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STORMWATER MANAGEMENT PLAN

MS4 GENERAL PERMIT COMPLIANCE

JUNE 2019

UPDATED JUNE 2021



Devens
MASSACHUSETTS

swmp

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CERTIFICATION

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

Printed Name John P. Marc-Aurele

Signature John P. Marc-Aurele, PE Date 9/30/21

1.0 INTRODUCTION / OVERVIEW

1.1 Regulatory Summary and Purpose

The Federal Water Pollution Control Act (WPCA), initially enacted in 1948, established ambient water quality standards to specify acceptable levels of pollution in lieu of preventing the causes of water pollution. The 1972 amendments to the WPCA, referred to as the Clean Water Act (CWA), implemented measures which were focused on establishing effluent limitations on point sources, or ‘any discernable, confined, and discrete conveyance... from which pollutants are or may be discharged.’

The 1972 CWA introduced the National Pollutant Discharge Elimination System (NPDES). The NPDES program was established as the fundamental regulatory mechanism of the CWA, requiring direct dischargers of pollutants into waters of the United States to obtain a NPDES permit. Between 1972 and 1987, the NPDES permit program focused on improving surface water quality by reducing pollutants of industrial process wastewater and municipal sewage. During this period, several nationwide studies on water quality, most notably the United States Environmental Protection Agency (EPA) National Urban Runoff Plan (NURP), identified stormwater discharges as a significant source of water pollution.

The results of the NURP and similar studies, resulted in the reauthorization of the CWA in 1987 with the passage of the Water Quality Act (WQA). The WQA established a legal framework and required EPA to develop a comprehensive phased program for regulating municipal and industrial stormwater discharges under the NPDES permit program.

The NPDES Phase 1 Rule, which was issued in November 1990, addressed stormwater dischargers from medium to large municipal separate storm sewer systems (MS4s), which were communities serving a population of at least 100,000 people, as well as stormwater discharges from 11 categories of industrial activity.

The NPDES Phase 2 Rule, which was promulgated in December 1999, addressed small MS4s serving a population of less than 100,000 people in urbanized areas. The Phase 2 Rule requires nationwide coverage of all operators of small MS4s that are located within the boundaries of the Bureau of the Census-defined “urbanized area” (UA) based on the latest decennial census. The Phase 2 rule requires that all MS4s located within “urbanized areas” automatically comply with the Phase 2 stormwater regulations. In the Commonwealth of Massachusetts, the EPA retains primacy as the Phase 2 permitting authority. On May 1, 2003, the EPA and the Massachusetts Department of Environmental Protection (MADEP) jointly issued the NPDES General Permit for Discharges from Small MS4s. At that time, the Devens REGIONAL Enterprise Zone (hereafter, referred to as “Devens”) was not considered to be a regulated area based on the 2000 Census data and was therefore not required to submit a Notice of Intent (NOI) to apply for coverage under this General Permit.

The 2003 NPDES Phase 2 MS4 General Permit (2003 MS4 Permit) required regulated communities to develop, implement, and enforce a Stormwater Management Program (SWMP). The objectives of the SWMP were to reduce the discharge of pollutants from the MS4 to the maximum extent practicable, to protect water quality, and to satisfy the appropriate water quality requirements of the CWA.

The 2003 MS4 Permit expired on May 1, 2008 but was administratively continued for covered permittees until a new MS4 Permit was issued on April 4th, 2016 and became effective on July 1, 2018. Based on the 2010 census data, and due to the amount of development that has occurred in Devens since 2000, a majority of Devens has now been designated as urbanized area, and therefore Devens is subject to the requirements of the 2016 MS4 Permit. Appendix B of this report provides maps of the Phase II stormwater “permit compliance area” for Devens as determined by the USEPA using the latest decennial census. Urbanized area within the Devens Regional Enterprise Zone is displayed on regulated area maps available for the Towns of Shirley, Harvard, and Ayer.

A copy of the 2016 MS4 Permit is included in Appendix C. On March 22, 2018, Devens submitted a Notice of Intent (NOI) to EPA to obtain coverage under the 2016 MS4 Permit. An amendment was later filed on June 29, 2018 to amend the original NOI submission. A copy of the original Notice of Intent, including the Amendment, is included in Appendix D. EPA posted Devens' Notice of Intent for public comment on October 5, 2018 for a 30-day period. Devens received authorization from EPA to discharge under the 2016 MS4 Permit on March 6, 2019. A copy of Devens' Authorization to Discharge is included in Appendix D.

This Stormwater Management Plan will specifically satisfy the requirements set forth by the NPDES Phase 2 regulations which expanded Phase 1's efforts to preserve, protect, and improve the nation's water resources from polluted stormwater runoff to include additional operators of “traditional” (i.e. cities and towns) and “non-traditional” (i.e. Federal and state agencies) MS4s. This plan will incorporate any existing practices, policies, and guidelines and expand their reach to encompass the goals of the 2016 MS4 Permit all while providing a framework for stormwater management at Devens to ensure that stormwater is managed and treated to the maximum extent possible. The stormwater management approach at Devens is grounded in the following goals: to advance stormwater management, exceed regulatory requirements, and to serve as an example community demonstrating through actions that new approaches and techniques to stormwater management can be implemented to support continued growth while improving receiving water quality.

The plan outlines a program of best management practices (BMPs) and measurable goals for the following six minimum control measures as identified in the 2016 MS4 Permit.

- Public education and outreach
- Public involvement / participation
- Illicit discharge detection and elimination
- Construction site stormwater runoff control
- Post-construction stormwater management in new development or redevelopment
- Pollution prevention/good housekeeping

Devens' efforts to comply with these BMPs, as outlined in their Notice of Intent, are included in Section 2.0.

1.2 Governance and Structure

In 1996, the US Army post, which resided at Devens, officially closed. At that time, the land was distributed among various federal and state entities, with the Massachusetts Development Finance Agency acquiring the largest share. A comprehensive disposition process has been occurring since 2003 to determine the future governance of Devens, which includes the potential for creation of a new

independent town, reversion to the original jurisdictional boundaries or other alternatives. A final recommendation for governance is to be made by 2033. The Devens Enterprise Commission (DEC) acts as the regulatory and permitting authority for the Devens Regional Enterprise Zone (Devens) administering and enforcing all zoning bylaws and development regulations. It essentially operates as Board of Health, Conservation Commission, Zoning Board of Appeals, Historic District Commission and Planning Board. There are twelve DEC Commissioners, all of whom are appointed by the Governor. MassDevelopment is responsible for providing municipal administration and services, including DPW, fire, police and other typical activities. MassDevelopment also operates a municipal utility at Devens which provides natural gas, water, electric and sanitary sewer utilities. Operation and management of the stormwater system is provided by the Devens DPW with assistance from the MassDevelopment engineering department.

Specific representatives from those departments that are responsible for implementation of the SWMP are outlined in the table below:

Table 1.1 PARTIES RESPONSIBLE FOR SWMP IMPLEMENTATION		
Name	Title	Affiliation
John Marc-Aurele, PE	Director of Engineering	MassDevelopment
Shane Melone	Director of Public Works and Recreation	MassDevelopment
Joseph Bisceglia	Project Engineer	MassDevelopment
Neil Angus	Environmental Planner	Devens Enterprise Commission
Peter Lowitt	Director/Land Use Administrator	Devens Enterprise Commission

1.3 Demographic Information

Devens is located in both Middlesex and Worcester Counties. It spans 6.8 square miles (17.7 square kilometers) in which only 0.08 square miles (1.2%) of Devens is water. As of the 2010 census, the population was 1,840 people.

Devens is comprised of predominantly urbanized area, based on the 2010 census data, and includes parts of Ayer, Harvard and Shirley.

Climate within the boundaries of Devens ranges from January average minimum temperature of 15 degrees Fahrenheit (°F) to July Average Maximum temperature of 84°F. The average annual precipitation of 47.9 inches, distributed throughout the year. The rainiest month is October, with approximately 4.4 inches of rain.

1.4 Water Resources

Devens is located within the boundaries of the Nashua River Watershed. Eight miles of rivers and streams flow through Devens, including the main stem of the Nashua River. Other water resources include abundant aquifers, wetlands, and approximately 51 acres of open waters. In addition to its location in the Main Stem subbasin of the Nashua, Devens also lies in the Catacoonamug Brook and Bowers/Nonacoicus Brook subbasins. Robbins Pond, Grove Pond, Plow Shop Pond, and Willow Branch are some of the major waterbodies within these subbasins. Some water bodies are considered impaired according to the Final 2014 303(d) list of Impaired Waters. All impairments and outfalls discharging to these water bodies are summarized in Table 1.2 below:

**Table 1.2
RECEIVING WATERS AND IMPAIRMENTS**

Waterbody	Impairment	Number of Outfalls Discharging to Receiving Water
Nashua River (Segment MA81-05) (Class B Water)	Aquatic Macroinvertebrate Bioassessments, Escherichia coli, Phosphorus (Total), Sediment Bioassays – Acute Toxicity Freshwater	11
Wetlands Area near the Nashua River	-	4
Wetlands Area off MacPherson Road	-	1
Unnamed Stream & Wetlands Near Rte. 2A	-	2
Outfalls to Detention Basins to Swales to Plow Shop Pond	Non-Native Aquatic Plants*, Aquatic Plants (Macrophytes), Arsenic, Chromium (total), Mercury in Fish Tissue, Polycyclic Aromatic Hydrocarbons (PAHs) (Aquatic Ecosystems), Sediment Bioassays - Chronic Toxicity Freshwater	3
Willow Branch	-	30
Wetlands Area Off Lake George Street	-	3
Bowers Brook	-	2
Bowers Brook Wetland	-	1
Cold Spring Brook	-	17
Cold Spring Brook Wetland	-	1
Unnamed Water Body Off Saratoga Street	-	2
Unnamed Stream/Wetlands area Off Queenstown Street	-	1

STORMWATER MANAGEMENT PLAN

Table 1.2
RECEIVING WATERS AND IMPAIRMENTS

Waterbody	Impairment	Number of Outfalls Discharging to Receiving Water
Unnamed Stream/Wetlands off Elm Road	-	3
Unnamed Stream off Spruce Street	-	5
Catacoonamug Brook (MA81-74)	Escherichia Coli	7
Trout Brook	-	1
Near Unnamed Stream Tributary to Mirror Lake	Mercury in Fish Tissue	1
Unnamed Stream on Shepley's Hill Landfill Site	-	1
Detention Area near Hospital Road	-	2
Detention Area near Jackson Road	-	2
Detention Area near Saratoga Blvd	-	1
Detention Area near Spruce Street	-	1
Overland to Unnamed Wetland Area	-	4

*TMDL not required, non-pollutant.

1.5 Interconnections and Impairments

MassDevelopment has begun the process of identifying interconnections with neighboring MS4s. Interconnections are those locations where Devens' MS4 discharges to a MS4 under another entity's jurisdiction. MassDevelopment will finish identifying these interconnections within five years of the permit effective date as required by the permit, and delineate the contributing catchment areas. They will also be summarized, along with any related impairments, in a table to be included in this section.

1.5.1 Interconnections and Impairments (Permit Year 2 Update)

Devens is in the process of identifying the ownership of all drainage infrastructure within the boundaries of the Devens Enterprise Zone. Due to its history as a military base and the amount of development that has occurred since 2000, a significant portion of the drainage in Devens is owned by the Army or by private entities. Significant progress has been made in determining the ownership of drainage in Devens during Permit Year 2. The interconnections identified during Permit Year 2 are included in Table 1.3 below.

1.5.2 Interconnections and Impairments (Permit Year 3 Update)

Devens continued to update its drainage mapping during Permit Year 3, including infrastructure ownership updates. All updates made to the list of regulated outfalls under Devens' jurisdiction are reflected in the SWMP. The list of interconnections included in Table 1.3 has also been updated to reflect ownership updates.

Interconnection and/or Drainage Area ID	Connecting Entity	Receiving Water	Impairment
OF-79	Army	Unnamed Stream/Wetland off Queenstown Street	-
51010/OF-106	Army	Cold Spring Brook Wetland	-
53004/AOF-6010	Army	Willow Branch	-
53005/OF-73	Army	Unnamed stream/wetlands area off Queenstown St	-
53007/AOF-6010	Army	Willow Branch	-
53009/OF-73	Army	Unnamed stream/wetlands area off Queenstown St	-
53010/OF-69	Army	Unnamed stream/wetlands area off Queenstown St	-
53011/AOF-6013	Army	Willow Branch	-
60011/AOF-6064	Army	Willow Branch	-
60012/OF-49	Army	Willow Branch	-
60028/OF-79	Army	Unnamed stream/wetlands area off Queenstown St	-

60029/OF-75	Army	Unnamed stream/wetlands area off Queenstown St	-
60030/AOF-6012	Army	Unnamed stream/wetlands area off Queenstown St	-
60056/OF-73	Army	Unnamed stream/wetlands area off Queenstown St	-

1.6 Endangered Species and Historic Properties Determination

The 2016 MS4 Permit requires Devens to demonstrate that all activities regulated under this permit will not adversely affect endangered and threatened species or critical habitat, or impact federal historic properties on the National Register of Historic Properties (NRHP). Devens must demonstrate that there is no critical habitat for any endangered species within its boundaries, and if such a habitat exists, that no best management practice shall interfere with that habitat. Devens must also certify that no discharge will affect a property that is listed or eligible for listing on the NRHP; that any such effects have written acknowledgements from the State Historic Preservation Officer (SHPO), Tribal Historic Preservation Officer (THPO), or other representative that such effects shall be mitigated; and written proof that any best management practices constructed under this permit will include measures to minimize harmful effects on these properties.

Through consultation with the US Fish & Wildlife Service (USFWS), it was determined that threatened species within Devens include both the northern long-eared bat and the small whorled pagonia. Correspondence with USFWS is appended to Devens' Notice of Intent included in Appendix D. Actions currently included in this SWMP will not affect this species. Therefore, Devens has determined that it can certify eligibility under USFWS Criterion C for coverage under the permit. Prior to construction of any structural BMPs, Devens will consult with USFWS to confirm that the proposed project will not impact the northern long-eared bat, the small whorled pagonia or any other endangered or threatened species that may be identified in the future.

The Devens Historic District is a historic district roughly bounded by El Caney Street, Antietam Street, Sherman Avenue, MacArthur Avenue, and Buena Vista Street, and includes land area within the underlying towns of Ayer and Harvard. The district encompasses a portion of the former Fort Devens, and includes several historical buildings. It has been determined to be very unlikely that any disturbance due to installing BMPs in the future would impact any of the historic properties located in this district. Devens can certify eligibility under Criterion A under the Historic Properties Preservation Act because Devens is a new permittee that is not undertaking any activity involving subsurface land disturbance less than one acre. Prior to construction of any structural BMPs, Devens will consult with the State Historic Preservation Officer by submitting a completed Project Notification Form to confirm that the proposed project will not impact any federal historic properties.

1.7 Increased Discharges

Any increased discharges (including increased pollutant loadings) through the MS4 to waters of the United States are subject to Massachusetts antidegradation regulations at 314 CMR 4.04. Section 2.1.2 of the 2016 MS4 Permit requires the Devens to comply with the provisions of 314 CMR 4.04 including information submittal requirements and obtaining authorization for increased discharges where

appropriate. Any authorization by MassDEP for an increased discharge is required to be incorporated into this SWMP.

Devens understands that there shall be no increased discharges, including increased pollutant loadings from the MS4 to impaired waters listed in categories 5 or 4b on the most recent Massachusetts Integrated Report of Waters listed pursuant to Clean Water Act section 303(d) and 305(b) unless it can be demonstrated that there is no net increase in loading from the MS4 to the impaired water of the pollutant(s) for which the waterbody is impaired. If necessary, Devens will demonstrate compliance with this provision by either:

- Documenting that the pollutant(s) for which the waterbody is impaired is not present in the MS4's discharge and retaining documentation of this finding with the SWMP; or
- Documenting that the total load of the pollutant(s) of concern from the MS4 to any impaired portion of the receiving water will not increase as a result of the activity and retain documentation of this finding in the SWMP. Unless otherwise determined by the Permittee, USEPA or by MADEP that additional demonstration is necessary, compliance with the requirements of Part 2.2.2 and Part 2.3.6 of this permit, including all reporting and documentation requirements, shall be considered as demonstrating no net increase as required by this part.

1.8 Surface Water Drinking Supplies

Section 3.0 of the MS4 Permit requires permittees to prioritize discharges to public drinking water supply sources in implementation of the SWMP. Devens does not have any direct discharges to surface drinking water supply sources or their tributaries.

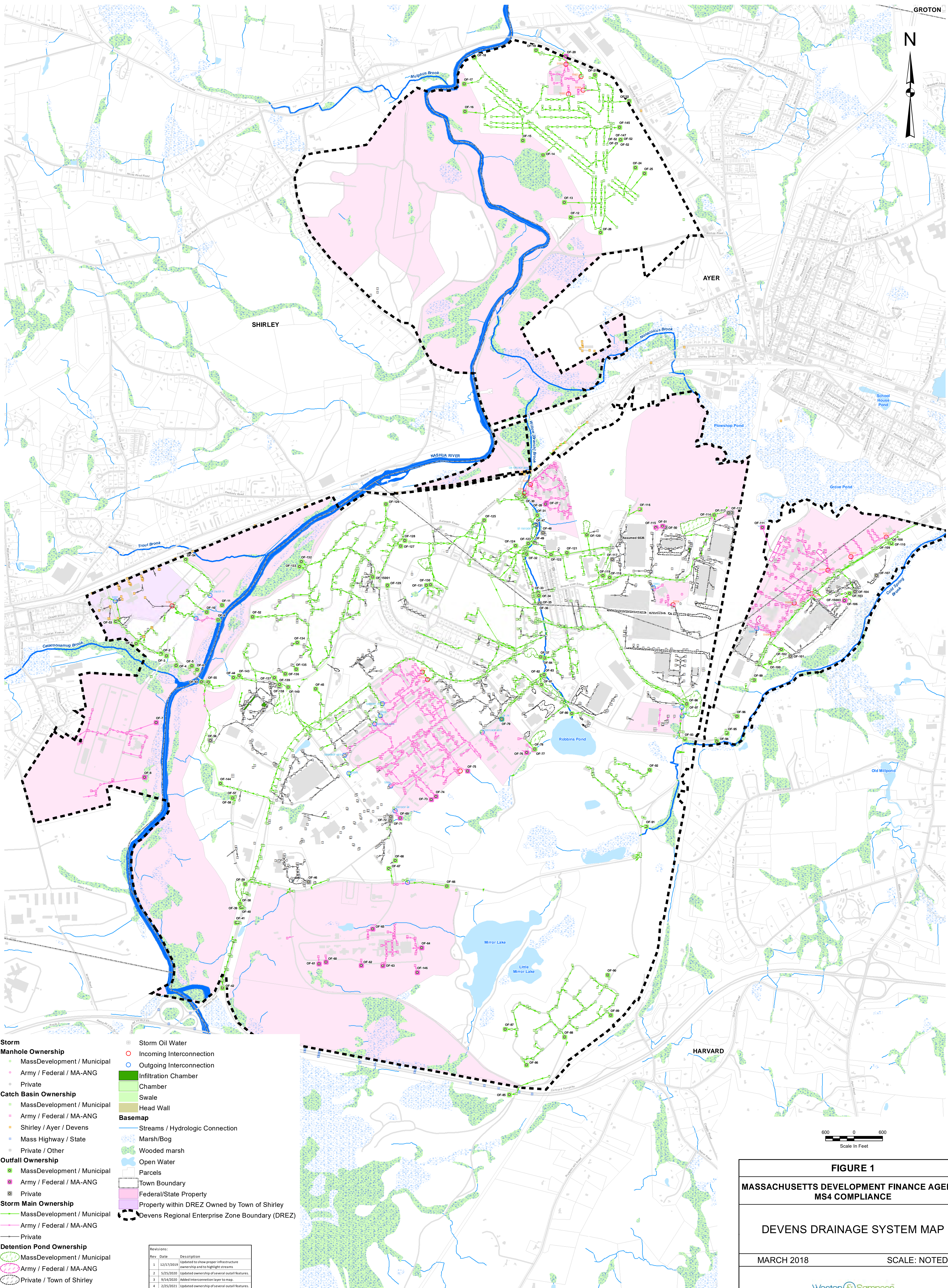


FIGURE 1

MASSACHUSETTS DEVELOPMENT FINANCE AGENCY

MS4 COMPLIANCE

DEVENS DRAINAGE SYSTEM MAP

MARCH 2018

SCALE: NOTED

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2.0 MINIMUM CONTROL MEASURES

2.1 Introduction

This section of the report provides a summary of the regulatory requirements for each of the six minimum control measures as defined under the MS4 General Permit by the EPA. It also provides a summary of those stormwater management practices that Devens currently employs. As part of the requirements of the Notice of Intent submitted to EPA, as included in Appendix D, Devens established a list of the Best Management Practices (BMPs) that it plans to implement in order to comply with each of the six minimum control measures. These BMPs will be implemented over the next five years (i.e. the permit term). However, Devens will have up to 10 years to implement some of the permit requirements as indicated. Devens' progress with respect to implementation of these BMPs, and other stormwater related activities, will be summarized in annual reports submitted to EPA in accordance with the MS4 Permit. These reports will be included in Appendix I.

The BMPs selected for each minimum control measure are summarized and briefly described in this section. Specific details for each BMP including measurable goals, implementation dates and individuals responsible for implementation are stated in each of the respective sections for each control measure in this plan. The Devens Enterprise Commission (DEC) and/or representatives from MassDevelopment will be responsible for implementation of each of the BMPs for the six minimum control measures.

Compliance with requirements of the permit related to water quality limited waters and approved TMDLs is included in Section 6.

Checklists outlining requirements for Permit Years 1 through 5 are included in Appendix E.

2.2 Permit Requirements and Implementation Timeframes

Based on the 2000 census, Devens was not considered an urbanized area and therefore was not regulated under the 2003 MS4 Permit. Although not required to apply for coverage under the 2003 MS4 Permit, Devens is already in compliance with many of the 2003 MS4 Permit requirements.

2.2.1 Public Education and Outreach

The public education and outreach minimum control measure requires Devens to make educational information available to the public and other stakeholders specified by the permit.

Regulatory Requirement:

Section 2.3.2 of the 2016 MS4 General Permit requires permittees to "implement an education program that includes educational goals based on stormwater issues of significance within the MS4 area. The ultimate objective of a public education program is to increase knowledge and change behavior of the public so that pollutants in stormwater are reduced."

Existing Practices:

Devens currently has a progressive public education program that is currently under the jurisdiction of MassDevelopment and the DEC. Both the “Devens Community” website maintained by MassDevelopment and the DEC website provide information to residents and businesses on ‘Living Green’ including how to reduce water use and reduce waste generated. Information is also available to developers on green infrastructure guidelines for construction projects. For operators of industrial facilities, information is provided on Best Management Practices for stormwater pollution prevention. MassDevelopment and the DEC also continue to work with the Nashua River Watershed Association on supporting the federal designation of the Nashua River as a Wild and Scenic River as authorized and signed into law, and the development and distribution of materials to educate the public on protecting and improving the water quality within the Nashua River. As a result, the Nashua River Watershed Association’s Wild and Scenic River Study cites the DEC Rules and Regulations as best practices for stormwater management in numerous sections of the report.

In addition to all the work being performed by Devens at present, the 2016 MS4 Permit requires a few extra measures. Devens must now distribute two rounds of information within three years to the following relevant stakeholders:

1. Residents
2. Businesses, Institutions and Commercial Facilities
3. Developers (Construction)
4. Industrial Facilities

In order to accomplish this, Devens will implement the following BMPs:

BMP: Brochures/Pamphlets/Web Page

Description: Provide general stormwater educational pamphlets as well as topic specific pamphlets addressing lawn care, pet waste, etc. Provide new/updated Devens website to provide public access to stormwater-related materials, documentation and procedures.

Targeted Audiences: Residents

Responsible Department/Parties: MassDevelopment (Engineering)

Measurable Goals: Distribute 2 pamphlets per year to residents, either with hard copies or online. Publish the updated stormwater webpage and track interactions with the materials.

Implementation Timeframe: Completed during Permit Year 1 (FY2019) and to be continued for the duration of the permit. The new stormwater website will be published during Permit Year 4 (FY2022).

BMP: Brochures/Pamphlets/Web Page

Description: Provide general stormwater educational pamphlets as well as topic specific pamphlets addressing lawn/grounds maintenance, use of salt/de-icing materials and other facility specific materials, etc. Provide new/updated Devens website to provide public access to stormwater-related materials, documentation and procedures.

Targeted Audiences: Businesses, Institutions, and Commercial Facilities

Responsible Department/Parties: Devens Enterprise Commission, MassDevelopment (Engineering)

Measurable Goals: Distribute 2 pamphlets per year to businesses, institutions, and commercial facilities, either with hard copies or online. Release the updated stormwater webpage to the public and track interactions with the materials.

Implementation Timeframe: Completed during Permit Year 1 (FY2019) and to be continued for the duration of the permit. The new stormwater website will be published during Permit Year 4 (FY2022).

BMP: Brochures/Pamphlets/Web Page

Description: Distribute brochures to prospective developers and contractors providing general information on stormwater management and summary information on Devens Rules and Regulations. Provide new/updated Devens website and update Devens Enterprise Commission website to provide public access to stormwater-related materials, documentation, regulations and procedures.

Targeted Audiences: Developers/Contractors (construction)

Responsible Department/Parties: Devens Enterprise Commission, MassDevelopment (Engineering)

Measurable Goals: Distribute brochure with hard copies or online throughout the permit term and maintain a list of all recipients. Publish the updated stormwater webpage and track interactions with the materials.

Implementation Timeframe: Completed during Permit Year 1 (FY2019) and to be continued for the duration of the permit. The new stormwater website will be published during Permit Year 4 (FY2022).

BMP: Brochures/Pamphlets

Description: Distribute brochures to industrial facilities providing general information on stormwater management and summary information on Devens Rules and Regulations. Provide new/updated Devens website and update Devens Enterprise Commission website to provide public access to stormwater-related materials, documentation, regulations and procedures.

Targeted Audiences: Industrial Facilities

Responsible Department/Parties: Devens Enterprise Commission (DEC), MassDevelopment

Measurable Goals: Distribute brochure with hard copies or online throughout the permit and maintain a list of all recipients. Publish the updated stormwater website and track interactions with the materials.

Implementation Timeframe: Completed during Permit Year 1 (FY2019) and to be continued for the duration of the permit. The new stormwater website will be published during Permit Year 4 (FY2022).

BMP: School Curricula/Programs

Description: Work with the Nashua River Watershed Association to develop/distribute stormwater-related educational materials, posters, etc., to local schools for use in classrooms and for general use. These materials will be appropriate for either in person or remote learning.

Targeted Audiences: Students

Responsible Department/Parties: MassDevelopment Operations/Engineering

Measurable Goals: Distribute materials to local schools annually.

Implementation Timeframe: Devens developed educational materials during Permit Year 3 as part of its MVP work with Bolton and Harvard, MA. These materials will continue to be distributed in future permit years.

BMP: Meeting

Description: Meet with businesses and institutions to review facilities and discuss specific discharge conditions.

Targeted Audiences: Businesses, Institutions, Commercial Facilities

Responsible Department/Parties: MassDevelopment Engineering/DPW, Devens Enterprise Commission

Measurable Goals: Meet with local businesses and institutions annually and tailor discussions to site specific stormwater information. A list of all facilities that have participated in the meetings shall be kept.

Implementation Timeframe: Devens collected and reviewed inspection reports from facilities with on-site stormwater management systems during Permit Year 3. They will continue this practice, as well as meet with businesses and institutions to discuss stormwater concerns in future permit years.

BMP: Meetings and Public Education Materials

Description: Continue to meet and work with the Nashua River Watershed Association to develop and implement a curriculum to educate the public on protecting the water quality of the Nashua River.

Targeted Audiences: General Public

Responsible Department/Parties: MassDevelopment Engineering, Devens Enterprise Commission

Measurable Goals: Meet and collaborate with the Nashua River Watershed Association annually to educate the general public.

Implementation Timeframe: To be completed during Permit Years 3-5 (FY2021-FY2023).

BMP: Presentation

Description: Conduct a presentation on Stormwater Operation & Maintenance Plan Requirements.

Targeted Audiences: Businesses, Institutions, and Commercial Facilities

Responsible Department/Parties: MassDevelopment Engineering, Devens Enterprise Commission

Measurable Goals: Make a presentation annually and track the number of commercial entities that attend the presentation.

Implementation Timeframe: This presentation was not held in Permit Year 3 due to the impacts of COVID-19. The presentation will be conducted in Permit Years 4 & 5 (FY2022-FY2023).

BMP: Web Page

Description: Continue to provide information to residents via the MassDevelopment "Devens Community" website and the Devens Enterprise Commission website on "Living Green" including how to reduce water use and reduce waste generated.

Targeted Audiences: Residents

Responsible Department/Parties: MassDevelopment, Devens Enterprise Commission

Measurable Goals: Send link to website where information is posted to residents and track number of residents contacted and the number of visits to the website.

Implementation Timeframe: Completed during Permit Year 1 (FY2019) and to be continued for the duration of the permit.

BMP: Web Page

Description: Continue to provide information to residents via the MassDevelopment "Devens Community" website and the Devens Enterprise Commission website on "Living Green" including how to reduce water use and reduce waste generated.

Targeted Audiences: Businesses, Institutions and Commercial Facilities

Responsible Department/Parties: MassDevelopment, Devens Enterprise Commission

Measurable Goals: Send link to website where information is posted to local businesses and track number of businesses contacted and the number of visits to the website.

Implementation Timeframe: Completed during Permit Year 1 (FY2019) and to be continued for the duration of the permit.

BMP: Brochures/Pamphlets

Description: Continue to make information available to developers on green infrastructure guidelines for construction projects in Devens.

Targeted Audiences: Developers (Construction)

Responsible Department/Parties: MassDevelopment, Devens Enterprise Commission

Measurable Goals: Post information on the Devens Enterprise Commission website and handout information to developers as new development projects are introduced to the Commission - keep a list of developers to which the information is distributed.

Implementation Timeframe: Completed during Permit Year 1 (FY2019) and to be continued for the duration of the permit.

BMP: Web Page

Description: Continue to make available to operators of industrial facilities information on Best Management Practices focused on stormwater pollution prevention

Targeted Audiences: Industrial Facilities

Responsible Department/Parties: MassDevelopment, Devens Enterprise Commission

Measurable Goals: Post information on the Devens Enterprise Commission website and e-mail a link to the information to owners/operators of industrial facilities within Devens. Track the number of owners/operators e-mailed and the number of visits to the website.

Implementation Timeframe: Implemented during Permit Year 1 (FY2019) and to be continued for the duration of the permit.

Public education materials utilized for MS4 Compliance are included in Appendix F.

2.2.2 Public Involvement / Participation

Regulatory Requirement:

Section 2.3.3 of the 2016 MS4 Permit requires the permittee to “provide opportunities to engage the public to participate in the review and implementation of the permittee’s SWMP.” Public participation benefits the program by increasing public support, including additional expertise and involving community groups/organizations.

Existing Practices:

MassDevelopment and the Devens Enterprise Commission continue to work with the Nashua River Watershed Association. The Nashua River Watershed Association holds meetings annually with communities located in the watershed. They also hold informational sessions and assist communities in implementing low impact development and green infrastructure practices. Devens is also an active participant in the Devens Household Hazardous Products Collection Program.

In addition to continuing the above practices, Devens plans to implement the following BMPs to meet the public involvement and participation requirements of the permit, and engage the public in the implementation of the SWMP.

BMP: Public Review

Description: Provide for Public Review of Stormwater Management Plan and Annual Reports

Responsible Department/Parties: MassDevelopment (Engineering), Devens Enterprise Commission

Measurable Goals: Make SWMP and annual reports available to public at MassDevelopment Offices & on Devens website.

Implementation Timeframe: Completed during Permit Year 1 (FY2019) and to be continued for the duration of the permit as the SWMP is updated annually.

BMP: Public Participation

Description: Provide Public Opportunity to Participate in SWMP Development

Responsible Department/Parties: MassDevelopment (Engineering), Devens Enterprise Commission

Measurable Goals: Allow public to comment on stormwater management plan annually.

Implementation Timeframe: Completed during Permit Year 1 (FY2019) and to be continued for the duration of the permit as the SWMP is updated annually.

BMP: Public Participation

Description: Continue to provide public access to Recycling Drop-Off

Responsible Department/Parties: MassDevelopment (DPW)

Measurable Goals: Continue to provide public access to the recycling drop off at the DPW facility annually.

Implementation Timeframe: Completed during Permit Year 1 (FY2019) and to be continued for the duration of the permit.

BMP: Public Participation

Description: Continue public access to Regional Household Hazardous Waste Collection Center

Responsible Department/Parties: MassDevelopment

Measurable Goals: Continue participation in Devens Regional Household Hazardous Products Collection Center.

Implementation Timeframe: Completed during Permit Year 1 (FY2019) and to be continued for the duration of the permit.

BMP: Public Participation

Description: Continue participation in the Nashua River Watershed Association

Responsible Department/Parties: Devens Enterprise Commission, MassDevelopment

Measurable Goals: Attend or participate in at least one meeting or event annually of the Nashua River Watershed Association.

Implementation Timeframe: Completed during Permit Years 3 (FY2021)) and to be continued for the duration of the permit.

BMP: Public Participation

Description: Provide community access to clean-up days, tree plantings, etc.

Responsible Department/Parties: Devens Enterprise Commission, MassDevelopment

Measurable Goals: Sponsor one activity annually for public involvement.

Implementation Timeframe: This could not be completed during Permit Year 3 (FY2021) due to the impacts of COVID-19. Devens will complete this BMP during Permit Years 4 & 5 (FY2022-FY2023).

BMP: Public Participation

Description: Continue participation in the Devens Eco-Efficiency Center

Responsible Department/Parties: Devens Enterprise Commission (DEC)

Measurable Goals: Provide at least one program/service annually to assist local businesses in reducing the amount of waste they generate and disposal costs.

Implementation Timeframe: Completed during Permit Year 1 (FY2019) and to be continued for the duration of the permit.

2.2.3 *Illicit Discharge Detection and Elimination*

Regulatory Requirement:

Section 2.3.4 of the 2016 MS4 General Permit requires the permittee to develop a written Illicit Discharge Detection and Elimination (IDDE) program. The IDDE program is designed to “systematically find and eliminate sources of non-stormwater discharges to its municipal separate storm sewer system and implement procedures to prevent such discharges.”

Existing Practices:

Devens already has a comprehensive GIS map of their drainage system, which needs only minor updating to be fully compliant with the mapping requirements of the 2016 MS4 Permit. Devens will continue to further develop their drainage mapping under the permit by identifying interconnections, or those locations where Devens’s MS4 discharges to a neighboring MS4’s jurisdiction, and delineating tributary catchment areas for all outfalls and interconnections. Devens already has identified drainage infrastructure located within the Devens Regional Enterprise Zone that is under the jurisdiction of other federal, state and municipal entities.

As a new permittee not previously covered under the 2003 MS4 Permit, Devens must establish legal authority to prohibit illicit discharges, investigate suspected illicit discharges, eliminate illicit discharges, and implement enforcement procedures through adoption of a new or modification of an existing regulatory mechanism. Devens must also develop a written IDDE plan, continue to maintain an inventory of all known Sanitary System Overflows (SSOs) and begin implementation of their illicit discharge detection and elimination program, including dry and wet weather outfall screening and sampling. These permit requirements can be achieved by implementing the following BMPs:

BMP: Illicit Discharge Detection and Elimination Regulations

Description: Review existing regulatory prohibitions and update as needed to provide required legal authority to prohibit, investigate, and eliminate illicit discharges. The general provisions of 974 CMR 4.08(2) currently require all projects to comply with MA DEP Stormwater Management Standards and submit a completed and endorsed stormwater management form which includes a signed Illicit Discharge Compliance Statement verifying that no illicit discharges exist on the site. Failure to prevent illicit discharges constitutes a violation of the Unified Permits issued for development at Devens and is subject to enforcement procedures outlined in 974 CMR 1.14.

Responsible Department/Parties: MassDevelopment (Engineering and Utilities), Devens Enterprise Commission

Measurable Goals: Review existing authority and prohibitions. Amend existing Devens regulations for enforcement as needed. Report on progress in Annual Reports.

Implementation Timeframe: To be completed within three years of the permit effective date, but begin review during Permit Year 1 (Start FY2019, Complete FY2021). A draft IDDE regulation was drafted by both MassDevelopment and the Devens Enterprise Commission during Permit Years 2 and 3. The regulations were adopted by the Devens Enterprise Commission at a public hearing held on May 25, 2021, and are in the process of being adopted by MassDevelopment.

BMP: SSO Inventory

Description: Develop inventory of where Sanitary Sewer Overflows (SSOs) have discharged in the five years prior to the permit effective date and since the permit became effective.

Responsible Department/Parties: MassDevelopment (Utilities), Devens Enterprise Commission (BOH)

Measurable Goals: Continue to maintain and update existing SSO inventory annually and provide updates in annual MS4 reports.

Implementation Timeframe: Completed within 1 year of the permit effective date (FY2019) and to be updated annually.

BMP: Storm Sewer System Map

Description: Review and update existing drainage map to include catchment delineations, interconnections, and impaired waters. Update annually thereafter to incorporate drainage improvements, including drainage from new developments and re-developments, and findings during IDDE Program Implementation.

Responsible Department/Parties: MassDevelopment (Engineering)

Measurable Goals: Update Devens' existing drainage map to include the following within 2 years of the permit effective date:

- all outfalls and receiving waters),
- open channel conveyances,
- interconnections with other MS4s),
- municipally-owned stormwater treatment structures,
- impaired waterbodies, *and*
- initial catchment delineations.

Within 10 years of the permit effective date, this map shall also include:

- location of outfalls with an accuracy of +/- 30 feet,
- all pipes,
- manholes,
- catch basins,
- refined catchment delineations, and
- sanitary sewer system.

In addition, EPA suggests adding, but does not require, the following information, some of which Devens is actively working to incorporate:

- storm and sanitary sewer material, size and age,
- privately-owned stormwater treatment structures,
- septic systems and areas likely to be affected by septic leaching,
- seasonal high-water table elevations,
- topography,
- orthography,
- alignments, dates and representation of illicit discharge remediation, and
- locations of suspected, confirmed and corrected illicit discharges.

Implementation Timeframe: Complete initial mapping updates within 3 years of the permit effective date and complete full system map within 13 years of permit effective date (Start FY2021, Complete FY2031). The drainage map was completed in Year 1, and will continue to be updated over the course of the

permit term as existing data is confirmed through field investigations and as new projects are incorporated into the MS4.

BMP: Written IDDE Program

Description: Create written IDDE plan to meet permit conditions

Responsible Department/Parties: MassDevelopment (Engineering/DPW Operations)

Measurable Goals: Develop written IDDE plan and follow the guidelines and practices in the program in implementation of the illicit discharge detection and elimination investigation program.

Implementation Timeframe: To be completed within four years of the permit effective date, but begin development during Permit Year 3 (Start FY2021, Complete FY2022). Devens began developing a written IDDE Plan during Permit Year 2 and completed a draft version of the plan during Permit Year 3. The plan will be finalized in Permit Year 4 (FY2022).

BMP: Outfall and Interconnection Inventory

Description: All outfalls and interconnections have been mapped. Update outfall and interconnection inventory as needed to incorporate condition information.

Responsible Department/Parties: MassDevelopment (Engineering/DPW Operations)

Measurable Goals: Review existing GIS and update inventory as needed

Implementation Timeframe: Updates to the outfall and interconnection inventory are ongoing. To be completed within four years of the permit effective date (FY2022).

BMP: Priority Ranking

Description: Assess and rank the potential for all catchments to have illicit discharges.

Responsible Department/Parties: MassDevelopment (Engineering/DPW Operations)

Measurable Goals: Devens will assess within existing catchments the potential for illicit discharges by obtaining data about:

- past complaints
- poor receiving water quality
- density of generating sites
- age of surrounding infrastructure
- previous sewer conversion
- presence of historically combined sewer systems
- surrounding septic systems
- presence of culverted streams
- approved TMDLs or known impairments of the receiving water body
- and any other relevant characteristics.

Using this and any other available data, Devens will rank each outfall in each catchment into one of four categories:

1. Problem outfalls – that have known discharges
2. High Priority outfalls – that discharge to an area of concern (drinking water, public beaches, recreational areas, shellfish beds, or other)
3. Low Priority outfalls – that do not fit into the other categories but require sampling
4. Excluded outfalls – that have no potential for illicit discharges and are exempt from the IDDE program.

Implementation Timeframe: To be completed within four years of the permit effective date, but begin during Permit Year 1 (Start FY2019, Complete FY2022). Devens developed a draft catchment assessment and priority ranking during Permit Year 1, which was further updated during Permit Years

2 & 3 based on mapping updates. The document will be finalized along with the IDDE Plan during Permit Year 4.

BMP: Conduct Dry Weather Screening

Description: Conduct Dry Weather Screening in accordance with outfall screening procedure and permit conditions.

Responsible Department/Parties: MassDevelopment (Engineering, DPW Operations)

Measurable Goals: Complete all dry weather screening and sampling within 6 years of the permit effective. Track number of outfalls that are screened annually.

Implementation Timeframe: To be completed within six years of the permit effective date, but begin during Permit Year 4 (Start FY2022, Complete FY2024).

BMP: Follow-up Ranking

Description: Update catchment prioritization and ranking as additional dry weather screening information becomes available.

Responsible Department/Parties: MassDevelopment (Engineering, DPW Operations)

Measurable Goals: The outfall ranking described above shall be amended by Devens as dry weather and sampling information becomes available.

Implementation Timeframe: To be completed within six years of the permit effective date, but begin during Permit Year 4 (Start FY2022, Complete FY2024).

BMP: Conduct Wet Weather Screening

Description: Conduct wet weather screening and sampling at outfalls/interconnections in catchments where System Vulnerability Factors are present in accordance with permit conditions.

Responsible Department/Parties: MassDevelopment (Engineering, DPW, Operations)

Measurable Goals: Complete all wet weather screening and sampling within 13 years of permit effective date. Track number of outfalls that are screened and sampled annually.

Implementation Timeframe: Begin after results from dry weather screening are obtained and before IDDE Investigations are complete within 13 years of the permit effective date (Start FY2023, Complete FY2031).

BMP: Employee Training

Description: Train employees on IDDE implementation.

Responsible Department/Parties: MassDevelopment (Engineering, DPW Operations)

Measurable Goals: Complete annual training in accordance with the IDDE plan developed. Track the number of employees that receive training.

Implementation Timeframe: Begin after IDDE plan is written and continue annually for duration of permit (FY2022).

BMP: Implement IDDE Program

Description: Implement catchment investigations according to program and permit conditions, including TV inspection, smoke testing and dye testing as needed to identify illicit connections.

Responsible Department/Parties: MassDevelopment (Engineering, DPW Operations)

Measurable Goals: Implement and enforce practices set forth in written IDDE plan and IDDE regulations. Track the number of illicit connections that are identified and removed annually.

Implementation Timeframe: Begin after IDDE plan is written, at most 5 years after the permit effective date and complete 13 years after the permit effective date (Start FY2023, Complete FY2031).

BMP: Ongoing Screening

Description: Conduct Dry and Wet weather screening (as necessary).

Responsible Department/Parties: MassDevelopment (Engineering, DPW, Operations)

Measurable Goals: Complete ongoing outfall screening upon completion of IDDE program in year 13 after the permit effective date.

Implementation Timeframe: To begin after completion of IDDE investigations as needed (FY2031).

2.2.4 Construction Site Stormwater Runoff Control

Regulatory Requirement:

Section 2.3.5 of the 2016 MS4 Permit requires the permittee to create a program to “minimize or eliminate erosion and maintain sediment on site so that it is not transported in stormwater and allowed to discharge to a water of the US through the permittee’s MS4.” The permittee will conduct site plan reviews, site inspections and include procedures for public involvement.

Existing Practices:

Under the Massachusetts Code of Regulations (974 CMR 1.00 – 10.00), The Devens Enterprise Commission (DEC) has promulgated regulations that address stormwater management controls, and erosion and sediment controls for new development and re-development. The DEC has existing Green Infrastructure Guidelines for new development and re-development which require adherence to the following sections of the Massachusetts Code of Regulations: 4.09 – Water Resource Protection, 4.11 – Greenhouse Gas Mitigation, 4.07 – Earth Removal, 3.04(4) – Stormwater Management, 3.02(3)(e) – Erosion and Sedimentation Controls During Construction, and 3.06 – Steep Slope Protection.

Devens also currently has zoning bylaws that require site-specific sediment and erosion control plans and development of a stormwater pollution prevention plan. This is included in the level one and level two permits, which should cover all new and re-development that disturbs more than one acre of land. In addition, the DEC has Rules and Regulations which include their own enforceable system for granting permits, subdivision laws, and site plan regulations.

To attain compliance with the 2016 MS4 Permit, Devens will implement the following BMPs to supplement the guidelines set forth in their zoning bylaws and rules and regulations.

BMP: Construction Site Stormwater Runoff Control (ESC) Regulations

Description: Continue compliance with Devens Enterprise Commission regulatory requirements for Erosion & Sediment Control (ESC) Plan under 974 CMR 3.02(3)(e).

Responsible Department/Parties: Devens Enterprise Commission, MassDevelopment

Measurable Goals: Continue to enforce the ESC measures and report on the number of site inspections and trainings that occur annually in the annual reports.

Implementation Timeframe: Continue to enforce throughout the permit term (FY2019).

BMP: Site Inspection and Enforcement of Erosion and Sediment Control (ESC) measures

Description: Continue implementation of 974 CMR 3.02(3)(e) and conditions of all site development approvals that require an ESC plan and DEC inspection of all controls prior to commencement of construction. Standard conditions of approval also require Applicant maintain an ESC log for all controls that is to be made available for inspection by DEC. Document existing inspection procedures.

Responsible Department/Parties: Devens Enterprise Commission (DEC), MassDevelopment

Measurable Goals: Continue existing site inspection and enforcement procedures. Document inspection and enforcement procedures. Procedures must be in written format within three years of permit effective date or by July 2021.

Implementation Timeframe: Continue to enforce throughout the permit term and document existing procedures within three years of the permit effective date (FY2021). A Standard Operating Procedure (SOP) for Site Plan Review, Inspection, and Enforcement was drafted during Permit Year 2 and finalized in Permit Year 3.

BMP: Site Plan Review

Description: Continue compliance with DEC regulatory requirements for ESC plan under 974 CMR 3.02(3)(e), protection of steep slopes 974 CMR 3.06, earth removal 974 CMR 4.07 and stormwater management 974 CMR 4.08. Document existing site plan review procedures.

Responsible Department/Parties: Devens Enterprise Commission, Engineering

Measurable Goals: Continue existing site plan review procedures. Document existing site plan review procedures. Procedures must be in written format within three years of permit effective date or by July 2021.

Implementation Timeframe: Continue to enforce throughout the permit term and create a written set of procedures within three years of the permit effective permit date (FY2021). A Standard Operating Procedure (SOP) for Site Plan Review, Inspection, and Enforcement was drafted during Permit Year 2 and finalized in Permit Year 3.

BMP: Erosion and Sediment Control

Description: Continue compliance with DEC regulatory requirements for ESC Plan under 974 CMR 3.02(3)(e) and 974 CMR 3.06.

Responsible Department/Parties: Devens Enterprise Commission, MassDevelopment

Measurable Goals: Continue compliance with existing requirements for erosion and sediment control at construction sites. Ensure BMPs are appropriate for site conditions.

Implementation Timeframe: Continue to enforce throughout permit term (FY2019).

BMP: Waste Control

Description: Continue requiring waste disposal and recycling affidavits as part of building permit process: http://www.devensec.com/forms/Building_Permit_2016.pdf (see page 2). DEC Determination of Completeness requirements also require applicants to identify waste disposal methods as part of site plan review (recycling, composting, reuse): http://www.devensec.com/forms/DOC_Form_2012.pdf (see page 3).

Responsible Department/Parties: Devens Enterprise Commission, MassDevelopment

Measurable Goals: Continue to require compliance with existing requirements for waste control.

Implementation Timeframe: Continue to enforce throughout the permit term (FY2019).

2.2.5 Post-Construction Stormwater Management

Regulatory Requirement:

Section 2.3.6 of the 2016 MS4 Permit requires the permittee to require developers to “reduce the discharge of pollutants found in stormwater through the retention or treatment of stormwater after construction on new or redeveloped sites.”

In this case, a site is defined as the “area extent of construction activities which includes but is not limited to the creation of new impervious cover and improvement of existing impervious cover.”

New Development is defined as construction activity that results in a total earth disturbance area equal to or greater than one acre on land that did not have any impervious area before work began.

Redevelopment is defined as any construction activity that disturbs greater than or equal to one acre and does not meet the requirements to be designated as new development.

Existing Practices:

Devens has incorporated post construction stormwater management control measures in the DEC Development Rules and Regulations promulgated in 1996 and last revised in 2013, the Devens By-Laws promulgated in 1994 and last revised in 2015, and the Devens Stormwater Pollution Prevention Plan promulgated in 1995. Since 1997, these regulations have required all stormwater management systems to be designed with pre-development areas modeled as “green field”, requiring developments to pre-treat and infiltrate more runoff directly on-site than what would have been required for redevelopment projects under the Massachusetts Stormwater Management Standards. The DEC requires that all projects comply with the MADEP Stormwater Management Standards regardless of whether the project is subject to the Wetlands Protection Act. Since 2011, Devens has required Low Impact Development (LID) for all new and redevelopment projects. 974 CMR 4.08 includes requirements to promote the use of LID stormwater management techniques to the maximum extent feasible to mimic the predevelopment hydrology of the site. Since 2011, Devens has also developed comprehensive green infrastructure guidelines and regulatory requirements for large building projects, and updated its stormwater operations and maintenance plan requirements for all private development.

Devens shall continue to build on these existing practices and meet the requirements of the 2016 MS4 Permit through implementation of the following:

BMP: Post Construction Stormwater Management Regulations

Description: Continue to require compliance with Devens Enterprise Commission (DEC) regulatory requirements for post-construction runoff from new development and re-development as included in 974 CMR 4.08 and 4.09.

Responsible Department/Parties: Devens Enterprise Commission, MassDevelopment (Engineering, Operations)

Measurable Goals: Continue to enforce existing regulations.

Implementation Timeframe: Continue to enforce regulations throughout the permit term (FY2019).

BMP: Target Properties to Reduce Impervious Areas

Description: Identify and priority rank at least 5 permittee-owned properties that could be modified or retrofitted with BMPs to reduce impervious cover and update annually.

Responsible Department/Parties: Devens Enterprise Commission, MassDevelopment (Engineering, DPW Operations)

Measurable Goals: This goal can be achieved through disconnecting impervious surfaces, introducing low impact development and green infrastructure practices, or re-defining zoning regulations to change maximum sizes of parking lots and lane widths. Report annually on progress and retrofitted properties targeted by this effort.

Implementation Timeframe: Complete within 6 years of the permit effective date and report annually on retrofitted properties (FY2024).

BMP: Allow for Green Infrastructure

Description: Continue to require LID practices for all stormwater management projects where feasible: 974 CMR 3.04(4)(a)1. & 974 CMR 4.08. Continue to utilize and improve on green infrastructure guidelines to guide, regulate and incentivize green infrastructure on all development and redevelopment projects: http://www.devensec.com/development/Green_Infrastructure_Guidelines_Final_8-12-14.pdf. Continue to monitor impervious surface reductions in Devens Sustainable Indicators Reports.

Responsible Department/Parties: Devens Enterprise Commission (DEC)

Measurable Goals: Continue to require LID practices as well as monitor and track sustainable indicators including impervious surface reductions resulting from incorporation of LID.

Implementation Timeframe: Continue to enforce throughout the duration of the permit (FY2019).

BMP: Street Design and Parking Lot Guidelines

Description: Encourage the use of reduced pavement widths and variable street standards and types, shortened roads through cluster development and alternative surfaces such as porous pavement, pavers, or reinforced turf. Develop a report assessing requirements that affect the creation of impervious cover to determine if design standards for streets and parking lots can be modified to support low impact design options. Continue to require LID practices for all street and permittee-owned parking lot projects where feasible: 974 CMR 3.04(4)(a)1. & 974 CMR 4.08. Continue to monitor impervious surface reductions in Devens Sustainable Indicators Reports.

Responsible Department/Parties: Devens Enterprise Commission, MassDevelopment (Engineering)

Measurable Goals: Continue to require LID practices as well as monitor and track sustainable indicators including impervious surface reductions resulting from incorporation of LID.

Implementation Timeframe: Continue to enforce and track throughout the duration of the permit (FY2019). Complete report within 6 years of the permit effective date and implement recommendations of report as warranted and where feasible.

BMP: Ensure the Requirements of the MA Stormwater Handbook are met

Description: Ensure any stormwater controls and management practices for new development and redevelopment meet the retention and treatment requirements of the MS4 Permit and all applicable requirements of the Massachusetts Stormwater Handbook. Review existing regulatory requirements and amend requirements as needed to meet permit conditions.

Responsible Department/Parties: Devens Enterprise Commission (DEC)

Measurable Goals: Modify existing regulatory mechanism to meet permit requirements.

Implementation Timeframe: The DEC regulations were reviewed and updated during permit years 2 & 3 to meet this requirement. The new regulations were adopted at a public hearing held on May 25, 2021.

BMP: As-Built Plans for Stormwater Control/Long-term Operation and Maintenance of BMPs

Description: Continue current procedures which require the development of O&M Plans as part of the permitting process and as a condition of occupancy. Continue to require property owners to file annual reports regarding system maintenance to the DEC. Continue to require the submission of as-builts prior to occupancy.

Responsible Department/Parties: Devens Enterprise Commission, MassDevelopment (Engineering)

Measurable Goals: Continue current procedures as they relate to development of O&M Plans and submission of as-built plans.

Implementation Timeframe: Continue to enforce throughout the duration of the permit (FY2019).

BMP: Inspection of Private Detention Basins

Description: Continue to require annual inspection of private detention basins to ensure compliance with existing O&M requirements. This inspection should be conducted by the owner/operator of the detention basin, and inspection reports should be submitted to the DEC and MassDevelopment.

Responsible Department/Parties: Devens Enterprise Commission (DEC), MassDevelopment (Engineering)

Measurable Goals: Continue to inspect annually to ensure compliance with existing O&M Plans. Report on the number of properties inspected annually and status of compliance.

Implementation Timeframe: Continue to enforce throughout the duration of the permit term (FY2019).

*2.2.6 Pollution Prevention / Good Housekeeping***Regulatory Requirement:**

Section 2.3.7 of the 2016 MS4 Permit requires the permittee to “implement an operations and maintenance program for permittee-owned operations that has a goal of preventing or reducing pollutant runoff and protecting water quality from all permittee-owned operations.”

This minimum control measure includes a training component and has the ultimate goal of preventing or reducing stormwater pollution from activities such as park and open space maintenance, fleet and building maintenance, new construction and land disturbances, and stormwater system maintenance.

Existing Practices:

The DPW's current procedures for maintaining existing infrastructure are based on computer generated tasks, programmed for specific equipment or duties for a specific time. Devens does have a written O&M plan/schedule that covers street sweeping, catch basin cleaning, and maintenance of BMPs. Devens currently sweeps all public streets and municipal parking lots in the early spring, and then on average every 4 weeks, as needed. Devens cleans approximately 50% of catch basins per year. Catch basin cleanings and street sweepings are stock piled in a self-contained erosion-free area at the DPW Yard, which are then transported to a landfill.

To be in compliance with the 2016 permit, catch basins must be no more than 50% full at any one time. To achieve this, all structures must be cleaned, measured, logged and monitored to develop an optimization plan. Devens shall continue to build on these existing practices and meet the requirements of the 2016 MS4 Permit through implementation of the following:

BMP: Inventory all Permittee-Owned Property

Description: Inventory all permittee-owned parks and open spaces, buildings and facilities, and vehicles and equipment and update annually.

Responsible Department/Parties: MassDevelopment (Engineering, DPW Operations)

Measurable Goals: Create Inventory and update annually.

Implementation Timeframe: Complete within 4 years of the permit effective date and update as needed (FY2022).

BMP: O&M Practices

Description: Review existing operation and maintenance (O&M) procedures addressing proper storage of materials, lawn maintenance and landscaping activities, protective practices, use and storage of

petroleum products, waste management procedures for buildings and facilities, location of fueling areas, evaluation of possible leaks, and storage locations of vehicles and equipment. Modify as necessary to ensure compliance with Section 2.3.7.a(ii) of the 2016 MS4 Permit.

Responsible Department/Parties: MassDevelopment (Engineering, DPW Operations)

Measurable Goals: Review and update standard operation and maintenance procedures for all municipal activities and facilities as necessary.

Implementation Timeframe: Complete within 4 years of the permit effective date and update as needed (FY2022).

BMP: Infrastructure O&M

Description: Establish and implement a program for repair and rehabilitation of MS4 infrastructure.

Responsible Department/Parties: MassDevelopment (Engineering, DPW Operations)

Measurable Goals: Create and implement the operation and maintenance plan.

Implementation Timeframe: Complete within 4 years of the permit effective date and update as needed (FY2022).

BMP: Catch Basin Cleaning Optimization

Description: Continue current practice of inspecting all catch basins annually and quantifying the amount of sediment removed from each basin. Continue to utilize information collected to optimize existing cleaning practices.

Responsible Department/Parties: MassDevelopment (Engineering, DPW Operations)

Measurable Goals: Continue to track sediment removed and optimize catch basin cleaning operations. Complete optimization plan within 4 years of permit effective date.

Implementation Timeframe: Began collection of data in Permit Year 1. Optimization will be complete within 4 years of the permit effective date and updated as needed (Start FY2019, Complete FY2022).

BMP: Catch Basin Cleaning

Description: Continue to target areas where catch basins fill up with sediment more quickly to ensure that each catch basin is no more than 50% full. Modify cleaning schedule and frequency as needed.

Responsible Department/Parties: MassDevelopment (Engineering, DPW Operations)

Measurable Goals: Clean catch basins on established schedule and report number of catch basins cleaned and total volume of material removed annually.

Implementation Timeframe: Completed and implemented within one year of the permit effective date (FY2019).

BMP: Street Sweeping Program

Description: Continue to sweep all streets and permittee-owned parking lots at least annually in accordance with permit conditions.

Responsible Department/Parties: MassDevelopment (Engineering, DPW Operations)

Measurable Goals: Sweep all streets and permittee-owned parking lots at least once per year in the spring and report.

Implementation Timeframe: Complete within 1 year of permit effective date and implement annually (FY2019).

BMP: Road Salt Use Optimization Program

Description: Continue to calibrate equipment annually. Continue to review and enhance existing practices to minimize the use of road salt.

Responsible Department/Parties: MassDevelopment (Engineering, DPW Operations)

Measurable Goals: Continue current efforts and modify existing practices where feasible for further optimization of road salt use. Complete optimization plan within 4 years of permit effective date.

Implementation Timeframe: Complete optimization plan within 4 years of permit effective date (FY2022).

BMP: Inspections and Maintenance of Stormwater Treatment Structures

Description: Continue to inspect detention ponds annually and clean as needed. Establish and implement inspection and maintenance procedures and frequencies for other stormwater treatment structures.

Responsible Department/Parties: Devens Enterprise Commission, MassDevelopment (Engineering, DPW Operations)

Measurable Goals: Review existing procedures and optimize. Inspect and maintain treatment structures at least annually. Begin annual inspections within 4 years of permit effective date.

Implementation Timeframe: Begin annual inspections within 4 years of permit effective date (FY2022).

BMP: Stormwater Pollution Prevention Plan (SWPPP)

Description: Create SWPPPs for waste-handling facilities not already covered under the Multi-Sector General Permit.

Responsible Department/Parties: MassDevelopment (Engineering, DPW Operations), Devens Enterprise Commission

Measurable Goals: Develop SWPPPs within 4 years of permit effective date and complete inspections and training annually thereafter.

Implementation Timeframe: A draft SWPPP for the DPW facility was completed during Permit Year 3 (FY2021). The SWPPP will be finalized and implementation will begin within four years of permit effective date (FY2022).

3.0 REGULATORY STANDARDS

3.1 Introduction

In order to prevent pollutants from entering the drainage system and being discharged to the environment with stormwater, Devens plans to continue existing practices and implement a wide variety of Best Management Practices (BMPs) categorized under the six minimum control measures as discussed earlier in this document. The control measures for Illicit Discharge Detection and Elimination, Construction Site Stormwater Runoff Control, and Post-Construction Stormwater Management are focused on improving stormwater pollution prevention into the future through implementation of the following:

- Regulatory mechanisms establishing legal authority, prohibitions and requirements
- Design and construction standards governing stormwater infrastructure
- Requirements for long-term Operation and Maintenance (O&M) of structural BMPs.

Additional information regarding Devens' current regulatory mechanisms, as well as the status of compliance with the 2016 MS4 Permit regulatory requirements are included in this section.

3.2 Existing Stormwater Regulatory Mechanisms

3.2.1 *Devens Enterprise Commission Development Rules and Regulations*

Under the Massachusetts Code of Regulations (974 CMR 1.00 – 10.00), The Devens Enterprise Commission (DEC) has promulgated regulations that address stormwater management controls, and erosion and sediment controls for new development and re-development. The DEC Rules and Regulations were developed in August 1996 and most recently revised in November 2013. Outlined in these regulations is the process for reviewing submissions in Devens which is called Unified Permitting. The purpose of Unified Permitting, which is administered by the DEC, is to provide for expeditious permitting of land development to promote the orderly conversion and redevelopment of Devens. The major components of this system are zoning, site plan review and subdivision of land.

There are two levels of application review as part of the development permitting process. Level One is applicable to relatively simple submissions and Level Two is reserved for more complicated or higher impact submissions. An application for a Development Permit shall be deemed Level One in the following cases:

- a. issuance of building or occupancy permit, wherein no other Commission action or site plan review is required;
- b. issuance of a permit for alteration or creation of a lot for any of the following purposes: revision of lot lines, division of a lot containing two (2) buildings into two (2) lots with separate buildings, and division of a single lot unimproved by a building into two (2) or more smaller lots; provided, however, that in any event all resultant lots shall comply with the frontage requirements in Article VIII and said frontage shall be on a way which the Commission certifies is used and maintained as a public way;
- c. approval of minor modifications to an already approved site plan consistent in scope with the following examples: a change to a more desirable variety of landscape material; a shift

- of less than eight (8) feet in building placement on the lot, for siting reasons; a shift in site utility connections, in order to provide improved hookup to the public system or to avoid a natural constraint; an adjustment of not more than three (3) feet in the width or location of a driveway entrance, in order to improve sight distance or to avoid a natural constraint; and similar adjustments required to facilitate a more functional site plan;
- d. approval of minor architectural modifications of a structure within an historic district;
- e. issuance of a certificate of compliance under an order of conditions.

An application for a Development Permit shall be deemed Level Two in all other circumstances.

974 CMR 4.08 presents the Stormwater Management requirements in the Industrial Performance Standards. Since 1997, these regulations have required all project stormwater management systems to be designed with pre-development areas all being modeled as “green field”, requiring developments to pre-treat and infiltrate more runoff directly on-site than what would have been required for redevelopment projects under the Massachusetts Stormwater Management Standards. 974 CMR 4.08 also includes requirements to promote the use of Low Impact Development (LID) stormwater management techniques to the maximum extent feasible to mimic the predevelopment hydrology of the site. The existing Green Infrastructure Guidelines encompass 974 CMR Sections 3.04(4) – Stormwater Management, 3.02(3)(e) – E&S Controls, and 3.06 – Steep Slope Protection, all of which outline necessary controls to regulate the quality of water entering the MS4.

3.2.2 Zoning Bylaws of the Devens Regional Enterprise Zone

The Zoning Bylaws of the Devens Regional Enterprise Zone, which govern land development in Devens, were adopted on November 14, 1994 and last revised in July 2015. They identify when site plan review is triggered as a part of or as a sole component of a Level Two Development Permit application, which includes:

- (i) construction of any new building, regardless of land use;
- (ii) extension or increase in the area of a nonconforming use in an existing building;
- (iii) construction or expansion of a parking lot, structure, or loading dock;
- (iv) construction of an ancillary building on-site (denoting use for storage of equipment, maintenance supplies, and similar items, or housing building systems equipment), if the building contains more than eight hundred (800) square feet of gross floor area; and/or
- (v) construction of a project that will result in changes to the existing grade of ten (10) percent or more of the lot size.

Devens Zoning Bylaws require that applications for development permits include a site-specific sediment and erosion control plan, and a stormwater pollution prevention plan.

3.2.3 Stormwater Pollution Prevention Plan

In 1995, Devens created a Stormwater Pollution Protection Plan to foster responsible stormwater management and further protect water resources in Devens. The Stormwater Pollution Prevention is utilized as a guide for the Devens Enterprise Commission, for site developers and site occupants at Devens to preserve natural resources by following and implementing proper stormwater management procedures.

3.2.4 Water Resource Protection Report

The protection of water resources in the Devens region has been a priority since the base closure in 1993, one which has been emphasized throughout the planning and redevelopment process at Devens. In 1994, as part of the Devens Reuse planning process, a Water Resource Protection Report was created to identify and protect the ground and surface water resources while allowing redevelopment. This led to the development of a Water Resources Protection Overlay Zone in the Devens Bylaws and DEC Rules and Regulations (974 CMR 4.09 – Water Resource Protection). Incorporating water resource protection efforts early on in the redevelopment process has allowed Devens to steer development away from wetlands, floodplains, and other sensitive resource areas to both protect and improve surface and groundwater resources.

3.3 Review of Regulatory Mechanisms for Compliance with the 2016 MS4 Permit

A comprehensive review was conducted to evaluate whether Devens' existing regulatory mechanisms for illicit discharge detection and elimination, as well as construction and post-construction stormwater management, comply with the 2016 MS4 Permit requirements, and identify what modifications, if any, are needed to bring Devens into compliance.

3.3.1 Illicit Discharge Detection and Elimination

Permit Requirement: The 2016 MS4 Permit requires the Devens Enterprise Commission to prohibit non-stormwater discharges into the MS4 and implement enforcement procedures within three years of the permit effective date. A regulatory mechanism must be implemented to provide the DEC with adequate legal authority to accomplish the following tasks:

- 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.

Excerpts from Devens' Regulations that Support Permit Requirement: The general provisions of 974 CMR 4.08(2) currently require all projects to comply with MA DEP Stormwater Management Standards and submit a completed and endorsed stormwater management form which includes a signed Illicit Discharge Compliance Statement verifying that no illicit discharges exist on the site. Failure to prevent illicit discharges constitutes a violation of the Unified Permits issued for development at Devens and is subject to enforcement procedures outlined in 974 CMR 1.14.

The Devens Enterprise Commission will need to supplement these regulations to provide the DEC with adequate legal authority to prohibit illicit discharges associated with existing development, to

investigate suspected illicit discharges, to eliminate illicit discharges from private property; and implement enforcement procedures.

3.3.1.1 Illicit Discharge Detection and Elimination – Permit Year 2 Update

Devens drafted an IDDE regulatory mechanism during Permit Year 2 based on the template provided to Massachusetts communities by the Attorney General's office, which gives the DEC the authority to prohibit illicit discharges, investigate suspected illicit discharges, eliminate illicit discharges – including discharged from properties not owned or controlled by MassDevelopment, and implement appropriate enforcement procedures and actions. The proposed language was under review by the DEC and MassDevelopment at the end of Year 2, and will be amended to the appropriate section of 974 CMR by the end of Permit Year 3. Once enacted, the IDDE regulatory mechanism will be included in Appendix G.

3.3.1.2 Illicit Discharge Detection and Elimination – Permit Year 3 Update

In Permit Year 3, Devens decided that the IDDE regulatory mechanism would be most effective if it gave both MassDevelopment and the DEC the authority to prohibit illicit discharges, investigate suspected illicit discharges, eliminate illicit discharges, and implement appropriate enforcement procedures and actions. In order to ensure dual authority, the draft regulatory mechanism was amended to both the DEC regulations (974 CMR) and the MassDevelopment regulations (946 CMR). The IDDE regulatory mechanism was adopted by the DEC as 974 CMR 8.10 on May 25, 2021, and will be adopted by MassDevelopment at a public hearing during Permit Year 4. Both regulatory mechanisms are included in Appendix G.

3.3.2 *Construction Site Stormwater Runoff Control*

The 2016 MS4 Permit requires the following:

Regulate Construction Runoff from Properties Disturbing Greater than One Acre

Permit Requirement: Devens is required to develop, implement and enforce a program to address stormwater runoff from construction activities that disturb greater than one acre and discharge into the MS4. The program shall also include projects that disturb less than one acre if the project is part of a larger common plan of development which disturbs greater than one acre. As part of that program, Devens is required to develop an ordinance or other regulatory mechanism to address construction runoff from properties that disturb greater than one acre and discharge to the MS4 by requiring the use of sediment and erosion control practices at construction sites. This regulatory mechanism is required to be developed within three years of the permit effective date.

Excerpts from Devens' Regulations that Support Permit Requirement: Per 974 CMR 2.04(1)(r), Level Two Definitive Subdivision Plans require a Stormwater Pollution Prevention Plan including erosion, siltation, and dust control measures before and during construction, and appropriate ground cover, seeding, and sweeping of adjacent public ways. Under 974 CMR 3.02(2)(p), site plan submission requirements include submittal of "an erosion and sedimentation control plan as per 974 CMR 3.04(4) and the Devens Stormwater Pollution Prevention Plan." 974 CMR 3.02(3)(e) states that "All site plan submissions shall include an Erosion and Sediment Control Plan containing sufficient information to describe the nature and purpose of the proposed development, pertinent conditions of the site and the adjacent areas, and proposed erosion and sedimentation controls. The plan shall include such detail as is necessary to demonstrate that the proposed development will comply with

Massachusetts Department of Environmental Protection Stormwater Management Standards, the Devens Stormwater Pollution Prevention Plan and 974 CMR 3.04 design standards. The Erosion and Sediment Control Plan shall also include the following:

- o Location and description of Resource Areas...
- o Existing soils and volume and nature of any imported materials
- o Drainage patterns, watershed and sub-watersheds, with calculations of proposed land disturbance within each sub-watershed and areas of soil to be disturbed in each watershed throughout the duration of the proposed land disturbance activity.
- o A description of construction and waste materials expected to be stored onsite. The Plan shall include a description and details of controls to reduce pollutants from these materials, including storage practices to minimize exposure of the materials to stormwater, and spill prevention response.
- o Location and details of all erosion and sediment control measures with a narrative of the construction sequence/phasing of the project, including both Operation and Maintenance for structural and non-structural control measures and best management practices, interim grading, and material stockpiling areas in accordance with the Devens Stormwater Pollution Prevention Plan and Massachusetts Erosion and Sediment Control Guidelines for Urban and Suburban Areas. Such narrative and Operation and Maintenance Plan for temporary and permanent erosion control measures during Construction, shall be included on the erosion and sediment control plan and include but not be limited to, the following requirements:
 - a. Prior to any land disturbance activities commencing on the site, the Applicant/contractor shall be responsible for physically marking the limits of construction on the site with tape, signs, or orange construction fence, so that workers understand the areas to be protected. The physical markers shall be inspected daily and repaired as necessary throughout the duration of the project.
 - b. Perimeter sediment control system shall be installed prior to soil disturbance and maintained to contain soils on-site. Areas outside of the perimeter sediment control system must not be disturbed unless the Applicant has obtained prior approval from the DEC.
 - c. Measures shall be taken to control erosion within the project area. Sediment in runoff water shall be trapped and retained within the project area and street sweeping of adjacent Streets and Roads shall be included where necessary.
 - d. All Resource Areas shall be protected from sediment.
 - e. Monitoring and maintenance of erosion and sediment control measures throughout the course of construction shall be required. Sediment shall be removed once the volume reaches $\frac{1}{4}$ to $\frac{1}{2}$ the height of the erosion control.
 - f. Divert runoff from offsite and undisturbed areas away from construction to minimize soil erosion and sedimentation on and off-site. Temporarily stabilize all highly erodible soils and slopes immediately.
 - g. Land disturbance activities exceeding two acres in size shall not be disturbed without a sequencing plan that requires stormwater

controls to be installed and exposed soils stabilized, as disturbance beyond the two acres continues. A construction phasing plan, including erosion and sediment control plan for each phase, shall be submitted to the DEC prior to any construction on the site. Mass clearings and grading of the entire site shall be avoided.

- h. Soil stockpiles must be stabilized or covered at the end of each workday. Stockpile side slopes shall not be greater than 2:1. All stockpiles shall be surrounded by sediment controls.
- i. Disturbed areas remaining idle for more than 14 days shall be temporarily or permanently stabilized.
- j. Permanent seeding shall be undertaken in the spring from March through May, and in late summer and early fall from August to October 15. During the peak summer months and in the fall after October 15, when seeding is found to be impractical, an appropriate temporary mulch and/or non-asphaltic soil tackifier with winter rye shall be applied. Permanent seeding may be undertaken during the summer if plans provide for adequate mulching and watering.
- k. Anti-tracking pad(s) shall be constructed at all entrance/exit points of the site to reduce the amount of soil carried onto roadways and off the site. Dust shall also be controlled at the site.
- l. All slopes steeper than 3:1 (h:v, 33.3%), as well as perimeter dikes, sediment basins or traps, and embankments must, upon completion, be immediately stabilized with sod, seed and anchored straw mulch, or other approved stabilization measures.
- m. Temporary sediment trapping devices must not be removed until permanent stabilization is established in all construction areas associated with the project. Similarly, stabilization must be established prior to converting temporary sediment traps/basins into permanent (post-construction) stormwater management facilities. All facilities used for temporary measures shall be cleaned and re-stabilized prior to being put into final operation.
- n. All temporary erosion and sediment control measures shall be removed after final site stabilization. Disturbed soil areas resulting from the removal of temporary measures shall be permanently stabilized within 30 days of removal.
- o. Other applicable controls and/or information as may be required by the DEC.
- o. All plans, reports and calculations required as part of the erosion and sediment control plan must be stamped and certified by a professional engineer.
- o. Projects disturbing one acre or more are required to obtain a Construction General Permit (CGP) from the US EPA. A copy of the CGP must be filed with the DEC prior to issuance of a building permit for all applicable projects."

Per 974 CMR 3.02.3.e.5.g “Land disturbance activities exceeding two acres in size shall not be disturbed without a sequencing plan that requires stormwater controls to be installed and exposed soils stabilized, as disturbance beyond the two acres continues. A construction phasing plan, including erosion and sediment control plan for each phase, shall be submitted to the DEC prior to any construction on the site. Mass clearings and grading of the entire site shall be avoided.”

Recommended Modification: Consider possibly lowering this two-acre threshold to one acre to better align with the permit requirements.

Adopted Updates to Meet Permit Requirement:

974 CMR 3.02.3.e.5.g. was updated to lower the referenced two-acre threshold to one acre. Clarifying language was also added to 974 CMR 3.02.1.e. to require site plan review when a proposed project involves disturbances of one acre or more, or disturbances of less than one acre that are part of a larger common plan of development that will disturb one acre or more. The updated 974 CMR 3.02 is included in Appendix G.

Site Inspection & Enforcement

Permit Requirement: *Development of written procedures for site inspections and enforcement of sediment and erosion control measures. These procedures shall clearly define who is responsible for site inspections as well as who has authority to implement enforcement procedures. The program shall provide that the permittee may, to the extent authorized by law, impose sanctions to ensure compliance with the local program. These procedures and regulatory authorities shall be documented in the SWMP.*

Excerpts from Devens' Regulations that Support Permit Requirement: Devens shall continue implementation of 974 CMR 3.02(3)(e) and conditions of all site development approvals that require ESC plan and DEC inspection of all controls prior to commencement of construction. Standard conditions of approval also require Applicant maintain an ESC log for all controls that is to be made available for inspection by DEC.

Recommended Modification: Documentation of existing site inspection and enforcement procedures is required, including responsibility for site inspections as well as authority to implement enforcement procedures.

Sediment and Erosion Control BMPs

Permit Requirement: *Requirements for construction site operators performing land disturbance activities within the MS4 jurisdiction that result in stormwater discharges to the MS4 to implement a sediment and erosion control program that includes BMPs appropriate for the conditions at the construction site. The program may include references to BMP design standards in state manuals, such as the Massachusetts Stormwater Handbook or design standards developed by the MS4. EPA supports and encourages the use of design standards in local programs. Examples of appropriate sediment and erosion control measures for construction sites include local requirements to:*

- Minimize the amount of disturbed area and protect natural resources
- Stabilize sites when projects are complete, or operations have temporarily ceased
- Protect slopes on the construction site

- *Protect all storm drain inlets and armor all newly constructed outlets*
- *Use perimeter controls at the site*
- *Stabilize construction site entrances and exists to prevent off-site tracking*
- *Inspect stormwater controls at consistent intervals*

Excerpts from Devens' Regulations that Support Permit Requirement: 974 CMR 3.02(3)(e) states that "All site plan submissions shall include an Erosion and Sediment Control Plan containing sufficient information to describe the nature and purpose of the proposed development, pertinent conditions of the site and the adjacent areas, and proposed erosion and sedimentation controls. The plan shall include such detail as is necessary to demonstrate that the proposed development will comply with Massachusetts Department of Environmental Protection Stormwater Management Standards, the Devens Stormwater Pollution Prevention Plan (SWPPP) and 974 CMR 3.04 design standards. The Devens SWPPP provides guidance on measures that may be utilized to prevent erosion and sedimentation during construction activities. The Erosion and Sediment Control Plan shall include the following:

.....

5. Location and details of all erosion and sediment control measures with a narrative of the construction sequence/phasing of the project, including both Operation and Maintenance for structural and non-structural control measures and best management practices, interim grading, and material stockpiling areas in accordance with the Devens Stormwater Pollution Prevention Plan and Massachusetts Erosion and Sediment Control Guidelines for Urban and Suburban Areas. Such narrative and Operation and Maintenance Plan for temporary and permanent erosion control measures during Construction, shall be included on the erosion and sediment control plan and include but not be limited to, the following requirements:

...

- b. Perimeter sediment control system shall be installed prior to soil disturbance and maintained to contain soils on-site. Areas outside of the perimeter sediment control system must not be disturbed unless the Applicant has obtained prior approval from the DEC.
- c. Measures shall be taken to control erosion within the project area. Sediment in runoff water shall be trapped and retained within the project area and street sweeping of adjacent Streets and Roads shall be included where necessary.

...

- e. Monitoring and maintenance of erosion and sediment control measures throughout the course of construction shall be required. Sediment shall be removed once the volume reaches $\frac{1}{4}$ to $\frac{1}{2}$ the height of the erosion control.
- f. Divert runoff from offsite and undisturbed areas away from construction to minimize soil erosion and sedimentation on and off-site. Temporarily stabilize all highly erodible soils and slopes immediately.
- g. Land disturbance activities exceeding two acres in size shall not be disturbed without a sequencing plan that requires stormwater controls to be installed and exposed soils stabilized, as disturbance beyond the two acres continues. A construction phasing plan, including erosion and sediment control plan for each phase, shall be submitted to the DEC prior to any construction on the site. Mass clearings and grading of the entire site shall be avoided.
- h. Soil stockpiles must be stabilized or covered at the end of each workday. Stockpile side slopes shall not be greater than 2:1. All stockpiles shall be surrounded by sediment controls.

- i. Disturbed areas remaining idle for more than 14 days shall be temporarily or permanently stabilized.
- j. Permanent seeding shall be undertaken in the spring from March through May, and in late summer and early fall from August to October 15. During the peak summer months and in the fall after October 15, when seeding is found to be impractical, an appropriate temporary mulch and/or non-asphaltic soil tackifier with winter rye shall be applied. Permanent seeding may be undertaken during the summer if plans provide for adequate mulching and watering.
- k. Anti-tracking pad(s) shall be constructed at all entrance/exist points of the site to reduce the amount of soil carried onto roadways and off the site. Dust shall also be controlled at the site.
- l. All slopes steeper than 3:1 (h:v, 33.3%), as well as perimeter dikes, sediment basins or traps, and embankments must, upon completion, be immediately stabilized with sod, seed and anchored straw mulch, or other approved stabilization measures.
- m. Temporary sediment trapping devices must not be removed until permanent stabilization is established in all construction areas associated with the project. Similarly, stabilization must be established prior to converting temporary sediment traps/basins into permanent (post-construction) stormwater management facilities. All facilities used for temporary measures shall be cleaned and re-stabilized prior to being put into final operation.”

Control of Wastes

Permit Requirement: Requirements for construction site operators within the MS4 jurisdiction to control wastes, including but not limited to, discarded building materials, concrete truck wash out, chemicals, litter, and sanitary wastes. These wastes may not be discharged to the MS4.

Excerpts from Devens' Regulations that Support Permit Requirement: Waste disposal and recycling affidavits are required as part of the building permit process: http://www.devensec.com/forms/Building_Permit_2016.pdf (see page 2). Devens Enterprise Commission Determination of Completeness requirements also require applicants to identify waste disposal methods as part of the site plan (recycling, composting, reuse): http://www.devensec.com/forms/DOC_Form_2012.pdf (see page 3). Recycling and waste management guidelines, including guidelines for construction waste, are publicly available at http://www.devensec.com/news/Recycling_Guidance_Document_updated_final_6-6-19.pdf. Copies of these documents are also included in Appendix G.

Per 974 CMR 3.02(3)(e)(4), the Erosion and Sediment Control Plan shall also include the following:

.....

“4. A description of construction and waste materials expected to be stored on-site. The Plan shall include a description and details of controls to reduce pollutants from these materials, including storage practices to minimize exposure of the materials to stormwater, and spill prevention and response.”

Site Plan Review Inspection and Enforcement

Permit Requirement: *Development of written procedures for site plan review, inspection and enforcement. The site plan review procedure shall include a pre-construction review by the permittee of the site design, the planned operations at the construction site, planned BMPs during the construction phase, and the planned BMPs to be used to manage runoff created after development. The review procedure shall incorporate procedures for the consideration of potential water quality impacts, and procedures for the receipt and consideration of information submitted by the public. The site plan review procedure shall also include evaluation of opportunities for use of low impact design and green infrastructure. When the opportunity exists, the permittee shall encourage project proponents to incorporate these practices into the site design. The procedures for site inspection conducted by the permittee shall include the requirement that inspections occur during construction of BMPs as well as after construction of BMPs to ensure they are working as described in the approved plans, clearly defined procedures for inspections including qualifications necessary to perform the inspections, the use of mandated inspections forms if appropriate, and procedure for tracking the number of site reviews, inspections, and enforcement actions.*

Recommended Modification: Separate documentation of existing in-house site plan review procedures is required, including inspection and enforcement procedures. Much of what is required is included in existing regulations and just needs to be pulled out to create a separate stand-alone document for in-house use.

3.3.2.1 Construction Site Stormwater Runoff Control – Permit Year 2 Update

Devens' existing regulatory mechanisms were reviewed for compliance with Section 2.3.5 of the MS4 permit during Permit Year 2, and found to effectively meet the requirements of that section. While the regulations can function as written procedures for Site Plan Review, Site Inspection, and Enforcement, Devens also drafted a separate SOP for Site Plan Review, Site Inspection, and Enforcement during Permit Year 2. Once finalized, the SOP will be included in Appendix H of the SWMP.

3.3.2.2 Construction Site Stormwater Runoff Control – Permit Year 3 Update

The SOP for Site Plan Review, Site Inspection, and Enforcement was finalized during Permit Year 3. The SOP is included in Appendix H of the SWMP.

3.3.3 *Post-Construction Stormwater Management*

The 2016 MS4 Permit requires the following as it relates to post construction runoff from new development and redevelopment:

Regulate Post-Construction Runoff from New and Re-Development Disturbing Greater than One Acre

Permit Requirement: Develop, implement and enforce a program to address post-construction stormwater runoff from new development and redevelopment that disturbs greater than one acre and discharges into the MS4. The program shall also include projects that disturb less than one acre if the project is part of a larger common plan of development which disturbs greater than one acre. As part of that program, Devens is required to develop a regulatory mechanism to address post-construction stormwater runoff from properties that disturb greater than one acre and discharge

to the MS4 by requiring the use of sediment and erosion control practices at construction sites. This regulatory mechanism is required to be developed and adopted, where feasible, no later than three years from the permit effective date.

Excerpts from Devens' Regulations that Support Permit Requirement: Continue to require compliance with Devens Enterprise Commission (DEC) regulatory requirements for post-construction runoff from new development and re-development as included in 974 CMR 4.08 and 4.09.

Low Impact Development

Permit Requirement: Low Impact Development (LID) site planning and design strategies must be used to the maximum extent feasible.

Excerpts from Devens' Regulations that Support Permit Requirement: LID is addressed in numerous places, including in the DEC Regulations 974 CMR 3.04.4.a.3 where it states that "Low Impact Development (LID) Stormwater Management Design shall be incorporated into the site plan to allow for the full utilization of the property while maintaining the pre-development characteristics of the site as though it were a "green field" (volume, frequency, peak runoff rate) to the maximum extent feasible. Maximizing the use of pervious areas minimizes stormwater runoff from a site, improves stormwater quality, and increases groundwater recharge. Maintenance of these on-site stormwater management systems must be incorporated into facility operations, and is the responsibility of the landowner. For requirements, design standards, and criteria for LID techniques, refer to 974 CMR 4.08."

Per the requirements outlined in CMR 3.04(4)(a)1. & 974 CMR 4.08, Devens will continue to utilize and improve on green infrastructure guidelines to guide, regulate and incentivize green infrastructure on all development and redevelopment projects. The Green Infrastructure Guidelines adopted by Devens in August 2014 are included in Appendix G. This document is intended to provide applicants with a better understanding of what Green Infrastructure is, the local incentives to promote Green Infrastructure, and guidance on how to strategically locate and incorporate Green Infrastructure into projects to meet multiple regulatory requirements within the DEC Rules and Regulations. Devens shall also continue to monitor impervious surface reductions in Devens Sustainable Indicators Reports.

BMP Design Guidance

Permit Requirement: 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 approved BMP design guidance.

Excerpts from Devens' Regulations that Support Permit Requirements: As referenced in 974 CMR 4.08.2.a "All applications, regardless of whether the project is subject to the Wetland Protection Act or not, shall design the stormwater management system in compliance with the Massachusetts DEP Stormwater Management Standards, January, 2008, as amended ("SMS") and the Massachusetts Stormwater Handbook, February 2008, as amended ("Handbook"). The applicant shall submit a completed and endorsed Stormwater Management Form that indicates compliance with the SMS, in addition to any supporting calculations indicating compliance with the required standards."

Compliance with the Stormwater Management Standards for New Development

Permit Requirement: Stormwater Management systems on new development sites shall be designed to:

- Not allow new stormwater conveyances to discharge untreated stormwater in accordance with Massachusetts Stormwater Handbook Standard 1;
- Control peak runoff rates in accordance with Massachusetts Stormwater Handbook Standard 2;
- Recharge groundwater in accordance with Massachusetts Stormwater Handbook Standard 3;
- 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;
- Protect Zone 2 or Interim Wellhead Protection Areas of public water supplies in accordance with Massachusetts Stormwater Handbook Standard 6;
- Implement long term maintenance practices in accordance with Massachusetts Stormwater Handbook Standard 9;
- Require that all stormwater management systems be designed to:
 1. Retain the volume of runoff equivalent to, or greater than, one (1) inch multiplied by the total post-construction impervious surface area on the site;

AND/OR

2. Remove 90% of the average annual load of TSS generated from the total post-construction impervious surface area on the site AND 60 % of the average annual load of TP generated from the post-construction impervious surface area on the site. Pollutant removal shall be calculated consistent with EPA Region 1's 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 may be used to calculated BMP performance.

Excerpts from Devens' Regulations that Support Permit Requirement: As referenced in 974 CMR 4.08.2.a "All applications, regardless of whether the project is subject to the Wetland Protection Act or not, shall design the stormwater management system in compliance with the Massachusetts DEP Stormwater Management Standards, January, 2008, as amended ("SMS") and the Massachusetts Stormwater Handbook, February 2008, as amended ("Handbook"). The applicant shall submit a completed and endorsed Stormwater Management Form that indicates compliance with the SMS, in addition to any supporting calculations indicating compliance with the required standards."

Per 974 CMR 3.04(4), "site generated stormwater shall be managed on-site to meet green field requirements. Conveyance to a common system (operated by the owners of more than one lot), or to the Devens Stormwater System (DSS), managed by MassDevelopment is an option once green field requirements have been met and all reuse and on-site infiltration methods have been exhausted."

Recommended Modification: In those instances where green field requirements have been met and all reuse and on-site infiltration methods have been exhausted, a requirement should be added that all stormwater management systems shall be designed to “Remove 90% of the average annual load of TSS generated from the total post-construction impervious surface area on the site AND 60 % of the average annual load of TP generated from the post-construction impervious surface area on the site. Pollutant removal shall be calculated consistent with EPA Region 1’s 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 may be used to calculated BMP performance.”

Adopted Updates to Meet Permit Requirements:

Updates were made to 974 CMR 4.08 to address post-construction stormwater management standards on applicable development projects. No distinction was made between new development and redevelopment projects relating to required stormwater treatment standards. The pollutant removal requirements included above were incorporated into 974 CMR 4.08.3.i. The updated version of 974 CMR 4.08 is included in Appendix G.

Compliance with the Stormwater Management Standards for Redevelopment

Permit Requirement: Stormwater management systems on redevelopment sites shall meet the following standards to the maximum extent feasible:

- Not allow new stormwater conveyances to discharge untreated stormwater in accordance with Massachusetts Stormwater Handbook Standard 1;
- Control peak runoff rates in accordance with Massachusetts Stormwater Handbook Standard 2;
- Recharge groundwater in accordance with Massachusetts Stormwater Handbook Standard 3;
- The pretreatment and structural best management practices requirements of Standards 5 (eliminate or reduce the discharge of pollutants from land uses with higher pollutant loads as defined in the Massachusetts Stormwater Handbook) and 6 (protect Zone 2 or Interim Wellhead Protection Areas of public water supplies in accordance with Massachusetts Stormwater Handbook Standard 6);
- Stormwater management systems on redevelopment sites shall also improve existing conditions by requiring that stormwater management systems be designed to:
 1. Retain the volume of runoff equivalent to, or greater than 0.8 inch multiplied by the total post-construction impervious surface area on the site;

AND/OR

2. Remove 80% of the average annual post-construction load of TSS generated from the total post-construction impervious area on the site AND 50% of the average annual load of TP generated from the total post-construction impervious surface area on the site. Pollutant removal shall be calculated consistent with EPA Region 1’s 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 may be used to calculated BMP performance.

- *Stormwater management systems on redevelopment sites may utilize offsite mitigation within the same USGS HUC10 as the redevelopment site to meet the equivalent retention or pollutant removal requirements indicated above.*

Excerpts from Devens' Regulations that Support Permit Requirement: As referenced in 974 CMR 4.08.2.a "All applications, regardless of whether the project is subject to the Wetland Protection Act or not, shall design the stormwater management system in compliance with the Massachusetts DEP Stormwater Management Standards, January, 2008, as amended ("SMS") and the Massachusetts Stormwater Handbook, February 2008, as amended ("Handbook"). The applicant shall submit a completed and endorsed Stormwater Management Form that indicates compliance with the SMS, in addition to any supporting calculations indicating compliance with the required standards."

There is not currently language included in the existing regulations, which makes a distinction between new and redevelopment. Currently, all redevelopment projects are subject to the same requirements as new development projects. Confirm whether the DEC will make a distinction going forward and whether offsite mitigation shall be allowed for redevelopment projects and modify regulations accordingly.

Permit Requirement: *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 any of the parts listed previously in part d. 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 d fully.*

Potential Modification if Exemption is Not Already Included: "Maintenance and redevelopment activities to existing roads including repaving, drainage infrastructure improvements, adding shoulders, or correcting intersections shall be exempt from other requirements in this part. Projects of this nature should consider options to improve any existing conditions by incorporating LID techniques or other stormwater best management practices and include in the construction permit application process a narrative describing that investigation's conclusions and chosen results when possible. Any road construction that increases the impervious surface by more than a single lane will not be covered under this exemption and shall be subject to all requirements for new and redevelopment."

Adopted Updates to Meet Permit Requirements:

The DEC incorporated this exemption into 974 CMR 4.08.3.i. The updated regulatory mechanism is included in Appendix G of the SWMP.

Submission of As-Builts

Permit Requirement: *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 as-built drawings must depict all on site controls, both structural and non-structural, designed to manage the stormwater associated with the completed site (post construction stormwater management).*

Excerpts from Devens' Regulations that Support Permit Requirement: The DEC shall continue to require the submission of as-builts prior to occupancy. Per 974 CMR 1.09, "a permit is completed upon application of a Certificate of Occupancy, Wetlands Certificate of Compliance, and submission of an as-built plan. Per 974 CMR 2.06 (4) (b), As-Built Plan., "Upon completion of construction, and before release of a performance guarantee, the DEC may require the Applicant to prepare and submit As-Built Plans at the same scale as the Street and/or Road plans, which shall indicate all of the following:

1. Boundaries of the Right-of-Way;
2. Location and elevations of roadway Improvements;
3. Driveway locations;
4. Permanent monuments;
5. Location and inverts, with elevation, of the required Utilities, hydrants and drainage including the location, with ties, and depth of sewer and water laterals serving each Lot;
6. Location of any other underground Utilities, such as natural gas, electricity, telephone lines, and street lighting;
7. Lot boundaries; and,
8. Centerline stationing.

The Applicant's Surveyor or Engineer shall certify that the ways and services as shown in the As-Built Plans are complete and the As-Built Plans are accurate. The DEC shall accept the As-Built Plans upon determining that their content and form comply with 974 CMR 2.00." The DEC requirements for as-built submissions are available to applicants on their website at http://www.devensec.com/development/As-built_Policy.pdf and is also included in Appendix G.

Long-term Operation & Maintenance

Permit Requirement: The new development/redevelopment program shall have procedures to ensure adequate long-term operation and maintenance of stormwater management practices that are put in place after the completion of a construction project. These procedures may include the use of dedicated funds or escrow accounts for development projects or the acceptance of ownership by the permittee of all privately owned BMPs. These procedures may also include the development of maintenance contracts between the owner of the BMP and the permittee. Alternatively, these procedures may include the submission of an annual certification documenting the work that has been done over the last 12 months to properly operate and maintain the stormwater control measures. The procedures to require submission of as-built drawings and ensure long term operation and maintenances shall be a part of the SWMP.

Excerpts from Devens' Regulations that Support Permit Requirement: The DEC shall continue current procedures which require the development of O&M Plans as part of the permitting process and as a condition of occupancy. The DEC shall also continue to require property owners to file annual reports regarding system maintenance to the DEC.

Site Plan Review requires submission of a Stormwater Operation and Maintenance Plan in accordance with 974 CMR 3.04(4) and 974 CMR 4.08. The Site Plan must specify the construction and post-development maintenance schedule in detail on the utility plan. Per 974 CMR 4.08, "An Operation and Maintenance Plan (O&M Plan) for stormwater management systems is required at the time of application for all projects. The O&M Plan shall be designed to ensure compliance with

the Massachusetts Surface Water Quality Standards (314 CMR 4.00), the Stormwater Plan and the DEC annual stormwater reporting form requirements. The O&M Plan shall be shown on the site plan(s) and shall include at a minimum the following:

- “(a) The name(s) of the owner(s) for all components of the system.
- (b) A statement that the Applicant is responsible for the operation and maintenance of the entire on-site system.
- (c) An O&M Inspection and Maintenance Schedule which shall include:
 1. Parking Lot Sweeping: with mechanized cleaning equipment on an annual basis.
 2. Catch Basin Cleaning: Catch Basins and Infiltration Chamber shall be inspected on a bi-annual basis. Any sediment accumulations in excess of half of the unit's sump depth shall be removed. Material shall be removed by a licensed contractor, who shall be responsible for disposing of the material off-site in a manner consistent with all local, state and federal regulations.
 3. Infiltration Swales: Ensure proper establishment of full vegetative cover. Swale embankments and side slopes must be properly maintained to ensure long-term stability. Annual and seasonal inspections are required to ensure a healthy groundcover is maintained to avoid erosion and promote infiltration. Bare spots shall be repaired and planted with native ground cover material. Saplings and large shrubs shall be removed to maintain integrity of the swale. Level spreader shall be inspected seasonally to remove any build-up of sediment and ensure proper drainage flows.
 4. Detention/Retention Basin Inspection and Maintenance: Wet and dry basins shall be inspected annually to ensure inlets and outlets remain unobstructed. Inlets and outlets and forebays shall also be inspected for potential sediment, erosion, cracking, tree growth, damage to the emergency spillway and erosion within the basin and on within the banks. Upper side slopes, embankment and emergency spillway shall be mowed annually. Any tree saplings shall be removed. Accumulated sediment shall be removed as necessary and at least once every ten years. Bare spots shall be repaired and planted with native ground cover material.
 5. Biofiltration Systems: Quarterly inspections for accumulated sediment shall be performed. Debris, sediment accumulation, erosion shall be removed/repared at least twice a year. Any dead or damaged plantings shall be replaced. All invasive species shall be removed on an annual basis. Re-mulch any void areas by hand. Native grasses and plants shall be maintained by hand without the use of fertilizers and limited use of organic herbicides. Trimming of surrounding grasses shall be restricted to a minimum of 5 inches. When cation exchange capacity of soil media decreases, the soil media shall be replaced to prevent contaminants from reaching the groundwater.
 6. Sediment Trap/Oil-Water Separator: Shall be inspected annually for sediment and debris accumulation. Any sediment accumulations in excess of half of the unit's sump depth shall be removed. Material shall be removed by a licensed contractor, who shall be responsible for disposing of the material off-site in a manner consistent with all regulations.
 7. Sub-Surface Infiltration Systems: Shall be inspected annually for proper function and sediment accumulation. Accumulations of sediment and/or materials that negatively impact the infiltration capacity of the system shall be removed.
 8. Constructed Stormwater Wetlands: In the first three years after construction, Applicants shall inspect the constructed stormwater wetlands twice a year during

both the growing and non-growing seasons. After three years such inspections shall occur on a periodic basis. During these inspections, the following information shall be recorded:

- a. The types and distribution of the dominant wetland plants in the marsh;
 - b. The presence and distribution of planted wetland species;
 - c. The presence and distribution of invasive wetland species (invasives shall be removed);
 - d. Indications that other species are replacing the planted wetland species;
 - e. Percentage of standing water that is unvegetated (excluding the deep water cells which are not suitable for emergent plant growth);
 - f. The maximum elevation and the vegetative condition in this zone, if the design elevation of the normal pool is being maintained for wetlands with extended zones;
 - g. Stability of the original depth zones and the micro-topographic features; and
 - h. Accumulation of sediment in the forebay and micropool; and survival rate of plants (cells with dead plants must be replanted). Sediment forebays must be cleaned annually.
- (d) Applicants shall submit annual stormwater monitoring and maintenance reports to the DEC addressing inspection and maintenance of the BMPs. The reports shall include:
1. Descriptions of the condition of the BMPs,
 2. Descriptions of maintenance performed and,
 3. Receipts for maintenance performed.

For ease of reporting, the DEC and MassDevelopment have created standard annual reporting templates for use by all Applicants. Failure to submit the required annual report is a violation of the Unified Permit.”

Phosphorous Impairment:

Permit Requirement: For discharges to water quality limited water bodies and their tributaries where phosphorous is the cause of the impairment, the permittee’s regulatory mechanism for Stormwater Management in New Development and Redevelopment (Year 4 Permit Requirement), shall include a requirement that new development and redevelopment stormwater management BMPs be optimized for phosphorus removal.

Recommended Modification: In Section 974 CMR 4.08(3), Design Standards and Criteria, language should be added, which requires that all BMPs installed are optimized for phosphorous removal and also that there be a methodology in place for evaluating BMP performance. Include the following statement, “To support compliance with the MS4 Permit, all BMPs must be optimized for the removal of phosphorous. The justification and design of such BMPs must also include a methodology for assessing BMP performance. Pollutant removal shall be consistent with EPA Region 1’s Evaluation tool.”

Adopted Updates to Meet Permit Requirements:

Language requiring stormwater BMPs to be optimized for phosphorus removal was incorporated into 974 CMR 4.08.3.j. The updated regulatory mechanism is included in Appendix G.

3.3.3.1 Post-Construction Stormwater Management – Permit Year 2 Update

Devens' existing regulatory mechanisms meet the requirements of Section 2.3.6 of the Permit pertaining to Low-Impact Development, BMP Design Guidance, the submission of as-built plans, and long-term operation and maintenance of stormwater management systems. As written, the regulations require further updates to meet the Permit requirements for stormwater management standards for new development and redevelopment, and the necessary requirements for phosphorous impaired waters. Updates to 974 CMR 4.08 were drafted during Permit Year 2 to bring Devens' regulatory mechanism into compliance with the Permit. The updated language is currently under review and will be enacted by the end of Permit Year 3. All new or updated regulatory mechanisms pertaining to stormwater management will be included in Appendix G of this document.

3.3.3.2 Post-Construction Stormwater Management – Permit Year 3 Update

The updates made during Permit Year 3 (FY2021) have been discussed under the "Adopted Updates to Meet Permit Requirements" headings above. The updates made to the DEC regulations (974 CMR) were adopted at a public hearing on May 25, 2021.

4.0 IDDE PLAN

4.1 IDDE Plan

As a new permittee not previously covered under the 2003 MS4 Permit, Devens must establish legal authority to prohibit illicit discharges, investigate suspected illicit discharges, eliminate illicit discharges, and implement enforcement procedures through adoption of a new or modification of an existing regulatory mechanism. Under the new MS4 Permit, Devens is required to implement their Illicit Discharge Detection and Elimination Investigation Program by presenting a defined approach to investigate, identify and remove illicit connections. Devens is required to adopt a regulatory mechanism no later than Year 3 of the Permit, and develop the written plan in Year 4. Devens must then continue to implement the plan throughout the permit term.

As part of Minimum Control Measure No. 3, Illicit Discharge Detection and Elimination (IDDE), Devens is required to implement an IDDE program to systematically find and eliminate sources of non-stormwater discharges to its MS4 and implement procedures to prevent such discharges. This includes, but is not limited to, the following measures:

1. Developing a comprehensive map of the drainage system.
2. Ensuring that appropriate regulatory mechanisms and enforcement procedures are in place to prohibit illicit discharges.
3. Developing and implementing a written plan to detect and eliminate illicit discharges, which references the required authority to implement all aspects of the IDDE program, clearly identifies responsibilities with regard to eliminating illicit discharges, and outlines written procedures for dry and wet weather outfall screening and sampling and catchment investigations.
4. Providing training annually to employees involved in the IDDE program about the program, including how to recognize illicit discharges and SSOs.

Such measures will be performed with the goal of finding and removing all illicit discharges, which include fixed point source discharges such as illegal/improper sanitary or floor drain connections and cross connections between the sanitary and drainage infrastructure, in addition to all isolated or recurring discharges such as illegal dumping and improper disposal of waste from boats. Illicit discharges could also be indirect sources that infiltrate into the drainage system through cracks/defects in infrastructure, such as sanitary wastes from failing sewer pipes. Exceptions do exist for the discharge of clean water from sources such as water line flushing, fire-fighting operations, non-contact cooling waters, and for other discharges that have separately obtained a permit from the NPDES Program, and these discharges should be highlighted in any regulatory mechanism adopted.

4.1.1 Mapping

Devens had already developed a comprehensive map of their drainage system, which includes outfalls, pipes, manholes, catch basins, municipally owned stormwater treatment structures and impaired water bodies. Interconnections with other MS4s are in the process of being identified, and outfalls and interconnection are being analyzed to create a defined catchment area that includes surface runoff to catch basins tributary to the identified outfall or interconnection. The catchment delineation process considers each catch basin upstream from the outfall or interconnection and

the area that would conceivably drain to that catch basin based on topography. As drainage infrastructure mapping becomes more complete over the course of the investigations performed throughout the permit term, this exercise will be refined and updated.

Mapping has been in accordance with the 2016 MS4 Permit's accuracy guidelines and has been recorded on a publicly available map, the most recent version of which can be found at the end of Section 1.0 of this report.

Drainage infrastructure within Devens' boundaries has been reviewed to determine ownership. Private infrastructure or infrastructure owned and operated by another municipality, state or federal entity has been determined and designated in Devens' drainage GIS.

The mapping will serve as a planning tool for the implementation and phasing of Devens' IDDE Program and demonstration of the extent of complete and planned investigations and corrections. Devens will update their mapping as needed to reflect newly discovered information and required corrections or modifications. Devens will report annually on progress toward completion of the system map in their MS4 Annual Report.

4.1.2 Catchment Prioritization and Ranking

Devens is working to develop an initial inventory and priority ranking to assess the illicit discharge and SSO potential of each regulated catchment and the related public health significance. The ranking will determine the priority order for screening of outfalls and interconnections, catchment investigations for evidence of illicit discharges, and provide the basis for determining permit milestones. Major factors to be considered in the prioritization and ranking of catchments includes:

- Past discharge complaints and reports
- Receiving water quality
- Density of generating sites.
- Age of development and infrastructure
- Culverted streams
- Water body impairments

This inventory and ranking will be documented in the Devens' IDDE Plan and will be updated annually throughout the permit term to reflect new findings from dry and wet-weather sampling and other IDDE program activities. It will also be documented in the Devens' MS4 Annual Reports.

4.1.3 Field Investigation

The MS4 Permit requires Devens to develop a storm drain network investigation that involves systematically and progressively observing, sampling and evaluating key junction manholes in the MS4 to determine the approximate location of suspected illicit discharges or SSOs.

Once the source of an illicit discharge is approximated between two manholes, more detailed investigation techniques will be used to isolate and confirm the source of the illicit discharge. The following methods may be used in isolating and confirming the source of illicit discharges:

- Sandbagging - If no flow is observed at a particular junction manhole or key junction manhole at the time of inspection, the drain segment in the area of concern can be isolated by placing sandbags within outlets to manholes to form a temporary dam that collects any intermittent flow for a 24 to 48-hour dry weather period to determine if any intermittent dry-weather flow is present. If intermittent flow is captured, grabs samples will be collected and analyzed at a minimum for ammonia, chlorine, and surfactants. If it is determined that no flow is captured behind the sandbag after a 24 to 48-hour period, the tributary drainage pipes can be excluded as the source of any intermittent discharge.
- Dye Testing - dyed water is poured into plumbing fixtures and downstream drainage is observed to confirm connections.
- ZoomCam Inspections - in selected tributary areas, or where indicated based on findings from other field investigation work, drainage structures will be inspected with a "zoom camera-on-a-stick" in an attempt to gather additional information and narrow the location of observed dry-weather flow.
- Smoke Testing - non-toxic smoke is introduced into drainage segments containing suspected illicit discharges and adjacent buildings are observed for signs of a connection, or smoke emanating from floor drains or sump pump connections.
- CCTV/Video Inspections – drainage pipes are internally inspected to pinpoint and evaluate connections through the use of a closed-circuit television camera through all or a portion of the drain segment believed to contain the connection.

Upon location of an illicit discharge, Devens will work to eliminate the illicit discharge as expeditiously as possible. When the specific source of an illicit discharge is identified, Devens will exercise its authority as necessary to require its removal. Devens will notify all responsible parties of any such discharge and require immediate cessation of improper disposal practices in accordance with its legal authorities.

4.1.4 Sanitary Sewer Overflows

Sanitary Sewer Overflows (SSOs) are included in the MS4 Permit's definition of illicit discharges and can be defined as 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, power failures, vandalism, and sewer defects. This includes SSOs resulting during dry or wet weather, from inadequate conveyance capacities, or where interconnectivity of the storm and sanitary sewer infrastructure allows for communication of flow between the systems.

Devens will maintain and update annually an inventory, that identifies all known locations where SSOs have discharged to the MS4 within the five (5) years prior to the effective date of the MS4 Permit (July 1, 2018), and any SSOs that have occurred thereafter. This includes SSOs resulting, during dry or wet weather, from inadequate conveyance capacities, or where interconnectivity of the storm and sanitary sewer infrastructure allows for transmission of flow between the systems. The inventory will include the following information, when available:

- Location (approximate street crossing/address and receiving water, if any);
- A clear statement of whether the discharge entered a surface water directly or entered the MS4

- Date(s) and time(s) of each known SSO occurrence (i.e., beginning and end of any known discharge);
- Estimated volume of the occurrence;
- Description of the occurrence indicating known or suspected cause(s);
- Mitigation and corrective measures completed with dates implemented; and
- Mitigation and corrective measures planned with implementation schedules.

Upon detection of an SSO, Devens will provide oral notice to EPA within 24 hours, a written notice to EPA within five (5) days and shall include the information in the updated inventory as identified above, and mitigate it as expeditiously as possible taking interim measures to minimize the discharge of pollutants to and from its MS4 until elimination is completed.

Devens has had eight (8) SSO occurrences in the five years prior to the permit effective date to present, including three (3) in Permit Year 3 (FY2021). These include the following:

- On April 7, 2015, an SSO was called in by a UPS delivery driver on Lovell Street near Hospital Road. Flow discharged overland from a sewer manhole and then entered Tail Race Brook via surface runoff. The volume of the discharge was approximately 8,200 gallons. The blockage was caused by a traffic cone lodged in a sewer siphon. Because almost all the flow in that portion of the system is from an upstream pump station, the pump station was shut down and a vactor truck was used to remove the blockage. The affected area was treated with lime. Additional cleaning was performed to ensure that no other obstructions were present.
- On July 20, 2015, an SSO was called in by a United Water worker near 270 Jackson Road. Flow discharged overland from a sewer manhole and then entered Willow Brook via surface runoff. The volume of the discharge was approximately 750 gallons. During an ongoing sewer main replacement project, a partial collapse occurred, causing the SSO. A temporary bypass was set up and the sewer main was eventually replaced. The affected area was treated with lime.
- On August 8, 2016, an SSO was called in by a contractor near 200 Jackson Road. Flow discharged from a gravity sewer main to the ground surface. The source was believed to be a crack in the sewer main. The volume of the discharge was intermittent based on flow and ranged from 0-1 GPM. The contractor televised the pipe to locate the source and scheduled for the pipe to be repaired.
- Another SSO occurred on August 8, 2016 at 249 Barnum Road, which was observed by the Board of Health. Flow discharged from a gravity sewer main to the ground surface. The volume of the discharge was approximately 3 gallons. A temporary repair was made until a new main connection was made on August 10, 2016.
- On December 20, 2017, an SSO occurred at SMH #879 in the woods located behind the Barnum Road Pump Station and discharged to the ground surface. The volume of the discharge was approximately 900 gallons. It was estimated that 15 gpm was leaking from the sewer manhole cover for a period of 60 minutes. The cause of the SSO event appeared to be a sewer system blockage and the entire gravity line was jetted approximately 200-feet. However, no roots or material was actually observed during jetting. The downstream pump

station wet well was checked for any debris that may have caused this back-up. No debris was identified and there were no issues with the pumps. Corrective actions taken included spraying 10 gallons of sodium hypochlorite on the affected area.

- On July 21, 2020, an SSO occurred at SMH #958 on Hospital Road and discharged to the ground surface. The discharge volume was approximately 725 gallons—it was estimated that 5 gpm was leaking from the sewer manhole for a period of 145 minutes. The cause of the SSO was caused to be a blockage in the sewer line. The line was jetted and vacuumed, and lime was spread on the affected overflow area.
- On December 26, 2020, an SSO was discovered at the Devens Wastewater Treatment Facility at 7:30am. The SSO was caused by failure of the programmable logic controller (PLC) card at the facility, which has since been replaced. The volume of the discharge was estimated to be 15,625 gallons based on average influent flows in SCADA. The area impacted by the discharge was cleaned with 15 gallons of 12.5% sodium hypochlorite.
- On March 3, 2021, an SSO occurred in the basement of 8 Adams Circle at 6:45pm. The volume of the discharge was 5-10 gallons and contained to the basement of 8 Adams Circle. The backup was determined to be caused by a sewer manhole (SMH #1251) that was surcharged but not overflowing. Corrective actions taken included using a jet/vactor truck to clear the blockage in the service and in SMH #1251.

Devens will maintain this SSO inventory as part of this plan and their IDDE Plan. Information will also be included in Devens' MS4 Annual Reports, including the status of mitigation and corrective measures to address each identified SSO.

4.1.5 IDDE Plan – Permit Years 2 & 3 Update

Devens developed a draft IDDE Plan during Years 2 & 3, which includes a draft catchment ranking and prioritization matrix, procedures for dry and wet weather outfall screening and sampling, and catchment investigation methodologies. Employee training on Illicit Discharge Detection and Elimination will begin in Permit Year 4 once the IDDE Plan is final. The written IDDE program, once finalized, will be available under separate cover on the DEC and MassDevelopment websites.

5.0 STANDARD OPERATING PROCEDURES

5.1 MS4 Permit Compliance

As part of the minimum control measure for Pollution Prevention/Good Housekeeping for Municipal Operations, the MS4 Permit requires permittees to implement an Operations and Maintenance (O&M) program for permittee-owned facilities and activities to prevent or reduce pollutant runoff and protect water quality. The O&M Program is required to include the following elements:

- 1) An inventory of all permittee-owned facilities.
- 2) Written O&M procedures for the following activities:
 - a. Parks and open space
 - b. Buildings and facilities where pollutants are exposed to runoff
 - c. Vehicles and equipment
- 3) A written program detailing the activities and procedures the permittee will implement so that MS4 infrastructure is maintained in a timely manner to reduce the discharge of pollutants from the MS4, to include:
 - a. Optimization of routine inspections, cleaning and maintenance of catch basins.
 - b. Implementation of procedures for sweeping and/or cleaning streets, and permittee-owned parking lots.
 - c. Proper storage and disposal of catch basin cleanings and street sweepings.
 - d. Implementation of procedures for winter road maintenance.
 - e. Implementation of inspection and maintenance frequencies and procedures for storm drain systems and stormwater treatment structures.
- 4) Written records for all maintenance activities, inspections and training.

5.2 Inventory of Municipal Facilities

The inventory of municipal facilities will be developed no later than Permit Year 4.

5.3 Operation and Maintenance Procedures for Municipal Activities and Facilities

To address the MS4 Permit requirements, Standard Operating Procedures (SOPs) associated with the identified municipal activities and facilities are required to be developed within four years of the permit effective date, except for procedures for winter road maintenance, which are required to be developed within three years of the permit effective date. The SOP for winter road maintenance, which includes snow removal and deicing, will be included in Appendix I along with additional SOPs developed in Permit Year 4.

5.4 Catch Basin Cleaning and Optimization

Devens currently has approximately 1,630 catch basins. Approximately 50% of Devens' catch basins are cleaned per year using in-house staff and equipment. Catch basin cleanings are stockpiled in a self-contained erosion-free area at the DPW yard. When the piles are large enough, they are transported to a landfill. To meet the anticipated requirements of the new MS4 Permit, Devens will need to optimize catch basin inspection, cleaning and maintenance such that the following conditions are met:

- Inspection and maintenance of catch basins located near construction activities (roadway construction, residential, commercial, or industrial development or redevelopment) are prioritized. Catch basins in such areas must be cleaned more frequently if inspection and maintenance activities indicate excessive sediment or debris loading.
- A schedule must be established such that the frequency of routine cleaning ensures that no catch basin at any time will be more than 50 percent full. A catch basin sump is more than 50 percent full if the contents within the sump exceed one half the distance between the bottom interior of the catch basin to the invert of the deepest outlet of the catch basin.
- If a catch basin sump is more than 50 percent full during two consecutive routine inspections/cleaning events, Devens must document the finding, investigate the contributing drainage area for sources of excessive sediment loading, and to the extent practicable, abate contributing sources.
- Devens shall maintain documentation, including metrics and other information, used to reach the determination that the established plan for cleaning and maintenance is optimal and meets the requirements of the MS4 Permit, including a log of catch basins cleaned and inspected.
- Devens must track and report the following information to EPA annually:
 - Total number of catch basins community-wide
 - Number of catch basins inspected
 - Number of catch basins cleaned
 - Total volume or mass of material removed from all catch basins

Devens collected additional data during the 2019, 2020, and 2021 cleaning seasons as part of their optimization plan to ensure that no catch basin is more than 50% full. Data collected includes depth from the catch basin rim to the top of sediment, to the bottom of the basin, and to the invert of the outlet pipe. Devens will continue to collect data as needed until data is available for all catch basins. This data will be integrated into the Devens' GIS and utilized to identify those catch basins that are filling up more frequently and will therefore need to be cleaned more than once annually to ensure that the catch basin sump is never more than 50% full.

6.0 TMDLS AND WATER QUALITY LIMITED WATERS

6.1 Discharges to Water Quality Limited Waters

Under Massachusetts General Law (MGL) Chapter 21, MassDEP is responsible for monitoring the waters of the Commonwealth, identifying those waters that are impaired, and developing a plan to bring them back into compliance with Massachusetts Surface Water Quality Standards. The list of impaired waters, better known as the "303(d) list," identifies impaired surface waters and the reasons for impairment.

Once a waterbody is identified as impaired, MassDEP is required by the Federal Clean Water Act (CWA) to develop a strategy for restoring the health of the impaired waterbody. The process of developing this strategy, which is generally referred to as a Total Maximum Daily Load (TMDL) includes identifying the type of pollutant, and the potential sources of the pollutant, in addition to determining the maximum amount of pollutant that can be discharged to a specific surface water body in order to meet surface water quality standards. Part of the TMDL also includes the development of a plan to help in meeting the Total Maximum Daily Load limits once they have been established. These impaired waters are listed under Category 4A in Part 2 of the Massachusetts Integrated List of Waters. Devens does not currently discharge to any receiving waters that have an approved TMDL, nor is Devens located in a watershed for which a TMDL has already been developed.

In addition to identifying water bodies for which a Total Maximum Daily Load has already been developed, the Integrated List of Waters also identifies the 303(d) List of Impaired Waters under Category 5. The 303(d) List identifies water bodies that are impaired for one or more designated uses and require a TMDL. In Devens, this includes the Nashua River (Segment MA-81-05) which is impaired for phosphorus and E. Coli; and Catacoonamug Brook (MA81-74) which is impaired for E. Coli.

6.2 Phosphorus Impairments

The Nashua River is impaired for phosphorus and requires the development of a TMDL. Devens has a number of outfalls, which discharge directly or indirectly, to the Nashua River and therefore, Devens is subject to the requirements of Appendix H of the MS4 Permit, which outlines requirements related to discharges to water quality limited water bodies and their tributaries where phosphorus is the cause of the impairment.

6.2.1 Public Education and Outreach

Devens must distribute additional educational messages to residential property owners, businesses, and commercial institutions about the proper use and disposal of grass clippings, and to encourage the use of slow release and phosphorous-free fertilizers annually in the spring, between March and April. An additional pet waste message must also be distributed to residents annually in the summer, between June and July, encouraging the proper management of pet waste and noting any existing bylaws where appropriate. In the Fall (August/September/October), an educational message detailing the proper disposal of leaf litter must be distributed to residential and commercial property owners. Devens must begin distribution of all required messages within three years of the permit effective date. Messages that have been distributed to date are included in Appendix F of this report.

6.2.2 *Regulatory Updates*

Devens must also update their regulations to require that all new development and redevelopment stormwater management BMPs constructed within Devens be optimized for phosphorous removal. A comprehensive review of all existing rules and regulations must be performed within four years of the permit effective date to determine any updates that must be made to comply with this statute and any progress shall be reported here and in Devens' Annual Report. Updates to 974 CMR 4.08, Industrial Performance Standards and General Regulations for Stormwater Management, were drafted during Permit Year 2 to require stormwater management BMPs on new development and redevelopment sites to be optimized for phosphorus removal. These updates were adopted during Permit Year 3.

In addition, as part of the assessment to identify permittee-owned property that can be retrofitted with BMPs, the incorporation of BMPs that infiltrate stormwater shall be prioritized where feasible to aid in phosphorus removal.

6.2.3 *Good Housekeeping and Pollution Prevention*

Devens shall develop and implement a program to manage grass clippings and leaf litter on all permittee-owned property, including prohibiting blowing organic waste materials onto adjacent impervious surfaces, within four years of the permit effective date. That plan shall be appended here.

Devens shall increase street and municipal parking lot sweeping frequencies to a minimum of two times per year within three years of the permit effective date, in the spring after snowmelt and sanding practices have subsided, and in the fall after leaf fall events (September 1st to December 1st). A street sweeping schedule shall be included in this plan and in Devens' Annual Reports.

6.2.4 *Phosphorus Source Identification*

Devens must develop a comprehensive Phosphorous Source Identification Report within 6 years of the permit effective date. This report must include the following elements:

- Calculation of the total MS4 regulated area draining to the Nashua River. The analysis will reflect any updated MS4 mapping and catchment delineations.
- Outfalls discharging directly to the Nashua River will be tested for phosphorus during dry and wet weather sampling events, where flowing.
- Calculation of Impervious Area and Directly Connected Impervious Area for each catchment.
- Identification, delineation and prioritization of potential catchments with high phosphorous loading.
- Identification of potential retrofit opportunities or opportunities for the installation of structural BMPs during redevelopment, including the removal of impervious area to reduce phosphorous loadings.

This report must be appended to Devens' Year 6 Annual Report and to this SWMP upon completion.

After the submission of the report, Devens' must evaluate all permittee-owned properties within the drainage area that could be candidates for a BMP retrofit. This evaluation must include:

- The next planned infrastructure, resurfacing or redevelopment activity planned for the property or planned retrofit date;
- The estimated cost of redevelopment or retrofit BMPs; and
- The engineering and regulatory feasibility of redevelopment or retrofit BMPs.

This analysis must be complete within 7 years of the permit effective date, and a plan and schedule for implementation must be included in the Year 7 Annual Report. Devens must plan and install at least one structural BMP as a demonstration project within the drainage area of the Nashua River within 8 years of the permit effective date. This BMP must target a catchment with high phosphorus load potential. Any other identified BMP retrofit project must be installed according to the schedule outlined in the Year 7 Annual Report. For those structural BMPs installed, Devens must document the following in each MS4 Annual Report:

- BMP type
- Total area treated by the BMP
- Design storage volume of the BMP
- Estimated phosphorus removed in mass per year by the BMP

6.3 Bacteria Impairments

Since the Nashua River and the Catacoonamug Brook are impaired for E. Coli and require the development of a TMDL, Devens is subject to the requirements of Appendix H of the MS4 Permit, which outlines the requirement related to discharges to water quality limited water bodies where bacteria or pathogens is the cause of the impairment.

6.3.1 Public Education and Outreach

Devens has a comprehensive public education program for multiple purposes and has easily been able to add in specific, targeted information regarding actions that can be taken to reduce sources of bacteria from outfalls tributary to the Nashua River and Catacoonamug Brook.

Devens must supplement its residential public education program by distributing information to pet owners within those catchments tributary to the Nashua River and Catacoonamug Brook about the proper management of pet waste, including noting any existing bylaws. This message must be disseminated to all residents annually and pet owners at the time of pet license issuance and renewal, beginning in the first year of the permit. This informational campaign can be combined with the phosphorus education requirements outlined in Section 6.2.1.

Devens is almost 100% on sewer, although there is one (1) property on septic. Devens will distribute information to the septic system owner about proper maintenance.

In implementing their Illicit Discharge Detection and Elimination Program, Devens will designate all catchments that are tributary to the Nashua River and Catacoonamug Brook as problem or high priority under the catchment prioritization and ranking.

7.0 REPORTING, EVALUATION AND MODIFICATION

7.1 MS4 Permit Reporting

The MS4 Permit requires submission of annual reports assessing the effectiveness of the proposed BMPs and reporting if the minimum control measures were met. The initial report is due 90 days from the close of the reporting period, or September 30th, 2019, and annually thereafter. Reports are to be submitted to both EPA and MADEP. At a minimum, the report should include the following:

- The status of compliance with permit conditions, including an assessment of the appropriateness of the selected BMPs and progress toward achieving the selected measurable goals for each minimum control measure.
- Results of any information collected and analyzed, including monitoring data, if any. Outfall screening and monitoring data collected shall be submitted for both the reporting cycle and cumulative for the permit term.
- A summary of the stormwater activities planned for the next reporting cycle.
- A change in any identified best management practices or measurable goals for any minimum control measure.
- Notice of relying on another governmental entity to satisfy some of the permit obligations, if applicable.

Devens will append future annual reports in compliance with the 2016 MS4 Permit as they are prepared in Appendix I.

7.2 Evaluation of SWMP Success

This SWMP should be considered a dynamic document that is modified as necessary to account for changes such as in drainage infrastructure, laws and regulations, and Devens leadership and policy. The success of programs implemented by the SWMP – such as IDDE – should also be evaluated to ensure that they are accomplishing the goals for which they were intended and, in a method and timetable that continues to be appropriate. In addition, the SWMP should be reviewed and revised as necessary to keep text and appendices current. For example:

- After each year of stormwater monitoring to update appended findings and priorities.
- As needed to keep appended IDDE investigation, identification and removal documentation current.
- After each NPDES stormwater permit renewal to incorporate new requirements, as well as append copies of new permits and associated Notices of Intent (NOIs).
- After adoption of any new or revised ordinances or other regulatory mechanisms related to stormwater or drainage infrastructure.

Devens undertook this SWMP, in part, in order to ensure the protection of its water resources and the large investment in drainage infrastructure. Periodic review and revision of this written document will help achieve these goals on a perpetual basis.

7.3 Modifications to the SWMP or Notice of Intent

As discussed above, minor modifications to this SWMP should be made on a regular and frequent basis to keep it current. However, major changes to the SWMP or needed modifications to the NOI for inclusion under the NPDES Permit require an official process. In accordance with the MS4 Permit, modifications to the SWMP or NOI may be made under the following provisions:

- At any time, Devens may add (but not subtract or replace) components, controls or requirements to the SWMP if written notification is made to EPA and MADEP.
- Devens may request to replace an ineffective or infeasible BMP specifically identified in the SWMP with an alternative BMP at any time if the request is made in writing to EPA and MADEP. Unless the request is denied, changes proposed in accordance with the criteria below shall be deemed approved and may be implemented 60 days from submittal of the request. If the request is denied, EPA or MADEP, as applicable, will send Devens a written explanation of the denial.
- Modification requests must include the following information:
 - An analysis of why the BMP is ineffective or infeasible (or cost prohibitive).
 - Expectations on the effectiveness of the replacement BMP.
 - An analysis of why the replacement BMP is expected to achieve the goals of the BMP to be replaced.
- Change requests or notifications must be made in writing to EPA (with copy to MADEP) and signed in accordance with EPA signatory requirements.

Devens does not anticipate any major modifications to the SWMP or NOI requiring official notification.