3. A listing of state and federal permits, licenses, and approvals necessary to include an estimated schedule of application and approval. Final actions of said permits shall be filed with the Planning Board as a matter of record.

4. Copies of permits previously issued by local, state and federal agencies, as applicable. (2012-032)

7. SITE PLAN REVIEW CRITERIA:

A. In reviewing and evaluating the Site Plan, and in making a final determination regarding Site Plan approval, the Planning Board shall consider the following criteria:

1. The Site Plan complies with the Development and Performance Standards contained in Subsection 8.

2. The Site Plan minimizes traffic and safety impacts of the proposed development on adjacent highways or roads, and maximizes the convenience and safety of vehicular and pedestrian movement with the site.

3. The proposed development, to the extent feasible:

a. Is integrated into the existing landscape;

b. Minimizes adverse environmental impacts on such features as wetlands, floodplains, and aquifer recharge areas;

c. Minimizes obstruction of scenic views from publicly accessible locations;

d. Preserves unique natural or historical features;

e. Minimizes tree, vegetation and soil removal and grade changes;

f. Maximizes open space retention;

g. Screens objectionable features from neighboring properties and roadway; and

h. Minimizes noise and odors associated with commercial/industrial activities.

4. The architectural design of the proposed development is in harmony with the vernacular architecture of the City.

5. The proposed development is served with adequate water supply and waste disposal systems and will not place excessive demands on City services and infrastructure.

6. The Site Plan shows or includes adequate measures to prevent pollution of surface or groundwater, to minimize erosion and sediments, and to prevent changes in groundwater levels, increased run-off and potential for flooding.

8. DEVELOPMENT AND PERFORMANCE STANDARDS

In order to receive Site Plan approval, all projects or uses must demonstrate compliance with the development and performance standards of the Amesbury Department of Public Works and the following criteria:

A. Access and Traffic Impacts: Applicants must demonstrate that the project will minimize traffic and safety impacts on City roads.

*1. **The number of curb cuts on state and local roads shall be minimized. To the extent feasible, access to businesses shall be provided via one of the following:***

a. Access via a common driveway serving adjacent lots or premises.

b. Access via an existing side street.

c. Access via a cul-de-sac or loop road shared by adjacent lots or premises.

2. One access driveway per development site that is a lot or a combination of several lots, shall be permitted as a matter of right. Except as noted in Section VIII.G.9, and Section VIII.G.20, the Planning Board may, in certain circumstances, allow more than one driveway as part of the Site Plan Approval process.

3. Curb cuts shall be limited to the minimum width for safe entering and exiting, and shall in no case exceed 24 feet in width.

4. All driveways shall be designed to afford motorists exiting to highways with safe sight distance.

5. The proposed development shall assure safe interior circulation within its site by separating pedestrian and vehicular traffic.

6. In each case where a new building(s) or new use of more than 3,000 square feet total floor area is proposed, or where any proposed enlargement of a building would result in a building have more than 3,000 square feet total floor area, a traffic impact statement shall be prepared containing the following information:

a. A detailed assessment of the traffic impacts of the proposed project or use on the carrying capacity of any adjacent highway or road(s) and associated intersection.

b. A plan to minimize traffic and safety impacts through such means as physical design and layout concepts, promoting use of public transportation, or other appropriate means.

c. An interior traffic and pedestrian circulation plan designed to minimize conflicts and safety problems.

7. Adequate pedestrian and bicycle access shall be provided as follows:

a. Sidewalks shall be provided to allow access to adjacent properties and between individual businesses within a development;

b. If the property directly abuts a bikeway right-of-way, paved access route to the bikeway shall be provided.

8. The anticipated impacts of a proposed development, and the effects of the proposed mitigation, should be evaluated using standard performance indicators which will include but not be limited to: level-of-service, delay, and volume to capacity ratio, as defined in the Highway Capacity Manual. The adequacy of existing and proposed roadways and intersections should be based on but not limited to: left turn lane guidelines, right turn lane guidelines, traffic signal warrants, and stopping sight distances. The design of all proposed improvements shall take into consideration:

a. The Manual on Uniform Traffic Control Devices (Federal Highway Administration),

b. A Policy on Geometric Design of Highways and Streets (American Association of State Highway and Transportation Officials),

c. Massachusetts Department of Transportation rules and procedures,

9. Regardless of project size or traffic generation, measured sight distances at access/egress locations with public ways for all new developments shall, at a minimum, meet Massachusetts Department of Transportation (MassDOT) and American Association of State Highway Transportation Officials (AASHTO) standards for safe stopping sight distance.

10. Adjacent commercial uses shall share access points and provide connections between parcels so as to minimize curb cuts, driveways, and vehicular turning maneuvers, where appropriate.

11. Internal site circulation shall be designed to accommodate the appropriate design vehicle for the project.

12. Roadway access for new development and redevelopment must be consistent with the functional classification of the road.

B. Parking: Proposed projects or uses must comply with Parking and Off-Street Loading requirements in Section VIII and the following standards:

1. To the extent feasible, parking areas shall be located to the side or rear of the structure, and be shared with adjacent businesses.

2. No parking shall be permitted within the required front yard setback.

C. Landscaping:

1. Except for driveways, internal pedestrian walkways, plazas or seating areas, a continuous landscaped buffer, at least ten (10) feet wide, shall be located within the front-yard setback to visually separate parking, loading and other such uses form the public way. Along all parking areas, the buffer strip shall be planted with a year-round vegetative landscape screening forming a solid screen at least 42 inches in height. Except where waived by the Board in instances where a vegetative screen is impractical due to topographical conditions on the site, the Board may approve the use of decorative fencing, shade trees, planting beds, or a combination thereof, where appropriate along the front-yard setback. At all street or driveway intersections, trees, shrubs or other planting shall be set back a sufficient distance form such intersections so that they do not present an obstruction to vehicular sight-lines.

2. A continuous landscaped buffer strip between commercial and industrial districts and any residential districts and/or property lines shall be provided consistent with the following:

a. For lots 10,000 square feet or less the buffer shall be ten (10) feet;

b. For lots 10,001 to 20,000 square feet the buffer shall be fifteen (15) feet;

c. For lots over 20,000 square feet the buffer shall be twenty-five (25) feet in width.

In particular circumstances where said criteria may be impractical to apply, given safety, land use, lot shape or historic preservation considerations, the Planning Board may vary the landscape buffer requirements, but in all cases some type of buffer shall be required. The landscape buffer strip shall be measured from the commercial/industrial district line and extend into the commercial/industrial district. The landscape buffer strip shall be of a density to screen ninety percent (90%) of the development in question from view, along the zoning district line in question. Plantings shall be of various approved evergreen species only and shall be planted at an initial height of six (6) feet. Fencing may be allowed in conjunction with plantings. Design and height of said fencing shall be subject to the approval of the Planning Board.

3. Retaining walls shall be allowed as follows:

a. Within the front yard setback and along public ways: No more than three (3) feet in height from the finished grade of the abutting public way. Only natural stone or pre-cast concrete landscape forms that are similar to natural stone walls shall be allowed.

b. All other areas or if abutting zoned residential districts: No more than six (6) feet in height. Walls abutting public ways but not within the front yard setback shall be terraced every three (3) feet, except as provided in (c) below.

c. Only if site conditions require elevation changes of greater than six (6) feet, the Board may allow retaining walls greater than six (6) feet in height towards the rear of the property, provided, i) the retaining walls are terraced at every six (6) feet and ii) landscaped with medium height (no less than 18 inched in height at the time of planting), hardy evergreen shrubs, continuously along the length of the terrace and at each terrace. Terracing will not be required if the top of retaining wall is no more than three (3) feet from the finished grade established along the property frontage.

d. Retaining walls shall be natural stone, concrete masonry units, or precast concrete landscape forms that are similar to natural stone walls. Vertical cast in place concrete shall not be permitted.

4. See Section VIII-F.16 for the landscaping requirements of all parking areas containing over 20 parking spaces.

5. Exposed storage areas, machinery, service areas, truck loading areas, utility buildings and structures and other unsightly uses shall be screened from view from neighboring properties and streets using dense, hardy evergreen plantings, or earthen berms, or wall or tight fence complemented by evergreen plantings.

6. All landscaped areas shall be properly maintained. Shrubs or trees which die shall be replaced within one growing season.

D. Site Plan and Architectural Design:

1. Where feasible buildings shall be located away from sensitive areas so as to preserve open space and natural scenic views. Where appropriate large continuous buildings shall be avoided and massing of buildings should be broken or staggered to reflect the historic scale of existing buildings.

2. Where feasible parking areas shall be located to the side or behind buildings so as to provide an appropriate setting for the building within the context of the site and neighborhood. The Planning Board may require alternative studies of parking lot layouts.

3. Building design shall be compatible with the vernacular structure, historic character, and scale of buildings in its surrounding neighborhood. This shall be accomplished through the use of appropriate building materials, screening, breaks in roof lines, roof forms, wall lines.

4. All proposed projects or uses requiring site plan review shall be reviewed by the Design Review Committee according to the guidelines established in the *"Amesbury Design Guidelines"* manual available at the Building Inspector's Office and Planning Board.

5. All proposed projects or uses within an Historic District shall require a Certificate of Appropriateness from the Historical Commission.

6. Rooftop mechanical equipment shall be screened from view by roof forms or other appropriate screening devices.

E. Stormwater Runoff: *The management and control of flow and pollutant loads from stormwater runoff discharges shall comply with the requirements of Section 7 (Design Standards) and Section 8 (Construction Standards) of the Amesbury Subdivision Rules and Regulations.*

~~1. The rate of surface water run-off from the site shall not be increased after construction. If needed to meet this requirement and maximize groundwater recharge, increased run-off from impervious surfaces shall be recharged on site by being diverted to vegetated surfaces for infiltration or through the use of retention ponds. Dry wells shall be used only where other methods are unfeasible and shall require oil, grease, and sediment traps to facilitate removal of contaminants.~~

~~2. Neighboring properties shall not be adversely affected by flooding from excessive run- off.~~

F. Erosion Control: *The development and implementation of a sediment and erosion control plan shall comply with the requirements of Section 6 (Definitive Subdivision Plans) and Section 8 (Construction Standards) of the Amesbury Subdivision Rules and Regulations. The following criteria shall be used to evaluate plans and control mechanisms used to minimize e*rosion of soil and sedimentation of streams and water bodies shall be minimized using the following erosion practices:

~~1.~~ Exposed or disturbed areas due to stripping of vegetation, soil removal, and regarding shall be permanently stabilized within six months of occupancy of a structure.

~~2.~~ During construction, temporary vegetation and/or mulching shall be used to protect exposed area from erosion. Until a disturbed area is permanently stabilized, sediment in run-off water shall be trapped by using staked hay bales or sedimentation straps.

~~3.~~ Permanent erosion control and vegetative measures shall be in accordance with the erosion/ sedimentation/vegetative practices recommended by the Soil Conservation Service.

~~4.~~ All slopes exceeding 15% resulting from site grading shall be either covered with 4 inches of topsoil and planted with a vegetative cover sufficient to prevent erosion or to be stabilized by a retaining wall.

5. Dust control shall be used during grading operations if the grading is to occur within 200 feet of an occupied residence or place of business. Dust control methods may consist of grading fine soils on calm days only or dampening the ground with water.

G. Water Quality: Groundwater recharge shall be maximized and groundwater quality shall be protected. Various techniques may be required to maximize recharge, such as perforated drain pipes, reduction of paved areas, reduction of building coverage; or to improve water quality, such as installing grease traps, or gas/oil separators. Where the groundwater elevation is close to the surface extra site grading precautions may be taken to maintain the protective function of the overburden.

H. Hazardous Materials and Explosive Materials: The storage, use, transportation, and removal of all hazardous materials and explosive materials shall be consistent with the requirements specified by the Amesbury Fire Department plus all relevant state and federal regulations.

I. Lighting:

1. The goal of exterior lighting shall be to make development feel safe and identify and accent key elements in the project's design.

2. The maximum height of outdoor lighting luminaries on poles shall not exceed ten (10) feet in pedestrian areas and sixteen (16) feet in all other areas, such height being the vertical distance from the finished grade directly below the centerline of the luminaire to the lowest direct light emitting part of the luminaire. Light poles shall be no grater in height than four times the distance to the property line. Luminaries used for roadway lighting, parking lots and for exterior building illumination shall be Dark Sky Certified or Compliant and designed to provide the minimum illumination recommended by the IESNA in the most current edition of the Illuminating Engineering Society of North America (IESNA) Lighting Handbook.

3. Light fixtures shall be located no closer to the property line than four times the mounting height of the fixture. Light levels at the property line shall not exceed 0.1 footcandles (fc) adjacent to non-residential properties and 0.05 fc at residential property boundaries. Lumen cap for projects in residentially zoned districts, C and CBD zoning districts shall not exceed 10,000 per acre and for all other zoning districts shall not exceed 25,000 per acre. The pole heights shall determine the overall spacing of the poles.

4. Lighting poles and structures should be appropriately scaled and styled for the project. Lamp type should be metal halide to provide a natural uniform quality of light. Parking and pedestrian light fixtures should be compatible with the building lighting to provide for a contiguous appearance of the project.

5. Whenever practicable, outdoor lighting installation shall include times, dimmers, and /or motion sensors to reduce overall energy consumption and eliminate unneeded lighting, particularly after 11 p.m.

6. A photometric analysis of site lighting shall be prepared by a registered engineer or a lighting consultant as per requirements of the Amesbury Subdivision Rules and Regulations, as amended.

J. Environmental Performance Standards:

1. Emissions shall be completely and effectively confined within the building, or so regulated as to prevent any nuisance, hazard, or other disturbance from being perceptible (without the use of instruments) at any lot line of the premises on which the use is located.

2. All activities and all storage of flammable and explosive materials at any point shall be provided with adequate safety devices against fire and explosion and adequate fire-fighting and fire suppression devices and equipment.

3. No activities that emit dangerous radioactivity at any point; no electrical disturbance adversely affecting the operation of any point, or any equipment other than that operation at any point, or any equipment other than that of the creator of such disturbance shall be permitted.

4. No emission of visible smoke of a shade darker than No 1 on the Ringlemann Smoke Chart as published by the U.S. Bureau of Mines shall be permitted.

5. No emission which can cause any damage to health of animals or vegetation or which can cause excessive soiling at any point, or in no event any emission of any solid or liquid particles in concentration exceeding 0.3 grains per cubic foot of conveying gas or air shall be permitted.

6. No discharge, at any point, into a private sewerage system, stream, the ground, or a municipal sewerage disposal system of any material in such a way, or of such a nature or temperature as can contaminate any running stream, water supply, or otherwise cause the emission of dangerous or objectionable elements and accumulation of wastes conducive to the breeding of rodents or insects shall be permitted.

7. No vibration which is discernible to the human sense of feeling for three (3) minutes or more hi any hour between 7:00 A.M. and 7:00 P.M. or for thirty (30) seconds or more in any hour between 7:00 P.M. to 7:00 A.M. shall be permitted. No vibration at any time shall produce an acceleration of more than 0.1 gram shall result in any combination of amplitudes and frequencies beyond the "safe" range of Table 7, U. S. Bureau of Mines Bulletin N.442.

8. No emission or odorous gases or odoriferous matter in such quantities as to be offensive shall be permitted. Any process which may involve the creation and/or emission of any odors shall be provided with a secondary safeguard system. No objectionable odor greater than that caused by 0.001202 per thousand cubic feet of hydrogen sulfide or any "odor threshold" as defined in Table III in Chapter 5 of Air Pollution Abatement Manual, copyright 1951, by Manufacturing Chemists Association, Inc., of Washington, D. C. shall be permitted.

9. No direct or sky-reflected glare, whether from floodlights, or from high temperature processes such as welding shall be permitted.

K. Noise:

1. Excessive noise at unreasonable hours shall be muffled so as not to be objectionable due to volume, frequency, shrillness, or intermittence.

2. The maximum permissible sound pressure level of any continuous, regular, or frequent source of sound produced by any use or activity shall not exceed the following limits at the property line or district line. whichever is more restrictive of the source:

Frequency Band (Cycles Per Second)	Sound Pressure Level (Decibel re.0.002 dyne/CM)
20 – 75	65
75 – 100	54

150 – 300	47
300 – 600	41
600 – 1200	37
1200 – 2400	34
2400 – 4800	31
4800 – 10000	28

If this sound is not smooth and continuous, the following corrections should be added to each of the actual decibel levels given:

a.Daytime Operation Only: +5

b.Noise source operations less than 20% of any hour period: +5

Note: Only one (1) of above corrections may be applied.

Sound pressure level shall be measured at all major lot lines, at a height of at least four (4) feet above the ground surface. Noises shall be measured with a sound level meter meeting the standards of the American Standards Institute, ANSI SI.4-1961 "American Standard Specification for General Purpose Sound Level Meters." The interment shall be set to the A-weight response scale. Measurements shall be conducted in accordance with ANSI SI.2-1962 "American Standard Meter for the Physical Measurements of Sound."

3. Sound levels specified shall not be exceeded for more than 15 minutes in any one day, except for temporary construction or maintenance work, agricultural activity, timer harvesting, traffic, church bells, emergency warning device, parades, or other similar special circumstances.

4. No person shall engage in or cause very loud construction activities on a site abutting residential use between the hours of9 P.M. of one day and 7 AM. of the following day.

L.Wetlands: When wetlands replacement or mitigation is required, a plan and description of proposed measures shall be prepared by a biologist or wetlands scientist.

M.Utilities:

1. Electric, telephone, cable TV and other such utilities shall be underground from existing roadway utilities.

2. The applicant must demonstrate that the proposed development will not overburden public sewer, water, and other service systems. If sewerage is to be treated on site, the applicant shall submit plans and specifications for said treatment system and shall demonstrate that the system will not negatively impact adjacent properties or aquifer recharge areas.

N. Roadways and Sidewalks:

1. All roadways and sidewalk construction within the site shall comply with Section 7 (Design Standards) and Section 8 (Construction Standards) of the Amesbury Subdivision Rules and Regulations.

2. All off-site construction on state roadways shall comply with the Department of Massachusetts Highway standards, specifications, or special conditions as applicable.

O. Marina or Docking Facilities: For marina or docking facilities the Site Plan criteria shall include the following additional information:

1. A plan of the proposed facility and the location of all boats.

2. A parking plan for the related off-street parking.

3. A plan indicating the shore frontage to be used and any alterations required.

4. Any other docking or mooring facility existing or planned with 75 feet of the outermost edge of the proposed facility.

5. The water storage location of any docks, floats, boats and associated equipment.

P. Specific Design and Construction Standards: The design and construction of stormwater management, erosion control plan, drainage, water and utilities shall comply with Section 7 (Design Standards) and Section 8 (Construction Standards) of the Amesbury Subdivision Rules and Regulations as amended. Low Impact Development strategies for managing stormwater shall be in accordance with standards promulgated by Massachusetts Department of Environmental Protection and any design manuals produced by the Amesbury Department of Public Works. (2009-060)

9. MODIFICATION TO THE SITE PLAN

Before approval of a Site Plan, the Planning Board may require the applicant to make modification in the proposed design of the project to ensure that the above criteria are met. Where existing buildings, including non-conforming buildings or uses are being enlarged or altered, an applicant may apply to make changes to the project as allowed below:

A. Minor Change:

1. An applicant may apply to make minor changes in a Project involving minor utility or building orientation adjustments, or minor adjustments to parking or other site details that do not affect the overall buildout or building envelope of the site, or provision of open space, expansion or alteration of uses in the existing facility. Such minor changes must be submitted to the Board shown on an existing conditions or approved plan, reflecting the proposed change, and on application forms provided by the Board. The Board may authorize such changes at any regularly scheduled meeting, without the need to hold a public hearing. The Board shall set forth any decision to approve or deny such minor change by motion and written decision, and provide a copy to the applicant for filing with the City Clerk;

2. No building permit and/or occupancy permit shall be issued in any case where a building is to be erected or externally enlarged, except if such addition and/or structure is permitted by right and is under 1,000 square feet gross area and does not abut a residential use. If said building abuts a residential use, the exemption shall be reduced to 500 square feet. No parking, loading, or vehicular service requiring an addition of more than five (5) off-street spaces shall be permitted without an approved Site Plan endorsed by the Planning Board.

B. Major Change: Those changes deemed by the Board to constitute a major change in a Project because of the nature of the change in relation to the prior approved plan, or because such change cannot by appropriately characterized as a minor change as described above, shall be processed by the Planning Board as a new application for Site Plan Approval pursuant to the provisions of Section XI.C.

10. FINAL ACTION ON SITE PLAN REVIEW

A. The Planning Board shall determine that the following conditions have been fulfilled and shall make recommendations in writing to the Building Inspector or Code Enforcement Officer after considering the following matters:

1. The proposed project is consistent with the purposes set out in paragraph 2.

2. The proposed project has been reviewed and approved by the Planning Board as to its design and architectural consistency regarding, among other things, the architectural value and significance of the site, building or structure, the general design, arrangement and texture, materials and color of the features involved and the relation to each feature to similar features of building and structures in the surrounding area.

3. In the case of new construction or additions to existing buildings or structures, the Planning Board shall consider the appropriateness of the size and shape of the buildings or structures both in relation to the land area upon which the building or structure is situated and to the buildings and structures in the vicinity.

4. The protection and enhancement of important existing site features.

5. Protection of adjoining premises against detrimental uses by provision of surface water drainage, sound and sight buffers and preservation of views, light and air.

6. Convenience and safety of vehicular and pedestrian movement within the site, the location of driveway openings in relation to traffic and to adjacent streets.

7. Adequacy of the arrangement of parking and loading spaces.

8. Adequacy of the methods of disposal of refuse and other wastes.

9. Relationship of structure and open space to the natural landscape and existing buildings.

10. Prevention of pollution of surface and groundwater, soil erosion, increased run-off and flooding.

11. The Planning Board may require dimensional and setback requirements in addition to those required by this Bylaw, in order to address the intent and purposes of Site Plan Review if said additional setbacks do not alter the allowed use, diminish the permitted intensity of use, or cause the applicant to seek additional forms of regulatory relief. The Planning Board shall not consider interior arrangement or architectural features not subject to public view.

B. The Planning Board's final action on Site Plan Review shall consist of either:

1. Approval based on a determination that the proposed project will constitute a suitable development and is in compliance with the criteria and design performance standards set forth in this Bylaw.

2. Approval subject to any Site Plan and design performance conditions, modification and restrictions the Planning Board may deem necessary to ensure the health, safety, and welfare of the community.

3. A written denial of the application for the reasons of an incomplete application.

4. Applicants receiving a denial shall be permitted to resubmit the Site Plan at their discretion.

C. Performance Guarantee

1. The Planning Board may require that the applicant file with the Board, as a condition of approval, a bond or other such surety acceptable, in form and amount, to the Planning Board. This surety is to cover costs of construction such as streets, utilities and other site improvements but not limited to erosion control measures and off-site environmental impacts, which left incomplete or improperly constructed, present a public health and safety hazard or nuisance. Further, a performance agreement between the applicant and the City will specify the manner in which the on or off-site improvements will be completed and the specific manner in which the surety will be released.

2. Release of Performance Guarantee: Upon completion of all or a portion of the improvements required by a performance agreement entered under Section XI.10.c.1 of the Bylaw, the applicant may request either partial or full release of his/her bond or other such surety as has been posted by

applicant pursuant to Section XI.10.c.1 by sending a statement of completion and request for release by registered mail to the Planning Board and to the City Clerk. If the Planning Board determines that said construction has been completed, it shall release the interest of the City in such bond or other security and return it to the person who furnished it.

3. Refusal of Release: If the Planning Board determines that said site improvements have not been either fully or adequately completed, it shall specify in a notice sent by registered mail to the applicant and to the City Clerk the details wherein said site improvements fail to comply with the requirements of these Zoning Bylaws.

11. *INSPECTIONS AND* ENFORCEMENT

The Planning Board or its authorized agent shall conduct site inspections and enforce this Bylaw and its regulations as specified in Section 8.02 of the Amesbury Subdivision Rules and Regulations. In addition, the Board shall require the following:

~~A. Prior to the start of construction an inspection fee shall be submitted in accordance with the schedule established by the Planning Board.~~

A. Record plans stamped by a professional engineer shall be submitted to the Building Inspector and the Planning Board. Said plans shall be accompanied with a letter certifying that what was constructed is consistent with approved plans and conditions set forth by the Planning Board as part of Site Plan Review.

B. Prior to the granting of an Occupancy Permit, the Planning Board shall certify to the Building Inspector or Code Enforcement Officer that the project has been constructed in accordance with the criteria and design and performance standards herein and that all conditions have been met. ~~To facilitate Planning Board review, the developer shall be required to complete and submit to the Planning Board Form O of the Subdivision Rules and Regulations, as applicable.~~

~~B. The Planning Board may require the developer to submit all drawings and plans in computer assisted design (CAD) formats. Specific file format shall be .DXF unless otherwise allowed.~~

Amesbury

Community & Economic Development
Nipun Jain, Planning Director
Tel: (978) 388-8110 Ext. 312
Fax: (978) 388-6727
nipun@amesburyma.gov

62 Friend Street
Second Floor
Amesbury, MA 01913

MEMORANDUM

DATE: July 13th, 2020

TO: President, City Council

SUBJECT: **Ordinance 2020-078**

The Planning Board held a duly posted public hearing on June 29th, 2020 on the proposed zoning amendments pursuant to Ordinance 2020-078.

The Ordinance indicates that the proposed amendments are to the provisions of Section XI.C – Site Plan Review. The entire Section XI.C has been included in the Ordinance. It states that the existing text is in black and the amendments are shown in red italics. There is no text in red but there are specific sections that are in italics and/or have been struck. There is also some text that is in italics and bold. The Ordinance as written did not call out specific sections that are intended to be amended.

The Planning Director on the request of the Board sought clarification from the Department of Public Works on the changes to Section XI.C to ensure that the relevant sections can be identified and listed in the public hearing notice as well as discussed appropriately by the Board.

The Board's Legislative Sub-committee conducted a review of said Ordinance. The Board then discussed their findings at its duly posted public hearing on 6/29/2020.

The Board's action and recommendations are stated in the attached document dated 7/6/2020. The document has been prepared to list the actual amendments to the Section XI.C and to ensure that the legislative record on the zoning amendments and the changes adopted pursuant to Ordinance 2020-078 is accurate.

Sincerely,

Nipun Jain
Attached: Recommendations dated 7/6/2020

OCED - Planning Division

Introduction:

Amesbury falls under the National Pollutant Discharge Elimination System (NPDES) for Small Municipal Separate Storm Sewer Systems (MS4). This is the second permit round (2016) the first beginning in 2003. The Department of Public Works (DPW) has indicated that as part of this permit and in order to comply with the EPA, several regulatory changes are required to ordinances in the City. The amendments to the Amesbury Zoning Bylaw are described in the specific amendments being proposed pursuant to 2020-078.

Pursuant to Ordinance 2020-078, the Amesbury Zoning Bylaw is amended as follows:

Note: The amendment to the specific provision is shown in the first text box. This is followed by the Planning Board recommendation. Lastly, the amended language is shown, **as recommended for adoption by the Board.**

The following provisions of the Amesbury Zoning Bylaw, **Section XI.C – Site Plan Review** are amended as indicated below:

I. Amend Section XI.C.8.E (Stormwater Runoff) by adding introductory statement after 'Stormwater Runoff' and striking XI.C.8.E.1 and XI.C.8.E.2

Planning Board recommendation: Accept the proposed amendment as submitted. The Board finds that the additional changes made to the stormwater runoff provisions in the Subdivision Rules and Regulations provide a more appropriate regulatory framework to evaluate management plans for stormwater runoff associated with development projects.

E. Stormwater Runoff: ***The management and control of flow and pollutant loads from stormwater runoff discharges shall comply with the requirements of Section 7 (Design Standards) and Section 8 (Construction Standards) of the Amesbury Subdivision Rules and Regulations.***

~~*1. The rate of surface water run-off from the site shall not be increased after construction. If needed to meet this requirement and maximize groundwater recharge, increased run-off from impervious surfaces shall be recharged on site by being diverted to vegetated surfaces for infiltration or through the use of retention ponds. Dry wells shall be used only where other methods are unfeasible and shall require oil, grease, and sediment traps to facilitate removal of contaminants.*~~

~~*2. Neighboring properties shall not be adversely affected by flooding from excessive run-off.*~~

II. Amend Section XI.C.8.F (Erosion Control) by adding introductory statement after 'Erosion Control' and striking XI.C.8.E.1 and XI.C.8.E.2

Planning Board recommendation: Revise the proposed amendment to add the proposed sentence and retain the existing the sentence in the introductory statement, revising it as shown below. Also, **DO NOT** strike the existing numbered provisions, XI.C.8.F.1 through XI.C.8.F.5. The Board finds that these existing provisions are different from the standards in the Subdivision Rules and Regulations being referenced in the amendment. The existing provisions provide the necessary evaluation criteria for plans designed using the standards from Subdivision Rules and Regulations.

F. Erosion Control: ***The development and implementation of a sediment and erosion control plan shall comply with the requirements of Section 6 (Definitive Subdivision Plans) and Section 8 (Construction Standards) of the Amesbury Subdivision Rules and Regulations.***

The following criteria shall be used to evaluate plans and control mechanisms used to minimize ~~*E*~~ erosion of soil and sedimentation of streams and water bodies ~~*shall be minimized using the following erosion practices:*~~

1. Exposed or disturbed areas due to stripping of vegetation, soil removal, and regarding shall be permanently stabilized within six months of occupancy of a structure.

2. During construction, temporary vegetation and/or mulching shall be used to protect exposed area from erosion. Until a disturbed area is permanently stabilized, sediment in run-off water shall be trapped by using staked hay bales or sedimentation straps.

3. Permanent erosion control and vegetative measures shall be in accordance with the erosion/ sedimentation/vegetative practices recommended by the Soil Conservation Service.

4. All slopes exceeding 15% resulting from site grading shall be either covered with 4 inches of topsoil and planted with a vegetative cover sufficient to prevent erosion or to be stabilized by a retaining wall.

5. Dust control shall be used during grading operations if the grading is to occur within 200 feet of an occupied residence or place of business. Dust control methods may consist of grading fine soils on calm days only or dampening the ground with water.

III. Amend Section XI.C.11 (Enforcement) by adding 'INSPECTIONS AND' before Enforcement and add introductory statement after sub-section title and striking XI.C.11.A through XI.C.11.D.

Planning Board recommendation: The Subdivision Rules and Regulations, established under MGL, Chapter 41T – Chapter 41-Q, allow oversight on the construction of right of ways and associated infrastructure improvements. They have limited ability to oversee improvements on individual lots and/or parcels other than that relate to subdivision performance standards such as site stabilization and drainage. On the other hand, the zoning regulations, established under Chapter 40A allow the review and oversight of all the improvements and uses ON the lot and/or parcels that is not typically covered under Subdivision Rules and Regulations. It is possible to use performance standards/engineering standards from those set of regulations but administering/enforcement of project requirements would have to be pursuant to provisions of Chapter 40A and therefore need to be spelled out in the Zoning Bylaw for them to be effective. Thus, it is important to retain the current language under Section XI.C.11 to a large degree.

Revise the proposed amendment as follows –

i. Add a second sentence after the proposed introductory statement ***In addition, the Board shall require the following:***
ii. XI.C.11.A - Accept the proposed deletion;
iii. XI.C.11.B - DO NOT accept the proposed deletion;
iv. XI.C.11.C - DO NOT accept the proposed deletion of the first sentence. Accept the deletion of the second sentence;
v. XI.C.11.D - Accept the proposed deletion;

11. ***INSPECTIONS AND*** ENFORCEMENT

The Planning Board or its authorized agent shall conduct site inspections and enforce this Bylaw and its regulations as specified in Section 8.02 of the Amesbury Subdivision Rules and Regulations. In addition, the Board shall require the following:

~~*A. Prior to the start of construction an inspection fee shall be submitted in accordance with the schedule established by the Planning Board.*~~

B. Record plans stamped by a professional engineer shall be submitted to the Building Inspector and the Planning Board. Said plans shall be accompanied with a letter certifying that what was constructed is consistent with approved plans and conditions set forth by the Planning Board as part of Site Plan Review.

C. Prior to the granting of an Occupancy Permit, the Planning Board shall certify to the Building Inspector or Code Enforcement Officer that the project has been constructed in accordance with the criteria and design and performance standards herein and that all conditions have been met. ~~*To facilitate Planning Board review, the developer shall be required to complete and submit to the Planning Board Form O of the Subdivision Rules and Regulations, as applicable.*~~

~~*D. The Planning Board may require the developer to submit all drawings and plans in computer assisted design (CAD) formats. Specific file format shall be .DXF unless otherwise allowed.*~~

Procedures for Site Plan Review and Inspection and Enforcement

Part 2.3.5.c.v of the MS4 General Permit specifies that the permittee develop and *implement "written procedures for site plan review and inspection and enforcement".*

For the most part, the permit requirement above is currently addressed in Section XI.C of the Amesbury Zoning Bylaw. However, the bylaw should be revised to consolidate the MS4 permit requirements for Construction Site Stormwater Runoff Control (Part 2.3.5) and Stormwater Management in New Development and Redevelopment (Part 2.3.6) into the Amesbury Subdivision Rules and Regulations. This will eliminate the potential for conflicts between the requirements of the Zoning Bylaw and the Subdivision Rules and Regulations.

To some extent, the consolidation of requirements has already been incorporated into the Zoning Bylaw. For example, under Section 8, Development and Performance Standards, there are separate criteria established for stormwater runoff and erosion control under Paragraphs E and F, respectively. At the same time, Paragraph P specifies that *"the design and construction of stormwater management, erosion control plan, drainage, water, and utilities shall comply with Section 7 (Design Standards) and Section 8 (Construction Standards) of the Amesbury Subdivision Rules and Regulations"*.

For ease of reference, the existing text from the Site Plan Review regulations under Section XI.C of the Amesbury Zoning Bylaw are presented below in black text with proposed changes to consolidate the MS4 permit requirements in red italics.

1. INTENT:

These regulations recognize that certain developments of land, though generally suitable for location in a particular zoning district are, because of their nature, size, complexity or other reasons of probable impact, capable of adversely affecting the stated purposes of this Bylaw, unless careful consideration is given to certain critical design elements. It is the intent of these regulations to provide a mechanism for the review of an applicant's attention to such critical design elements within developments that are subject to review.

2. PURPOSES:

A. To promote highway traffic safety and protect the capability of state and local roads to conduct traffic smoothly and efficiently;

B. To promote attractive and viable commercial, industrial or multi-family development projects;

C. To protect the character, aesthetic visual qualities and property values of the City and abutting residential districts;

D. To discourage unlimited commercial "strip development" and curb cuts along highways, and to encourage commercial growth in nodes and clusters;

E. To allow for the preservation of open space; and the protection of natural features and environmentally sensitive areas.

3. APPLICABILITY:

A. Site Plan Review shall be required where so indicated in Section V.D. Table of Use Regulations. Further, where a special permit is required an approved Site Plan pursuant to XI.C shall be required as a condition of granting said permit.

B. An applicant for Site Plan Review shall not be issued a building permit and/or occupancy permit unless in conformance with an approved Site Plan or unless the Planning Board has

authorized changes to an existing Site Plan and/or facility, including change of uses pursuant to Section XI.C.9.

C. Reviewable Projects for Design Review. All projects submitted to the Planning Board which are either listed as "Site Plan Required" under the Table of Use Regulations, Section V.D., or a sign application, shall be reviewed by the Design Review Committee and shall be subject to the design standards contained within the Site Plan Review (SPR), Section XI.C. and the Sign Bylaw, Section VII. All applicants are encouraged to contact the DRC within a pre-application hearing for SPR.

4. PROCEDURE:

A. Submittal Requirement: An applicant shall file a Building Permit Application with the Building Inspector/Code Enforcement Administrator. If said official determines that a Site Plan Review or special permit with Site Plan Review is required, the applicant shall submit the appropriate application to the Planning Board.

B. Pre-application Conference: Prior to submission of an application it is strongly recommended that the applicant confer with the Planning Board to determine the applicability of the information requirements of this subsection and to obtain other information and guidance before entering into binding commitments or incurring substantial expense in the preparation of plans, surveys and other data. If the applicant decides to forgo the pre-application for Site Plan Review, the information and materials for review as noted in Sections 5 and 6 shall be required. If the applicant schedules a pre-application conference the Planning Board suggests that the information provided by the applicant be designed to assist the Planning Board to understand the scope and impact of the project. Said information may include a conceptual drawing of the proposed project indicating general building design, potential locations of curb cuts, parking areas, signs, wetlands, the location and type of surrounding uses and information regarding environmental access or infrastructure issues relevant to the project.

C. Application for Site Plan Review:

1. Filing: An application for Site Plan shall be filed by the current owner of record to the Planning Board on the form provided by the Planning Board, along with application fee(s) which shall be set forth in the Planning Board Regulations.

2. Required Submittals: An applicant shall file the Site Plan Review application, required materials for review and other submittals as set forth in the Planning Board regulations with the Planning Board in one (1) original and fourteen (14) copies. The application, Site Plans and all supporting documents shall also be submitted in Portable Document File (PDF) format on Compact Disk (CD).

3. Application Completeness: Upon receipt of an application, the Board shall determine if the application is complete, including information and requirements listed under Sections XI.C.5 and XI.C.6. If it is determined that the application is incomplete, the Board shall take no further action on said application. An application which is determined to be incomplete may be revised and resubmitted at a subsequent meeting of the Board.

4. Circulation to Town Departments and other Boards: Within seven (7) days of receipt of a complete application, the Board shall transmit a copy to the Design Review Committee, Engineering Department, Board of Health, Building Inspector/Code Enforcement Officer, Fire Department, Police Department, Conservation Commission, Town Planner and Town Clerk for comments. The Boards and Departments herein named shall review the application and report their recommendations in writing to the Board no later than twenty-one (21) days after receipt of the application and information required by this subsection.

5. Public Hearing: The Planning Board shall hold a public hearing within sixty-five (65) days of submission of a completed application for which notice has been given as provided in Section X.J.3 of the Bylaw. The decision of the Board shall be made within ninety (90) days of completion of the public hearing, except where the application has submitted a written request for extension of time.

6. Peer Review: The applicant shall be required to pay for reasonable consulting fees to provide peer review of the Site Plan Review application, pursuant to GL chapter 40a Section 53G. Such fees shall be held by the Town of Amesbury in a separate account and used only for expenses associated with the review of the application by outside consultants, including, but not limited to, attorneys, civil engineers, landscape and urban designers, traffic engineers and others. Any surplus remaining after the completion of such review, including any interest accrued shall be returned to the applicant forthwith. (2012-032)

5. MATERIALS FOR REVIEW:

All Site Plans shall be prepared by a registered architect, landscape architect, or professional engineer who shall sign and date a designer's certificate (Form D) as required by the Town's subdivision regulations and place their seal upon all pertinent documents unless this requirement is waived by the Planning Board because of unusually simple circumstances. All original Site Plans shall be prepared on standard 24" x 36" mylar sheets at a minimum scale of 1" = 40'. Elevations drawings, where required, shall be drawn at a minimum scale of 1" = 8'.

The Planning Board may waive any information requirements it judges to be unnecessary to the review of small scale developments. Said waiver(s) shall be made to the applicant in writing with stated reasons for granting the waiver. The following information shall be included in the Site Plan set:

A. Parcel Information: The location and boundaries of the lot, adjacent public or private ways, total parcel area, frontage, setback boundaries, required open space and parking, other applicable information from Section VI - Dimensional and Density Regulations, easements affecting the use, access and building layout on the parcel, the location and owners names of all adjacent properties.

B. Topography and existing land features: Existing and proposed topography including contours (two foot intervals), the location of wetlands, streams, water bodies, aquifers, aquifer recharge areas, marshes, drainage swales, areas subject to flooding, and unique natural land features, including all trees over eight (8) inches in caliper, and the general location of the tree line. Existing walls, fences, culverts, bridges, recreation trails, land- fills, gravel pits and other significant man-made features.

C. Buildings: Existing and proposed structures, including dimensions, footprint, total gross floor area, number of stories, floor finished elevations and building height(s).

D. Parking & driveways: The location of parking and loading areas, driveways, access and egress points from existing ways.

E. Sidewalks, bike paths, and recreation trails: Walkways between building and parking areas, pedestrian access to and from the site to existing sidewalks and bike paths.

F. Utilities: The locations and description of all existing and proposed septic systems, sanitary sewer water supply, storm drainage systems (including method and calculations for 10 and 100-year storm events), utilities, and refuse and other waste disposal methods.

G. Grading and stormwater drainage: Limit of work, proposed finished elevations, slopes, stabilization measures, storm water and erosion control structures and features.

H. Landscaping: Proposed landscape features including the locations and a description of buffer areas, screening, fencing, and plantings. A planting plan shall be prepared by a registered landscape architect, unless a licensed plant nursery person is deemed appropriate by the Planning Board.

I. Lighting: Existing and proposed lighting, including locations, lighting source, and fixture types. The Planning Board may require photometric analysis of proposed lighting.

J. Signs: The location, dimensions, height, and characteristics of proposed signs.

K. Open Space: The location and description of proposed open space or recreation areas.

L. Traffic Generation: The plan shall describe estimated daily and peak hour vehicle trips to be generated by the site and traffic flow patterns for vehicles and pedestrians showing adequate access to and from the site and adequate circulation within the site.

M. Building Facades and Floor Plans: Architectural elevations of all sides of all new buildings and of those sides of existing buildings which are proposed to be altered; roof plans and floor plans showing existing and/or proposed uses with floor areas for each use. Elevation drawings should indicate exterior material and colors, size and spacing of windows, doors and other openings. (2012-032)

6. ADDITIONAL REVIEW MATERIALS:

In each case where a new building(s) or a use of more than 15,000 square feet total floor area is proposed, the following information shall be required and submitted along with the information and documents required under paragraph 5. If a project requires review under MEPA and issuance of a Certificate on Environmental Notification Form or Environmental Impact Report, a complete information package as required under the MEPA Certificate on ENF of Draft EIR shall also be submitted to the Board. In all other circumstances related to significant environmental or public safety issues or where the proposed intensity of use requires more detailed review, the Planning Board shall require materials or information in paragraph 6 it deems necessary. If not requested at the time of the pre-application conference this information shall be requested not more than 28 days from the date of submission and will not extend the review period, unless mutually agreed.

A. Surface and water pollution: A report on the impact of storm water runoff on adjacent and downstream water bodies, subsurface ground water and water tables.

B. Soils: A report on the potential dangers of erosion and sedimentation caused by the operation and maintenance of the proposed development and the mitigation efforts proposed. To this end, high intensity soil mapping, i.e., test borings and analysis, may be required.

C. General environmental impact: A report on the relationship of the proposed development to the major botanical, zoological, geological, and hydrological resources on the site, and compatibility of the proposed development with adjacent or surrounding land uses and neighborhoods. At the discretion of the Planning Board, an EIS required through the MEPA process which addresses the Planning Board's concerns may be substituted in lieu of this report.

D. Traffic impacts: A report on existing traffic volume, composition, peak hour levels, and existing street capabilities, analysis of existing and resulting level of services (LOS) for:

1. The nearest and/or most impacted public roadway intersection.

2. Estimated average daily traffic generation composition, peak hour levels.

3. Directional flows resulting from the proposed development.

4. Proposed methods to mitigate the estimated traffic impact.

5. The methodology and sources used to derive existing data and estimations.

Further, in an instance where the proposed project will result in an intersection level of service below a rating of LOS D, or result in a roadway volume to capacity rating greater than 1.0; then the applicant shall provide detailed plans (including reconstruction concepts), that when implemented would result in an intersection level of service rating of D or better. The Planning Board may engage a traffic consultant to review said report and make its recommendations to the Planning Board thirty (30) days before final action is required.

E. Architectural Drawings: Building elevations, roof plans and other drawings and documentation, architectural elevations of all sides of all new buildings and of those sides of existing buildings which are proposed to be altered in any way. The elevations shall be prepared by a registered architect who shall sign the plan and place his/her seal upon it. The drawings shall be prepared at a minimum scale of 1/8" = 1' and shall show the following:

1. Exterior material and colors.

2. Type and pitch of roofs.

3. Size and spacing of windows, doors and other openings.

4. Size, location, colors, and copy of signs affixed to or hanging from the building.

5. The relationship in bulk and height of other existing structure in the vicinity.

6. Renderings (or model may be provided at the option of the applicant).

7. Cross-sections of the site and buildings.

8. Product literature on proposed light fixtures.

F. Legal Documents: Drafts of deeds, easements, agreements and other legal documents, including the following where applicable:

1. Deeds of land to be conveyed to the Town for streets or other public purposes.

2. Deeds of easement and right-of-way.

3. Covenants and any other agreements affecting the use of the site.

4. Articles of incorporation of a landowner's association and the by-laws of the association.

5. Agreements between the applicant and the Town regarding public improvements or other matters.

G. Additional Information: Certification of the following:

1. Any and all actions of the Zoning Board of Appeals relative to the application.

2. Assurances from public utility companies that necessary non-municipal utilities will be installed in accordance with plans submitted with the application.

3. A listing of state and federal permits, licenses, and approvals necessary to include an estimated schedule of application and approval. Final actions of said permits shall be filed with the Planning Board as a matter of record.

4. Copies of permits previously issued by local, state and federal agencies, as applicable. (2012-032)

7. SITE PLAN REVIEW CRITERIA:

A. In reviewing and evaluating the Site Plan, and in making a final determination regarding Site Plan approval, the Planning Board shall consider the following criteria:

1. The Site Plan complies with the Development and Performance Standards contained in Subsection 8.

2. The Site Plan minimizes traffic and safety impacts of the proposed development on adjacent highways or roads, and maximizes the convenience and safety of vehicular and pedestrian movement with the site.

3. The proposed development, to the extent feasible:

a. Is integrated into the existing landscape;

b. Minimizes adverse environmental impacts on such features as wetlands, floodplains, and aquifer recharge areas;

c. Minimizes obstruction of scenic views from publicly accessible locations;

d. Preserves unique natural or historical features;

e. Minimizes tree, vegetation and soil removal and grade changes;

f. Maximizes open space retention;

g. Screens objectionable features from neighboring properties and roadway; and

h. Minimizes noise and odors associated with commercial/industrial activities.

4. The architectural design of the proposed development is in harmony with the vernacular architecture of the City.

5. The proposed development is served with adequate water supply and waste disposal systems and will not place excessive demands on City services and infrastructure.

6. The Site Plan shows or includes adequate measures to prevent pollution of surface or groundwater, to minimize erosion and sediments, and to prevent changes in groundwater levels, increased run-off and potential for flooding.

8. DEVELOPMENT AND PERFORMANCE STANDARDS

In order to receive Site Plan approval, all projects or uses must demonstrate compliance with the development and performance standards of the Amesbury Department of Public Works and the following criteria:

A. Access and Traffic Impacts: Applicants must demonstrate that the project will minimize traffic and safety impacts on City roads.

1. The number of curb cuts on state and local roads shall be minimized. To the extent feasible, access to businesses shall be provided via one of the following:

    a. Access via a common driveway serving adjacent lots or premises.

    b. Access via an existing side street.

    c. Access via a cul-de-sac or loop road shared by adjacent lots or premises.

2. One access driveway per development site that is a lot or a combination of several lots, shall be permitted as a matter of right. Except as noted in Section VIII.G.9, and Section VIII.G.20, the Planning Board may, in certain circumstances, allow more than one driveway as part of the Site Plan Approval process.

3. Curb cuts shall be limited to the minimum width for safe entering and exiting, and shall in no case exceed 24 feet in width.

4. All driveways shall be designed to afford motorists exiting to highways with safe sight distance.

5. The proposed development shall assure safe interior circulation within its site by separating pedestrian and vehicular traffic.

6. In each case where a new building(s) or new use of more than 3,000 square feet total floor area is proposed, or where any proposed enlargement of a building would result in a building have more than 3,000 square feet total floor area, a traffic impact statement shall be prepared containing the following information:

    a. A detailed assessment of the traffic impacts of the proposed project or use on the carrying capacity of any adjacent highway or road(s) and associated intersection.

    b. A plan to minimize traffic and safety impacts through such means as physical design and layout concepts, promoting use of public transportation, or other appropriate means.

    c. An interior traffic and pedestrian circulation plan designed to minimize conflicts and safety problems.

7. Adequate pedestrian and bicycle access shall be provided as follows:

    a. Sidewalks shall be provided to allow access to adjacent properties and between individual businesses within a development;

    b. If the property directly abuts a bikeway right-of-way, paved access route to the bikeway shall be provided.

8. The anticipated impacts of a proposed development, and the effects of the proposed mitigation, should be evaluated using standard performance indicators which will

include but not be limited to: level-of-service, delay, and volume to capacity ratio, as defined in the Highway Capacity Manual. The adequacy of existing and proposed roadways and intersections should be based on but not limited to: left turn lane guidelines, right turn lane guidelines, traffic signal warrants, and stopping sight distances. The design of all proposed improvements shall take into consideration:

a. The Manual on Uniform Traffic Control Devices (Federal Highway Administration),

b. A Policy on Geometric Design of Highways and Streets (American Association of State Highway and Transportation Officials),

c. Massachusetts Department of Transportation rules and procedures,

9. Regardless of project size or traffic generation, measured sight distances at access/egress locations with public ways for all new developments shall, at a minimum, meet Massachusetts Department of Transportation (MassDOT) and American Association of State Highway Transportation Officials (AASHTO) standards for safe stopping sight distance.

10. Adjacent commercial uses shall share access points and provide connections between parcels so as to minimize curb cuts, driveways, and vehicular turning maneuvers, where appropriate.

11. Internal site circulation shall be designed to accommodate the appropriate design vehicle for the project.

12. Roadway access for new development and redevelopment must be consistent with the functional classification of the road.

B. Parking: Proposed projects or uses must comply with Parking and Off-Street Loading requirements in Section VIII and the following standards:

1. To the extent feasible, parking areas shall be located to the side or rear of the structure, and be shared with adjacent businesses.

2. No parking shall be permitted within the required front yard setback.

C. Landscaping:

1. Except for driveways, internal pedestrian walkways, plazas or seating areas, a continuous landscaped buffer, at least ten (10) feet wide, shall be located within the front-yard setback to visually separate parking, loading and other such uses form the public way. Along all parking areas, the buffer strip shall be planted with a year-round vegetative landscape screening forming a solid screen at least 42 inches in height. Except where waived by the Board in instances where a vegetative screen is impractical due to topographical conditions on the site, the Board may approve the use of decorative fencing, shade trees, planting beds, or a combination thereof, where appropriate along the front-yard setback. At all street or driveway intersections, trees, shrubs or other planting shall be set back a sufficient distance form such intersections so that they do not present an obstruction to vehicular sight-lines.

2. A continuous landscaped buffer strip between commercial and industrial districts and any residential districts and/or property lines shall be provided consistent with the following:

a. For lots 10,000 square feet or less the buffer shall be ten (10) feet;

b. For lots 10,001 to 20,000 square feet the buffer shall be fifteen (15) feet;

c. For lots over 20,000 square feet the buffer shall be twenty-five (25) feet in width.

In particular circumstances where said criteria may be impractical to apply, given safety, land use, lot shape or historic preservation considerations, the Planning Board may vary the landscape buffer requirements, but in all cases some type of buffer shall be required. The landscape buffer strip shall be measured from the commercial/industrial district line and extend into the commercial/industrial district. The landscape buffer strip shall be of a density to screen ninety percent (90%) of the development in question from view, along the zoning district line in question. Plantings shall be of various approved evergreen species only and shall be planted at an initial height of six (6) feet. Fencing may be allowed in conjunction with plantings. Design and height of said fencing shall be subject to the approval of the Planning Board.

3. Retaining walls shall be allowed as follows:

   a. Within the front yard setback and along public ways: No more than three (3) feet in height from the finished grade of the abutting public way. Only natural stone or pre-cast concrete landscape forms that are similar to natural stone walls shall be allowed.

   b. All other areas or if abutting zoned residential districts: No more than six (6) feet in height. Walls abutting public ways but not within the front yard setback shall be terraced every three (3) feet, except as provided in (c) below.

   c. Only if site conditions require elevation changes of greater than six (6) feet, the Board may allow retaining walls greater than six (6) feet in height towards the rear of the property, provided, i) the retaining walls are terraced at every six (6) feet and ii) landscaped with medium height (no less than 18 inched in height at the time of planting), hardy evergreen shrubs, continuously along the length of the terrace and at each terrace. Terracing will not be required if the top of retaining wall is no more than three (3) feet from the finished grade established along the property frontage.

   d. Retaining walls shall be natural stone, concrete masonry units, or precast concrete landscape forms that are similar to natural stone walls. Vertical cast in place concrete shall not be permitted.

4. See Section VIII-F.16 for the landscaping requirements of all parking areas containing over 20 parking spaces.

5. Exposed storage areas, machinery, service areas, truck loading areas, utility buildings and structures and other unsightly uses shall be screened from view from neighboring properties and streets using dense, hardy evergreen plantings, or earthen berms, or wall or tight fence complemented by evergreen plantings.

6. All landscaped areas shall be properly maintained. Shrubs or trees which die shall be replaced within one growing season.

D. Site Plan and Architectural Design:

1. Where feasible buildings shall be located away from sensitive areas so as to preserve open space and natural scenic views. Where appropriate large continuous buildings shall be avoided and massing of buildings should be broken or staggered to reflect the historic scale of existing buildings.

2. Where feasible parking areas shall be located to the side or behind buildings so as to provide an appropriate setting for the building within the context of the site and neighborhood. The Planning Board may require alternative studies of parking lot layouts.

3. Building design shall be compatible with the vernacular structure, historic character, and scale of buildings in its surrounding neighborhood. This shall be accomplished through the use of appropriate building materials, screening, breaks in roof lines, roof forms, wall lines.

4. All proposed projects or uses requiring site plan review shall be reviewed by the Design Review Committee according to the guidelines established in the *"Amesbury Design Guidelines"* manual available at the Building Inspector's Office and Planning Board.

5. All proposed projects or uses within an Historic District shall require a Certificate of Appropriateness from the Historical Commission.

6. Rooftop mechanical equipment shall be screened from view by roof forms or other appropriate screening devices.

E. Stormwater Runoff: *The management and control of flow and pollutant loads from stormwater runoff discharges shall comply with the requirements of Section 7 (Design Standards) and Section 8 (Construction Standards) of the Amesbury Subdivision Rules and Regulations.*

~~1. The rate of surface water run-off from the site shall not be increased after construction. If needed to meet this requirement and maximize groundwater recharge, increased run-off from impervious surfaces shall be recharged on site by being diverted to vegetated surfaces for infiltration or through the use of retention ponds. Dry wells shall be used only where other methods are unfeasible and shall require oil, grease, and sediment traps to facilitate removal of contaminants.~~

~~2. Neighboring properties shall not be adversely affected by flooding from excessive run-off.~~

F. Erosion Control: *The development and implementation of a sediment and erosion control plan shall comply with the requirements of Section 6 (Definitive Subdivision Plans) and Section 8 (Construction Standards) of the Amesbury Subdivision Rules and Regulations.* ~~Erosion of soil and sedimentation of streams and water bodies shall be minimized using the following erosion practices:~~

~~1. Exposed or disturbed areas due to stripping of vegetation, soil removal, and regarding shall be permanently stabilized within six months of occupancy of a structure.~~

~~2. During construction, temporary vegetation and/or mulching shall be used to protect exposed area from erosion. Until a disturbed area is permanently stabilized, sediment in run-off water shall be trapped by using staked hay bales or sedimentation straps.~~

~~3. Permanent erosion control and vegetative measures shall be in accordance with the erosion/ sedimentation/vegetative practices recommended by the Soil Conservation Service.~~

~~4. All slopes exceeding 15% resulting from site grading shall be either covered with 4 inches of topsoil and planted with a vegetative cover sufficient to prevent erosion or to be stabilized by a retaining wall.~~

~~5. Dust control shall be used during grading operations if the grading is to occur within 200 feet of an occupied residence or place of business. Dust control methods may consist of grading fine soils on calm days only or dampening the ground with water.~~

G. Water Quality: Groundwater recharge shall be maximized and groundwater quality shall be protected. Various techniques may be required to maximize recharge, such as perforated drain pipes, reduction of paved areas, reduction of building coverage; or to improve water quality, such as installing grease traps, or gas/oil separators. Where the groundwater elevation is close to the surface extra site grading precautions may be taken to maintain the protective function of the overburden.

H. Hazardous Materials and Explosive Materials: The storage, use, transportation, and removal of all hazardous materials and explosive materials shall be consistent with the requirements specified by the Amesbury Fire Department plus all relevant state and federal regulations.

I. Lighting:

1. The goal of exterior lighting shall be to make development feel safe and identify and accent key elements in the project's design.

2. The maximum height of outdoor lighting luminaries on poles shall not exceed ten (10) feet in pedestrian areas and sixteen (16) feet in all other areas, such height being the vertical distance from the finished grade directly below the centerline of the luminaire to the lowest direct light emitting part of the luminaire. Light poles shall be no grater in height than four times the distance to the property line. Luminaries used for roadway lighting, parking lots and for exterior building illumination shall be Dark Sky Certified or Compliant and designed to provide the minimum illumination recommended by the IESNA in the most current edition of the Illuminating Engineering Society of North America (IESNA) Lighting Handbook.

3. Light fixtures shall be located no closer to the property line than four times the mounting height of the fixture. Light levels at the property line shall not exceed 0.1 footcandles (fc) adjacent to non-residential properties and 0.05 fc at residential property boundaries. Lumen cap for projects in residentially zoned districts, C and CBD zoning districts shall not exceed 10,000 per acre and for all other zoning districts shall not exceed 25,000 per acre. The pole heights shall determine the overall spacing of the poles.

4. Lighting poles and structures should be appropriately scaled and styled for the project. Lamp type should be metal halide to provide a natural uniform quality of light. Parking and pedestrian light fixtures should be compatible with the building lighting to provide for a contiguous appearance of the project.

5. Whenever practicable, outdoor lighting installation shall include times, dimmers, and /or motion sensors to reduce overall energy consumption and eliminate unneeded lighting, particularly after 11 p.m.

6. A photometric analysis of site lighting shall be prepared by a registered engineer or a lighting consultant as per requirements of the Amesbury Subdivision Rules and Regulations, as amended.

J. Environmental Performance Standards:

1. Emissions shall be completely and effectively confined within the building, or so regulated as to prevent any nuisance, hazard, or other disturbance from being perceptible (without the use of instruments) at any lot line of the premises on which the use is located.

2. All activities and all storage of flammable and explosive materials at any point shall be provided with adequate safety devices against fire and explosion and adequate fire-fighting and fire suppression devices and equipment.

3. No activities that emit dangerous radioactivity at any point; no electrical disturbance adversely affecting the operation of any point, or any equipment other than that operation at any point, or any equipment other than that of the creator of such disturbance shall be permitted.

4. No emission of visible smoke of a shade darker than No 1 on the Ringlemann Smoke Chart as published by the U.S. Bureau of Mines shall be permitted.

5. No emission which can cause any damage to health of animals or vegetation or which can cause excessive soiling at any point, or in no event any emission of any solid or liquid particles in concentration exceeding 0.3 grains per cubic foot of conveying gas or air shall be permitted.

6. No discharge, at any point, into a private sewerage system, stream, the ground, or a municipal sewerage disposal system of any material in such a way, or of such a nature or temperature as can contaminate any running stream, water supply, or otherwise cause the emission of dangerous or objectionable elements and accumulation of wastes conducive to the breeding of rodents or insects shall be permitted.

7. No vibration which is discernible to the human sense of feeling for three (3) minutes or more hi any hour between 7:00 A.M. and 7:00 P.M. or for thirty (30) seconds or more in any hour between 7:00 P.M. to 7:00 A.M. shall be permitted. No vibration at any time shall produce an acceleration of more than 0.1 gram shall result in any combination of amplitudes and frequencies beyond the "safe" range of Table 7, U. S. Bureau of Mines Bulletin N.442.

8. No emission or odorous gases or odoriferous matter in such quantities as to be offensive shall be permitted. Any process which may involve the creation and/or emission of any odors shall be provided with a secondary safeguard system. No objectionable odor greater than that caused by 0.001202 per thousand cubic feet of hydrogen sulfide or any "odor threshold" as defined in Table III in Chapter 5 of Air Pollution Abatement Manual, copyright 1951, by Manufacturing Chemists Association, Inc., of Washington, D. C. shall be permitted.

9. No direct or sky-reflected glare, whether from floodlights, or from high temperature processes such as welding shall be permitted.

K. Noise:

1. Excessive noise at unreasonable hours shall be muffled so as not to be objectionable due to volume, frequency, shrillness, or intermittence.

2. The maximum permissible sound pressure level of any continuous, regular, or frequent source of sound produced by any use or activity shall not exceed the following limits at the property line or district line. whichever is more restrictive of the source:

Frequency Band (Cycles Per Second)	Sound Pressure Level (Decibel re.0.002 dyne/CM)
20 – 75	65
75 – 100	54
150 – 300	47

300 – 600	41
600 – 1200	37
1200 – 2400	34
2400 – 4800	31
4800 – 10000	28

If this sound is not smooth and continuous, the following corrections should be added to each of the actual decibel levels given:

a. Daytime Operation Only: +5

b. Noise source operations less than 20% of any hour period: +5

Note: Only one (1) of above corrections may be applied.

Sound pressure level shall be measured at all major lot lines, at a height of at least four (4) feet above the ground surface. Noises shall be measured with a sound level meter meeting the standards of the American Standards Institute, ANSI SI.4-1961 "American Standard Specification for General Purpose Sound Level Meters." The interment shall be set to the A-weight response scale. Measurements shall be conducted in accordance with ANSI SI.2-1962 "American Standard Meter for the Physical Measurements of Sound."

3. Sound levels specified shall not be exceeded for more than 15 minutes in any one day, except for temporary construction or maintenance work, agricultural activity, timer harvesting, traffic, church bells, emergency warning device, parades, or other similar special circumstances.

4. No person shall engage in or cause very loud construction activities on a site abutting residential use between the hours of9 P.M. of one day and 7 AM. of the following day.

L. Wetlands: When wetlands replacement or mitigation is required, a plan and description of proposed measures shall be prepared by a biologist or wetlands scientist.

M. Utilities:

1. Electric, telephone, cable TV and other such utilities shall be underground from existing roadway utilities.

2. The applicant must demonstrate that the proposed development will not overburden public sewer, water, and other service systems. If sewerage is to be treated on site, the applicant shall submit plans and specifications for said treatment system and shall demonstrate that the system will not negatively impact adjacent properties or aquifer recharge areas.

N. Roadways and Sidewalks:

1. All roadways and sidewalk construction within the site shall comply with Section 7 (Design Standards) and Section 8 (Construction Standards) of the Amesbury Subdivision Rules and Regulations.

2. All off-site construction on state roadways shall comply with the Department of Massachusetts Highway standards, specifications, or special conditions as applicable.

O. Marina or Docking Facilities: For marina or docking facilities the Site Plan criteria shall include the following additional information:

1. A plan of the proposed facility and the location of all boats.

2. A parking plan for the related off-street parking.

3. A plan indicating the shore frontage to be used and any alterations required.

4. Any other docking or mooring facility existing or planned with 75 feet of the outermost edge of the proposed facility.

5. The water storage location of any docks, floats, boats and associated equipment.

P. Specific Design and Construction Standards: The design and construction of stormwater management, erosion control plan, drainage, water and utilities shall comply with Section 7 (Design Standards) and Section 8 (Construction Standards) of the Amesbury Subdivision Rules and Regulations as amended. Low Impact Development strategies for managing stormwater shall be in accordance with standards promulgated by Massachusetts Department of Environmental Protection and any design manuals produced by the Amesbury Department of Public Works. (2009-060)

9. MODIFICATION TO THE SITE PLAN

Before approval of a Site Plan, the Planning Board may require the applicant to make modification in the proposed design of the project to ensure that the above criteria are met. Where existing buildings, including non-conforming buildings or uses are being enlarged or altered, an applicant may apply to make changes to the project as allowed below:

A. Minor Change:

1. An applicant may apply to make minor changes in a Project involving minor utility or building orientation adjustments, or minor adjustments to parking or other site details that do not affect the overall buildout or building envelope of the site, or provision of open space, expansion or alteration of uses in the existing facility. Such minor changes must be submitted to the Board shown on an existing conditions or approved plan, reflecting the proposed change, and on application forms provided by the Board. The Board may authorize such changes at any regularly scheduled meeting, without the need to hold a public hearing. The Board shall set forth any decision to approve or deny such minor change by motion and written decision, and provide a copy to the applicant for filing with the City Clerk;

2. No building permit and/or occupancy permit shall be issued in any case where a building is to be erected or externally enlarged, except if such addition and/or structure is permitted by right and is under 1,000 square feet gross area and does not abut a residential use. If said building abuts a residential use, the exemption shall be reduced to 500 square feet. No parking, loading, or vehicular service requiring an addition of more than five (5) off-street spaces shall be permitted without an approved Site Plan endorsed by the Planning Board.

B. Major Change: Those changes deemed by the Board to constitute a major change in a Project because of the nature of the change in relation to the prior approved plan, or because such change cannot by appropriately characterized as a minor change as described above, shall be processed by the Planning Board as a new application for Site Plan Approval pursuant to the provisions of Section XI.C.

10. FINAL ACTION ON SITE PLAN REVIEW

A. The Planning Board shall determine that the following conditions have been fulfilled and shall make recommendations in writing to the Building Inspector or Code Enforcement Officer after considering the following matters:

1. The proposed project is consistent with the purposes set out in paragraph 2.

2. The proposed project has been reviewed and approved by the Planning Board as to its design and architectural consistency regarding, among other things, the architectural value and significance of the site, building or structure, the general design, arrangement and texture, materials and color of the features involved and the relation to each feature to similar features of building and structures in the surrounding area.

3. In the case of new construction or additions to existing buildings or structures, the Planning Board shall consider the appropriateness of the size and shape of the buildings or structures both in relation to the land area upon which the building or structure is situated and to the buildings and structures in the vicinity.

4. The protection and enhancement of important existing site features.

5. Protection of adjoining premises against detrimental uses by provision of surface water drainage, sound and sight buffers and preservation of views, light and air.

6. Convenience and safety of vehicular and pedestrian movement within the site, the location of driveway openings in relation to traffic and to adjacent streets.

7. Adequacy of the arrangement of parking and loading spaces.

8. Adequacy of the methods of disposal of refuse and other wastes.

9. Relationship of structure and open space to the natural landscape and existing buildings.

10. Prevention of pollution of surface and groundwater, soil erosion, increased run-off and flooding.

11. The Planning Board may require dimensional and setback requirements in addition to those required by this Bylaw, in order to address the intent and purposes of Site Plan Review if said additional setbacks do not alter the allowed use, diminish the permitted intensity of use, or cause the applicant to seek additional forms of regulatory relief. The Planning Board shall not consider interior arrangement or architectural features not subject to public view.

B. The Planning Board's final action on Site Plan Review shall consist of either:

1. Approval based on a determination that the proposed project will constitute a suitable development and is in compliance with the criteria and design performance standards set forth in this Bylaw.

2. Approval subject to any Site Plan and design performance conditions, modification and restrictions the Planning Board may deem necessary to ensure the health, safety, and welfare of the community.

3. A written denial of the application for the reasons of an incomplete application.

4. Applicants receiving a denial shall be permitted to resubmit the Site Plan at their discretion.

C. Performance Guarantee

1. The Planning Board may require that the applicant file with the Board, as a condition of approval, a bond or other such surety acceptable, in form and amount, to the Planning Board. This surety is to cover costs of construction such as streets, utilities and other site improvements but not limited to erosion control measures and off-site environmental impacts, which left incomplete or improperly constructed, present a public health and safety hazard or nuisance. Further, a performance agreement between the applicant and the City will specify the manner in which the on or off-site improvements will be completed and the specific manner in which the surety will be released.

2. Release of Performance Guarantee: Upon completion of all or a portion of the improvements required by a performance agreement entered under Section XI.10.c.1 of the Bylaw, the applicant may request either partial or full release of his/her bond or other such surety as has been posted by applicant pursuant to Section XI.10.c.1 by sending a statement of completion and request for release by registered mail to the Planning Board and to the City Clerk. If the Planning Board determines that said construction has been completed, it shall release the interest of the City in such bond or other security and return it to the person who furnished it.

3. Refusal of Release: If the Planning Board determines that said site improvements have not been either fully or adequately completed, it shall specify in a notice sent by registered mail to the applicant and to the City Clerk the details wherein said site improvements fail to comply with the requirements of these Zoning Bylaws.

11. *INSPECTIONS AND* ENFORCEMENT

The Planning Board or its authorized agent shall conduct site inspections and enforce this Bylaw and its regulations as specified in Section 8.02 of the Amesbury Subdivision Rules and Regulations.

~~A. Prior to the start of construction an inspection fee shall be submitted in accordance with the schedule established by the Planning Board.~~

~~B. Record plans stamped by a professional engineer shall be submitted to the Building Inspector and the Planning Board. Said plans shall be accompanied with a letter certifying that what was constructed is consistent with approved plans and conditions set forth by the Planning Board as part of Site Plan Review.~~

~~C. Prior to the granting of an Occupancy Permit, the Planning Board shall certify to the Building Inspector or Code Enforcement Officer that the project has been constructed in accordance with the criteria and design and performance standards herein and that all conditions have been met. To facilitate Planning Board review, the developer shall be required to complete and submit to the Planning Board Form O of the Subdivision Rules and Regulations, as applicable.~~

~~D. The Planning Board may require the developer to submit all drawings and plans in computer assisted design (CAD) formats. Specific file format shall be .DXF unless otherwise allowed.~~

Procedures for Site Inspections and Enforcement of Sediment and Erosion Control Measures

Part 2.3.5.c.ii of the MS4 General Permit specifies that the permittee develop and *implement "written (hardcopy or electronic) procedures for site inspections and enforcement of sediment and erosion control measures".*

Section 6.05 of the Amesbury Subdivision Rules and Regulations establishes procedures for the preparation and submittal of an erosion and sedimentation control plan as well as the posting of a performance guarantee to insure proper implementation of sediment and erosion control measures during construction. The use of a performance guarantee is the principal means of enforcement provided in the current regulations, but this type of arrangement involves the City having to perform the remedial work required to bring the site back into compliance. Another approach would be to provide the Planning Board or its authorized agent with the ability to issue written orders to enforce the regulations. To this end, the City should consider incorporating additional provisions to strengthen the current regulations and to fully comply with MS4 permit requirements.

Sections 6.11 and 8.02 of the Amesbury Subdivision Rules and Regulations establish the basis and schedule for site inspections to occur at specific milestones during construction, or as approved by the Planning Board. In addition, the regulations include an Inspection Form to be completed by the developer which lists each milestone and the responsible agency (i.e., Planning Board, DPW, etc.) for inspection sign-off, a copy of which is attached to the back of this document. However, neither the schedule of inspections nor the inspection form included specific references to sediment and erosion control measures. Therefore, the City should also consider revising both the schedule of inspections and inspection form accordingly.

For ease of reference, the existing text from each relevant section of the Amesbury Subdivision Rules and Regulations are presented below in black text with proposed changes to incorporate additional provisions in red italics.

6.05 EROSION AND SEDIMENTATION CONTROL PLANS

A plan for erosion and sedimentation control covering all proposed excavation, filling and grade work for improvements shall be required. Said plan shall be prepared and certified by a Registered Professional Engineer.

Requirements for Erosion Control. Such plans shall show proper measures to control erosion and reduce sedimentation, as set forth in Section 8.08. Such Erosion and Sedimentation Control Plan shall consist of:

1. All Construction Plan Contents plus,

2. Location of areas to be stripped of vegetation and other exposed or unprotected areas.

3. A schedule of operations to include starting and completion dates for major development phases, such as land clearing and grading, street, sidewalk, and storm sewer installation, and sediment control measures.

4. Seeding, sodding, or revegetation plans and specifications for all unprotected or unvegetated areas.

5. Location and design of structural sediment control measures, such as diversions, waterways, grade stabilization structures, debris basins, etc.

6. General information relating to the implementation and maintenance of the sediment control measures.

Enforcement of Sediment and Erosion Control Measures. The Planning Board or its authorized agent may issue a written order to enforce the provisions of this regulation as set forth in Section 8.02.

In certain circumstances, the Planning Board may require the Applicant to post a performance guarantee, to insure proper implementation of the Erosion and Sedimentation Control Plan during construction. The intent of the performance guarantee is to provide the Planning Board with a specific surety designated for:

a. Construction and ongoing maintenance of measures outlined in the Erosion and Sedimentation Control Plan,

b. Construction and maintenance of additional erosion and sedimentation controls, as may be warranted by particular site conditions,

c. Construction of interim measures, as may be required, for stabilization of disturbed areas and/or repairs to eroded areas.

If, in the opinion of the Planning Board, the Developer fails to adequately execute the Erosion and Sedimentation Control Plan, or fails to satisfactorily control sediment at the site, the proceeds of the performance guarantee shall be made available to the Town of Amesbury, for the purpose of correcting sedimentation and erosion control issues, and for the purpose of bringing the site into compliance with the Erosion and Sedimentation Control Plan.

The form of the performance guarantee shall be as agreed by the Planning Board and shall be maintained and extended by the Applicant/Developer until such time as earthwork operations are completed and all disturbed areas have been adequately vegetated. The dollar amount of the performance guarantee shall be based on the area of land to be disturbed, as shown on the Definitive Plans, (unless otherwise determined by the Board) times the unit price established in the 'Fee Schedule'. Release of the performance guarantee shall be in accordance with the procedures outlined in Section 6.09.E of these Regulations.

6.11 INSPECTIONS

1. Purpose. Inspections of the quality of materials used and methods of installation of the improvements within a subdivision by the Board are required to protect the health and welfare of the future subdivision residents, and of the Town.

2. Access. The applicant will provide safe and convenient access to all parts of the subdivision, for the purposes of inspection, to representative of the board or other Town agencies and Boards.

3. Responsibility The applicant is responsible for requesting inspections at the proper stage in the process of installation of improvements (see Section 8.02). Should an inspection not be performed due to the failure of the applicant to notify the Planning Board, the applicant will be required to uncover the improvements. No work will be accepted that has ***been*** covered before inspection.

4. Inspection fee. A fee shall be charged to cover the cost of inspections. This fee shall be based upon the time spent by the Planning Board's representative in making the required inspections.

5. Sediment and Erosion Control Measures. The applicant or his/her agent shall make regular inspections of all control measures in accordance with the inspection schedule outlines in the approved Erosion and Sedimentation Control Plan. The purpose of such inspections will be

to determine the overall effectiveness of the control plan and the need for additional control measures. All inspections shall be documented in written form and submitted to the Planning Board at the time interval specified in the permit decision.

8.02 INSPECTIONS *AND ENFORCEMENT*

A. Schedule.

It is assumed that under normal conditions work will proceed in accordance with the following construction schedule and site inspections will occur as indicated, or as approved by the Planning Board. The contractor will provide the Planning Board with a detailed construction schedule. Additional inspections may be required as determined by the Planning Board or their designated representative, The Planning board or designated representative must be given 48 hours-notice prior to the inspection.

1. Establish Construction Control*; including installation of sediment and erosion control measures.*

   SITE INSPECTION

2. Clearing and grubbing; including excavating or stripping poor material.

3. Preparation of sub-base; including necessary cuts and fills.

   SITE INSPECTION

4. Installation of drainage pipes.

5. Installation of other underground utilities.

   SITE INSPECTION *PRIOR TO BACKFILLING OPERATIONS*

6. Application of material for sub-base.

7. Application of gravel in or above sub-base.

   SITE INSPECTION

8. Application of oil or other binding material where needed as determined by the Planning Board.

9. Removal or application of material for slopes.

10. Application of bituminous concrete base course.

    SITE INSPECTION

11. Installation of granite curbing.

12. Application of gravel in sidewalks.

13. Application of and installation of concrete sidewalks.

14. Application of bituminous concrete finish course.

15. Application of loam for lawns and slopes.

16. Installation of bounds.

17. Clean up.

SITE INSPECTION

As part of the final inspection, and prior to the release of the performance guarantee, the effectiveness of the stormwater management system as installed shall be evaluated in an actual storm. If the inspection finds the system to be adequate, the Planning Board will issue a Certificate of Completion. However, if the system is found to be inadequate by virtue of physical evidence of operational failure, even though it was built as called for in approved plan, it shall be corrected by the applicant before the performance guarantee is released. If the permittee fails to act, the City of Amesbury may use the surety bond to complete the work. Examples of inadequacy include, but shall not be limited to: errors in the infiltrative capability, errors in the maximum groundwater elevation, failure to properly define or construct flow paths, or erosive discharges from basins.

B. Fees

A fee shall be charged to cover the cost of inspections. This fee shall be based upon the time spent by the Planning Board representative in making the required inspections.

C. Enforcement

1. The Planning Board or its authorized agent shall enforce its regulations, orders, violation notices, and enforcement orders, and may pursue all civil and criminal remedies for such violations.

2. Orders. The Planning Board or its authorized agent may issue a written order to enforce the provisions of this Bylaw or the regulations there under, which may include:

a. A requirement to cease and desist from the land disturbing activity until there is compliance with the regulations or provisions of the land disturbance permit;

b. Maintenance, installation or performance of additional erosion and sediment control measures;

c. Monitoring, analyses, and reporting;

d. Remediation of erosion and sedimentation resulting directly or indirectly from the land disturbing activity;

e. Compliance with the Operation and Maintenance Plan.

f. If the enforcing person determines that abatement or remediation of erosion and sedimentation is required, the order shall set forth a deadline by which such abatement or remediation must be completed. Said order shall further advise that, should the violator or property owner fail to abate or perform remediation within the specified deadline, the City of Amesbury may, at its option, undertake such work, and the property owner shall reimburse the town's expenses. Within thirty (30) days after completing all measures necessary to abate the violation or to perform remediation, the violator and the property owner shall be notified of the costs incurred by the City of Amesbury, including administrative costs. The violator or property owner may file a

written protest objecting to the amount or basis of costs with the Board within thirty (30) days of receipt of the notification of the costs incurred.

g. *Fines. Any person who violates any provision of this regulation, order or permit issued there under, shall be punished by a fine of not more than $ 300.00. Each day or part there under that such violation occurs or continues shall constitute a separate offense.*

h. *Non-Criminal Disposition. As an alternative to criminal prosecution or civil action, the Planning Board may elect to utilize the noncriminal disposition procedure set forth in G.L. Ch. 40, §21D, which has been adopted by the City, in which case the Planning Board or authorized agent shall be the enforcing person. The penalty for each violation shall be $300.00. Each day or part thereof that such violation occurs or continues shall constitute a separate offense.*

Sediment and Erosion Control Practices

Part 2.3.5.c.i of the MS4 General Permit specifies that the permittee develop and implement "*an ordinance or regulatory mechanism that requires the use of sediment and erosion control practices at construction sites. In addition to addressing sediment and erosion control, the ordinance must include controls for other wastes on construction sites such as demolition debris, litter and sanitary wastes".*

Section 8.08 of the Amesbury Subdivision Rules and Regulations currently requires the control of erosion and sedimentation during construction. To fully comply with the requirements outlined above, however, the regulations need to be revised to include additional controls for other wastes on construction sites. For ease of reference, the existing text from Section 8.08 is presented below in black text with proposed changes to incorporate additional controls in red italics.

8.08 EROSION AND SEDIMENTATION CONTROL

The developer shall control erosion and sedimentation during construction according to the objectives, principles and design considerations set forth in *Residential Erosion and Sediment Control*, published joint by the Urban Land Institute, the American Society of Civil Engineers and the National Association of Home Builders, 1978 and according to the guidelines for *Soil and Water Conservation in Urbanized Areas of Massachusetts*, published by the USDA, Soil Conservation Service, Amherst, 1975. These publications are hereby incorporated as a part of these regulations.

In addition to the requirements and objectives stated therein, the following must also be achieved:

1. An absolute minimum of existing vegetative cover shall be disturbed during the construction period.

2. Only the smallest practical area of land shall be exposed at any one time during development.

3. When land is exposed during development, the exposure shall be kept to the shortest practical period of time.

4. Where necessary, as determined by Planning Board, temporary vegetation and/or mulching shall be used to protect areas exposed during development.

5. All disturbed areas shall be properly and neatly graded and shaped as soon as possible. Final grading shall include removal of all large rocks, stumps, debris, and all other deleterious materials from the finished surface.

6. At the toe of all cut and fill slopes in excess of ten (10) feet in height, baled hay or other erosion checks shall be installed.

7. All disturbed areas shall be protected from potentially erosive runoff from up-slope areas by means of Diversions, Benches, and/or other acceptable means.

8. Cuts and fills shall not endanger adjoining property.

9. Fill shall be placed and compacted so as to minimize sliding or erosion of the soil.

10. Grading shall not be done in such a way so as to divert water onto or impound water on the property of another landowner without the written consent of landowner.

11. Fills shall not encroach on natural watercourses or constructed channels.

12. During construction, necessary measures for dust control shall be exercised.

13. *Employ only wet type equipment for saw cutting and concrete grinding to control dust nuisance.*

14. *Obtain Planning Board approval before chemicals for dust control are used. Sodium chloride is not permitted for dust control.*

15. *All trenches and disturbed areas created during construction that will produce dust shall be maintained dust free by an application of calcium chloride. The use of calcium chloride on temporary access roads is not allowed.*

16. *Temporary construction entrance pads or other measures required by Planning Board shall be provided at all sites to ensure that sediment is not tracked onto public streets by construction vehicles or washed into storm drains.*

17. *Wash mud from construction vehicles before leaving the construction site. Promptly clean up all dirt and mud deposited on public and/or private property due to construction.*

17. *Discharge silt-laden water from trenches or excavations onto filter fabric mat, baled hay or straw sediment traps, or into sedimentation basins to ensure that only sediment-free water is returned to watercourses.*

18. *Do not dump spoiled material into any streams, wetlands, surface waters, or unspecified locations.*

19. *Prevent indiscriminate, arbitrary, or capricious operation of equipment in streams, wetlands or surface waters.*

20. *Prevent damage to vegetation adjacent to or outside of construction area limits.*

21. *Soil stockpiles must be stabilized or covered at the end of each workday.*

22. *Provide controls for other wastes at construction sites, including but not limited to the following:*

    A. *General: Do not dispose of trees, brush, debris, paints, chemicals, asphalt products, concrete curing compounds, fuels, lubricants, insecticides, washwater from concrete trucks or hydroseeders, or any other pollutant in streams, wetlands, surface waters, or natural or man-made channels leading thereto, or unspecified locations.*

    B. *Sanitary Waste:*

        i. *Adequate sanitary facilities shall be provided for the use of those employed on the Work. Such facilities shall be made available when the first employees arrive on the site of the Work, shall be properly secluded from public observation, and shall be constructed and maintained during the progress of the Work in suitable numbers and at such points and in such manner as may be required.*

        ii. *The Developer shall maintain the sanitary facilities in a satisfactory and sanitary condition at all times and shall enforce their use. He shall rigorously prohibit the committing of nuisances on the site of the Work, on the lands of the Owner, or on adjacent property.*

C. *Protection of Storm Drains: Prevent construction material (including liquid wastes such as oil, chemicals, paints), pavement, concrete, earth, or other debris from entering existing storm drain pipes or structures.*

D. *Disposal of Excess Excavated and Other Waste Materials:*

i. *Excess excavated material not required or not suitable for backfill and other waste material shall be disposed of in accordance with local regulatory requirements.*

ii. *Provide watertight conveyance for liquid, semi-liquid or saturated solids which tend to bleed during transport. Liquid loss from transported materials is not permitted, whether being delivered to construction site or hauled away for disposal. Fluid materials hauled for disposal must be specifically acceptable at selected disposal site.*

iii. *Transport dusty materials in covered haulage vehicles.*

E. *Use of Chemicals:*

i. *Chemicals used during project construction or furnished for project operation, whether herbicide, pesticide, disinfectant, polymer, reactant or of other classification, shall be approved by U.S. EPA or U.S. Department of Agriculture and any other applicable regulatory agency.*

ii. *Use and disposal of chemicals and residues shall comply with manufacturer's instructions.*

F. *Cleaning of Equipment:*

i. *Keep construction equipment clean so that no debris is deposited on any public roadway. Identify a designated vehicle cleaning area within the limit of work. Contain all construction debris is this designated area only, and dispose of debris off-site at an approved location.*

ii. *Debris cleaned from equipment cannot gain access to storm drains and watercourses.*

G. *Fuels and Lubricants:*

i. *Comply with local, state, and federal regulations concerning transportation and storage of fuels and lubricants. Minimize use of potentially hazardous materials including fuels and lubricants.*

ii. *Designate an area within the working limits to be used exclusively for fueling of construction equipment and carry out all refueling in this area only.*

iii. *Establish procedures for the interception and rapid clean-up and disposal of fuel spillages which may occur. Ensure that the materials required for the clean-up of fuel spillages are readily accessible on site at all times.*

iv. *Report spills or leaks from fueling equipment or construction equipment and clean-up as required by local, state or federal regulations.*

v. *Keep motorized equipment in good working order with no fuel or lubricant leakage. Protect ground surface from leakage using tarps or other methods.*

vi. *Do not change oil on equipment or store or dispose of fuels, solvents, lubricants, or other potentially hazardous materials on site.*

H. *Construction Waste Management:*

i. *Provide appropriately marked containers or bins for controlling recyclable and construction waste, trash, and debris until they are removed from the site. Include list of acceptable and unacceptable materials at each container and bin. Inspect containers for contamination and remove contaminated materials if found.*

ii. *Designate and label specific areas on site necessary for separating materials that are to be salvaged, recycled, reused, donated, sold or disposed of.*

iii. *Separate recyclable waste by type at site to the maximum extent practical. For waste that cannot be separated at site, co-ingle with waste which is to be separated later at a recycling facility.*

iv. *Except for items or materials to be salvaged, recycled, or otherwise reused, remove waste materials from site and legally dispose of them in a landfill or incinerator acceptable to authorities having jurisdiction. Do not burn waste materials on site.*

v. *Do not allow waste materials that are to be disposed of accumulate on site.*

vi. *Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.*

As-Built Drawings

Part 2.3.6.a.iii of the MS4 General Permit specifies *that "the permittee shall require, at a minimum, the submission of as-built drawings no later than two (2) years after completion of construction projects".*

The permit requirement above is currently addressed in both the Amesbury Zoning Bylaw and the Amesbury Subdivision Rules and Regulations. Section 11, Paragraph b of the Site Plan Review regulations under Section XI.C of the Amesbury Zoning Bylaw states the following:

b. Record plans stamped by a professional engineer shall be submitted to the Building Inspector and the Planning Board. Said plans shall be accompanied with a letter certifying that what was constructed is consistent with approved plans and conditions set forth by the Planning Board as part of Site Plan Review.

Similarly, Section 6.12 of the Definitive Subdivision Plan requirements under the Amesbury Subdivision Rules and Regulations states the following:

6.12 AS BUILT PLANS

Upon completion of construction, and before release of the performance guarantee, the subdivider shall have prepared and submitted As-Built Plans at the same scale as the street plans, which shall indicate the actual locations of street line; traveled wad edges; path locations; permanent monuments; inverts and location of require utilities and drainage; location of all underground utilities. The accuracy of such As-Built Plans shall be certified by a Registered Land Surveyor and Registered Professional Engineer retained by the subdivider. The Planning Board shall be provided with one mylar copy and two blueline copies of the As-Built Plan (record plan).

As indicated above, the release of the performance guarantee is conditioned upon the submittal of As-Built Plans. Therefore, it is not necessary to incorporate the two-year time requirement specified in Part 2.3.6.a.iii of the MS4 General Permit.

Post-Construction Stormwater Runoff

Part 2.3.6.a.ii of the MS4 General Permit specifies *that "the permittee shall develop or modify, as appropriate, an ordinance or regulatory mechanism"* to incorporate design standards to address post-construction stormwater runoff impacts from new development and redevelopment sites.

Design standards for stormwater management systems are provided in Section 7.10 of the Amesbury Subdivision Rules and Regulations. To fully comply with the MS4 permit requirements, however, the regulations need to be revised to incorporate the specific criteria to reduce the discharge of pollutants found in stormwater as outlined in the permit. For ease of reference, the existing text from Section 7.10 is presented below in black text with proposed changes to incorporate additional design standards in red italics.

7.10 DRAINAGE

A. General Approach

Storm drains, culverts, and related facilities shall be designed to permit the unimpeded flow of all natural water courses, to ensure adequate drainage at all low points along streets, to control erosion, and to intercept stormwater run-off along streets at intervals reasonably related to the extent and grade of the area being drained. To the maximum extent feasible, storm water must be recharged utilizing structures designed to prevent water quality degradation, rather than piped to surface water. In areas identified as high yielding, aquifer and aquifer recharge areas, recharge is especially critical. Peak stream and channel flows and overland runoff at the boundaries of the development in the twenty-five (25) and one hundred (100) year frequency storm shall be no higher following development than prior to development.

Where the water table is not too high and where the soil is reasonably permeable to adequate depths, drainage shall feature swales, detention/retention ponds and multi-use areas. Open drainage systems may be required for recharge of aquifers and recharge areas provided that runoff is not seriously polluted. Open drainage featuring grassed areas will be preferred as providing better filtration than pits and shafts.

B. Design Basis

Storm sewers shall be designed to convey peak discharge of the 25-year frequency storm, and culverts shall be designed to convey the peak discharge of the 100-year frequency storm. Detention ponds shall be designed to provide no increase in peak discharge to any off-site area in both the 25 years and 100 year storms. Retention ponds shall be designed such that the combined storage and 24-hour recharge volumes are greater than the inflowing runoff volume. *In accordance with the 2016 MS4 permit, the design of all stormwater management systems shall also meet the following design criteria:*

1. *Low Impact Development (LID) site planning and design strategies must be used to the maximum extent feasible.*

2. *The design of treatment and infiltration practices should follow the guidance in Volume 2 of the Massachusetts Stormwater Handbook, as amended, or other federally or State approved10 BMP design guidance.*

3. *Stormwater management systems on new development sites shall be designed to:*

    a. *Not allow new stormwater conveyances to discharge untreated stormwater in accordance with Massachusetts Stormwater Handbook Standard 1;*

b. *Control peak runoff rates in accordance with Massachusetts Stormwater Habook Standard 211;*

c. *Recharge groundwater in accordance with Massachusetts Stormwater Handbook Standard 312;*

d. *Eliminate or reduce the discharge of pollutants from land uses with higher pollutant loads as defined in the Massachusetts Stormwater Handbook in accordance with Massachusetts Stormwater Handbook Standard 5;*

e. *Protect Zone II or Interim Wellhead Protection Areas of public water supplies in accordance with Massachusetts Stormwater Handbook Standard 613;*

f. *Implement long term maintenance practices in accordance with Massachusetts Stormwater Handbook Standard 9; and*

g. *Require that all stormwater management systems be designed to:*

i. *Retain the volume of runoff equivalent to, or greater than, one (1.0) inch multiplied by the total post-construction impervious surface area on the site AND/OR*

ii. *Remove 90% of the average annual load of Total Suspended Solids (TSS) generated from the total post-construction impervious area on the site14 AND 60% of the average annual load of Total Phosphorus (TP) generated from the total post-construction impervious surface area on the site14. Pollutant removal shall be calculated consistent with EPA Region 1's BMP Performance Extrapolation Tool or other BMP performance evaluation tool provided by EPA Region 1, where available. If EPA Region 1 tools do not address the planned or installed BMP performance any federally or State approved15 BMP design guidance or performance standards (e.g. State stormwater handbooks and design guidance manuals) may be used to calculate BMP performance.*

4. *Redevelopment Requirements*

a. *Stormwater management systems on Redevelopment sites shall meet the following sections of part 2.3.6.a.ii.3 to the maximum extent feasible:*

i. *Part 2.3.6.a.ii.3(a) (Massachusetts Stormwater Standard 1);*

ii. *Part 2.3.6.a.ii.3(b) (Massachusetts Stormwater Standard 2);*

iii. *Part 2.3.6.a.ii.3(c) (Massachusetts Stormwater Standard 3); and*

iv. *The pretreatment and structural best management practices requirements of 2.3.6.a.ii.3(d) and 2.3.6.a.ii.3(e) (Massachusetts Stormwater Standards 5 and 6).*

b. *Stormwater management systems on Redevelopment sites shall also improve existing conditions by requiring that stormwater management systems be designed to:*

i. *Retain the volume of runoff equivalent to, or greater than, 0.80 inch multiplied by the total post-construction impervious surface area on the site AND/OR*

ii. *Remove 80% of the average annual post-construction load of Total Suspended Solids (TSS) generated from the total post-construction impervious area on the*

site AND 50% of the average annual load of Total Phosphorus (TP) generated from the total postconstruction impervious surface area on the site. Pollutant removal shall be calculated consistent with EPA Region 1's BMP Performance Extrapolation Tool or other BMP performance evaluation tool provided by EPA Region 1 where available. If EPA Region 1 tools do not address the planned or installed BMP performance any federally or State approved BMP design guidance or performance standards (e.g. State stormwater handbooks and design guidance manuals) may be used to calculate BMP performance.

c. Stormwater management systems on redevelopment sites may utilize offsite mitigation within the same USGS HUC10 as the redevelopment site to meet the equivalent tretention or pollutant removal requirements in part 2.3.6.a.ii.4(b).

d. Redevelopment activities that are exclusively limited to maintenance and improvement of existing roadways, (including widening less than a single lane, adding shoulders, correcting substandard intersections, improving existing drainage systems, and repaving projects) shall improve existing conditions where feasible and are exempt from part 2.3.6.a.ii.4(a), part 2.3.6.a.ii.4(b) and part 2.3.6.a.ii.4(c). Roadway widening or improvements that increase the amount of impervious area on the redevelopment site by greater than or equal to a single lane width shall meet the requirements of part 2.3.6.a.ii.4(a) – (c)fully.

C. Design Method

Storm Drainage calculations shall be based upon the rational method and the modified soil cover complex method with Storm Drainage design based upon the objectives, principles and design considerations set forth in the current edition of Urban Hydrology for Small Watersheds, published by the USDA, Soil Conservation Service, Technical Release 55 (TR 55). This publication is hereby incorporated as a part of these regulations. In cases where TR 55 does not apply the Planning Board, after consulting with the Director of Public Works, may base design methods upon other pertinent references.

Water velocities in pipes and gutters shall be between three (3) and ten feet per second. (see §8.04.B.)

When determining the extent of development, all undeveloped, off-site tributary areas shall be assumed to be fully developed in accordance with the Amesbury Zoning Bylaw and these Subdivision Regulations.

D. Connections

Proper connections shall be made with any existing drains in adjacent streets or easements which must be proven, by the developer, to be adequate to accommodate the drainage flow from the subdivision. In the absence of such facilities, or inadequacy of the same, it shall be the responsibility of the developer to extend drains from the subdivision as required to property dispose of all drainage from said subdivision in a manner determined to be proper by the Board. Should any such outlet extend onto adjoining privately owned property, the developer should obtain all necessary easements running to the Town of Amesbury in a manner approved by the Board. Any connection to existing facilities shall also meet the requirements of the Director of Public Works and the Town Engineer.

E. Flood Hazard Avoidance

Any subdivision located partially or wholly within the Zone A of the Flood Insurance Rate Maps prepared by the Federal Emergency Management Agency (FEMA) shall comply with the following:

1. Subdivision design shall be consistent with the need to minimize flood damage within the flood-prone area, through use of clustering, open space reservation, street profile design, and drainage.

2. All public utilities and facilities, such as sewer, gas, electrical, and water systems shall be located and constructed to minimize or eliminate flood damage.

3. Drainage systems shall be designed in consideration of possible flooding to the Base Flood Elevation.

Pursuant to Ordinance _____, the Amesbury Subdivision Rules and Regulations is amended as follows:

Note: The amendment to the specific provision is shown in the first text box. This is followed by the amended language, **as recommended for adoption by the City.**

I. Amend Section 6.05 (Erosion and Sedimentation Control Plans) by adding paragraph on enforcement after Item 6.

6.05 EROSION AND SEDIMENTATION CONTROL PLANS

A plan for erosion and sedimentation control covering all proposed excavation, filling and grade work for improvements shall be required. Said plan shall be prepared and certified by a Registered Professional Engineer.

Requirements for Erosion Control. Such plans shall show proper measures to control erosion and reduce sedimentation, as set forth in Section 8.08. Such Erosion and Sedimentation Control Plan shall consist of:

1. All Construction Plan Contents plus,

2. Location of areas to be stripped of vegetation and other exposed or unprotected areas.

3. A schedule of operations to include starting and completion dates for major development phases, such as land clearing and grading, street, sidewalk, and storm sewer installation, and sediment control measures.

4. Seeding, sodding, or revegetation plans and specifications for all unprotected or unvegetated areas.

5. Location and design of structural sediment control measures, such as diversions, waterways, grade stabilization structures, debris basins, etc.

6. General information relating to the implementation and maintenance of the sediment control measures.

Enforcement of Sediment and Erosion Control Measures. The Planning Board or its authorized agent may issue a written order to enforce the provisions of this regulation as set forth in Section 8.02.

In certain circumstances, the Planning Board may require the Applicant to post a performance guarantee, to insure proper implementation of the Erosion and Sedimentation Control Plan during construction. The intent of the performance guarantee is to provide the Planning Board with a specific surety designated for:

a. Construction and ongoing maintenance of measures outlined in the Erosion and Sedimentation Control Plan,

b. Construction and maintenance of additional erosion and sedimentation controls, as may be warranted by particular site conditions,

c. Construction of interim measures, as may be required, for stabilization of disturbed areas and/or repairs to eroded areas.

If, in the opinion of the Planning Board, the Developer fails to adequately execute the Erosion and Sedimentation Control Plan, or fails to satisfactorily control sediment at the site, the proceeds of the performance guarantee shall be made available to the Town of Amesbury, for the purpose of correcting sedimentation and erosion control issues, and for the purpose of bringing the site into compliance with the Erosion and Sedimentation Control Plan.

The form of the performance guarantee shall be as agreed by the Planning Board and shall be maintained and extended by the Applicant/Developer until such time as earthwork operations are completed and all disturbed areas have been adequately vegetated. The dollar amount of the performance guarantee shall be based on the area of land to be disturbed, as shown on the Definitive Plans, (unless otherwise determined by the Board) times the unit price established in the 'Fee Schedule'. Release of the performance guarantee shall be in accordance with the procedures outlined in Section 6.09.E of these Regulations.

II. Amend Section 6.11 (Inspections) by adding Item 5 to the end of the section.

6.11 INSPECTIONS

1. Purpose. Inspections of the quality of materials used and methods of installation of the improvements within a subdivision by the Board are required to protect the health and welfare of the future subdivision residents, and of the Town.

2. Access. The applicant will provide safe and convenient access to all parts of the subdivision, for the purposes of inspection, to representative of the board or other Town agencies and Boards.

3. Responsibility The applicant is responsible for requesting inspections at the proper stage in the process of installation of improvements (see Section 8.02). Should an inspection not be performed due to the failure of the applicant to notify the Planning Board, the applicant will be required to uncover the improvements. No work will be accepted that has been covered before inspection.

4. Inspection fee. A fee shall be charged to cover the cost of inspections. This fee shall be based upon the time spent by the Planning Board's representative in making the required inspections.

5. Sediment and Erosion Control Measures. The applicant or his/her agent shall make regular inspections of all control measures in accordance with the inspection schedule outlines in the approved Erosion and Sedimentation Control Plan. The purpose of such inspections will be to determine the overall effectiveness of the control plan and the need for additional control measures. All inspections shall be documented in written form and submitted to the Planning Board at the time interval specified in the permit decision.

III. Amend Section 7.11.B (Design Basis) by adding introductory statement to the end of the section followed by the design criteria required by the 2016 MS4 permit for all stormwater management systems.

A. Design Basis

Storm sewers shall be designed to convey peak discharge of the 25-year frequency storm, and culverts shall be designed to convey the peak discharge of the 100-year frequency storm. Detention ponds shall be designed to provide no increase in peak discharge to any off-site area in both the 25 years and 100 year storms. Retention ponds shall be designed such that the combined storage and 24-hour recharge volumes are greater than the inflowing runoff volume. ***In accordance with the 2016 MS4 permit, the design of all stormwater management systems shall also meet the following design criteria:***

1. ***Low Impact Development (LID) site planning and design strategies must be used to the maximum extent feasible.***

2. ***The design of treatment and infiltration practices should follow the guidance in Volume 2 of the Massachusetts Stormwater Handbook, as amended, or other federally or State approved10 BMP design guidance.***

3. ***Stormwater management systems on new development sites shall be designed to:***

    a. ***Not allow new stormwater conveyances to discharge untreated stormwater in accordance with Massachusetts Stormwater Handbook Standard 1;***
    b. ***Control peak runoff rates in accordance with Massachusetts Stormwater Habook Standard 211;***

    c. ***Recharge groundwater in accordance with Massachusetts Stormwater Handbook Standard 312;***

    d. ***Eliminate or reduce the discharge of pollutants from land uses with higher pollutant loads as defined in the Massachusetts Stormwater Handbook in accordance with Massachusetts Stormwater Handbook Standard 5;***

    e. ***Protect Zone II or Interim Wellhead Protection Areas of public water supplies in accordance with Massachusetts Stormwater Handbook Standard 613;***

    f. ***Implement long term maintenance practices in accordance with Massachusetts Stormwater Handbook Standard 9; and***

    g. ***Require that all stormwater management systems be designed to:***

        i. ***Retain the volume of runoff equivalent to, or greater than, one (1.0) inch multiplied by the total post-construction impervious surface area on the site AND/OR***

        ii. ***Remove 90% of the average annual load of Total Suspended Solids (TSS) generated from the total post-construction impervious area on the site14 AND 60% of the average annual load of Total Phosphorus (TP) generated from the total post-construction impervious surface area on the site14. Pollutant removal shall be calculated consistent with EPA Region 1's BMP Performance Extrapolation Tool or other BMP performance evaluation tool provided by EPA Region 1, where available. If EPA Region 1 tools do not address the planned or installed BMP performance any federally or State approved15 BMP design guidance or performance standards (e.g. State stormwater handbooks and design guidance manuals) may be used to calculate BMP performance.***

4. Redevelopment Requirements

a. Stormwater management systems on Redevelopment sites shall meet the following sections of part 2.3.6.a.ii.3 to the maximum extent feasible:

i. Part 2.3.6.a.ii.3(a) (Massachusetts Stormwater Standard 1);

ii. Part 2.3.6.a.ii.3(b) (Massachusetts Stormwater Standard 2);

iii. Part 2.3.6.a.ii.3(c) (Massachusetts Stormwater Standard 3); and

iv. The pretreatment and structural best management practices requirements of 2.3.6.a.ii.3(d) and 2.3.6.a.ii.3(e) (Massachusetts Stormwater Standards 5 and 6).

b. Stormwater management systems on Redevelopment sites shall also improve existing conditions by requiring that stormwater management systems be designed to:

i. Retain the volume of runoff equivalent to, or greater than, 0.80 inch multiplied by the total post-construction impervious surface area on the site AND/OR

ii. Remove 80% of the average annual post-construction load of Total Suspended Solids (TSS) generated from the total post-construction impervious area on the site AND 50% of the average annual load of Total Phosphorus (TP) generated from the total postconstruction impervious surface area on the site. Pollutant removal shall be calculated consistent with EPA Region 1's BMP Performance Extrapolation Tool or other BMP performance evaluation tool provided by EPA Region 1 where available. If EPA Region 1 tools do not address the planned or installed BMP performance any federally or State approved BMP design guidance or performance standards (e.g. State stormwater handbooks and design guidance manuals) may be used to calculate BMP performance.

c. Stormwater management systems on redevelopment sites may utilize offsite mitigation within the same USGS HUC10 as the redevelopment site to meet the equivalent tretention or pollutant removal requirements in part 2.3.6.a.ii.4(b).

d. Redevelopment activities that are exclusively limited to maintenance and improvement of existing roadways, (including widening less than a single lane, adding shoulders, correcting substandard intersections, improving existing drainage systems, and repaving projects) shall improve existing conditions where feasible and are exempt from part 2.3.6.a.ii.4(a), part 2.3.6.a.ii.4(b) and part 2.3.6.a.ii.4(c). Roadway widening or improvements that increase the amount of impervious area on the redevelopment site by greater than or equal to a single lane width shall meet the requirements of part 2.3.6.a.ii.4(a) – (c)fully.

IV. Amend Section 8.02 (Inspections) by adding "AND ENFORCEMENT" after Inspections; adding further description to Item A.1 and an additional site inspection; adding further description to the site inspection under Item A.5; adding a statement after the final site inspection under Item 17; and adding new sub-section C. Enforcement.

8.02 INSPECTIONS ***AND ENFORCEMENT***

A. Schedule.

It is assumed that under normal conditions work will proceed in accordance with the following construction schedule and site inspections will occur as indicated, or as approved by the Planning Board. The contractor will provide the Planning Board with a detailed construction schedule. Additional inspections may be required as determined by the Planning Board or their designated representative, The Planning board or designated representative must be given 48 hours-notice prior to the inspection.

1. Establish Construction Control***; including installation of sediment and erosion control measures***.

   SITE INSPECTION

2. Clearing and grubbing; including excavating or stripping poor material.

3. Preparation of sub-base; including necessary cuts and fills.

   SITE INSPECTION

4. Installation of drainage pipes.

5. Installation of other underground utilities.

   SITE INSPECTION ***PRIOR TO BACKFILLING OPERATIONS***

6. Application of material for sub-base.

7. Application of gravel in or above sub-base.

   SITE INSPECTION

8. Application of oil or other binding material where needed as determined by the Planning Board.

9. Removal or application of material for slopes.

10. Application of bituminous concrete base course.

    SITE INSPECTION

11. Installation of granite curbing.

12. Application of gravel in sidewalks.

13. Application of and installation of concrete sidewalks.

14. Application of bituminous concrete finish course.

15. Application of loam for lawns and slopes.

16. Installation of bounds.

17. Clean up.

SITE INSPECTION

As part of the final inspection, and prior to the release of the performance guarantee, the effectiveness of the stormwater management system as installed shall be evaluated in an actual storm. If the inspection finds the system to be adequate, the Planning Board will issue a Certificate of Completion. However, if the system is found to be inadequate by virtue of physical evidence of operational failure, even though it was built as called for in approved plan, it shall be corrected by the applicant before the performance guarantee is released. If the permittee fails to act, the City of Amesbury may use the surety bond to complete the work. Examples of inadequacy include, but shall not be limited to: errors in the infiltrative capability, errors in the maximum groundwater elevation, failure to properly define or construct flow paths, or erosive discharges from basins.

B. Fees

A fee shall be charged to cover the cost of inspections. This fee shall be based upon the time spent by the Planning Board representative in making the required inspections.

C. Enforcement

1. The Planning Board or its authorized agent shall enforce its regulations, orders, violation notices, and enforcement orders, and may pursue all civil and criminal remedies for such violations.

2. Orders. The Planning Board or its authorized agent may issue a written order to enforce the provisions of this Bylaw or the regulations there under, which may include:

a. A requirement to cease and desist from the land disturbing activity until there is compliance with the regulations or provisions of the land disturbance permit;

b. Maintenance, installation or performance of additional erosion and sediment control measures;

c. Monitoring, analyses, and reporting;

d. Remediation of erosion and sedimentation resulting directly or indirectly from the land disturbing activity;

e. Compliance with the Operation and Maintenance Plan.

f. If the enforcing person determines that abatement or remediation of erosion and sedimentation is required, the order shall set forth a deadline by which such abatement or remediation must be completed. Said order shall further advise that, should the violator or property owner fail to abate or perform remediation within the specified deadline, the City of Amesbury may, at its option, undertake such work, and the property owner shall reimburse the town's expenses. Within thirty (30) days after completing all measures necessary to abate the

violation or to perform remediation, the violator and the property owner shall be notified of the costs incurred by the City of Amesbury, including administrative costs. The violator or property owner may file a written protest objecting to the amount or basis of costs with the Board within thirty (30) days of receipt of the notification of the costs incurred.

g. Fines. Any person who violates any provision of this regulation, order or permit issued there under, shall be punished by a fine of not more than $ 300.00. Each day or part there under that such violation occurs or continues shall constitute a separate offense.

h. Non-Criminal Disposition. As an alternative to criminal prosecution or civil action, the Planning Board may elect to utilize the noncriminal disposition procedure set forth in G.L. Ch. 40, §21D, which has been adopted by the City, in which case the Planning Board or authorized agent shall be the enforcing person. The penalty for each violation shall be $300.00. Each day or part thereof that such violation occurs or continues shall constitute a separate offense.

V. Amend Section 8.08 (Erosion and Sedimentation Control) by adding Items 13 through 22 to the end of the section.

8.08 EROSION AND SEDIMENTATION CONTROL

The developer shall control erosion and sedimentation during construction according to the objectives, principles and design considerations set forth in *Residential Erosion and Sediment Control*, published joint by the Urban Land Institute, the American Society of Civil Engineers and the National Association of Home Builders, 1978 and according to the guidelines for *Soil and Water Conservation in Urbanized Areas of Massachusetts*, published by the USDA, Soil Conservation Service, Amherst, 1975. These publications are hereby incorporated as a part of these regulations.

In addition to the requirements and objectives stated therein, the following must also be achieved:

1. An absolute minimum of existing vegetative cover shall be disturbed during the construction period.

2. Only the smallest practical area of land shall be exposed at any one time during development.

3. When land is exposed during development, the exposure shall be kept to the shortest practical period of time.

4. Where necessary, as determined by Planning Board, temporary vegetation and/or mulching shall be used to protect areas exposed during development.

5. All disturbed areas shall be properly and neatly graded and shaped as soon as possible. Final grading shall include removal of all large rocks, stumps, debris, and all other deleterious materials from the finished surface.

6. At the toe of all cut and fill slopes in excess of ten (10) feet in height, baled hay or other erosion checks shall be installed.

7. All disturbed areas shall be protected from potentially erosive runoff from up-slope areas by means of Diversions, Benches, and/or other acceptable means.

8. Cuts and fills shall not endanger adjoining property.

9. Fill shall be placed and compacted so as to minimize sliding or erosion of the soil.

10. Grading shall not be done in such a way so as to divert water onto or impound water on the property of another landowner without the written consent of landowner.

11. Fills shall not encroach on natural watercourses or constructed channels.

12. During construction, necessary measures for dust control shall be exercised.

13. Employ only wet type equipment for saw cutting and concrete grinding to control dust nuisance.

14. Obtain Planning Board approval before chemicals for dust control are used. Sodium chloride is not permitted for dust control.

15. All trenches and disturbed areas created during construction that will produce dust shall be maintained dust free by an application of calcium chloride. The use of calcium chloride on temporary access roads is not allowed.

16. Temporary construction entrance pads or other measures required by Planning Board shall be provided at all sites to ensure that sediment is not tracked onto public streets by construction vehicles or washed into storm drains.

17. Wash mud from construction vehicles before leaving the construction site. Promptly clean up all dirt and mud deposited on public and/or private property due to construction.

17. Discharge silt-laden water from trenches or excavations onto filter fabric mat, baled hay or straw sediment traps, or into sedimentation basins to ensure that only sediment-free water is returned to watercourses.

18. Do not dump spoiled material into any streams, wetlands, surface waters, or unspecified locations.

19. Prevent indiscriminate, arbitrary, or capricious operation of equipment in streams,
wetlands or surface waters.

20. Prevent damage to vegetation adjacent to or outside of construction area limits.

21. Soil stockpiles must be stabilized or covered at the end of each workday.

22. Provide controls for other wastes at construction sites, including but not limited to the following:

A. General: Do not dispose of trees, brush, debris, paints, chemicals, asphalt products, concrete curing compounds, fuels, lubricants, insecticides,

washwater from concrete trucks or hydroseeders, or any other pollutant in streams, wetlands, surface waters, or natural or man-made channels leading thereto, or unspecified locations.

B. Sanitary Waste:

i. Adequate sanitary facilities shall be provided for the use of those employed on the Work. Such facilities shall be made available when the first employees arrive on the site of the Work, shall be properly secluded from public observation, and shall be constructed and maintained during the progress of the Work in suitable numbers and at such points and in such manner as may be required.

ii. The Developer shall maintain the sanitary facilities in a satisfactory and sanitary condition at all times and shall enforce their use. He shall rigorously prohibit the committing of nuisances on the site of the Work, on the lands of the Owner, or on adjacent property.

C. Protection of Storm Drains: Prevent construction material (including liquid wastes such as oil, chemicals, paints), pavement, concrete, earth, or other debris from entering existing storm drain pipes or structures.

D. Disposal of Excess Excavated and Other Waste Materials:

i. Excess excavated material not required or not suitable for backfill and other waste material shall be disposed of in accordance with local regulatory requirements.

ii. Provide watertight conveyance for liquid, semi-liquid or saturated solids which tend to bleed during transport. Liquid loss from transported materials is not permitted, whether being delivered to construction site or hauled away for disposal. Fluid materials hauled for disposal must be specifically acceptable at selected disposal site.

iii. Transport dusty materials in covered haulage vehicles.

E. Use of Chemicals:

i. Chemicals used during project construction or furnished for project operation, whether herbicide, pesticide, disinfectant, polymer, reactant or of other classification, shall be approved by U.S. EPA or U.S. Department of Agriculture and any other applicable regulatory agency.

ii. Use and disposal of chemicals and residues shall comply with manufacturer's instructions.

F. Cleaning of Equipment:

i. Keep construction equipment clean so that no debris is deposited on any public roadway. Identify a designated vehicle cleaning area within the limit of work. Contain all construction debris is this designated area only, and dispose of debris off-site at an approved location.

ii. Debris cleaned from equipment cannot gain access to storm drains and watercourses.

G. Fuels and Lubricants:

i. Comply with local, state, and federal regulations concerning transportation and storage of fuels and lubricants. Minimize use of potentially hazardous materials including fuels and lubricants.

ii. Designate an area within the working limits to be used exclusively for fueling of construction equipment and carry out all refueling in this area only.

iii. Establish procedures for the interception and rapid clean-up and disposal of fuel spillages which may occur. Ensure that the materials required for the clean-up of fuel spillages are readily accessible on site at all times.

iv. Report spills or leaks from fueling equipment or construction equipment and clean-up as required by local, state or federal regulations.

v. Keep motorized equipment in good working order with no fuel or lubricant leakage. Protect ground surface from leakage using tarps or other methods.

vi. Do not change oil on equipment or store or dispose of fuels, solvents, lubricants, or other potentially hazardous materials on site.

H. Construction Waste Management:

i. Provide appropriately marked containers or bins for controlling recyclable and construction waste, trash, and debris until they are removed from the site. Include list of acceptable and unacceptable materials at each container and bin. Inspect containers for contamination and remove contaminated materials if found.

ii. Designate and label specific areas on site necessary for separating materials that are to be salvaged, recycled, reused, donated, sold or disposed of.

iii. Separate recyclable waste by type at site to the maximum extent practical. For waste that cannot be separated at site, co-ingle with waste which is to be separated later at a recycling facility.

iv. Except for items or materials to be salvaged, recycled, or otherwise reused, remove waste materials from site and legally dispose of them in a landfill or incinerator acceptable to authorities having jurisdiction. Do not burn waste materials on site.

v. Do not allow waste materials that are to be disposed of accumulate on site.

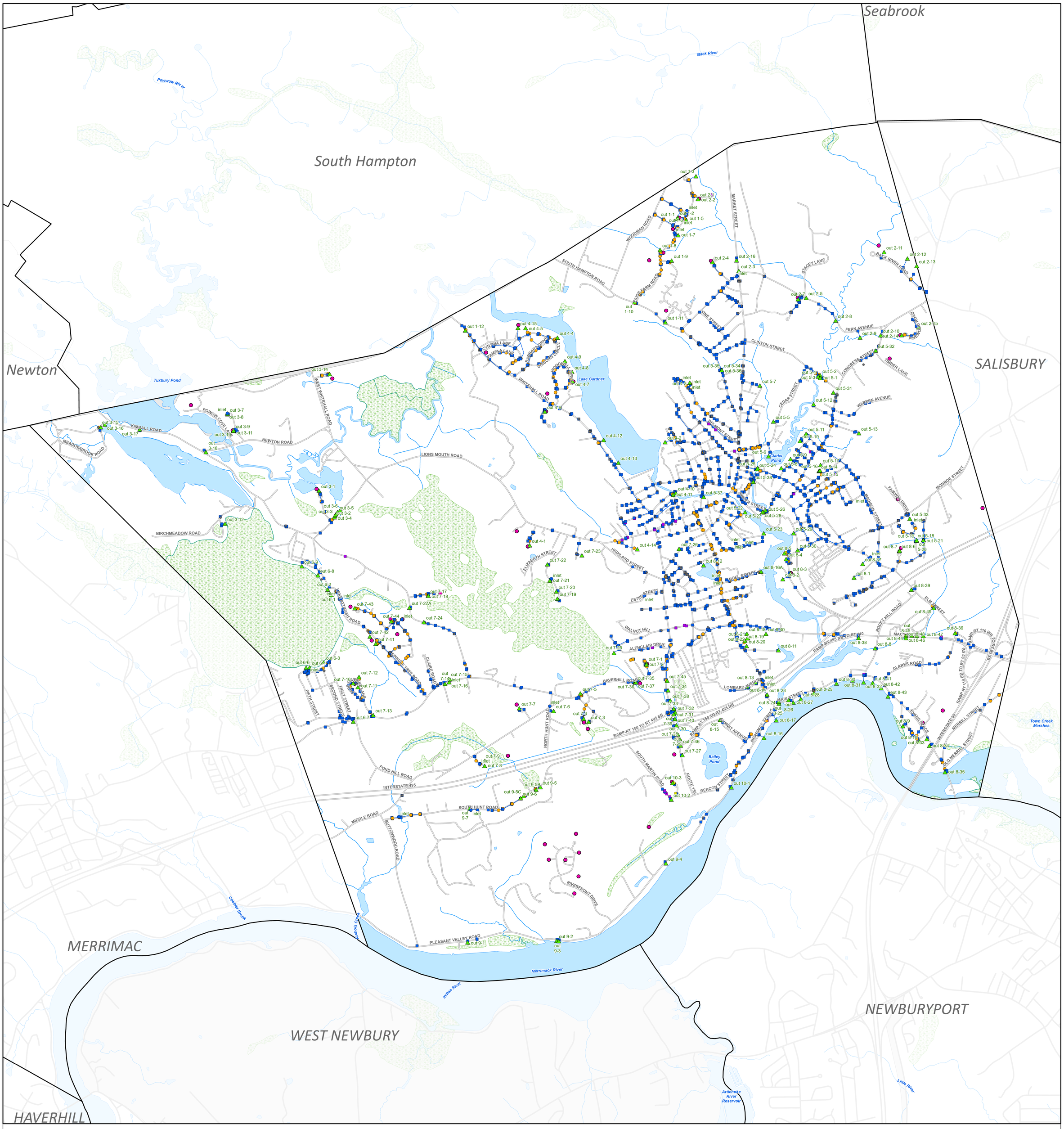
vi. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.

Appendix C

Stormwater System Mapping

Mapping Status

Requirement Summary	Status
Phase I – Must be Complete by July 1, 2020	
1. Outfalls and receiving waters	Complete (updates ongoing)
2. Open channel conveyances	Not started
3. Interconnections with other MS4s	Minimally Complete
4. Municipally owned structural BMPs	Complete
5. Waterbody names and impairments	Complete
6. Initial catchment delineations by topography	Complete
Phase II – Must be Complete by July 1, 2028	
1. Outfalls with spatial accuracy +/-30 feet	Complete (updates ongoing)
2. Pipe connectivity	Minimally Complete
3. Manholes	Complete
4. Catch basins	Complete
5. Refined catchment delineations	Not started
6. Municipal sanitary system	Complete
7. Municipal combined sewer system	Not Applicable



LEGEND

- Outfall
- Inlet
- Catch Basin
- Manhole
- Leaching Catch Basin
- Other
- Dummy
- Drainage Pipes
- BMPs
- Lake, Pond, Reservoir
- Wetland, Marsh, Swamp
- Stream, Brook
- Non-Urban Area

Note: All of Amesbury is urbanized area.

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Miles

Stormwater Infrastructure Map

Amesbury, MA

Comprehensive Environmental Incorporated

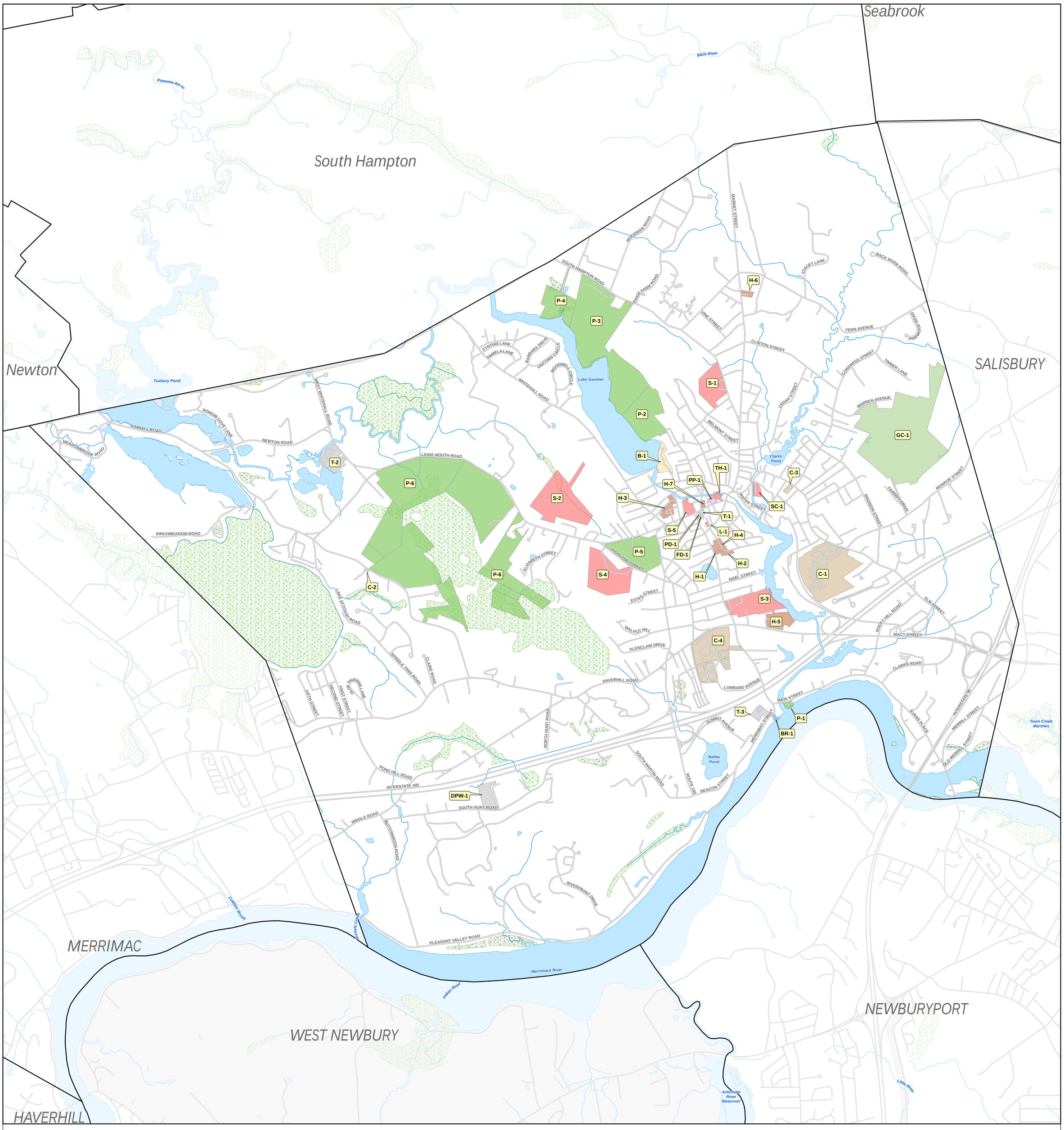
Data Sources: MassGIS, Town of Amesbury, CEI

12/2/2021

Appendix D

Inventory of City-Owned Property

Site Name	Address	Map ID
MUNICIPAL BUILDINGS		
Police Department	19 School St	PD-1
Fire Department	17 School St	FD-1
Town Hall	62 Friend St	T-1
Department of Public Works	39 South Hunt Rd	DPW-1
Water Department	12 Newton Rd	T-2
Waste Water Treatment Facility	19 Merrimac St	T-3
SCHOOLS AND COMMUNITY BUILDINGS		
Senior Center	68 Elm St	SC-1
Public Library	149 Main St	L-1
Amesbury Elementary School	20 South Hampton Rd	S-1
Charles C. Cashman Elementary School	193 Lions Mouth Rd	S-2
Amesbury Middle School	220 Main St	S-3
Amesbury High School	5 Highland St	S-4
Amesbury Innovation High School	71 Friend St	S-5
Al Capp Amphitheater	11 and 25 Friend St	TH-1
HOUSING		
Amesbury Housing Authority	180 Main St	H-1
Heritage Towers	180 Main St	H-2
Powow Villa	26 Summer St	H-3
Heritage Vale	Heritage Vale St	H-4
Macy Street/Macy Terrace	Macy Street/Macy Terrace	H-5
Orchard Park	209 Market St	H-6
The Elms	53 Friend St	H-7
OPEN SPACES		
Parks		
Alliance Park	347-349 Main St	P-1
Batchelder Park	92 Powwow St	P-2
Battis Farm	76 South Hampton Rd	P-3
Camp Kent Environmental Center	92 South Hampton Rd	P-4
Amesbury Town Park	140 Friend St	P-5
Amesbury Town Forest/Bartlett Greenbelt	Kimball Rd	P-6
Golf Courses		
Amesbury Golf and Country Club	3 Country Club Rd	GC-1
Beaches		
Lake Gardner Beach	79 High St	B-1
Public Boat Ramp	18 Merrimack St	BR-1
OTHER		
Cemeteries		
Mount Prospect Cemetery	202 Elm St	C-1
Tuxbury Burial Ground	67 Kimball Rd	C-2
Old Corner Cemetery	126 Elm St	C-3
Union Cemetery	10 Haverhill Rd	C-4
Parking		
Public Parking	27 Friend St/7 Hamilton Court	PP-1



LEGEND

Municipal Properties:

- Beaches
- Boat Ramp
- Cemeteries
- Golf Course
- Housing
- Municipal Buildings

- Parks and Open Space
- Public Parking
- Schools and Community Buildings
- Lake, Pond, Reservoir
- Wetland, Marsh, Swamp
- Stream, Brook
- Non-Urban Area

Note: All of Amesbury is urbanized area.

μ

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Miles

Municipal Properties

Amesbury, MA

Comprehensive Environmental Incorporated

Data Sources: MassGIS, Town of Amesbury, CEI

12/10/2021

Appendix E

Street Sweeping Optimization Plan

Street Sweeping Map
Sweeping per Phase II Requirements

Amesbury, MA

Legend

- Outfall
- Outfall Catchment
- 303(d) Impaired Stream
- 303(d) Impaired Waterbody
- Lake, Pond, Reservoir
- Wetland, Marsh, Swamp
- Stream, Brook
- Urbanized Area

Street Sweeping Frequency

- 1x/year (required) Within Catchment & UA
- 1x/year (optional) Within UA
- MassDOT Road
- Sweep TBD (Back and Powwow River Watershed)

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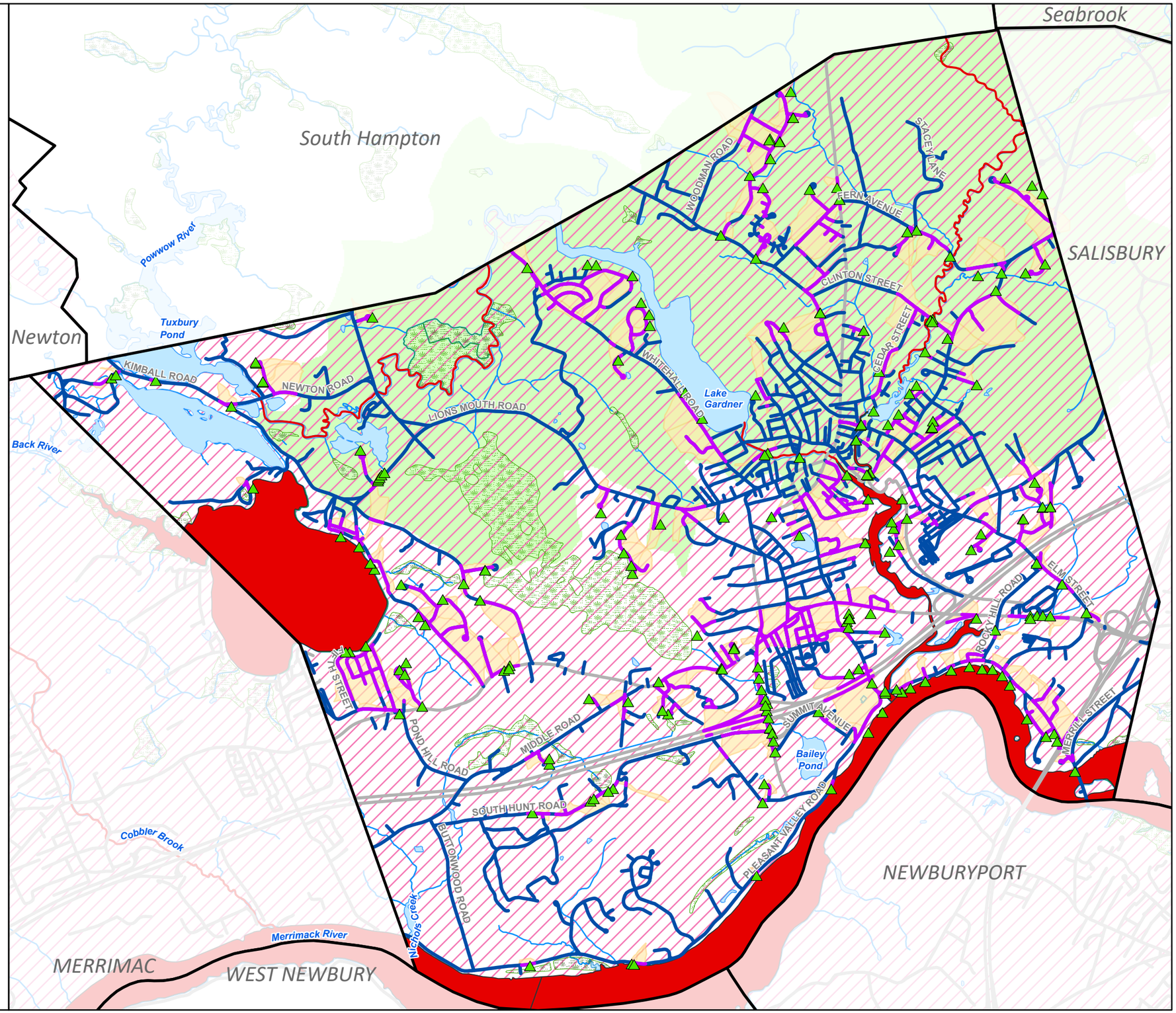
Miles

Comprehensive Environmental Incorporated

Data Sources: MassGIS, Town of Amesbury, CEI

12/15/2021



Appendix F

Catch Basin Optimization Plan

Appendix G

List of Stormwater BMPs

City of Amesbury Structural BMP Inventory

Owner	Street	Installed
Town	Arborcrest Rd	2009
Town	Ashley Dr	1993
Town	Back River Rd	1988
Town	Birchfield Rd	2009
Town	Cabot Ct	2009
Town	Castlegate Rd	2009
Town	Chapman Way	2002
Private	Colonial Way	2020
Town	Cottage Ln	1991
Town	Country Ln	1993
Town	Cynthia Rd	1994
Town	Devonshire Rd	2009
Town	Evans Pl	2016
Town	Fairway Dr	2009
Town	Goss Ave Ext	2009
Town	Hannah Currier Cir	1992
Town	Harrison Eaton Ln	1986
Town	Hoyt Ave	0
Town	Industrial Way	1983
Town	Jacqueline Dr	2002
Town	Jordan Ln	1998
Town	Kimberly Cir	1995
Town	Lancewood Dr	2002
Town	Marshall Dr	1997
Town	Maudsley View Ln	1993
Town	Morse Croft Ln	1992

Owner	Street	Installed
Town	Arborcrest Rd	2009
Town	Ashley Dr	1993
Town	Back River Rd	1988
Town	Birchfield Rd	2009
Town	Cabot Ct	2009
Town	Castlegate Rd	2009
Town	Chapman Way	2002
Private	Colonial Way	2020
Town	Cottage Ln	1991
Town	Country Ln	1993
Town	Cynthia Rd	1994
Town	Devonshire Rd	2009
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Town	Fairway Dr	2009
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Town	Hannah Currier Cir	1992
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Town	Jacqueline Dr	2002
Town	Jordan Ln	1998
Town	Kimberly Cir	1995
Town	Lancewood Dr	2002
Town	Marshall Dr	1997
Town	Maudsley View Ln	1993
Town	Morse Croft Ln	1992

Owner	Street	Installed
Town	Woodwell Cir	2007
Town	Olde Taverne Ln	2005
Town	Paige Farm Rd	1992
Town	Pennycook Way	1992
Town	Pinewood Rd	1998
Town	Point Shore Dr	2020
Private	Pond View Ave	2020
Town	Powow Cove Ln	1997
Town	Quimby Ln	2013
Town	River St	0
Town	Riverfront Dr	2009
Town	Riverview Hts	2009
Town	Spindletree Ln	2002
Town	Stacey Ln	1995
Town	Tallowwood Ln	2002
Town	Timber Ln	2013
Town	Tuxbury Ln	1994
Town	Unicorn Cir	1993
Town	Vernon Dr	1993
Town	Whitehall Rd	2015
Town	Whitewood Cir	2011
Town	Whittier Meadows Dr	2003
Town	Willowdale Ct	1995
Town	Woodridge Ln	1999
Town	Woodsom Dr	2010

City of Amesbury Structural BMP Inventory

Owner	Street	Installed
Town	Arborcrest Rd	2009
Town	Ashley Dr	1993
Town	Back River Rd	1988
Town	Birchfield Rd	2009
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Town	Castlegate Rd	2009
Town	Chapman Way	2002
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Town	Country Ln	1993
Town	Cynthia Rd	1994
Town	Devonshire Rd	2009
Town	Evans Pl	2016
Town	Fairway Dr	2009
Town	Goss Ave Ext	2009
Town	Hannah Currier Cir	1992
Town	Harrison Eaton Ln	1986
Town	Hoyt Ave	0
Town	Industrial Way	1983
Town	Jacqueline Dr	2002
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Town	Kimberly Cir	1995
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Town	Morse Croft Ln	1992

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Town	Country Ln	1993
Town	Cynthia Rd	1994
Town	Devonshire Rd	2009
Town	Evans Pl	2016
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Town	Goss Ave Ext	2009
Town	Hannah Currier Cir	1992
Town	Harrison Eaton Ln	1986
Town	Hoyt Ave	0
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Town	Jacqueline Dr	2002
Town	Jordan Ln	1998
Town	Kimberly Cir	1995
Town	Lancewood Dr	2002
Town	Marshall Dr	1997
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Town	Morse Croft Ln	1992

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Town	Riverfront Dr	2009
Town	Riverview Hts	2009
Town	Spindletree Ln	2002
Town	Stacey Ln	1995
Town	Tallowwood Ln	2002
Town	Timber Ln	2013
Town	Tuxbury Ln	1994
Town	Unicorn Cir	1993
Town	Vernon Dr	1993
Town	Whitehall Rd	2015
Town	Whitewood Cir	2011
Town	Whittier Meadows Dr	2003
Town	Willowdale Ct	1995
Town	Woodridge Ln	1999
Town	Woodsom Dr	2010

Appendix H

Annual Reports

Year 1 Annual Report
Massachusetts Small MS4 General Permit
Reporting Period: May 1, 2018-June 30, 2019

Please DO NOT attach any documents to this form. Instead, attach all requested documents to an email when submitting the form

Unless otherwise noted, all fields are required to be filled out. If a field is left blank, it will be assumed the requirement or task has not been completed.

Part I: Contact Information

Name of Municipality or Organization: City of Amesbury

EPA NPDES Permit Number: MAR041177

Primary MS4 Program Manager Contact Information

Name: Robert Desmarais, P.E. Title: Director of Public Works

Street Address Line 1: 39 South Hunt Road

Street Address Line 2:

City: Amesbury State: MA Zip Code: 01913

Email: rob@amesburyma.gov Phone Number: (978) 388-8116

Fax Number: (978) 388-1769

Stormwater Management Program (SWMP) Information

SWMP Location (web address): https://www.amesburyma.gov/public-works/pages/ms4-stormwater-program

Date SWMP was Last Updated: Jun 28, 2019

If the SWMP is not available on the web please provide the physical address and an explanation of why it is not posted on the web:

Part II: Self Assessment

First, in the box below, select the impairment(s) and/or TMDL(s) that are applicable to your MS4.

Impairment(s)

☒ Bacteria/Pathogens ☐ Chloride ☐ Nitrogen ☐ Phosphorus
☒ Solids/ Oil/ Grease (Hydrocarbons)/ Metals

TMDL(s)

In State: ☐ Assabet River Phosphorus ☐ Bacteria and Pathogen ☐ Cape Cod Nitrogen
☐ Charles River Watershed Phosphorus ☐ Lake and Pond Phosphorus

Out of State: ☐ Bacteria/Pathogens ☐ Metals ☐ Nitrogen ☐ Phosphorus

Clear Impairments and TMDLs

Next, check off all requirements below that have been completed. ***By checking each box you are certifying that you have completed that permit requirement fully.*** *If you have not completed a requirement leave the box unchecked. Additional information will be requested in later sections.*

Year 1 Requirements

☒ Develop and begin public education and outreach program

☒ Identify and develop inventory of all known locations where SSOs have discharged to the MS4 in the last 5 years

- ○ The SSO inventory is attached to the email submission
- ◉ The SSO inventory can be found at the following website:

https://www.amesburyma.gov/sites/amesburyma/files/uploads/annual_ii_report.pdf

☒ Develop written IDDE plan including a procedure for screening and sampling outfalls

☐ IDDE ordinance complete

☐ Identify each outfall and interconnection discharging from MS4, classify into the relevant category, and priority rank each catchment for investigation

- ○ The priority ranking of outfalls/interconnections is attached to the email submission
- ○ The priority ranking of outfalls/interconnections can be found at the following website:

☒ Construction/ Erosion and Sediment Control (ESC) ordinance complete

☒ Develop written procedures for site inspections and enforcement of sediment and erosion control measures

☒ Develop written procedures for site plan review

☒ Keep a log of catch basins cleaned or inspected

☒ Complete inspection of all stormwater treatment structures

Annual Requirements

- ☒ Annual opportunity for public participation in review and implementation of SWMP
- ☒ Comply with State Public Notice requirements
- ☒ Keep records relating to the permit available for 5 years and make available to the public
- ☒ Properly store and dispose of catch basin cleanings and street sweepings so they do not discharge to receiving waters
- ☒ Annual training to employees involved in IDDE program
- ☒ All curbed roadways have been swept a minimum of one time per year

Bacteria/ Pathogens (Combination of Impaired Waters Requirements and TMDL Requirements as Applicable)

Annual Requirements

*Public Education and Outreach**

- ☒ Annual message encouraging the proper management of pet waste, including noting any existing ordinances where appropriate
- ☒ Permittee or its agents disseminate educational material to dog owners at the time of issuance or renewal of dog license, or other appropriate time
- ☐ Provide information to owners of septic systems about proper maintenance in any catchment that discharges to a water body impaired for bacteria

** Public education messages can be combined with other public education requirements as applicable (see Appendix H and F for more information)*

Solids, Oil and Grease (Hydrocarbons), or Metals

Annual Requirements

Good Housekeeping and Pollution Prevention for Permittee Owned Operations

- ☒ Increase street sweeping frequency of all municipal owned streets and parking lots to a schedule to target areas with potential for high pollutant loads
- ☒ 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

Use the box below to input additional details on any unchecked boxes above or any additional information you would like to share as part of your self assessment:

The city is currently developing its IDDE program and ordinance. The draft plan and ordinance are uploaded. The updated plan should be completed by the end of October 2019. The ordinance will be presented to the administration in November 2019.

The assessment and priority ranking of outfalls will be completed as part of the development of the IDDE program.

Finally, the city is working with its Board of Health to develop a list of properties with septic systems so that educational materials on proper maintenance may be distributed especially in any catchment that discharges to a water body impaired for bacteria or pathogens.

Part III: Receiving Waters/Impaired Waters/TMDL

Have you made any changes to your lists of receiving waters, outfalls, or impairments since the NOI was submitted?

Yes ☐ No ☒

If yes, describe below, including any relevant impairments or TMDLs:

Part IV: Minimum Control Measures

Please fill out all of the metrics below. If applicable, include in the description who completed the task if completed by a third party.

MCM1: Public Education

Number of educational messages completed during the reporting period: 6

Below, report on the educational messages completed during the first year. For the measurable goal(s) please describe the method/measures used to assess the overall effectiveness of the educational program.

BMP: 2018-2019 Trash and Recycling Flyer

Message Description and Distribution Method:

Two page flyer mailed to residents annually and posted on the city's website with information on the disposal of yard waste at the Compost Site.

Targeted Audience: Residents

Responsible Department/Parties: Engineering

Measurable Goal(s):

Track number of visitors to web page and notices published annually.

Message Date(s): Annually beginning in January

Message Completed for: Appendix F Requirements ☐ Appendix H Requirements ☐

Was this message different than what was proposed in your NOI? Yes ☐ No ☒

If yes, describe why the change was made:

BMP: Snow Removal and Ice Control Policy & Procedures

Message Description and Distribution Method:

Policy and procedures for snow removal and ice control available for viewing on the city's website and for distribution in brochure/pamphlet format.

Targeted Audience: Business, institutions and commercial facilities

Responsible Department/Parties: Engineering

Measurable Goal(s):

Distribute and maintain list of businesses that receive brochures/pamphlets annually.

Message Date(s): July 1, 2018 to present

Message Completed for: Appendix F Requirements ☐ Appendix H Requirements ☐

Was this message different than what was proposed in your NOI? Yes ☐ No ☒

If yes, describe why the change was made:

BMP: Erosion and Sedimentation Control

Message Description and Distribution Method:

Provide guidance on erosion and sedimentation control available for viewing on the city's website and for distribution in brochure/pamphlet format.

Targeted Audience: Developers (construction)

Responsible Department/Parties: Conservation Commission, Planning Board and Engineering

Measurable Goal(s):

Distribute and maintain list of developers that receive brochures/pamphlets annually.

Message Date(s): July 1, 2018 to present

Message Completed for: Appendix F Requirements ☐ Appendix H Requirements ☐

Was this message different than what was proposed in your NOI? Yes ☐ No ☒

If yes, describe why the change was made:

BMP: Spill Prevention and Response

Message Description and Distribution Method:

Provide guidance on spill prevention and response through the city's Industrial Pretreatment Program available for viewing on the city's website and for distribution in brochure/pamphlet format.

Targeted Audience: Industrial Facilities

Responsible Department/Parties: Waste Water and Engineering

Measurable Goal(s):

Distribute and maintain list of facilities that receive brochures/pamphlets annually.

Message Date(s): July 1, 2018 to present

Message Completed for: Appendix F Requirements ☐ Appendix H Requirements ☐

Was this message different than what was proposed in your NOI? Yes ☐ No ☒

If yes, describe why the change was made:

BMP: Household Hazardous Waste Program

Message Description and Distribution Method:

Publish dates for community HHW events on the city's website and in the local newspaper.

Targeted Audience: Residents

Responsible Department/Parties: Engineering

Measurable Goal(s):

Track volume of HHW collected annually.

Message Date(s): Annually through the months of April and October.

Message Completed for: Appendix F Requirements ☐ Appendix H Requirements ☐

Was this message different than what was proposed in your NOI? Yes ☐ No ☒

If yes, describe why the change was made:

BMP: Stormwater Management and BMPs

Message Description and Distribution Method:

Overall plan for public education and outreach on stormwater management and BMPs at both local and regional levels.

Targeted Audience: All 4 target audiences

Responsible Department/Parties: Engineering

Measurable Goal(s):

Review and expand on-going public education program to all 4 target audiences by updating web page and printed materials on a periodic basis.

Message Date(s): July 1, 2018 to present

Message Completed for: Appendix F Requirements ☐ Appendix H Requirements ☐

Was this message different than what was proposed in your NOI? Yes ☐ No ☒

If yes, describe why the change was made:

Add an Educational Message

MCM2: Public Participation

Describe the opportunity provided for public involvement in the development of the Stormwater Management Program (SWMP) during the reporting period:

The city is a member of the Merrimack Valley Stormwater Collaborative which is a coalition of 15 MVPC communities working together on regional approaches to cost-effective stormwater management. The Collaborative is focused on intermunicipal coordination in training, public education and best management practices implementation, all key elements in each community's Stormwater Management Program and compliance with federal Environmental Protection Agency's NPDES Phase II regulations and the MS4 Permit for Massachusetts. (Website: www.merrimackvalleystormwater.org)

The city is also a member of the Greenscapes North Shore Coalition which is a collaborative of municipalities and partner organizations, focusing on stormwater and watershed related issues. Specifically, Greenscapes provides outreach and education to support municipal compliance with water-related regulatory requirements, including the MS4 Stormwater and the Water Management Act permits. (Website: www.greenscapes.org)

The Amesbury DPW periodically meets with other departments and boards such as the Conservation Commission, Planning Board, etc. to discuss stormwater topics. Discussions include current and future construction projects within the city, as well as operations and maintenance of the MS4.

Finally, the Amesbury Lakes and Waterways Commission also conducts monthly meetings to discuss lake related issues such as stormwater impacts. These meetings are open to interested members of the public. The Lakes and Waterways Commission coordinates lake cleanup efforts such as trash removal, elimination of invasive species, etc. as funds are available. The commission also actively pursues funding opportunities for lake cleanup efforts.

Was this opportunity different than what was proposed in your NOI? Yes ☐ No ☒

Describe any other public involvement or participation opportunities conducted during the reporting period:

MCM3: Illicit Discharge Detection and Elimination (IDDE)

Sanitary Sewer Overflows (SSOs)

Below, report on the number of SSOs identified in the MS4 system and removed during this reporting period.

Number of SSOs identified: 4

Number of SSOs removed: 3

Below, report on the total number of SSOs identified in the MS4 system and removed to date. At a minimum, report SSOs identified since 2013.

Total number of SSOs identified: 4

Total number of SSOs removed: 3

MS4 System Mapping

Describe the status of your MS4 map, including any progress made during the reporting period (phase I map due in year 2):

The city has completed GPS location and mapping of all drainage outfalls and structures, and is currently delineating the catchment areas for each outfall for the purposes of prioritizing areas for investigation as required under the IDDE program.

Screening of Outfalls/Interconnections

If conducted, please submit any outfall monitoring results from this reporting period. Outfall monitoring results should include the date, outfall/interconnection identifier, location, weather conditions at time of sampling, precipitation in previous 48 hours, field screening parameter results, and results from all analyses.

- ○ The outfall screening data is attached to the email submission
- ○ The outfall screening data can be found at the following website:

Below, report on the number of outfalls/interconnections screened during this reporting period.

Number of outfalls screened:

Below, report on the percent of total outfalls/ interconnections screened to date.

Percent of total outfalls screened:

Catchment Investigations

If conducted, please submit all data collected during this reporting period as part of the dry and wet weather investigations. Also include the presence or absence of System Vulnerability Factors for each catchment.

- ○ The catchment investigation data is attached to the email submission

○ The catchment investigation data can be found at the following website:

Below, report on the number of catchment investigations completed during this reporting period.

Number of catchment investigations completed this reporting period:

Below, report on the percent of catchments investigated to date.

Percent of total catchments investigated:

Optional: Provide any additional information for clarity regarding the catchment investigations below:

IDDE Progress

If illicit discharges were found, please submit a document describing work conducted over this reporting period, and cumulative to date, including location source; description of the discharge; method of discovery; date of discovery; and date of elimination, mitigation, or enforcement OR planned corrective measures and schedule of removal.

○ The illicit discharge removal report is attached to the email submission

○ The illicit discharge removal report can be found at the following website:

Below, report on the number of illicit discharges identified and removed, along with the volume of sewage removed during this reporting period.

Number of illicit discharges identified:

Number of illicit discharges removed:

Estimated volume of sewage removed: [UNITS]

Below, report on the total number of illicit discharges identified and removed to date. At a minimum, report on the number of illicit discharges identified and removed since the effective date of the permit.

Total number of illicit discharges identified:

Total number of illicit discharges removed:

Optional: Provide any additional information for clarity regarding illicit discharges identified, removed, or planned to be removed below:

The city is in the process of developing its written IDDE program, and it is anticipated that this effort will be completed by the end of October 2019. However, the city is not aware of any illicit discharges within the MS4 as of this writing.

Employee Training

Describe the frequency and type of employee training conducted during the reporting period:

Employee training occurs annually and will be supplemented upon completion of the written IDDE program.

MCM4: Construction Site Stormwater Runoff Control

Below, report on the construction site plan reviews, inspections, and enforcement actions completed during this reporting period.

Number of site plan reviews completed: 0

Number of inspections completed: 0

Number of enforcement actions taken: 0

MCM5: Post-Construction Stormwater Management in New Development and Redevelopment

Ordinance Development

Describe the status of the post-construction ordinance required to be complete in year 2 of the permit term:

The city is currently conducting a review of its land use regulations for the purpose of streamlining the permitting process. As part of this effort, the existing rules and regulations are being reviewed to determine whether they fully address the post-construction stormwater management objectives of the MS4 program. This review process is scheduled to be completed by next spring in accordance with the year 2 permit requirements.

As-built Drawings

Describe the status of the measures the MS4 has utilized to require the submission of as-built drawings and ensure long term operation and maintenance of completed construction sites required to be complete in year 2 of the permit term:

The Planning Board has been incorporating these requirements in all approval decisions for projects subject to their review.

Street Design and Parking Lots Report

Describe the status of the street design and parking lots assessment due in year 4 of the permit term, including any planned or completed changes to local regulations and guidelines:

No update at this time.

Green Infrastructure Report

Describe the status of the green infrastructure report due in year 4 of the permit term, including the findings and progress towards making the practice allowable:

No update at this time.

Retrofit Properties Inventory

Describe the status of the inventory, due in year 4 of the permit term, of permittee-owned properties that could be modified or retrofitted with BMPs to mitigate impervious areas and report on any properties that have been modified or retrofitted:

No update at this time.

MCM6: Good Housekeeping

Catch Basin Cleaning

Describe the status of the catch basin cleaning optimization plan:

Complete

If complete, attach the catch basin cleaning optimization plan or the schedule to gather information to develop the optimization plan:

- ○ The catch basin cleaning optimization plan or schedule is attached to the email submission
- ◉ The catch basin cleaning optimization plan or schedule can be found at the following website:

https://www.amesburyma.gov/sites/amesburyma/files/uploads/stormwater_maintenance_.pdf

Below, report on the number of catch basins inspected and cleaned, along with the total volume of material removed from the catch basins during this reporting period.

Number of catch basins inspected: 1779

Number of catch basins cleaned: 1779

Total volume or mass of material removed from all catch basins: 90 Cubic Yards

Below, report on the total number of catch basins in the MS4 system, if known.

Total number of catch basins: 1779

If applicable:

Report on the actions taken if a catch basin sump is more than 50% full during two consecutive routine inspections/cleaning events:

N/A

Street Sweeping

Describe the status of the written procedures for sweeping streets and municipal-owned lots:

Complete

Report on street sweeping completed during the reporting period using one of the three metrics below.

- (•) Number of miles cleaned: 80
- ( ) Volume of material removed: [UNITS]
- ( ) Weight of material removed: [UNITS]

If applicable:

For rural uncurbed roadways with no catch basins, describe the progress of the inspection, documentation, and targeted sweeping plan:

Winter Road Maintenance

Describe the status of the written procedures for winter road maintenance including the storage of salt and sand:

Complete

Inventory of Permittee-Owned Properties

Describe the status of the inventory, due in year 2 of the permit term, of permittee-owned properties, including parks and open spaces, buildings and facilities, and vehicles and equipment, and include any updates:

The city will complete this inventory in year 2 of the permit term as required.

O&M Procedures for Parks and Open Spaces, Buildings and Facilities, and Vehicles and Equipment

Describe the status of the operation and maintenance procedures, due in year 2 of the permit term, of permittee-owned properties (parks and open spaces, buildings and facilities, vehicles and equipment) and include maintenance activities associated with each:

The city will develop O&M procedures for parks and open spaces, buildings and facilities, and vehilces and equipment in year 2 of the permit term as required.

Stormwater Pollution Prevention Plan (SWPPP)

Describe the status of any SWPPP, due in year 2 of the permit term, for permittee-owned or operated facilities including maintenance garages, public works yards, transfer stations, and other waste handling facilities where pollutants are exposed to stormwater:

The city will prepare SWPPPS for all permittee-owned or operated facilities in year 2 of the permit term as required.

Below, report on the number of site inspections for facilities that require a SWPPP completed during this reporting period.

Number of site inspections completed:

Describe any corrective actions taken at a facility with a SWPPP:

O&M Procedures for Stormwater Treatment Structures

Describe the status of the written procedure for stormwater treatment structure maintenance:

Additional Information

Monitoring or Study Results

Results from any other stormwater or receiving water quality monitoring or studies conducted during the reporting period not otherwise mentioned above, where the data is being used to inform permit compliance or permit effectiveness must be attached.

- (•) Not applicable
- ( ) The results from additional reports or studies are attached to the email submission
- ( ) The results from additional reports or studies can be found at the following website(s):

If such monitoring or studies were conducted on your behalf or if monitoring or studies conducted by other entities were reported to you, a brief description of the type of information gathered or received shall be described below:

Additional Information

Optional: Enter any additional information relevant to your stormwater management program implementation during the reporting period. Include any BMP modifications made by the MS4 if not already discussed above:

Activities Planned for Next Reporting Period

Please confirm that your SWMP has been, or will be, updated to comply with all applicable permit requirements including but not limited to the year 2 requirements summarized below. (Note: impaired waters and TMDL requirements are not listed below)

Yes, I agree ☒

- Complete system mapping Phase I
- Begin investigations of catchments associated with Problem Outfalls
- Develop or modify an ordinance or other regulatory mechanism for post-construction stormwater runoff from new development and redevelopment
- Establish and implement written procedures to require the submission of as-built drawings no later than two years after the completion of construction projects
- Develop, if not already developed, written operations and maintenance procedures
- Develop an inventory of all permittee owned facilities in the categories of parks and open space, buildings and facilities, and vehicles and equipment; review annually and update as necessary
- Establish a written program detailing the activities and procedures the permittee will implement so that the MS4 infrastructure is maintained in a timely manner
- Develop and implement a written SWPPP for maintenance garages, public works yards, transfer stations, and other waste handling facilities where pollutants are exposed to stormwater

- Enclose or cover storage piles of salt or piles containing salt used for deicing or other purposes
- Develop, if not already developed, written procedures for sweeping streets and municipal-owned lots
- Develop, if not already developed, written procedures for winter road maintenance including storage of salt and sand
- Develop, if not already developed, a schedule for catch basin cleaning
- Develop, if not already developed, a written procedure for stormwater treatment structure maintenance
- Develop a written catchment investigation procedure *(18 months)*

Annual Requirements

- Annual report submitted and available to the public
- Annual opportunity for public participation in review and implementation of SWMP
- Keep records relating to the permit available for 5 years and make available to the public
- Properly store and dispose of catch basin cleanings and street sweepings so they do not discharge to receiving waters
- Annual training to employees involved in IDDE program
- Update inventory of all known locations where SSOs have discharged to the MS4 in the last 5 years
- Continue public education and outreach program
- Update outfall and interconnection inventory and priority ranking and include data collected in connection with the dry weather screening and other relevant inspections conducted
- Implement IDDE program
- Review site plans of construction sites as part of the construction stormwater runoff control program
- Conduct site inspection of construction sites as necessary
- Inspect and maintain stormwater treatment structures
- Log catch basins cleaned or inspected
- Sweep all uncurbed streets at least annually

Provide any additional details on activities planned for permit year 2 below:

Part V: Certification of Small MS4 Annual Report 2019

40 CFR 144.32(d) 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, I certify that 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.

Name:	Robert Desmarais, P.E.	Title:	Director of Public Works
Signature:		Date:	09/30/19

[Signatory may be a duly authorized representative]

Year 2 Annual Report
Massachusetts Small MS4 General Permit
Reporting Period: July 1, 2019-June 30, 2020

Please DO NOT attach any documents to this form. Instead, attach all requested documents to an email when submitting the form

Unless otherwise noted, all fields are required to be filled out. If a field is left blank, it will be assumed the requirement or task has not been completed. Please ONLY report on activities between July 1, 2019 and June 30, 2020 unless otherwise requested.

Part I: Contact Information

Name of Municipality or Organization: City of Amesbury

EPA NPDES Permit Number: MAR04117

Primary MS4 Program Manager Contact Information

Name: Robert L. Desmarais, P.E. Title: Director of Public Works

Street Address Line 1: 39 South Hunt Road

Street Address Line 2:

City: Amesbury State: MA Zip Code: 01913

Email: rob@amesburyma.gov Phone Number: (978) 388-8116

Stormwater Management Program (SWMP) Information

SWMP Location (web address): https://www.amesburyma.gov/public-works/pages/ms4-stormwater-program

Date SWMP was Last Updated: Jun 28, 2019

If the SWMP is not available on the web please provide the physical address:

Part II: Self-Assessment

First, in the box below, select the impairment(s) and/or TMDL(s) that are applicable to your MS4. Make sure you are referring to the most recent EPA approved Section 303(d) Impaired Waters List which can be found here: https://www.epa.gov/tmdl/region-1-impaired-waters-and-303d-lists-state

Impairment(s)

☒ Bacteria/Pathogens ☐ Chloride ☐ Nitrogen ☐ Phosphorus
☒ Solids/ Oil/ Grease (Hydrocarbons)/ Metals

TMDL(s)

In State: ☐ Assabet River Phosphorus ☐ Bacteria and Pathogen ☐ Cape Cod Nitrogen
☐ Charles River Watershed Phosphorus ☐ Lake and Pond Phosphorus

Out of State: ☐ Bacteria/Pathogens ☐ Metals ☐ Nitrogen ☐ Phosphorus

Clear Impairments and TMDLs

Next, check off all requirements below that have been completed. ***By checking each box you are certifying that you have completed that permit requirement fully.*** *If you have not completed a requirement leave the box unchecked. Additional information will be requested in later sections.*

Year 2 Requirements

- ☐ Completed Phase I of system mapping
- ☐ Developed a written catchment investigation procedure and added the procedure to the SWMP
- ☒ Developed written procedures to require the submission of as-built drawings and ensure the long term operation and maintenance of completed construction sites and added these procedures to the SWMP
- ☒ Enclosed or covered storage piles of salt or piles containing salt used for deicing or other purposes
- ☐ Developed written operations and maintenance procedures for parks and open space, buildings and facilities, and vehicles and equipment and added these procedures to the SWMP
- ☐ Developed an inventory of all permittee owned facilities in the categories of parks and open space, buildings and facilities, and vehicles and equipment and added this inventory to the SWMP
- ☐ Completed a written program for MS4 infrastructure maintenance to reduce the discharge of pollutants
- ☐ Developed written SWPPPs, included in the SWMP, for all of the following permittee owned or operated facilities: maintenance garages, public works yards, transfer stations, and other waste handling facilities where pollutants are exposed to stormwater

Optional: If you would like to describe progress made on any incomplete requirements listed above, provide any additional information, and/or if any of the above year 2 requirements could not be completed due to the impacts of COVID-19, please identify the requirement that could not be completed, any actions taken to attempt to complete the requirement, and reason the requirement could not be completed below:

COVID-19 curtailed all work on year 2 MS4 permit requirements for a period of approximately four months. As a result, the City was unable to complete many of the tasks above prior to the end of the reporting period. This work will be completed by the end of the calendar year.

Annual Requirements

- ☒ Provided an opportunity for public participation in review and implementation of SWMP and complied with State Public Notice requirements
- ☒ Kept records relating to the permit available for 5 years and made available to the public
- ☐ The SSO inventory has been updated, including the status of mitigation and corrective measures implemented
  - ○ This is not applicable because we do not have sanitary sewer
  - ◉ This is not applicable because we did not find any new SSOs
  - ○ The updated SSO inventory is attached to the email submission
  - ○ The updated SSO inventory can be found at the following website:
- ☒ Properly stored and disposed of catch basin cleanings and street sweepings so they did not discharge to receiving waters
- ☐ Provided training to employees involved in IDDE program within the reporting period
- ☐ All curbed roadways were swept at least once within the reporting period
- ☐ Updated outfall and interconnection inventory and priority ranking as needed

Optional: If you would like to describe progress made on any incomplete requirements listed above, provide any additional information, and/or if any of the above annual requirements could not be completed due to the impacts of COVID-19, please identify the requirement that could not be completed, any actions taken to attempt to complete the requirement, and reason the requirement could not be completed below:

COVID-19 curtailed all work on mapping, screening, and priority ranking of outfalls for a period of approximately four months. As a result, the City was unable to complete the last task above prior to the end of the reporting period. This work will be completed by the end of the calendar year.

Bacteria/ Pathogens (Combination of Impaired Waters Requirements and TMDL Requirements as Applicable)

Annual Requirements

*Public Education and Outreach**

- ☐ Annual message was distributed encouraging the proper management of pet waste, including noting any existing ordinances where appropriate
- ☐ Permittee or its agents disseminated educational material to dog owners at the time of issuance or renewal of dog license, or other appropriate time
- ☐ Provided information to owners of septic systems about proper maintenance in any catchment that discharges to a water body impaired for bacteria

** Public education messages can be combined with other public education requirements as applicable (see Appendix H and F for more information)*

Optional: If you would like to describe progress made on any incomplete requirements listed above or provide any additional details, please use the box below:

COVID-19 curtailed all work on year 2 MS4 permit requirements for a period of approximately four months. As a result, the City was unable to complete many of the tasks above prior to the end of the reporting period.

This work will be completed by the end of the calendar year.

Solids, Oil and Grease (Hydrocarbons), or Metals

Annual Requirements

Good Housekeeping and Pollution Prevention for Permittee Owned Operations

☐ Increased street sweeping frequency of all municipal owned streets and parking lots to a schedule that targets areas with potential for high pollutant loads

☐ Prioritized inspection and maintenance for catch basins to ensure that no sump shall be more than 50 percent full; Cleaned catch basins more frequently if inspection and maintenance activities indicated excessive sediment or debris loadings

Optional: If you would like to describe progress made on any incomplete requirements listed above or provide any additional details, please use the box below:

COVID-19 curtailed all work on year 2 MS4 permit requirements for a period of approximately four months. As a result, the City was unable to complete many of the tasks above prior to the end of the reporting period. This work will be completed by the end of the calendar year.

Optional: Use the box below to provide any additional information you would like to share as part of your self-assessment:

Part III: Receiving Waters/Impaired Waters/TMDL

Have you made any changes to your lists of receiving waters, outfalls, or impairments since the NOI was submitted?

- ○ Yes
- ◉ No

If yes, describe below, including any relevant impairments or TMDLs:

Part IV: Minimum Control Measures

Please fill out all of the metrics below. If applicable, include in the description who completed the task if completed by a third party.

MCM1: Public Education

Number of educational messages completed **during this reporting period**: 6

*Below, report on the educational messages completed **during this reporting period**. For the measurable goal(s) please describe the method/measures used to assess the overall effectiveness of the educational program.*

BMP: 2020-2021 Trash and Recycling Flyer

Message Description and Distribution Method:

Six page flyer mailed to residents annually and posted on the city's website with information on the disposal of yard waste at the Compost Site

Targeted Audience: Residents

Responsible Department/Parties: Engineering

Measurable Goal(s):

Track number of visitors to web page and notices published annually.

Message Date(s): Annually beginning in January of each year

Message Completed for: Appendix F Requirements ☐ Appendix H Requirements ☐

Was this message different than what was proposed in your NOI? Yes ○ No ◉

If yes, describe why the change was made:

BMP: Snow Removal and Ice Control Policy & Procedures

Message Description and Distribution Method:

Policy and procedures for snow removal and ice control available for viewing on the city's website and for distribution in brochure/pamphlet format

Targeted Audience: Businesses, institutions and commercial facilities

Responsible Department/Parties: Engineering

Measurable Goal(s):

Distribute and maintain list of businesses that receive brochures/pamphlets annually.

Message Date(s): July 1, 2018 to present

Message Completed for: Appendix F Requirements ☐ Appendix H Requirements ☐

Was this message different than what was proposed in your NOI? Yes ○ No ◉

If yes, describe why the change was made:

BMP: Erosion and Sedimentation Control

Message Description and Distribution Method:

Provide guidance on erosion and sedimentation control available for viewing on the city's website and for distribution in brochure/pamphlet format.

Targeted Audience: Developers (construction)

Responsible Department/Parties: Conservation Commission, Planning Board and Engineering

Measurable Goal(s):

Distribute and maintain list of developers that receive brochures/pamphlets annually.

Message Date(s): July 1, 2018 to present

Message Completed for: Appendix F Requirements ☐ Appendix H Requirements ☐

Was this message different than what was proposed in your NOI? Yes ○ No ◉

If yes, describe why the change was made:

BMP: Spill Prevention and Response

Message Description and Distribution Method:

Provide guidance on spill prevention and response through the city's Industrial Pretreatment Program available for viewing on the city's website and for distribution in brochure/pamphlet format.

Targeted Audience: Industrial facilities

Responsible Department/Parties: Waste Water and Engineering

Measurable Goal(s):

Distribute and maintain list of facilities that receive brochures/pamphlets annually.

Message Date(s): July 1, 2018 to present

Message Completed for: Appendix F Requirements ☐ Appendix H Requirements ☐

Was this message different than what was proposed in your NOI? Yes ○ No ◉

If yes, describe why the change was made:

BMP: Household Hazardous Waste Program

Message Description and Distribution Method:

Publish dates for community HHW events on the city's website and in the local newspaper.

Targeted Audience: Residents

Responsible Department/Parties: Engineering

Measurable Goal(s):

Track volume of HHW collected annually.

Message Date(s): Annually through the months of April and October.

Message Completed for: Appendix F Requirements ☐ Appendix H Requirements ☐

Was this message different than what was proposed in your NOI? Yes ○ No ◉

If yes, describe why the change was made:

BMP: Stormwater Management and BMPs

Message Description and Distribution Method:

Overall plan for public education and outreach on stormwater management and BMPs at both local and regional levels.

Targeted Audience: All four target audiences.

Responsible Department/Parties: Engineering

Measurable Goal(s):

Review and expand on-going public education program to all four target audiences by updating web page and printed materials on a periodic basis.

Message Date(s): July 1, 2018 to present

Message Completed for: Appendix F Requirements ☐ Appendix H Requirements ☐

Was this message different than what was proposed in your NOI? Yes ○ No ◉

If yes, describe why the change was made:

Add an Educational Message

MCM2: Public Participation

Describe the opportunity provided for public involvement in the development of the Stormwater Management Program (SWMP) **during this reporting period**:

The city is a member of the Merrimack Valley Stormwater Collaborative which is a coalition of 15 MVPC communities working together on regional approaches to cost-effective stormwater management. The Collaborative is focused on intermunicipal coordination in training, public education and best management practices implementation, all key elements in each community's Stormwater Management Program and compliance with federal Environmental Protection Agency's NPDES Phase II regulations and the MS4 Permit for Massachusetts. (Website: www.merrimackvalleystormwater.org)

The city is also a member of the Greenscapes North Shore Coalition which is a collaborative of municipalities and partner organizations, focusing on stormwater and watershed related issues. Specifically, Greenscapes provides outreach and education to support municipal compliance with water-related regulatory requirements, including the MS4 Stormwater and the Water Management Act permits. (Website: www.greenscapes.org)

The Amesbury DPW periodically meets with other departments and boards such as the Conservation Commission, Planning Board, etc. to discuss stormwater topics. Discussions include current and future construction projects within the city, as well as operations and maintenance of the MS4.

Finally, the Amesbury Lakes and Waterways Commission also conducts monthly meetings to discuss lake related issues such as stormwater impacts. These meetings are open to interested members of the public. The Lakes and Waterways Commission coordinates lake cleanup efforts such as trash removal, elimination of invasive species, etc. as funds are available. The commission also actively pursues funding opportunities for lake cleanup efforts.

Was this opportunity different than what was proposed in your NOI? Yes ○ No ◉

Describe any other public involvement or participation opportunities conducted **during this reporting period**:

MCM3: Illicit Discharge Detection and Elimination (IDDE)

Sanitary Sewer Overflows (SSOs)

Check off the box below if the statement is true.

☐ This SSO section is NOT applicable because we DO NOT have sanitary sewer

*Below, report on the number of SSOs identified in the MS4 system and removed **during this reporting period**.*

Number of SSOs identified: 0

Number of SSOs removed: 0

MS4 System Mapping

Below, check all that apply.

The following elements of the Phase I map have been completed:

☒ Outfalls and receiving waters

☒ Open channel conveyances

☒ Interconnections

☒ Municipally-owned stormwater treatment structures

☐ Waterbodies identified by name and indication of all use impairments

☐ Initial catchment delineations

Optional: Describe any additional progress you made on your map during this reporting period or provide additional status information regarding your map:

COVID-19 curtailed all work on mapping, screening, and priority ranking of outfalls for a period of approximately four months. As a result, the City was unable to complete the last task above prior to the end of the reporting period. This work will be completed by the end of the calendar year.

Screening of Outfalls/Interconnections

If conducted, please submit any outfall monitoring results from this reporting period. Outfall monitoring results should include the date, outfall/interconnection identifier, location, weather conditions at time of sampling, precipitation in previous 48 hours, field screening parameter results, and results from all analyses.

○ The outfall screening data is attached to the email submission

○ The outfall screening data can be found at the following website:

*Below, report on the number of outfalls/interconnections screened **during this reporting period**.*

Number of outfalls screened: 0

Catchment Investigations

If conducted, please submit all data collected during this reporting period as part of the dry and wet weather investigations. Also include the presence or absence of System Vulnerability Factors for each catchment.

- ○ The catchment investigation data is attached to the email submission
- ○ The catchment investigation data can be found at the following website:

*Below, report on the number of catchment investigations completed **during this reporting period**.*

Number of catchment investigations completed this reporting period: 0

*Below, report on the percent of catchments investigated **to date.***

Percent of total catchments investigated: 0

Optional: Provide any additional information for clarity regarding the catchment investigations below:

COVID-19 curtailed all work on mapping, screening, and priority ranking of outfalls for a period of approximately four months. As a result, the City was unable to complete the last task above prior to the end of the reporting period. This work will be completed by the end of the calendar year.

IDDE Progress

If illicit discharges were found, please submit a document describing work conducted over this reporting period, and cumulative to date, including location source; description of the discharge; method of discovery; date of discovery; and date of elimination, mitigation, or enforcement OR planned corrective measures and schedule of removal.

- ○ The illicit discharge removal report is attached to the email submission
- ○ The illicit discharge removal report can be found at the following website:

*Below, report on the number of illicit discharges identified and removed, along with the volume of sewage removed **during this reporting period.***

Number of illicit discharges identified: 0

Number of illicit discharges removed: 0

Estimated volume of sewage removed: 0 gallons/day

*Below, report on the total number of illicit discharges identified and removed to date. At a minimum, report on the number of illicit discharges identified and removed **since the effective date of the permit (July 1, 2018)**.*

Total number of illicit discharges identified: 5

Total number of illicit discharges removed: 4

Optional: Provide any additional information for clarity regarding illicit discharges identified, removed, or planned to be removed below:

Since July 1, 2018, there have been SSOs at five different locations within the Amesbury sewer system. With the exception of one location, the SSOs were due to temporary sewer blockages that were cleared immediately. The final location (Route 110 at 495 exit ramp) requires further investigation to to identify alternatives to eliminate sanitary sewer overflows (SSOs) from occurring at MH No. 3-1-63 located upstream

of the siphon crossing near the Route 495 northbound off ramp. During periods of wet weather and high groundwater conditions, SSOs have been reported at this location due to surcharged flow conditions in the sewer system. This suggests that the hydraulic flow capacity of the existing siphon is inadequate for conveying not only existing flows, but also future flows from further development within the tributary area. To this end, the city has developed a scope and budget to conduct the investigation and is currently awaiting funding approval.

Employee Training

Describe the frequency and type of employee training conducted **during the reporting period**:

MCM4: Construction Site Stormwater Runoff Control

*Below, report on the construction site plan reviews, inspections, and enforcement actions completed **during this reporting period**.*

Number of site plan reviews completed: 0

Number of inspections completed: 0

Number of enforcement actions taken: 0

Optional: Enter any additional information relevant to construction site plan reviews, inspections, and enforcement actions:

MCM5: Post-Construction Stormwater Management in New Development and Redevelopment

Ordinance or Regulatory Mechanism

Below, select the option that describes your ordinance or regulatory mechanism progress.

- ○ Bylaw, ordinance, or regulations are updated and adopted consistent with permit requirements
- ◉ Bylaw, ordinance, or regulations are updated consistent with permit requirements but are not yet adopted

○ Bylaw, ordinance, or regulations have not been updated or adopted

As-built Drawings

Describe the measures the MS4 has utilized to require the submission of as-built drawings and ensure long term operation and maintenance of completed construction sites:

The submission of as-built drawings is currently required under both the Amesbury Zoning Bylaw (Section 11 Paragraph b) and the Amesbury Subdivision Rules and Regulations (Section 6.12 of the Definitive Subdivision Plan).

Street Design and Parking Lots Report

Describe the status of the street design and parking lots assessment due in year 4 of the permit term, including any planned or completed changes to local regulations and guidelines:

Work on the street design and parking lots assessment has not been started yet.

Green Infrastructure Report

Describe the status of the green infrastructure report due in year 4 of the permit term, including the findings and progress towards making the practice allowable:

Work on the green infrastructure report has not been started yet.

Retrofit Properties Inventory

Describe the status of the inventory, due in year 4 of the permit term, of permittee-owned properties that could be modified or retrofitted with BMPs to mitigate impervious areas and report on any properties that have been modified or retrofitted:

Work on the inventory of permittee-owned properties that could be modified or retrofitted with BMPS to mitigate impervious areas has not been started yet.

MCM6: Good Housekeeping

Catch Basin Cleaning

Below, report on the number of catch basins inspected and cleaned, along with the total volume of material removed from the catch basins ***during this reporting period****.*

Number of catch basins inspected: 0

Number of catch basins cleaned: 0

Total volume or mass of material removed from all catch basins: 0 [Select Units]

Below, report on the total number of catch basins in the MS4 system.

Total number of catch basins: 0

If applicable:

Report on the actions taken if a catch basin sump is more than 50% full during two consecutive routine inspections/cleaning events:

Street Sweeping

*Report on street sweeping completed **during this reporting period** using one of the three metrics below.*

- (•) Number of miles cleaned: 10
- ( ) Volume of material removed: [Select Units]
- ( ) Weight of material removed: [Select Units]

O&M Procedures and Inventory of Permittee-Owned Properties

Below, check all that apply.

The following permittee-owned properties have been inventoried:

- ☐ Parks and open spaces
- ☐ Buildings and facilities
- ☐ Vehicles and equipment

The following O&M procedures for permittee-owned properties have been completed:

- ☐ Parks and open spaces
- ☐ Buildings and facilities
- ☐ Vehicles and equipment

Stormwater Pollution Prevention Plan (SWPPP)

*Below, report on the number of site inspections for facilities that require a SWPPP completed **during this reporting period**.*

Number of site inspections completed: 0

Describe any corrective actions taken at a facility with a SWPPP:

Additional Information

Monitoring or Study Results

Results from any other stormwater or receiving water quality monitoring or studies conducted during the reporting period not otherwise mentioned above, where the data is being used to inform permit compliance or permit effectiveness must be attached.

- (•) Not applicable
- ( ) The results from additional reports or studies are attached to the email submission
- ( ) The results from additional reports or studies can be found at the following website(s):

If such monitoring or studies were conducted on your behalf or if monitoring or studies conducted by other entities were reported to you, a brief description of the type of information gathered or received shall be described below:

Additional Information

Optional: Enter any additional information relevant to your stormwater management program implementation during the reporting period. Include any BMP modifications made by the MS4 if not already discussed above:

COVID-19 Impacts

Optional: If any of the above year 2 requirements could not be completed due to the impacts of COVID-19, please identify the requirement that could not be completed, any actions taken to attempt to complete the requirement, and reason the requirement could not be completed below:

COVID-19 curtailed all work on year 2 MS4 permit requirements for a period of approximately four months. As a result, the City was unable to complete many of the tasks above prior to the end of the reporting period. This work will be completed by the end of the calendar year.

Activities Planned for Next Reporting Period

Please confirm that your SWMP has been, or will be, updated to comply with all applicable permit requirements including but not limited to the year 3 requirements summarized below. (Note: impaired waters and TMDL requirements are not listed below)

Yes, I agree ☒

- Inspect all outfalls/ interconnections (excluding Problem and Excluded outfalls) for the presence of dry weather flow
- Complete follow-up ranking as dry weather screening becomes available

Annual Requirements

- Annual report submitted and available to the public
- Annual opportunity for public participation in review and implementation of SWMP
- Keep records relating to the permit available for 5 years and make available to the public
- Properly store and dispose of catch basin cleanings and street sweepings so they do not discharge to receiving waters
- Annual training to employees involved in IDDE program
- Update inventory of all known locations where SSOs have discharged to the MS4
- Continue public education and outreach program
- Update outfall and interconnection inventory and priority ranking and include data collected in connection with the dry weather screening and other relevant inspections conducted
- Implement IDDE program
- Review site plans of construction sites as part of the construction stormwater runoff control program
- Conduct site inspection of construction sites as necessary
- Inspect and maintain stormwater treatment structures
- Log catch basins cleaned or inspected
- Sweep all uncurbed streets at least annually
- Continue investigations of catchments associated with Problem Outfalls
- Review inventory of all permittee owned facilities in the categories of parks and open space, buildings and facilities, and vehicles and equipment; update if necessary

Provide any additional details on activities planned for permit year 3 below:

Part V: Certification of Small MS4 Annual Report 2020

40 CFR 144.32(d) 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, I certify that 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.

Name: Robert L. Desmarais, P.E. Title: Director of Public Works

Signature: Robert Desmarais Digitally signed by Robert Desmarais Date: 2020.09.28 14:24:06 -04'00' Date:

[Signatory may be a duly authorized representative]

Note: When prompted during signing, save the document under a new file name.

Annual Report Submission

Please submit the form electronically via email to both EPA and MassDEP by clicking on one of the links below or using the email addresses listed below. Please ensure that all required attachments are included in the email and not attached to this PDF.

EPA: stormwater.reports@epa.gov MassDEP: laura.schifman@mass.gov

Paper Signature:

If you did not sign electronically above, you can print the signature page by clicking the button below.

Print Signature Page

Optional: If you did not sign electronically above, you may lock the form by clicking the "Lock Form" button below which will prompt you to save the locked version of the form. Save this locked version under a new file name.

Lock Form