



TOWN OF WINDHAM STORMWATER MANAGEMENT PLAN

The Stormwater Management Plan defines specific best management practices that will be implemented by the Town of Windham under each of the six minimum control measures set forth in the General Permit for the Discharge of Stormwater from Small Municipal Separate Storm Sewer Systems, which are designed to reduce discharge of pollutants from the MS4 to the maximum extent practicable.

*Town of Windham
Environment &
Sustainability*

*MS4 General Permit
Effective July 1, 2022*

*Submitted to Maine DEP by
March 31, 2021*

*Re-Submitted to Maine
DEP by September 4, 2021*

*Updated June 21, 2022, to
incorporate November 23,
2021, Permit Modification
and June 3, 2022
Department Order*

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SECTION 1

INTRODUCTION

1.1 Overview of Regulatory Program

The Town of Windham is subject to the General Permit for Discharge of Stormwater from Small Municipal Separate Storm Sewer Systems (MS4s), which was issued by the Maine Department of Environmental Protection (Maine DEP) with an effective date of July 1, 2022. The General Permit authorizes the direct discharge of stormwater from or associated with a regulated small MS4 to an MS4 or waters of the State other than groundwater. Compliance with the General Permit authorizes a person to discharge stormwater, pursuant to 38 M.R.S.A. § 413. In Maine, the DEP has delegated authority under the Federal National Pollutant Discharge Elimination System (NPDES) program, and the program is referred to as the Maine Pollutant Discharge Elimination System (MEPDES) program. Since the permit is a Clean Water Act permit, it is limited to a duration of five years and is due to expire on June 30, 2027. However, if the Maine DEP does not issue another Permit by June 30, 2027, the permit will be administratively continued, and the Town may need to update this Stormwater Management Plan (SWMP) to show what activities it will complete during the continued time period.

Communities are regulated under this program when and if they are identified as having ‘Urbanized Areas’ in their municipal boundary. An Urbanized Area is a U.S. Census-defined term, applied to a large area (50,000 people or more) that has a high population density and/or a high percentage of impervious cover (hard-scape surfaces like parking lots or buildings). Both criteria (high population density and high percentage of impervious cover) cause an area to be at risk for adverse surface water quality impacts from polluted stormwater discharges.

The U.S. Environmental Protection Agency (U.S. EPA) and Maine DEP began regulating communities for their stormwater discharges using the Urbanized Area criteria in 2003. The Town of Windham became regulated in 2003 based on the 2000 census.

Once a community becomes regulated by the MS4 General Permit, only the Urbanized Area portions of the town are regulated. As each U.S. Census is published, if the Urbanized Area changes (based on changes to the population or impervious cover), additional areas can be added to the regulated area only after a new MS4 General Permit is issued. Once an Urbanized Area is regulated by the MS4 General Permit, it cannot be removed from regulation, even if a subsequent census identifies it is no longer classified as an Urbanized Area. Therefore, the area regulated by the MS4 General Permit can either grow larger or stay the same size, but it cannot become smaller. [Appendix A](#) shows the Urbanized Area that is regulated by the 2022 MS4 General Permit for the town, which is based on the cumulative 2000 and 2010 U.S. Census Urbanized Area data. The 2022 MS4 General Permit specifically does not include any areas identified by the 2020 U.S. Census.

1.2 Cooperation Between Regulated Communities

There are 30 municipalities in the State of Maine that are subject to the 2022 MS4 General Permit. There are also two transportation agencies which are subject to their own MS4 General Permit, and eight state/federal agencies (which are called 'nested' MS4s) that are subject to a third MS4 General Permit. The regulated MS4s (municipal, transportation and state/federal) have a good history of cooperating on a state-wide basis to complete activities required by the General Permit such as a public outreach and training as a cost saving measure and to improve the quality of compliance.

The Town of Windham is a member of the Interlocal Stormwater Working Group (ISWG), pronounced *izzy-wig*. ISWG is a coalition of 14 MS4 municipalities in the greater Portland and Saco areas (Biddeford, Cape Elizabeth, Cumberland, Falmouth, Freeport, Gorham, Old Orchard Beach, Portland, Saco, Scarborough, South Portland, Westbrook, Windham, and Yarmouth) as well as the Southern Maine Community College and University of Southern Maine which are also regulated as MS4s under a separate MS4 General Permit. This coalition is facilitated by the Cumberland County Soil and Water Conservation District, which also assists in completing some of the permit requirements under contract to the coalition.

Similarly, the Bangor area MS4s have formed the Bangor Area Stormwater Working Group (BASWG), the Lewiston-Auburn area MS4s formed the Androscoggin Valley Stormwater Working Group (AVSWG), and the southern-most regulated MS4s formed the Southern Maine Stormwater Working Group (SMSWG). For some public education requirements, all of the stormwater working groups are working cooperatively as identified in this plan.

In implementing the 2022 MS4 General Permit, the Town of Windham relies on the ISWG to complete some requirements and implements the remaining requirements using municipal staff. This plan describes which elements will be completed individually, regionally or as a state-wide effort.

1.3 Stormwater Management Plan (SWMP)

Though the MS4 General Permit is a Clean Water Act Permit, it does not specify numeric effluent limitations (concentrations that a stormwater discharge must meet). Instead, the MS4 General Permit specifies narrative effluent limitations, in the form of Minimum Control Measures (MCMs).

Each of the four MS4 General Permits (effective 2003, 2008, 2013, and 2022) has required that the regulated MS4s develop and implement a Stormwater Management Plan (SWMP) to coincide with the effective dates of the General Permit.

This SWMP describes how the Town will implement Best Management Practices (BMPs) to meet the six MCMs, set forth in Part IV(C) of the 2022 MS4 General Permit. The six MCMs that are required to be addressed in this SWMP are:

1. Education/Outreach Program
2. Public Involvement and Participation
3. Illicit Discharge Detection and Elimination Program

4. Construction Site Stormwater Runoff Control
5. Post-Construction Stormwater Management in New Development and Redevelopment
6. Pollution Prevention/Good Housekeeping for Municipal Operations

The 2022 MS4 General Permit requires that for each MCM, the Town must: define appropriate BMPs; designate a person(s) responsible for implementing each BMP; define a date or timeline with milestones for implementation of each BMP; and define measurable goals for each BMP.

The prior MS4 General Permits also required that the SWMP address these six MCMs, but the specific requirements related to each MCM have changed with each permit. In many instances, the BMPs in this SWMP expand upon or continue BMPs that were developed under prior General Permits.

In addition to addressing the six MCMs, the Town must address impaired water requirements. Sections 1.4 and 1.5 describe the water quality status in the Town, and what watersheds are priorities. Sections 1.6 through 1.9 describe how permit coverage is obtained, how the SWMP is modified (when needed), when public notice is required, and annual reporting requirements.

The Maine DEP will review this SWMP and determine if the Town is controlling pollutants to the “Maximum Extent Practicable”. The term “Maximum Extent Practicable” is defined in the Clean Water Act. The term means available and feasible considering cost, existing technology, and logistics based on the overall purpose of the project. Effectively, the Town can consider these concepts as they select Best Management Practices (BMPs) to meet permit requirements, but the Maine DEP decides if the Town is meeting the “Maximum Extent Practicable” standard.

The SWMP is not an enforceable document, however, some of its elements are enforceable as identified in the Town’s Department Order contained in Appendix B. Some flexibility is built into the SWMP to allow communities to engage in an adaptive management approach to mitigating or eliminating the discharge of pollutants to and from its regulated small MS4. This approach enables the Town to adjust the SWMP and BMPs throughout the Permit Cycle if needed on evaluation of their effectiveness, changing conditions, specific local concerns, or changes in other factors. Some SWMP Modifications require Maine DEP review and approval and public notice. Section 1.6 Obtaining Coverage to Discharge and Section 1.8 SWMP Modifications describe the requirements associated with modifying a SWMP.

1.4 Water Quality and Discharges to Impaired Waters

The 2022 MS4 General Permit contains the following requirements for discharges to waters that are not meeting their fishable and swimmable standards (i.e., impaired waters):

1. If the waterbody to which a point source discharge drains is impaired and has an EPA approved total maximum daily load (TMDL), then the SWMP must propose clear, specific, and measurable actions to comply with the TMDL waste load allocations (WLA) and any implementation plan. The GP does not authorize a direct discharge that is inconsistent with the WLA of an approved TMDL. This requirement applies only to TMDLs that were approved by EPA as of 10/15/2020.

2. If a TMDL is approved or modified by EPA after 10/15/2020, the Maine DEP will notify the permittee if any changes are needed to the SWMP and may take other actions regarding the approved TMDL as identified in the 2022 MS4 General Permit.
3. If an MS4 has a discharge to an Urban Impaired Stream, it must develop and implement three BMPs to address the water's impairment, unless the Maine DEP has determined the MS4 discharge is not causing or contributing to the impairment.

The Fact Sheet that was issued with the 2022 MS4 General Permit also contained a strongly worded recommendation for MS4s to consult with the Maine DEP Division of Environmental Assessment regarding impaired waters that do not have approved TMDLs. The consult would be focused on identifying the root cause of the impairment and developing a strategy to reduce the discharge of pollutants of concern if the permittee is causing or contributing to the impairment.

Section 1.4.1 describes generally how the state evaluates surface waters and describes TMDL documents and Urban Impaired Streams. Section 1.4.2 describes the status of the waters that receive discharges from the Town's MS4, and Section 1.4.3 describes recent progress by the Town on addressing the impairments, which provides rationale for how BMPs in this SWMP address the 2022 MS4 General Permit requirements.

1.4.1 State Water Quality Assessments

The State of Maine is required by the Clean Water Act to identify water quality classifications for each surface water in the State, and then to assess whether each of those waters is meeting its designated classification standards. Maine has four classifications for freshwater rivers, three classes for marine and estuarine waters, and one class for lakes and ponds. Each classification identifies a use and set of water quality standards for the water. The classifications, uses, and standards are described and assigned to the various waters in the Maine Statutes (Title 38, Section 464 through 469).

Assessments as to whether each water is achieving its designated classification are based on data that is obtained from several sources depending on the type of water being assessed:

- Lakes and ponds are assessed primarily through data obtained by the Maine DEP, regional entities, and lake associations. The regional and lake association data is coordinated through the Lake Stewards of Maine (Volunteer Lake Monitoring Program).
- Marine and Estuarine waters are assessed by evaluation of data obtained from the Maine DEP, Maine Healthy Beaches, Department of Marine Resources, Marine Environment's Gulf Watch, Gulf of Maine Council, and several other academic and non-profit organizations.
- Wetlands are assessed primarily using data obtained from the Maine DEP Biomonitoring Program.
- Rivers and Streams are assessed using data from the Maine DEP Biomonitoring Program, Surface Water Ambient Toxics (SWAT) Monitoring Program, the Atlantic Salmon Recovery Plan, Lake Stewards of Maine 'Volunteer Lake Monitoring Program' (VLMP), and through many other government agencies such as the Department of Inland Fisheries and Wildlife, EPA, and the United States Geologic Survey.

Every two years, the Maine DEP publishes a report and list documenting the results of the assessments, and identifying which waters are meeting their designated classifications, and which are considered impaired. The report and list are called the Integrated Water Quality Report and are generally referred to by the Section of the Clean Water Act which requires them: the 305(b) report and/or the 303(d) list, respectively. There are five general status categories available for assignment to each water.

- Category 1: Attaining all designated uses and water quality standards, and no use is threatened.
- Category 2: Attains some of the designated uses, no use is threatened; and insufficient data or no data and information is available to determine if the remaining uses are attained or threatened (with presumption that all uses are attained).
- Category 3: Insufficient data and information to determine if designated uses are attained (with presumption that one or more uses may be impaired).
- Category 4: Impaired or threatened for one or more designated uses but does not require development of a TMDL (Total Maximum Daily Load) report.
 - 4A means a TMDL has already been completed.
 - 4B means other pollution control measures will address impairment.
 - 4C means the impairment is not caused by a pollutant.
- Category 5: Waters impaired or threatened for one or more designated uses by a pollutant(s), and a TMDL report is required.

In Maine, the most current 303(d) list approved by the EPA is from the 2016 data. The Maine DEP has indicated they will issue a combined 2018/2020/2022 303(d) list sometime in spring 2022.

A TMDL document identifies the source(s) of the impairments and recommendations to correct the impairments. Specifically, a TMDL document identifies how much of a pollutant a waterbody can receive and still meet its water quality classification. Typically, the units are identified as pounds per day, which is the basis for the term "Total Maximum Daily Load". TMDLs typically include a Margin of Safety between 2-5% of the TMDL to account for uncertainties or lack of knowledge about the relationship between the pollutant loading and water quality.

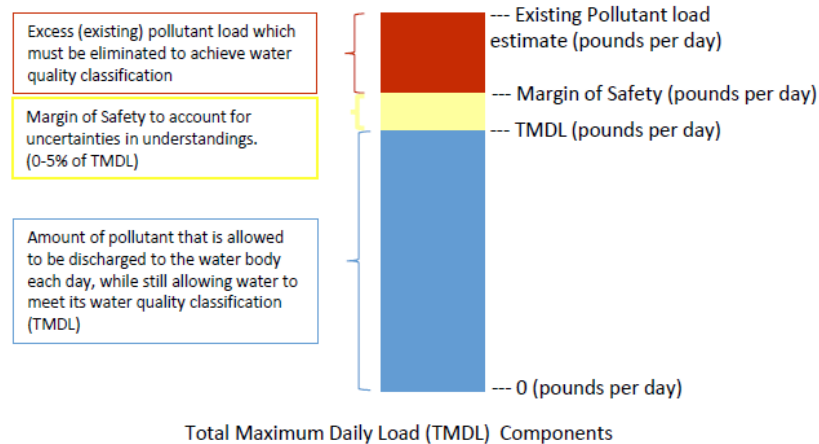


Figure 1 - Image of TMDL components.

In addition to the Maine 305(b) report and 303(d) list, Maine has developed a special rule, Chapter 502, which has restrictions related to Direct Watersheds of Lakes Most at Risk from New Development and Urban Impaired Streams. This rule became effective in 1997 and has been modified several times over the years. The rule defines an Urban Impaired Stream as a stream that fails to meet its water quality standards because of effects of stormwater runoff from developed land. The rule imposes additional stormwater treatment controls on development in the watersheds of Urban Impaired Streams.

1.4.2 Windham Water Quality Status

The following is a summary of the waters in the Town's Urbanized Area that receive point source discharges from the Town's MS4 and each waterbody's TMDL and impairment status.

Figure 1 shows the watersheds and waterbodies in Windham., and Table 1 shows the waterbodies where the Town has MS4 discharges and their impairment status according to the 2016 303(d) list.

The following documents were reviewed in making these determinations:

- Statewide Bacteria TMDL (September 2009)
- Chapter 502: Direct Watersheds of Lakes Most at Risk from New Development and Urban Impaired Streams
- Statewide Nonpoint Source (NPS) Pollution TMDL (June 2016)
- Impervious Cover TMDL (September 2012)
- Pleasant River Watershed Management Plan (June 2011)
- Sebago Lake Watershed Assessment and Prioritization Plan (September 2015)
- Highland Lake Phosphorous Control Action Plan and TMDL Report (August 2003)
- Highland Lake Watershed Management Plan (March 2020)
- Maine 2016 Integrated Water Quality Monitoring and Assessment Report, Appendices (February 2018)

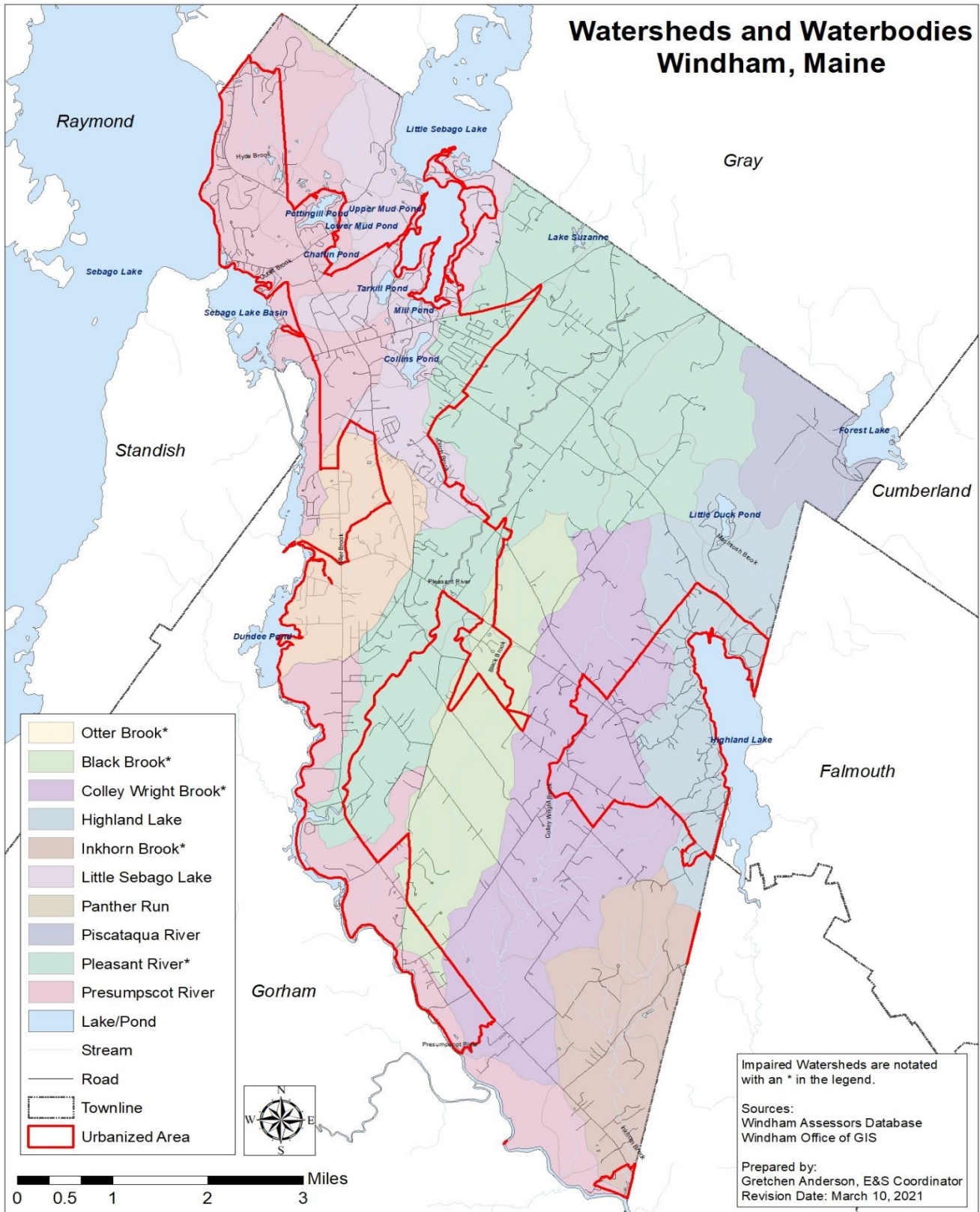


Figure 2 - Map of Windham Watersheds and Waterbodies with impaired watersheds labeled with an '*'.
 0 0.5 1 2 3 Miles

Table 1 - Waters in the Town of Windham located in the Urbanized Area that receive discharges from the regulated MS4.

Waterbody	Reason for Impairment	Classification Notes
Hyde Brook	N/A	N/A
Pettingill Pond	N/A	N/A
Outlet Brook	N/A	N/A
Sebago Lake	N/A	N/A
Little Sebago Lake	N/A	N/A
Ditch Brook	N/A	N/A
Otter Brook (7 piped outfalls + 5 ditch outfalls)	High E. Coli levels Low Dissolved Oxygen	2009: Statewide Bacteria (E.Coli) TMDL approved 2007: Monitoring for DO 2016: Statewide NPS (Dissolved Oxygen) TMDL approved - impairment excluded from final. 2021: Addendum to the Statewide NPS (Dissolved Oxygen) TMDL approved
Black Brook (3 piped outfalls)	High E. Coli levels Low Dissolved Oxygen	2010: Will be included in future update to Statewide Bacteria TMDL 2007: Monitoring for DO 2016: Bacteria TMDL in development. Statewide NPS (DO) TMDL approved - impairment excluded from final. 2021: Addendum to the Statewide NPS (Dissolved Oxygen) TMDL approved
Presumpscot River (18 piped outfalls + 7 ditch outfalls)	Other flow regime alterations	Main Stem (above Dundee Dam) - Class A/Category 2 2012: Statutory Class A to confluence with Pleasant River, Class B below that point. Impoundments. 2015: Improved flow regulation from Eel Weir Dam expected to improve DO.
Colley Wright Brook (9 piped outfalls + 13 ditch outfalls)	High E. Coli levels Low Dissolved Oxygen	2009: Statewide Bacteria (E.Coli) TMDL approved 2007: Monitoring for DO 2016: Statewide NPS (Dissolved Oxygen) TMDL approved - impairment excluded from final. 2021: Addendum to the Statewide NPS (Dissolved Oxygen) TMDL approved
McIntosh Brook	N/A	N/A
Highland Lake (5 piped outfalls + 4 ditch outfalls)	N/A	Listed as impaired until 2010
Pleasant River (16 piped outfalls + 10 ditch outfalls)	High E. Coli levels Low Dissolved Oxygen	2009: Statewide Bacteria (E.Coli) TMDL approved 2012: VRMP showed occasional low DO values in 2009-10 at one location 2016: Statewide NPS (Dissolved Oxygen) TMDL approved - impairment excluded from final. 2021: Addendum to the Statewide NPS (Dissolved Oxygen) TMDL approved
Inkhorn Brook (2 ditch outfalls)	High E. Coli levels Low Dissolved Oxygen	2009: Statewide Bacteria (E. Coli) TMDL approved 2007: Monitoring for DO 2016: Statewide NPS (DO) TMDL approved - impairment excluded from final. 2021: Addendum to the Statewide NPS (Dissolved Oxygen) TMDL approved

1.4.3 Progress on addressing Impairments.

The following subsections describe how impaired waters are addressed in this SWMP and provides some background on work the Town has done in recent years to improve water quality in these waters, including progress since the 2003 Phosphorous Control Action Plan and 1999 and 2020 Watershed Management Plans for Highland Lake were prepared.

1.4.3.1 Discharges to Waters with TMDLs

The Pleasant River, Otter Brook, Black Brook, Colley Wright Brook, and Inkhorn Brook are impaired by bacteria and are listed in the Statewide Bacteria TMDL, which was completed in 2009 with a 2014 Addendum. Additionally, Highland Lake has a stand-alone Phosphorus Control Action Plan (PCAP)-TMDL document, which was finalized in 2003 and a Watershed Management Plan that was updated in 2020. Therefore, the Windham regulated MS4 discharges must be consistent with the Waste Load Allocations in these TMDLs and any implementation plan.

Statewide Bacteria TMDL: Table 1 summarizes how many outfalls discharge from Windham's regulated MS4 to the Pleasant River, Otter Brook, Black Brook, Colley Wright Brook, and Inkhorn Brook, which are impaired for bacteria.

The Statewide Bacteria TMDL does not specifically identify sources of the bacteria impairments but encourages communities to pursue an action plan that is based on investigation of the source. MS4s are already required to conduct investigations of potential illicit discharges under MCM 3 (IDDE).

The Statewide Bacteria TMDL document also requires that all sources of bacteria that are prohibited (such as failed septic systems or illicit discharges) be removed. It also requires that any sources of bacteria from allowed discharges (such as this MS4 permitting program) be restricted to concentrations equal to the water quality criteria. MS4s are already required to complete these activities under MCM 3.

Highland Lake TMDL: Highland Lake was listed as impaired and has a stand-alone PCAP-TMDL document and a Watershed Management Plan; however, in 2010 it was removed from the 303(d) list of impaired waters because of restoration efforts in the watershed. Highland Lake is also considered a 'Lake Most at Risk for New Development' in Maine DEP Rule Chapter 502. High phosphorus is identified as the main contributor to the water quality impairment. The sources and stressors contributing to this impairment identified in the PCAP-TMDL document include shoreline residential development, camp roads, state/town roads, shoreline septic systems, agriculture, etc. The PCAP-TMDL assigned a TMDL of 287 kg TP/year, with a Load Allocation of 115 kg TP/year and a Waste Load Allocation of 172 kg TP/year. The PCAP-TMDL document contains a 'Future Work' section, which provides recommendations that can be implemented to improve water quality. The Highland Lake Watershed Management Plan refined the understanding of the watershed and created an action plan that focuses on correcting the stressors and sources of high phosphorous impairment.

Additionally, the Town is a member of the Highland Lake Leadership Team (HLLT) which was a recommendation from the PACP-TMDL to ensure that phosphorous reduction and water quality

improvement were maintained in the Highland Lake Watershed. This committee is comprised of the Highland Lake Association, Town of Falmouth and associate members from the Cumberland County Soil and Water Conservation District and Maine DEP. The committee has been involved with the 2018 Watershed Survey, CWA Section 604(b) application and grant issuance, 2020 Watershed Management Plan update, CWA Section 319 application and grant issuance. The HLLT will use the Watershed Management Plan Action Plan as a map for future work and scheduling projects. Currently the committee is working on a 10-year Education and Outreach plan that will focus on the Highland Lake watershed. The Town commits staff time (Environmental & Sustainability Coordinator, Planning Department, Code Enforcement Department & Public Works Department) and budgetary expenditures for compliance with this PACP-TMDL.

Statewide Nonpoint Source Pollution (NPS) TMDL: Table 1 summarizes how many outfalls discharge from Windham's regulated MS4 to the Pleasant River, Otter Brook, Black Brook, Colley Wright Brook, and Inkhorn Brook, which are impaired for dissolved oxygen. The Town of Windham consulted with the Maine DEP Division of Environmental Assessment via email on February 4, 2021. On February 17, 2021, the Maine DEP confirmed that these streams (Black Brook, Pleasant River, Otter Brook, Colley Wright Brook, and Inkhorn Brook) will be listed in the Maine DEP's proposed NPS TMDL Addendum when it is released and will identify agricultural and other NPS sources as likely major contribution to the impairments. The Maine DEP also confirmed no additional actions for these streams needs to be taken under the 2022 MS4 General Permit.

1.4.3.2 Discharges to Urban Impaired Streams

There are no Urban Impaired Streams located in the Town of Windham; therefore, the Urban Impaired Stream requirements in the 2022 MS4 General Permit are not applicable.

1.5 Priority Watersheds

Previous MS4 General Permits required regulated MS4s to identify a Priority Watershed and apply BMPs to that watershed. The 2022 MS4 General Permit does not contain any specific requirements related to Priority Watersheds. However, it does require that an MS4 have a procedure in place to prioritize watersheds when addressing illicit discharges. The Town of Windham uses this prioritization to identify where illicit discharge inspections are conducted first. The Town may also use the prioritization for illicit discharge investigations in the event there were insufficient resources to address all potential illicit discharges simultaneously. The IDDE Plan describes in more detail how the prioritization is applied.

The Maine DEP maintains a list of waters that are vulnerable to non-point source pollution, which is then available to receive grant funding under Section 308(b) and Section 319 of the Clean Water Act if the funding is not used to satisfy the conditions of a Clean Water Act Permit (such as the 2022 MS4 General Permit). The Maine DEP's NPS Priority Watersheds list – Threatened Lakes Priority list includes Highland Lake as the MS4's "Priority Watershed". It should be noted that MS4s may not use 319 grant funding to implement any BMPs required by the MS4 General Permit.

The Town of Windham's highest priority watersheds are: Pleasant River and Highland Lake

because of their impairments. The Pleasant River is a watershed centrally located in Town and is the major tributary to the Presumpscot River. Due to the river's bacteria and dissolved oxygen impairments, the Town believes prioritization of this watershed is warranted. As previously mentioned, Highland Lake had phosphorus control action plan implemented until 2010 but was removed from impaired list. However, due to recent history of declining water quality and potential threat of re-impairment, the town has renewed focus on the watershed.

1.6 Obtaining Coverage to Discharge

As required, a Notice of Intent (NOI) to comply with the 2022 MS4 General Permit was submitted to the Maine DEP with this SWMP. A copy of the Town's NOI is provided in [Appendix B](#).

A 30-day Public Notice was provided by both the Maine DEP and the Town to allow the public to comment on the SWMP. A copy of the Public Notice provided by the Town is also contained in [Appendix B](#).

Following review of the SWMP and NOI, and receipt of any public comments, the Maine DEP issued a draft permittee specific DEP order. The permittee specific DEP order contained the authorization to discharge, was subject to a DEP-issued 30-day public comment period and was finalized by the DEP after the comment period ended.

Once the Maine DEP issued the final permittee specific DEP order/authorization to discharge, the Town had 60 days to update the SWMP to reflect any new or changed requirements and any comments. Maine DEP did request that this SWMP be resubmitted to them.

The SWMP has been updated to accordance with that requirement. The final permittee specific DEP order is be included in [Appendix B](#). [Appendix C](#) contains the comments received from the public along with any notes on how the comments were addressed in the SWMP.

1.7 SWMP Availability

The SWMP must be made available to the public by posting it on the Town website. A copy must also be made available to the public at Town Hall.

If any of the following entities request a copy, one must be made immediately available to them:

- a) U.S. EPA or Maine DEP,
- b) any interconnected or adjacent MS4,
- c) any owner or operator of a water supply company where the MS4 discharges to a water supply watershed, or
- d) members of the public.

1.8 SWMP Modifications during the Permit Cycle

During the permit term (2022 to 2027), the SWMP must be kept current. As required by the 2022 MS4 General Permit, the Town will amend the SWMP if the Maine DEP or the Town determine that:

- a) The actions required by the BMPs fail to control pollutants to the meet the terms and conditions of the 2022 MS4 General Permit and permittee specific DEP order.
- b) The BMPs do not prevent the potential for a significant contribution of pollutants to waters of the State other than groundwater.
- c) New information results in a shift in the SWMP's priorities.

If the changes are initiated by the Maine DEP, it will notify the Town, and the Town must respond in writing within 30 days of the notice explaining how it will modify the SWMP. The Town must then modify the SWMP within 90 calendar days of the Town's written response, or within 120 calendar days of the DEP notice (whichever is less). Any such modification must be submitted to the DEP for final review.

If the changes are initiated by the Town, the following processes apply (depending on the nature of the change as identified below):

- To modify any schedule identified in the permittee specific DEP Order, the permittee must file an application on a DEP form with the Department that includes a justification to formally modify the original permittee-specific DEP order.
- The permittee must allow the public the opportunity to comment on changes made to the SWMP a minimum of once per year.
- For BMPs in the SWMP that are not required to comply with the General Permit or the permittee specific DEP order, the BMPs and/or implementation schedule may be amended as appropriate without the need for public comment. Changes must be submitted to the Department in the Annual Report following the permit year the change(s) were made.

1.9 Annual Compliance Report and Recordkeeping

By September 15 of each year, the Town will electronically submit an Annual Compliance Report for the Maine DEP's review using a standardized form provided by the Maine DEP. The Annual Compliance Report must be sent via email to the Municipal Stormwater Coordinator. As of June 2022, the Maine DEP Municipal Stormwater Coordinator is:

Holliday Keen (holliday.keen@maine.gov)
Municipal/Industrial Stormwater Coordinator
Department of Environmental Protection
17 State House Station
Augusta, Maine 04333-0017

The Annual Compliance Report must include the following:

- a) The status of compliance with the terms and conditions of the 2022 MS4 General Permit and the Town's permittee specific DEP order, based on implementation of the Town's SWMP for each permit year, an assessment of the effectiveness of the components of its stormwater management program, an assessment of the appropriateness of identified BMPs, progress towards achieving identified measurable goals for each of the MCMs and progress toward

- achieving the goal of reducing the discharge of pollutants to the maximum extent practical.
- b) A summary of information collected and analyzed, including monitoring data, if any, during the reporting period.
 - c) A summary of the stormwater activities the Town intends to undertake pursuant to its SWMP to comply with the terms and conditions of the 2022 MS4 General Permit and the Town's permittee specific DEP order during the next reporting cycle.
 - d) A change in any identified BMPs or measurable goals that apply to the SWMP.
 - e) A description of the activities, progress, and accomplishments for each of the MCMs 1-6 including such items as the status of education and outreach efforts, public involvement activities, stormwater mapping efforts, the number of visual dry weather inspections performed, the number of inaccessible and new outfalls, dry weather flow sampling events and laboratory results, detected illicit discharges, detected illicit connections, illicit discharges that were eliminated, construction site inspections, number and nature of enforcement actions, post construction BMP status and inspections, the number of functioning post construction BMPs, the number of post construction sites requiring maintenance or remedial action, the status of the permittee's good housekeeping/pollution prevention program including the percentage of catch basins cleaned, those catch basins cleaned multiple times, and the number of catch basins that could not be evaluated for structural condition in a safe manner. Where applicable, the MS4 must quantify steps/measures/activities taken to comply with the 2022 MS4 General Permit and its SWMP including reporting on the types of trainings, presented the number of municipal and contract staff that received training, the length of the training and training content delivered as well as any revisions to the SWPPP procedures and/or changes in municipal operations.

The Maine DEP will review the annual reports and provide comments to the MS4s. Changes to the report based on the Maine DEP's review comment(s) must be submitted to the Department within 60 days of the receipt of the comment(s).

The regulated MS4s must keep records required by the 2022 MS4 General Permit and permit specific DEP order for at least three years following its expiration or longer if requested by the Maine DEP Commissioner. The regulated MS4s must make records, including this SWMP, available to the public at reasonable times during regular business hours.

SECTION 2

MINIMUM CONTROL MEASURES

2.1 MCM 1 – Public Education and Outreach

The 2022 General Permit requires municipalities to develop and implement two Education/Outreach Campaigns to address stormwater issues of significance:

1. An 'Outreach to Raise Awareness' Campaign targeted at two audiences applying three (3) tools per audience per year. One target audience must be the public and the second audience may be selected from: municipal, commercial, development/construction, or

institutions.

2. An 'Outreach to Change Behavior' Campaign to promote one behavior change directed at two audiences using a minimum of three (3) outreach tools per year. This campaign will promote and reinforce desirable behaviors designed to reduce stormwater pollution.

In 2018, the ISWG executed a statewide survey to assess public awareness of a variety of stormwater issues and related behaviors. The survey results report¹ was included in the ISWG Permit Year 5 (2017-2018) annual reports. In addition, the ISWG communities reviewed regional water quality related to stormwater issues, examined unique conditions within each of their communities, and evaluated the needs for public education around stormwater at five of their regional meetings (9/13/2018, 3/21/2019, 7/18/2019, 3/26/2020, 5/21/2020). Based on the survey results and the discussions at their regional meetings, the ISWG communities agreed on which issues of significance to address and what tools and messages might be effective. Each of the BMP provides a brief introductory section describing the rationale for the selection of the BMP based on the ISWG members' understanding of their community. The BMPs are further structured to allow for adaptive education and outreach approaches to create a strong, diverse, and effective campaign over the duration of this permit.

The Town of Windham will fulfill the requirements for Public Education/Outreach through participation in the ISWG and the Town's provision of funding to the Cumberland County Soil & Water Conservation District (CCSWCD) for Public Education/ Outreach services, as described in the following BMPs. The BMPs will be implemented according to their individual timelines over the term of the permit.

2.1.1 BMP 1.1 – Outreach to Raise Awareness Campaign

Responsible Party: Environmental & Sustainability Coordinator (with implementation assistance from CCSWCD)

The 2022 MS4 General Permit requires the permittee to raise awareness of the public as well as one of the following audiences: municipal, commercial, development/construction, or institutions. This BMP describes the reasoning and measurable goals for the public audience and the selected audience: development/construction.

Background for Measurable Goal 1.1a Public Audience: The Think Blue Maine campaign began in 2003 as a statewide effort to raise awareness of common stormwater pollutants and ways to prevent those pollutants. The Think Blue Maine campaign has been historically successful in increasing awareness of stormwater issues. The ISWG, AVSWG, and SWSWG coordinate their Think Blue Maine messaging and education efforts to provide consistent messaging in Southern Maine. In addition, the Massachusetts and New Hampshire small MS4s are using similar Think Blue campaigns, so there is regionally consistent messaging in circulation.

¹ http://thinkbluemaine.cumberlandswcd.org/wp-content/uploads/2018/07/Survey_Summary-FINAL.pdf

In 2018, the ISWG executed a statewide survey around public awareness of stormwater issues, and behaviors that impact stormwater. Ninety-four percent of survey respondents in the ISWG region ages 25-34 stated it was “very important to have clean water in the lakes and streams in [their] community”, and 86% of ISWG respondents ages 25-34 believe that stormwater runoff has a major impact or somewhat impacts water quality, but only 46% of the ISWG respondents ages 25-34 were able to correctly describe what happens to stormwater at their residences. The ISWG communities will use the Think Blue Maine campaign to raise awareness of the target audience to be more aware of stormwater issues and be more willing to change their behavior in the future.

Measurable Goal 1.1a – The Town, through its participation in the ISWG, will implement the following program which is designed to raise 15%² of the target audience’s awareness of what happens to stormwater at their residence or place of work. According to the 2019 U.S. Census Bureau, the ISWG region’s population for ages 25-34 is approximately 38,000 people, and 15% of the target audience is 6,000 people.

Target Audience: People 25-34 in the ISWG region.

Overarching Message: “Water that lands on our roads, roofs, and other hard surfaces picks up pollutants and carries them to our local waterbodies without being treated.”

This message will be presented with variations based on target audience interests and outreach tools used.

Outreach Tools: A minimum of three outreach tools will be selected from [Appendix F \(Table 1. Tools for Measurable Goal 1.1a\)](#) each year. Each tool will be assessed and customized based on the target audience’s receptiveness to the method. Any tool used in a given year will be tailored to the message of the relevant target audience subset based on common characteristics and/or demographics.

Evaluation: Effectiveness will be evaluated annually by tracking process indicators³ for each tool implemented that year and by tracking impact indicators⁴ where available (see [Appendix F \[Table 1. Tools for Measurable Goal 1.1a\]](#)).

Implementation schedule: A minimum of three tools from [Appendix F \(Table 1. Tools for Measurable Goal 1.1a\)](#) will be implemented each year for the duration of the permit.

Adaptive Management: As part of the ISWG adaptive management education and outreach program, tools and messaging will be reviewed and evaluated on an annual basis at a minimum as part of annual reporting. To address emerging issues, opportunistic tools and outreach may also be implemented. Seasonal messaging and tools adjustments will be used

² As recommended in the EPA’s “Getting in Step: A guide for conducting watershed outreach campaigns” (2003), when 15 to 20 percent of an audience adopts a new idea or behavior, it will be able to permeate to the rest of the audience.

³ Indicators related to the execution of the outreach program.

⁴ Indicators related to the achievement of the goals or objectives of the program.

when applicable. Report findings will be incorporated into ISWG meeting discussions as well as annual workplans and budgets.

Background for Measurable Goal 1.1b Development/Construction Audience: Evaluation of municipal stormwater programs, through annual meetings with municipal staff and officials, has revealed a large amount of effort required to comply with MCM 4 tasks. The ISWG communities identified opportunities to better address common MCM 4 goals through coordinated regional and statewide stormwater education to developers and contractors to reduce development and construction-related stormwater pollutants that are not already required by MCM 4. Due to the cyclical nature of the development/construction sector, the target audience baseline cannot be established until Permit Year 1 to establish contractor and developer awareness and the baseline target audience.

Measurable Goal 1.1b – The Town, through its participation in the ISWG, will implement the following program which is designed to raise awareness of developers and contractors by 15% from the Permit Year 1 established baseline audience of developers and contractors about construction-related stormwater pollutants and methods available to reduce discharge of those pollutants.

Target Audience: Developers and contractors who operate within the ISWG region.

Overarching Message: “Through proper design and site management, erosion and sediment control best management practices can reduce the potential to negatively impact local water bodies.”

This message will be presented with variations based on target audience interests and outreach tools used.

Outreach Tools: A minimum of three outreach tools will be selected from [Appendix F \(Table 2. Tools for Measurable Goal 1.1b\)](#) each year. Each tool will be assessed and customized based on the target audience’s receptiveness to the method. Any tool used in any given year will be tailored to the message of the relevant target audience subset based on common characteristics and/or demographics.

Evaluation: Effectiveness will be evaluated annually by tracking process indicators for each tool implemented that year and by tracking impact indicators where available (see [Appendix F \[Table 2. Tools for Measurable Goal 1.1b\]](#)). Effectiveness will also be measured by the number of Maine DEP certified contractors operating in the ISWG region over the course of the permit term.

Implementation schedule: A minimum of three tools from [Appendix F \(Table 2. Tools for Measurable Goal 1.1b\)](#) will be implemented each year for the duration of the permit.

Adaptive Management: As part of the ISWG adaptive management education and outreach program, tools and messaging will be reviewed and evaluated on an annual basis at a minimum as part of annual reporting. To address emerging issues, opportunistic tools and outreach may also be implemented. Seasonal messaging and tools adjustments will be used

when applicable. Report findings will be incorporated into ISWG meeting discussions as well as annual workplans and budgets.

2.1.2 BMP 1.2 – Outreach to Change Behavior Campaign

Responsible Party: Environmental & Sustainability Coordinator (with implementation assistance from CCSWCD)

Background for BMP 1.2: The ISWG communities have focused on changing behavior to reduce nutrients into regional waterbodies in their MS4 permits for the past three permit cycles. The ISWG communities will continue their efforts to reduce sources of nutrients by promoting proper dog waste disposal to two target audiences this permit term for the following reasons:

1. Generally, excess nutrients in our waters are a nationally recognized water quality issue related to stormwater – there are multiple common sources of nutrients including sediments, pet waste, septic systems, and fertilizers.
2. The Statewide survey conducted in Permit Year 5 of the previous cycle identified that survey respondents are aware that nutrient sources (including dog waste) are a common stormwater pollutant and respondents expressed a willingness to take action to help reduce stormwater pollution. Eighty-four percent of 2018 survey respondents in the ISWG region ages 25-34 and 67% of 2018 survey respondents in the ISWG region ages 35-55 selected “picking up pet waste and putting it in the trash” as a practice they believed would reduce water pollution.
3. Most ISWG communities are part of the Casco Bay watershed. In the June 2019 Casco Bay Nutrient Council report, nutrients were identified as the main pollutant of concern for the health of Casco Bay. While there is discrepancy between nutrient models as to the contribution percentages of the three main sources of nutrients (stormwater, wastewater, and atmospheric deposition), stormwater runoff is believed to contribute between 24% and 64% of the nitrogen entering the bay.
4. Several ISWG communities have encountered problems with dog waste not being picked up⁵ or not being properly disposed of in the trash, causing local water quality concerns⁶ and unsanitary conditions for the public and municipal staff.
5. Most ISWG communities have taken steps to discourage improper dog waste disposal through ordinances. However, there are currently still barriers to effectively educating and enforcing these types of ordinances.
6. Dog owners ages 25-64 are the least likely age group to pick up after their dog⁷. However, dog owners ages 25-64 receive their information through different outreach methods⁸. To

⁵<https://www.pressherald.com/2019/03/21/south-portland-raises-a-red-flag-over-dog-waste-problem-at-hinckley-park/>

⁶<https://www.pressherald.com/2019/08/30/south-portland-park-tests-positive-for-algae-that-can-harm-dogs/>

⁷ Hall, S.L. (2006 June) Survey on Poop: Half don't scoop; neighborhoods seeking solutions. *The News & Observer*, pp. B1.

⁸<https://umaine.edu/undiscoveredmaine/small-business/resources/marketing-for-small-business/social-media-tools/social-media-statistics-details/>

provide effective messaging on proper dog waste management, two audiences will be created to allow appropriate outreach tools to be used per age group.

A baseline evaluation will be conducted in Permit Year 1 to establish dog owner behavior of dog waste disposal and the baseline target audience with the ISWG region.

Measurable Goal 1.2a – The ISWG communities will work toward changing the behavior of 15% of pet owners so more will properly dispose of their pet waste.

Target Audience: Pet owners ages 25-34 within the ISWG region.

Overarching Message: “Dispose of pet waste as a solid waste, so it does not end up in our stormwater. Once in the stormwater, pet waste contributes nutrients, bacteria, and pathogens to our ponds, lakes, streams, rivers, and bays, which can lower property values, harm our drinking water, and hinder recreational and economic opportunities.”

This message will be presented with variation based on target audience interests and outreach tools used.

Outreach Tools: A minimum of three outreach tools will be selected from [Appendix F \(Table 3. Tools for Measurable Goal 1.2a\)](#) each year. Each tool will be assessed and customized based on the target audience’s receptiveness to the method. Any tool used in a given year will be tailored to the message of the relevant target audience subset based on common characteristics and/or demographics.

Evaluation: Effectiveness will be evaluated annually by tracking process indicators for each tool implemented that year and by tracking indicators where available (see [Appendix F \[Table 3. Tools for Measurable Goal 1.2a\]](#)). Effectiveness will also be evaluated by conducting visual (observational) surveys of pet waste disposal at public areas and tracking the presence of pet waste bags in catch basins. These annual field surveys will be on established routes and include geotagging of observed dog waste. Site factors such as signage, community litter cleanups, and other variables will also be documented. In addition, presence of dog waste bags in catch basins will be recorded during annual inspections. In Permit Year 1, the field survey work will be supplemented by also observing the age groups utilizing the spaces and their pet waste disposal behavior in a subsample of the sites. This supplemental observation will be repeated in Permit Year 5.

Implementation schedule: A minimum of three tools from [Appendix F \(Table 2. Tools for Measurable Goal 1.2a\)](#) will be implemented each year for the duration of the permit.

Adaptive Management: As part of the ISWG adaptive management education and outreach program, tools and messaging will be reviewed and evaluated on an annual basis at a minimum as part of annual reporting. To address emerging issues, opportunistic tools and outreach may also be implemented. Seasonal messaging and tools adjustments will be used when applicable. Report findings will be incorporated into ISWG meeting discussions as well as annual workplans and budgets.

Measurable Goal 1.2b – The ISWG communities will work toward changing the behavior of 15% of pet owners so more will properly dispose of their pet waste.

Target Audience: Pet owners ages 35-55 within the ISWG region.

Overarching Message: “Dispose of pet waste as a solid waste, so it does not end up in our stormwater. Once in the stormwater, pet waste contributes nutrients, bacteria, and pathogens to our ponds, lakes, streams, rivers, and bays, which can lower property values, harm our drinking water, and hinder recreational and economic opportunities.”

This message will be presented with variation based on target audience interests and outreach tools used.

Outreach Tools: A minimum of three outreach tools will be selected from [Appendix F \(Table 4. Tools for Measurable Goal 1.2b\)](#) each year. Each tool will be assessed and customized based on the target audience’s receptiveness to the method. Any tool used in a given year will be tailored to the message of the relevant target audience subset based on common characteristics and/or demographics.

Evaluation: Effectiveness will be evaluated annually by tracking process indicators for each tool implemented that year and by tracking indicators where available (see [Appendix F \[Table 4. Tools for Measurable Goal 1.2b\]](#)). Effectiveness will also be evaluated by conducting visual (observational) surveys of pet waste disposal at public areas and tracking the presence of pet waste bags in catch basins. These annual field surveys will be on established routes and include geotagging of observed dog waste. Site factors such as signage, community litter cleanups, and other variables will also be documented. In addition, presence of dog waste bags in catch basins will be recorded during annual inspections. In Permit Year 1, the field survey work will be supplemented by also observing the age groups utilizing the spaces and their pet waste disposal behavior in a subsample of the sites. This supplemental observation will be repeated in Permit Year 5.

Implementation schedule: A minimum of three tools from [Appendix F \(Table 4. Tools for Measurable Goal 1.2b\)](#) will be implemented each year for the duration of the permit. As part of the ISWG adaptive management education and outreach program, tools and messaging will be reviewed and evaluated on an annual basis at a minimum as part of annual reporting. To address emerging issues, opportunistic tools and outreach may also be implemented. Seasonal messaging and tools adjustments will be used when applicable. Report findings will be incorporated into ISWG meeting discussions as well as annual workplans and budgets.

2.1.3 BMP 1.3 – Effectiveness Evaluation

Responsible Party: Environmental & Sustainability Coordinator (with implementation assistance from CCSWCD)

Measurable Goal 1.3a – The Town, through its participation in ISWG, will submit an annual report each year of the 2022 MS4 General Permit term documenting the implementation of each BMP. The

annual report will include the message for each audience, the methods of distribution, the outreach tools used, the measures/methods used to determine on-going effectiveness of the campaigns, and any changes planned based on the measures of effectiveness.

Measurable Goal 1.3b – In Permit Year 5 of the 2022 MS4 General Permit the Town, through its participation in ISWG, will conduct an evaluation of the overall effectiveness of the Awareness and Behavior Change BMPs (BMPs 1.1 and 1.2). The evaluation will be a review of the annually reported benchmark values for the Awareness and Behavior Change BMPs as well as documentation of overall changes during the permit term by comparing back to the established baselines.

- For Measurable Goal 1.1a, a survey will be conducted in Permit Year 5 to assess the target audience’s awareness of stormwater issues and what happens to stormwater at their residence or place of work and will be compared to the survey issued in 2018.
- For Measurable Goal 1.1b, the number of DEP certified contractors located in the ISWG region in Permit Year 5 will be compared to the Permit Year 1 established baseline audience to determine the net number of new certified contractors aware of erosion and sediment control practices.
- For Measurable Goal 1.2a and 1.2b, the amount and presence of pet waste found in the ISWG region in Permit Year 5 field surveys will be compared to the established baseline field surveys conducted in Permit Year 1.

The evaluation will identify recommendations of future awareness and behavior change target audiences, messages, tools, and benchmarks.

2.1.4 BMP 1.4 – Optional Activities

Responsible Party: Environmental & Sustainability Coordinator (with implementation assistance from CCSWCD)

This BMP describes activities that are not required by the 2022 MS4 General Permit but may be conducted by the Town to supplement the Education/Outreach program.

Measurable Goal 1.4a – The Town will continue to support the Cumberland County Soil & Water Conservation District’s youth education curriculum to community schools, as funding allows. Annual reports will include the total number of students reached, which schools were involved, and the lesson topics covered.

Measurable Goal 1.4b – The Town will support the regional YardScaping effort to reduce nutrients from entering regional waterways and increase buffers. Annual reports will include the total number of people reached, partner point of sale locations, and workshop survey data.

2.2 MCM 2 – Public Involvement and Participation

The Town of Windham will fulfill the requirements for Public Involvement and Participation through participation in ISWG and the Town’s provision of funding to the CCSWCD for Public Involvement and Participation services, or through directly fulfilling the requirements, as described

in this section of the SWMP.

2.2.1 BMP 2.1 – Public Notice Requirement

Responsible Party: Environmental & Sustainability Coordinator (with implementation assistance from CCSWCD)

Measurable Goal 2.1a: The Town will follow applicable state and local public notice requirements for their SWMP and NOI to comply with the 2022 MS4 General Permit. Copies of the NOI and SWMP will be made available on the Town’s website. The Town will document public meetings related to their stormwater program and attendance of those meetings in their annual report.

Measurable Goal 2.1b: The ISWG members meet as a group six times per year to review issues associated with implementation of the SWMP and MS4 General Permit. These meetings will be publicized through the CCSWCD website, on ISWG member websites, and are open to the public.

2.2.2 BMP 2.2 – Public Event

Responsible Party: Environmental & Sustainability Coordinator (with implementation assistance from CCSWCD)

Measurable Goal 2.2a: The Town will annually host, conduct, and/or participate in a public community event with a pollution prevention and/or water quality theme from the list included in the 2022 MS4 permit, or another activity approved by the Maine DEP. Stormwater stewardship and educational messages and activities will be incorporated into the event. The event will be advertised on the Town’s website, through the Town’s and CCSWCD’s social media accounts, and other Town and CCSWCD communication methods. The annual report will include a description of the event and the estimated attendance/participation.

2.3 MCM 3 – Illicit Discharge Detection and Elimination

The Town of Windham will continue to implement its Illicit Discharge Detection and Elimination (IDDE) program, which includes:

- A watershed-based map of the stormwater infrastructure
- A written IDDE Plan, which describes:
 - Inspections of the infrastructure during dry weather (and monitoring of outfalls that flow during dry weather)
 - Investigations of potential illicit discharges
 - Enforcement of the Non-Stormwater Discharge Ordinance
 - A Quality Assurance Project Plan (QAPP)
- Development of a list of outfalls that have the potential to cause illicit discharges during wet weather.

The following BMPs will be implemented to meet this Minimum Control Measure. The [Town’s Code of Ordinances](#) are referenced in this MCM and are available online.

2.3.1 BMP 3.1 – Continue to Maintain Watershed-Based Storm Sewer System Infrastructure Map

Responsible Party: Environmental & Sustainability Coordinator and GIS Coordinator

Measurable Goal 3.1a: The Town created a watershed-based map of the MS4 infrastructure during the prior three permit cycles (2003-2022). The map shows the locations of stormwater catch basins, drain manholes, connecting surface and subsurface infrastructure showing the direction of pipe flow and the locations of stormwater outfalls. The infrastructure is documented in a Geographic Information System (GIS), which contains unique identifiers for outfalls and catch basins, as well as outfall material, size and receiving water. The map is updated annually as follows:

- The GIS geodatabase is updated to reflect changes to infrastructure based on inspections by Public Works Staff/Environmental & Sustainability Coordinator/GIS intern by June 30 of each year.
- The GIS geodatabase is updated when as-built drawings become available for municipal infrastructure.

2.3.2 BMP 3.2 – Continue to Implement the Non-Stormwater Discharge Ordinance

Responsible Party: Code Enforcement Department and Environmental & Sustainability Coordinator

Measurable Goal 3.2a: The Town implemented a Non-Stormwater Discharge Ordinance on February 11, 2005. The Environmental & Sustainability Coordinator coordinates the enforcement of the ordinance with assistance and implementation from the Code Enforcement Department. The Town will continue to enforce this ordinance throughout the permit cycle.

Measurable Goal 3.2b: The Town will document the results of enforcement action taken for illicit discharges in an excel spreadsheet.

2.3.3 BMP 3.3 – Maintain a Written IDDE Plan

Responsible Party: Environmental & Sustainability Coordinator

Measurable Goal 3.3a: The Town prepared a written IDDE Plan in January 2017, which has been updated to contain the elements required in the 2022 MS4 General Permit (Part IV.C.3.b.i through vi). The updated IDDE plan is contained in [Appendix D](#) of this SWMP. The IDDE Plan will be reviewed annually and updated if needed to reflect any changes to the program.

Measurable Goal 3.3b: The Town will conduct a wet weather assessment in accordance with the 2022 MS4 General Permit Part IV.C.3.f. and will incorporate the wet weather assessment into their IDDE Plan by the end of Permit Year 5 (6/30/2027).

2.3.4 BMP 3.4 – Conduct Infrastructure Inspections and Monitor Flowing Outfalls

Responsible Parties: Environmental & Sustainability Coordinator, Public Works Personnel

Measurable Goal 3.4a: The Town will conduct infrastructure inspections for pollutants using the following frequency:

- One dry weather inspection will be conducted on each outfall at least once per permit cycle as required by the 2022 MS4 General Permit.
- Catch basins will be inspected for evidence of pollutants during their required sediment inspections during catch basin cleaning (BMP 6.4).

Measurable Goal 3.4b: If an outfall is observed to be flowing during a dry weather inspection, the flow will be sampled and analyzed once per permit term using the methods described in the IDDE Plan unless it is exempt from dry weather investigations (as described in Part IV.C.3.e.vi of the 2022 MS4 General Permit). Outfalls sampled during dry weather will be handled as follows:

1. Outfalls where sampling and analysis reveals the potential for an illicit discharge: The Town will investigate the catchment area associated with the outfall for potential illicit discharges as described under Measurable Goal 3.5a.
2. Outfalls where sampling and analysis does not reveal the potential for an illicit discharge: The Town will document the dry weather flow as either uncontaminated groundwater, water from a natural resource, or an allowable non-stormwater discharge.

The Environmental and Sustainability Coordinator will summarize the monitoring results and any investigation completed, or the exempt status, as applicable, in an Excel spreadsheet or GIS geodatabase.

The Town's IDDE Plan (contained in [Appendix D](#)) describes the information collected during infrastructure inspections. The Town documents inspections electronically in GIS.

2.3.5 BMP 3.5 – Conduct Investigations on Suspect Illicit Discharges and Flowing Outfalls

Responsible Parties: Environmental & Sustainability Coordinator, Public Works Personnel

Measurable Goal 3.5a: When the Town becomes aware of a potential illicit discharge, it will investigate to identify the source using methods described in the written IDDE Plan ([Appendix D](#)). The Environmental & Sustainability Coordinator will track the status and outcome of the investigations in an Excel spreadsheet or GIS geodatabase.

2.3.5 BMP 3.6 – Significant Contributors of Pollutants

Responsible Party: Environmental & Sustainability Coordinator

Measurable Goal 3.6a: During the previous permit cycle, the Maine DEP identified that hydrant flushing was a potential contributor of pollutants to MS4s. The Maine DEP published an issue profile providing water districts and departments guidance on how to meet ambient water quality standards for chlorine during hydrant flushing. The document was specifically designed for discharges to MS4s. In addition, the Maine Rural Water Association and Maine Water Utilities Association prepared a guidance document and training to show water districts and departments

how to meet the requirements of the issue profile.

The Town previously requested annual reports from Portland Water District describing their hydrant flushing dechlorination processes, and the Town will continue to request that they provide the reports each permit year.

Measurable Goal 3.6b: If any of the following allowed non-stormwater discharges (in addition to hydrant flushing) are identified as significant contributors of pollutants to the MS4, the Town will work with the responsible dischargers to control these sources, so they are no longer significant contributors of pollutants.

- Landscape irrigation
- Diverted stream flows.
- Rising groundwater
- Uncontaminated groundwater infiltration (as defined in 40 CFR 35.2005(20))
- Uncontaminated pumped groundwater
- Uncontaminated flows from foundation drains
- Air conditioning and compressor condensate
- Irrigation waters
- Flows from uncontaminated springs.
- Uncontaminated water from crawl space pumps
- Uncontaminated flows from footing drains
- Lawn watering runoff
- Flows from riparian habitats and wetlands.
- Residual street wash water (where spills/leaks of toxic or hazardous materials have not occurred, unless all spilled material has been removed and detergents are not used)
- Firefighting activity runoff
- Water line flushing and discharges from potable water sources (hydrant flushing is discussed in MG 3.6a)
- Individual residential car washing
- Dechlorinated swimming pool discharges

2.4 MCM 4: Construction Site Stormwater Runoff Control

The Town of Windham will update, implement, and enforce its Construction Runoff Control Program for construction activities that disturb greater than or equal to one acre of land including projects less than one acre that are part of a larger common plan of development or sale as required by the 2022 MS4 General Permit through implementation of BMPs as described in this section.

Overall, the Town's existing Land Use Ordinances contain requirements that meet most elements of the Construction Site Stormwater Runoff Control MCM, but some modifications are required to meet the 2022 MS4 General Permit requirements. The Town has Site Plan Review and Subdivision Review standards, which include the development of erosion and sediment control plans for all sites subject to Site Plan Review and Subdivision Review, including minor and major development and minor and major subdivisions. Additionally, development sites not subject to the Site Plan Review or Subdivision Review requirements of submitting an Erosion Control Plan, may fall under the Town's Surface Water Protection Ordinance. This ordinance applies to all activities which

involve filling, grading, excavation, or other similar activities, which result in unstable soil conditions. A permit is required as well as a written soil erosion and sedimentation control (ESC) plan. [Windham Ordinances](#) can be found on the Town website. The following BMPs will be implemented to meet this Minimum Control Measure.

2.4.1 BMP 4.1 – Erosion Sediment Control Ordinance

Responsible Parties: Planning and Code Enforcement Department, Environmental & Sustainability Coordinator.

Measurable Goal 4.1a: The Town’s Site Plan Review and Subdivision Review procedures (included in the Land Use Ordinance) already specify that any application for Site Plan Review or Subdivision Review contain an Erosion and Sediment Control Plan. This requirement covers all sites that disturb one or more acres of land including projects less than one acre that are part of a larger common plan of development or sale as required by the 2022 MS4 General Permit.

The Town will update the Land Use Ordinance by 7/1/2023 to reference that the Erosion and Sediment Control Plan meet a set of standards consistent with the applicable sections of Attachment C to the 2022 MS4 General Permit, (i.e., Maine DEP Stormwater Rule Chapter 500 Appendices A: Erosion and Sediment Control, B: Inspections and Maintenance, and C: Housekeeping).

Measurable Goal 4.1b: Prior to the Land Use Ordinance update identified in Measurable Goal 4.1a, the Town will develop, either on its own or regionally, a set of standards consistent with the construction site requirements contained in Attachment C to the 2022 MS4 General Permit, (i.e., Maine DEP Stormwater Rule Chapter 500 Appendices A: Erosion and Sediment Control, B: Inspections and Maintenance, and C: Housekeeping).

The standards will include a requirement to control waste such as discarded building materials, concrete truck washouts, chemicals, litter, and sanitary waste at the construction site that may cause adverse impacts to water quality if passed through the storm drain system.

2.4.2 BMP 4.2 – Site Plan Review and Subdivision Review Procedures

Responsible Parties: Planning Department, Environmental & Sustainability Coordinator

Measurable Goal 4.2a: The Town’s Site Plan Review and Subdivision Review Procedures, which contain the required elements listed in the 2022 MS4 General Permit (consideration of potential water quality impacts, erosion control, waste storage, the ability for public comment at publicly noticed meetings and procedures to consider information submitted by the public), will continue to be implemented.

2.4.3 BMP 4.3 – Procedures for Notifying Construction Site Developer and Operators

Responsible Parties: Planning and Code Enforcement Department, Environmental & Sustainability Coordinator.

Measurable Goal 4.3a: The Town will continue notifying developers and contractors of requirements to obtain coverage under the Maine Construction General Permit (MCGP) and Chapter 500 Stormwater Management for sites that disturb one or more acres of land using the following methods:

- Providing check boxes on Planning Department applications and forms, and
- In discussions with applicants.

2.4.4 BMP 4.4 – Conduct and Document Construction Site Inspections

Responsible Parties: Planning and Code Enforcement Department, Environmental & Sustainability Coordinator.

Measurable Goal 4.4a: The Town will continue implementing its procedures for construction site inspections which will be formalized in a written document by 7/1/2022. The written procedure will include site inspection responsibility as well as who has authority to implement enforcement procedures. The Town will conduct erosion and sediment control inspections using the form in [Appendix E](#). The Town will conduct a minimum of three inspections during the active earth-moving phase of construction, with one of these inspections conducted at project completion to ensure the site has been stabilized and all temporary erosion and sediment controls have been removed. Additionally, the Town will complete one inspection annually until a project reaches substantial completion.

Measurable Goal 4.4b: The Town will document construction sites as part of the Construction Runoff Control Program each year using an excel spreadsheet. The documentation will include the site's name, map and lot number, location, dates of inspections, and any enforcement action and corrective action taken.

2.5 BMP 5 – Post-Construction Stormwater Management

As described in BMP 5.1, the Town of Windham will continue to implement its Post-Construction Stormwater Management Ordinance to address stormwater runoff from new development and redevelopment projects that disturb greater than or equal to one acre, including projects less than one acre that are part of a larger common plan of development or sale, that discharge into the Town's MS4 through implementation of the following BMPs.

The Town's current Ordinances contain provisions to prevent or minimize water quality impacts from development in accordance with the requirements of the MS4 General Permit. The following is a summary of the ordinance contents as they relate to the MCM 5 requirements:

[Chapter 140 Land Use Ordinance, Section 800 Site Plan Review & 900 Subdivision Review requires that:](#)

- The design of the stormwater drainage system shall provide for the disposal of stormwater without damage to streets, adjacent properties, downstream properties, soils, and vegetation.

[Chapter 144 Post-Construction Stormwater Ordinance](#) requires:

- Preparation and implementation of a Post-Construction Stormwater Management Plan for all new development and redevelopment projects within the urbanized area that disturb greater than or equal to one acre that discharge to the municipalities' MS4 and to associated stormwater management facilities.
- Submittal of an annual report documenting that all on-site BMPs have been inspected by a qualified, third-party inspector and are either functioning as intended or if they require maintenance and repair, a list of deficiencies, and documentation once they are corrected.

Windham Ordinances can be found on the Town website, using the links provided above. The following BMPs will be implemented to meet this Minimum Control Measure.

The Town will implement a set of Low Impact Development strategies to prevent or minimize water quality impacts as described in BMP 5.2.

2.5.1 BMP 5.1 – Maintain and Enforce Post-Construction Stormwater Ordinance

Responsible Party: Planning and Code Enforcement Department, Environmental & Sustainability Coordinator

Measurable Goal 5.1a: During the 2008-2013 permit cycle, the Town passed a Post-Construction Stormwater Ordinance (Chapter 144, effective July 9, 2009) which requires that any site that disturbs one or more acres certify to the Town annually by May 1st that they have inspected and maintained their stormwater BMPs. The Town will continue to require annual certification and will track the required information for annual reporting in an excel spreadsheet.

Measurable Goal 5.1b: By 7/1/2023, the Town's Post-Construction Ordinance (Chapter 144) will be updated to include provisions requiring the following for sites reporting that maintenance is required:

- Deficiencies will be corrected within 60 days of identification and a record of the correction action taken will be provided to the Town's Enforcement Authority within the same 60-day period.
- If it is not possible to correct the deficiency within 60 days, the property owner will coordinate with the Town to establish an expeditious schedule to correct the deficiency and will provide a record of the corrective actions taken.

2.5.2 BMP 5.2 – Implement strategies to prevent or minimize water quality impacts.

Responsible Party: Planning and Code Enforcement Department, Environmental & Sustainability Coordinator

Measurable Goal 5.2a: The Town, either on its own or through its partnership with the ISWG, will develop a Model LID Ordinance for stormwater management on new and redevelopment sites

which establishes performance standards for each of the LID Measures listed in Table 1 of Appendix F of the 2022 MS4 General Permit.

The Model LID Ordinance will be submitted to the Maine DEP for review by September 1, 2022. The 2022 MS4 General Permit identified that the Maine DEP will post the Model LID Ordinance for public comment and will approve it, with or without modifications by November 1, 2022.

Measurable Goal 5.2b: Assuming the Model LID Ordinance and its required elements are approved by November 1, 2022, the Town will either adopt the Model LID Ordinance, or incorporate its required elements into Town Ordinances on or before July 1, 2024.

2.6 MCM 6: Pollution Prevention/Good Housekeeping for Municipal Operations

The objective of this MCM is to mitigate or eliminate pollutant runoff from municipal operations on property that is owned or managed by the permittee and located within the Urbanized Area through implementation of the following BMPs.

2.6.1 BMP 6.1 – Operations at Municipally Owned Grounds and Facilities

Responsible Parties: Environmental & Sustainability Coordinator, Public Works Director

Measurable Goal 6.1a: During previous permit cycles, the Town developed an inventory of municipal operations conducted in, on, or associated with facilities, buildings, golf courses, cemeteries, parks, and open space owned or operated by the town that have the potential to cause or contribute to stormwater pollution. The Town will review and update its inventory annually.

Measurable Goal 6.1b: During previous permit cycles, the Town developed and implemented Operation and Maintenance (O&M) Procedures for the municipal operations listed in their inventory that had the potential to cause or contribute to stormwater pollution. The town will continue to implement these O&M Procedures and will review and update the O&M Procedures annually to iteratively improve strategies and practices to eliminate or better control pollutant discharges.

2.6.2 BMP 6.2 – Municipal Employee Training

Responsible Party: Environmental & Sustainability Coordinator

Measurable Goal 6.2a: Continue to implement the Town's municipal employee training program to reduce stormwater pollution potential from municipal operations and facilities. Topics to be covered by the training program may include, but not be limited to:

- Maintenance activities, maintenance schedules, and long-term inspection procedures for structural and non-structural stormwater controls to reduce pollutants discharged from the separate storm sewers.
- Controls for reducing or eliminating the discharge of pollutants into the separate storm sewers from streets, roads, highways, municipal parking lots, maintenance and storage

yards, fleet or maintenance shops with outdoor storage areas, salt/sand storage yards, and snow disposal areas.

- Procedures for disposing of waste removed from the separate storm sewers and areas listed above in accordance with the regulatory requirements (such as dredge spoil, accumulated sediments, floatables, and other debris).

2.6.3 BMP 6.3 – Continue Street Sweeping Program

Responsible Party: Public Works Department

Measurable Goal 6.3a: Each permit year, the Town will continue to sweep all publicly accepted paved streets and parking lots at least once a year as soon as possible after snowmelt.

2.6.4 BMP 6.4 – Cleaning of Stormwater Infrastructure including Catch Basins

Responsible Party: Public Works Department

Measurable Goal 6.4a: The Town will inspect its stormwater infrastructure for sediment content at least once every two years, but the Town will continue to attempt to inspect annually if time and municipal budget allows. Stormwater infrastructure that is found to have more than two inches of sediment during an inspection, will be cleaned. Sediment removed during stormwater infrastructure cleaning is stored and disposed of in accordance with state law.

Measurable Goal 6.4b: The Town will track catch basins with excess sediment (i.e., greater than or equal to 50% of sump filled) to ensure those catch basins are inspected again the following year and cleaned if necessary. If two consecutive inspections show excess sediment, the catch basin will be cleaned every year instead of every other year until it has been documented to exhibit less than 25% sediment in its sump for two consecutive years, at which point it will be removed from the excess sediment list and will be inspected every other year.

2.6.5 BMP 6.5 – Maintenance and Upgrading of Stormwater Conveyances and Outfalls

Responsible Party: Public Works Department

Measurable Goal 6.5a: The Town will maintain and upgrade the stormwater conveyance systems based on the results of the catch basin and outfall inspections, in accordance with the urgency of any needed repairs or maintenance. The Town will continue to perform systematic capital upgrades of the storm drain system in correlation with the road paving program for the town. The Town also inspects and maintains its stormwater treatment systems using a qualified inspector.

2.6.6 BMP 6.6 – Stormwater Pollution Prevention Plans (SWPPPs)

Responsible Party: Public Works Department

Measurable Goal 6.6a: During the previous permit cycle, the Town prepared a SWPPP for the Public Works Facility. The Town will amend the SWPPP to comply with the requirements specified in Part IV.C.6.d by 6/30/2022. In addition, the Town will amend the SWPPP within 30 calendar days of any

of the following:

- A change in design, construction, operation, or maintenance that may have significant effect on the discharge or potential for discharge of pollutants including the addition or reduction of industrial activity.
- Monitoring, inspections, or investigations by the Town, local, state, or federal officials which determines the SWPPP is ineffective in eliminating or significantly minimizing the intended pollutants.
- A discharge that occurs that is determined by the Maine DEP to cause or have the reasonable potential to cause or contribute to the violation of an applicable water quality standard.

Measurable Goal 6.6b: The Town will implement the SWPPP throughout each permit year including conducting quarterly facility inspections using the Town's own form and visual monitoring using the forms containing the inspection criteria identified in [Appendix G](#) of the 2022 MS4 General Permit.

2.7 Impaired Waters BMPs

As shown in Table 1, of Section 1.4 of this Plan, the Town does not discharge to any Urban Impaired Stream, and the Maine DEP confirmed that no additional actions need to be taken for any other impaired water as part of this Plan. Therefore, no BMPs or Measurable Goals are required to be implemented under this section.

SECTION 3 GENERAL REQUIREMENTS

3.1 Certification

The General Permit requires this SWMP be certified by either a principal executive officer or ranking elected official. This section provides the necessary 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."

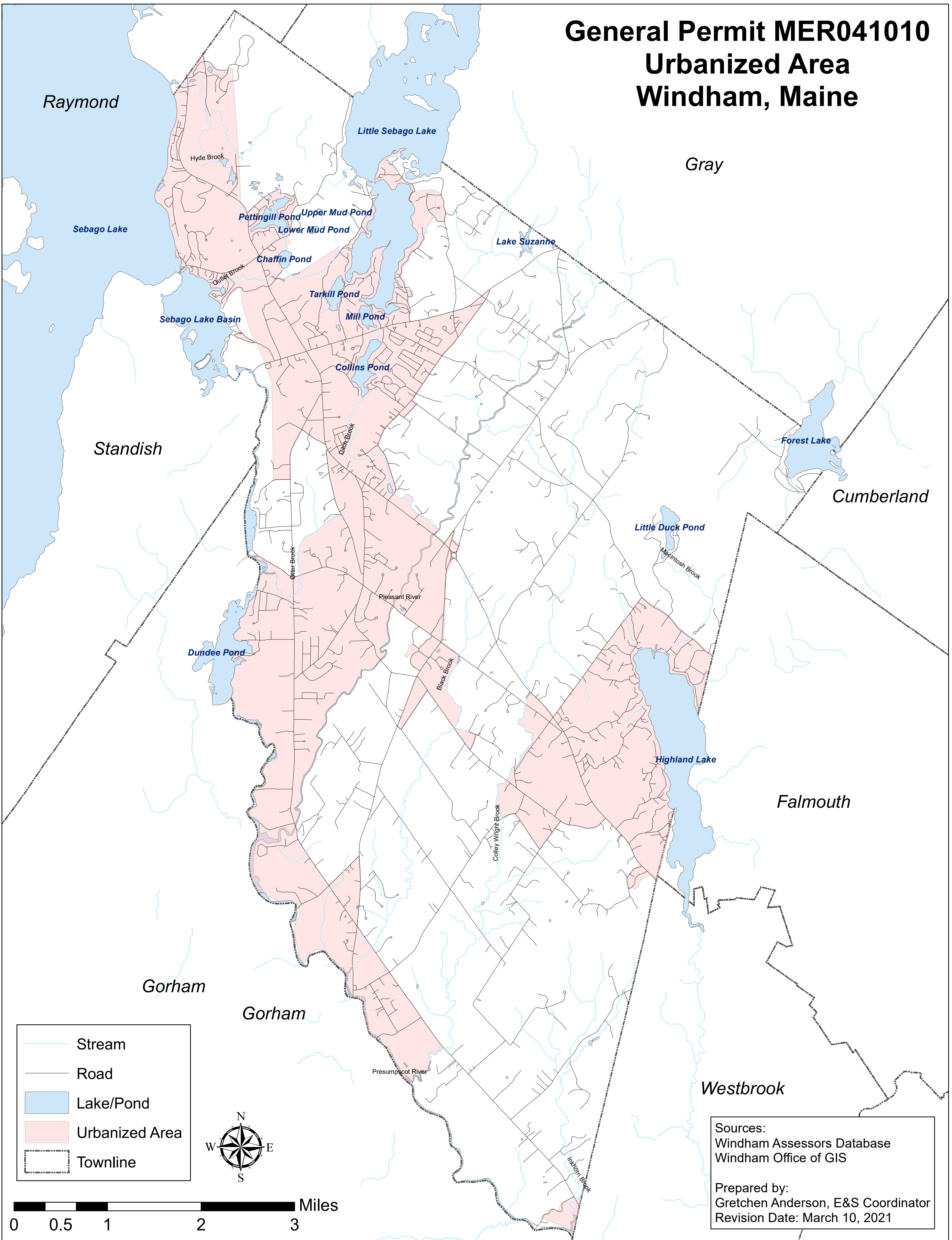
Signature: Barry A. Tibbetts Date: 6/27/2022
Barry Tibbetts

Title: Town Manager

APPENDICES

A. Urbanized Area Map

General Permit MER041010 Urbanized Area Windham, Maine



B. Notice of Intent, Public Notice, and Permittee Specific DEP Order



NOTICE OF INTENT TO COMPLY WITH MAINE GENERAL PERMIT FOR THE DISCHARGE OF STORMWATER FROM MUNICIPAL SEPARATE STORM SEWER SYSTEMS (MS4)

PLEASE TYPE OR PRINT IN **BLACK INK ONLY**

PERMITTEE INFORMATION					
MS4 Entity		Permittee ID #			
Name and title of chief elected official or principal executive officer					
Mailing Address					
Town/City		State		Zip Code	
Daytime Phone		Email			
PRIMARY CONTACT PERSON FOR OVERALL STORMWATER MANAGEMENT PROGRAM (if different than PEO/CEO)					
Name and Title					
Mailing Address					
Town/City		State		Zip Code	
Daytime Phone		Email			
STORMWATER MANAGEMENT PLAN (SWMP)					
Urbanized Area (sq. mi.)					
I have attached our updated SWMP with ordinances, SOPs, forms. <input type="checkbox"/>					
Name of streams, wetlands, or waterbodies to which the regulated small MS4 discharges (<i>attach additional sheets as necessary</i>):					
List of impaired waterbodies that receive stormwater from the regulated small MS4 (<i>attach additional sheets as necessary</i>):					
CERTIFICATION					
I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.					
Signature of Permittee				Date	

This NOI registration form must be filed with the Department at the following address:

Stormwater Program Manager
 Maine Department of Environmental Protection
 Bureau of Water Quality
 17 State House Station
 Augusta ME 04333-0017
Rhonda.Poirier@maine.gov

OFFICE USE ONLY							
Date Recieved		Staff		Date Accepted		Date Not Accepted	

ZONING *Cont. from page 1*
number of small businesses.

"The proposed zone slightly reduces minimum lot sizes and road frontages to allow for more residential development that is consistent with the older subdivision developments in the area," Lessard said. "The Windham Center District, to the east of the Pleasant River, is intended to be the primarily residential civic village with a mixture of uses intended to complement the cultural, public, and institutional uses with other small business that meet local neighborhood needs."

This proposed zone further reduces minimum lot sizes and road frontages (to be the same as the Town's current Medium-Density Residential zone and proposes to allow additional commercial uses that are limited in size, Lessard said.

"Both districts are proposed to require pitched rooflines, all new streets must be public streets, and new development on existing public streets must provide sidewalks along the frontage of the lot," she said.

It will be several months before Windham town councilors could vote on the rezoning proposal as there is a process to follow.

"The LRPC will consider revisions

to the proposal based on public input and make a recommendation to the Windham Town Council," Lessard said. "The Land Use Ordinance specifies the process for amendments, so the Council will forward the proposal to the Planning Board for review and recommendation."

As part of the process, a public hearing will be held as part of the Windham Planning Board's review. The board's recommendation will be sent back to the Windham Town Council for discussion and a public hearing before a vote is held.

Windham's Comprehensive Plan Update was adopted in June 2017 and included numerous policy and implementation strategies to achieve the vision for Windham in the next 10-plus years.

"These were distilled into the 4 Big Things, one of which was 'Change the game for Windham's Growth Areas: North Windham, Windham Center, South Windham,'" Lessard said. "This zoning change would expand the range of options available in Windham by allowing for different types and scales of neighborhood development and provide more options for people to choose from when considering Windham for a home or a place to start or expand a business." <

Maine DHHS offers free transportation to COVID vaccination clinics

The Maine Department of Health and Human Services is offering a new, free option for Maine people who need a ride to and from a COVID-19 vaccination appointment.

Maine DHHS is partnering with ModivCare, one of the organizations that coordinates rides for MaineCare members, to provide rides for any Maine resident who is unable to drive, lacks reliable transportation or is otherwise unable to travel to their appointment.

ModivCare will in turn partner with Community Action Programs and transportation companies to provide rides. This new option is in addition to the transportation support that DHHS already offers for eligible MaineCare members who face challenges getting to their vaccine appointment.

Individuals must have a vaccination appointment before requesting a ride and must request a ride at least 48 hours in advance of their appointment. More information on accessing this service is included below.

The dashboard on Maine's COVID-19 vaccination website shows that 20.4 percent of Maine residents have gotten their first doses and 11.6 percent have received final doses.

Currently, Maine residents age 60 and older are eligible to be vaccinated. Additionally, Maine residents who are educators, school staff, and childcare workers can get vaccinated. Maine DHHS and the Maine Department of Education are partnering with health care organi-

zations to hold dedicated vaccination clinics for school staff aged 60 and older on March 12, 13, and other dates. Additional information on vaccination for people in Maine is available at Maine's COVID-19 vaccine website.

Information about free ride program

Individuals must have a vaccination appointment before requesting a ride. Rides will be provided to and from the appointment. These may be shared rides so DHHS can provide transportation to as many people as possible, and face masks will be required.

DHHS can provide transportation for appointments that are scheduled Monday through Saturday from 7 a.m. to 4 p.m. At least 48 hours before the vaccine appointment, individuals should call 1-855-608-5172 to reserve a ride and should have the following information ready:

Date and time of appointment

Name, address, and phone number of the facility where they are receiving the vaccination.

MaineCare members who already use a Non-Emergency Transportation broker to arrange rides to their MaineCare-covered services should call that same broker for rides to vaccination clinics. This program is for MaineCare members who are ineligible for Non-Emergency Transportation as well as any other Maine resident who does not have access to reliable transportation to get to their vaccination appointment. <

LEGAL ADVERTISEMENT

TOWN OF RAYMOND Raymond, ME 04071 ZONING BOARD OF APPEALS SITE WALK Saturday, March 20, 2021 at 9:00a.m.

You are hereby notified of the Raymond ZONING BOARD OF APPEALS Site Walk at the following location Saturday, March 20, 2021 at 9:00am. regarding the information on the following application:

APPLICANT: Jeffrey D. Clark and Bethany A F Clark
LOCATION: 3 Orchard Estates Map 012 Lot 044/000 Zone R

DESCRIPTION: Requesting Variance to divide lot, creating one conforming and one non-conforming lot

The site walk will commence at 9:00 am on site. We request that attendees wear masks and observe all COVID 19 precautions.

VIDEO Public Hearing (Internet or Cable Public Access TV) Wednesday, March 31, 2021 • 7:00P.M.

You are hereby notified that the Raymond Appeals Board will hold a public hearing video conference public hearing on Wednesday, March 31, 2021 at 7:00 pm to hear information on the following application:

APPLICANT: Jeffrey D. Clark and Bethany A F Clark
LOCATION: 3 Orchard Estates Map 012 Lot 044/000 Zone R

DESCRIPTION: Requesting Variance to divide lot, creating one conforming and one non-conforming lot

The meeting can be viewed via the internet or on cable TV. The meeting will be streamed real time. from the local Government channel. This live stream is hosted on YouTube, so make sure that your computer or router/firewall does not block YouTube content.

A telephone number will be displayed on the screen for public comment call-in during the Public Hearing portion of the meeting.

Copy of the submitted application is available for review on the town website (<https://www.raymondmaine.org/content/zba-agenda>) after March 12, 2021, OR at the Town Office (401 Webbs Mills Road) by appointment during regular business hours.

TOWN OF WINDHAM

LEGAL NOTICE

The Municipality of Windham will file a Notice of Intent (NOI) to comply with the Maine General Permit for the Discharge of Stormwater from Small Municipal Separate Storm Sewer Systems issued 10/15/2020 (MER041000 W009170-5Y-C-R) and an associated Stormwater Management Plan (SWMP) with the Maine Department of Environmental Protection.

The NOI and SWMP will be filed by March 31, 2021.

A copy may also be seen at the Town of Windham municipal offices and on the municipal website: www.windhammaine.us/DocumentCenter/View/6948/Windham-Stormwater-Management-Plan-2022-2027. The DEP will review the submittal and assess if it is complete for processing within 60 days of submittal. Once it has been deemed complete for processing, it will be made available on the Maine DEP website for 30-day public comment: www.maine.gov/dep/comment/index.html.

A request for public hearing or request that the Board of Environmental Protection assume jurisdiction over this application must be received by the DEP, in writing, no later than 20 days after the application is found acceptable for processing. Requests must indicate the interest of the person filing the request and specify the reasons why a hearing is warranted. Unless otherwise provided by law, a hearing is discretionary and may be held if the Commissioner or the Board finds significant public interest or there is conflicting technical information.

The NOI and SWMP are also available for viewing at the DEP Office in Augusta by scheduled appointment during normal business hours during the pandemic. Written public comments or requests for information may be made to the Division of Water Quality Management, Department of Environmental Protection, State House Station #17, Augusta, ME 04333-0017; telephone (207) 592-6233 and must include the name of the municipality filing the NOI and the Permit number provided above.



STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION



JANET T. MILLS
GOVERNOR

MELANIE LOYZIM
COMMISSIONER

June 2, 2022

Mr. Barry Tibbetts
Town Manager
8 School Road
Windham, Maine 04062
e-mail: batibbetts@windhammaine.us

**RE: Municipal Separate Storm Sewer System (MS4) General Permit #MER041000
Final - MER041010**

Dear Mr. Tibbetts:

Enclosed please find a copy of your **final** MEPDES permit and Maine WDL which was approved by the Department of Environmental Protection. Please read this permit/license and its attached conditions carefully. Compliance with this permit/license will protect water quality.

Any interested person aggrieved by a Department determination made pursuant to applicable regulations, may appeal the decision following the procedures described in the attached DEP FACT SHEET entitled *“Appealing a Commissioner’s Licensing Decision.”*

If you have any questions regarding the matter, please feel free to call me at 287-7693. Your Department compliance inspector copied below is also a resource that can assist you with compliance. Please do not hesitate to contact them with any questions.

Thank you for your efforts to protect and improve the waters of the great state of Maine!

Sincerely,

Gregg Wood
Division of Water Quality Management
Bureau of Water Quality

Enc.

cc: Alison Moody, DEP/SMRO	Lori Mitchell, DEP/CMRO	Holliday Keen, DEP/CMRO
Irene Saumur, DEP/CMRO	Damien Houlihan, USEPA	Nathan Chien, USEPA
Richard Carvalho, USEPA	Newton Tedder, USEPA	Ivy Frignoca, FOCB

AUGUSTA
17 STATE HOUSE STATION
AUGUSTA, MAINE 04333-0017
(207) 287-7688 FAX: (207) 287-7826

BANGOR
106 HOGAN ROAD, SUITE 6
BANGOR, MAINE 04401
(207) 941-4570 FAX: (207) 941-4584

PORTLAND
312 CANCO ROAD
PORTLAND, MAINE 04103
(207) 822-6300 FAX: (207) 822-6303

PRESQUE ISLE
1235 CENTRAL DRIVE, SKYWAY PARK
PRESQUE ISLE, MAINE 04769
(207) 764-0477 FAX: (207) 760-3143



STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION
17 STATE HOUSE STATION
AUGUSTA, ME 04333

**DEPARTMENT ORDER
IN THE MATTER OF**

TOWN OF WINDHAM)	MUNICIPAL SEPARATE STORM
WINDHAM, CUMBERLAND COUNTY, MAINE)	SEWER SYSTEM
MER041010)	MER041000
)	GENERAL PERMIT COVERAGE
APPROVAL)	RENEWAL

The Department of Environmental Protection (Department/DEP) has considered the Notice of Intent submitted by the TOWN OF WINDHAM (Town/permittee), with supportive data, agency review comments and other related materials on file for coverage under the Municipal Separate Storm Sewer System (MS4) General Permit, #MER041000, issued by the Department on October 15, 2020 and revised on November 23, 2021, and FINDS THE FOLLOWING FACTS.

The permittee submitted a Notice of Intent (NOI) with an initial Stormwater Management Plan (SWMP) to the Department on March 30, 2021 that were made available for a 30-day public comment period on the Department's website at <https://www.maine.gov/dep/comment/comment.html?id=4463193>. No public comments were received on the NOI or the initial SWMP. The Department has reviewed the initial SWMP document and made the determination that the document is consistent with and fully articulates what is required to meet the MS4 GP standard. Pursuant to Part IV(B) of MS4 GP issued by the Department on October 15, 2020 and revised on November 23, 2021, the permittee must update the initial SWMP within 60 days of the effective date of this DEP permittee specific order or within 60 days of the final resolution to an appeal of this DEP permittee specific order. The final plan must be submitted to the Department and will be posted on the Department's website.

The permittee must fully implement the following Best Management Practices in accordance with their associated schedules of compliance, as established in the Modified Stormwater Management Plan that is in effect at the time any schedule for compliance is due.

- MCM 1: BMPs 1.1, 1.2, and 1.3.
- MCM 2: BMPs 2.1 and 2.2.
- MCM 3: BMPs 3.1, 3.2, 3.3, 3.4, 3.5, and 3.6.
- MCM 4: BMPs 4.1, 4.2, 4.3, and 4.4.
- MCM 5: BMPs 5.1 and 5.2.
- MCM 6: BMPs 6.1, 6.2, 6.3, 6.4, 6.5, and 6.6.

Modifications to the Initial Stormwater Management Plan required as a result of this Order, if any, must be provided to the Department in accordance with Part IV.B of the MS4 GP, and the Department will notify the permittee if further changes are required in accordance with Part IV.B.2.

The permittee has agreed to comply with all terms and conditions of the MS4 General Permit, #MER041000, dated October 15, 2020 and revised on November 23, 2021. Operated in accordance with the Municipal Separate Storm Sewer System (MS4) General Permit, #MER041000, the discharges identified by the permittee will not have a significant adverse effect on water quality or cause or contribute to the violation of the water quality standards of the receiving water.

THEREFORE, the Department GRANTS the TOWN OF WINDHAM, coverage under the Municipal Separate Storm Sewer System (MS4) General Permit, #MER041000, issued by the Department on October 15, 2020 and revised on November 23, 2021, subject to the terms and conditions therein.

This DEP permittee specific order becomes effective on July 1, 2022 and expires at midnight five (5) years after that date. If the GP is to be renewed, this DEP permittee specific order will remain in effect and enforceable until the Department takes final action on the renewal.

DONE AND DATED AT AUGUSTA, MAINE, THIS 2 DAY OF June , 2022.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: 

for Melanie Loyzim, Commissioner

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

The Notice of Intent was received by the Department on _____ March 30, 2021 .

The Notice of Intent was accepted by the Department on _____ April 5, 2021 .

FILED
JUNE 2, 2022
State of Maine
Board of Environmental Protection

Date filed with Board of Environmental Protection: _____

This Order prepared by GREGG WOOD, BUREAU OF WATER QUALITY

RESPONSE TO COMMENTS

During the period of March 16, 2022 through the date of signature of this final agency action, the Department solicited comments on the draft MEPDES DEP permittee specific order. The Department did receive timely written comments from the permittee and the Friends of Casco Bay (FOCB). Responses to substantive comments are as follows:

Comment #1(Permittee): The language in the draft order (italicized below) is potentially vague, which may lead to confusion about what steps are required for compliance.

“The permittee must fully implement all actions, schedules and milestones established in the March 31, 2021 initial SWMP and any revisions to the initial SWMP reflected in the final plan.”

Specifically, the permittee is concerned that in the SWMPs it may not always be clear what qualifies as mandatory “actions, schedules and milestones” and what does not. This is because the SWMPs were written broadly to, in addition to setting out specific and measurable actions, provide helpful context, educate officials and citizens about the Plan, and establish process, among other things. There is, therefore, significant text in the SWMPs that does not appear to be an action, schedule, or milestone, and thus would not be enforceable. The permittee is concerned that it will not always be clear exactly what is mandatory and what is not. Additionally, the permittee believes that the language about enforcing any additional revisions to the SWMP also may be somewhat unclear, given that SWMPs are living documents that are expected under the new MS4 general permit to evolve over time.

Response #1: The Department concurs with the permittee’s position on the purpose and enforceability of the SWMP as a stand-alone document. Part VI(E), *Relationship Between the SWMP and Permit Required Terms and Conditions* of the December 9, 2016 Federal Register states in relevant part “...under EPA small MS4 regulations, the details included in the permittee’s SWMP document are not directly enforceable as effluent limitations of the permit. The SWMP document is intended to be a tool that describes the means by which the MS4 establishes its stormwater controls and engages in the adaptive management process during the term of the permit. While the requirement to develop a SWMP document is an enforceable condition of the permit (see §122.34(b) of the final rule) the contents of the stormwater management document itself are not enforceable as effluent limitations of the permit, unless the document or specific details within the SWMP are specifically incorporated by the permitting authority into the permit.”

Part VI(E), also states in relevant part “... the details of any part of the permittee's program that are described in the SWMP, unless specifically incorporated into the permit, are not enforceable under the permit, and because they are not terms of the permit, the MS4 may revise those parts of the SWMP if necessary to meet any permit requirements or to make improvements to stormwater controls during the permit term. As discussed in more detail below, the permitting authority has discretion to determine what elements, if any, of the SWMP are to be made enforceable, but in order to do so it must follow the procedural requirements for the second step under Sec. 122.28(d)(2).

The regulations envision that the MS4 permittee will develop a written SWMP document that provides a road map for how the permittee will comply with the permit. The SWMP document(s) can be changed based on adaptations made during the course of the permit, which enable the permittee to react to circumstances and experiences on the ground and to make adjustments to its program to better comply with the permit. The fact that the SWMP is an external tool and not required to be part of the permit is intended to enable the MS4 permittee to be able to modify and retool its approach during the course of the permit term in order to continually improve how it complies with the permit and to do this without requiring the permitting authority to review and approve each change as a permit modification.”

Comment #2(Permittee): The General Permit does require that the SWMPs be updated and sent out for public comment annually and lays out a process for any other needed revisions. Multiple versions of the SWMPs should not be enforceable. The only version that should be enforceable is the version that is in force at the time a Best Management Practice or Measurable Goal is due. Accordingly, we recommend clarifying this provision to eliminate any potential confusion.

This will, in turn, promote compliance and lead to better water quality. To accomplish that, we note that our SWMPs have Best Management Practices (BMPs) with Measurable Goals and believe the second step order would be more clear if it references that we will fully implement those BMPs. This approach is consistent with Part III.A.8 of the GP which provides: “Following the public comment period on the NOI, the Department will issue a permittee specific DEP Order that establishes additional terms and conditions, including but not limited to, a list of required actions and corresponding schedules of compliance for a limited number BMPs associated with the implementation of this GP.” Thus, we suggest the following italicized text be incorporated into the final Order:

The permittee must fully implement the following Best Management Practices in accordance with their associated schedules of compliance, as established in the Modified Stormwater Management Plan that is in effect at the time any schedule for compliance is due:

MCM 1 Education/Outreach Program: BMPs 1.1, 1.2, and 1.3;

MCM 2 Public Involvement and Participation: BMPs 2.1 and 2.2;

MCM 3 Illicit Discharge Detection and Elimination: BMPs 3.1, 3.2, 3.3, 3.4, 3.5, and 3.6;

MCM 4 Construction Site Stormwater Runoff Control: BMPs 4.1, 4.2, 4.3, and 4.4;

MCM 5 Post-Construction Stormwater Management in New Development/Redevelopment: 5.1, and 5.2;

MCM 6 Pollution Prevention and Good Housekeeping for Municipal Operations: BMPs 6.1, 6.2, 6.3, 6.4, 6.5, and 6.6.

Modifications to the Initial Stormwater Management Plan required as a result of this Order, if any, must be provided to the Department in accordance with Part IV.B of the MS4 GP, and the Department will notify the permittee if further changes are required in accordance with Part IV.B.2.

Response #2: The revisions cited above are acceptable to the Department and are consistent with Remand Rule in that “the permitting authority has discretion to determine what elements, if any, of the SWMP are to be made enforceable, but in order to do so it must follow the procedural requirements for the second step under Sec. 122.28(d)(2).”

Part IV.B of the GP states in relevant part “Modified Stormwater Management Plan (SWMP). The permittee must implement and enforce a written (hardcopy or electronic) SWMP. The initial SWMP must be updated within 60 days of permit authorization to include how the permittee will meet all requirements of the DEP Order. The modified SWMP must include a summary of the comments received during the MS4s public comment period and any corresponding changes to the SWMP made in response to the comments received. The permittee must perform all actions required by the permittee specific DEP Order in accordance with the timelines in the permittee specific DEP Order. Unless otherwise specified by the Department in writing, the permittee must submit the updated SWMP to the Department indicating how the permittee has modified their SWMP to be consistent with the GP and permittee specific DEP Order. To modify the schedule established in the permittee specific DEP Order, the permittee must file an application on a DEP form with the Department that includes a justification to formally modify the original permittee specific DEP Order.”

The final DEP permittee specific order has been modified accordingly.

Comment #3 (FOCB): From the outset, Friends of Casco Bay has advocated for a comprehensive general permit with all clear, specific, and measurable terms needed to comply with the Remand Rule. The rule, however, allows DEP to issue either a comprehensive general permit or a two-step general permit. A two-step general permit consists of a base general permit and a second permitting step that establishes additional permit terms and conditions. The two documents combined meet the MS4 permit standard. We request that future MS4 permits be issued as comprehensive general permits.

Response 3: The Department will take the FOCB’s comment into consideration during the renewal of the MS4 GP in calendar year 2027 and consider renewing the permit as a comprehensive permit.

Comment #4 (FOCB): Because SWMPs are now second step orders, would DEP please clarify when a SWMP modification will be considered a minor permit modification that does not require public process and when SWMP modifications will be posted for public comment and process? Although the code of federal regulations spells this out, there has been much confusion throughout the permit renewal process, and clear guidance would be helpful.

Response #4: Based on the Responses #1 and #2 above, the entire SWMP is not an enforceable document. Specific BMPs under each MCM and or impaired waters section of the SWMP have been cited in this DEP permittee specific order and are enforceable. The 2022 MS4 General Permit is clear that MS4s must provide an opportunity for annual public comment on any changes to their SWMPs in Part IV(B)(2), and must provide notice to the DEP for any changes to schedules in the SMWP including a rationale for why there is a change. The Modified Stormwater Management Plan is self-implementing as this DEP permittee specific order states:

The permittee must fully implement the following Best Management Practices in accordance with their associated schedules of compliance, as established in the Modified Stormwater Management Plan that is in effect at the time any schedule for compliance is due.

If a party, during its annual review of an updated SWMP, wishes to object to modifications to the SWMP proposed by the permittee, it can petition the Department to remedy said objections to ensure the terms and conditions proposed in SWMP are consistent with the Clean Water Act and MS4 regulations.

Comment #5 (FOCB): Second step orders incorporate initial SWMPs that were written before the Board of Environmental Protection issued an order remanding the base general permit to DEP. In response to the order, DEP issued a permit modification that requires municipalities to adopt an ordinance that mandates the use of LID for new and re-development. The initial SWMPs uniformly contain terms relating to MCM 5 that do not comply with the BEP Order and subsequent permit modification. DEP should revise SWMPs and add all terms and schedules of compliance to second step orders to fully implement MCM 5 as set forth in the permit modification.

Response #5: All permittee's seeking coverage under the MS4 GP are subject to both the October 15, 2020 base general permit and the November 23, 2021 permit modification that mandates the use of LID for new and re-development. All permittees were copied on the final permit modification and are aware of the following language:

A. Low Impact Development

5. *MCM5 - Post-Construction Stormwater Management in New Development and Redevelopment.*

Each permittee must implement and enforce a program to address post construction stormwater runoff to the maximum extent practicable from new development and redevelopment projects that disturb greater than or equal to one acre, including projects less than one acre that are part of a larger common plan of development that discharge into the MS4.

- a. *The permittee must implement strategies which include a combination of structural and/or non-structural BMPs appropriate to prevent or minimize water quality impacts as follows:*

On or before September 1, 2022, each permittee must develop a Model LID Ordinance for stormwater management on new and redevelopment sites which establishes performance standards for each of the LID Measures contained in Table 1 of Appendix F. The Model LID ordinance should, at a minimum, refer to Appendix F for guidance.

The Model LID Ordinance shall be submitted to the Maine DEP for review by September 1, 2022. DEP will post the model ordinance for public comments and approve it, with or without modifications, on or before November 1, 2022.

On or before July 1, 2024 each permittee shall adopt an ordinance or regulatory mechanism that is at least as stringent as the required elements of the Model LID Ordinance or incorporate all of its required elements into the permittee's code of ordinances or other enforceable regulatory mechanism.

Each permittee is aware these terms and terms are to be incorporated into the Modified Stormwater Management Plan to be submitted to the Department within 60 days of permit authorization. Therefore, this order remains unchanged.

Comment #6 (FOCB) - To meet the measurable requirement, permittees must evaluate the effectiveness of actions to reduce stormwater pollution. Some of the second step orders contain terms that do not satisfy this standard. Our review focused on terms to reduce stormwater pollution to impaired waters. The BMPs that fail to satisfy the Remand Rule are BMPs that contain a budget caveat. BMPs to restore water quality to impaired waters must be implemented without reference to budget.

The modified base general permit requires permittees that discharge to an impaired water(s) to implement three clear, specific and measurable BMPs to restore water quality. Some second step orders condition the implementation of a BMP on the passage of a budget. If the permittee does not pass a budget to fund the BMP, then the permittee does not have to implement it. Recommending but not executing BMPs does not restore water quality. Nor does it meet the mandate that second step orders require municipalities to implement three BMPs for each impaired water. Finally, it is troubling policy to treat permittees inconsistently. DEP should remove the budget caveat from second step orders. If budget becomes an issue, permittees could propose alternate and equally effective BMPs to DEP that could be considered through a permit modification.

Response #6 – Neither the March 16, 2022 draft DEP permittee specific order or the permittee’s initial SWMP contained language regarding a budget caveat. This comment is not applicable to the permittee.

Comment #7 (FOCB): To meet the measurable requirement, permittees must evaluate the effectiveness of actions to reduce stormwater pollution. Some of the second step orders contain terms that do not satisfy this standard. Our review focused on terms to reduce stormwater pollution to impaired waters. The BMPs that fail to satisfy the Remand Rule include the Long Creek BMP. Second step orders for MS4s that discharges to Long Creek must be modified to include clear, specific and measurable BMPs.

The Long Creek watershed is located in the MS4 municipalities of South Portland, Westbrook, Portland and Scarborough. Long Creek is impaired by urban development which has altered stream beds and flows, covered much of the landscape with impervious surfaces, and delivered slugs of pollution to Long Creek including excessive chlorides from winter application of road salt. Using residual designation authority under the CWA, the State issued a general permit regulating stormwater discharges in these municipalities from MS4, commercial and industrial sources. In relevant part, the existing Long Creek permit replaced requirements of the 2013 MS4 Permit. The Long Creek general permit expired April 15, 2020 and has been administratively continued.

Part of the delay in reissuing the Long Creek permit may stem from the fact that EPA has advised DEP that the permit must be renewed with clear, specific and measurable terms commensurate with the Remand Rule. As written, the Long Creek permit is a very general permit supported with non-enforceable management plans.

MS4 municipalities:

[M]ay rely upon another entity to satisfy its NPDES permit obligations to implement a minimum control measure if:

- (1) The other entity, in fact, implements the control measure;
- (2) The particular control measure, or component thereof, is at least as stringent as the corresponding NPDES permit requirement; and

(3) The other entity agrees to implement the control measure on the permittee's behalf.

In this case, the 2015 Long Creek general permit is not as stringent as the requirements of the 2022 MS4 Permit because it contains no clear, specific and measurable actions. Therefore, MS4 communities cannot rely on the 2015 Long Creek general permit to comply with the 2022 MS4 Permit. This may be easy to cure. DEP could review the Long Creek Restoration Project Plans and select three clear, specific and measurable actions to include in the South Portland, Portland, Westbrook and Scarborough second step orders.

Response #7 (FOCB): This comment is not applicable to the permittee as it does not discharge to Long Creek.

Comment #8 (FOCB) - We had hoped that second step orders would encourage, where appropriate, the development and implementation of fertilizer ordinances to reduce nutrient pollution to urban impaired and threatened waters. For example, Portland seeks to implement a fertilizer ordinance under its pending Integrated Plan to reduce nutrient pollution. We had hoped this decision might be supported through the MS4 process.

Response #8: The Department agrees with the commenter that developing and implementing a fertilizer ordinance can be an effective BMP to reduce nutrient loading to surface water bodies. Short of formally adopting an ordinance, many of the permittees have developed BMPs in their SWMPs to address nutrient loading to surface water bodies by way of public education (MCM1 and MCM2), yard-scaping programs and watershed management plans.

Comment #9 (FOCB): To meet the measurable requirement, permittees must evaluate the effectiveness of actions to reduce stormwater pollution. Some of the second step orders contain terms that do not satisfy this standard. Our review focused on terms to reduce stormwater pollution to impaired waters. The BMPs that fail to satisfy the Remand Rule include the chlorides reduction BMP. The chlorides reduction BMP must be replaced with clear, specific and measurable actions that reduce chlorides pollution to the MEP.

Many urban impaired streams cannot be restored without reducing chlorides. To address this, some second step orders contain the following provision:

- a. At least one representative from the City must attend an annual regional training or roundtable to learn about new chloride reduction techniques coordinated by the ISWG or another organization.
- b. The permittee, solely or in combination with others, must;
 - Beginning July 1, 2022 and alternating years thereafter until it passes, provide educational outreach to legislators regarding limited liability legislation and at least two other organizations representing firms that conduct application of chloride on private property;
 - In years when limited liability legislation has not passed and is not active for procedural reasons, the City will provide winter maintenance education and outreach to the public using two tools from the City's Stormwater Management Plan.
 - The first year after legislation passes, the City must provide awareness of its passage in the form of a presentation to the Council.

- Beginning the second and subsequent years after passage, the City must educate property managers, private contractors, and/or the public on winter maintenance practices to maintain public safety and protect the environment using two tools from the City's Stormwater Management Plan.

While well intended, this BMP does not satisfy the tenets of the CWA and Remand Rule. It is not a clear, specific, and measurable term designed to actually reduce stormwater pollution to the maximum extent practicable. It does not include narrative, numeric, or other types of requirements designed to reduce pollutant loads. Once a year training for municipal officials might be important, but without more, does not reduce pollution. Similarly, educating legislators might be laudable but is not a BMP for purposes of a CWA permit. There is no chlorides reduction bill before the legislature, and education efforts alone will not pass and implement such a bill. The concept is simply too attenuated to satisfy the Remand Rule.

DEP should strike the above-referenced chlorides reduction BMP from second step orders and replace it with direct actions municipalities can take to reduce chlorides to urban impaired waters. We have attached Appendix F from the NH MS4 Permit as guidance for the types of BMPs that might be included.

Response #9: Neither the March 16, 2022 draft DEP permittee specific order or the permittee's initial SWMP contained language regarding a chlorides reduction BMP. This comment is not applicable to the permittee.



DEP INFORMATION SHEET

Appealing a Department Licensing Decision

Dated: August 2021

Contact: (207) 314-1458

SUMMARY

This document provides information regarding a person's rights and obligations in filing an administrative or judicial appeal of a licensing decision made by the Department of Environmental Protection's (DEP) Commissioner.

Except as provided below, there are two methods available to an aggrieved person seeking to appeal a licensing decision made by the DEP Commissioner: (1) an administrative process before the Board of Environmental Protection (Board); or (2) a judicial process before Maine's Superior Court. An aggrieved person seeking review of a licensing decision over which the Board had original jurisdiction may seek judicial review in Maine's Superior Court.

A judicial appeal of final action by the Commissioner or the Board regarding an application for an expedited wind energy development ([35-A M.R.S. § 3451\(4\)](#)) or a general permit for an offshore wind energy demonstration project ([38 M.R.S. § 480-HH\(1\)](#)) or a general permit for a tidal energy demonstration project ([38 M.R.S. § 636-A](#)) must be taken to the Supreme Judicial Court sitting as the Law Court.

I. ADMINISTRATIVE APPEALS TO THE BOARD

LEGAL REFERENCES

A person filing an appeal with the Board should review Organization and Powers, [38 M.R.S. §§ 341-D\(4\)](#) and [346](#); the Maine Administrative Procedure Act, 5 M.R.S. § [11001](#); and the DEP's [Rule Concerning the Processing of Applications and Other Administrative Matters \(Chapter 2\)](#), 06-096 C.M.R. ch. 2.

DEADLINE TO SUBMIT AN APPEAL TO THE BOARD

Not more than 30 days following the filing of a license decision by the Commissioner with the Board, an aggrieved person may appeal to the Board for review of the Commissioner's decision. The filing of an appeal with the Board, in care of the Board Clerk, is complete when the Board receives the submission by the close of business on the due date (5:00 p.m. on the 30th calendar day from which the Commissioner's decision was filed with the Board, as determined by the received time stamp on the document or electronic mail). Appeals filed after 5:00 p.m. on the 30th calendar day from which the Commissioner's decision was filed with the Board will be dismissed as untimely, absent a showing of good cause.

HOW TO SUBMIT AN APPEAL TO THE BOARD

An appeal to the Board may be submitted via postal mail or electronic mail and must contain all signatures and required appeal contents. An electronic filing must contain the scanned original signature of the appellant(s). The appeal documents must be sent to the following address.

Chair, Board of Environmental Protection
c/o Board Clerk
17 State House Station
Augusta, ME 04333-0017
ruth.a.burke@maine.gov

The DEP may also request the submittal of the original signed paper appeal documents when the appeal is filed electronically. The risk of material not being received in a timely manner is on the sender, regardless of the method used.

At the time an appeal is filed with the Board, the appellant must send a copy of the appeal to: (1) the Commissioner of the DEP (Maine Department of Environmental Protection, 17 State House Station, Augusta, Maine 04333-0017); (2) the licensee; and if a hearing was held on the application, (3) any intervenors in that hearing proceeding. **Please contact the DEP at 207-287-7688 with questions or for contact information regarding a specific licensing decision.**

REQUIRED APPEAL CONTENTS

A complete appeal must contain the following information at the time the appeal is submitted.

1. *Aggrieved status.* The appeal must explain how the appellant has standing to bring the appeal. This requires an explanation of how the appellant may suffer a particularized injury as a result of the Commissioner's decision.
2. *The findings, conclusions, or conditions objected to or believed to be in error.* The appeal must identify the specific findings of fact, conclusions of law, license conditions, or other aspects of the written license decision or of the license review process that the appellant objects to or believes to be in error.
3. *The basis of the objections or challenge.* For the objections identified in Item #2, the appeal must state why the appellant believes that the license decision is incorrect and should be modified or reversed. If possible, the appeal should cite specific evidence in the record or specific licensing criteria that the appellant believes were not properly considered or fully addressed.
4. *The remedy sought.* This can range from reversal of the Commissioner's decision on the license to changes in specific license conditions.
5. *All the matters to be contested.* The Board will limit its consideration to those matters specifically raised in the written notice of appeal.
6. *Request for hearing.* If the appellant wishes the Board to hold a public hearing on the appeal, a request for hearing must be filed as part of the notice of appeal, and it must include an offer of proof regarding the testimony and other evidence that would be presented at the hearing. The offer of proof must consist of a statement of the substance of the evidence, its relevance to the issues on appeal, and whether any witnesses would testify. The Board will hear the arguments in favor of and in opposition to a hearing on the appeal and the presentations on the merits of an appeal at a regularly scheduled meeting. If the Board decides to hold a public hearing on an appeal, that hearing will then be scheduled for a later date.
7. *New or additional evidence to be offered.* If an appellant wants to provide evidence not previously provided to DEP staff during the DEP's review of the application, the request and the proposed supplemental evidence must be submitted with the appeal. The Board may allow new or additional evidence to be considered in an appeal only under limited circumstances. The proposed supplemental evidence must be relevant and material, and (a) the person seeking to add information to the record must show due diligence in bringing the evidence to the DEP's attention at the earliest possible time in the licensing process; or (b) the evidence itself must be newly discovered and therefore unable to have been presented earlier in the process. Requirements for supplemental evidence are set forth in [Chapter 2 § 24](#).

OTHER CONSIDERATIONS IN APPEALING A DECISION TO THE BOARD

1. *Be familiar with all relevant material in the DEP record.* A license application file is public information, subject to any applicable statutory exceptions, and is made accessible by the DEP. Upon request, the DEP will make application materials available to review and photocopy during normal working hours. There may be a charge for copies or copying services.

2. *Be familiar with the regulations and laws under which the application was processed, and the procedural rules governing the appeal.* DEP staff will provide this information upon request and answer general questions regarding the appeal process.
3. *The filing of an appeal does not operate as a stay to any decision.* If a license has been granted and it has been appealed, the license normally remains in effect pending the processing of the appeal. Unless a stay of the decision is requested and granted, a licensee may proceed with a project pending the outcome of an appeal, but the licensee runs the risk of the decision being reversed or modified as a result of the appeal.

WHAT TO EXPECT ONCE YOU FILE A TIMELY APPEAL WITH THE BOARD

The Board will acknowledge receipt of an appeal, and it will provide the name of the DEP project manager assigned to the specific appeal. The notice of appeal, any materials admitted by the Board as supplementary evidence, any materials admitted in response to the appeal, relevant excerpts from the DEP's administrative record for the application, and the DEP staff's recommendation, in the form of a proposed Board Order, will be provided to Board members. The appellant, the licensee, and parties of record are notified in advance of the date set for the Board's consideration of an appeal or request for a hearing. The appellant and the licensee will have an opportunity to address the Board at the Board meeting. The Board will decide whether to hold a hearing on appeal when one is requested before deciding the merits of the appeal. The Board's decision on appeal may be to affirm all or part, affirm with conditions, order a hearing to be held as expeditiously as possible, reverse all or part of the decision of the Commissioner, or remand the matter to the Commissioner for further proceedings. The Board will notify the appellant, the licensee, and parties of record of its decision on appeal.

II. JUDICIAL APPEALS

Maine law generally allows aggrieved persons to appeal final Commissioner or Board licensing decisions to Maine's Superior Court (see [38 M.R.S. § 346\(1\)](#); 06-096 C.M.R. ch. 2; [5 M.R.S. § 11001](#); and M.R. Civ. P. 80C). A party's appeal must be filed with the Superior Court within 30 days of receipt of notice of the Board's or the Commissioner's decision. For any other person, an appeal must be filed within 40 days of the date the decision was rendered. An appeal to court of a license decision regarding an expedited wind energy development, a general permit for an offshore wind energy demonstration project, or a general permit for a tidal energy demonstration project may only be taken directly to the Maine Supreme Judicial Court. See 38 M.R.S. § 346(4).

Maine's Administrative Procedure Act, DEP statutes governing a particular matter, and the Maine Rules of Civil Procedure must be consulted for the substantive and procedural details applicable to judicial appeals.

ADDITIONAL INFORMATION

If you have questions or need additional information on the appeal process, for administrative appeals contact the Board Clerk at 207-287-2811 or the Board Executive Analyst at 207-314-1458 bill.hinkel@maine.gov, or for judicial appeals contact the court clerk's office in which the appeal will be filed.

Note: This information sheet, in conjunction with a review of the statutory and regulatory provisions referred to herein, is provided to help a person to understand their rights and obligations in filing an administrative or judicial appeal. The DEP provides this information sheet for general guidance only; it is not intended for use as a legal reference. Maine law governs an appellant's rights.

C. Summary of Public Comments Received

The public comment period for the Initial SWMP (offered by Maine DEP) lasted from March 13, 2021 to May 12, 2021. No public comments were received.



[Municipal applications for permit coverage under the 2022 General Permit for the Discharge of Stormwater from Small Municipal Separate Storm Sewer Systems \(MS4\).](#)

04/12/2021 12:08 PM EDT

The Department is posting for public comment Municipal applications, including Notice of Intent to Comply (NOI) and Stormwater Management Plans (SWMP), for municipalities seeking coverage under the 2022 General Permit for the Discharge of Stormwater from Small Municipal Separate Storm Sewer Systems (MS4).

Submit written comments to Rhonda Poirier rhonda.poirier@maine.gov by 5:00 p.m. May 12, 2021.

[Municipal NOI and SWMP files for comment.](#)

A request for public hearing must be received by the DEP, in writing, no later than 20 days after the application is found acceptable for processing. Requests must indicate the interest of the person filing the request and specify the reasons why a hearing is warranted. Unless otherwise provided by law, a hearing is discretionary and may be held if the Commissioner or the Board finds significant public interest or there is conflicting technical information.

The permittee specific DEP Orders were issued for public comment in November 2021 on the Maine DEP website. Comments received were as follows (attachments not included, but available from DEP):

From: Ivy Frignoca <ifrignoca@cascobay.org>
Sent: Monday, December 20, 2021 10:51 AM
To: Wood, Gregg <Gregg.Wood@maine.gov>
Subject: Friends of Casco Bay Comment on second step orders

EXTERNAL: This email originated from outside of the State of Maine Mail System. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Dear Gregg,

I just reviewed the proposed second step orders for the municipalities that discharge into the Casco Bay watershed, including Yarmouth, Cumberland, Falmouth and Gorham. None of these second step orders contain the necessary additional terms. It appears that all of the clear, specific and measurable terms necessary to carry forth the requirements in the first step general permit remain in the stormwater management plans (SWMPs) or are completely missing. The SWMPs are not enforceable. Without additional terms being incorporated into the second step permits (as is required by the general permit and the Remand Rule which has been codified into the code of federal regulations), these second step permits are wholly illegal.

Friends of Casco Bay respectfully requests that you rewrite the second step permits to incorporate the required terms contemplated by the MS4 permit (scheduled to take effect in July 2022) and the Remand Rule. To reiterate, without this action, the second step permits are inadequate and unlawful.

Ivy

Ivy L. Frignoca, Casco Baykeeper
Friends of Casco Bay
43 Slocum Drive
South Portland, ME 04106
Cell: (207) 831-3067
ifrignoca@cascobay.org

From: Tedder, Newton <Tedder.Newton@epa.gov>
Sent: Wednesday, December 01, 2021 10:52 AM
To: Wood, Gregg <Gregg.Wood@maine.gov>
Subject: RE: Second Step Permit

EXTERNAL: This email originated from outside of the State of Maine Mail System. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Hi Gregg

You need to add a reference to all the other things that were required in the 2step. I provided an example of what needs to be included (on top of the additional things you added for impaired waters)

Sincerely,
Newton W. Tedder

P.S. Have a nice day

Based on comments received from EPA and Friends of Casco Bay, the Maine DEP issued the permittee specific DEP Orders again on March 16, 2022 to address their comments. The comments received and how they were addressed are attached to the Final Department Order contained in [Appendix B](#) of this SWMP.



ILLICIT DISCHARGE DETECTION AND ELIMINATION MANUAL

This manual is intended to serve as a guidance tool for the Town of Windham's IDDE program, as required by the 2022 General Permit for Stormwater Discharges from Municipal Separate Storm Sewer Systems.

These tools are shown through Standard Operating Procedures for different aspects of the program.

*Town of Windham
Environment &
Sustainability*

*Date Prepared:
January 2017*

*Dates Revised:
March 2021, June 2022*

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Section 1.0 Introduction

This manual is intended to serve as guidance for the Town of Windham’s Illicit Discharge Detection and Elimination (IDDE) program, as required by the Maine Department of Environmental Protection (Maine DEP) through the Municipal Separate Storm Sewer System (MS4) General Permit. This manual profiles the minimum control measure (MCM) 3, which is one of six MCMs required to be included in the Town’s Stormwater Management Plan.

1.1 What is an MS4?

The State of Maine defines a MS4 as “...a conveyance or system of conveyances designed or used for collecting or conveying stormwater including, but not limited to roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, human-made channels or storm drains owned or operated by any municipality, sewer or sewage district, Maine Department of Transportation (MaineDOT), Maine Turnpike Authority (MTA), State agency or Federal agency or other public entity that discharges directly to waters of the State other than groundwater.”

1.2 Background of NPDES and MS4 General Permit

Although the quality of the nation’s waters has improved greatly since the passage of the Clean Water Act (CWA) in 1972, many water bodies are still impaired by pollution. According to the United States Environment Protection Agency (EPA), the top causes of impairment include siltation, nutrients, bacteria, metals, and oxygen-depleting substances. Polluted stormwater runoff, including runoff from urban/suburban areas and construction sites are leading sources of impairment. To address this problem, EPA has put into place a program that regulates certain stormwater discharges.

In the 1990s, the EPA promulgated Phase I and II of its stormwater program under the NPDES permit provisions of the CWA. The Phase II program regulates discharges from small MS4s located in “urbanized areas” (as delineated by the Census Bureau in the most recent census) and from additional small MS4s designated by the permitting authority. On October 15, 2020, the General Permit for the Discharge of Stormwater from Small Municipal Separate Storm Sewer Systems (MS4 General Permit) was issued by the Maine Department of Environmental Protection (Maine DEP) with an effective date of July 1, 2022. The Maine DEP holds delegated authority under the Federal National Pollution Discharge Elimination Systems (NPDES) permit program to administer the MS4 General Permit in Maine. To demonstrate how the regulated MS4 (Town of Windham) proposed to meet requirements of the General Permit, the Town was required to develop, implement, and enforce a Stormwater Management Plan. The Plan outlines best management practices (BMPs) that the Town intends to utilize toward implementing the six minimum control measures. These include:



Source: CCSWCD

- MCM1 Public Education and Outreach on Stormwater Impacts
- MCM2 Public Involvement and Participation
- MCM3 Illicit Discharge Detection and Elimination (IDDE)
- MCM4 Construction Site Stormwater Runoff Control
- MCM5 Post-Construction Stormwater Management in New Development and Redevelopment
- MCM6 Pollution Prevention / Good Housekeeping for Municipal Operations

1.3 IDDE Responsibilities in the Town of Windham

The Town’s Environmental & Sustainability Coordinator is responsible for overall permit compliance, and for implementation of this IDDE Manual, including outfall inspections, sampling, and training. The following other Town personnel support implementation of this Manual:

Public Works Department: Conduct catch basin inspections. Coordinate with Environmental & Sustainability Coordinator on stormwater infrastructure maintenance, street sweeping and illicit discharge detection and elimination (IDDE). Participate in IDDE training.

Planning Department: Facilitates any required ordinance changes related to non-stormwater discharges through Planning Board.

Code Enforcement Department: Assist in illicit discharge inspections when needed and enforcement authority for ordinances. Coordinate with Environmental & Sustainability Coordinator on illicit discharge detection and elimination. Participate in IDDE training.

Coordination and data transfer is conducted through email/telephone correspondence. Documentation is stored and organized electronically on the Town server.

1.4 Amendments and updates to the IDDE Plan

The MS4 General Permit provides coverage for a five-year period. The first MS4 General Permit applicable to the Town of Windham became effective in 2003 and expired in 2008. Subsequent General Permits were issued, providing the Town with continuous coverage for their stormwater discharges.

This IDDE Manual has been updated to meet the requirements of the 2022 MS4 General Permit. This Manual will be updated if any of the following occur:

- A new permit is issued which changes the requirements described in this IDDE Manual.
- The Town identifies that the Manual is not effective.
- Municipal operations change which need to be reflected in this Manual.

The Environment & Sustainability Coordinator will either modify this IDDE Manual or engage a third party to update the document.

The following table briefly summarizes the origin and amendments to this document.

Date of Document	Description of Changes
January 2017	Development of document from Stormwater Management Plan BMPs and Measurable Goals. Previously utilized state-wide IDDE Standard Operating Procedures.
March 2021	Updated document to reflect 2022 MS4 General Permit requirements, including QAPP and required inspection fields and domains for GIS.
June 2022	Updated points of contact, removed optional or voluntary items & clarified equipment lists, Field Data Sheets and Chain of Custody forms as examples to be used.

1.5 What is an illicit discharge?

An illicit discharge is defined under the MS4 General Permit as any discharge to a regulated MS4 system that is not composed entirely of stormwater other than: discharges authorized pursuant to another permit issued pursuant to 38 M.R.S. §413; uncontaminated groundwater; water from a natural resource [such as a wetland]; or other Allowable Non-Stormwater Discharges identified in Part IV.C.3.h of the MS4 General Permit.

In Windham, the MS4 is directly connected to waterbodies and does not receive any type of treatment prior to its discharge to receiving waters of the State. Since there is little or no treatment, it is vital that only stormwater be discharged from Windham's MS4.

1.6 Types of Illicit Discharges

The Center for Watershed Protection (CWP) developed a comprehensive IDDE Manual in 2004 and provided an abbreviated update in 2011, which classifies illicit discharges into three categories related to frequency of discharge. This categorization allows communities to develop a comprehensive IDDE Plan that will address all kinds of illicit discharges. The three categories of illicit discharges identified in the CW manual are described below along with examples of the types of discharges that may be encountered:

An outfall is the last accessible point before stormwater discharges to a waterbody. Some things that are NOT outfalls include: driveway culverts that connect ditch segments, culverts that convey waterbodies under roadways, and pipes that discharge to other stormwater infrastructure elements.

1. **Transitory Illicit Discharges** are typically one-time events resulting from spills, breaks, dumping, or accidents.

Examples include:

- a. paint equipment rinse water
- b. carpet cleaning water
- c. sediment from construction sites
- d. wash water from vehicles (other than individual residential car washing by an owner.)
- e. oil or gasoline from a vehicle crash or other source
- f. yard waste
- g. litter or pet waste

Transitory illicit discharges are often reported to an authority through a citizen complaint line or following observation by a municipal employee during regular duties. Since they are not recurring, they are the most difficult to investigate, trace, and remove. The best method to reduce transitory discharges is through public education, education of municipal personnel to minimize spills and accidents, tracking of discharge locations (to identify potential patterns associated with spills), and enforcement of an illicit discharge ordinance.

2. **Intermittent Illicit Discharges** occur occasionally over a period (several hours per day, or a few days a year). Intermittent Illicit discharges can result from legal connections to the storm drain system, such as a legal sump pump connection that is illegally discharging washing machine water, or illegal connections from a single home sanitary connection or floor drains from industrial or commercial operations. Intermittent discharges can also result from activities such as excessive irrigation or wash water from exterior areas. The 2022 MS4 General Permit requires that MS4s consider illicit discharges that might result from dumping. One example of this would be trash or litter dumped in/near stormwater structures might leak leachate into the system intermittently. Since intermittent discharges are longer lasting than transient, they are more likely to be discovered during an

opportunistic or regularly scheduled inspection. They are less difficult to trace and remove than transitory discharges but can have large or small impacts on water bodies depending on the pollutant content.

3. **Continuous Illicit Discharges** are typically the result of a direct connection from a sanitary sewer, overflow from a malfunctioning septic system, or inflow from a nearby subsurface sanitary sewer that is malfunctioning. Continuous illicit discharges are usually easiest to trace and can have the greatest pollutant load but are typically the costliest and most time consuming to correct because they likely involve construction and alteration of subsurface connections (CWP and Robert Pitt, 2004). They can result from cross connections, infrastructure problems with a sanitary sewer system, or malfunctioning subsurface wastewater disposal system (SWDS).

1.7 Overview of IDDE Plan Components

The MS4 General Permit requires an IDDE Plan be developed and implemented to assist the Town in locating and eliminating Illicit Discharges. An overview of each component of this IDDE Manual is provided in this subsection, and the remaining sections of this document describe how the Town of Windham is implementing each component.

- Development of a watershed-based map - The Town is required to develop a watershed-based map of the storm sewer system infrastructure including catch basins, connecting surface and subsurface infrastructure, the direction of in-flow and out-flow pipes, and the locations of all discharges from the Town's MS4 outfalls into any other interconnected MS4 or receiving waters. The catch basins and outfalls must have unique identifiers. The following outfall information is included in the map system: the type of outfall (a connected pipe, a culvert, or a ditch), the material, its size, the name, and location of the nearest named waterbody to which it discharges. Section 2.0 of this document describes the Town's watershed-based map.
- Authority to Prohibit Illicit Discharges – To the extent allowable under state or local law, the Town must effectively prohibit, through an ordinance or other regulatory mechanism, non-stormwater discharges into the system and implement appropriate enforcement procedures and actions. Section 3.0 of this document describes how the Town's Non-Stormwater Discharge Ordinance is implemented.
- Identification of High Priority Areas for Inspections – Prior MS4 General Permits required that the Town identify priority areas that needed to be protected from illicit discharges. The 2022 MS4 General Permit does not have this requirement, but it does require that the Town have 'procedures for prioritizing watersheds.' The Town of Windham conducts inspections more frequently than the 2022 MS4 General Permit requires, so they continue to conduct inspections in the priority watershed first. The Town's high priority areas are described in Section 4.0 of this document, including a discussion of the basis for determining the high priority areas.
- Procedures to locate Illicit Discharges (detection and inspection) - The Town must develop procedures for locating illicit discharges by conducting dry weather outfall inspections and assessing catch basins for evidence of pollutants. The 2022 MS4 General Permit also requires the monitoring be conducted on outfalls that are flowing during dry weather. The Town also conducts ditch inspections. Section 5.0 of this document describes the Town's detection and inspection procedures.
- Procedures to Investigate and Remove Illicit Discharges – The Town must develop procedures for locating the source of the discharge and procedures for the removal of the source. Sections 6.0 and 7.0 of the document describes how the Town investigates potential discharges to determine their sources and removes illicit discharges once the source is discovered.
- Procedures to Document Illicit Discharges – The Town must develop procedures for documenting actions and evaluating impacts on the storm sewer system after the removal. Section 8.0 describes how the Town tracks illicit discharges.

Section 9.0 of this document describes the record retention requirements of the MS4 General Permit and Section 10.0 of this document provides references.

Section 2.0: Mapping and Inventory

2.1 Mapping

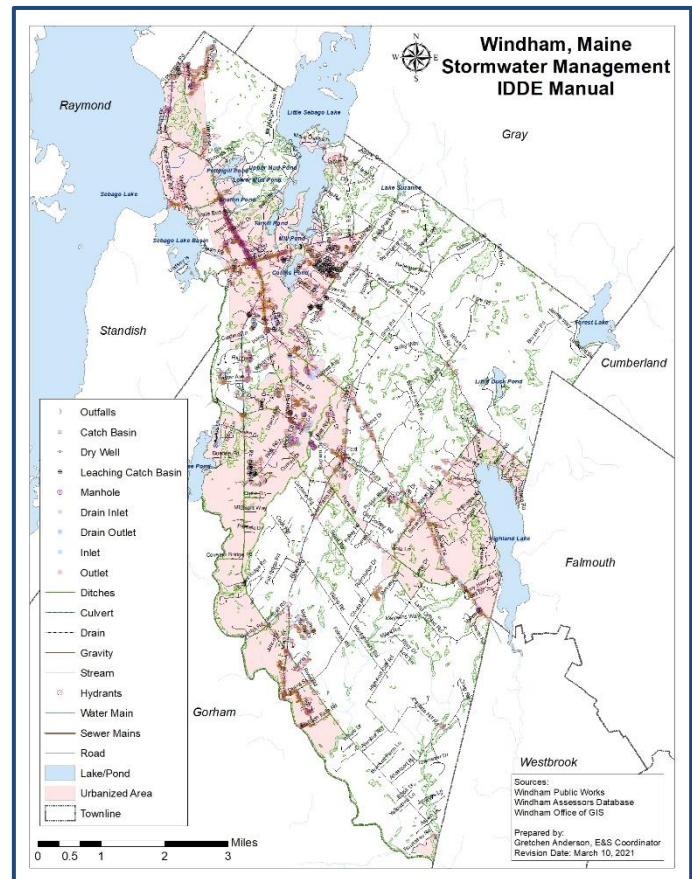
The Town of Windham has developed and continues to maintain mapping of the MS4 using Geographic Information System (GIS). The inventory is maintained and updated by the GIS Mapping Department, or their designee, as needed (e.g., infrastructure upgrades, new developments, etc.). Inspections are conducted by the Environmental & Sustainability Coordinator and the Public Works Department. Cleaning and system upgrades are provided by the Public Works Department. Maps can be viewed in [Attachment](#)

[A](#).

2.2 Inventory

The location and attributes of stormwater infrastructure is collected by Environmental & Sustainability Coordinator or their designee using a Global Positioning System (GPS) unit or the ArcGIS Collector App. The data features collected include catch basins, junction boxes, manholes, storm pipes, outfalls, culverts, ditches, etc. For each feature, specific information is gathered including size, material, type, length, GPS date, location, comments, reference number, condition, etc. All data is housed on a server at the Town Hall. The “Stormwater” geodatabase contains the following shapefiles:

- Infalls
- Outfalls
- Drainage Structures
- MS4 Post-Construction Sites
- Culverts
- Ditches
- Drain Pipes



The GIS information is used to create an annual map, which is used by the Public Works Department, Code Enforcement Department, and the Environmental & Sustainability Coordinator daily for various tasks including inspections and cleaning the MS4. As the results of the Town maintaining a very extensive GIS database, including roads, parcels, addresses, the Town can digitally map inspections, cleanings, complaints, etc. Additionally, the Code Enforcement Department can digitally track Notice of Violations, Stop Work Orders, etc. regarding illicit discharges and construction activity.

2.3 Procedures to Update Map of Infrastructure

The following describes the scenarios under which changes to the storm drain system are typically made, and how the map subsequently gets updated:

1. Generally, the Public Works Department constructs minor changes to the system based on immediate or planned need without formal drawings. When the Public Works Department makes changes to the storm drain infrastructure, the Environmental & Sustainability coordinator or the GIS Coordinator updates the online GIS layer to reflect these changes using an iPad, as an interface to the online files. These changes can be made within weeks of the physical changes on the ground.
2. More significant changes are typically constructed after preparation of formal design drawings, whereupon the Public Works Department or a private contractor constructs the changes. Where a private contractor constructs the changes, the Town requires the formal as-built plan be prepared and submitted to the GIS Coordinator in electronic format, so that the infrastructure can be imported into the GIS. These changes are typically made annually.

'Paper Maps' are kept in PDF format until printing is needed/wanted to reduce number of maps printed.

Section 3.0: Authority to Prohibit Illicit Discharges

The Town of Windham's authority to prohibit illicit discharges became effective February 11, 2005, when the Town passed a Non-Stormwater Discharge Ordinance ([Chapter 143](#)). The ordinance was created from a model ordinance developed by the Maine Municipal Association for Towns that are regulated by the MS4 General Permit. Though the MS4 General Permit is only applicable to the Urbanized Area of Town, the Town implements the Non-Stormwater Discharge Ordinance town wide.

The Ordinance allows the following non-stormwater discharges to the storm drain system if they do not cause or contribute to violations of water quality standards:

- Landscape irrigation.
- Diverted stream flows.
- Rising ground waters.
- Uncontaminated ground water infiltration (as defined at 40 CFR 35.2005(20)).
- Uncontaminated pumped ground water.
- Uncontaminated flows from foundation drains.
- Air conditioning and compressor condensate.
- Irrigation water.
- Flows from uncontaminated springs.
- Uncontaminated water from crawl space pumps.
- Uncontaminated flows from footing drains.
- Lawn watering runoff.
- Flows from riparian habitats and wetlands.
- Residual street wash water (where spills/leaks of toxic or hazardous materials have not occurred unless all spilled materials has been removed and detergents are not used).
- Hydrant flushing and firefighting activity runoff.
- Water line flushing and discharges from potable water sources.
- Individual residential car washing.

The Town Manager or designee is the enforcement authority within the ordinance. The primary designee is the Code Enforcement Department, which has the authority to issue a notice of violation if needed.

Discharges from hydrant and water line flushing are required to be dechlorinated if they are to be discharged to a portion of the MS4 system which discharges to a small stream. In accordance with the Maine DEP November 18, 2016 issue Profile for Drinking Water System Discharges to Regulated Small MS4s, the Portland Water District either aerates or dechlorinates during flushing to meet Total Residual Chlorine (TRC) acute water quality criteria as follows:

- Freshwater – 19 ug/L (adjusted to 50 ug/l per the Maine DEP as the reporting limit for available reliable and consistent test methods)

The Portland Water District flushes the system every three years and provides an annual report to the Town describing water dechlorination methods in use and testing results for any flushing conducted. The upcoming flushing schedule for the Town of Windham is as follows: 2020, 2023, etc.

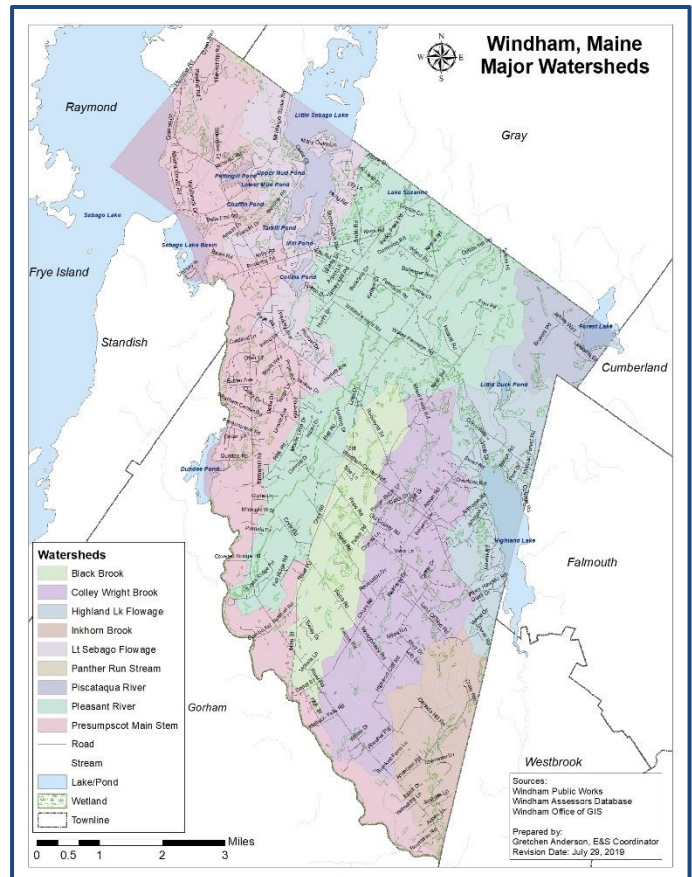
Section 4.0: Priority Areas

Prior MS4 General Permits required the Town to identify priority areas that need to be protected from illicit discharges. The priority areas were used to implement a prioritized dry weather outfall inspection program. The 2022 MS4 General Permit does not have this requirement. Since the Town of Windham conducts inspections more frequently than required, they will continue to conduct inspections in priority areas first. Additionally, the prioritization may also be used for illicit discharge investigations in the event there were insufficient resources to address all potential illicit discharges simultaneously.

Windham's IDDE program under the 2022 MS4 General Permit will begin in the Town's priority watershed. The Town will conduct annual dry weather outfall inspections until 100% are inspected by the end of the 5-year permit cycle. If an illicit discharge is suspected or detected during routine work, the standard operating procedures contained in this Manual will be followed and it will be reported to the Environmental & Sustainability Coordinator, regardless of location.

To identify areas within the Town that are high priority for illicit discharge inspections, the Town considered impaired waters, size, land use, etc.

- Highest priority watershed – Pleasant River (Impairment for bacteria and dissolved oxygen. Identified in the statewide bacteria TMDL. Watershed Management Plan is being implemented.)
- Other noted watershed– Highland Lake (previous phosphorus control action plan implemented until 2010, when removed from impaired list. However, due to history of declining water quality, town has renewed focus on watershed.)
- Other noted watershed – Presumpscot River (tributary to Sebago Lake, which flows to Casco Bay and is downstream from multiple regulated municipalities).



Section 5.0: Detection and Inspections

The Town of Windham uses the following methods to locate illicit discharges:

1. Catch basin cleaning inspections.
2. Citizen reports of illicit discharges.
3. Dry weather outfall inspections
4. Outfall sampling and analysis
5. Wet Weather Assessment

5.1 Catch Basin Cleaning Inspections

Catch basin cleaning inspections are only required every two years by the MS4 General Permit. During this inspection process, the employee is also inspecting to assess if any evidence of an illicit discharge is present. If the employee sees any evidence of an illicit discharge, the evidence is documented in GIS and provided to the Environmental & Sustainability Coordinator for further action. Optional and permit-required information collected during the inspection is outlined in Attachment B under MS4 Inspection Type: Structure.

5.2 Citizen Reports of Illicit Discharges

Citizen reports of illicit discharge issues received by phone are routed to various departments depending on the nature of the illicit discharge. Illegal dumping and spills from vehicle accidents are covered by Public Safety. Monthly reports of spills are sent to the Environmental & Sustainability Coordinator for input into the IDDE tracking sheet. Illegal connections, failing septic systems, and construction site runoff discharges are handled by the Code Enforcement Department via education, warnings, Stop Work Orders, and Notices of Violation. The Environmental & Sustainability Coordinator will work with the Code Enforcement Department to remediate these illicit discharges. Individual reports are drafted for these types of reports.

5.3 Dry Weather Outfall Inspections

During previous permit cycles, dry weather outfall inspections had been conducted in the priority watersheds identified in Section 4.0, and then expanded to other areas of the Town as time and budget allowed. The Town began documenting the results of the inspections on an iPad in the summer of 2017. Optional and permit-required information collected during the inspection is outlined in Attachment B under MS4 Inspection Type: Outfall.

The following guidelines are used:

- Inspections are performed during periods of dry weather.
- Inspections are performed in a safe and efficient manner.
- Inspections are performed during periods of no or minimal snow cover and prior to growth of vegetation such that outfalls can be easily spotted.
- Observations include the following at a minimum:
 - Sheen
 - Discoloration

Dry weather is defined in the permit as a time when:

- *There has been no snow or ice melt for 72 hours, or*
 - *There has been no precipitation greater than ¼ inch for 72 hours.*
-

If an outfall is inspected within the 72 hours window for rain or melting, and it is not flowing, the inspection can be considered a dry weather inspection.

- Foaming
- Sanitary Sewage
- Excessive Algal Growth
- Odor
- Photographs are often taken at the time of inspection for documentation purposes.
- MS4 outfalls are inspected where the Town has safe and legal access to the structure to be inspected.
- If maintenance issues are identified, the Public Works Department is informed so that work can be prioritized with other projects in Town.

5.4 Outfall Sampling and Analysis

Outfall sampling and analysis is required under the 2022 MS4 General Permit when an outfall is observed to be flowing during dry weather conditions regardless of if it has exhibited evidence of an illicit discharge. Outfalls and/or other structures may also be sampled if other evidence of illicit discharges is observed during inspection. The Environmental & Sustainability Coordinator may solicit the assistance of a third-party contractor to collect a sample for field screening and/or analysis depending on conditions encountered.

A Quality Assurance Project Plan (QAPP) has been developed to provide sampling personnel the information that will assist them in collecting samples and using field equipment, test kits and obtaining analyses. The QAPP describes the sampling procedures that should be used as well as the analytical methods and field equipment that are appropriate for use in investigating potential illicit discharges and flowing outfalls. The QAPP also provides guidance on interpretation of the results obtained so that investigators can make informed decisions about whether to continue investigating a potential source, or whether results indicate a flowing outfall might be from a natural source. The QAPP is contained in [Attachment E](#) to this IDDE Plan.

5.6 Wet Weather Assessment

The Town will conduct a wet weather assessment for the potential for illicit discharges during wet weather events. The Town will utilize data from existing studies, including (but not limited to):

- Areas within the MS4 that have combined sewer systems.
- Sanitary sewer systems located in a common trench with stormwater infrastructure, particularly those with known infiltration.
- Subsurface wastewater disposal systems that are 20 years old or more, or those in areas known to have experienced recent malfunctions or failures.
- Complaints of sewage odor at a stormwater outfall during wet weather events.
- Direct discharge from the stormwater system to any of the following.
 - Public beach or recreational area.
 - A waterbody impaired for bacteria.
 - Drinking water supply.

The outcome of the assessment will be a list of outfalls identified for wet weather monitoring and testing if applicable, by the Town in the next permit cycle and the rationale for including these outfalls.

On or before the expiration of the 2022-2027 General Permit, the Town will identify outfalls using the assessment and include them in an attachment of this IDDE Manual. The IDDE Manual will also be updated to include procedures for wet weather monitoring based on the EPA New England Bacterial Source Tracking Protocol or other acceptable

protocols or methodologies and specify the timing and frequency of wet weather monitoring to be completed during the term of the next permit cycle. If the Town completes the wet weather assessment and includes it within the IDDE Manual prior to the expiration of the 2022-2027 permit and the Town-specific DEP order, the Town will implement the wet weather monitoring upon completion of the update.

5.7 Cooperation with other MS4s

Since the Town of Windham has interconnections with other MS4s, it may be necessary to conduct cooperative investigations with other MS4s or to inform them of issues associated with the Town of Windham’s infrastructure, including potential illicit discharges. The Town has provided notices to all adjacent MS4s to ensure adequate spill response. The MS4 contacts with which Windham is adjacent are:

Entity	Contact	Email	Phone
City of Westbrook	Lynn Leavitt <i>Sustainability Coordinator</i>	lleavitt@westbrook.me.us	(207) 591-8135
Maine Department of Transportation (MDOT)	Peter Newkirk <i>Senior Environmental Engineer</i>	Peter.Newkirk@maine.gov	(207) 877-5081
Town of Cumberland	Laura Neleski <i>Public Works Administrative Assistant</i>	lneleski@cumberlandmaine.com	(207) 829-2220
Town of Falmouth	Justin Early <i>Town Engineer</i>	jearly@falmouthme.org	(207) 699-5371
Town of Gorham	Ethan Moskowitz <i>Stormwater Compliance Officer</i>	emoskowitz@gorham.me.us	(207) 892-9062
Town of Gray	Nathaniel Rudy <i>Town Manager</i>	nrudy@grayme.org	(207) 657-3339
Town of Raymond	Don Willard <i>Town Manager</i>	don.willard@raymondmaine.org	(207) 655-4742
Town of Standish	Bill Giroux <i>Town Manager</i>	bgiroux@standish.org	(207) 642-2538

Notification letters with adjacent MS4s are included in [Attachment F](#).

Section 6.0: Procedures to Investigate Illicit Discharges

Once an illicit discharge has been identified and detected, tracing will be implemented to locate the source of discharge. Once a location is determined to have an illicit discharge, the Environmental & Sustainability Coordinator or their designed will start the tracing protocol starting at that location to determine where the source of the illicit discharge is originating from. An *Illicit Discharge Incident Form* ([Attachment C](#)) will be completed to record the discharge, regarding steps taken, responsible party as the investigation occurs. These forms are filled in and maintained by the Environmental and Sustainability Coordinator via Microsoft Word. The incident will be recorded in the *Illicit Discharge Tracking Sheet* ([Attachment D](#)), both of which are maintained by the Environmental & Sustainability Coordinator. Once the source of the illicit discharge is located, the discharge will be eliminated from Windham’s MS4 system ([Section 7](#)).

6.1 Tracing Techniques

There are different techniques that are utilized by Windham staff to trace for an illicit discharge within the separate storm sewer system, depending on the type of discharge and whether a potential source has been identified. Not every technique will be utilized for all illicit discharges; it will be determined by the Environmental & Sustainability coordinator, or their designee. Each technique listed, including their limitations, should be fully understood by staff. If questions or comments arise, staff is to contact the Environmental & Sustainability Coordinator.

6.1.a.1 Visual Inspections

Once dry weather flow or evidence of an illicit discharge are observed and it has been determined to be an illicit discharge, inspections along the closed drainage system or within the municipal roadside ditch must occur. The visual inspection process that the Public Works Department adheres to is as follows:

1. Staff starts at the initial detection location – the MS4 outfall where the illicit discharge has been observed and noted.
2. Staff works “upstream” from initial detection location – that is they move up the stormwater system to the first catch basin or manhole or further up the municipal roadside ditch, if the outfall is a ditch outfall.
3. Staff checks the catch basin or manhole or municipal roadside ditch for evidence of flow or evidence of an illicit discharge.
4. If flow is observed, staff moves to the next upstream manhole or further up the municipal roadside ditch. Step 3 is repeated until no or low flow and no evidence of an illicit discharge is observed. Junction lines entering the stormwater system at other locations are noted using the stormwater map. Under these circumstances, Public Works checks those catch basins or manholes as well.
5. During the inspection process, the following observations are noted in GIS using the collector app (see [Attachment B](#) for inspection fields and domains):
 - a. Presence of flow
 - b. Odors
 - c. Colors/Clarity
 - d. Stains or deposits on the bottom/sides of structure(s)
 - e. Oil sheen, scum, or foam on any standing water
6. If the source is located, information is relayed to the Public Works Director and Environmental & Sustainability Coordinator, if necessary, for next steps.



Source: Pro-Hawk Inspections

6.1.a.2 Dry Weather Flow Monitoring

Once a visual inspection has occurred, Town staff would conduct dry weather water quality sampling to potentially determine a source or cause of the illicit discharge. See [Section 5.4](#) and [Attachment E](#) for more information.

6.1.a.3 Dye Testing

Once the area has been determined where the potential illicit discharge source is located, Windham would utilize dye testing to assist in determining the exact location of the illicit discharge. The dye testing procedure that the Public Works department would adhere to is as follows:

1. Prior to starting a dye test procedure, staff will obtain permission to access private property. If a dye test is needed on the inside of a building, staff will obtain written permission. Once permission is granted, staff will begin the dye test procedure.
2. Staff will pour dye into sinks, toilets, etc., and then flush it through the sanitary sewer system.
3. An additional staff member will monitor the stormwater and sanitary sewer systems to observe where the dye discharges to.

4. If the source is located, information is relayed to the Public Works Director and the Environmental & Sustainability Coordinator for next steps.

This procedure is effective in determining direct connections of sanitary lines to storm lines.

6.1.a.4 Sandbagging/Damming

This method would be used by Windham staff to determine if discharge is intermittent (See Section 1.6). Staff would place and secure sandbags at strategic locations within the system to isolate the source of the discharge. Junction lines would be noted as they can help rule out branches of the system and narrow down the source. Staff would leave the sandbags in place for a maximum of 48 hours. Windham would conduct this technique during forecasted dry weather due to potential blockage of the stormwater system.

Section 7.0: Procedures to Remove Illicit Discharges

Once the source of an illicit discharge has been identified, an Illicit Discharge Incident Report ([Attachment C](#)) will be generated and sent to the Code Enforcement Department who will initiate the removal process. The Environmental & Sustainability Coordinator or designee will provide technical information to the Code Enforcement Department including any suggestions on how to remediate the illicit discharge or possible correction. If the source of the suspected illicit discharge cannot be identified, the outfall will be re-inspected at a later date.

Enforcement and removal of illicit discharges will be accomplished through the reliance on the Non-Stormwater Discharge Ordinance.

As part of the removal process, the Code Enforcement Department and/or the Environmental & Sustainability Coordinator will determine who is financially responsible for removal of the illicit discharge (i.e., municipality, private property owner, or exempt person).

- If the municipality is responsible, the appropriate municipal authority will be notified, removal will be scheduled, and the necessary repairs or corrections will be made.
- If a private property owner is responsible, the owner will be contacted, a Notice of Violation will be issued, and the schedule for removal will be determined. No repairs or corrections will be made on private property without the direction of the appropriate municipal authority (Code Enforcement Director and/or Public Works Director).
- If an exempt party (see box below) is responsible, the facility operator will be notified as well as the appropriate enforcement authority.

Exempt Facility	Regulation	Enforcement Authority
Maine Turnpike Authority and Maine DOT (in select urbanized areas)	Maine General Permit for the Discharge of Stormwater from the MDOT and MTA MS4s	Maine DEP
Industrial Facilities with selected SIC codes	Multi Sector General Permit for Industrial Activities	Maine DEP

The illicit discharge must be removed or eliminated within 60 days of identification of the source of the illicit discharge. If this is not possible, an expeditious schedule for its elimination will be established and summarized in the MS4 General Permit annual report.

If it is determined that an “imminent and substantial danger” exists because of the illicit discharge, access to the storm drain system will be suspended. Once the removal process is completed, a follow-up inspection will be conducted to confirm that the illicit discharge has been eliminated.

Section 8.0: Procedures to Document Illicit Discharges

The Town will document the progress of investigating and removing illicit discharges using an IDDE Tracking sheet ([Attachment D](#)). The spreadsheet is maintained in Excel. Each year, the Town is required to complete an annual report summarizing the activities completed under the Stormwater Management Plan. The Environmental & Sustainability Coordinator will print or retain an electronic copy of the IDDE Tracking Sheet for the year as back-up documentation of investigative and removal work completed.

Section 9.0 Records Retention

The Environmental & Sustainability Coordinator will retain paper or electronic files of inspections and investigations, including laboratory reports, for a minimum of three years after expiration of the MS4 General Permit term or longer if requested by the Maine DEP or the USEPA. If the General Permit expires on June 30, 2027, the files may be discarded July 1, 2030.

Section 10.0: Education to Town Employees and the General Public

The Maine DEP requires that communities train public employees on pollution prevention and raise the public’s awareness of stormwater pollution. The Town informs both public employees and the public of hazards associated with illegal discharges and improper disposal of waste as part of their IDDE program.

10.1 Town Employees

The MS4 General Permit requires that municipal employees be trained on pollution prevention techniques. This is located under Minimum Control Measure 6: “Pollution Prevention/Good Housekeeping for Municipal Operations” of the Town’s Stormwater Management Plan.

The Town has also developed a comprehensive schedule to meet the requirements. Two primary trainings have been identified related to IDDE:

- Training for all staff personnel that are routinely in the field to educate them on what constitutes an illicit discharge and how to report suspected problems.
- Training for illicit discharge responders on proper identification, investigation, clean-up, disposal, and reporting techniques for illicit discharges.

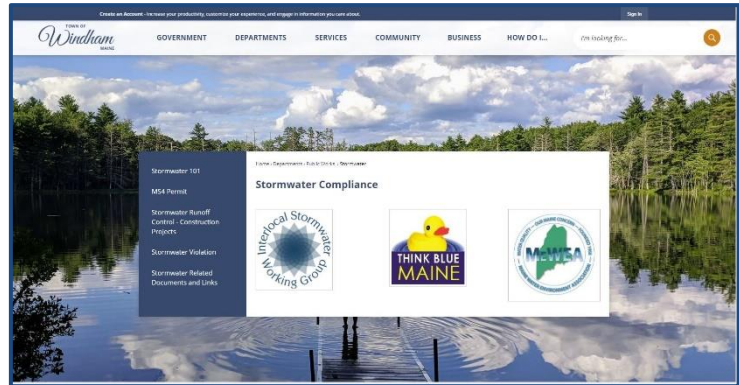
These trainings are generally conducted by the Environmental & Sustainability Coordinator, who administers a PowerPoint presentation. The Town will also schedule follow-up trainings as needed to keep the information current and introduce new information acquired during implementation of the IDDE program.

Training for illicit discharge responders will primarily include distribution and review of this procedure manual as well as a refresher on Town spill response procedures. Follow-up trainings for illicit discharge responders may take the form of debriefings following significant IDDE incidents. Debriefings allow staff to review the actions that were taken, identify what worked well and what should be modified for future responses.

10.2 General Public

The MS4 General Permit requires the Town to conduct outreach activities to educate the public about water quality protection. This is located under Minimum Control Measure 1: “Public Education and Outreach” of the Town’s Stormwater Management Plan. Outreach activities focus on reducing pollutants at the source by educating the public about their ultimate impact on the natural environment. Many members of the community are apt to modify behaviors once they understand the potential negative consequences.

The Town, through the Interlocal Stormwater Working Group, has conducted outreach activities aimed at educating residents about natural yard care techniques, habitat protection, and personal impact on the natural environment.



The General Public can also learn about illicit discharges under the “[Stormwater Violation](#)” section of the Stormwater Compliance Page on the Town website. The content includes what constitutes an illicit discharge, why illicit discharges negatively impact the environment/storm sewer system, and pollution prevention techniques that can be applied to eliminate illicit discharges. The section also includes a “Stormwater Violation Form”, which can be filled out and submitted to the Environmental & Sustainability Coordinator.

Section 11.0 References

CWP and Robert Pitt 2004. *Illicit Discharge Detection and Elimination Manual* – A Guidance Manual for Plan Development and Technical Assessments. October 2004. Available at: https://www3.epa.gov/npdes/pubs/idde_manualwithappendices.pdf

Aquarion Engineering Services and Casco Bay Estuary Partnership 2005. *Guidelines and Standard Operating Procedures for Stormwater Phase II Communities in Maine*. Available at: <http://thinkbluemaine.cumberlandswcd.com/index.php/documents/> (under Minimum Control Measures Resources – 3. Illicit Discharge Detection & Elimination)

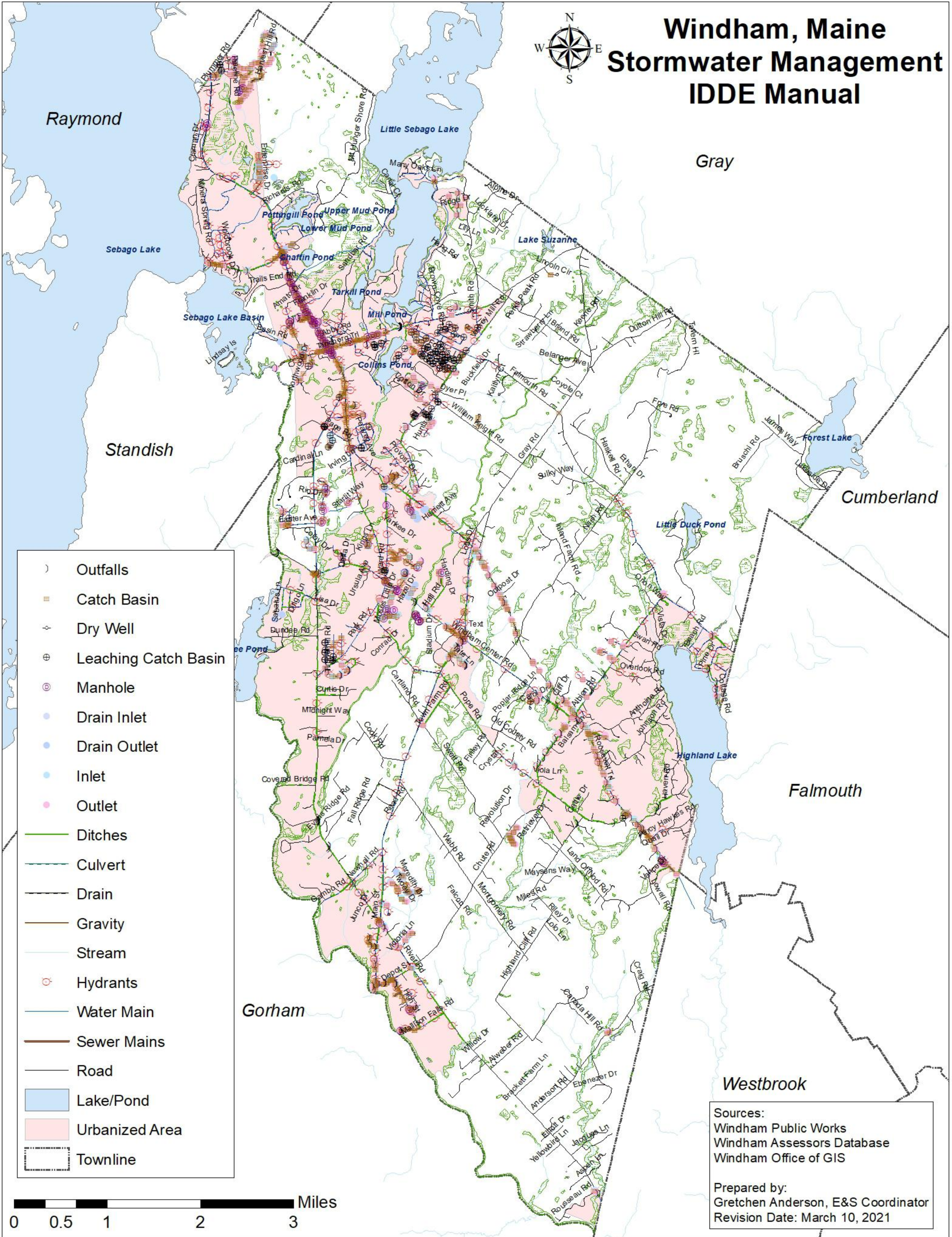
CWP and Robert Pitt 2011 Illicit Discharge Detection and Tracking Guide. Available at: <https://www.riverkeeper.org/wp-content/uploads/2015/03/Center-for-Watershed-Protection-Illicit-Discharge-Tracking-Guide-short.pdf>

USEPA New England Bacterial Source Tracking Protocol 2012. Provided by USEPA to Integrated Environmental Engineering. Available at: <https://www3.epa.gov/region1/npdes/stormwater/ma/2014AppendixI.pdf>

Attachments

Attachment A – Stormwater Infrastructure and Watershed Maps

Windham, Maine Stormwater Management IDDE Manual



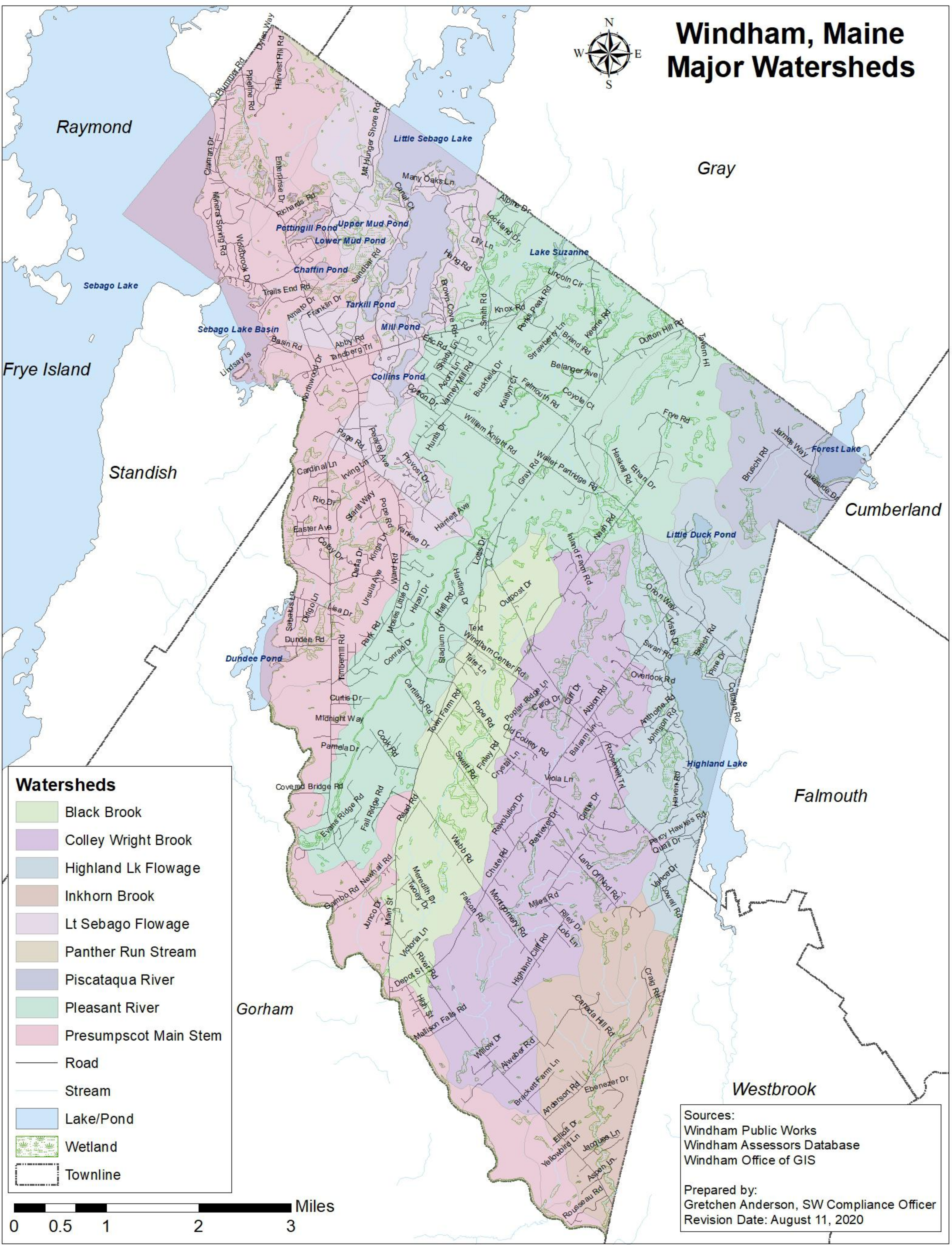
- Outfalls
- Catch Basin
- Dry Well
- Leaching Catch Basin
- Manhole
- Drain Inlet
- Drain Outlet
- Inlet
- Outlet
- Ditches
- Culvert
- Drain
- Gravity
- Stream
- Hydrants
- Water Main
- Sewer Mains
- Road
- Lake/Pond
- Urbanized Area
- Townline

0 0.5 1 2 3 Miles

Sources:
Windham Public Works
Windham Assessors Database
Windham Office of GIS

Prepared by:
Gretchen Anderson, E&S Coordinator
Revision Date: March 10, 2021

Windham, Maine Major Watersheds



Watersheds

- Black Brook
- Colley Wright Brook
- Highland Lk Flowage
- Inkhorn Brook
- Lt Sebago Flowage
- Panther Run Stream
- Piscataqua River
- Pleasant River
- Presumpscot Main Stem
- Road
- Stream
- Lake/Pond
- Wetland
- Townline

Sources:
 Windham Public Works
 Windham Assessors Database
 Windham Office of GIS

Prepared by:
 Gretchen Anderson, SW Compliance Officer
 Revision Date: August 11, 2020

Attachment B – Inspection Fields and Domains in GIS

IDDE inspections are conducted using ArcGIS and Collector App.

As an inspector is using the iPad in the field, they tap on the structure or element they are inspecting and edit the inspection fields by either typing data or using the drop-down entries, where available. The Town utilizes related tables to allow multiple inspections on one feature. The following is a potential summary of the available fields associated with each type of inspection. **Those items in BOLD are required as part of the MS4 General Permit.**

MS4 Inspection Type	GIS Fields and Domains Completed as Part of Inspection
Structure (Catch Basin)	<p>OBJECTID – Auto Populated and linked with Structure (Catch Basin) Feature.</p> <p>Cleaning Date – Auto Populated with date and time.</p> <p>Grit Volume – Less than ¼ full, ¼ full, ½ full, ¾ full, plugged</p> <p>Sediment Depth – open text field</p> <p>Odor – Yes or No</p> <p>Pet Waste – Yes or No</p> <p>Foam/Soap – Yes or No</p> <p>Sewage – Yes or No</p> <p>Litter – Yes or No</p> <p>Yard Waste – Yes or No</p> <p>Fats, Oils, Grease – Yes or No</p> <p>Discoloration/Staining – Yes or No</p> <p>Excessive Algal Growth – Yes or No</p> <p>Follow-Up – Yes or No</p> <p>Cleaning Comments – Open text field</p>
Outfall (Pipe and Ditch)	<p>OBJECTID – Auto Populated and linked with Outfall Feature.</p> <p>Inspection Date – Auto Populated with date and time.</p> <p>Precipitation in past 72 hours? – Yes or No</p> <p>Precipitation Amount – Open text field</p> <p>Approximate Temperature</p> <p>Wind Present? – Yes or No</p> <p>Pipe Submerged? – Yes, No, Not Applicable</p> <p>Foam – Yes or No</p> <p>Floating Green Scum – Yes or No</p> <p>Vegetative Mat/Excessive Algal Growth – Yes or No</p> <p>Oil/Film – Yes or No</p> <p>Sewage Solids – Yes or No</p> <p>Odor – None, Natural, Musty</p> <p>Discoloration/Staining – Yes or No</p> <p>Water Clarity – Not Applicable, Clear, Cloudy, or Opaque</p> <p>Flow – None, Trickling, Steady, ¼ pipe/ditch, full pipe/ditch</p> <p>Seepage Flow – None, Trickling, Steady, ¼ pipe/ditch, full pipe/ditch</p> <p>Flow Color – Brown, Tan, Gray, Other (explain in comments)</p> <p>Date Flow Sampled – Open Text field. Enter date or ‘not applicable’.</p> <p>Sediment Condition – Open, ¼ fill, ½ full, ¾ full, plugged</p> <p>Structure Condition – Excellent, Fair, Poor</p> <p>Trash/Litter – Yes or No</p> <p>Yard Waste – Yes or No</p> <p>Follow-Up – Yes or No</p> <p>Comments – Open text field</p>

Attachment C – Illicit Discharge Incident Form

ILLICIT DISCHARGE INCIDENT REPORT FORM

(Modified from: *Illicit Discharge Detection and Elimination-A Guidance Manual for Program Development and Technical Assessments*, CWP, 2004.) Rev. 8/1/16

Incident ID:	
Responder Information	
Call taken by:	Call date:
Call time:	Precipitation (inches) in past 24-48 hrs:
Reporter Information	
Incident time:	Incident date:
Caller contact information (<i>optional</i>):	
Incident Location (<i>complete one or more below</i>)	
Latitude and longitude:	
Stream address or outfall #:	
Closest street address:	
Nearby landmark:	
Primary Location Description	Secondary Location Description:
<input type="checkbox"/> Stream corridor (<i>In or adjacent to stream</i>)	<input type="checkbox"/> Outfall <input type="checkbox"/> In-stream flow <input type="checkbox"/> Along banks
<input type="checkbox"/> Upland area (<i>Land not adjacent to stream</i>)	<input type="checkbox"/> Near storm drain <input type="checkbox"/> Near other water source (stormwater pond, wetland, etc.) Describe:
Outfall ID closest to or most likely to be impacted by discharge:	
Extent of area affected by the discharge:	
Narrative description of location:	
Upland Problem Indicator Description	
<input type="checkbox"/> Dumping	<input type="checkbox"/> Oil/solvents/chemicals <input type="checkbox"/> Sewage
<input type="checkbox"/> Wash water, suds, etc.	<input type="checkbox"/> Other: _____
Stream Corridor Problem Indicator Description	
Odor	<input type="checkbox"/> None <input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/Sour <input type="checkbox"/> Petroleum (gas)
	<input type="checkbox"/> Sulfide (rotten eggs); natural gas <input type="checkbox"/> Other: Describe in "Narrative" section
Appearance	<input type="checkbox"/> "Normal" <input type="checkbox"/> Oil sheen <input type="checkbox"/> Cloudy <input checked="" type="checkbox"/> X Suds
	<input type="checkbox"/> Other: Describe in "Narrative" section
Floatables	<input type="checkbox"/> None: <input type="checkbox"/> Sewage (toilet paper, etc) <input type="checkbox"/> Algae <input type="checkbox"/> Dead fish
	<input type="checkbox"/> Other: Describe in "Narrative" section
Narrative description of problem indicators:	

Suspected Violator (name, personal or vehicle description, license plate #, address, etc.):	
Investigation Notes	
Work order number assigned to incident (if applicable):	
Initial investigation date:	Investigators:
<input type="checkbox"/> No Investigation made	Reason:
<input type="checkbox"/> Reported to different Department/Agency (including DEP)	Department/Agency: Notification Date: Name and contact of Person reported to: Actions Required:
<input type="checkbox"/> Investigated: No action necessary	
<input type="checkbox"/> Investigated: Requires Action / Follow Up	Description of actions required:
Description of correction action taken:	
Amount of time between the call/discovery and initial investigation (in hours):	
Amount of time to investigate incident (in hours):	
Date incident resolved/closed:	

Pictures:

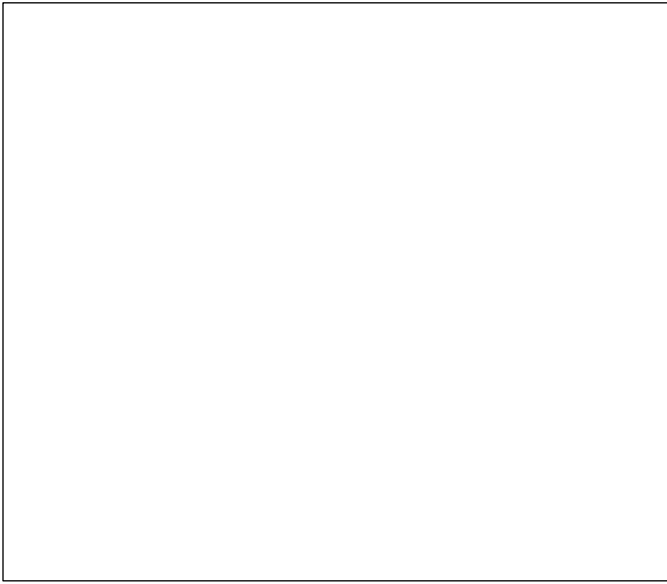


Figure 1 -

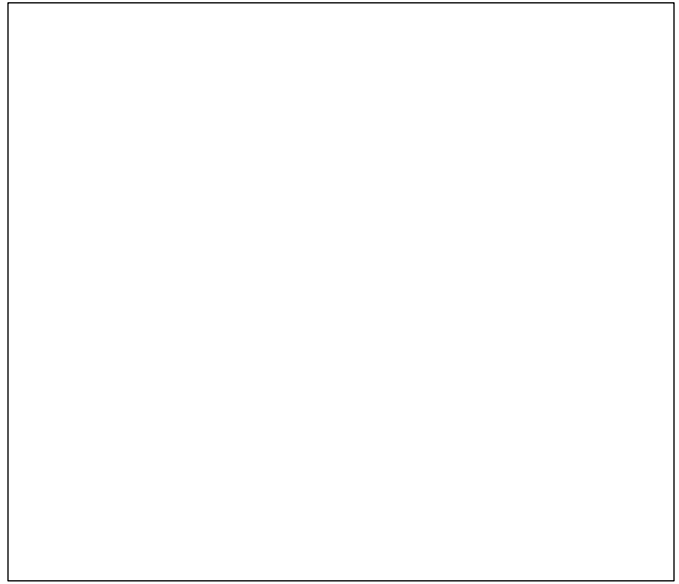


Figure 2 -



Figure 3 -



Figure 4 -

Attachment D – Illicit Discharge Tracking Sheet

Attachment E – Quality Assurance Project Plan (QAPP)

Stormwater Monitoring Quality Assurance Project Plan

1.0 Background and Scope

In Maine, there are 30 municipalities (permittees) regulated by the 2022 Maine General Permit for Stormwater Discharges from Municipal Separate Storm Sewer Systems (MS4 General Permit). The MS4 General Permit requires that the municipalities conduct dry weather inspections on 100% of their outfalls during the 5-year term of the MS4 General Permit.

Under most conditions, if an outfall is observed to have dry weather flow, monitoring must be conducted to assess whether there is an illicit discharge associated with the flow. (Part IV(C)(3)(e)(vi) of the MS4 General Permit contains a few conditions under which flowing outfalls do not need to be monitored.)

The following monitoring needs to be conducted whether the outfall's dry weather flow exhibits evidence of an illicit discharge:

- E. coli, enterococci, total fecal coliform or human bacteroides;
- Ammonia, total residual chlorine, temperature, and conductivity; and
- Optical enhancers or surfactants.

The objective of the monitoring is to collect data that can be used to determine if there is an illicit discharge present in the flow, or if the flow is from uncontaminated groundwater, water from a natural resource, or an allowable non-stormwater discharge.

The purpose of this Quality Assurance Project Plan (QAPP) is to provide sampling personnel information that will assist them in collecting samples and analyzing the samples using field equipment/test kit(s) and/or laboratories in a manner that ensures sufficient accuracy and precision so that sampling personnel and regulators can be confident there is or is not an illicit discharge present in dry weather flow from an outfall. This QAPP provides information on several field equipment/test kit(s) and analytical methods available to permittees that can be used to comply with the requirements for Dry Weather Outfall Monitoring.

Illicit Discharge means any discharge to a regulated MS4 system that is not composed entirely of stormwater other than:

- discharges authorized pursuant to another permit issued pursuant to 38 M.R.S. §413;
- uncontaminated groundwater;
- water from a natural resource [such as a wetland]; or
- other Allowable Non-Stormwater Discharges identified in Part IV(C)(3)(h) of the MS4 General Permit.

Each municipality is required by the MS4 General Permit to prepare a written Illicit Discharge Detection and Elimination (IDDE) Plan. This QAPP has been developed to be an attachment to a municipality's IDDE Plan, and therefore does not contain all of the IDDE requirements associated with the MS4 General Permit. For example, some communities are conducting outfall inspections more frequently than once every 5 years. The IDDE Plan should be consulted to determine the municipality's frequency of inspections. In addition, if there is evidence of an illicit discharge, the municipality must conduct additional investigations to identify the source and work with responsible parties to remove the source. The IDDE Plan describes the processes and procedures specific to a municipality for the subsequent investigations.

2.0 Sampling Procedures

Samples are required to be collected at outfalls that exhibit dry weather flow (defined as flow after there has been no precipitation greater than ¼ inch for 72 hours, and no melt water from snow or ice).

Personnel should be prepared to collect samples during any outfall inspection, because dry weather flow is sometimes intermittent, and if personnel need to return to the site later in the same day, or several days later, the dry weather flow may no longer be present.

Table 1 contains a list of equipment that should be prepared and available in order to conduct dry weather monitoring.

Samples will be collected from a flowing source only (not from stagnant water), and where the pipe outlet has at least 1 or 2 inches of free-flowing drop before any standing water or pool below it. Stagnant water should not be sampled unless the municipality deems it necessary for some reason.



This outfall, though in poor condition because it is cantilevered, provides a good opportunity for a clean catch of its discharge.



This outfall is partially submerged and a clean catch of its discharge is not possible. If tidal influences are strong, wait until low tide to sample. Additional options include: sampling upstream structures or using sand bags around the outfall to prevent contamination from backflow.

Table 1 provides a list of equipment that should be gathered and available for use in the event dry weather outfall monitoring needs to be conducted.

Table 1 Field Equipment for Monitoring

1 Gallon of Distilled or de-ionized water for rinsing
1 Roll Paper towels
3-5 clean plastic 250 ml beakers for water sample collection in Baggie marked “Clean” or disposable “whirl bags”
Garbage bags
1 long sampling pole and or sampling pump and tubing
Equipment to remove and access catch basin covers if needed (pull, hammer, crowbar)
Field equipment/test kits (see Table 2) and bottles for any laboratory samples or off-site field test kits. Ensure field test kits reagents have not expired typically keep bottles for 3-5 samples available
Non-latex gloves
Box of 1 gallon plastic bags
Cooler with ice
Camera or phone
Safety Vest
Steel toed boots, waterproof
scissors
Sunscreen and bug spray
Clip board
3-5 Field Data Sheets (See Addendum 1)
Chain of Custody (Addendum 3)
Sharpies and water-proof pens
Packing tape and Duct tape
Sheet of blank labels for bottles
First aid kit
Small white board with pen to mark outfall ID, date, and time in photo

For each outfall sampled, a Field Data Sheet will be used to document the date, time, and location of sample(s) collected, weather conditions, any general observations related to the tests being performed, and results of any parameters analyzed using field equipment or test kits. Note that the Field Data Sheet has a place to document sample observations including odor, color, turbidity, presence of algae, etc. The observations can be documented in this location instead of, or in addition to the observations made during the normal outfall inspection (which should be conducted in accordance with the MS4’s IDDE Plan or SOP).

Sample bottles that will be taken away from the sampling site for analysis will be labelled with the date, time and sample location as well as the name of the sampler. Example labels are provided in Addendum 1 along with an example field data collection sheet.

When using a third-party laboratory for any off-site analysis, sample bottles should be obtained before the sampling event. Coordination with the laboratory is also recommended to ensure that sample hold times and preservation requirements are being met. If samples are being collected on a Friday, some laboratories need prior notice to meet short hold times. Analytical methods, hold times and other pertinent information is described in Section 3 of this QAPP.

After sampling events, any reusable sample collection containers will be cleaned with soap and water or trisodium phosphate and water. Cleaning will be completed in a location where wash

water can be discharged to a licensed wastewater treatment plant, sanitary sewer, or septic system.

3.0 Analyses and Reporting limits

The MS4 General Permit does not require samples to be analyzed using Clean Water Act (CWA) Methods published in 40 Code of Federal Regulations Chapter 136. The use of field equipment/ test kit(s) and laboratories are both allowed. The MS4 General Permit does not require samples to be analyzed by a laboratory that is certified by the Maine DEP. However, this QAPP specifies that when a commercial laboratory is used for a CWA method, it will be certified by the Maine DEP for the CWA method specified.

Use of a certified laboratory is specified in this QAPP because the data generated by a certified lab would be more likely to stand up in a court of law than data generated by a non-certified lab.

A list of commercial certified laboratories is available on the Maine DEP website at: <https://www.maine.gov/dhhs/mecdc/environmental-health/dwp/professionals/labCert.shtml> . Note also that many Wastewater Treatment Plants conduct bacteria analysis for operational purposes. If there is a Wastewater Treatment Plant in the area, it can also be used for the bacteria screening.

This QAPP does not specify CWA methods or Maine DEP certification for use of field equipment/test kit(s).

Table 2 provides information related to sampling parameters, analysis methods, and sample preservation and holding times that may be used during dry weather outfall monitoring. Analysis methods specified in **Table 2** include CWA methods, field equipment, and test kits, where applicable. **Table 2** also provides information on when a given CWA Method, Field Equipment, or Test Kit might be preferable if there are multiple options for a given parameter.

Prior to sampling, the sampler and Environmental & Sustainability Coordinator will determine what analysis method (CWA Method, Field Equipment, or Test Kit) will be used.

User manual(s) and safety data sheets (SDS) for field equipment and/or test kit(s) that will be utilized for dry weather monitoring are included as Addendum 4 to this QAPP, or may be kept in a separate electronic or paper location as long as they are easily accessible to the field personnel who will be conducting the monitoring.

Table 2 Sampling Parameters, Analysis Methods, and Sample Preservation and Holding Times

Bacteria - select one or more based on discharge environment	CWA Method, Field Equipment, or Test Kit	Preservation	Holding time	Bottle needed	Notes on Use
Bacteria - E. coli	SM 9223 B (IDEXX Colilert Quanti-Tray) EPA 1603 (membrane filtration, MF) Or SM 9221 B (Most probable number, MPN)	Ice	To lab within 6 hours Analyze within 2 hours of receipt	120 ml or 250 ml plastic sterile bottle with lid from lab	Use for discharges to freshwater (with ammonia and either optical enhancers or surfactants)
Bacteria – Fecal Coliform	SM 9222 D (MF CFU/100ml) Or SM 9221 C, E (Multitube MPN/100ml)	Ice	To lab within 6 hours Analyze within 2 hours of receipt	120 ml or 250 ml plastic sterile bottle with lid from lab	Use for discharges to salt or freshwater (with ammonia and either optical enhancers or surfactants)
Bacteria – Human Bacteroides	Labs: EMSL (NJ), Microbial Insights (TN) or Source Molecular (FL) Or Dr. Steve Jones, UNH	Ice	To lab within 24 hours Analyze within 48 hours	1000 ml plastic bottle with sodium thiosulfate from lab (with insulated shipping box)	Use for discharges to salt or freshwater (with ammonia and either optical enhancers or surfactants). Not a CWA method, so Maine Laboratory certification not required.

Table 2 Sampling Parameters, Analysis Methods, and Sample Preservation and Holding Times

Ammonia (select one method)	CWA Method, Field Equipment, or Test Kit	Preservation	Holding time	Bottle needed	Notes on Use
Ammonia	Hach Ammonia Test Strips	None	Immediate (w/in 15 minutes) in Field	Field jar or beaker	
Ammonia	Hach DR300 Pocket Colorimeter Ammonia Nitrogen or LaMotte 3680-01 DC1200 Colorimeter test kit	None	Immediate (w/in 15 minutes) in Field	Field jar or beaker	Reagent contains Mercury, Generates a Toxic Hazardous Waste (D009) instructional video (10 minutes): https://www.youtube.com/watch?v=hFiEEEAuWfo
Total Residual Chlorine (select one method)	CWA Method, Field Equipment, or Test Kit	Preservation	Holding time	Bottle needed	Notes on Use
Chlorine	Field kit – Hach Colorimeter II low range	None	Immediate (w/in 15 minutes) in Field	Field jar or beaker	Instructional video available at: https://www.youtube.com/watch?v=WTTUD0Hq1Vw
Temperature and Conductivity (use both)	CWA Method, Field Equipment, or Test Kit	Preservation	Holding time	Bottle needed	Notes on Use
Temperature	Temperature/ Conductivity probe	None	Immediate (w/in 15 minutes) in Field	Field jar or beaker	Use to distinguish between groundwater and surface water.
Conductivity	Temperature/ Conductivity probe	None	Immediate (w/in 15 minutes) in Field	Field jar or beaker	Use to distinguish between salt water and fresh water.

Table 2 Sampling Parameters, Analysis Methods, and Sample Preservation and Holding Times

Optical Enhancers or Surfactants (select one)	CWA Method, Field Equipment, or Test Kit	Preservation	Holding time	Bottle needed	Notes on Use
Surfactants	CheMetrics K-9400 field test kit (see Maine DEP guidance on handling and disposal in Addendum 2)	None	Immediate (w/in 15 minutes) in Field	Field jar or beaker	Works on most soaps (laundry detergent, personal care products, dish soap). Contains alcohol and chloroform. Generates a Flammable (D001) and Toxic (D022) Hazardous Waste. Do not use test kit in the field unless licensed to transport hazardous wastes. Instructional Video available at: https://www.youtube.com/watch?v=6vwiZgWqa04
Optical brighteners	Maine Healthy Beaches Fluorometer (\$15,000 unit)	None	Keep in a dark container, provide to MHB in 1-2 days, analyze within 7 days	Whirl bag or 100 ml plastic bottle.	Provides semi-quantitative numeric fluorescence of sample. Need to provide sample to MHB in bottle or whirl bag (in a box or cooler). One week hold time. Provide advanced notice to coordinate delivery to office. Organic matter or tannins, or color will interfere.
Other Optional Parameters	CWA Method, Field Equipment, or Test Kit	Preservation	Holding time	Bottle needed	Notes on Use
Dissolved Oxygen	Hach DO Test kit Model OX-2P	None	Immediate (w/in 15 minutes) in Field	Field jar or beaker	Waters of the state have Dissolved Oxygen standards. This test can show whether outfall contributions are affecting Dissolved Oxygen content of receiving waters.
Total Phosphorus	EPA 365.3	Sulfuric Acid (pH <2) + Ice (4°C)	28 days	250 ml glass bottle from lab.	Provides data regarding nutrient contributions to receiving waters which can originate from paved surfaces, fertilizers and eroding soils.
Other Optional Parameters (continued)	CWA Method, Field Equipment, or Test Kit	Preservation	Holding time	Bottle needed	Notes on Use
Personal Care Products	EPA 1694	Sulfuric Acid (pH <2) + Ice (4°C)	7 day to extraction 40 days after extraction	1000 ml amber jar	EPA Lab Chelmsford can run if capacity. Contact Todd Borci. Otherwise need to use a commercial laboratory. EPA recommends analyzing only for following subset: Caffeine, 1,7-DMX (metabolite of

Table 2 Sampling Parameters, Analysis Methods, and Sample Preservation and Holding Times

					caffeine), Acetaminophen, Carbamazepine (anti-depressant), Primidone (anti-epilepsy drug), Atenolol (high Blood pressure med), Cotinine (metabolite of nicotine), urobilin (by product of hemoglobin breakdowns), Azithromycin (antibiotic)
Total Suspended Solids	EPA 160.2 or SM2549D	Ice	7 days	1000 ml plastic bottle from lab	
Biochemical Oxygen Demand	EPA 405.1 or SM5210B	Ice	To lab within 24 hours, analyze within 48 hours		Provides general water quality information.
Total Petroleum Hydrocarbons DRO and GRO	SW 8015C	Ice	7 Days to extraction 40 days after extraction	500 ml amber glass jar and 3 40 ml VOA containers from lab with sulfuric acid	DRO is Diesel Range Organics (C10 to C28) GRO is Gasoline Range Organics (C5 to C10)
Nitrate + Nitrite	SM 4500 or EPA 300	Sulfuric Acid (pH <2) + Ice (4°C)	28 days	125 ml plastic bottle from lab	Provides data regarding nutrient contributions to receiving waters which can originate from paved surfaces, fertilizers, eroding soils or wastewaters.
Total Kjeldahl Nitrogen	SM 4500 or EPA 300	Sulfuric Acid (pH <2) + Ice (4°C)	28 days	1000 ml amber glass bottle from lab	Provides data regarding nutrient contributions to receiving waters which can originate from paved surfaces, fertilizers, eroding soils or wastewaters.

4.0 Quality Control

The following are the reporting limits required by the MS4 General Permit:

Ammonia: 0.5 mg/L
Surfactants: 0.25 mg/L
Total Residual Chlorine: 0.05 mg/L
E. coli bacteria 4 cfu/100 ml
Enterococcus 10 cfu/100 ml

To ensure the data collected meets the required reporting limits, the MS4 permittee will use either a Maine Certified Laboratory or one of the field equipment/test kit methods listed in **Table 2** to assess dry weather flow.

Each of the test kits listed in **Table 2** has a use range that is appropriate for the work being conducted, and which meets the MS4 required reporting limits.

Test kit reagents that have expired will not be used. Test kit and temperature/conductivity probes that have useful life limits will be replaced when they have reached the end of their useful lives.

Maine Certified Laboratories have standard reporting limits for the parameters that conform to the MS4 General Permit required reporting limits.

4.1 Duplicate Samples¹ To assess the precision of the dry weather flow monitoring, the municipality will collect one duplicate sample for every 10 samples collected. Precision reflects the reproducibility of a given parameter by calculating the Relative Percent Difference (RPD) of the samples. RPD is calculated as follows:

$$RPD = \frac{(X_1 - X_2) \times 100}{(X_1 + X_2) \div 2} \quad \text{Where } X_1 \text{ is the concentration of one sample and } X_2 \text{ is the concentration of the duplicate sample.}$$

Table 3 provides information on the use of duplicate samples and troubleshooting information in the event the duplicate samples results are outside acceptable precision limits. The Precision and Target Relative Percent Differences shown were taken primarily from the Draft USEPA Bacteria Source Tracking Protocol. It is not possible to cover all possible reasons a set of duplicate samples may be outside the precision or Relative Percent Difference targets but the last column of the table lists a few considerations. If RPDs are not met on a day when samples were collected from multiple sites, the sampler should consider carefully the conditions that may have lead to the issue and whether those conditions would cause all the sample results to be unreliable.

¹ Optional – Not required by permit.

Table 3 Sample Precision Goals

Parameter	Precision/ Target Relative Percent Difference	Use of Data when it meets the Precision or RPD	Comments/Troubleshooting if outside Precision or RPD
Temperature	0.1 °C or 0.2 °F	Retain both sets of data.	Because there are no thresholds for additional investigations for this parameter, just retain both sets of data and provide any comments that may have affected discrepancy such as age and condition of meter, or if exposure to ambient temperature could have affected temperature of sample.
Specific Conductance	5 uS/cm	Retain both sets of data.	Because there are no thresholds for additional investigations for this parameter, just retain both sets of data and provide any comments that may have affected discrepancy such as age and condition of meter.
Bacteria (E-Coli, Enterococci, or Fecal Coliform)	+/- 100 col/100ml or 30% RPD	Retain both sets of data, use an average of the samples to compare to the investigation thresholds.	Assess cleanliness of equipment used to collect sample. Review Laboratory quality control reports for any errors or issues. Review visual observations of sample collected to assess if there were any differences in color, clarity, odor, or volume of discharge that could account for discrepancy. Consider resampling site.
Dissolved Oxygen	0.02 mg/L	Retain both sets of data.	Assess cleanliness of equipment used to collect sample. Consider resampling site.
All other parameters	30% RPD	Retain both sets of data, use an average of the samples to compare to any investigation thresholds.	Assess cleanliness of equipment used to collect sample. Consider resampling site.

4.2 Equipment or Rinsate Blanks. For most instances, dedicated equipment and containers are used to collect samples, so that equipment and rinsate blanks are not required to be collected and analyzed. However, if equipment or collection containers are being used multiple times in the field for different sample locations, they should be cleaned in between samples, wash water should be collected in the field and disposed of when returning to office or lab spaces, and equipment or rinsate blanks should be collected and assessed. The USEPA Volunteer Monitor's Guide to Quality Assurance Project Plans has additional information on how to complete these tasks (EPA Document 841-B-96-003).

5.0 Field Data Sheets and Chain of Custody

As described in Sampling Procedures, Field Data Sheets will be used to document sample collection. Field Data sheets will document the type of field equipment or test kit(s) used and results of any in-situ analysis. Example Field Data Sheets are provided in Addendum 1 to this QAPP.

Whenever samples will be sent to a laboratory for analysis, a Chain of Custody will be used to document sample collection dates, times, analytical methods requested, and custody of the sample from the time it was collected, until the time it was analyzed. Example Chains of Custody are provided in **Addendum 3** to this QAPP.

6.0 Data Reports

Field data collection sheets shall constitute data reports for analyses using field equipment or test kits.

Whenever samples are sent to a laboratory for analysis, data reports are provided by the laboratory showing the sample location, date and time of collection, results of the analysis, the reporting limit, the person who conducted the analysis, the analytical method used.

7.0 Data Review and Follow up

Once all data has been received, it will be reviewed by the Environmental & Sustainability Coordinator. Data shall also be stored electronically or in paper format for at least 3 years following the expiration date of the MS4 General Permit, as required by the MS4 General Permit.

If the person collecting the sample is the Environmental & Sustainability Coordinator, they may opt to have another municipal staff person review the data, or a Stormwater Manager or Coordinator from another municipality if they deem it necessary to assist in the overall investigation. Data should be reviewed within 2 weeks of receipt and additional investigations should be implemented to identify the source of any potential illicit discharge if any of the thresholds in **Table 4** are exceeded.

Table 4 Thresholds for Additional Investigation

Parameter	Threshold Level for Additional Investigation	Notes/Discussion
E. coli	236 cfu/100 ml – discharges into freshwater rivers or streams	All classifications of flowing fresh surface water in Maine (AA, A, B and C) have a standard that no more than 10% of the samples may exceed this concentration in any 90-day interval. A fresh surface water is at risk of impairment if it is receiving significant discharges from human sources above this concentration.
E. coli	194 cfu/100 ml – discharges into freshwater ponds	Great Ponds and lakes less than 10 acres have a standard that no more than 10% of the samples may exceed this concentration in any 90-day interval. A water of this type is at risk of impairment if it is receiving significant discharges from human sources above this concentration.
Fecal Coliform	61 cfu/100 ml (2 times 31 cfu/100 ml for MF) to 100 cfu/100ml	The low end of this threshold is two times the 90 th percentile standards that DMR applies for approved (open) shellfish harvesting areas and is very conservative (90% of the samples collected from the area must be above these concentrations for the harvesting area to remain open and completely unrestricted for shellfish harvesting. See Addendum 2 for additional info from DMR)
Human Bacteroides	Any concentration may be indicative of human sewage, but MHB considers 4,200 col/100ml HB to be equivalent to the level of contamination that exceeds the EPA acceptable risk of gastrointestinal illness to swimmers. (Rothenburger and Jones, 2018 and Boehm, Soller and Shanks 2015)	Any concentration of human source of sewage should be investigated.
Ammonia	≥ 0.50 mg/L	This is the effective reporting limit of the Ammonia test strips and was taken from USEPA Draft 2012 Bacteria Source Tracking Protocol.
Chlorine	≥ 0.05 mg/L	Limit of test kit and was taken from USEPA Draft 2012 Bacteria Source Tracking Protocol.
Surfactants	≥ 0.25 mg/L	Taken from USEPA Draft 2012 Bacteria Source Tracking Protocol.
Optical Brighteners	≥ 100 ug/L (≥ 0.10 mg/L)	This is used by Maine Healthy Beaches as an actionable threshold. If using a handheld fluorometer, conduct further investigation if presence of optical brighteners is detected

MS4s should use the thresholds listed above and the following general guidance to make determinations whether an outfall requires additional investigation for illicit discharges:

Outfalls that have some visual evidence of an illicit discharge and exceed at least one of the above thresholds and should be investigated further using techniques described in the MS4s IDDE Plan.

Outfalls that do not have any visual evidence of an illicit discharge but exceed more than one of the above thresholds should be investigated further using techniques described in the MS4s IDDE Plan

As described in Section 1 of this QAPP, if the above thresholds are not exceeded, the MS4 may make the determination that the flow is from uncontaminated groundwater, water from a natural resource, or an allowable non-stormwater discharge.

Revisions:

1. Original document prepared for 2022 MS4 General Permit Submission to Maine DEP.
2. Updates in accordance with municipal-specific needs and information.

Addenda

1. Example Field Data Collection Sheet and labels
2. References:
 - a. E-mail on Surfactant field kit handling of residuals from DEP staff
 - b. E-mail on Fecal Coliform thresholds from DMR listed in Table 4
3. Example Chains of Custody
4. User Manual(s) and Safety Data Sheets (SDS) for Field Equipment and/or Test Kit(s) (This is an optional addendum. The information must be located where field personnel can access electronically or in paper form, so this Addendum can be used as a place to describe where field personnel will find equipment, manuals and SDSs).

References:

Rothenheber and Jones 2018. *Enterococci Concentrations in a Coastal Ecosystem are a function of fecal source input*. Published in Applied Environmental Microbiology, July 13, 2018.

Boehm, Soller and Shanks 2015. *Human-Associated Fecal Quantitative Polymerase Chain reaction Measurements and Simulated Risk of Gastrointestinal Illness in Recreational Waters Contaminated with Raw Sewage*. Published in Environmental Science and Technology Letters 2015, 2, 270-275.

Addendum 1

Example Field Data Collection Sheet and labels

Field Data Collection Sheet for Dry Weather Outfall Monitoring

Date _____	Project Name _____
Time _____	_____
Sampler's Name _____	Project Location _____
Weather: _____	
Sample Type: _____	
Sample Location/Sketch: _____	

Field Parameters to Monitor

Parameter	Result (units)	Equipment Used	Threshold triggering additional investigation (see QAPP)
Temperature (all flows)	C/F		No threshold. FYI: Temp. is dependent on season. Groundwater is typically 40-55 F. Surface water can be hotter or colder.
Conductivity (all flows)	µs		No threshold. FYI: Groundwater is typ. Less than 1000 µs. Freshwater can be as high as 2000 µs. Saltwater can be as high as 55,000 µs.
Ammonia (potential bacteria sources)	mg/L	Hach Test Strips	≥ 0.50 mg/L
Surfactants or Optical Brighteners (potential bacteria sources)			Surfactants ≥ 0.25 mg/L Optical Brighteners ≥ 100 ug/L or if present
Chlorine (potential chlorine sources)	mg/l	Hach Colorimeter II low range	≥ 0.05 mg/L (test kit limit)

Observations (unless already documented as part of outfall inspection: odor, color, turbidity, algae, etc): _____

Laboratory Analyses (see QAPP for thresholds)

Parameter	Method/ Lab Code	Comments
E. coli	SM 9223 B, EPA 1603, or SM 9221 B	For freshwaters
Enterococci	SM 9230 or EPA 1600	For marine/estuarine waters
Fecal Coliform	SM 9222 D or SM 9221 D, E	For fresh or marine/estuarine waters
Human Bacteriodes	qPCR	For fresh or marine/estuarine waters

Comments/Field Notes

This set of labels was designed to be used with Avery 5366 labels, but you can use any labels.

Sampler: _____ Date: _____
Time: _____ Field ID: _____

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Time: _____ Field ID: _____

Addendum 2

-Reference E-mails

Kristie Rabasca

From: Lewis, Bryant J <Bryant.J.Lewis@maine.gov>
Sent: Thursday, October 31, 2019 4:46 PM
To: Kristie Rabasca; Wahle, Benjamin
Subject: RE: simple summary of Fecal concentrations for open vs seasonal vs restricted vs prohibited?

Kristie,

I did misunderstand the question. Unless there is a specific area of concern where we are collaborating on a special study with a town, we typically provide a yearly update for each station's geomean and P90 incorporating the most recent 30 sample scores. That annual trend is provided to towns so we are not usually contacting a town based on any one score to tell them that there might be a problem.

However- if trying to determine a trigger on a single sample, there is some subjectivity to the answer. I would suggest a value between 50-100 as a high value trigger. There is merit to your suggestion of using twice the 31 value as well since that is within that range. Often, our Scientists would use 100 as the high score value as their own flag to watch a station since an area that is already at risk of exceeding the approved standard based on the last 30 samples would likely go over a P90 of 31 with a 100 added. I think you would likely accomplish your goal by using any of the three values; 50, 62, or 100. I would recommend starting with 62 then re-evaluating after some data is built up to determine if that should be increased or decreased based on program needs.

Bryant Lewis
ME Department of Marine Resources
Growing Area West Program Supervisor
194 McKown Point Road
West Boothbay Harbor, ME 04575
Tel: 207-633-9401
Cell: 207-215-4107

From: Kristie Rabasca <krabasca@integratedenv.com>
Sent: Thursday, October 31, 2019 2:42 PM
To: Lewis, Bryant J <Bryant.J.Lewis@maine.gov>; Wahle, Benjamin <Benjamin.Wahle@maine.gov>
Subject: RE: simple summary of Fecal concentrations for open vs seasonal vs restricted vs prohibited?

EXTERNAL: This email originated from outside of the State of Maine Mail System. Do not click links or open attachments unless you recognize the sender and know the content is safe.

H Bryant,

I do a lot of illicit discharge investigations with and for the municipalities. Maybe I did not phrase my question properly.

For a single sample, at what concentration would DMR say to a municipality: "we think there might be a problem here". Is that concentration the 90th percentile number? 31? Or twice that?

Or do you wait until you see the GM or P90 number get close to its threshold for multiple samples?

Kristie L. Rabasca, P.E.
207-415-5830 (cell)

From: Lewis, Bryant J <Bryant.J.Lewis@maine.gov>
Sent: Thursday, October 31, 2019 2:33 PM

To: Kristie Rabasca <krabasca@integratedenv.com>; Wahle, Benjamin <Benjamin.Wahle@maine.gov>

Subject: RE: simple summary of Fecal concentrations for open vs seasonal vs restricted vs prohibited?

Kristie,

I would suspect DEP and possibly the municipality should be contacted for possible illicit discharges.

We use DMR water quality stations to classify growing area waters. As part of our program, we also conduct surveys of the shoreline where we look for malfunctioning septic systems and other pollution sources and sample the mouths of streams entering growing area waters; however, we do not conduct investigations to determine the sources of contamination. Generally, it is up to the municipality to investigate degrading water quality while sometimes DEP can provide some additional assistance. If there is an area where water quality was degrading we would provide the municipality the information we have if they wished to investigate. The municipality would likely need to do additional work to locate the source of contamination but the information you are describing would likely be valuable in their effort.

Bryant Lewis
ME Department of Marine Resources
Growing Area West Program Supervisor
194 McKown Point Road
West Boothbay Harbor, ME 04575
Tel: 207-633-9401
Cell: 207-215-4107

From: Kristie Rabasca <krabasca@integratedenv.com>

Sent: Wednesday, October 30, 2019 9:00 AM

To: Lewis, Bryant J <Bryant.J.Lewis@maine.gov>; Wahle, Benjamin <Benjamin.Wahle@maine.gov>

Subject: RE: simple summary of Fecal concentrations for open vs seasonal vs restricted vs prohibited?

EXTERNAL: This email originated from outside of the State of Maine Mail System. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Thanks so much for this. We are using it because some communities will be sampling outfalls that are discharging into marine environments for fecal coliform as a screening tool when looking for illicit discharges. The MS4 General Permit requires that the communities regulated for their stormwater discharges do sampling whenever an outfall is flowing after three days of dry weather. We are telling them to notify DMR of the results, and wanted to have some guidelines for when they should be concerned. I know that your scores are very conservative because they are all about the FDA and ingestion of shellfish.

I have attached a QAPP that we are using and you will see the table in the back has a "threshold" for additional investigation if the town is monitoring for fecal coliform. Please note that the samples they are collecting are discharges from outfalls into the water body – not from the water body.

Would you investigate further if the thresholds for 90th percentile for open areas were exceeded? Or would you use 2x that? Or some other number.

Hopefully you understand my question....

Kristie L. Rabasca, P.E.
207-415-5830 (cell)

From: Lewis, Bryant J <Bryant.J.Lewis@maine.gov>

Sent: Monday, October 28, 2019 10:16 AM

To: Wahle, Benjamin <Benjamin.Wahle@maine.gov>; Kristie Rabasca <krabasca@integratedenv.com>

Subject: RE: simple summary of Fecal concentrations for open vs seasonal vs restricted vs prohibited?

Kristie,

This webpage explains the classifications.

<https://www.maine.gov/dmr/shellfish-sanitation-management/programs/growingareas/howclassified.html>

The NSSP Model Ordinance dictates how we calculate water quality scores. A 90th percentile based on the most recent 30 samples providing a score of 31 or less is Approved, 32-163 is Restricted and above 163 is Prohibited. There is a link to the Model Ordinance on our website, if needed. It describes how to calculate scores for systematic random sampling using membrane filtration.

<https://www.maine.gov/dmr/shellfish-sanitation-management/programs/growingareas/index.html>

I have also attached a document summarizing what is in the Model Ordinance for calculating water quality station scores.

Bryant Lewis
ME Department of Marine Resources
Growing Area West Program Supervisor
194 McKown Point Road
West Boothbay Harbor, ME 04575
Tel: 207-633-9401
Cell: 207-215-4107

From: Wahle, Benjamin
Sent: Monday, October 28, 2019 9:28 AM
To: Kristie Rabasca <krabasca@integratedenv.com>
Cc: Lewis, Bryant J <Bryant.J.Lewis@maine.gov>
Subject: RE: simple summary of Fecal concentrations for open vs seasonal vs restricted vs prohibited?

Hi Kristie,

I'm actually going to refer you to Bryant Lewis, who is the Western Region Growing Area Supervisor. He'll be better able to explain DMR's classification system.

-Ben

From: Kristie Rabasca <krabasca@integratedenv.com>
Sent: Monday, October 28, 2019 8:03 AM
To: Wahle, Benjamin <Benjamin.Wahle@maine.gov>
Subject: simple summary of Fecal concentrations for open vs seasonal vs restricted vs prohibited?

EXTERNAL: This email originated from outside of the State of Maine Mail System. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Good Morning Ben,

I worked with you in Eliot and Cape – and am looking on your website for a simple summary of the P90 concentrations that trigger the various restrictions on shellfishing.

Does such an animal exist? If so, could you share it?

I am working on a QAPP for the stormwater folks and want to provide them with a reference that is accurate and truthed by DMR for when they are sampling outfalls near shellfishing areas.

Thanks for any help you can provide.

DMR uses a membrane filtration (MF) method for fecal coliform analysis using mTEC agar with a two-hour resuscitation step. The geometric mean and the 90th percentile are calculated on a minimum of the most recent 30 data points.

Geometric Mean (Geomean):

The geometric mean, or geomean, is a type of averaging calculation. Unlike a simple average or arithmetic mean, the geomean takes into account the way bacteria grow. During bacterial growth, each bacterium doubles and reproduces itself i.e. one bacterium becomes two, two bacteria become four, four become eight and so on. There are low values at first and the rate of growth increases as the number of colonies increases. This is called exponential growth (Figure 1). This growth pattern means a fecal coliform dataset may have a few high scores and many low scores. The calculation for the geometric mean takes exponential growth into account by transforming the data into logarithms, taking the mean and then converting the number back to a log base 10 number. For example, the arithmetic mean of a fecal coliform score of 300, 150, 23 and 2 CFU/100ml is 119 CFU/100ml. Calculating the geomean, the result is 38 CFU/100ml.

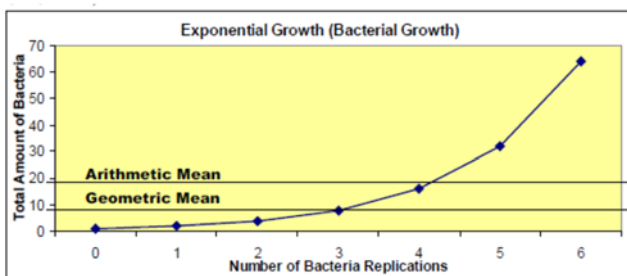
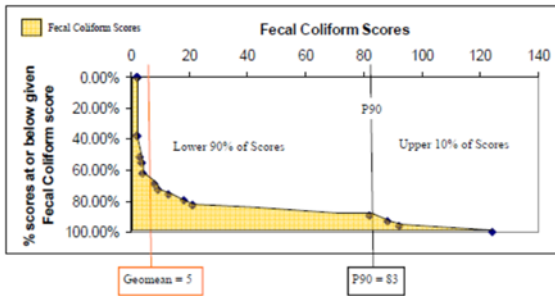
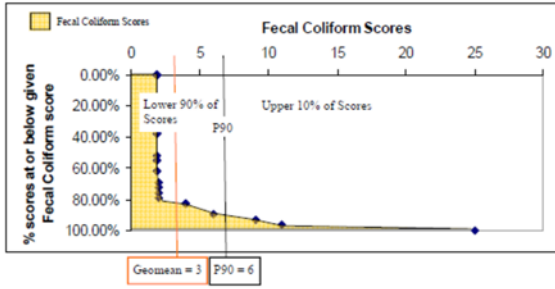


Figure 1. The graph illustrates exponential growth. The arithmetic mean for the scores is 18.1 while the geomean is 8.

90th Percentile (P90)

The other calculation used for shellfish growing area classification is the 90th percentile (P90). The P90 is the variability standard, meaning this value takes into account the variability of test readings. In any test measurement, successive readings of the same sample would produce slightly different scores each time due to precision of the equipment, human error, etc. This type of variability is a factor of the test method and equipment used and is true of all testing methods.

To account for the variability in the fecal coliform test, a standard has been established. Here again, since bacteria grows exponentially, the calculations are performed on a logarithmic scale. The P90 is based on the distribution of fecal coliform scores and means that 90% of scores are at are below the P90 and 10% scores are above (Figures 2a and 2b). As long as most of the other scores are low, a few high scores will not have a large impact on the P90 value. The P90 standard is the acknowledgment by the NSSP that a few high scores in data set may be due to the variability of the test method. If the area shows high fecal coliform scores intermittently due to pollution events such as rainfall, this may cause water quality to exceed the P90 standards because the shellfish are intermittently subject to polluted waters. For classification determinations, P90s are rounded to the nearest whole number. 0.1-0.49 are rounded down and 0.5-0.9 are rounded up to the next whole number.



Figures 2a and b. The lower 90% of the scores fall to the left of the P90 line and 10% of the scores fall to the right. 2a has a low P90 because there are many low scores and a few high scores. 2b has a larger number of high fecal coliform scores, so the P90 is shifted to the right. Although the geomean of 2b passes the approved standard, the area would not be classified as approved because the P90 score is above the threshold.

Fecal Coliform Standards by Shellfish Growing Area Classification Category

Shellfish Growing Area Classification	Activity Allowed	Geometric mean FC/100ml	90 th Percentile (P90) FC/100ml
Approved	Harvesting allowed	≤ 14	≤ 31
Conditionally Approved	Harvesting allowed except during specified conditions	≤ 14 in open status	≤ 31 in open status
Restricted	Depuration harvesting or relay only	≤ 88 and >15	≤ 163 and >31
Conditionally Restricted	Depuration harvesting or relay allowed except during specified conditions	≤ 88 in open status	≤ 163 in open status
Prohibited	Aquaculture seed production only	>88	>163

Kristie Rabasca

From: Hudson, Michael S <Michael.S.Hudson@maine.gov>
Sent: Monday, October 7, 2019 11:51 AM
To: Kristie Rabasca
Cc: Plummer, Cherrie F; Poirier, Rhonda
Subject: FW: Proper handling and disposal of CheMetrics Surfactant field test kit residuals
Attachments: surfactants_CHEMetrics_k9400instructs.pdf; surfactants_CHEMetrics_k9400_SDSs.pdf; EIASOP-SWTestKits_REV1.pdf

Importance: High

In response to the questions posed regarding proper handling and disposal of CheMetrics Surfactant field test kit residuals:

1. Can the Towns mix the liquids from a. and b. in a single container for disposal as D001 and D022 waste? Or do they need to keep them separate to dispose of them?
Answer: Chloroform is miscible in alcohols such as n-propanol and is compatible. The Hazardous Waste Management Rules, 06-096 C.M.R. ch. 850 through 858, do not prohibit the mixing of compatible wastes. If mixed, the waste mixture should be coded as both D001 and D022. The town/generator could check with the licensed hazardous waste transporter it intends to use for the hazardous waste pick-up and disposal to determine if it is advisable or more cost effective to keep the wastes separate.
2. The n-propanol waste is super tough to get out of the vial – we pretty much just dispose of the whole vial. Is that okay? Or can we break the vial? And dispose of the empty glass as solid waste (as long as it is RCRA empty).
Answer: The whole vials containing n-propanol can be disposed of as hazardous waste. If the generator chooses to break the vial to dispose of the n-propanol as hazardous waste and the glass as a solid waste, then the generator must ensure the broken vials are RCRA-empty. Again, the town/generator could check with the licensed hazardous waste transporter it intends to use for the hazardous waste pick-up and disposal to determine if it is advisable or more cost effective to break and empty the vials to dispose of the glass and n-propanol separately. Of course, care and safety measures should be employed if breaking and handling glass vials.
3. Most of these towns are going to be SQGs (Maine Definition), and are going to be generating this waste while they are out in the field over a period of months. Then after each event, they are going to drive it back to the public works facility and set up a SQG haz waste storage area until they can get rid of it (either at HHWD collection, or have a specific pick up). They have 1 year to dispose of it. Have I missed any exemptions or special conditions for this? Is it okay that they are driving it around? Or should they be bringing the water samples back to public works and running the surfactant analysis on it at public works so they don't have to transport it. (its easier for them to run the sample right there while they are at the site).
Answer: It is preferable for the town/generator to bring samples back from field sites to its Public Works to do the test so that hazardous waste generated by the tests does not have to be transported from field sites. Under the rules, the town/generator would need hazardous waste licenses to transport or accept the hazardous wastes from off-site. Towns should set up a hazardous waste collection container for the hazardous wastes from the tests, with an appropriate size container, labeled as "Hazardous Waste" with an accumulation start date. If the town's Public Works is a Small Quantity Generator (SQG), i.e. it generates for all its hazardous wastes in aggregate no more than 27 gallons/month and accumulates no more than 55 gallon of all of its hazardous waste in aggregate, then the town/generator could accumulate the waste indefinitely until the container of hazardous waste from tests is full at which point the town/generator would have 180 days to ship

via licensed hazardous waste transporter. Town/ Public Works should not dispose of these waste through the Household HW collection programs because they are not household exempt wastes.

4. We are going to do a training of the use of this kit on 10/17 in Portland. I would really like for attendees to be able to practice use of the kit at that training. Do I need to schedule with NRCC or Clean Harbors to come pick up the waste that day (as a licensed transporter), or could one of the communities transport it back to their public works facility for storage until later disposal (during HHWD)?

Answer: Under the rules, the generator should arrange for waste pick-up at the site of generation. These hazardous wastes are not exempt under the household waste exclusion and are not acceptable at Household Hazardous Waste collections events.

The guidance above is based on the information provided below and the applicable rules, Hazardous Waste Management Rules, 06-096 C.M.R. ch. 850 through 858, without information on the number of test kits expected to be used, frequency of testing and volumes of anticipated waste accumulation. If you have questions or would like to discuss the specifics, please feel free to contact me at Michael.s.hudson@maine.gov or 207-287-7884, or Cherrie Plummer of the Hazardous Waste Management Unit. Cherrie's contact is Cherrie.F.Plummer@maine.gov and 207-287-7882.

Michael S. Hudson, Supervisor, Hazardous Waste Management Unit
Maine Department of Environmental Protection
17 State House Station, Augusta, ME 04333-0017
Tel. 207-287-7884
www.maine.gov/dep

From: Poirier, Rhonda
Sent: Monday, October 07, 2019 9:37 AM
To: Hudson, Michael S <Michael.S.Hudson@maine.gov>
Subject: Proper handling and disposal of CheMetrics Surfactant field test kit residuals
Importance: High

Hi Mike,

The sampling she's describing is required by one of the permits in my stormwater program. She is giving a workshop on it on 10/17 and would like to talk to the proper DEP person before that, for planning purposes. Can you help her?

Thank you,
Rhonda

Rhonda Poirier
MEPDES Stormwater Program Manager
Bureau of Water Quality
Maine Department of Environmental Protection
207-592-6233
www.maine.gov/dep

From: Kristie Rabasca <krabasca@integratedenv.com>
Sent: Tuesday, October 01, 2019 4:02 PM
To: Poirier, Rhonda <Rhonda.Poirier@maine.gov>
Cc: Aimee Mountain (Aimee.Mountain@gza.com) <Aimee.Mountain@gza.com>; Damon Yakovleff <dyakovleff@cumberlandswcd.org>
Subject: Proper handling and disposal of CheMetrics Surfactant field test kit residuals

Hi Rhonda,

Thanks for taking my call.

I am developing a dry weather monitoring training session for the ISWG and SMSWG MS4s, and am developing a QAPP and some checklists.

We will need to use the CheMetrics K-9400 field test kit for surfactants. I have attached the instructions for the kit, and the Safety Data Sheets for the two reagents. Generally for each sample we will do the following:

1. Add 5 ml of water to a small plastic vial
2. Add 4ml of the double tipped reagent (SDS attached and it is flammable and contains 71% chloroform)
3. Shake
4. Use the 0.25 ml sealed glass ampule (which is 98% N-propanol) to draw the organic phase out of the plastic vial with the water and the first reagent.
5. Use colorimeter to check detergent concentration of sample.

So the two wastes we have when done are:

- a. The mixture of the 5 ml water and the 4 ml 71% chloroform (which is still flammable) in the plastic vial (minus about 1 ml extracted into the n-propanol vial)
- b. About 1 ml of the n-propanol and the chloroform organic phase in a very small glass ampule.

I am requesting the EPA SOP on this – but I do not think it has the detail I want.

When I have used this in the past, I have given it to the municipality where it was generated and told them it was a **D001 Flammable and D022 Tox-chloroform waste**, and they hand it to clean harbors during household hazardous waste day.

We are going to have a lot more people generating this waste – using these kits, and we need to handle it properly. As we provide them with guidance, we want to make sure it is right.

My questions are:

1. Can the Towns mix the liquids from a. and b. in a single container for disposal as D001 and D022 waste? Or do they need to keep them separate to dispose of them?
2. The n-propanol waste is super tough to get out of the vial – we pretty much just dispose of the whole vial. Is that okay? Or can we break the vial? And dispose of the empty glass as solid waste (as long as it is RCRA empty)
3. Most of these towns are going to be SQGs (Maine Definition), and are going to be generating this waste while they are out in the field over a period of months. Then after each event, they are going to drive it back to the public works facility and set up a SQG haz waste storage area until they can get rid of it (either at HHWD collection, or have a specific pick up). They have 1 year to dispose of it. Have I missed any exemptions or special conditions for this? Is it okay that they are driving it around? Or should they be bringing the water samples back to public works and running the surfactant analysis on it at public works so they don't have to transport it. (its easier for them to run the sample right there while they are at the site).
4. We are going to do a training of the use of this kit on 10/17 in Portland. I would really like for attendees to be able to practice use of the kit at that training. Do I need to schedule with NRCC or Clean Harbors to come pick up the waste that day (as a licensed transporter), or could one of the communities transport it back to their public works facility for storage until later disposal (during HHWD)?

So many questions.... Perhaps I could talk with someone at Haz waste.... Thanks for any help you can provide.



Kristie L. Rabasca, P.E

Integrated Environmental Engineering, Inc.

12 Farms Edge Road

Cape Elizabeth, ME 04170

207-415-5830

Addendum 3

Example Chains of Custody

Laboratory Sample Chain of Custody

Client:		Contact:		Phone #:		Email										
Address:			City:		State:		Zip Code:									
Purchase Order #:			Proj. Name/No.:			Quote #:										
Bill (if different than above):				Address:												
Sampler (Print/Sign):						Copies To:										
LAB USE ONLY		Work Order #:				Analysis and Container Type Preservatives										
Remarks: Shipping Info: FEDEX UPS CLIENT Airbill No: Temp C Temp Blank Intact Not Intact						Filt. Y/N	Filt. Y/N	Filt. Y/N	Filt. Y/N	Filt. Y/N	Filt. Y/N	Filt. Y/N	Filt. Y/N	Filt. Y/N	Filt. Y/N	
*	Sample Description	Date/Time Collected	Matrix water/soil /other	No. of Containers												
COMMENTS:																
Relinquished By:		Date/Time		Received By:		Relinquished By:		Date/Time		Received By:						
Relinquished By:		Date/Time		Received By:		Relinquished By:		Date/Time		Received By:						



EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

EMSL Order Number (Lab Use Only):

EMSL ANALYTICAL, INC.
200 ROUTE 130 NORTH
CINNAMINSON, NJ 08077

PHONE: (800) 220-3675
FAX: (856) 786-0262

Company :		EMSL-Bill to: <input type="checkbox"/> Same <input type="checkbox"/> Different If Bill to is Different please note in Comments**					
Street:		<i>Third Party Billing requires written authorization from third party</i>					
City:	State/Province:	Zip/Postal Code:	Country:				
Report To (Name):		Fax #:					
Telephone #:		E-mail Address:					
Project Name/ Number:							
Please Provide Results: <input type="checkbox"/> Fax <input type="checkbox"/> E-mail		PO#	State Samples Taken:				
Turnaround Time (TAT) Options* - Please Check							
<input type="checkbox"/> 3 Hour	<input type="checkbox"/> 6 Hour	<input type="checkbox"/> 24 Hour	<input type="checkbox"/> 48 Hour	<input type="checkbox"/> 72 Hour	<input type="checkbox"/> 96 Hour	<input type="checkbox"/> 1 Week	<input type="checkbox"/> 2 Week
<small>*Analysis completed in accordance with EMSL's Terms and Conditions located in the Analytical Price Guide. TATs are subject to methodology requirements.</small>							
Fungi		Bacteria		Insects			
<input type="checkbox"/> ERMI Panel (M180) <i>Dust Only</i>		<input type="checkbox"/> Human <i>Bacteroides</i> (M199)		<input type="checkbox"/> Bed Bug (<i>Cimex lectularius</i>) (M146)			
<input type="checkbox"/> EPA 36 Panel (M233) <i>Air, Swab</i>		<input type="checkbox"/> Total <i>Bacteroides</i> (M095)		<input type="checkbox"/> Tick - <i>Anaplasma phagocytophilum</i> Anaplasmosis (M261)			
<input type="checkbox"/> Water Damage 20 Panel (M181)		<input type="checkbox"/> <i>E. coli</i> O157:H7 (M140)		<input type="checkbox"/> Tick - <i>Babesia microti</i> Babesiosis (M260)			
<input type="checkbox"/> Wood Rot Fungi 10 Panel (M232)		<input type="checkbox"/> <i>E. coli</i> (M200)		<input type="checkbox"/> Tick - <i>Borrelia burgdorferi</i> Lyme disease (M196)			
<input type="checkbox"/> <i>Aspergillus</i> 15 Panel (M186)		<input type="checkbox"/> Total <i>Enterococcus</i> (M096)		Other			
<input type="checkbox"/> <i>Aspergillus</i> 6 Panel (M188)		<input type="checkbox"/> <i>Helicobacter pylori</i> (M207)		<input type="checkbox"/> <i>Acanthamoeba</i> spp. (M147)			
<input type="checkbox"/> <i>Penicillium</i> 13 Panel (M189)		<input type="checkbox"/> <i>Legionella pneumophila</i> (M103)		<input type="checkbox"/> <i>Cryptosporidium</i> spp. (M237)			
<input type="checkbox"/> Customized Fungi Panel (M100)		<input type="checkbox"/> <i>Legionella</i> 4 species-EPA (M162)		<input type="checkbox"/> <i>Giardia</i> spp. (M149)			
<input type="checkbox"/> <i>Penicillium</i> Mycotoxin 9 Panel (M190)		<input type="checkbox"/> <i>Legionella</i> Broad Screen (M163)		<input type="checkbox"/> Enterovirus RT-PCR (M142)			
Birds, Animal Droppings		<input type="checkbox"/> MRSA (M203)		<input type="checkbox"/> Food Authentication (F130)			
<input type="checkbox"/> <i>Chlamydomydia psittaci</i> (M234)		<input type="checkbox"/> <i>Mycobacterium avium</i> (M144)		<input type="checkbox"/> GMO Analysis (F131)			
<input type="checkbox"/> <i>Cryptococcus neoformans</i> (M143)		<input type="checkbox"/> <i>Mycobacterium tuberculosis</i> (M159)		<input type="checkbox"/> DNA Barcode Analysis (M195)			
<input type="checkbox"/> <i>Histoplasma capsulatum</i> (M208)		<input type="checkbox"/> <i>Pseudomonas aeruginosa</i>		<input type="checkbox"/> DNA Sequencing Fungi/Bacteria Isolates (M192)			
<input type="checkbox"/> Raccoon Roundworm (M236)		<input type="checkbox"/> <i>Salmonella</i> spp. (M141)		<input type="checkbox"/> Special Request:			
<input type="checkbox"/> Rodent (Mouse, Rat) Dropping (M271)		<input type="checkbox"/> <i>Shigella</i> spp. (F122)					
Sample #	Sample Location	Sample Type	Test Code	Volume/Area	Date/Time Collected		
Client Sample # (s): -				Total # of Samples:			
Relinquished (Client):				Date:	Time:		
Received (Lab):				Date:	Time:		
Comments:							

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information



EMSL ANALYTICAL, INC.
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[Empty Box]

EMSL Order Number (Lab Use Only):

EMSL ANALYTICAL, INC.
200 ROUTE 130 NORTH
CINNAMINSON, NJ 08077

PHONE: (800) 220-3675
FAX: (856) 786-0262

Sample #	Sample Location	Sample Type	Test Code	Volume/Area	Date/Time Collected

****Comments/Special Instructions**

Addendum 4
User Manual(s) and Safety Data Sheets (SDS) for
Field Equipment and/or Test Kit(s)
(This is an optional addendum. The information
must be located where field personnel can access
electronically or in paper form, so this
Addendum can be used as a place to describe
where field personnel will find equipment,
manuals and SDSs).

All user manuals and Safety Data Sheets for Field Equipment and/or Test Kits will be kept in the Environmental & Sustainability Coordinator's office with corresponding equipment and test kits.

Attachment F - MS4 Interconnection Notices

Town of Windham

8 School Road
Windham, ME 04062

voice 207.892.1907

fax 207.892.1916

March 23, 2021

Mr. Nathaniel Rudy, Town Manager
Town of Gray
24 Main Street
Gray, Maine 04093

RE: Interconnected MS4 Coordination

Dear Mr. Rudy,

The Town of Windham has filed a notice of intent to comply with the Maine General Permit for the discharge of stormwater from the municipal separate storm sewer system (MS4). Under this permit, we are required to coordinate with interconnected and nested MS4 permittees on spill response efforts in order to improve the health of Maine waters.

Although the Town of Gray is not an MS4 permittee, the Town of Windham has interconnections with your MS4. We will notify you if there is a spill of hazardous or non-hazardous substances in Windham that could affect your MS4 and we request that you do the same. In the event of an emergency after hours, please contact Windham Public Safety Dispatch at 207-892-2525.

Please forward this letter and/or request to any first responders or other municipal staff who may be able to coordinate spill response efforts with Windham. Please contact me if you have any questions regarding this letter and thank you for your cooperation in this matter.

Sincerely,

Gretchen Anderson

Gretchen Anderson
Environmental & Sustainability Coordinator

gaanderson@windhammaine.us
Office: 207-777-1948
Cell: 207-310-7393

Cc: Barry Tibbetts, Town Manager
Brent Libby, Fire Chief
Kevin Schofield, Police Chief

Town of Windham

8 School Road
Windham, ME 04062

voice 207.892.1907

fax 207.892.1916

March 23, 2021

Mr. Don Willard, Town Manager
Town of Raymond
401 Webb Mills Road
Raymond, Maine 04071

RE: Interconnected MS4 Coordination

Dear Mr. Willard,

The Town of Windham has filed a notice of intent to comply with the Maine General Permit for the discharge of stormwater from the municipal separate storm sewer system (MS4). Under this permit, we are required to coordinate with interconnected and nested MS4 permittees on spill response efforts in order to improve the health of Maine waters.

Although the Town of Raymond is not an MS4 permittee, the Town of Windham has interconnections with your MS4. We will notify you if there is a spill of hazardous or non-hazardous substances in Windham that could affect your MS4 and we request that you do the same. In the event of an emergency after hours, please contact Windham Public Safety Dispatch at 207-892-2525.

Please forward this letter and/or request to any first responders or other municipal staff who may be able to coordinate spill response efforts with Windham. Please contact me if you have any questions regarding this letter and thank you for your cooperation in this matter.

Sincerely,

Gretchen Anderson

Gretchen Anderson
Environmental & Sustainability Coordinator

gaanderson@windhammaine.us
Office: 207-777-1948
Cell: 207-310-7393

Cc: Barry Tibbetts, Town Manager
Brent Libby, Fire Chief
Kevin Schofield, Police Chief

Town of Windham

8 School Road
Windham, ME 04062

voice 207.892.1907

fax 207.892.1916

March 23, 2021

Mr. Bill Giroux, Town Manager
Town of Standish
175 Northeast Road, Rt. 35
Standish, Maine 04084

RE: Interconnected MS4 Coordination

Dear Mr. Giroux,

The Town of Windham has filed a notice of intent to comply with the Maine General Permit for the discharge of stormwater from the municipal separate storm sewer system (MS4). Under this permit, we are required to coordinate with interconnected and nested MS4 permittees on spill response efforts in order to improve the health of Maine waters.

Although the Town of Standish is not an MS4 permittee, the Town of Windham has interconnections with your MS4. We will notify you if there is a spill of hazardous or non-hazardous substances in Windham that could affect your MS4 and we request that you do the same. In the event of an emergency after hours, please contact Windham Public Safety Dispatch at 207-892-2525.

Please forward this letter and/or request to any first responders or other municipal staff who may be able to coordinate spill response efforts with Windham. Please contact me if you have any questions regarding this letter and thank you for your cooperation in this matter.

Sincerely,

Gretchen Anderson

Gretchen Anderson
Environmental & Sustainability Coordinator

gaanderson@windhammaine.us
Office: 207-777-1948
Cell: 207-310-7393

Cc: Barry Tibbetts, Town Manager
Brent Libby, Fire Chief
Kevin Schofield, Police Chief

Town of Windham

8 School Road
Windham, ME 04062

voice 207.892.1907

fax 207.892.1916

March 23, 2021

Ms. Laura Neleski, Administrative Assistant
Town of Cumberland
290 Tuttle Road
Cumberland, Maine 04021

RE: Interconnected MS4 Coordination

Dear Ms. Neleski,

The Town of Windham has filed a notice of intent to comply with the Maine General Permit for the discharge of stormwater from the municipal separate storm sewer system (MS4). Under this permit, we are required to coordinate with interconnected and nested MS4 permittees on spill response efforts in order to improve the health of Maine waters.

Although the interconnections are outside the urbanized area, the Town of Windham still has interconnections with your MS4. We will notify you if there is a spill of hazardous or non-hazardous substances in Windham that could affect your MS4 and we request that you do the same. In the event of an emergency after hours, please contact Windham Public Safety Dispatch at 207-892-2525.

Please forward this letter and/or request to any first responders or other municipal staff who may be able to coordinate spill response efforts with Windham. Please contact me if you have any questions regarding this letter and thank you for your cooperation in this matter.

Sincerely,

Gretchen Anderson

Gretchen Anderson
Environmental & Sustainability Coordinator

gaanderson@windhammaine.us
Office: 207-777-1948
Cell: 207-310-7393

Cc: Barry Tibbetts, Town Manager
Brent Libby, Fire Chief
Kevin Schofield, Police Chief

Town of Windham

8 School Road
Windham, ME 04062

voice 207.892.1907

fax 207.892.1916

March 23, 2021

Mr. Justin Early, Town Engineer
Town of Falmouth, Public Works Department
271 Falmouth Road
Falmouth, Maine 04105

RE: Interconnected MS4 Coordination

Dear Mr. Early,

The Town of Windham has filed a notice of intent to comply with the Maine General Permit for the discharge of stormwater from the municipal separate storm sewer system (MS4). Under this permit, we are required to coordinate with interconnected and nested MS4 permittees on spill response efforts in order to improve the health of Maine waters.

The Town of Windham has interconnections with your MS4. We will notify you if there is a spill of hazardous or non-hazardous substances in Windham that could affect your MS4 and we request that you do the same. In the event of an emergency after hours, please contact Windham Public Safety Dispatch at 207-892-2525.

Please forward this letter and/or request to any first responders or other municipal staff who may be able to coordinate spill response efforts with Windham. Please contact me if you have any questions regarding this letter and thank you for your cooperation in this matter.

Sincerely,

Gretchen Anderson

Gretchen Anderson
Environmental & Sustainability Coordinator

gaanderson@windhammaine.us

Office: 207-777-1948

Cell: 207-310-7393

Cc: Barry Tibbetts, Town Manager
Brent Libby, Fire Chief
Kevin Schofield, Police Chief

Town of Windham

8 School Road
Windham, ME 04062

voice 207.892.1907

fax 207.892.1916

March 23, 2021

Mr. Matthew LaCroix, Stormwater Compliance Officer
Town of Gorham, Public Works Department
75 South Street
Gorham, Maine 04038

RE: Interconnected MS4 Coordination

Dear Mr. LaCroix,

The Town of Windham has filed a notice of intent to comply with the Maine General Permit for the discharge of stormwater from the municipal separate storm sewer system (MS4). Under this permit, we are required to coordinate with interconnected and nested MS4 permittees on spill response efforts in order to improve the health of Maine waters.

The Town of Windham has interconnections with your MS4. We will notify you if there is a spill of hazardous or non-hazardous substances in Windham that could affect your MS4 and we request that you do the same. In the event of an emergency after hours, please contact Windham Public Safety Dispatch at 207-892-2525.

Please forward this letter and/or request to any first responders or other municipal staff who may be able to coordinate spill response efforts with Windham. Please contact me if you have any questions regarding this letter and thank you for your cooperation in this matter.

Sincerely,

Gretchen Anderson

Gretchen Anderson
Environmental & Sustainability Coordinator

gaanderson@windhammaine.us

Office: 207-777-1948

Cell: 207-310-7393

Cc: Barry Tibbetts, Town Manager
Brent Libby, Fire Chief
Kevin Schofield, Police Chief

Town of Windham

8 School Road
Windham, ME 04062

voice 207.892.1907

fax 207.892.1916

March 23, 2021

Mr. Kerem Gungor, Stormwater Engineer
Maine Department of Transportation, Environmental Office
16 State House Station
Augusta, ME 04333

RE: Interconnected MS4 Coordination

Dear Mr. Gungor,

The Town of Windham has filed a notice of intent to comply with the Maine General Permit for the discharge of stormwater from the municipal separate storm sewer system (MS4). Under this permit, we are required to coordinate with interconnected and nested MS4 permittees on spill response efforts in order to improve the health of Maine waters.

The Town of Windham has interconnections with your MS4. We will notify you if there is a spill of hazardous or non-hazardous substances in Windham that could affect your MS4 and we request that you do the same. In the event of an emergency after hours, please contact Windham Public Safety Dispatch at 207-892-2525.

Please forward this letter and/or request to any first responders or other municipal staff who may be able to coordinate spill response efforts with Windham. Please contact me if you have any questions regarding this letter and thank you for your cooperation in this matter.

Sincerely,

Gretchen Anderson

Gretchen Anderson
Environmental & Sustainability Coordinator

gaanderson@windhammaine.us

Office: 207-777-1948

Cell: 207-310-7393

Cc: Barry Tibbetts, Town Manager
Brent Libby, Fire Chief
Kevin Schofield, Police Chief

Town of Windham

8 School Road
Windham, ME 04062

voice 207.892.1907

fax 207.892.1916

March 23, 2021

Ms. Lynn Leavitt, Sustainability Coordinator
City of Westbrook, Public Services Department
371 Saco Street
Westbrook, Maine 04092

RE: Interconnected MS4 Coordination

Dear Ms. Leavitt,

The Town of Windham has filed a notice of intent to comply with the Maine General Permit for the discharge of stormwater from the municipal separate storm sewer system (MS4). Under this permit, we are required to coordinate with interconnected and nested MS4 permittees on spill response efforts in order to improve the health of Maine waters.

The Town of Windham has interconnections with your MS4. We will notify you if there is a spill of hazardous or non-hazardous substances in Windham that could affect your MS4 and we request that you do the same. In the event of an emergency after hours, please contact Windham Public Safety Dispatch at 207-892-2525.

Please forward this letter and/or request to any first responders or other municipal staff who may be able to coordinate spill response efforts with Windham. Please contact me if you have any questions regarding this letter and thank you for your cooperation in this matter.

Sincerely,

Gretchen Anderson

Gretchen Anderson
Environmental & Sustainability Coordinator

gaanderson@windhammaine.us

Office: 207-777-1948

Cell: 207-310-7393

Cc: Barry Tibbetts, Town Manager
Brent Libby, Fire Chief
Kevin Schofield, Police Chief

D. IDDE Plan

E. Construction Inspection Form



Erosion Sedimentation Control Inspection Report

Construction Sites ≥ 1 Acre

Part I: General Information			
Project Name			
Project Address			
Project Contact Person & Title			
Project Contact Phone Number			
Project Contact Email			
Project in Shoreland Zone?	Yes	No	
DEP ESC-Certified Inspector?	Yes	No	
DEP Permit Number (if known)			
Inspection Date & Time			
Inspector Name			
Inspector Phone Number			
Current Weather & Temperature °F			
Date & Amount Last Precipitation			
Part II: Previous Inspections			
ESC Plan Available on site?	Yes	No	
Self Inspection Reports Available?	Yes	No	
Previous third-party inspection reports reviewed?	Yes	No	
Note any outstanding issues from previous inspection reports below.			
	Fixed?	Yes	No
	Fixed?	Yes	No
	Fixed?	Yes	No
	Fixed?	Yes	No
	Fixed?	Yes	No



Erosion Sedimentation Control Inspection Report

Construction Sites ≥ 1 Acre

M and F ratings require follow-up be noted in Part XIII

M = Maintenance Needed (BMP is functioning, but needs attention)
P = Pass (BMP is functioning and in good condition)
F = Fail (BMP is not functioning and needs repair/replacement)
N/A = Not Applicable

Part III: Overall Site BMPs

					Notes
Disturbed areas minimized	M	P	F	N/A	
Natural buffers protected	M	P	F	N/A	
Perimeter controls (required prior to construction)	M	P	F	N/A	

Part IV: Winter Stabilization (November 1 - April 15)

					Notes
Hay mulch is applied at 2x standard application rate	M	P	F	N/A	
Areas brought to final grade are stabilized each day	M	P	F	N/A	
Areas W/I 75' of protected natural resource must be double row of barriers	M	P	F	N/A	

Part V: Sediment Barriers

					Notes
Sediment barriers downgradient of disturbance(s)/stock piles	M	P	F	N/A	
Sediment barriers adjacent to drainage channels	M	P	F	N/A	
Sediment barriers functioning as intended; excess sediment removed	M	P	F	N/A	

Part VI: Temporary Site Stabilization

					Notes
Disturbed but inactive area stabilized w/mulch or non-eroding cover	M	P	F	N/A	
Disturbed area within 75' of wetland stabilized w/in 48hrs of storm event	M	P	F	N/A	
No evidence of washing/rilling of topsoil	M	P	F	N/A	
Seeded areas protected with mulch or erosion control blanket	M	P	F	N/A	

Part VII: Permanent Site Stabilization

					Notes
90% cover of healthy vegetation established on vegetated areas	M	P	F	N/A	
Binding of sod roots to soil; sod healthy and intact	M	P	F	N/A	
Mulched landscape areas totally covered with approved mulch materials	M	P	F	N/A	



Erosion Sedimentation Control Inspection Report

Construction Sites ≥ 1 Acre

Rip-rap backed by well-graded gravel or geo-textile	M	P	F	N/A	
Soil stable behind rip-rap	M	P	F	N/A	
Rip-rap appropriately sized to stay in place	M	P	F	N/A	
Placement of compacted subbase is complete on paved areas	M	P	F	N/A	
Roads & parking drain to stable area	M	P	F	N/A	
Runoff is evenly distributed to buffers	M	P	F	N/A	
Catch basin(s) are capturing run-off without by-pass to other areas	M	P	F	N/A	
Part VIII: Ditches, Channels, Swales					
					Notes
Well graded rip-rap lining or other non-erosive lining	M	P	F	N/A	
No evidence of undercutting of banks	M	P	F	N/A	
No evidence of down-cutting of channel	M	P	F	N/A	
No evidence of slumping of channel lining	M	P	F	N/A	
Stabilized with geotextile, gravel bed and stone lining	M	P	F	N/A	
Netting used to anchor mulch on 8% slopes unless;	M	P	F	N/A	
Erosion control blankets or erosion control mix is in place	M	P	F	N/A	
Stabilized for long-term erosion control	M	P	F	N/A	
Sized to handle runoff	M	P	F	N/A	
Constructed and completed w/in same day	M	P	F	N/A	
If delayed, diversion berms used	M	P	F	N/A	
Check dams installed appropriately and functioning as intended	M	P	F	N/A	
Temporary lining installed/prevent scour	M	P	F	N/A	
Channels, banks, and slopes free of erosion	M	P	F	N/A	
Part IX: Culverts					
					Notes
No evidence of overtopping or flooding	M	P	F	N/A	
Culvert outlet has apron or plunge pools installed	M	P	F	N/A	
Culvert inlets protected with appropriate materials to prevent erosion	M	P	F	N/A	
Aprons and plunge pools are functioning as intended	M	P	F	N/A	



Erosion Sedimentation Control Inspection Report

Construction Sites ≥ 1 Acre

Part X: Materials Storage / Good Housekeeping					Notes
Material storage areas is not exposed to the elements	M	P	F	N/A	
Spill prevention, containment, and response plan is on site	M	P	F	N/A	
A spill kit is on site to prevent petroleum from discharging	M	P	F	N/A	
Petroleum/ haz. materials not stored / handled where exposed to stormwater	M	P	F	N/A	
Litter and construction debris is enclosed /covered / not overfull	M	P	F	N/A	
Part XI: Dewatering					Notes
Discharge to a wooded buffer, sediment bag, or specifically designated BMP	M	P	F	N/A	
Discharge is not flowing across disturbed areas	M	P	F	N/A	
Part XII: Tracking & Dust Control					Notes
No evidence of tracking mud/soil onto public roadway	M	P	F	N/A	
Stabilized construction entrance installed and functioning	M	P	F	N/A	
Non-oil dust control used to minimize fugative dust	M	P	F	N/A	
Weekly sweeping of roadways being conducted	M	P	F	N/A	
Part XIII: Corrections Needed					Compliance Deadline / Timeframe



Part XIV: Photo Documentation

Insert Picture by:

- 1) Right-click text-box and choose "Format Picture"**
- 2) Choose "Fill" and then "Picture or Texture fill"**
- 3) Click "File"**
- 4) Choose photo**

P1 -

P2 -

P3 -

P4 -

P5 -

P6 -

F. Education & Outreach Tools, Levels of Effort, and Effectiveness Benchmarks

Audience appropriate social media platforms will be determined by platform use demographics each year.

Table 1. Tools for Measurable Goal 1.1a. (People 25-34 in the ISWG region)

Outreach Tool	Minimum Level of Effort	Effectiveness Benchmark
Think Blue Maine Website Content	Semiannual updates to website content	Number of visitors to website
Social Media Post (each platform counts as separate tool)	12 posts	Amount of post engagement (e.g., reactions, comments, shares, etc.)
Social Media Ad (each platform counts as separate tool)	Ad(s) run 90 days (multiple ads may be run for shorter durations to total 90 days)	Amount of ad engagement (e.g., reactions, comments, shares, link clicks, etc.) Number of people reached with ad
Social Media Video (each platform counts as separate tool)	3 videos	Amount of video engagement (e.g., views, reactions, comments, shares, etc.)
Online Ad	Ad(s) run 90 days (multiple ads may be run for shorter durations to total 90 days)	Number of people reached with ad Amount of ad engagement (e.g., link clicks)
Outreach Tabling	3 events	Number of interactions
Outreach partnership with local organization	3 content shares by partner organization	Number of people reached
Other DEP-approved	Minimum level of effort will be determined based on the tool	Effectiveness benchmark will be determined based on the tool

Table 2 Tools for Measurable Goal 1.1b. (Contractors located within the ISWG region)

Outreach Tool	Minimum Level of Effort	Effectiveness Benchmark
Factsheet	1 factsheet	Total number of factsheets distributed
Email Newsletter	4 email newsletters	Number of people reached with email Number of interactions with email (e.g., link clicks)
Municipal Website Content	Annual updates to website stormwater content	Number of visitors to stormwater webpages(s)
Think Blue Maine Website Content	Semiannual updates to website content	Number of visitors to website
Online Ad	Ad(s) run 90 days (multiple ads may be run for shorter durations to total 90 days)	Number of people reached with ad Amount of ad engagement (e.g., link clicks)
Webinar/Workshop	7 hours of training offered (multiple webinars/workshops may be offered to reach 7 hours)	Number of workshop attendees
Outreach partnership with local organization	3 content shares by partner organization	Number of people reached
Other DEP-approved	Minimum level of effort will be determined based on the tool	Effectiveness benchmark will be determined based on the tool

Table. 3 Tools for Measurable Goal 1.2a. (Dog owners ages 25 to 34 within the ISWG region)

Outreach Tool	Minimum Level of Effort	Effectiveness Benchmark
Targeted Social Media Post (each platform counts as separate tool)	12 posts	Amount of post engagement (e.g., reactions, comments, shares, etc.)
Targeted Social Media Ad (each platform counts as separate tool)	Ad(s) run 90 days (multiple ads may be run for shorter durations to total 90 days)	Amount of post engagement (e.g., reactions, comments, shares, link clicks, etc.) Number of people reach with ad
Targeted Social Media Video (each platform counts as separate tool)	3 videos	Amount of video engagement (e.g., reactions, comments, shares, etc.)
Outreach Tabling	3 events	Number of interactions
Outreach partnership with local organization	3 content shares by partner organization	Number of people reached
Item with branding/messaging	1 item with branding/messaging	Total number of items distributed
Other DEP-approved	Minimum level of effort will be determined based on the tool	Effectiveness benchmark will be determined based on the tool

Table. 4 Tools for Measurable Goal 1.2b. (Dog owners ages 35 to 55 within the ISWG region)

Outreach Tool	Minimum Level of Effort	Effectiveness Benchmark
Story Walk	1 story walk	Number of QR code (or similar technology) scans from signs
Targeted Social Media Post (each platform counts as separate tool)	12 posts	Amount of post engagement (e.g., reactions, comments, shares, etc.)
Targeted Social Media Ad (each platform counts as separate tool)	Ad(s) run 90 days (multiple ads may be run for shorter durations to total 90 days)	Amount of post engagement (e.g., reactions, comments, shares, link clicks, etc.) Number of people reach with ad
Online ad	Ad(s) run 90 days (multiple ads may be run for shorter durations to total 90 days)	Number of people reached with ad Amount of ad engagement (e.g., link clicks)
Outreach Tabling	3 events	Number of interactions
Outreach partnership with local retailer	50% of industry retailers in region participating	Number of local retailers participating
Item with branding/messaging	1 item with branding/messaging	Total number of items distributed
Other DEP-approved	Minimum level of effort will be determined based on the tool	Effectiveness benchmark will be determined based on the tool

Table. 5 Tools for Measurable Goal 1.2c. (Regional Winter Maintenance BMP)

Outreach Tool	Minimum Level of Effort	Effectiveness Benchmark
Municipal Roadside Message Board	3 messages	Amount of time message was displayed.
Email Newsletter	4 email newsletters	Number of people reached with email Number of interactions with email (e.g., link clicks)
Municipal Website Content	Annual updates to website stormwater content	Number of visitors to stormwater webpages(s)
Social Media Post (each platform count as separate tool)	12 posts	Amount of post engagement (e.g., reactions, comments, shares, etc.)
Social Media Ad (each platform counts as separate tool)	Ad(s) run 90 days (multiple ads may be run for shorter durations to total 90 days)	Amount of ad engagement (e.g., reactions, comments, shares, link clicks, etc.) Number of people reached with ad
Online ad	Ad(s) run 90 days (multiple ads may be run for shorter durations to total 90 days)	Number of people reached with ad Amount of ad engagement (e.g., link clicks)
Newspaper Article	1 newspaper article	Number of people reached with article
Other DEP-approved	Minimum level of effort will be determined based on the tool	Effectiveness benchmark will be determined based on the tool

G. SWPPP



TOWN OF WINDHAM PUBLIC WORKS FACILITY

This plan is in compliance of the requirements for the 2022 MDEP General Permit for the Discharge of Stormwater from Small Municipal Separate Storm Sewer Systems for the Public Works Facility located at 185 Windham Center Road, Windham, Maine 04062.

Stormwater Pollution Prevention Plan

Created: July 2012

*Revised: August 2017,
October 2019,
September 2020, June
2022*

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1.0 Purpose

The Stormwater Pollution Prevention Plan (SWPPP) was originally prepared in accordance with the requirements of the Maine 2013-2018 General Permit for Stormwater Discharges associated with Municipal Separate Storm Sewer Systems (2013-2018 Maine MS4 General Permit). It was updated to comply with the 2022 Maine MS4 General Permit in June 2022.

This SWPPP is specific to the Public Works Department located at 185 Windham Center Road, Windham, Maine 04062.

This SWPPP:

- Identifies the SWPPP team and lists their responsibilities.
- Describes the facility, with information on its location, receiving waters and the nature of the activities conducted.
- Includes a site map showing the property boundaries and size, location of significant structures and impervious surfaces, directions of stormwater flow, locations of all receiving waters, locations of all potential pollutant sources, and stormwater control measures in use including above ground tanks, location of large spills (greater than 10 gallons) that have occurred in the three years prior to June 2022 and any areas of frequent spills (more than 3 spills per year), the stormwater monitoring points with unique identifiers and their associated drainage areas, and the location of the activities associated with potential pollutant sources that are listed in the 2022 MS4 General Permit.
- Describes the activities and potential pollutant sources on-site.
- Describes the Control Measures in place and in use to control the potential pollutant sources and activities.
- Describes the facility's monitoring plan (quarterly routine facility inspections and quarterly wet-weather visual monitoring).
- Describes the implementation schedule and provisions for amendment of the plan.
- Describes the conditions that may trigger the need for corrective actions, and how to complete corrective actions in accordance with the 2022 MS4 General Permit requirements.

2.0 Planning and Organization

Implementation of the Shared Maintenance Facility SWPPP is assigned to the Pollution Prevention Team. The team is identified by name and area of responsibility.

<i>Team Member Title</i>	<i>Name & Job Title</i>	<i>Roles & Responsibilities</i>
SWPPP Team Leader	Gretchen Anderson – Environmental & Sustainability Coordinator	Oversight of SWPPP implementation, included but not limited to: <ul style="list-style-type: none">• Coordinates plan development & amendments• Annual employee training• Good housekeeping practices• Quarterly visual monitoring• Quarterly compliance inspections• Corrective Actions• Documentation/Record Retention

Facility Manager	Douglas Fortier – Public Works Director	Assists the SWPPP Team Leader in the development, implementation, and revision of the facility’s SWPPP.
SWPPP Deputy Team Leader	Sam Pelletier – Service Writer & Parts Manager	Oversight of good housekeeping measures including Spill Prevention and Response Best Management Practices (BMPs) as defined in this SWPPP, including but not limited to: <ul style="list-style-type: none"> • Conducting & documenting quarterly visual monitoring • Conducting & documenting quarterly compliance inspections • Reporting corrective actions
SWPPP Team Member	Mike Constantine – Highway Supervisor	Responsible for implementing good housekeeping measures including Spill Prevention and Response and BMPs as defined in this SWPPP.

3.0 Assessment

3.1 Site Description/Nature of Site Operations

The Windham Shared Maintenance Facility is located at 185 Windham Center Road, Windham, Maine. The Site Location Map (Appendix 1) shows the location of the facility. The facility has a total developed area of 2.39 acres and impervious area of 5.9 acres. The facility serves as the Town of Windham’s public works department and the Regional School Unit (RSU) 14 school buses. The facility includes the following infrastructure:

- 23,400 square foot maintenance garage & office building
- 2,280 square foot cold storage building
- 3,360 square foot gravel pad for outdoor storage
- Concrete pad for outdoor storage
- Fueling station (one (1) 5,000-gallon gasoline tank & one (1) 10,000-gallon diesel tank)
- 11,220 square foot gravel laydown yard with covered public sand shed
- Indoor wash bay
- 12,000 square foot sand and salt storage building
- Parking for buses, public works vehicles, employees & visitors

The facility serves as vehicle fleet base of operations for RSU14 Transportation and the Town Public Works department. The vehicles associated with the Public Works department include the following:

- | | |
|----------------------|----------------------|
| • 1 backhoe | • 13 dump trucks |
| • 2 street sweepers | • 7 pickup trucks |
| • 1 sidewalk machine | • 1 SUV |
| • 2 loaders | • 5 utility trailers |
| • 1 grader | • 1 hay trailer |
| • 1 Bobcat | • 1 hot box |
| • 1 roller | |

Additionally, equipment from other departments may be parked outside at various times awaiting the maintenance queue.

The facility has 6 bays used for vehicle maintenance, but three are specific to the Town Public Works Department. The interior floor drains are connected to holding tank that is pumped as needed.

Vehicle washing is performed indoors in a dedicated wash bay discharging to a close-looped recycling system.

A sand/salt shed, and cold storage building are located on the front portion of the property.

Most equipment and vehicles are stored outdoors at the facility on the various storage pads or laydown yard.

The municipal fueling station is located at the facility. This system includes a dual hose diesel and gasoline pump with weather canopy, secondary containment, and CO₂ fire suppression system. There are two double-walled, aboveground storage tanks feeding the fueling station – one 5,000-gallon gasoline tank and one 10,000-gallon diesel tank.

3.2 Site Topography & Drainage

Three watershed subcatchment areas have been identified at the facility (Appendix 2). There is a corresponding tributary area and stormwater runoff path for each subcatchment.

Sub-catchment	Tributary Area	Stormwater Pathway
1	<ul style="list-style-type: none"> • Facility driveway #1 • Vehicle Storage • Adjacent parking areas around the facility. 	Drains to the Pleasant River via sheet flow and does not receive additional treatment.
2	<ul style="list-style-type: none"> • Adjacent parking area • Maintenance building roof • Equipment laydown yard • Two grassed underdrains 	Directed to grassed underdrain soil filter #1 and #2. The catch basin will be split between the two ponds by utilizing two catch basin outlet pipes with the same invert elevation.
3	<ul style="list-style-type: none"> • School bus parking • ½ of sand/salt shed roof • Fueling Island • Focal Point Filter • Facility driveway #2 	Directed to the Focal Point Filter and subsequent subsurface storage chambers.

Appendix 3 provides an overview of the facility, including the:

- Direction of stormwater flow.
- Location of all stormwater conveyances including catch basins, ditches, pipes, & swales.
- Location of stormwater inlets, outlets, outfalls, and discharge points.

3.3 Site Map

A Site Map is included in Appendix 4. The map shows the following:

- | | | |
|---------------------|-----------------------------|------------------------|
| • Buildings | • Underground Storage Tanks | • Spills/Chronic Leaks |
| • Paved areas | • Salt/Sand Storage | • Drainage Area |
| • Parking lots | • Fueling Station | • Vegetative Buffers |
| • Loading/Unloading | | • Structural Controls |

- Stormwater Outfalls

3.4 Potential Pollution Sources and Control Measures

The table located in Appendix 5 summarizes the potential pollution sources currently (as of the June 2022 update) at the site that could be exposed to rainfall or snowmelt and could be discharged from the facility.

The table shows the Control Measures that are currently in place which protect stormwater from the potential pollution sources and identifies the associated drainage area and outfall. More information on the basis for the selection of the control measures is contained in Section 4.0.

3.5 Spills and Leaks

Spills and leaks include, but are not limited to, releases of oil or hazardous substances more than quantities that are reportable under CWA §311 (see 40 CFR 110.10 and 40 CFR 117.21), Section 102 of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) or 38 M.R.S.A. §§ 543, 550 and 1318-B. Spills may also include releases of oil or hazardous substances that are not access of reporting requirements. The 2022 MS4 General Permit requires documentation of locations on site where potential spills and leaks could occur and contribute to stormwater pollution. For Windham, those locations are:

- Fueling Station
- Equipment/Vehicle Storage Areas
- Fluid Room filling port's location

In addition, the 2022 MS4 General Permit requires documentation of all frequent or large spills and leaks in the three years prior to update of this SWPPP. A search of the online database for the Maine Department of Environmental Protection (Maine DEP) Hazardous and Oil Spill System was completed for the years 2016-2021, and the facility manager was interviewed to assess if any spills have occurred. Based on this work, no spills have occurred at the site.

3.6 Wastewater or Process Water Containment

The 2022 MS4 General Permit requires secondary containment for any wastewater or process water stored in exterior areas that has the potential discharge to a stormwater conveyance during a malfunction. This facility does not have any wastewater or process water that requires containment.

The facility does have aboveground oil storage tanks, which do have secondary containment as required by the USEPA Oil Pollution Prevention Regulations (40 CFR Part 112).

Liquid deicing materials are not required to have secondary containment.

3.7 Non-Stormwater Discharges

The 2022 MS4 General Permit requires the site be evaluated for the presence of non-stormwater discharges. The facility performed a non-stormwater discharge assessment on June 23, 2022, as preparation for the SWPPP update.

Non-stormwater discharges that are typically encountered at public works garages include fluids from solid waste dumpsters, oils and greases from waste oil collection and vehicle maintenance and track out from sand/salt sheds. As shown in Appendix 5, these items are stored undercover, or in designated containers, and they are removed from the site frequently to minimize total volume present on-site.

3.8 Allowable Non-Stormwater Discharges

The non-stormwater discharges that are allowable under the 2022 MS4 General Permit, include:

- Landscape irrigation
- Diverted stream flows
- Rising groundwater
- Uncontaminated groundwater infiltration
- Uncontaminated pumped groundwater
- Uncontaminated flows from foundation drains
- Air conditioning and compressor condensate
- Irrigation water
- Flows from uncontaminated springs
- Uncontaminated water from crawl space pumps
- Uncontaminated flows from footing drains
- Lawn watering runoff
- Flows from riparian habitats and wetlands
- Residual street wash water (where spills/leaks of toxic or hazardous materials have not occurred, unless all spilled material has been removed and detergents are not used)
- Hydrant flushing and firefighting activity runoff
- Waterline flushing and discharges from potable water sources
- Individual residential car washing
- Dechlorinated swimming pool discharges.

The following allowable stormwater discharges were identified:

- Periodic flushing/testing of the facility sprinkler system
- Condensate from rooftop HVAC units
- Periodic pavement washing without detergent and in conjunction with street sweeper
- Periodic washing of building exterior without detergents

3.9 Existing Stormwater Monitoring Data

No sampling or analysis of stormwater discharges has occurred at the site. Only visual monitoring has been conducted, and documentation is conducted in this SWPPP.

4.0 Control Measures and Non-Numeric Effluent Limitations

The control measures to address potential pollutant sources presented in Appendix 5, were selected using the following considerations as required by the 2022 MS4 General Permit:

- The quantity and nature of the pollutants and their potential to impact the water quality of the receiving waters.

- Preventing stormwater from encountering polluting materials.
- Using control measures in combination
- Assessing the type and quantity of pollutants, including their potential to impact receiving water quality.
- Minimizing impervious areas at the facility and infiltrating runoff onsite (including bioretention cells, green roofs, and pervious pavement, among other approaches) in accordance with State laws and regulations.
- Attenuating flow using open vegetated swales and natural depressions.
- Conserving and/or restoring riparian buffers.
- Using treatment interceptors (e.g., swirl separators and sand filters)

The control measures used at this site were selected to meet the non-numeric effluent limitations as described in the 2022 MS4 General Permit. The following subsections describe the non-numeric effluent limitations.

4.1 Minimize Exposure

The facility implements the following practices to minimize exposure to potential pollutant sources unless it has been deemed impractical.

- Grading, berms, and curbing are used to prevent runoff of contaminated flows and to divert run-on away from potential pollutant sources.
- Material, equipment, and activities are located so that potential leaks and spills are contained or able to be contained or diverted before discharge.
- Spills and leaks are cleaned up promptly using dry methods (e.g., absorbents) to prevent the discharge of pollutants.
- Materials used for spill or leak cleanup are disposed of properly by the next business day, or the next rain event (whichever is sooner) to prevent them from becoming a source of pollutants in stormwater runoff.
- Leaky vehicles and equipment are stored indoors, or if stored outdoors drip pans and absorbents are used.
- Spill and overflow protection are used for fill ports.
- No washing of equipment or vehicles outside the facility is allowed. Washing is done indoors, and the wash water is cleaned using a water recycling system.
- Fluids are drained from equipment and vehicles that will be decommissioned; and inspections are conducted quarterly on any equipment and vehicles that will not be decommissioned, but that are used for extended periods of time.
- Materials and equipment are stored indoors or under a storm-resistant shelter where practical to do so.

4.2 Good Housekeeping

The following is a list of good housekeeping practices followed at this facility:

- Street sweeping is conducted annually.
- Materials are stored in containers to the extent practicable and labeled.
- Dumpsters holding trash have covers that are kept closed except when in use.
- Snow storage areas are sited to prevent the discharge of snow directly into surface waters or stormwater facilities. Snow piles are removed from site as needed.

4.3 Preventative Maintenance

Control measures in use are maintained as follows:

- Quarterly inspections are done as required by the SWPPP.
- All staff personnel are aware and trained for spill prevention and response procedures.
- Spill response equipment is located at all potential spill areas.
- Catch basins and sediment chambers are checked and cleaned as needed.
- Drainage swales are kept clear of debris and maintained to prevent erosion.
- The facility catch basins and dry wells are cleaned out as necessary.
- Uncontaminated stormwater in containment areas is kept to a minimum.

4.4 Spill Prevention and Response

The Town implements its Oil SPCC Plan in accordance with the EPA requirements in 40 CFR Part 112. Implementation of this program covered the effluent limitations in the 2022 MS4 General Permit for SWPPPs in the following categories:

- Labeling all containers larger than 55-gallons and any containers used to transfer fluids
- Implementing procedures for careful material storage and handling to minimize the potential for spills including the requirement for all above ground tanks with a capacity to hold 55 gallons or more petroleum be double-walled or have secondary containment.
- Conducting annual training
- Maintaining spill kits close to each storage area and potential spill area to facilitate rapid response to small spills.
- Completing required notifications
- Taking immediate and long-term actions in the event of a spill or leak.

4.5 Sediment & Erosion Control

The facility has minimized the potential for erosion and sedimentation by:

- Using riprap in steep slope areas, ditches, and outfall outlets.
- Maintaining vegetation in good condition.

4.6 Management of Stormwater Runoff

The following management practices for runoff are used at this facility.

- Two grassed underdrain soil filters
- Focal Point Filter with a subsurface chamber system and two Stormtech isolator rows.
- Certain impervious areas have no curbs to encourage sheet flow runoff to vegetative buffers.

Additionally, fertilizers or pesticides are not utilized on-site.

4.7 Salt Storage Piles or Piles Containing Salt

The 2022 MS4 General Permit requires covering or enclosing salt and sand/salt mix storage piles unless otherwise authorized by a variance pursuant to Chapter 574: Siting and Operation of Road Salt and Sand-Salt Storage Areas.

The facility houses two different piles of product used for winter road treatment in the 12,000 square foot sand and salt shed. One pile of granular road salt and liquid magnesium chloride and one pile of gravel road sand. The salt pile is

located on the left side of the storage building close to the entrance. The sand pile is in the back portion of the building to ensure it's entirely covered by the roof's building. The two piles are divided by a concrete block wall. Typically, there is low/limited stormwater exposure during bulk unloading of granular salt and sand, which may occur at any time during the year depending on commodity pricing. The shed is large to accommodate covered unloading. Any incidental spillage that occurs during unloading is scraped or swept up and placed in the shed. Once the inventory is full, both the salt and sand remain in the shed until needed in the winter months.

Loading onto municipal vehicles for use during winter months is accomplished by filling a loader bucket and transporting the bucket to the receiving truck at the adjacent outside loading dock. Incidental spills from the bucket during transport and loading may occur. These incidental spills are cleaned up after each storm event by sweeping or scraping up the material and returning it to the building.

4.8 Employee Training

Formal stormwater pollution prevention employee training is completed annually. All employees who work in areas where industrial materials or activities are exposed to stormwater or are responsible for implementing activities necessary to meet the SWPPP requirements of the 2022 MS4 General Permit are training, including the members of the Stormwater Pollution Prevention team.

The training covers the following topics:

- An overview of SWPPP components.
- Spill response procedures for expeditiously stopping, containing, and cleaning up leaks, spills, and other releases, good housekeeping, maintenance requirements, and material management practices.
- The location of all Control Measures used, and how they are to be maintained.
- The proper procedures to follow with respect to pollution prevention requirements.
- Inspection frequency and content, record applicable findings, and corrective action processes.

Employee training records (e.g., sign-in sheets and agendas) can be found in Appendix 13.

5.0 Evaluation

To assess the effectiveness of the Control Measures being implemented at the site, and to observe the quality of stormwater being discharged from the site, quarterly inspections and visual monitoring of wet weather discharges are conducted. The following subsection describe these evaluations.

5.1 Quarterly Visual Monitoring

Quarterly visual monitoring of stormwater discharges is required to be conducted at each outfall at the facility. Five locations at this facility require visual observation:

Outfall	Drainage Area
1	<ul style="list-style-type: none"> • Facility driveway #1 • Vehicle Storage • Adjacent parking areas around the facility.
2	<ul style="list-style-type: none"> • School Bus Parking • Maintenance building roof • ½ of sand/salt shed • Fueling island

	<ul style="list-style-type: none"> • Equipment laydown yard • Stormwater Facilities 	<ul style="list-style-type: none"> • Facility driveway #2
3	<ul style="list-style-type: none"> • Subsurface Stormwater Storage Chamber Outlet 	
4	<ul style="list-style-type: none"> • Grassed Soil Filter Underdrain Outlet 	
5	<ul style="list-style-type: none"> • Focal Point Filter Underdrain Outlet 	

The sample is collected during daylight hours and within 60 minutes after stormwater runoff begins from a qualifying storm event. A qualifying storm event is an event of at least ¼ inch of rain in 24 hours, or snow melt of any magnitude that occurs after 72 hours of dry weather (no prior discharges).

If it is not possible to conduct the visual examination within 60 minutes of discharge beginning, it should be collected within 2 hours, and note should be added to explain why it was not possible to conduct the visual examination within 60 minutes. Observations are documented using the quarterly visual monitoring inspection sheet in Appendix 7 and records are contained in Appendix 8. Additionally, the Maine DEP guidance, “*Standard Operating Procedures and Visual Monitoring Guidelines for Stormwater Discharges* (MDEP document #DEPLW0768) is used to complete the monitoring.

5.2 Quarterly Routine Facility Inspections

The facility is inspected at least four (4) times a year spaced at least 60 days apart in conjunction with the visual monitoring process. One of these inspections must be conducted during a storm event.

The inspection includes review of:

- Areas where materials or activities are exposed to stormwater.
- Areas where spills and leaks have occurred in the past 3 years (none at this site)
- 5 outfalls (discharge points)
- Control measures used to protect stormwater from becoming polluted.

Observations are documented using the facility inspection form in Appendix 9 and records are contained in Appendix 10.

5.3 Recordkeeping & Reporting

The facility shall retain records described in the SWPPP for a period of 3 years from the date that the 2022 MS4 General Permit expires. These records will be made available to state or federal inspectors upon request.

In addition, the Town must notify the Maine DEP within 24 hours of becoming aware of any issue that may endanger health or the environment. Oral notification to the Maine DEP MS4 Stormwater Coordinator is required – (207) 287-7866 (general number – Caller should ask for the Maine Stormwater Coordinator). A written report may also be required.

5.4 Plan Revisions and Corrective Actions

The SWPPP must be updated within 30 calendar days of completion of any of the following:

- Change in design, construction, operation, or maintenance at the facility that may have a significant effect on the discharge or potential for discharge of pollutants from the facility including the addition or reduction of industrial activity.

- Monitoring, inspections, or investigations by the permit or by local, State, or Federal officials which determine the SWPPP is ineffective in elimination or significantly minimizing the intended pollutants.
- A discharge under the 2022 MS4 General Permit that is determined by Maine DEP to cause or have the reasonable potential to cause or contribute to the violation of an applicable water quality standard.

In addition, when any of the following conditions occur or are detected during an inspection, monitoring, or other means, or when the Maine DEP informs the Town that any of the following conditions have occurred, this SWPPP must be reviewed and revised, and corrective actions must be initiated:

- An authorized release or discharge (e.g., spill, leak, or discharge of non-stormwater not authorized by this or another NEPDES permit to a water of the State) occurs at the facility.
- A discharge violates a condition of the 2022 MS4 General Permit.
- A discharge violates a non-numeric effluent limitation contained in the 2022 MS4 General Permit, or an applicable water quality-based limitation or ambient water quality criteria associated with impaired waters monitoring.
- The control measures are not stringent enough for the discharge to meet applicable water quality standards.
- A required control measure was never installed, was installed incorrectly, or is not being properly operated or maintained; or
- Whenever a visual assessment shows evidence of stormwater pollution (e.g., color, odor, floating solids, settled solids, suspended solids, foam).

When one of these conditions occur, facility personnel should assess or document whether the SWPPP needs to be modified, whether immediate or subsequent corrective actions need to be taken, and what immediate and subsequent actions need to be taken.

The following subsections provide additional information on the timing for immediate and subsequent actions and documentation using a corrective action form.

5.4.1 Immediate Corrective Action

If the corrective action is needed, facility personnel must immediately take all reasonable steps necessary to minimize or prevent the discharge of pollutants until a permanent solution is installed and made operational, including cleaning up any contained surfaces so that the material will not discharge in subsequent storm events.

In this context, the term “immediately” requires facility personnel to, on the same day a condition requiring corrective action is found, take all reasonable steps to minimize or prevent the discharge of pollutants until a permanent solution is installed and made operational. However, if a problem is identified at a time in the workday when it is too late to initiate corrective action, the initiation of corrective action must begin no later than the following workday. “All reasonable steps” means that the facility personnel have undertaken initial actions to assess and address the condition causing the corrective action, including, for example, cleaning up any exposed materials that may be discharged in a storm event (e.g., through sweeping vacuuming) or planning (i.e., scheduling) for a new BMP to be installed later.

5.4.2 Subsequent Corrective Actions

If facility personnel determine that additional actions are necessary beyond those implemented in accordance with immediate action response, the facility personnel must complete the corrective actions (e.g., install a new or modified control and make it operational, complete the repair) before the next storm event if possible, and within 14 calendar

days from the time of discovery of the corrective action condition. If it is infeasible to complete the corrective action within 14 calendar days, the facility personnel must document why it is infeasible to complete the corrective action within the 14-day timeline. The facility personnel must also identify the schedule for completing the work, which must be done as soon as practicable after the 14-day timeframe but no longer than 45 days after discovery. If the completion of corrective action will exceed the 45-day timeframe, the permittee may take the minimum additional time necessary to complete the corrective action, provided that the facility notifies the Maine DEP of the intention to exceed 45 days, the facility's rationale for an extension, and a completion date, which the facility must also include in its corrective action documentation. Where the facility's corrective actions result in changes to any of the controls or procedures documented in the SWPPP, the permittee will modify the SWPPP accordingly within 14 calendar days of completing corrective action work.

5.4.3 Corrective Action Reporting

A corrective action report (CAR) is provided in Appendix 11 to document the corrective actions taken. Generally, if an immediate corrective action is all that is needed because of a quarterly inspection, there is a place on the form to document what was done. However, if immediate or subsequent corrective actions are needed for other findings or reasons, they should be documented on a CAR contained in Appendix 11 and records filed in Appendix 12.

A completed CAR must contain the following information:

1. The existence of any of the conditions listed in Section 5.4 of this SWPPP [which are the same as those in Part IV (8) (a-f) of the 2022 MS4 General Permit] and description of the condition triggering the need for corrective action review.
2. For any spills or leaks: a description of the incident including material, date/time, amount, location, and cause for spill, and any leaks, spills or other releases that resulted in discharges of pollutants to the MS4 or waters of State, through stormwater or otherwise.
3. The date the condition was identified in a facility or Department inspection.
4. A description of immediate actions completed, including measures taken to prevent the reoccurrence of such releases.
5. A description of the corrective actions taken or to be taken because of the identified conditions.
6. the dates when each corrective action was initiated and completed (or is expected to be completed).

If the event triggering the review is a violation of the 2022 MS4 General Permit, correcting it does not remove the original violation. Additionally, failing to take corrective action in accordance with this section is an additional violation of the 2022 MS4 General Permit.

6.0 Certifications

6.1 Preparation by a Qualified Person

This SWPPP was prepared by Gretchen Anderson, Town of Windham Environmental & Sustainability Coordinator. Ms. Anderson is a qualified person as defined by the 2022 MS4 General Permit:

“a person knowledgeable in the principles and practices of stormwater controls and pollution prevention and possesses the education and ability to assess conditions at the facility that could impact stormwater quality, and the education and ability to assess the effectiveness of stormwater controls selected and installed to meet the requirements of the permit.

A qualified person may include facility staff that is familiar with the facility’s activities and control measures necessary to reduce or eliminate the discharge of pollutants associated with the activity.”

6.2 Non-Stormwater Discharges

All stormwater outfalls to surface waters at this facility have been evaluated and found to be free of non-stormwater discharges except for the allowable non-stormwater discharges identified in Section 3.6 of this SWPPP.

6.3 Stormwater Pollution Prevention Plan

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.

Signature: *Gretchen Anderson*

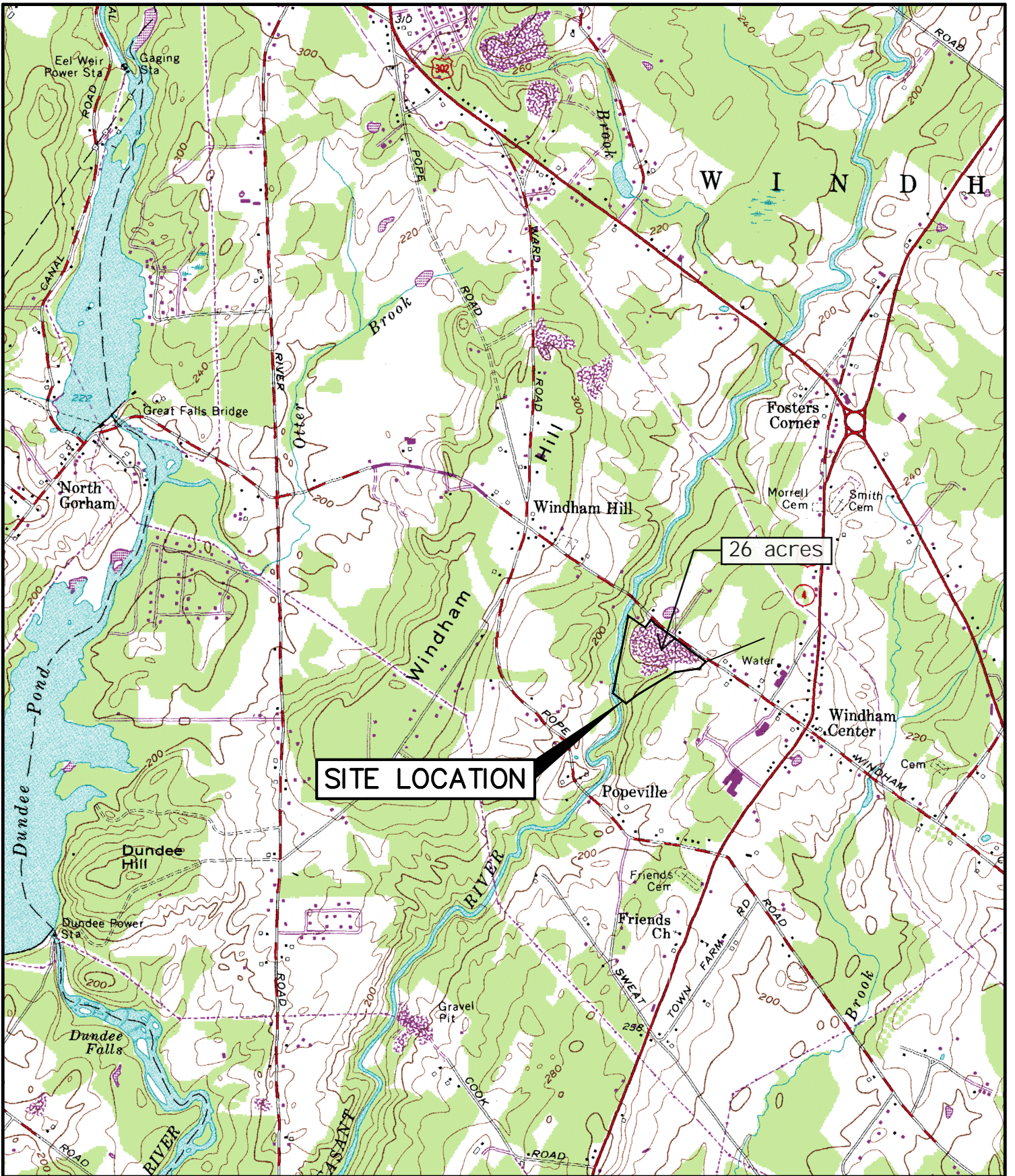
Title: Environmental & Sustainability Coordinator

Name: Gretchen Anderson

Date: 6/27/2022

Appendices

Appendix 1 – Site Location Map



U.S.G.S. Location Map
 Public Works Maintenance Facility - Windham, Maine
 U.S.G.S. North Windham, State-7.5 Minute Series (Topographic)

Design: -	Date: SEP 2017
Draft: LAN	Job No.: 98083.05
Checked: WCH	Scale: N.T.S.
File Name: 98083-05-LOCMAP.dwg	



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Figure
1

Appendix 2 – Watershed Subcatchment Map

STORMWATER QUALITY TREATMENT - REDEVELOPMENT											
SUBCATCHMENT	COVER TYPE	IMPERVIOUS *				DEVELOPED *				TREATMENT	
		AREA (SF)	AMOUNT TREATED	% AREA	% TREATED	AREA (SF)	AMOUNT TREATED	% AREA	% TREATED		
2	GRAVEL/PAVE/ROOF	80,424	100%	29.7%	29.7%	118,764	100%	30.11%	30.11%	GRASSED UNDERDRAIN	
3	PAVE/ROOF	93,060	100%	34.3%	34.3%	120,204	100%	30.48%	30.48%	FOCAL POINT FILTER	
1	GRAVEL/PAVE/ROOF	97,500	0%	36.0%	0%	155,358	0%	39.4%	0%	UNTREATED	
	TOTAL AREA	270,984		100%		TOTAL AREA		394,326	100%		
TOTAL % TREATMENT				64.0%	TOTAL % TREATMENT				60.6%		

* REDEVELOPMENT PROJECT. PERCENTAGE OF DEVELOPED AREA THAT MUST BE TREATED = 60% OF DEVELOPED AREA.

LEGEND:

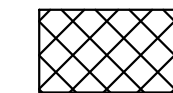
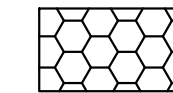
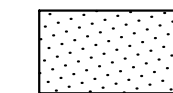
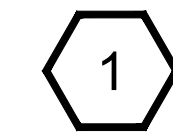

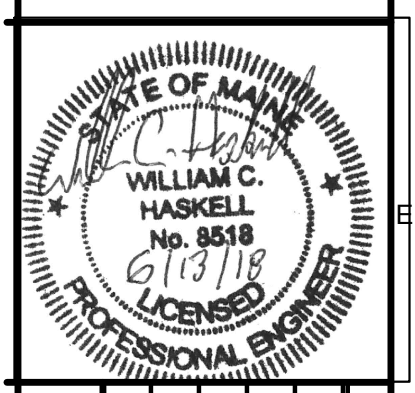
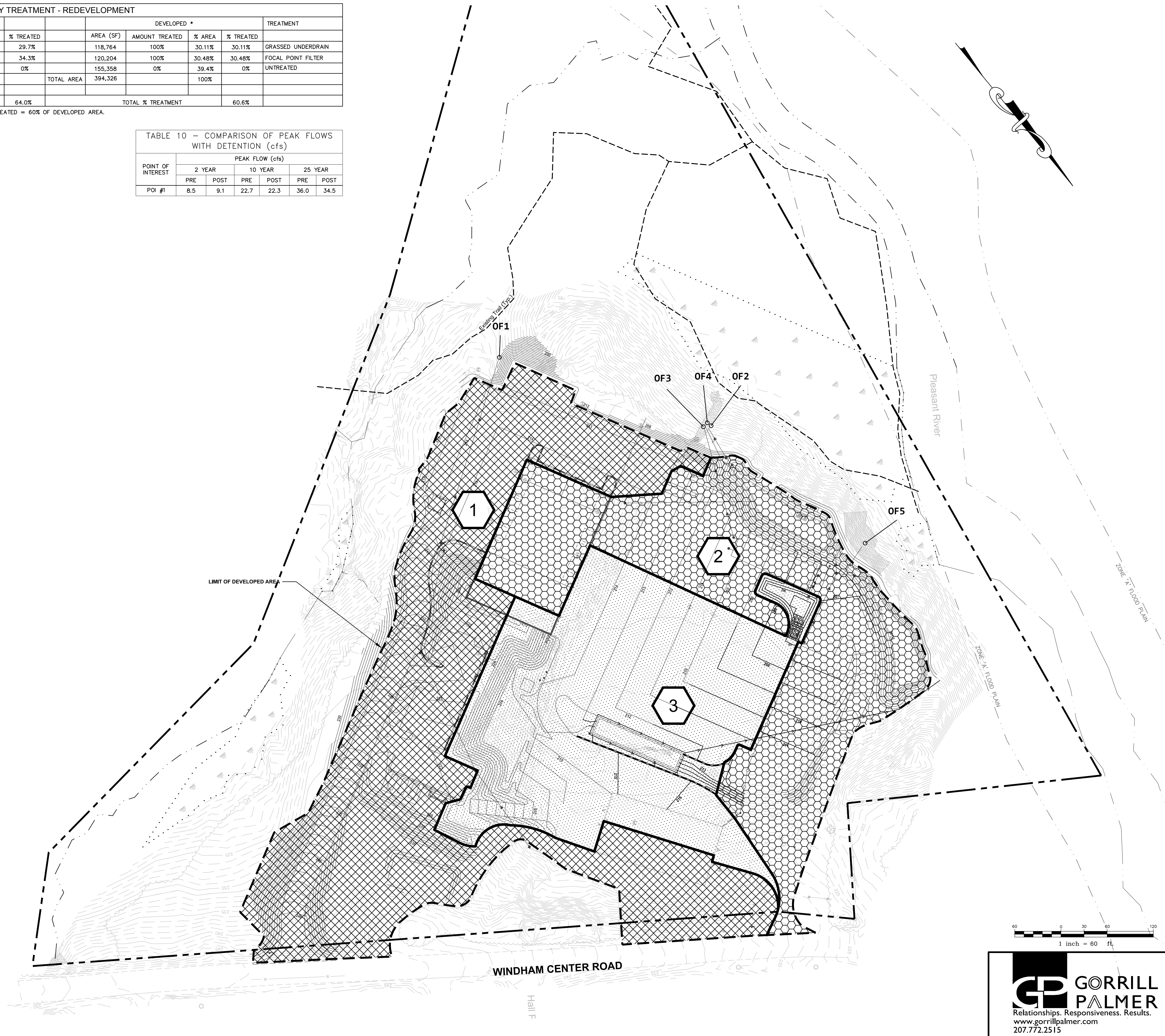
-  AREA UNTREATED
-  AREA TREATED BY GRASSED UNDERDRAINED SOIL FILTER #1 AND #2
-  AREA TREATED BY FOCAL POINT FILTER
-  SUBCATCHMENT
-  REDEVELOPMENT BOUNDARY

TABLE 10 - COMPARISON OF PEAK FLOWS WITH DETENTION (cfs)

POINT OF INTEREST	PEAK FLOW (cfs)					
	2 YEAR		10 YEAR		25 YEAR	
	PRE	POST	PRE	POST	PRE	POST
POI #1	8.5	9.1	22.7	22.3	36.0	34.5



REVISIONS			
DATE	NUMBER	BY	DESCRIPTION
6-18-2018	1	WCH	ISSUED FOR CONSTRUCTION

WATER QUALITY MAP
 SHARED MAINTENANCE FACILITY
 WINDHAM, MAINE
WQ



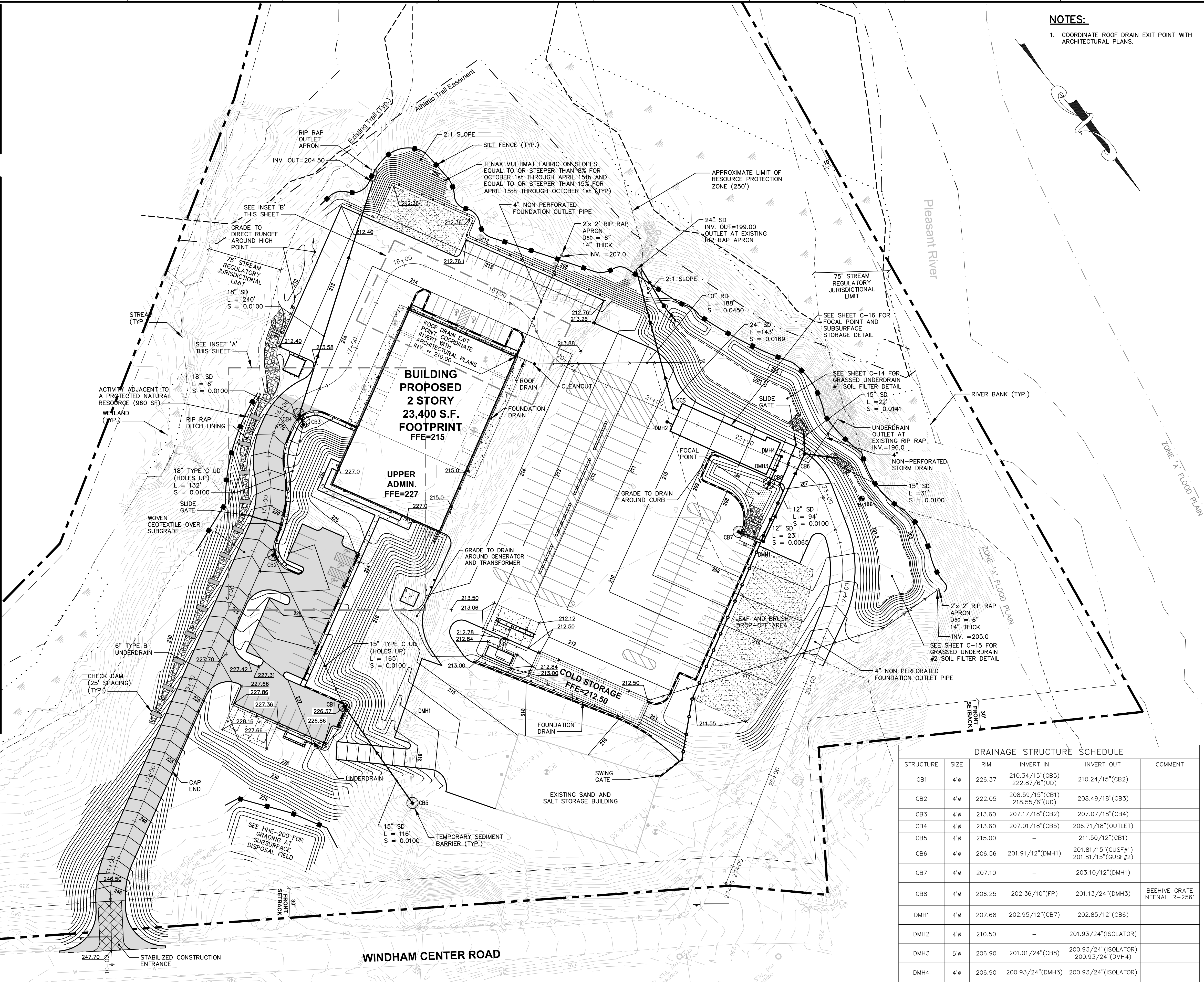
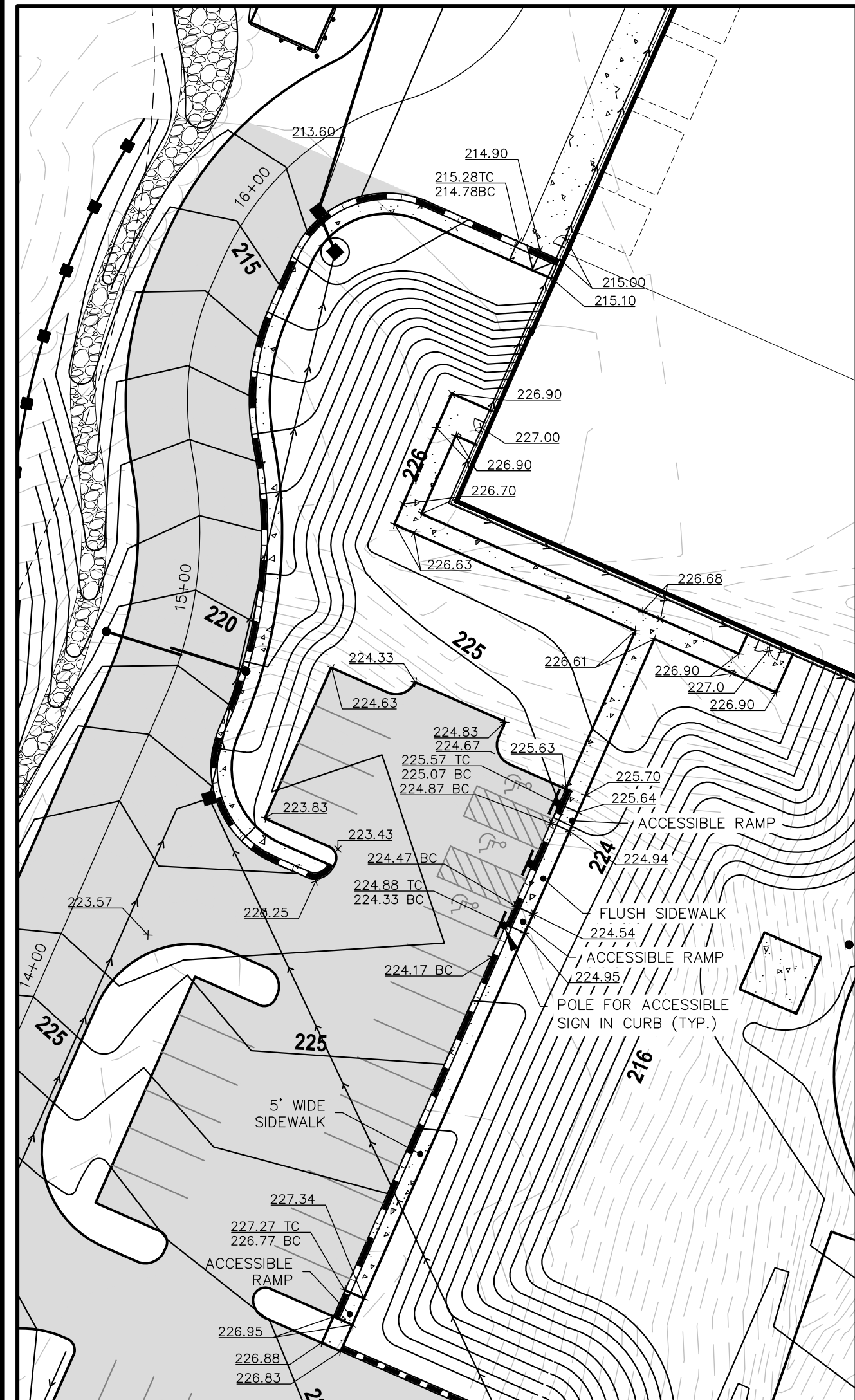
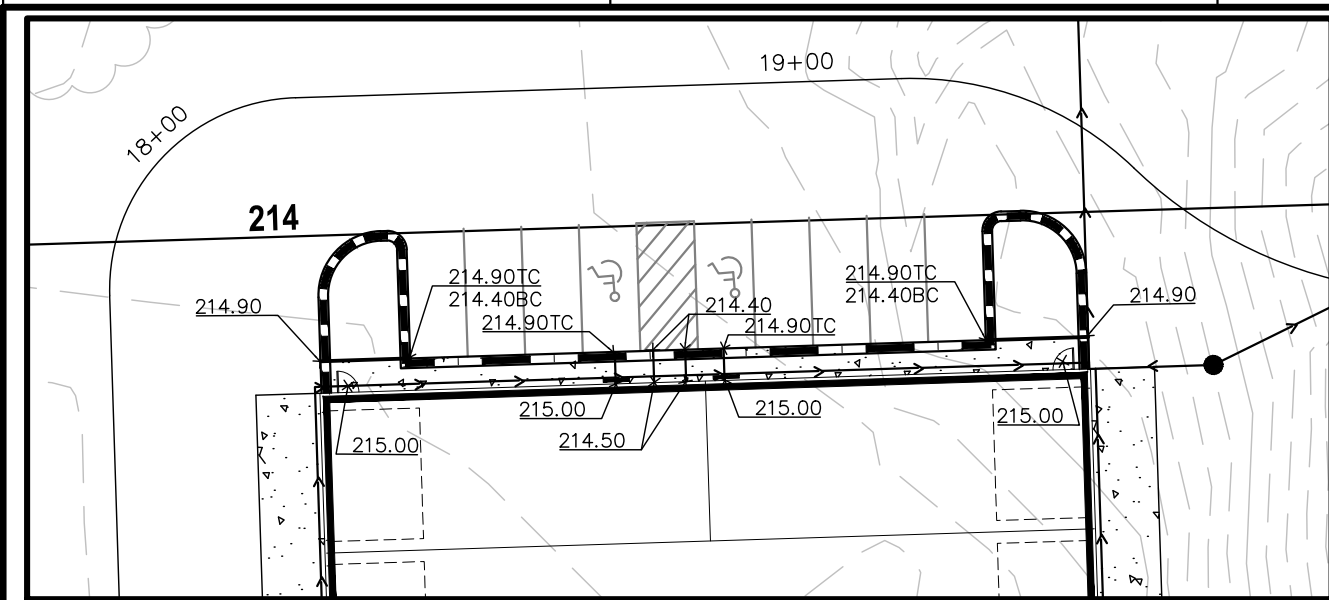
Allied Engineering
 Structural Mechanical Electrical Commissioning
 160 Veranda Street
 Portland, Maine 04103
 T: 207.221.2260
 F: 207.221.2266
 Web: www.allied-eng.com

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CONSTRUCTION PLAN - JUNE 2018

Appendix 3 – Drainage Map

NOTES:
 1. COORDINATE ROOF DRAIN EXIT POINT WITH ARCHITECTURAL PLANS.



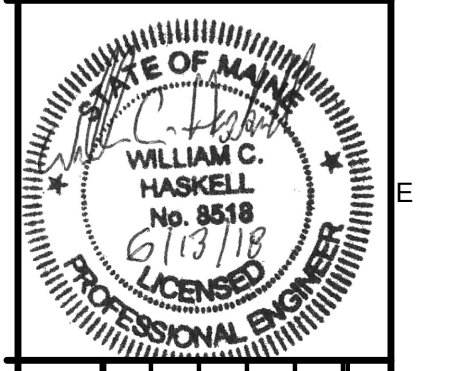
DRAINAGE STRUCTURE SCHEDULE					
STRUCTURE	SIZE	RIM	INVERT IN	INVERT OUT	COMMENT
CB1	4"	226.37	210.34/15"(CB5) 222.87/6"(UD)	210.24/15"(CB2)	
CB2	4"	222.05	208.59/15"(CB1) 218.55/6"(UD)	208.49/18"(CB3)	
CB3	4"	213.60	207.17/18"(CB2)	207.07/18"(CB4)	
CB4	4"	213.60	207.01/18"(CB5)	206.71/18"(OUTLET)	
CB5	4"	215.00	-	211.50/12"(CB1)	
CB6	4"	206.56	201.91/12"(DMH1)	201.81/15"(GUSF#1) 201.81/15"(GUSF#2)	
CB7	4"	207.10	-	203.10/12"(DMH1)	
CB8	4"	206.25	202.36/10"(FP)	201.13/24"(DMH3)	BEEHIVE GRATE NEENAH R-2561
DMH1	4"	207.68	202.95/12"(CB7)	202.85/12"(CB6)	
DMH2	4"	210.50	-	201.93/24"(ISOLATOR)	
DMH3	5"	206.90	201.01/24"(CB8)	200.93/24"(ISOLATOR) 200.93/24"(DMH4)	
DMH4	4"	206.90	200.93/24"(DMH3)	200.93/24"(ISOLATOR)	

NOTE: CATCH BASIN OUTLET HOOD (SNOUT) SHALL BE PROVIDED ON ALL STORM DRAIN OUTLET PIPES 18" IN DIAMETER OR LESS.



160 Veranda Street
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Allied Engineering
 Structural Mechanical Electrical Commissioning



REVISIONS	
NUMBER	DESCRIPTION
1	ISSUED FOR CONSTRUCTION

GRADING, DRAINAGE, AND EROSION CONTROL PLAN

SHARED MAINTENANCE FACILITY

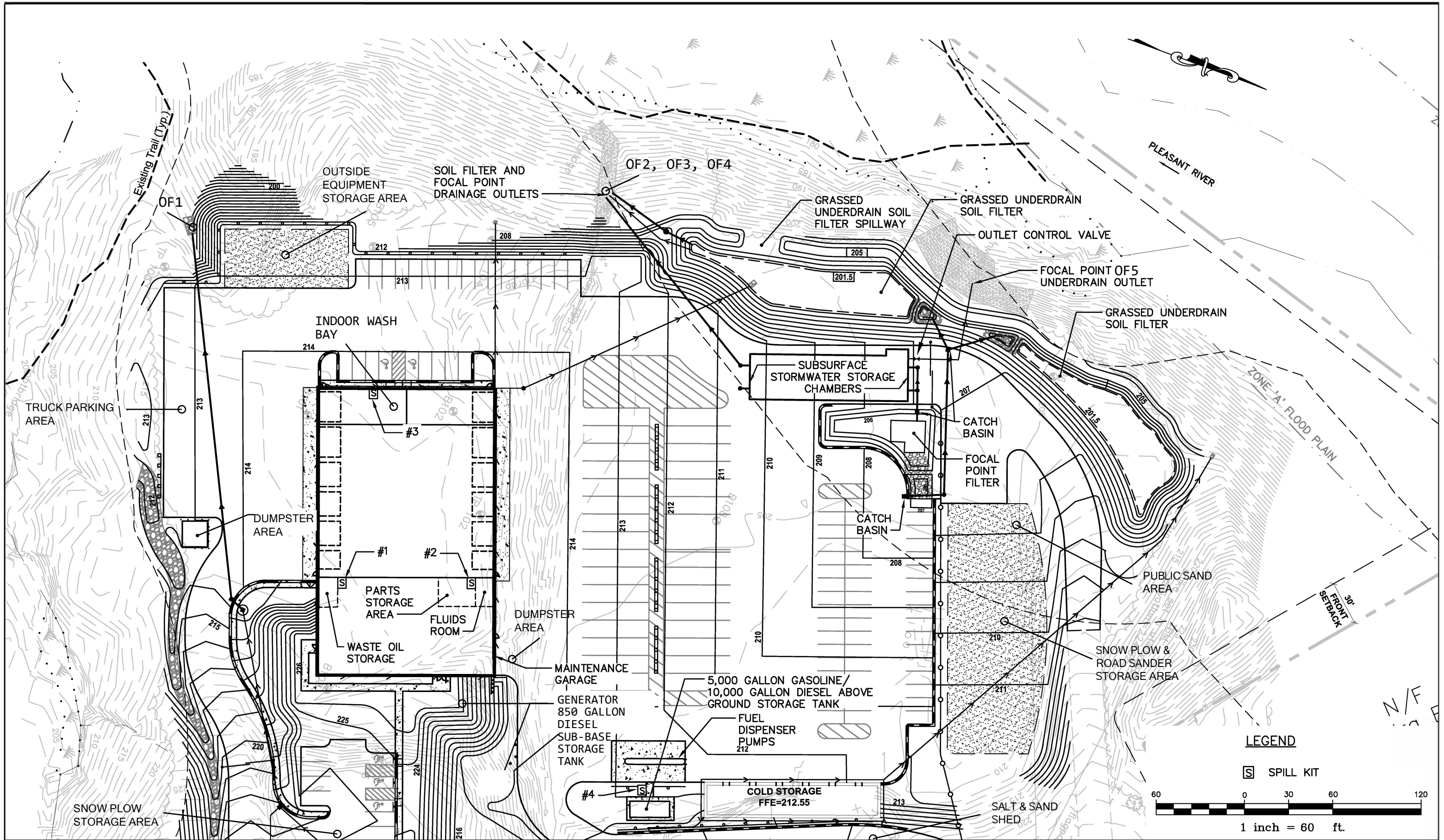
WINDHAM, MAINE

C-6

CONSTRUCTION PLAN - JUNE 2018

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Appendix 4 – Site Description Map



1	5-23-18	FUEL LOCATION REVISION
Rev.	Date	Revision

Design:	JWA	Date:	DEC 2017
Draft:	LAN	Job No.:	98083.05
Checked:	WCH	Scale:	1"=60'
File Name: 98083.05_11X17-SP_OPT1			



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Drawing Name:	Site Description
Project:	Shared Maintenance Facility Windham, Maine

Figure No.
1

Appendix 5 – Significant Materials Inventory

Significant Materials Inventory

Area of Facility / Content Potential Stormwater Pollutant	Location	Volume / Type (Gallons)	Control Measures			Direction of Flow outside Containment
			Spill Containment Type and Size	Overfill Protection	Security	
Facility Fueling Station Unleaded Gasoline Gasoline (sheen)	On concrete pad adjacent to the fuel pumps.	5,000-gallon double-walled tank. Within a single, two- compartment tank shared with diesel.	<ul style="list-style-type: none"> - Double wall provides 110% containment capacity. - Interstitial space is electronically monitored. 	<ul style="list-style-type: none"> - Tank filled through remote fill port with 20-gallon spill containment area. - Redundant overfill protection includes an audible alarm and automatic flow shutoff device. 	<ul style="list-style-type: none"> - Tank has an anti-siphon device to prevent gravity discharge. - Site is gated with key-fob identification. 	<u>Drainage Area 3:</u> Across parking lot to Focal Point Filter and subsequent subsurface storage chambers.
Facility Fueling Station Diesel Oil (sheen)	On concrete pad adjacent to the fuel pumps.	10,000-gallon double-walled tank. Within a single, two- compartment tank shared with gasoline.	<ul style="list-style-type: none"> - Double wall provides 110% containment capacity. - Interstitial space is electronically monitored. 	<ul style="list-style-type: none"> - Tank filled through remote fill port with 20-gallon spill containment area. - Redundant overfill protection includes an audible alarm and automatic flow shutoff device. 	<ul style="list-style-type: none"> - Tank has an anti-siphon device to prevent gravity discharge. - Site is gated with key-fob identification. 	<u>Drainage Area 3:</u> Across parking lot to Focal Point Filter and subsequent subsurface storage chambers.
Generator Diesel Oil (sheen)	On concrete pad in front of administrative entrance to facility.	850-gallon double-walled tank.	<ul style="list-style-type: none"> - Double wall provides 110% containment capacity. 	<ul style="list-style-type: none"> - Fill gauge 	<ul style="list-style-type: none"> - Site is gated with key-fob access. - Access port is locked. 	<u>Drainage Area 3:</u> Across parking lot to Focal Point Filter and subsequent subsurface storage chambers.
Dumpster (Public Works) Litter	On gravel area adjacent to truck parking area.	6-yard frontload container with lid.	<ul style="list-style-type: none"> - Container with lid and drain plug 	N/A	<ul style="list-style-type: none"> - Site is gated with key-fob access. 	<u>Drainage Area 1:</u> Towards ditch line and subsequent outfall.
Dumpster (RSU 14) Litter	On pavement adjacent to maintenance garage.	2-yard frontload container with lid.	<ul style="list-style-type: none"> - Container with lid and drain plug. 	N/A	<ul style="list-style-type: none"> - Site is gated with key-fob access. 	<u>Drainage Area 3:</u> Across parking lot to Focal Point Filter and subsequent subsurface storage chambers.
Sand and Salt Shed Sediment, Calcium Chloride	In storage building located on northeast edge of site.	Varies by season	<ul style="list-style-type: none"> - Roof and sidewalls 	N/A	<ul style="list-style-type: none"> - Site is gated with key-fob identification. 	<u>Drainage Area 3:</u> Across parking lot to Focal Point Filter and subsequent subsurface storage chambers.
Public Sand Shed Sand, Calcium Chloride	Northwest side of site, located in leaf & brush drop-off area.	Varies by season	<ul style="list-style-type: none"> - Roof and sidewalls 	Sand is scraped/swept back into containment area as needed.	<ul style="list-style-type: none"> - Site is gated with key-fob identification. 	<u>Drainage Area 2:</u> To grassed underdrain soil filters.
Hydraulic Oils and Lubricants Oil, Gasoline	In fluids room of maintenance garage.		-	Overfill protection includes an audible alarm and automatic flow shutoff device.	<ul style="list-style-type: none"> - Site is gated with key-fob identification. - Building is locked with key-fob identification. 	<u>Drainage Area 3:</u> Across parking lot to Focal Point Filter and subsequent subsurface storage chambers.

Appendix 6 – Record of Significant Spills and Leak

Appendix 7 – Blank Visual Monitoring Forms

Windham Public Works
Quarterly Visual Monitoring Inspection Log for Stormwater

Facility Name	Shared Maintenance Facility
Facility Address	185 Windham Center Road, Windham, ME 04062
Date of Observation	
Total Rainfall	
Sampler's Name	
Sampler's Signature	
Has it been 72 hours since last rain event?	

Outfall Number	Outfall 1	Outfall 2	Outfall 3
Observation Time			
Est. Time from onset of discharge (w/in 60 min)			
Discharge type (rain, snow melt or ice melt)			
Sample Volume			
Color			
Odor			
Clarity			
Floating Solids			
Settled Solids			
Suspended Solids			
Foam			
Oil Sheen			
Comments on Potential Pollution Sources			

Provide additional comments on attached page if needed for floating, settled, and suspended solids or other items.

Signature of Responsible Official: 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 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 fines and imprisonment for knowingly violating the law.

Title/Name: Environmental & Sustainability Coordinator, Gretchen Anderson

Signature: _____ Date: _____

GENERAL COMMENTS AND IMMEDIATE CORRECTIVE ACTIONS TAKEN

In the comments section, enter physical description of floating, settled, and suspended solids for each outfall sampled.

Enter general comments on the condition and appearance of each outfall in the comments section also as indicated in the instructions. Also use this form to document any Immediate Corrective Actions taken and to identify if any subsequent actions are needed.

Outfall 1	<u>Comments</u> : _____ _____ _____ _____ _____
Outfall 2	<u>Comments</u> : _____ _____ _____ _____ _____
Outfall 3	<u>Comments</u> : _____ _____ _____ _____ _____
	_____ _____ _____ _____ _____
	_____ _____ _____ _____ _____
	_____ _____ _____ _____ _____

Appendix 8 – Completed Visual Monitoring Forms

Appendix 9 – Blank Facility Inspection Forms

**Windham Public Works
Quarterly Routine Facility Inspection**

Calendar Year: _____

- Q1 (Jan-Mar)
- Q2 (Apr-Jun)
- Q3 (Jul-Sept)
- Q4 (Oct-Dec)

Date:			
Inspection Start Time:			
Temperature (F):			
Weather (circle one):	Sunny	Cloudy	Raining
Precipitation (last 72 hours):			
Inspector:			
Inspector Signature:			

Potential Pollutant Area and Control Measure (Practice) being implemented.	Is practice followed?	If practice not followed, does SWPPP need revision?	If practice not followed, described immediate corrective actions completed.	If immediate corrective actions do not resolve the issue, describe why not, and complete a full corrective action report.
No litter or debris is present on the ground that could contaminate stormwater or be washed away in stormwater.	Yes	Yes		
	No	No		
Used oil and universal wastes are stored in appropriate containers with secondary containment.	Yes	Yes		
	No	No		
All dumpster lids are closed, and drains plugged.	Yes	Yes		
	No	No		
Vegetative areas are in good condition (no signs of sediment or erosion).	Yes	Yes		
	No	No		
Non-Stormwater Certification: outfalls and drainage ditches were inspected and there was no evidence of illicit discharge.	Yes	Yes		
	No	No		
Storm drainpipes are visible and unclogged (inlets and outlets).	Yes	Yes		
	No	No		
Riprap ditch and outfall locations are visual, free of woody vegetation, and litter.	Yes	Yes		
	No	No		
Fueling area is free from leaks, drips, spills, and the spill kit is fully stocked.	Yes	Yes		
	No	No		

Drums, Chemicals, wastes, and leaking vehicles are stored in interior areas.	Yes	Yes		
	No	No		
The equipment/vehicle storage areas are free from leaks, drips, and spills.	Yes	Yes		
	No	No		
The general area has been swept as needed to remove excessive sediment.	Yes	Yes		
	No	No		
Both grassed underdrain soil filters and Focal Point Filter are free from excessive sedimentation, litter/debris, erosion, woody vegetation, and standing water for more than 48 hours.	Yes	Yes		
	No	No		

Have any buildings been added or removed? **Yes** **No**

Have there been any changes to the Stormwater drainage systems or surfaces of the drainage? **Yes** **No**

Potential Pollutant Sources – Significant Materials and Industrial Activities

Have there been any additions or deletions to sources identified in the plan? **Yes** **No**

Have the locations of any of the potential pollution sources changed? (Exterior storage) **Yes** **No**

Evaluate the effectiveness of the BMPs in use. Review records & inspect structural BMPs

	Excellent	Good	Inadequate	Area #
Housekeeping	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Preventative Maintenance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Stormwater System Maintenance (Inspect Devices)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Management of Runoff (Inspect yards)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Spill Prevention	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Erosion & Sedimentation Control	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Employee Training & Awareness	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Reporting & Recordkeeping	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Standard Operating Procedures	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

Review existing schedules for BMPs. Do the schedules require modification? **Yes** **No**

Stormwater Pollution Prevention Team

Have there been any changes in personnel assigned to the team? **Yes** **No**
Have there been any changes in team member's responsibilities? **Yes** **No**

Modifications Required to the Plan and/or Site Map(s)

A **yes** or **inadequate** answer to any of the questions listed above requires the SWPPP or Site Map(s) to be modified to reflect the necessary changes.

Are any modifications required to be made to the Plan and/or Site Map(s) No modification required
 Plan requires modification
 Map(s) require modification

All required changes have been made to the Plan. Date: _____ Initials: _____

All required changes have been made to the Site Map(s) Date: _____ Initials: _____

Are all required records (e.g., visual quarterly monitoring records, spill logs, material inventories, employee training agendas and sign in sheets, waste oil manifests or receipt of pickup, etc., included in the Appendices of the SWPPP? **Yes** **No**

Are there any non-stormwater discharges? **Yes** **No**

If yes, what are they?

Are the non-stormwater discharges authorized under the MSGP? **Yes** **No**

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: Gretchen Anderson, E&S Coordinator Signature: _____ Date: _____

Appendix 10 – Completed Facility Inspection Forms

Appendix 11 – Blank Corrective Action Forms

Corrective Action Form

Facility Name: Windham Public Works
Facility Address: 185 Windham Center Road, Windham, ME 04062

1. Which of the following conditions has occurred that requires a corrective action be completed:

- an unauthorized release or discharge (*e.g.*, spill, leak, or discharge of non-stormwater not authorized by this or another MEPDES permit to a water of the State) occurred at the facility.
- a discharge violated a condition of the 2022 MS4 General Permit.
- a discharge violated a non-numeric effluent limitation contained in the 2022 MS4 General Permit, or an applicable water quality-based limitation or ambient water quality criteria associated with impaired waters monitoring.
- the control measures were not stringent enough for the discharge to meet applicable water quality standards.
- a required control measure was never installed, was installed incorrectly, or is not being properly operated or maintained; or
- a visual assessment showed evidence of stormwater pollution (*e.g.*, color, odor, floating solids, settled solids, suspended solids, foam).

2. Provide the date the condition was identified _____

3. Describe the condition that was identified (for any spills or leaks: a description of the incident including material, date/time, amount, location, and cause for spill, and any leaks, spills or other releases that resulted in discharges of pollutants to the MS4 or waters of State, through stormwater or otherwise).

4. Describe any immediate actions taken to correct the condition:

5. Describe the subsequent actions taken to correct the condition (including dates of completion or expected completion.

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: Gretchen Anderson, E&S Coordinator

Signature: _____

Date: _____

Appendix 12 – Completed Corrective Action Forms

Appendix 13 - Employee Training Records