TOWN OF OLD ORCHARD BEACH, MAINE

MARCH 2021

Stormwater Management Plan

11155K

MS4 General Permit: Effective July 1, 2022
Submitted to Maine DEP (Initial SWMP): March 30, 2021

WRIGHT-PIERCE
Engineering a Better Environment

TOWN OF OLD ORCHARD BEACH, MAINE

STORMWATER MANAGEMENT PLAN

MARCH 2021

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STORMWATER MANAGEMENT PLAN

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INTRODUCTION

1.1 OVERVIEW OF REGULATORY PROGRAM

The Town of Old Orchard Beach is subject to the General Permit for the Discharge of Stormwater from Small Municipal Separate Storm Sewer Systems (MS4s) which was issued by the Maine Department of Environmental Protection (DEP) on October 15, 2020 with an effective date of July 1, 2022. 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. If the Maine DEP does not issue another General 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 regulated under this program 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 of these 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 Old Orchard Beach 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. The Urbanized Area map in Appendix A illustrates the Urbanized Area regulated by the 2022 MS4 General Permit for the Town of Old Orchard Beach, 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

The Town of Old Orchard Beach is a member of the Interlocal Stormwater Working Group (ISWG), which is a coalition of 14 regulated 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 permit. This coalition is facilitated by the Cumberland County Soil and Water Conservation District (CCSWCD), which also assists in completing some of the permit requirements under contract to the ISWG. Some of the public education requirements are implemented statewide as identified in this SWMP with ISWG working cooperatively with the Bangor Area Stormwater Working Group (BASWG), Androscoggin Valley Stormwater Working Group (AVSWG), and Southern Maine Stormwater Working Group (SMSWG).

In implementing the 2022 MS4 General Permit, the Town of Old Orchard Beach relies on the ISWG to complete some requirements, hires consultants to implement some requirements, and implements other requirements using municipal staff. This plan describes which elements will be completed individually, regionally, or as a statewide effort.

1.3 OVERVIEW OF THE STORMWATER MANAGEMENT PLAN

This SWMP describes how the Town will implement best management practices (BMPs) to meet the six minimum control measures (MCMs), set forth in Part IV.C of the 2022 MS4 General Permit. The six MCMs addressed in this SWMP are:

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

Although 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 MCMs.

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 plan expand upon or continue BMPs that were developed under prior General Permits. In addition to addressing the six MCMs, the Town must address impaired waters 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 is allowed to consider these concepts as they select 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; therefore, some flexibility is built in to the BMPs 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 allows the Town to adjust BMPs throughout the permit cycle, if needed, based on evaluations of their effectiveness, changing conditions, specific local concerns, or changes in other factors. Some SWMP Modifications require Maine DEP review and approval and public comment. Sections 1.6 and 1.8 describe the requirements associated with modifying the 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 (a.k.a. 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 address compliance with the TMDL waste load allocation ("WLA") and any implementation plan. The General Permit 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 October 15, 2020.
2) If a TMDL is approved or modified by EPA after October 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 Town of Old Orchard Beach MS4 has discharges to a waterbody with EPA-approved TMDLs; the waterbody is also an Urban Impaired Stream. The Town of Old Orchard Beach and Wright-Pierce consulted with staff from Maine DEP Division of Environmental Assessment on February 26, 2021 via email and on March 8, 2021 via a virtual meeting to discuss compliance with the TMDLs and BMPs specific to the Urban Impaired Stream within the community borders. The Urban Impaired Stream BMPs included in Section 2.7 of this SWMP are a result of this consultation. A general discussion of how the State assesses surface water quality is included in Section 1.4.1. The status of waters that receive discharges from the Town's MS4 is discussed in Section 1.4.2, and how the SWMP complies with the impaired water requirements is discussed in Section 1.4.3.

The Fact Sheet issued with the 2022 MS4 General Permit 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 consultation 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. A regional consultation was conducted, which is described under Section 1.4.3.2.

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. The classifications, uses, and standards are described and assigned to the various waters in the Maine Statutes (Title 38, Sections 464 through 469).

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

- Lake 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 (DMR), 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, Volunteer River Monitoring Program (VRMP) and through many other government agencies such as the Department of Inland Fisheries and Wildlife, U.S. EPA, and United States Geologic Survey.

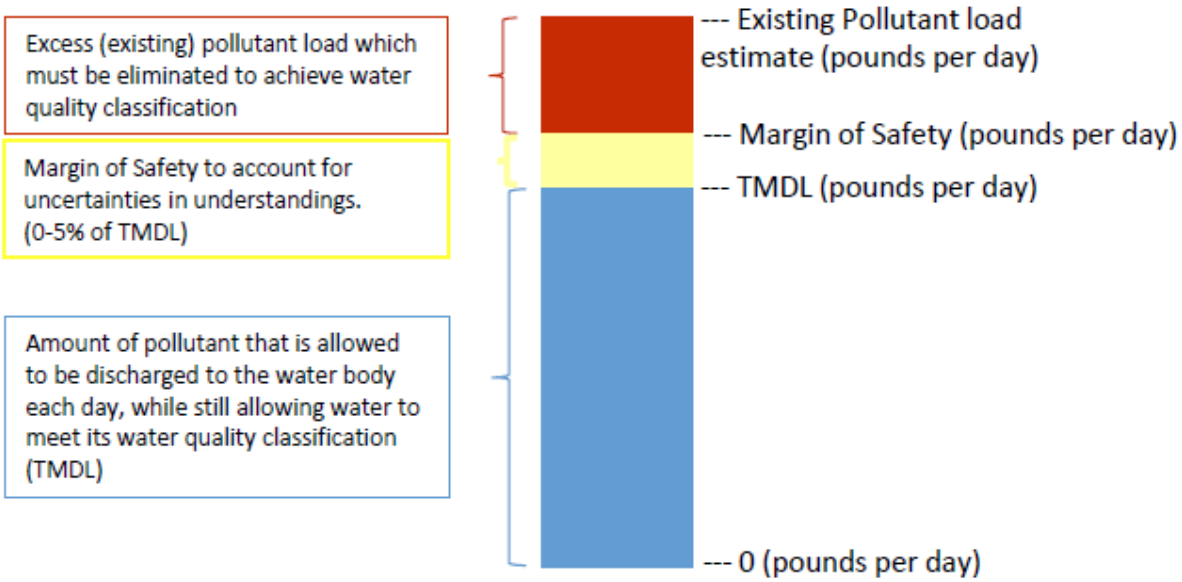
Every two years, the Maine DEP publishes a report and list documenting the results of the assessments and identifying which waters are meeting their designated classifications and which are considered impaired. The report and list are called the Integrated Water Quality Report, and are generally referred 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 of 2022.

A TMDL document identifies the source(s) of the impairments and recommendations to correct the impairments. In particular, 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 two and five percent of the TMDL to account for uncertainties

or lack of knowledge about the relationship between the pollutant loading and water quality. TMDL components are illustrated below.



Total Maximum Daily Load (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 Lakes Most at Risk from Development and Urban Impaired Streams.

1.4.2 Old Orchard Beach Water Quality Status

As part of the development of this SWMP, waterbodies within the Town's Urbanized Area that receive point source discharges from the Town's MS4 were reviewed. The impairment status and applicable TMDLs for each waterbody were also reviewed to determine which impaired water

requirements under the 2022 MS4 General Permit were applicable. Several documents were reviewed in making these determinations, including the:

- Final 2016 Maine Integrated Water Quality Report and Appendices [305(b) report and 303(d) list]
- Chapter 502 Direct Watersheds of Lakes Most at Risk from New Development and Urban Impaired Streams
- Goosefare Brook TMDL (September 2003)
- Maine Impervious Cover TMDL Assessment for Impaired Waters (September 2012)
- Maine Statewide Bacteria TMDL: 2013 Freshwater Addendum (August 2014)
- Goosefare Brook Watershed-based Management Plan (May 2016)

Table 1 shows the waters where the Town has regulated small MS4 discharges and their impairment status. Goosefare Brook as well as Saco Bay are impaired waterbodies located within Old Orchard Beach.

TABLE 1
WATERBODIES IN OLD ORCHARD BEACH WITH DISCHARGES FROM THE REGULATED SMALL MS4

Waterbody Name	Impairment Status	Comments
Goosefare Brook	Category 4-A[1]	Aquatic life use, recreational use, and metals approved TMDLs
	Category 4-B-1[2]	Wastewater outfall moved out of estuary. TMDL on freshwater brook.
Saco Bay	Growing Area WG, Section P2 (formerly DMR Pollution Area 10), Category 5-B-1(a)[3]	Elevated fecal indicators; included in 2009 Statewide Bacteria TMDL; moved from Category 4-A to 5-B-1(a) in 2016 until major Bacteria TMDL update
Little River / Jones Creek	None	
Mill Brook	None	
Milliken Pond	None	
Milliken Mill Pond	None	

[1] Rivers and streams with impaired use other than Mercury – TMDL Completed

[2] Estuarine/marine water, impaired by pollutants – pollution control requirements reasonably expected to result in attainment.

[3] Estuarine and marine waters impaired for Bacteria only – TMDL Required

Goosefare Brook has TMDLs for heavy metals, bacteria, and impervious cover, and is also listed as an Urban Impaired Stream. Maine DEP's delineation of Goosefare Brook as an Urban Impaired Stream under Chapter 502 only includes the freshwater portion. Since Appendix B Urban Impaired Streams of the 2022 MS4 General Permit does not distinguish between the freshwater or marine/estuarine portions of the stream and the Goosefare Brook Watershed-based Management Plan includes both the freshwater and marine/estuarine portions of the watershed within its delineation, for purposes of this SWMP, including the Urban Impaired Stream BMPs, the delineation of the Goosefare Brook watershed includes both the freshwater and marine/estuarine portions of the watershed as shown on Figure 2 in Appendix A.

Saco Bay are marine/estuarine waters listed on the 303(d) list for bacteria impairments. It should be noted that Saco Bay was previously listed in the 2009 Statewide Bacteria TMDL; however, it was recategorized in 2016 as Category 5-B-1(a), which needs a TMDL, until such time as the Maine DEP reissues the Statewide Bacteria TMDL. Saco Bay is included in the Maine shellfish growing area designated as WG. The portion of the growing area located adjacent to the coast of Old Orchard Beach is included in growing area section P2 (formerly DMR Pollution Area 10), which extends nearly the full coast line of Old Orchard Beach and up the mouth of Goosefare Brook. Shellfish harvesting is prohibited in P2 due to wastewater treatment plant discharges from Saco, Biddeford, Old Orchard Beach, and Scarborough.

1.4.3 Progress on Addressing Impairments and Approach to BMP Development

The Town of Old Orchard Beach and Wright-Pierce consulted with staff from Maine DEP Division of Environmental Assessment via email on February 26, 2021 and a virtual meeting on March 8, 2021. Consultation regarding SWMP compliance with the TMDLs was provided in an email from the Division of Environmental Assessment on February 26, 2021 and is discussed in Section 1.4.3.1. The Maine DEP consultation via a virtual meeting on March 8, 2021, which included staff from the Division of Environmental Assessment and Maine Healthy Beaches, focused on the selection of Urban Impaired Stream BMPs. During this consultation, Maine DEP recommended focusing the Urban Impaired Stream BMPs to be included in the SWMP on bacteria impairments, which would make the most difference in the watershed. Additionally, since there are impacts related to buffers, a program that improves the riparian buffer would be applicable. Maine DEP

indicated that chloride impairments within the Goosefare Brook watershed are not applicable to the Town of Old Orchard Beach, and a regional BMP for chloride reduction would not be appropriate for the SWMP. The Urban Impaired Stream BMPs, identified in Section 2.7 of this SWMP, were selected as a result of the consultation with Maine DEP. The Urban Impaired Stream BMPs are based on data and known issues in the Goosefare Brook watershed from monitoring of the New Salt Road Tributary conducted by Maine Healthy Beaches and recommendations stemming from that monitoring. The Urban Impaired Stream BMPs are not a direct result of IDDE inspections to date.

The IDDE BMPs identified in Section 2.3 of this SWMP, are intended to be separate from the Urban Impaired Stream BMPs and will focus on town-wide initiatives related to outfall inspections as well as sampling/analysis and further investigation, if warranted. The focus of the IDDE BMPs will be on the stormwater infrastructure. While there may be some overlap between the Urbanized Impaired Stream and IDDE BMPs, in that some of the data collected may support next steps with the investigations, the intent is to generally allow the actions and measurable goals to be separate.

1.4.3.1 Discharges to Waters with TMDLs and Urban Impaired Stream

Goosefare Brook is a stream located in both Saco and Old Orchard Beach. It originates in Saco Heath and discharges to Saco Bay between Old Orchard Beach and Ferry Beach State Park. There are both residential, commercial, industrial, and highway properties along the length of Goosefare Brook. Goosefare Brook does not meet its Class B statutory classification, and has a toxicity impairment from heavy metals, an aquatic life use impairment based on non-attainment for macroinvertebrates, and a recreational use impairment due to Escherichia coli (E. coli).

The following TMDLs have been established for Goosefare Brook:

- Goosefare Brook TMDL (September 2003) for heavy metals (Cadmium, Chromium, Copper, Iron, Nickel, Lead, and Zinc). The TMDL was associated with two known legacy discharges, and not a result of MS4 discharges; therefore, no further action is required for this TMDL in this SWMP. This was confirmed as a result of consultation with staff from Maine DEP Division of Environmental Assessment on February 26, 2021.

- Maine Impervious Cover (IC) TMDL Assessment for Impaired Waters (September 2012) addresses the impairments to aquatic life use (benthic-macroinvertebrate and stream habitat assessments). The IC TMDL indicates these impairments are associated with a variety of pollutants in urban stormwater as well as erosion, habitat loss, and unstable stream banks caused by excessive amounts of runoff. The percent impervious cover in the watershed is 17 percent with a TMDL target of 9 percent. Goosefare Brook is also on the list of Urban Impaired Streams. As such, the three BMPs for the Urban Impaired Stream will be sufficient to demonstrate compliance with the IC TMDL. This was confirmed as a result of consultation with staff from Maine DEP Division of Environmental Assessment on February 26, 2021.
- Maine Statewide Bacteria TMDL: 2013 Freshwater Addendum (August 2014) addresses impairments due to E. coli bacteria. The Addendum to the Bacteria TMDL suggests that bacterial sources in the watershed are likely from failing residential septic systems, leaky sewer pipes, illicit connections to storm drains, or domestic animals. For the purposes of calculating a single reduction for Goosefare Brook, the most downstream mainstem site was used to compute a percent reduction, which was the crossing at Old Orchard Road (SGS01), which is located in the freshwater portion of the watershed. The TMDL goal is a 73 percent reduction in bacteria loads. One of the specific recommendations in the Bacteria TMDL is the establishment of an IDDE Program, as such, the implementation of the Town's IDDE program will be sufficient for meeting the requirements for the Bacterial TMDL. This was confirmed as a result of consultation with staff from Maine DEP Division of Environmental Assessment on February 26, 2021.

Maine Healthy Beaches Monitoring

The Maine Healthy Beaches program has been conducting enhanced monitoring and pollution source tracking in the New Salt Road Tributary of Goosefare Brook, since 2012. This portion of the Goosefare Brook watershed is located in the marine/estuarine portion of the watershed. According to the Maine Healthy Beaches' 2012-2019 Summary Report of Enhanced Monitoring and Pollution Tracking in New Salt Road Tributary, using multiple pollution source tracking tools, the multi-year pollution tracking efforts identified two primary "hot spots" suspected of human fecal contamination in the New Salt Road Tributary. The summary report indicates enterococci,

optical brightener, canine detection, and pharmaceutical and personal care products (PPCPs) data was used to isolate the mouth region (GFB-01 and associated sites) and the marsh region (Marsh-1 and associated sites) as the two distinct "hot spots" with the potential for human and other fecal sources(s) of pollution. Microbial source tracking analyses was used to verify suspected "hotspots", locate potential pollution sources, and assess seasonal differences in sources. The Maine Healthy Beaches 2012-2019 summary report suggests the impaired water quality (due to fecal bacteria) in the New Salt Road Tributary is likely a combination of human, wild, and domestic animal waste, and human sources may include faulty sewer lines, cross-connections between sewer and stormwater infrastructure, and malfunctioning septic systems/cesspools. The 2012-2019 summary report includes a recommendation to target human sources, and for Town to continue investigations of suspect areas to rule out sources of human sewage. Specifically, the summary report recommends follow-up on parcels identified during 2015 smoke testing indicating potential sewer connection issues and to investigate wastewater infrastructure integrity near GFB-01-0 where the New Salt Road Tributary goes underground (in a closed box culvert parallel to West Grand Ave, Route 9) between Randall Ave (GFB-01-0) and Ancona Ave (GFB-01-1).

Significant efforts have been made by the Town in partnership with Maine Healthy Beaches to monitor and identify sources of enterococci in Goosefare Brook estuary and beaches over many years. Prior to the development of the Goosefare Brook Watershed-based Management Plan (WMP), efforts to detect and address potential bacteria sources included dye testing of homes, replacement of aging sanitary sewer infrastructure, and smoke testing to tract potential sources of contamination into the Goosefare Brook. As a result of the 2015 smoke testing effort, a list of properties with potential sewer connection issues was developed. Since the development of the Goosefare Brook WMP, the Town of Old Orchard Beach has been progressing the implementation of the WMP and working to protect and restore water quality in the watershed.

Watershed-based Management Plan (WMP)

A WMP plan was developed for the Goosefare Brook watershed in May of 2016. The WMP is a comprehensive plan that provides the City of Saco and Town of Old Orchard Beach with recommendations for protecting and restoring the Goosefare Brook and its tributaries. The WMP identified the five stressors of nutrients, toxics, chloride, bacteria, and stream habitat as

contributors to existing and potential future impairments in Goosefare Brook. The primary stressors identified for subwatersheds in Old Orchard Beach are related to nutrients, bacteria, and stream habitat (along a short stretch of stream). Excess nutrients (primarily nitrogen and phosphorus) originate from sources within the watershed such as fertilizer application, soil erosion, and biological waste. As previously noted, elevated levels of bacteria within portions of the watershed are likely tied to human sources. Key protection and restoration categories identified in the Goosefare Brook WMP include bacteria source reduction (continue to seek out and remove bacteria sources in the watershed), stream restoration (improve habitat conditions in and adjacent to the stream by restoring riparian buffers, stabilizing eroding stream banks and removing fish barriers), and Education/Outreach (garner the support and cooperation from community groups while educating business owners, school children, and watershed residents about the need for and importance of clean water), which will be addressed by the proposed Urban Impaired Stream BMPs.

The Town participates in the Goosefare Brook Restoration Committee, which serves as a steering committee for the implementation of the WMP. Additionally, the Town has partnered with the City of Saco to apply for and be awarded multiple grants provided by the U.S. EPA under Section 319 of the Clean Water Act. Under these grants, the Town has installed stormwater retrofits to treat stormwater runoff and erosion issues and provided public education (storm drain stenciling) within the watershed. Currently, the Town is working on ordinance amendments to Chapter 71 Post-Construction Stormwater Management to have the ordinance also apply to projects that create 20,000 square feet or more impervious area in the marine/estuarine portion of the Goosefare Brook watershed. Additionally, the Town is planning BMP installations at the Department of Public Works facility and Loranger Middle School as well as buffer restorations. The City of Saco and Town of Old Orchard Beach were recently awarded a third implementation grant to continue watershed restoration.

1.4.3.2 Discharges to Impaired Waters without a TMDL

The Fact Sheet to the 2022 MS4 General Permit recommends the Town consult with Maine DEP to assess actions to be taken to address discharges to impaired waters that do not have an EPA-approved TMDL. In Old Orchard Beach's case, these waters include the estuarine/marine waters

of Saco Bay located in the DMR Growing Area WG, Growing Section P2 (formerly DMR Pollution Area 13). DMR Growing Area WG was originally listed in the 2009 Statewide Bacteria TMDL; however, in 2016, the Maine DEP moved the estuarine/marine waters to the 303(d) list Category 5-B-1(a) (TMDL required) until such time as the Maine DEP can update the Statewide Bacterial TMDL to provide more specific spatial data on which areas are included.

Although, the 2022 MS4 General Permit requirements do not apply to 303(d) non-TMDL waters, through regional consultation, the Maine DEP concurs that for bacteria impaired waters that were vacated from the 2009 Statewide Bacteria TMDL (marine/estuarine), implementation of the MS4 IDDE elements of the 2022 MS4 General Permit (i.e. outfall inspections, sampling outfalls during dry weather flow, and completing IDDE investigations to eliminate bacterial sources) is sufficient to address the impairment until such time as the Statewide Bacteria TMDL can be updated.

1.5 PRIORITY WATERSHEDS

The 2022 MS4 General Permit does not contain any specific requirements related to priority watersheds; however, it does require the Town to have a procedure in place to prioritize watersheds when addressing illicit discharges. In general the Town focuses illicit discharge detection and elimination (IDDE) efforts in the priority watershed. The Town's IDDE Plan, included in Appendix E, describes in more detail how the prioritization is applied. The Town's priority watershed is the Goosefare Brook for several reasons, including:

- it is an urban impaired stream,
- it is impaired for bacteria,
- it encompasses more than a third of the area of the Town (based on the Town's
- delineation), and
- other studies have been conducted in the watershed.

Additionally, 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 Sections 308(b) and 319 of the Clean Water Act, as long as the funding is not used to satisfy the conditions of a Clean Water Act Permit (such as the 2022 MS4 General Permit). The list includes Goosefare Brook. It should be

noted that 319 grant funding cannot be used to implement BMPs required by the MS4 General Permit.

1.6 OBTAINING COVERAGE TO DISCHARGE

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 included in Appendix C.

Following review of the SWMP and NOI, and receipt of any public comments, the Maine DEP will issue a permittee-specific DEP Order, establishing terms and conditions that are enforceable in addition to the language in the 2022 MS4 General Permit which is also enforceable. The permittee-specific DEP Order is also subject to a 30-day public comment period, which the Maine DEP will provide. Following the end of the public comment permit, the Maine DEP will offer any updated information to the Town. If no comments are received, Maine DEP will provide notice to the Town that they are authorized to discharge under the 2022 MS4 General Permit and the permittee-specific DEP Order.

Once the Maine DEP issues authorization to discharge, the Town will have 60 days to update the SWMP to reflect any new or changed requirements based on the permittee-specific DEP Order and any comments received. At that time, the permittee-specific DEP Order will be included in Appendix B of this SWMP. In addition, the Town will include a summary in Appendix C of comments received and how they were addressed in the SWMP. The SWMP will be resubmitted to the Maine DEP after revision along with a narrative indicating how the SWMP was modified to be consistent with the 2022 MS4 General Permit and permittee-specific DEP Order, unless the Maine DEP indicates in writing that resubmittal is not required. The new permit conditions do not take effect until July 1, 2022.

1.7 SWMP AVAILABILITY

The SWMP will be made available on the Town website and a copy of the SWMP will also be available for viewing at Town Hall, which will immediately be made available to the following entities upon request:

- U.S. EPA or Maine DEP,
- an interconnected or adjacent MS4,
- any owner or operator of a water supply company where the MS4 discharges to a water supply watershed, or
- member of the public.

1.8 SWMP MODIFICATIONS DURING THE PERMIT CYCLE

During the permit cycle, the SWMP will 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:

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

If the changes being made are explicitly required by the 2022 MS4 General Permit or the permittee-specific DEP Order, one of the following processes will be followed:

- If the changes are initiated by the Town, the Maine DEP will be notified prior to changing any elements to discuss justification for the changes and to discuss the process for formally making the changes. Changes in relation to modifying the schedule established in the permittee-specific DEP Order will be filed by the Town in an application to the Maine DEP on a Maine DEP form and will include justification to formally modify the original permittee-specific DEP Order;
- If the changes are initiated by the Maine DEP, the Town will be notified, and the Town will respond in writing within 30 days of the notice explaining how it will modify the SWMP. The Town will then modify the SWMP within 90 calendar days of the Town's

written response or within 120 calendar days of the Maine DEP notice (whichever is less). Any such modification must be submitted to the Maine DEP for final review.

Changes to BMPs in the permittee-specific DEP Order require formal public notice in the local paper within the 30 calendars-day period prior to submitting the amendment to Maine DEP. There may be other instances where changes require formal pubic notice; these instances will be determined in coordination with the Maine DEP as they arise. Changes requiring formal public notice will be made available for 30-day public comment by posting the changes and associated updated SWMP on the Town's website. Changes to items in the SWMP that are not specifically required by the 2022 MS4 General Permit or permittee-specific DEP Order may be amended as appropriate without the need for public notice/comment; however, the Town will allow the public the opportunity to comment on changes made to the SWMP by annually posting the SWMP on the Town's website. The Maine DEP will be notified of changes not requiring public notice/comment in the annual report following the permit year the changes were made.

1.9 ANNUAL COMPLIANCE REPORT AND RECORD KEEPING

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 will be sent to:

MEPDES Stormwater Program Manager
Maine Department of Environmental Protection
Rhonda Poirier; rhonda.poirier@maine.gov

The Annual Compliance Report will 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 the implementation of the Town's Plan 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 practicable.

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 through 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 Plan 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 Maine DEP within 60 days of the receipt of the comment(s). The regulated MS4s must keep records required by the 2022 MS4 General Permit and permittee-specific DEP Order for at least three years following its expiration or longer if requested by the Maine DEP or the U.S. EPA. The Town must make records, including this SWMP, available to the public during regular business hours.

SECTION 2
MINIMUM CONTROL MEASURES

2.1 MCM 1 EDUCATION/OUTREACH PROGRAM

The 2022 MS4 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 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 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 report[1] 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 the 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 BMPs provides a brief introductory section describing the rationale for the selection of the BMP based on the regional and local issues within the ISWG region. 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 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

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

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: DPW Administrative Operations Manager and/or Assistant Planner (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 groups: municipal, commercial, development/construction, or institutions. This BMP describes the reasoning and measurable goals for the public audience and the selected second 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 SMSWG 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 some regionally consistent messaging in circulation.

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 to 34 stated it was "very important to have clean water in the lakes and streams in [their] community", and 86 percent of ISWG respondents ages 25 to 34 believe that stormwater runoff has a major impact or somewhat impacts water quality, but only 46 percent of ISWG respondents ages 25 to 34 were able to correctly describe what happens to stormwater at their residence. Because this age group has not been targeted before for education and has the potential to impact stormwater for many years into the future, the ISWG, AVSWG, and SMSWG communities will cooperatively 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 raise 15 percent[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 to 34 is approximately 38,000 people: therefore 15 percent of the target audience is approximately 6,000 people.

Target Audience: People 25 to 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 D 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 for the relevant target audience subset based on common characteristics and/or demographics.

Evaluation: Effectiveness will be evaluated annually by tracking process indicators[3] for each tool implemented that year and by tracking impact indicators[4] where available (see Appendix D).

Implementation schedule: A minimum of three of the tools from Appendix D will be implemented each year for the duration of the permit.

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 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

[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.

cyclical nature of the development/construction sector, a baseline evaluation will be conducted in 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 raise awareness of developers and contractors by 15 percent 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 are located 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 D 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 for 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 D). Effectiveness will also be measured by the number of Maine DEP certified contractors located in the ISWG region over the course of the permit term.

Implementation schedule: A minimum of three of the tools will be implemented each year for the duration of the permit.

2.1.2 BMP 1.2 Outreach to Change Behavior Campaign

Responsible Party: DPW Administrative Operations Manager and/or Assistant Planner (with implementation assistance from CCSWCD)

The ISWG communities have focused on changing behavior to reduce nutrients into regional waterbodies in their MS4 permit 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 to 34 and 67 percent of 2018 survey respondents in the ISWG region ages 35 to 55 selected "picking up pet waste and putting it in the trash" as a practice they believed could 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 percent and 64 percent of the nitrogen entering Casco Bay.
4. Several ISWG communities have encountered problems with dog waste not being picked up[5] or not being properly disposed of in the trash, causing local water quality concerns[6] 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 to 64 are the least likely age group to pick up after their dog[7]. However, dog owners ages 25 to 64 receive their information through different outreach methods[8]. In order to provide effective messaging on proper dog waste management, two audiences will be created to allow appropriate outreach tools to be used per age group.

[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/

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

Measurable Goal 1.2a – The Town, through its participation in the ISWG, will work towards changing the behavior of 15 percent of pet owners from the Permit Year 1 established baseline audience of dog owners so more will properly dispose of their pet waste.

Target audience: Dog owners ages 25 to 34 within the ISWG region.

Overarching Message: "Dispose of dog waste as a solid waste, so it does not end up in our stormwater. Once in the stormwater, dog 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 variations based on target audience interests and outreach tools used.

Outreach Tools: A minimum of three outreach tools will be selected from Appendix D 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 impact indicators where available (see Appendix D). Effectiveness will also be evaluated by conducting visual (observational) surveys of dog waste disposal at public areas and tracking the presence of dog waste bags in catch basins.

Implementation schedule: A minimum of three of the tools will be implemented each year for the duration of the permit.

Measurable Goal 1.2b – The Town, through its participation in the ISWG, will work towards changing the behavior of 15 percent of pet owners from the Permit Year 1 established baseline audience of dog owners so more will properly dispose of their pet waste.

Target audience: Dog owners ages 35 to 55 within the ISWG region

Overarching Message: "Dispose of dog waste as a solid waste, so it does not end up in our stormwater. Once in the stormwater, dog 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 variations based on target audience interests and outreach tools used.

Outreach Tools: A minimum of three outreach tools will be selected from Appendix D 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 for 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 D). Effectiveness will also be evaluated by conducting visual (observational) surveys of dog waste disposal at public areas and tracking the presence of dog waste bags in catch basins.

Implementation schedule: A minimum of three of the tools will be implemented each year for the duration of the permit.

2.1.3 BMP 1.3 Effectiveness Evaluation

Responsible Party: DPW Administrative Operations Manager and/or Assistant Planner (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. The evaluation will identify recommendations for future awareness and behavior change target audiences, messages, tools, and benchmarks. A comprehensive survey will be conducted for the ISWG region to evaluate the impact of the awareness campaigns.

2.1.4 BMP 1.4 Additional Activities

Responsible Party: DPW Administrative Operations Manager and/or Assistant Planner (with implementation assistance from CCSWCD)

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

Measurable Goal 1.4a – The Town, through its participation in the ISWG , will continue to support the CCSWCD'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, through its participation in the ISWG, may support the regional effort to reduce chloride contributions to receiving waterbodies by having at least one representative from the Town attend an annual regional training or roundtable to learn about new chloride reduction techniques coordinated by the ISWG or another organization.

Measurable Goal 1.4c – The Town, through its participation in the ISWG, may support the regional effort to reduce chloride contributions to receiving waterbodies by completing the following actions to facilitate future reduction of chlorides through application by private contractors:

- In Permit Year 1, and alternating years thereafter until it passes, the Town may provide educational outreach regarding limited liability legislation to legislators and at least two other organizations representing firms that conduct application of chloride on private property. The Town may also provide comments on any drafted legislation, and provide testimony at the committee level once drafted to help inform the review committee. The information provided will identify how chlorides affect water quality and how limited

liability legislation will support a training, data collection, and certification program like the New Hampshire "Green Snow Pro" program or Minnesota's Smart Salting Training Program for private applicators.

- In years when limited liability legislation has not passed and is not active for procedural reasons, the Town may provide winter maintenance education and outreach to the public. The messaging will be delivered using two tools per year selected from Appendix D.
- Should the legislation be successful:
    - The first year after it passes, the Town may provide awareness of its passage in the form of a presentation to the Select Board/Council.
    - Beginning the second and subsequent years after passage, the Town may educate property owners/managers, private contractors, and/or the public on winter maintenance practices to maintain public safety and protect the environment. These practices will be delivered using two tools per year selected from Appendix D.

2.2 MCM 2 PUBLIC INVOLVEMENT AND PARTICIPATION

The Town will fulfill the requirements for Public Involvement and Participation through participation in the ISWG and the Town's provisions of funding to CCSWCD for Public Involvement and Participation services, or through directly fulfilling the requirements, as described in this section of the plan.

2.2.1 BMP 2.1 Public Notice Requirement

Responsible Party: DPW Administrative Operations Manager and/or Assistant Planner (with implementation assistance from CCSWCD)

Measurable Goal 2.1a – The Town will follow applicable state and local public notice requirements for its NOI and SWMP to comply with the MS4 General Permit. Copies of the SWMP, which includes the NOI, 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 and on ISWG member websites and are open to the public.

2.2.2 BMP 2.2 Public Event

Responsible Party: DPW Administrative Operations Manager and/or Assistant Planner (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 General Permit or another activity approved by the Maine DEP. Stormwater stewardship, 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 Municipal 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 will continue to implement and enforce its Illicit Discharge Detection and Elimination (IDDE) program. The program includes procedures for: prioritizing watersheds, identifying potential illicit discharges, investigating and tracing the source of illicit discharges, removing the source of the discharge, and program evaluation and assessment, and is described in the Town's written IDDE Plan. The following BMPs will be implemented to meet this MCM.

2.3.1 BMP 3.1 Continue to Implement the Illicit Discharge Ordinance

Responsible Party: Director of Public Works with support from Code Enforcement

Measurable Goal 3.1a – The Town adopted an Illicit Discharge Ordinance on December 5, 2006. The Ordinance is included as Article V. – Illicit Discharge Ordinance of Chapter 58 – Utilities of the Town's Code of Ordinances. The Director of Public Works is the authorized enforcement authority per the Ordinance; however, enforcement is accomplished with the assistance of the

Code Enforcement Officer. This ordinance provides the enforcement authority the ability to take enforcement action, including issuing notices of violation and penalties. The Town will continue to enforce this ordinance each permit year. This Ordinance can be viewed online at: https://library.municode.com/me/old_orchard_beach/codes/code_of_ordinances?nodeId=PTIICOOR_CH58UT_ARTVILDIOR

Measurable Goal 3.1b – The Town will document enforcement action taken related to illicit discharges using an Excel spreadsheet.

2.3.2 BMP 3.2 Maintain a Written IDDE Plan

Responsible Party: Director of Public Works

Measurable Goal 3.2a – The Town updated its IDDE Plan to contain elements required in the 2022 MS4 General Permit (Part IV.C.3.b.i through vi). The updated IDDE Plan is included in Appendix E of this SWMP. The plan will be reviewed periodically and updated as needed to reflect any changes to the program.

Measurable Goal 3.2b – The Town will conduct a desktop wet weather analysis to assess the potential for illicit discharges during wet weather events, in accordance with the 2022 MS4 General Permit Part IV.C.3.f. The Town will incorporate the wet weather assessment into their IDDE Plan by the end of Permit Year 5.

2.3.3 BMP 3.3 Maintain Storm Sewer System Infrastructure Map

Responsible Party: Director of Public Works

Measurable Goal 3.3a – The Town developed a map of the MS4 infrastructure during the previous permit cycles. 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. Updates to the Town's stormwater geodatabase are continually made and viewable within the Town's ArcGIS Online Organization as they are made. The version

of the stormwater geodatabase that is publicly viewable is updated annually. Updates primarily include changes to infrastructure based on inspections and addition of infrastructure when as-built drawings become available. The Town will continue to maintain an MS4 infrastructure map.

2.3.4 BMP 3.4 Conduct Infrastructure Inspections and Monitor Flowing Outfalls

Responsible Party: Director of Public Works

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.
- Catch basins will be inspected for evidence of pollutants during catch basin cleaning (see BMP 6.4 for details).

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 cycle 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 Department of Public Works 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 E) describes the information collected during infrastructure inspections. The Town documents the inspections electronically in GIS.

2.3.5 BMP 3.5 Conduct Investigations on Suspect Illicit Discharges

Responsible Party: Director of Public Works

Measurable Goal 3.5a – Whenever the Department of Public Works becomes aware of a potential illicit discharge, it will investigate to identify the source using methods described in the written IDDE Plan (Appendix E). The Department of Public Works will track the status and outcome of the investigations using an Excel spreadsheet.

2.3.6 BMP 3.6 Allowable Non-Stormwater Discharges Identified as Significant Contributors of Pollutants

Responsible Party: Director of Public Works

Measurable Goal 3.6a – In the previous permit cycle, the Maine DEP identified hydrant flushing as 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 has received annual reports from the Maine Water Company describing their hydrant flushing best management practices and results. The Town will continue to request Maine Water Company provide annual reports each permit year.

Measurable Goal 3.6b – If any of the allowable non-stormwater discharges listed in the 2022 MS4 General Permit (Part IV.C.3.h) are identified as significant contributors of pollutants to the MS4, the SWMP will be amended to address how the Town will work with the responsible dischargers to control these sources so they are no longer significant contributors of pollutants.

2.4 MCM 4 CONSTRUCTION SITE STORMWATER RUNOFF CONTROL

The Town will review, update as necessary, implement, and enforce its Construction Runoff Control Program for construction activities that result in land disturbance 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 as required by the 2022 MS4 General Permit. This program will be implemented through BMPs as described in this section.

The Town's existing Zoning Ordinance includes Erosion and Sediment Control as a Performance Standard (Chapter 78, Article VIII, Division 8), which currently applies to all uses with the exception of construction or expansion of single-family detached houses and their accessory uses or structures. All activities which involve filling, grading, excavation, or other similar activities, which result in unstabilized soil conditions and which require a shoreland zoning permit or site plan, subdivision, or condition use approval are required to submit a written erosion and sediment control plan.

The Town's Planning Board Site Plan Review is addressed in Chapter 78, Article IV, and generally applies to design and construction of nonresidential and multifamily residential uses as well as earth-moving activities. The Town has additional procedures and standards for subdivisions (Chapter 74).

The Town's existing Subdivisions and Zoning Ordinances can be viewed online at:

- Chapter 74 Subdivisions: https://library.municode.com/me/old_orchard_beach/codes/code_of_ordinances?nodeId=PTIICOOR_CH74SU

- Chapter 78 Zoning: https://library.municode.com/me/old_orchard_beach/codes/code_of_ordinances?nodeId=PTIICOOR_CH78ZO

The following BMPs will be implemented to meet this MCM.

2.4.1 BMP 4.1 Erosion Sediment Control Ordinance

Responsible Party: Town Planner or Assistant Planner

Measurable Goal 4.1a – The Town will review its existing Erosion and Sediment Control Performance Standard to determine the best approach to require erosion and sediment control BMPs at construction sites be consistent with the applicable sections of Attachment C to the 2022 MS4 General Permit (which are the same as the Maine DEP Stormwater Rule Chapter 500 Appendices A Erosion and Sediment Control, B Inspections and Maintenance, and C Housekeeping). It will be determined whether the existing Erosion and Sediment Control Performance Standards be updated or whether a new article or section under the Zoning Ordinance be developed. All applicable references to required erosion and sediment control plans in the Subdivisions and Zoning Ordinances will be updated accordingly.

Measurable Goal 4.1b – Prior to the updates to the Zoning Ordinance identified in Measurable Goal 4.1a, the Town will determine whether it will reference Maine DEP Stormwater Rule Chapter 500, Appendices A, B, and C or whether it 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, (which currently are the same as the Maine DEP Stormwater Rule Chapter 500 Appendices A, B, and C).

2.4.2 BMP 4.2 Subdivision and Site Plan Review Procedures

Responsible Party: Town Planner or Assistant Planner

Measurable Goal 4.2a – The Town's existing Subdivision Ordinance and Zoning Ordinance include procedures and standards related to the review of subdivisions and site plans, which are consistent with the required elements listed in the 2022 MS4 General Permit (consideration of potential water quality impacts, erosion control, waste storage, the ability for the public to comment at publicly noticed meetings and procedures to consider information submitted by the public). The Town will continue to implement these subdivision and site plan review procedures.

2.4.3 BMP 4.3 Procedures for Notifying Construction Site Developers and Operators

Responsible Party: Town Planner or Assistant Planner

Measurable Goal 4.3a – The Town will continue to notify developers and operators 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:

- Verbally in discussions with the applicant and at pre-application meetings.
- Through language on the Conditional Use, Site Plan – Plenary Review, Private Way, Subdivision – Minor, Subdivision – Major, and Building Permit applications.

2.4.4 BMP 4.4 Procedures to Control Waste at Construction Sites

Responsible Party: Town Planner or Assistant Planner

Measurable Goal 4.4a – The Town will develop procedures for construction site operations to control waste such as discarded building materials, concrete truck wash-outs, chemicals, litter and sanitary waste at the construction site that may cause adverse impacts to water quality if passed through the storm drain system.

2.4.5 BMP 4.5 Conduct and Document Construction Site Inspections

Responsible Party: Assistant Planner with support from Code Enforcement

Measurable Goal 4.5a – The Town will continue implementing its procedure for construction site inspections which is included as Construction Phase (MCM 4), Step 4: Construction Inspections and Documentation in the Planning Department's Development Review Process Guide for Stormwater Management. The procedures for construction site inspections will be updated to incorporate the 2022 MS4 General Permit requirements by July 1, 2023. The written procedures will be reviewed and updated, as necessary, to:

- identify who is responsible for site inspections,
- identify who has authority to implement enforcement procedures,
- describe communication and enforcement procedures regarding deficiencies identified during inspections,

- require three inspections during active earth-moving phase of construction,
- require a minimum of one inspection annually until the project reaches substantial completion,
- require a final inspection at project completion to ensure that permanent stabilization has been achieved and all temporary erosion and sediment controls have been removed, and
- include use of the construction inspection forms provided in Appendix F of this SWMP.

Measurable Goal 4.5b – The Town will document construction sites as part of the Construction Runoff Control Program using an Excel spreadsheet. The spreadsheet contains information to support annual reporting, including the project name, location, status, inspection dates, and any corrective and enforcement action taken.

2.5 MCM 5 POST-CONSTRUCTION STORMWATER MANAGEMENT IN NEW DEVELOPMENT/ REDEVELOPMENT

The Town will continue to implement its Post-Construction Stormwater Management Program 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, or projects that result in 20,000 square feet or more of impervious area in the watershed of an urban impaired stream as listed in Maine DEP's Chapter 502, Appendix B Urban Impaired Streams and 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 Post-Construction Stormwater Management Ordinance was adopted on January 15, 2013 as Chapter 71 in the Town's Code of Ordinances.

The Post-Construction Stormwater Ordinance can be viewed online at: https://library.municode.com/me/old_orchard_beach/codes/code_of_ordinances?nodeId=PTIICOOR_CH71PONSSTMA

Chapter 71 Post-Construction Stormwater Management requires:

- Submittal, approval, and implementation of a Post Construction Stormwater Management Plan for all new development and redevelopment within the regulated area (2000 + 2010 Urbanized Area) of the municipality identified on the EPA map titled "NPDES Phase II Stormwater Program Automatically Designated MS4 Area" for Old Orchard Beach, ME and to associated post-construction BMPs.
- Preparation of a Post-Construction Stormwater Management Plan (PCSWMP) in accordance with the Town of Old Orchard Beach standards.
- Execution and filing of a maintenance agreement for any infrastructure that will not be dedicated to the municipality.
- Submittal of an annual report certifying that the post-construction BMPs have been inspected by a qualified post-construction inspector and are either adequately maintained and functioning as intended or if they require maintenance or repair, a list of deficiencies and documentation once they have been corrected.

The following BMPs will be implemented to meet this MCM.

2.5.1 BMP 5.1 Promote Strategies to Prevent or Minimize Water Quality Impacts

Responsible Party: Town Planner and Assistant Planner

Measurable Goal 5.1a – The Town will promote strategies to prevent or minimize water quality impacts by notifying site developers to consider Low Impact Development and green infrastructure techniques. Notification will be accomplished during the development review process, primarily at the pre-application meeting and through the peer review process. Where there are opportunities to use Low Impact Development and/or green infrastructure, peer review comments will include such recommendations.

2.5.2 BMP 5.2 Maintain Post Construction Ordinance

Responsible Party: Assistant Planner with support from Code Enforcement

Measurable Goal 5.2a – The Town's Post-Construction Stormwater Management Ordinance requires the owner or operator of a post-construction BMP to hire a qualified post-construction

inspector and to provide the Town with an annual certification by June 30 of each year. The Town will continue to require annual certifications and will track the required information for annual reporting in an Excel spreadsheet.

Measurable Goal 5.2b – By July 1, 2023, the Town's Post-Construction Stormwater Management Ordinance (Chapter 71) 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 corrective 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 and notify the Town within 60 days, the property owner will coordinate with the Enforcement Authority to establish an expeditious schedule to correct the deficiency and will provide a record of the corrective actions taken.

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 2000 and 2010 Urbanized Area through implementation of the following BMPs.

2.6.1 BMP 6.1 Operations at Municipally Owned Grounds and Facilities

Responsible Party: Director of Public Works

Measurable Goal 6.1a – During previous permit cycles, the Town developed and updated 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, as necessary, 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, as necessary, 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: Director of Public Works

Measurable Goal 6.2a – The Town will conduct an annual municipal employee training to reduce stormwater pollution from municipal operations and facilities. Training will include the appropriate municipal employees and will cover the O&M Procedures and Stormwater Pollution Prevention Plan, accordingly.

2.6.3 BMP 6.3 Continue Street Sweeping Program

Responsible Party: Director of Public Works

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

2.6.4 BMP 6.4 Cleaning of Catch Basins

Responsible Party: Director of Public Works

Measurable Goal 6.4a – The Town will inspect all catch basins for sediment content at least once every other year and, if necessary, clean catch basin and other stormwater structures that accumulate sediment. Removed sediment will be stored and disposed of according to state law. Catch basins will be cleaned more frequently if inspections indicate excessive accumulation of sediment. Excessive accumulation is considered greater than or equal to 50 percent of the sump filled.

Measurable Goal 6.4b – The Town will track catch basins with excess sediment. 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 percent sediment in its sump for two consecutive years at which point it will be removed from the excess sediment list, and will be inspected again every other year.

2.6.5 BMP 6.5 Maintain and Upgrade of Stormwater Conveyances, Structures, and Outfalls

Responsible Party: Director of Public Works

Measurable Goal 6.5a – The Town will continue to maintain and upgrade the conveyances, structures, and outfalls of the regulated small MS4 as needed and as part of the Town's capital improvement planning process, which includes systematic capital upgrades to the storm drain system in correlation with other infrastructure/roadway projects.

2.6.6 BMP 6.6 Stormwater Pollution Prevention Plan (SWPPP)

Responsible Party: Director of Public Works

Measurable Goal 6.6a – During previous permit cycles, the Town developed and updated a SWPPP for the Department of Public Works Garage and Sand Salt Storage Facility. By July 1, 2022, the Town will review its existing SWPPP and update it, as necessary, to meet the requirements specified in Part IV.C.6.d of the 2022 MS4 General Permit.

Measurable Goal 6.6b – The Town will continue to implement the SWPPP for the Department of Public Works Garage and Sant Salt Storage Facility each permit year.

2.7 URBAN IMPAIRED STREAM BMPS

The Town's regulated MS4 has discharges to Goosefare Brook, which is classified as an Urban Impaired Stream as listed in Appendix B of the 2022 MS4 General Permit. As such, the Town is required to implement three structural or non-structural BMPs for any Urban Impaired Streams that receives discharges from the regulated MS4. To meet the Urban Impaired Stream requirement of the 2022 MS4 General Permit, the Town will implement the following BMPs.

2.7.1 BMP 7.1 Targeted Behavior Change: YardScaping 2.0

Responsible Party: DPW Administrative Operations Manager and/or Assistant Planner (with implementation assistance from CCSWCD)

Measurable Goal 7.2a – As identified in Section 1.4.3.1 of the SWMP, key protection and restoration categories for Goosefare Brook watershed include stream restoration and education/outreach, highlighting the need for restoring riparian buffers and educating watershed residents about the importance of clean water. During Permit Years 1-5, the Town, through participation in the ISWG and the Town's provision of funding to CCSWCD, will provide targeted education to the residents living adjacent to Goosefare Brook and/or select tributaries to Goosefare Brook. The goal of the enhanced public education is to encourage residents to improve their riparian zone by creating or improving and maintaining the riparian buffer with native species to minimize erosion and to implement one of the YardScaping concepts. This BMP will incorporate targeted and regional outreach with other ISWG municipalities that have urban impaired streams. Within the ISWG municipalities with urban impaired streams, the following items will occur each year:

- One digital and one print outreach will be distributed to residents within the Urban Impaired Stream area (to be designated) about ways to create, improve, and maintain their riparian zone.
- Offer four regional workshops on YardScaping and buffer BMPs (workshops will alternate between communities with Urban Impaired Streams each year).
- Product and plant recommendations will be identified at regional point of sale partners.

Surveys will be conducted immediately after workshops and then a follow up survey will be conducted after the next growing season to evaluate behavior changes of the target audience.

2.7.2 BMP 7.2 Conduct Investigation of Select Segments of Sanitary Sewer System within New Salt Road Tributary Subwatershed

Responsible Party: Director of Public Works

As noted in Section 1.4.3.1, Maine Healthy Beaches enhanced monitoring and pollution source tracking, including microbial source tracking, in the New Salt Road Tributary indicate human sources of bacteria are contributing to the bacteria impairment. Given aging sanitary sewer infrastructure within the lower part of the New Salt Road Tributary (some of which is comprised of asbestos concrete pipe) smoke testing would help identify problem areas within the sanitary sewer system. This BMP is based on a recommendation from the Maine Healthy Beaches' 2012-2019 Summary Report of Enhanced Monitoring and Pollution Source Tracking in the New Salt Road Tributary to investigate wastewater infrastructure integrity near Randall Ave, where the New Salt Road Tributary goes underground (in a closed box culvert) between Randall Avenue and Ancona Avenue.

Measurable Goal 7.2a – During Permit Year 2, conduct smoke testing of the sanitary sewer system in the New Salt Road Tributary subwatershed to locate potential problem areas within the sanitary sewer system, including sewer connection issues. The smoke testing will be generally focused on sanitary sewer in the area where the New Salt Road Tributary goes underground (in a closed box culvert parallel to West Grand Avenue) between Randall Avenue and Ancona Avenue, and will include portions of West Grand, Randall, Temple, Colby, Seaside, and Ancona Avenues.

Measurable Goal 7.2b – During Permit Year 3, based on the results of the smoke testing described in Measurable Goal 7.2a, the Town will develop a list of recommendations, including problem areas/properties which require further investigation. The Town will conduct further investigation as described under Measurable Goals 7.3c and 7.3d.

2.7.3 BMP 7.3 Investigate Sewer Connection Issues Identified through Smoke Testing Effort in New Salt Road Tributary Subwatershed

Responsible Party: Director of Public Works with support from Code Enforcement

Similar to BMP 7.2, this BMP is based on a recommendation from the Maine Healthy Beaches' 2012-2019 Summary Report of Enhanced Monitoring and Pollution Source Tracking in the New Salt Road Tributary to follow-up on parcels identified during smoke testing of the sanitary sewer in 2015 indicating potential sewer connection issues.

Measurable Goal 7.3a – During Permit Year 1, the Department of Public Works will review the recommendations from the 2015 smoke testing effort and confirm those properties or areas identified as requiring further investigation continue to require follow up. A listing of properties and areas will be identified along with identified concerns.

Measurable Goal 7.3b – During Permit Year 2, Department of Public Works and Code Enforcement will determine their ability to enter private property and their right to access, and develop a plan to conduct internal house inspections. The Town will reach out to each affected property owner a minimum of one time to discuss access.

Measurable Goal 7.3c – During Permit Years 3-5 and contingent on securing access to private properties, the Town will conduct internal house inspections of properties with potential sewer connection issues identified through smoke testing efforts. House inspections may include a plumbing inspection, observation of where the sewer exits the house, push camera inspections, and/or dye testing. At a minimum, the private properties recommended for internal house inspections under Measurable Goal 7.3a will be inspected. Additional houses will be inspected, based on the findings from the smoke testing to be conducted under Measurable Goal 7.2a. Up to a total of 15 houses will be inspected under this measurable goal.

Measurable Goal 7.3d – During Permit Years 3-5, the Town will conduct follow-up investigation of areas identified through smoke testing that did not involve internal house inspection. At a minimum, the applicable items identified under Measurable 7.3a will be investigated. Additional investigation, based on the findings from the smoke testing to be conducted under Measurable

Goal 7.2a will be conducted. Up to a total of 5 areas will receive follow-up investigation under this measurable goal.

2.7.4 Optional BMP 7.4 Enhanced Pet Waste Behavior Change Campaign

Responsible Party: DPW Administrative Operations Manager and/or Assistant Planner

This BMP is an optional BMP, and will only be considered if the Town is unable to implement and complete BMP 7.2 or 7.3 as a result of lack of funding or inability to secure access to inspect private properties. As noted in Section 1.4.3.1, both the Statewide Bacteria TMDL Addendum and Maine Healthy Beaches' 2012-2019 Summary Report of Enhanced Monitoring and Pollution Source Tracking in the New Salt Road Tributary of Goosefare Brook suggests that bacteria impairment in Goosefare Brook is a combination of several sources, including domestic animals. By enhancing the public education behavior program related to pet waste, bacteria contributions from pet waste will be reduced.

Measurable Goal 7.4a – If this BMP is initiated, the Town will enhance BMP 1.2 Outreach to Change Behavior Campaign, by improving existing pet waste stations or installing new pet waste stations within the New Salt Road Tributary subwatershed. The number of pet waste stations to be improved and/or installed will be determined based on review of existing pet waste stations and coordination with the Ocean Park Association.

SECTION 3
GENERAL REQUIREMENTS

3.1 CERTIFICATION

The MS4 General Permit requires that this SWMP be certified by either a principal executive officer or ranking elected official. This section provides the necessary certification.

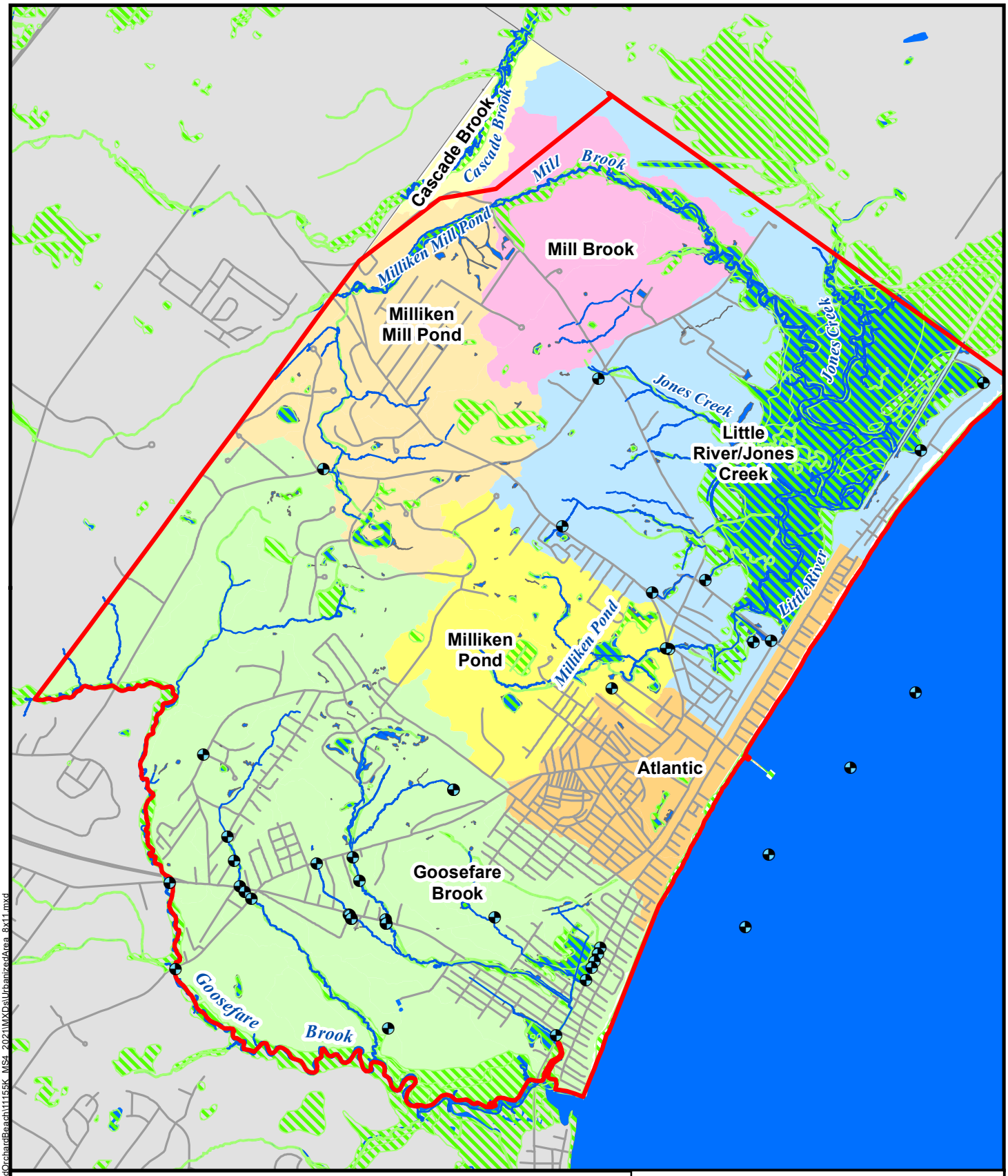
"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage 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: _____ Date: 3.29.21

Larry S. Mead

Title: Town Manager

Appendix A
Urbanized Area Map and Goosefare Brook Watershed Map



Urbanized Area Map

Old Orchard Beach, Maine

PROJ NO:	DATE:
11155K	Mar 2021

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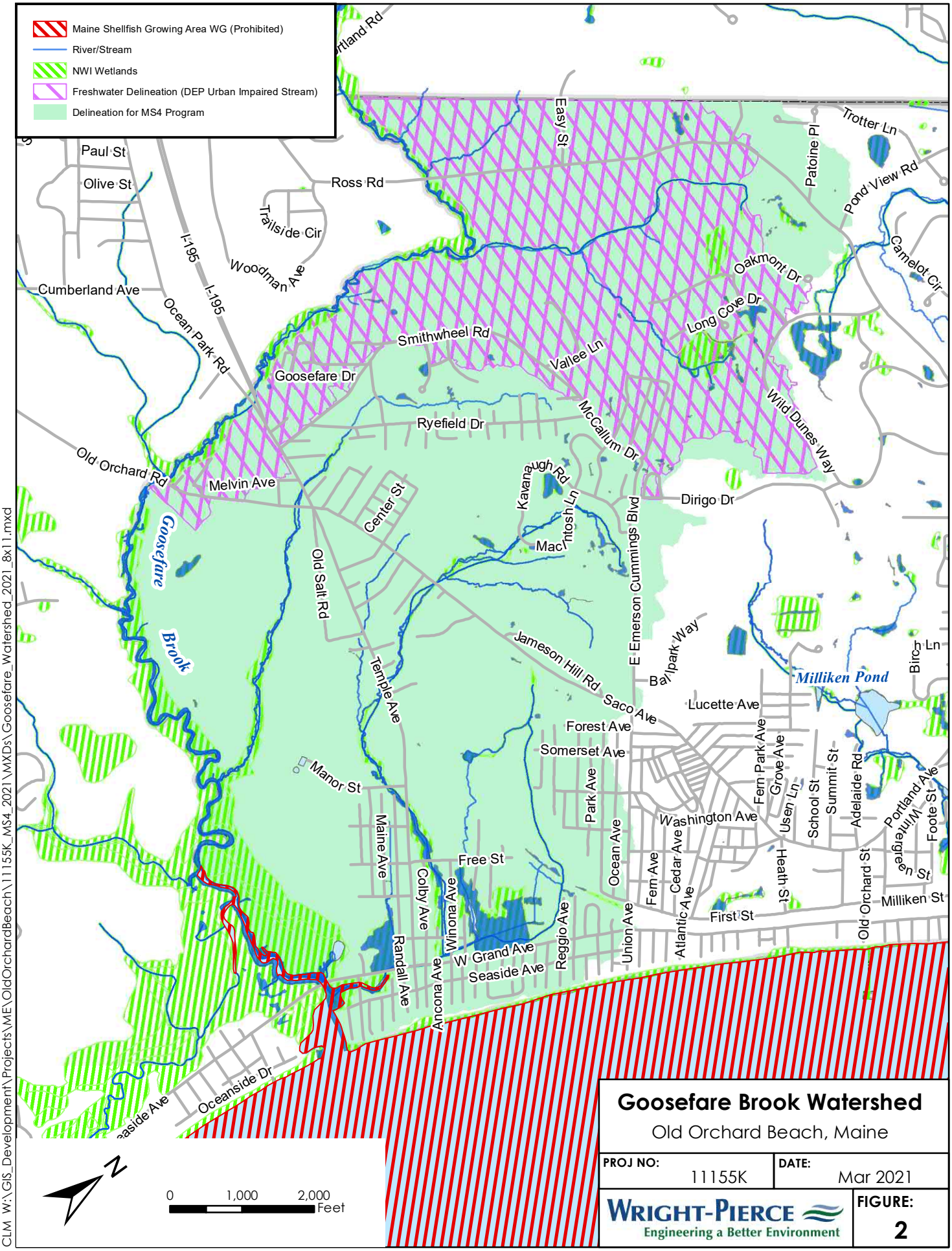
FIGURE: 1

C:\M_W\GIS_Development\Projects\ME\OldOrchardBeach\11155K_MS4_2021MXD\UrbanizedArea_8x11.mxd



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Goosefare Brook Watershed

Old Orchard Beach, Maine

PROJ NO:	DATE:
11155K	Mar 2021

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Engineering a Better Environment

FIGURE: 2

Appendix B
Notice of Intent (NOI) 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	Town of Old Orchard Beach			Permittee ID #	MER041025
Name and title of chief elected official or principal executive officer	Larry S. Mead, Town Manager				
Mailing Address	1 Portland Ave				
Town/City	Old Orchard Beach	State	ME	Zip Code	04064
Daytime Phone	(207) 934-5714	Email	lmead@oobmaine.com		
PRIMARY CONTACT PERSON FOR OVERALL STORMWATER MANAGEMENT PROGRAM (if different than PEO/CEO)					
Name and Title	Joseph Cooper, Director of Public Works				
Mailing Address	1 Portland Ave				
Town/City	Old Orchard Beach	State	ME	Zip Code	04064
Daytime Phone	(207) 934-2250	Email	jcooper@oobmaine.com		
STORMWATER MANAGEMENT PLAN (SWMP)					
Urbanized Area (sq. mi.)	7.3				

I have attached our updated SWMP with ordinances, SOPs, forms. ■

Name of streams, wetlands, or waterbodies to which the regulated small MS4 discharges (*attach additional sheets as necessary*):

Goosefare Brook and tributaries, Saco Bay, Little River / Jones Creek and tributaries, Mill Brook, Milliken Pond, Milliken Mill Pond

List of impaired waterbodies that receive stormwater from the regulated small MS4 (*attach additional sheets as necessary*):

Goosefare Brook

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	3.29.21

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	

Appendix C
Public Notice and
Summary of Public Comments Received

COURIER CLASSIFIEDS

To Place Your Ad call **282-4337** or stop by our office **6 Digital Drive, Biddeford**

22,500 Total Circulation
Reach more than 75,000 people by advertising in all 5 of our papers!

- **CARS, TRUCKS & VANS** - Pay only $20 for 8 weeks for 1 paper! $3 for each additional paper. (up to 20 words, then 15¢ for each additional word).
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- **NON-BUSINESS CLASSIFIED ADS** -$15.00 per week or only $30 for 3 weeks (up to 20 words, then 15¢ for each additional word).
- **YARD SALE ADS** - Only $15.00 per paper, per week. Only $5 a week per additional paper
- **AD DEADLINE IS 5 PM ON FRIDAYS**
- **PRE-PAYMENT IS NECESSARY FOR PLACING ALL CLASSIFIED ADS** We accept
- ***Mainely MediaLLC does not issue refunds.***

PUBLIC NOTICES

CITY OF BIDDEFORD

INDUSTRIAL PRETREATMENT PROGRAM SNC PUBLICATION

The City of Biddeford's Industrial Pretreatment Program is required under 40 CFR Part 403.8(f)(2)(vii) and 06-096 Chapter 528(9)(f)(2)(vii) to annually publish a list of industrial users in significant noncompliance. The publication requirement is in accordance with the public participation requirements of 40 CFR Part 25 in the enforcement of National Pretreatment Standards. Significant noncompliance (SNC) is defined as meeting one or more criteria listed in 06-096 Chapter 528(9)(f)(2)(vii)(A-H) and covers the prior 12-month period. This reporting period covers January 1, 2020 through December 31, 2020. The following industry was deemed to be in significant noncompliance: Banded Brewing.

PUBLIC NOTICES

Public Notice
Town of Old Orchard Beach

The Town of Old Orchard Beach, Maine 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 on or about March 31, 2021. A copy may viewed at Old Orchard Beach Town Hall and on the Public Works website: https://www.oobmaine.com/public-works

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: https://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.

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PropertyFirstLLC@outlook.com

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from Sustainable Hardscrabble Farms Forest in Arundel. Any amount delivered. Also, campfire wood.
Call 207-282-2060

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clean background check.
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$310 per cord 2 or more cords.
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1 cord minimum
Winterwood Farm
459-0278

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* NEW CONSTRUCTION *
* ALL ASPECTS *
* SANDING *
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or go to my website
Stewartconstructionme.com

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www.wright-pierce.com

March 26, 2021
W-P Project No. 11155K

Stephen Buckley
Scarborough Public Works Department
20 Washington Ave
Scarborough, ME 04074
sbuckley@scarboroughmaine.org

Subject: Old Orchard Beach MS4 Program
Interconnected MS4 Notice

Dear Stephen:

On behalf of the Town of Old Orchard Beach, we are formally notifying you that the Town intends to apply for continued coverage under the Maine Department of Environmental Protection's (DEP's) General Permit for the Discharge of Stormwater from Small Municipal Separate Storm Sewer Systems (MS4 General Permit) on or around March 31, 2021, which includes providing public notice to all regulated small MS4s into which the MS4 discharges.

As required by the MS4 General Permit, the Town of Old Orchard Beach has an Illicit Discharge Detection and Elimination (IDDE) program. If an illicit discharge event occurs, including spills of hazardous or non-hazardous substances, in or associated with your regulated MS4 that has the potential to discharge to the Town of Old Orchard Beach, including to the Town's regulated MS4, please report the incident to the Town of Old Orchard Beach Department of Public Works at (207) 934-2250. In the event of an emergency situation that you need immediate assistance from the Town of Old Orchard Beach, please call Dispatch at (207) 934-4911 to have the appropriate party dispatched.

Sincerely,
WRIGHT-PIERCE

Christine T.M. Rinehart, PE
Lead Project Engineer
christine.rinehart@wright-pierce.com

cc: Joe Cooper, Director of Public Works
Lisa Wilson, Administrative Operations Manager

WRIGHT-PIERCE
Engineering a Better Environment

11 Bowdoin Mill Island, Suite 140
Topsham, ME 04086
Phone: 207.725.8721 | Fax: 207.729.8414
www.wright-pierce.com

March 26, 2021
W-P Project No. 11155K

Joseph Laverriere, PE
Saco Public Works Department
15 Phillips Spring Road
Saco, ME 04072
jlaverriere@sacomaine.org

Subject: Old Orchard Beach MS4 Program
Interconnected MS4 Notice

Dear Joe:

On behalf of the Town of Old Orchard Beach, we are formally notifying you that the Town intends to apply for continued coverage under the Maine Department of Environmental Protection's (DEP's) General Permit for the Discharge of Stormwater from Small Municipal Separate Storm Sewer Systems (MS4 General Permit) on or around March 31, 2021, which includes providing public notice to all regulated small MS4s into which the MS4 discharges.

As required by the MS4 General Permit, the Town of Old Orchard Beach has an Illicit Discharge Detection and Elimination (IDDE) program. If an illicit discharge event occurs, including spills of hazardous or non-hazardous substances, in or associated with your regulated MS4 that has the potential to discharge to the Town of Old Orchard Beach, including to the Town's regulated MS4, please report the incident to the Town of Old Orchard Beach Department of Public Works at (207) 934-2250. In the event of an emergency situation that you need immediate assistance from the Town of Old Orchard Beach, please call Dispatch at (207) 934-4911 to have the appropriate party dispatched.

Sincerely,
WRIGHT-PIERCE

Christine T.M. Rinehart, PE
Lead Project Engineer
christine.rinehart@wright-pierce.com

cc: Joe Cooper, Director of Public Works
Lisa Wilson, Administrative Operations Manager

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Engineering a Better Environment

11 Bowdoin Mill Island, Suite 140
Topsham, ME 04086
Phone: 207.725.8721 | Fax: 207.729.8414
www.wright-pierce.com

March 26, 2021
W-P Project No. 11155K

Kerem Gungor, PE
Maine DOT Environmental Office
16 State House Station
Augusta, ME 04333
kerem.gungor@maine.gov

Subject: Old Orchard Beach MS4 Program
Interconnected MS4 Notice

Dear Kerem:

On behalf of the Town of Old Orchard Beach, we are formally notifying you that the Town intends to apply for continued coverage under the Maine Department of Environmental Protection's (DEP's) General Permit for the Discharge of Stormwater from Small Municipal Separate Storm Sewer Systems (MS4 General Permit) on or around March 31, 2021, which includes providing public notice to all regulated small MS4s into which the MS4 discharges.

As required by the MS4 General Permit, the Town of Old Orchard Beach has an Illicit Discharge Detection and Elimination (IDDE) program. If an illicit discharge event occurs, including spills of hazardous or non-hazardous substances, in or associated with your regulated MS4 that has the potential to discharge to the Town of Old Orchard Beach, including to the Town's regulated MS4, please report the incident to the Town of Old Orchard Beach Department of Public Works at (207) 934-2250. In the event of an emergency situation that you need immediate assistance from the Town of Old Orchard Beach, please call Dispatch at (207) 934-4911 to have the appropriate party dispatched.

Sincerely,
WRIGHT-PIERCE

Christine T.M. Rinehart, PE
Lead Project Engineer
christine.rinehart@wright-pierce.com

cc: Joe Cooper, Director of Public Works
Lisa Wilson, Administrative Operations Manager

Appendix D
Education & Outreach Tools, Levels of Effort, and Effectiveness Benchmarks

EDUCATION & OUTREACH TOOLS, LEVELS OF EFFORT, AND EFFECTIVENESS BENCHMARKS

Below is a list of tools with their corresponding minimum level of effort and effectiveness benchmark that will be selected from each year to implement BMP 1.1 and 1.2.

Outreach Tool	Minimum Level of Effort	Effectiveness Benchmark
Poster	10 posters/municipality	Total number of posters distributed
Flyer	1 flyer	Total number of flyers distributed
Brochure	1 brochure	Total number of brochures distributed
Rack Card	1 rack card	Total number of rack cards distributed
Newsletter Article	2 newsletter articles	Total number of newsletters distributed
Post Card	1 post card	Total number of postcards distributed
Factsheet	1 factsheet	Total number of factsheets distributed
Sign	5 signs/municipality	Total number of signs distributed
Story Walk	1 story walk	Number of QR code (or similar technology) scans from signs
Story Map	1 regional story map	Number of visitors to webpage
Stormwater Geocaching	1 regional activity (14 sites)	Number of participants per site
Augmented Reality App	1 regional activity (14 sites)	Number of app downloads Number of engagements within the app
Municipal Electronic 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 webpage(s)
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.)

Outreach Tool	Minimum Level of Effort	Effectiveness Benchmark
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)
Radio Ad	1 radio ad	Number of people reached with ad
Radio Segment	1 radio segment	Number of people reached with segment
Television Ad (broadcast or streaming)	1 television ad	Number of people reached with ad
Television News Segment (broadcast or streaming)	1 television news segment	Number of people reached with segment
Newspaper Article	1 newspaper article	Number of people reached with article
Newspaper Ad	1 newspaper ad	Number of people reached with ad
Webinar/Workshop	7 hours of training offered (multiple webinars/workshops may be offered to reach 7 hours)	Number of workshop attendees
Social Gathering	3 events	Number of interactions
Tabling	3 events	Number of interactions
Outreach partnership with local retailer	50% of industry retailers in region participating	Number of local retailers participating
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
A DEP-approved tool	Minimum level of effort will be determined based on the tool	Effectiveness benchmark will be determined based on the tool

Appendix E
Illicit Discharge and Elimination (IDDE) Plan

TOWN OF OLD ORCHARD BEACH, ME

MARCH 2021

11155K

Illicit Discharge Detection and Elimination (IDDE) Plan

WRIGHT-PIERCE
Engineering a Better Environment

OLD ORCHARD BEACH, MAINE

ILLICIT DISCHARGE DETECTION AND ELIMINATION (IDDE) PLAN

MARCH 2021

PREPARED BY:

WRIGHT-PIERCE

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TOWN OF OLD ORCHARD BEACH, MAINE

ILLICIT DISCHARGE DETECTION AND ELIMINATION (IDDE) PLAN

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ATTACHMENTS

SECTION 1
INTRODUCTION

The following Illicit Discharge Detection and Elimination (IDDE) Plan has been developed to reduce the number of illicit discharges into the municipal separate storm sewer system (MS4) and to improve water quality in local waterbodies. The development of an IDDE program, including a written IDDE Plan, is a requirement of the Town's MS4 General Permit (described below). This document replaces the following previous documents:

- Standard Operating Procedure (SOP) for Dry Weather Inspection Program (May 2009; revised May 2014)
- Standard Operating Procedure (SOP) for Detection and Elimination of Illicit Discharges to Municipal Ditches within the Goosefare Brook Watershed (June 2013)
- Enforcement of Illicit Discharge Narrative (June 2015)
- Illicit Discharge Detection and Elimination (IDDE) Standard Operating Procedure (SOP) for the Town of Old Orchard Beach (March 2016, revised May 2017)

This IDDE Plan will be updated if any of the following occur:

- a new permit is issued which changes the requirements described in this IDDE Plan document,
- the Town of Old Orchard Beach identifies that this IDDE Plan is not effective, or
- municipal operations change which need to be reflected in this IDDE Plan.

1.1 OVERVIEW OF REGULATORY PROGRAM

The Town of Old Orchard Beach holds a General Permit for the Discharge of Stormwater from Small Municipal Separate Storm Sewer Systems, referred to as the MS4 General Permit issued by the Maine Department of Environmental Protection (DEP). The MS4 General Permit authorizes the direct discharge of stormwater from or associated with the Town's storm drain system to another MS4 or waters of the state, other than groundwater. The MS4 General Permit was originally issued in 2003, and is reissued every five years, unless it is administratively continued. The most current permit was issued on October 15, 2020 with an effective date of July 1, 2022.

The Maine DEP holds delegated authority under the Federal National Pollutant Discharge Elimination System (NPDES) permit program to administer the MS4 General Permit in Maine.

The MS4 General Permit requires permittees to address six minimum control measures (MCMs) listed below:

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

This IDDE Plan fulfills the MCM 3 IDDE requirements specified in Part IV.C.3.b of the 2022 MS4 General Permit.

1.2 COMMON TYPES OF ILLICIT DISCHARGES

The 2022 MS4 General Permit defines an illicit discharge as any discharge to a regulated MS4 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.

Illicit discharges can enter the storm drain system through direct or indirect connections. Direct connections are piped connections to a storm drain, and can include cross-connections or straight-pipes that discharge sewage or non-stormwater flows to the storm drain system. Indirect connections are flows that enter the storm drain system through inlets or infiltration through joints in the storm drain pipe, and can include spills in the area surrounding a catch basin or inlet that enter the storm drain, intentional dumping into a catch basin or inlet, or groundwater seepage contaminated with diluted sanitary sewage from leaking or damaged sanitary sewer systems.

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 CWP manual are described below along with examples of the types of discharges that may be encountered:

1. **Transitory Illicit Discharges** are typically one-time events resulting from spills, breaks, dumping, or accidents. Examples include:
    - paint equipment rinse water
    - carpet cleaning water
    - sediment from construction sites
    - wash water from vehicles (other than individual residential car washing by an owner)
    - oil or gasoline from a vehicle crash or other source
    - yard waste
    - 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 service 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 transitory illicit discharges, 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** continue without changing and are typically the result of a direct connection from a sanitary sewer or service, 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, physical defects in a sanitary sewer system, or malfunctioning subsurface wastewater disposal system (SWDS).

1.3 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 Plan is provided in this subsection, and the remaining sections of this document describe how the Town of Old Orchard Beach is implementing each component.

- Authority and Statement of IDDE Responsibilities – 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 storm sewer system and implement appropriate enforcement procedures and actions. Section 2 of this document describes how the Town's Illicit Discharge Ordinance is implemented and the responsible parties for the IDDE program.

- Available Resources – The Town has various resources available to aid in the detection and elimination of illicit discharges, including mapping, equipment to trace illicit discharges, and emergency response. Section 3 of this document describes the resources available to the Town.

- Identification of Priority Areas – The 2022 MS4 General Permit requires the Town have "procedures for prioritizing watersheds". The Town's priority area is Goosefare Brook watershed, which is described in Section 4 of this document.

- Procedures to Detect Illicit Discharges – 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 requires the monitoring be conducted on outfalls that are flowing during dry weather. Section 5 of this document describes the Town's detection and inspection procedures.

- Wet Weather Assessment – The Town must complete a desktop wet weather assessment prior to the expiration of the 2022 MS4 General Permit for the potential for illicit discharges during wet weather events. Section 6 of this document describes the required wet weather assessment.

- 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 7 and 8 of this document describe how the Town investigates potential discharges to determine their sources and removes illicit discharges once the source is discovered.

- Interconnections with other MS4s – The Town's regulated MS4 is interconnected with other regulated MS4s. Cooperation with and notification to other MS4s is described in Section 9.

- Documentation and Record Retention – The Town must develop procedures for documenting actions and evaluating impacts on the storm sewer system after the removal. Section 10 describes how the Town tracks illicit discharges and Section 11 of this document describes the record retention requirements of the MS4 General Permit.

- References – References are provided in Section 12 of this document.

SECTION 2
AUTHORITY AND STATEMENT OF IDDE RESPONSIBILITIES

2.1 AUTHORITY TO PROHIBIT NON-STORMWATER DISCHARGES

As required by the MS4 General Permit, the Town of Old Orchard Beach adopted Chapter 58, Article V. Illicit Discharge Ordinance on December 5, 2006. The purpose of the Ordinance is to provide for the health, safety, and general welfare to the citizens of the Town of Old Orchard Beach through the regulation of non-stormwater discharges to the storm drainage system. The Ordinance prohibits the discharge of non-stormwater into the storm sewer system other than allowable non-stormwater discharges and provides for implementation of appropriate enforcement procedures and actions. The Illicit Discharge Ordinance is available at: https://library.municode.com/me/old_orchard_beach/codes/code_of_ordinances?nodeId=PTIICOOR_CH58UT_ARTVILDIOR

The following discharges are considered allowable non-stormwater discharges per the Illicit Discharge Ordinance:

- water line flushing or other potable water sources,
- landscape irrigation or lawn watering,
- diverted stream flows,
- rising ground water,
- ground water infiltration to storm drains,
- uncontaminated pumped ground water,
- foundation or footing drains (not including active groundwater dewatering systems),
- crawl space pumps,
- air conditioning condensation,
- springs,
- noncommercial washing of vehicles,
- natural riparian habitat or wet-land flows,
- swimming pools (if dechlorinated-typically less than one PPM chlorine),
- fire-fighting activities,

- and any other water source not containing pollutants.

Additionally, dye testing is an allowable discharge; however, verbal notification to the Department of Public Works is required prior to the time of the test. Refer to Section 58-311 of the Illicit Discharge Ordinance for additional discharge prohibitions. The Director of Public Works is the authorized enforcement authority who is responsible to administer, implement, and enforce the provisions of the Illicit Discharge Ordinance; however, enforcement is accomplished with the assistance of the Code Enforcement Officer.

Water line and hydrant flushing are both identified as non-stormwater discharges; however, as outlined in the Maine DEP's Issue Profile: Drinking Water System Discharges to Regulated Small Municipal Separate Storm Sewer Systems (MS4s) dated November 18, 2016, the Maine DEP has determined certain discharges from a drinking water system have the potential to contribute non-attainment of water quality standards. The issue profile sets forth both the requirements to meet Maine's ambient aquatic life water quality criteria and acute exposure for both fresh and marine waters. Since discharges from a drinking water system through a MS4 is relatively short term, the Maine DEP issue profile indicates the acute criteria should be used for determinations of non-attainment; however, as a regulatory matter, the Maine DEP has established an analytical reporting limit for total residual chlorine concentration of 50 micrograms/liter (ug/L), which is equal to 0.05 mg/L.

The Maine Water Company maintains the potable water system in the Town of Old Orchard Beach, and provides an annual report to the Town describing best management practices used during hydrant flushing and testing results.

2.1.1 IDDE Responsible Parties

The Department of Public Works is the lead municipal department responsible for implementing, evaluating, and updating the IDDE Plan with support from the Code Enforcement Officer, Public Safety Department Heads, and consultants. Points of Contact for the IDDE Plan are listed in Table 2-1 and general responsibilities are as follows:

- Public Works Staff: Tracks potential and suspected illicit discharges; assists with outfall inspections, and conducts outfall maintenance, catch basin inspections, and illicit discharge investigations.
- Code Enforcement Officer: Assists with enforcement of the Illicit Discharge Ordinance.
- Public Safety Department Heads (Fire and Police Chiefs): Respond to spills of gasoline and other automotive fluids resulting from vehicle accidents.
- Consultant (CAI Technologies): Assists with mapping updates and management of ArcGIS Online.
- Consultant (Wright-Pierce): Assists with IDDE program development and implementation.

The coordination and data transfer between responsible parties is accomplished through email, phone, and Department Head meetings. Inspection and mapping updates are documented using ArcGIS Online, which are viewable in the Town's ArcGIS Online Organization.

TABLE 2-1
IDDE PLAN POINTS OF CONTACTS

Name	Position	Contact
Joe Cooper (Primary Contact)	DPW Director	Office: (207) 934-2250 Cell: (207) 929-0090 jcooper@oobmaine.com
Lisa Wilson (Secondary Contact)	DPW Administrative Operations Manager	Office: (207) 934-2250 lscruton-wilson@oobmaine.com
Dennis Poisson	DPW Foreman	Office: (207) 934-2250 Cell: (207) 229-5517
Dispatch (24/7)		(207) 934-4911
Jeffrey Hinderliter	Acting Code Enforcement Officer	Office: (207) 937-5615 jhinderliter@oobmaine.com
Fred LaMontagne,	Fire Chief	Office: (207) 934-7790 x 1201 flamontagne@oobmaine.com
Dana Kelley	Police Chief	Office: (207) 934-4911 dkelley@oobmaine.com
Aaron Weston	CAI Technologies	Office: (603) 761-6241 aweston@cai-tech.com
Christine Rinehart	Wright-Pierce	Office: (207) 798-2784 christine.rinehart@wright-pierce.com

SECTION 3
AVAILABLE RESOURCES

3.1 MAPPING

The Town of Old Orchard Beach has a GIS database that can be accessed using a hand-held device as well as a desktop computer to aid during infrastructure inspections and investigation. The GIS database includes both the storm and sanitary sewer systems. Updates to the Town's stormwater geodatabase are continually made, as needed, with updates viewable within the Town's ArcGIS Online Organization (separate from the public online viewer). A Stormwater Infrastructure map using layers from the Town's GIS stormwater geodatabase is included as Figure 1 in Attachment 1.

3.2 EQUIPMENT TO TRACE ILLICIT DISCHARGES

The Town of Old Orchard Beach Department of Public Works shares the Tri-Community Camera closed-circuit television (CCTV) truck with the cities of Biddeford and Saco. The CCTV camera truck rotates between the three communities, and the Town of Old Orchard Beach has access to it every 10 weeks for a two-week period. The Department of Public Works has access to a push camera and has the ability to conduct dye testing; however, smoke testing is contracted out.

3.3 EMERGENCY RESPONSE

In the event of an illicit discharge that results in an emergency or one that is beyond the control and capabilities of the Department of Public Works, the Town would hire an external contractor. Below is the primary contractor available for support:

- Clean Harbors (800) 645-8265 [24-hour Emergency Response]

SECTION 4
IDENTIFICATION OF PRIORITY AREA

The 2022 MS4 General Permit requires the IDDE program to have procedures for prioritizing watersheds, which can be used to implement a prioritized dry weather outfall inspection program and address illicit discharges.

The Town identified the Goosefare Brook watershed as its priority watershed for the IDDE program. The prioritization took into account the impairment status of the waterbody as well as the land area of the watershed and the percentage of outfalls within the watershed. In general, the Town of Old Orchard Beach focuses dry weather outfall inspections in the priority watershed. Additionally, the Town may use the prioritization for illicit discharge investigations. In the event there were insufficient resources to investigate multiple potential illicit discharges simultaneously, investigation of a potential illicit discharge in the priority watershed would be conducted first.

The Goosefare Brook is listed as an Urban Impaired Stream in Maine DEP's Chapter 502: Direct Watershed of Lakes Most at Risk from New Development and Urban Impaired Streams. Additionally, Goosefare Brook is impaired for heavy metals, bacteria, benthic-macroinvertebrates, and stream habitat assessments, and has EPA-approved Total Maximum Daily Loads (TMDL) Reports for metals (Goosefare Brook TMDL, 2003), bacteria (Maine Statewide Bacteria TMDL Addendum, 2014), and impervious cover (Maine Impervious Cover TMDL, 2012). A Watershed-based Management Plan was developed for Goosefare Brook watershed in 2016, and Maine Healthy Beaches has been conducting enhanced monitoring and pollution source tracking within the Goosefare Brook watershed for several years. More information on the water quality and discharges to Goosefare Brook, including work being done within the watershed is described in Section 1.4 of the Town's SWMP.

The Goosefare Brook watershed encompasses more than a third of the area of the Town (based on the Town's delineation of the watershed, which includes both the freshwater and tidal portions of the watershed), and has the highest percentage of publicly-owned outfalls within the watershed than any other watershed.

SECTION 5
PROCEDURES TO DETECT ILLICIT DISCHARGES

The Town of Old Orchard Beach will rely on various methods for the detection of illicit discharges including inspections, citizen call-ins, and Town Department reported incidents. The following subsections provide a summary of the various types of detection methods that will be used.

5.1 DRY WEATHER OUTFALL INSPECTIONS

All MS4 outfalls located within the Urbanized Area will be inspected at least once per permit cycle. Dry weather inspections are a visual inspection of the outfall location.

The Town of Old Orchard Beach has transitioned to digital collection of inspection information. Dry weather outfall inspection will be completed using the ArcGIS Collector App on a hand-held device. A list of the data fields and domains for these inspections is included in Attachment 2. Typically routine inspections are completed by a consultant, and follow-up and opportunistic inspections are completed by Public Works staff. All consultants or staff conducting inspections will be trained on inspections, documentation, and indicators to observe.

The following guidelines are used during dry weather inspections:

- Inspections are performed during periods of dry weather. **Dry weather** is defined 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 hour window for rain or melting, and it is not flowing, the inspection can be considered a dry weather inspection.)
- Inspections are performed in a safe and efficient manner.
- Inspections are typically performed during periods when vegetation is minimal (in spring before leave-out or in autumn after leaves have fallen), such that outfalls can be easily located; however, inspections can be conducted outside of this timeframe.
- Observations include the following at a minimum:
    - Sheen
    - Discoloration

    - Foaming
    - Sanitary Sewage
    - Excessive Algal Growth
    - Odor
- Photographs are typically taken at the time of inspection for documentation purposes.
- Inspections are performed where the Town has safe and legal access to the structure to be inspected.
- Director of Public Works is informed, if dry weather discharges are observed requiring further inspection or investigations, or if maintenance issues are identified requiring the generation of a work order.

Some indicators may look illicit, but may be a result of a natural source. For example, some sheens occur naturally by in-stream processes when an iron bacteria forms a sheet-like film. Organic sheens will break apart when disturbed. Synthetic oil sheens will swirl when disturbed. If the sheen swirls and reforms when disturbed, then the sheen is from an oil source. Another example is foam. Some foams are naturally formed when the surface tension of water is reduced; natural foam breaks apart easily when disturbed. If the foam has a fragrant odor and does not break apart easily when disturbed, it may indicate the presence of detergents or wash water in the flow.

Inaccessible outfalls or outfalls that do not have safe or legal access will be inspected at the first accessible upstream location within the storm sewer system (e.g. catch basin, manhole, pipe). During the inspection, the immediate area surrounding the outfall will be observed, and photographs of the outfall and anything noteworthy will be taken.

5.1.1 Initial Investigation

When dry weather flows are observed at an outfall, the flow is considered non-stormwater related. This flow could potentially be an illicit discharge, but it may also be a flow generated from an allowable non-stormwater discharge, groundwater, or water form a natural resource (see Section 5.2 for additional considerations). Potential, suspected, or detected illicit discharges will be recorded using the Illicit Discharge Incident Form included in Attachment 3 and logged on the Illicit Discharge Tracking Sheet included in Attachment 4.

If indicators of a potential illicit discharge are observed during an inspection, the following steps will be taken as soon as practicable:

- Look for a potential source in the surrounding area of the discharge.
- Gather as much information on the potential illicit discharge as possible, such as: date, weather (recent rainfall/snowmelt), physical location, description of discharge location, indicators of illicit discharge (odor, appearance, floatables, residual evidence, etc.).
- Report potential illicit discharge to the Department of Public Works Administrative Operations Manager or Director.
- Clean up and remove obvious pollution, such as excess sediment, organic debris, sewage or residual products, petroleum/chemical products, or trash/litter as soon as practical to prevent further discharge or exposure of such pollutants.
- Follow up detection with investigation using various inspection techniques, such as visual inspections or dye testing to determine the source of the discharge (see Section 7 Procedures to Investigate Illicit Discharges).
- Remove the illicit discharge through enforcement of Chapter 58, Article V. Illicit Discharge Ordinance, once the source is identified (see Section 8 Procedures to Remove Illicit Discharges).

5.2 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.

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/or 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 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 5 of this IDDE Plan.

For dry weather flows from outfalls that are suspected of being from an allowable non-stormwater discharge, groundwater, or a natural resource, the cause of the flow should be evaluated based on considerations, such as: the time of year (i.e. is it related to high groundwater flows), absence or presence of other indicators (i.e. odor, color, stains, sewage/toilet paper, oil sheen, suds), activities in the surrounding areas that could be contributing the flow (i.e. outdoor car wash, someone draining their pool, hydrant flushing), and presence of contributing flow from a natural resource. The potential cause for the flow should be noted during the inspection. If as-built drawings are available, they should be reviewed to see if they provide information on the potential cause of the flow (i.e. underdrain or foundation drain connections, etc.).

5.3 CATCH BASIN INSPECTIONS

As part of the catch basin inspections and cleaning required under MCM 6, Public Works staff access catch basins for evidence of an illicit discharge and note the presence or evidence of odor, pet waste, foam, sewage, discoloration, algal growth, oil sheen, etc. If Public Works staff observes evidence of an illicit discharge, the evidence is documented as part of the inspection. Catch basin inspections are completed in the field using the ArcGIS Collector App. Information collected during the inspection is outlined in Attachment 2.

5.4 CITIZEN CALL-IN AND AFTER HOUR CALLS

The public can report potential, suspected, or detected illicit discharges to the Department of Public Work by calling the Department of Public Works main number at (207) 934-2250 or by visiting the Department of Public Works office during regular business hours. After hours, when calling the Department of Public Works, callers are directed to leave a message or call Dispatch at (207) 934-4911, for emergencies. Dispatch will notify the appropriate party to respond (Public Works, Fire, and/or Police). Potential, suspected, or detected illicit discharges received from the public will be recorded, tracked, and investigated using the Illicit Discharge Incident Form in Attachment 3 and logged on the Illicit Discharge Tracking Sheet in Attachment 4.

5.5 TOWN DEPARTMENT REPORTS

Department Heads, including Public Safety (Fire/Police), Code Enforcement, Planning, Wastewater, Recreation, and Town Manager have been notified to report any potential, suspected, or detected illicit discharges observed to the Department of Public Works by calling the information in or completing an Illicit Discharge Incident Form (in Attachment 3). Town Department reports will be logged by the Department of Public Works on the Illicit Discharge Tracking Sheet (in Attachment 4), and will be investigated by the Department of Public Works, as needed.

The two primary sources of illicit discharge reports from Town Departments, other than Public Works, are likely to come from Fire/Police and Code Enforcement. The most likely type of potential, suspected, or detected illicit discharges reported by the Fire/Police Departments are spills of gasoline and other automotive fluids, such as diesel and oil, resulting from vehicle accidents. When the Fire Department responds to an accident, granular absorbent material, booms, and pads are deployed to clean up a spill to limit the impact, if any, to the storm sewer system.

Code Enforcement may observe or be alerted to various potential, suspected, or detected illicit discharges, including, but not limited to,

- construction site dewatering,
- track-out from constructions sites, and
- pool water discharges.

Erosion and sediment control on construction sites greater than or equal to an acre are inspected and addressed through the construction site inspection program (MCM 4); however, severe construction site dewatering or track-out issues discharging to the Town's storm sewer system and observed by Code Enforcement Officer at smaller sites (less than an acre) will be reported to the Department of Public Works.

Pool discharges that are observed discharging to the street or to the Town's storm sewer system will be reported to the Department of Public Works who will respond onsite. If personnel can smell chlorine in the pool water or if chlorine is detected when using test strips, the property owner

will not be allowed to discharge the pool water to the Town's storm sewer system. If the pool discharge is determined to be non-detect for chlorine and discharges are not causing erosion, the discharge will be considered allowable. If dechlorinated pool water is discharged directly to a municipal catch basin, the catch basin must have a sediment level less than 50 percent of the sump volume or be cleaned prior to receiving the non-stormwater discharge.

SECTION 6
WET WEATHER ASSESSMENT

The Town will conduct a desktop wet weather analysis intended to assess the potential for illicit discharges during wet weather events, including areas with increased interaction between the storm sewer and sanitary sewer as well as septic systems as a result of increased flows and high water tables. The wet weather analysis is also intended to prioritize future wet weather monitoring. The 2022 MS4 General Permit does not define a "wet weather event"; however, it is assumed a wet weather event is a storm event of sufficient depth or intensity to produce stormwater discharge from the storm sewer system. To identify catchments with a higher potential for wet-weather induced illicit discharges, the Town will utilize data from existing sources, including (but not limited to):

- Comprehensive Drainage Study for the Town of Old Orchard Beach, Maine (Wright-Pierce, draft January 2018).
- 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.
- Municipally-owned dog parks.
- 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.
    - A shellfish bed; and/or
    - Drinking water supply.

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

On or before the expiration of the 2022 MS4 General Permit, the Town will identify outfalls using the assessment and include them in an attachment to this IDDE Plan. The IDDE Plan 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 Plan prior to the expiration of the 2022 MS4 General Permit, the Town will implement the wet weather monitoring upon completion of the update.

SECTION 7
PROCEDURES TO INVESTIGATE ILLICIT DISCHARGES

Source tracking will be implemented when the source of a suspected or detected illicit discharge cannot be determined from the inspection and initial investigation. Tracing will involve systematic inspections starting at the initial detection location and gradually working upstream within the storm sewer system looking for indicators of the discharge until a potential source is identified or no further evidence is found. Various inspection techniques will be used depending on the type of discharge and whether a potential source has been identified. The primary tracing technique used will be visual inspections (described in Section 7.1.1). If the source of the suspected illicit discharge cannot be identified by visual inspections, the outfall will be coded as follow-up required and the Town will assess further investigation techniques as noted in 7.1.2 and 7.1.3.

7.1 TRACING TECHNIQUES

7.1.1 Visual Inspections

Visual inspections will be performed starting at the initial detection location and working "upstream" within the storm sewer system to the first upstream drain manhole or catch basin or further up the municipal roadside ditch, if the outfall is a ditch outfall. Staff will inspect inverts and/or sumps of drain manholes and catch basins or the ditch for indicators that could lead to the source of the discharge such as flow, staining or deposits, oil sheen, scum, foam, odors, etc. Staff will continue to move to the next upstream manhole or catch basin or further up the municipal roadside ditch until a potential source is identified or no further evidence of an illicit discharge is observed. Junction lines entering the storm sewer system at manholes are noted and confirmed on the stormwater map. Depending on the circumstances, including observation of flow or other indicators coming from the junction lines, these lines may also be inspected.

7.1.2 Dye Testing, Smoke Testing, and CCTV Inspections

Dye testing, smoke testing, and CCTV inspection of the storm drain system and laterals will be used to isolate, trace, and locate illicit discharges and connections within the storm drain system. Dye testing is particularly effective in determining direct connection of sanitary service to the

storm drain line; however, they rely on being able to obtain permission to access private property. These techniques will used individually or in combination, depending on the circumstance. Refer to Section 3 Available Resources for additional information on equipment available to the Town for these tracing techniques.

7.1.3 Sandbagging/Damming

Sandbagging/damming of the storm sewer system may be used to determine if discharges are intermittent. Sandbags would be placed and secured at strategic locations within the system to help isolate the source of the discharge by acting as dams trapping dry weather discharges. When placed at junctions, sandbags/dams can help rule out branches of the system and help narrow down the source. Since sandbagging/damming could result in blockage of the stormwater collection system, sandbagging would only be conducted during forecasted dry weather and left in place for a maximum of 48 hours.

SECTION 8
PROCEDURES TO REMOVE ILLICIT DISCHARGES

Once the source of an illicit discharge has been identified, the illicit discharge will be reported to the Code Enforcement Officer, who in coordination with the Director of Public Works will initiate the removal process. The Department of Public Works will provide technical information to the Code Enforcement Officer, including any suggestions on how to remediate the illicit discharge, including possible corrections. The removal of the illicit discharge will be accomplished through the enforcement of the Town's Illicit Discharge Ordinance (Chapter 58 Utilities, Article V. Illicit Discharge Ordinance, §§58-306 - 58-317), which is available at: https://library.municode.com/me/old_orchard_beach/codes/code_of_ordinances?nodeId=PTIICOOR_CH58UT_ARTVILDIOR .

As part of the removal process, the Code Enforcement Officer and/or the Director of Public Works will determine who is financially responsible for removal of the illicit discharge (i.e. municipality, private property owner, or exempt party).

- 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 as described below. No repairs or corrections will be made on private property without the direction of the appropriate municipal authority (Code Enforcement Officer and/or Director of Public Works).
- If an exempt party is responsible, the exempt party will be notified. An example of exempt facilities includes industrial facilities that hold a Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activity.
- If the illicit discharge is to the storm drain system located in the Urban Compact Area, the removal of the illicit discharge will be the responsibility of the Town. If an illicit discharge is discovered during a MaineDOT capital improvement project within the Urban Compact Area, the MaineDOT will coordinate with the Town to eliminate the illicit connection as soon as possible.

In the case of an illicit connection, cross connection, or failed connection at a building, the Code Enforcement Officer will first attempt to call the property owner, and if uncooperative or unresponsive, the Code Enforcement Officer will send a notice to the property owner via return receipt requesting that the property owner respond with a solution within 30 days. The Code Enforcement Officer than works with the property owner on any required permitting and will inspect the progress of work. Additional enforcement measures are described in Section 58-316 of the Illicit Discharge Ordinance.

All illicit discharges 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. Once the removal process is completed, a follow-up inspection will be conducted to confirm that the illicit discharge has been eliminated. Following the removal of an illicit discharge, the IDDE Plan will be evaluated to determine if techniques implemented were efficient and effective.

It should be noted that the Illicit Discharge Ordinance (Section 58-312) allows the authorized enforcement authority to suspend a person's ability to discharge to the MS4 due to emergency situations (an actual or threatened discharge which presents or may present imminent and substantial danger), detection of illicit discharge, or reinstatement of access without prior approval.

SECTION 9
INTERCONNECTIONS WITH OTHER MS4S

9.1 IDENTIFICATION OF INTERCONNECTIONS

The Town has identified areas where the Town of Old Orchard Beach's MS4 discharges to another regulated MS4 as shown on Figure 2 MS4 Interconnections in Attachment 1 and described below:

- A small area of ditching along Portland Avenue in Old Orchard Beach discharges to Scarborough's ditch system.
- A small area of ditching on Cascade Road (Route 98) discharges to the ditch system in Saco. Even though it is located outside of Saco's Urban Compact Area; maintenance of Cascade Road (Route 98) was turned over from MaineDOT to Saco several years ago.
- There are a series of catch basins on Ocean Park Road (Route 5) that discharge to a catch basin located at the I-195 merge with Route 5 (just across the Old Orchard Beach town line) owned and maintained by MaineDOT.

The Town of Old Orchard Beach has reviewed incoming contributions to its storm sewer system, and does not have any direct interconnections with the Town of Scarborough, the City of Saco, and the Maine Department of Transportation (MaineDOT) where flow from these MS4s would flow directly into the Town of Old Orchard Beach's MS4.

MaineDOT owns drainage structures located on State Aid Roads within the Urban Compact Area; however the Town is responsible for the maintenance of these structures (except for two catch basins located at the I-195 merge with Route 5: one is the interconnection described above and one is a catch basin with no incoming connection, just an outlet; these two catch basins are maintained by the MaineDOT). The State Aid Roads located within the boundaries of the Urban Compact Area include: Cascade Road, Portland Avenue, East Grand Avenue, West Grand Avenue, Union Avenue, Ocean Park Road, Old Orchard Road, Old Orchard Street, Saco Avenue, and Temple Avenue. Refer to Figure 3 Urban Compact Area Roads in Attachment 1.

9.2 COOPERATION WITH OTHER MS4S

Since the Town of Old Orchard 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 Old Orchard Beach's infrastructure. The MS4 contacts with which Old Orchard has interconnections are listed in the table below.

Entity	Contact	Email	Phone
Town of Scarborough	Stephen Buckley	sbuckley@scarboroughmaine.org	(207) 730-4407
City of Saco	Joseph Laverriere	jlaverriere@sacomaine.org	(207) 284-6641
	Saco Police Dispatch	Not applicable	(207) 284-4535
Maine Department of Transportation	Kerem Gungor	Kerem.gungor@maine.gov	(207) 592-3489

If an illicit discharge is identified that has the potential to enter the Town of Scarborough's or City of Saco's MS4 from the Town of Old Orchard Beach, notification will be made first to the Old Orchard Beach Department of Public Works Administrative Operations Manager or Director who will then notify the appropriate entity. If there is an illicit discharge discovered during routine maintenance and/or inspection of catch basins or storm drains located in the Urban Compact Area (refer to Figure 3 in Attachment 1) notification to the MaineDOT is not required; however, if there is potential for a detected illicit discharge to enter MaineDOT's regulated MS4 via an interconnection, MaineDOT should be notified as described above.

Notification letters to interconnected MS4s required as part obtaining coverage under the 2022 MS4 General Permit are included in Appendix C of the Stormwater Management Plan.

SECTION 10
PROCEDURES TO DOCUMENT ILLICIT DISCHARGES

Tracking of illicit discharges will be used to document that potential or confirmed illicit discharges are investigated and corrected as well as identify maintenance issues for the MS4 and to help better understand the origins of illicit discharges. Tracking will also be used for annual reporting purposes. The following information will be summarized on the Illicit Discharge Tracking Sheet (an Excel spreadsheet), which is maintained at the Department of Public Works office (refer to Attachment 4). The tracking sheet captures the following information:

- Date of Incident/Date Reported
- Report Initiated By (phone, drop-in, maintenance, inspections, etc.)
- Location of Discharge (outfall number, closest street, nearby landmark, etc.)
- Description of Discharge (dumping, wash water, suds, oil/solvents/chemicals, sewage, etc.)
- Actions to be Taken (who, what where, when, and how – what should be done)
- Description of Resolution (outcome of actions taken and necessary follow up – what was done)
- Date Resolved

SECTION 11
RECORDS RETENTION

The Department of Public Works will retain paper and/or electronic files of inspections and investigations for a minimum of three years following the expiration of the MS4 General Permit or longer if requested by the Maine DEP or the U.S. Environmental Protection Agency.

Documentation of illicit or potential illicit discharges will include, as applicable:

- initial and follow-up inspection information,
- illicit discharge incident tracking sheet,
- laboratory reports,
- repairs, corrections, and any other actions required, and
- correspondence with exempt parties or private property owners, including any Notice of Violations and penalties issued.

SECTION 12
REFERENCES

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)

Cape Elizabeth, Town of, 2021. *Draft Illicit Discharge Detection and Elimination Plan*.

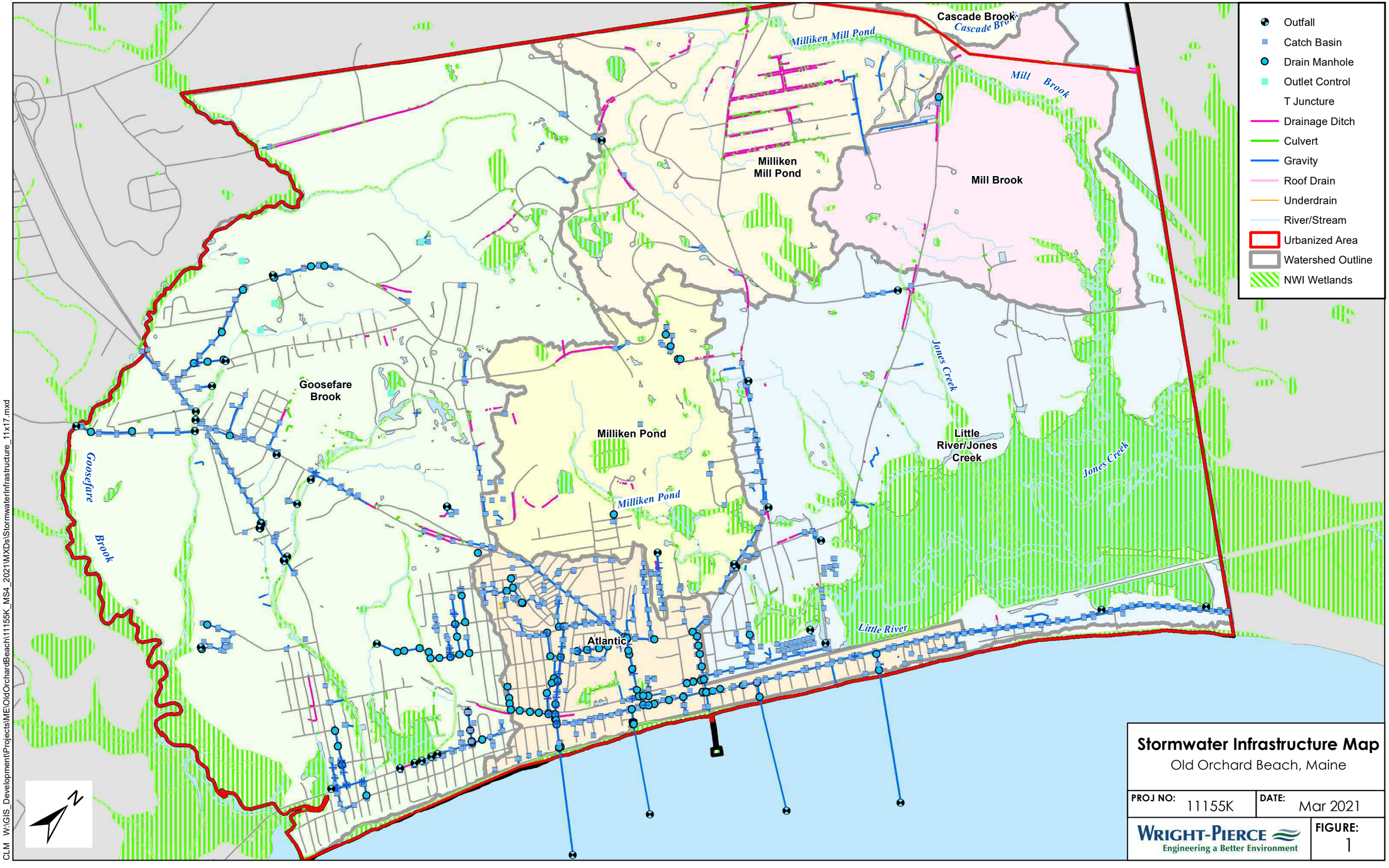
CWP and Robert Pitt, 2011 *Illicit Discharge Detection and Tracking Guide*. Available at: https://www.riverkeeper.org/wp-content/uploads/2015/03/Center-for-Watershed-Protection_Illicit-Discharge-Tracking-Guide-short.pdf

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

State of Maine Department of Environmental Protection, Bureau of Land and Water Quality, 2020. *General Permit for the Discharge of Stormwater from Small Municipal Separate Storm Sewer Systems (MS4), MER041000*.
Available at: https://www.maine.gov/dep/water/wd/ms4/2022-Municipal-MS4-GP.pdf

USEPA, 2012. *New England Bacterial Source Tracking Protocol*. Available at: https://www3.epa.gov/region1/npdes/stormwater/ma/2014AppendixI.pdf

Attachment 1
Figures



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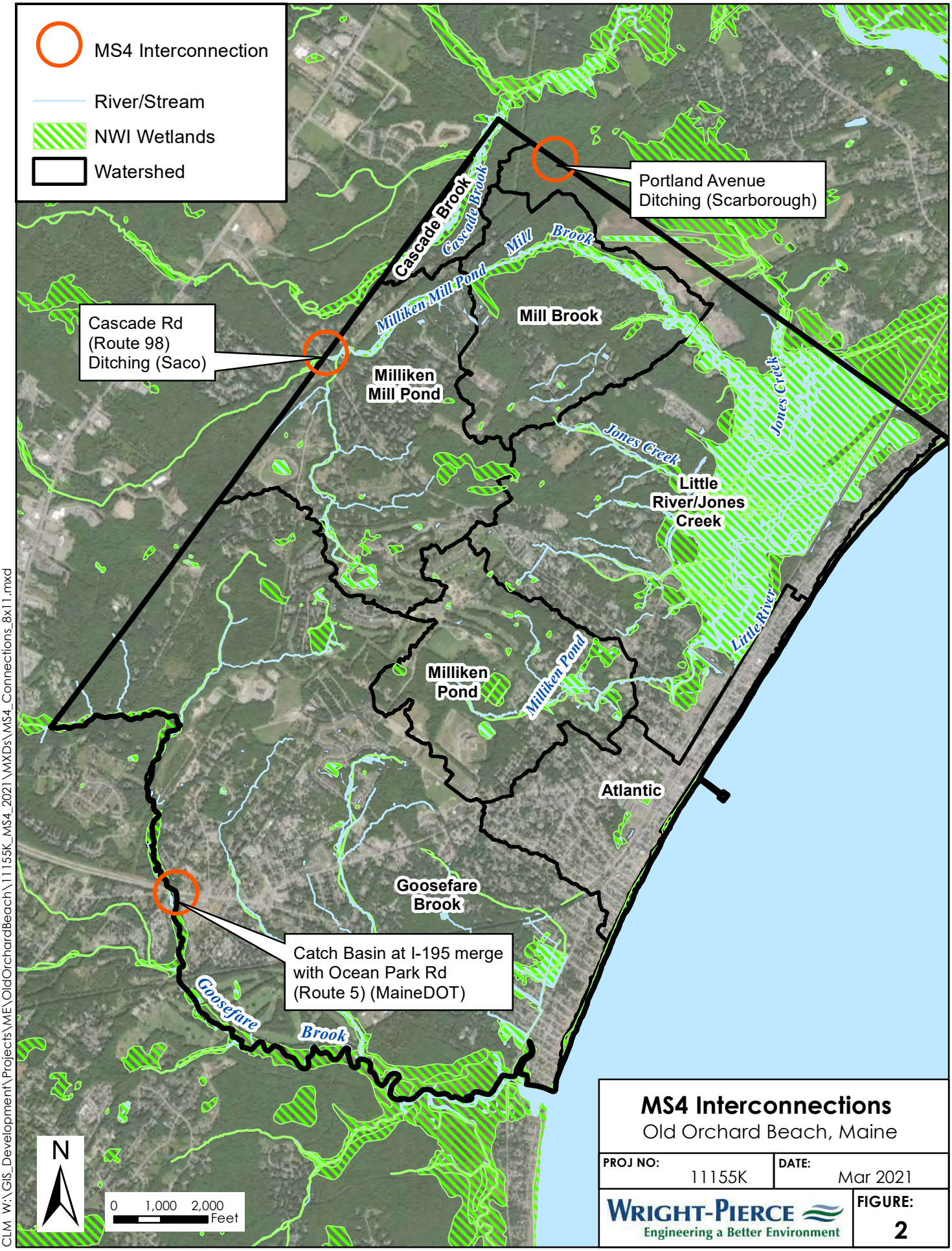
Stormwater Infrastructure Map

Old Orchard Beach, Maine

PROJ NO:	DATE:	FIGURE:
11155K	Mar 2021	1

WRIGHT-PIERCE
Engineering a Better Environment



MS4 Interconnections
Old Orchard Beach, Maine

PROJ NO:	DATE:	FIGURE:
11155K	Mar 2021	2

WRIGHT-PIERCE
Engineering a Better Environment

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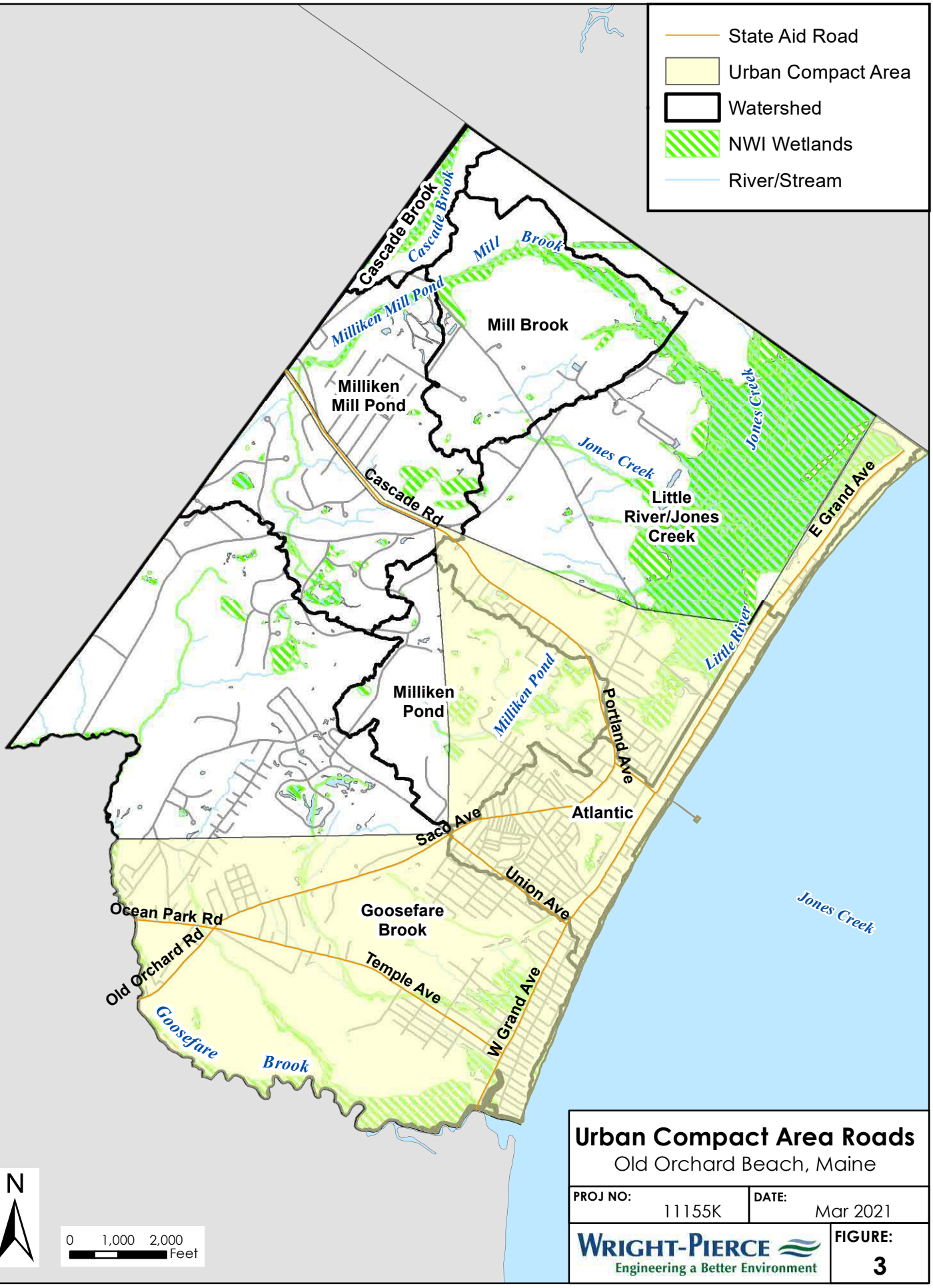

Urban Compact Area Roads

Old Orchard Beach, Maine

PROJ NO:	DATE:
11155K	Mar 2021

WRIGHT-PIERCE
Engineering a Better Environment

FIGURE: 3

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Attachment 2
Inspection Fields and Domains

INSPECTION FIELDS AND DOMAINS

The following is a list of fields and domains from the digital ArcGIS Online Collector application that are collected during dry weather outfall inspections and catch basin inspections.

OUTFALLS

Field	Domain
Feature ID	Unique identifier (OF = Piped Outfall; DO = Ditch Outfall); auto populated and linked with feature
Inspection Date	Auto populated with date
Inspection Time	Auto populated with time
Inspector	Open text field for inspector name
Precipitation in last 72 hours	Yes or No
Precipitation Amount (in)	Open text field
Approximate Temperature	Open text field
Wind Present?	Yes or No
Pipe Submerged?	No, Partially, Fully
Debris Foam	Yes or No
Debris Floating Green Scum	Yes or No
Debris Oil / Film	Yes or No
Debris Vegetative Mat / Excessive Algal Growth	Yes or No
Debris Sewage Solids	Yes or No
Discoloration / Staining	Yes or No
Odor	None, Musty, Sewerage
Water Clarity	N/A, Clear, Cloudy, Opaque
Pipe Flow	None, Trickle, Steady
Seepage Flow	None, Trickle, Steady
Flow Color	N/A, Clear, Brown, Black, Orange, Green
Flow Sampled	N/A, Yes, or No
Sediment Condition	Natural, Less than 2 inches, Greater than 2 inches, Plugged
Structure Condition	Needs Attention, Poor, Fair, Good, Excellent
Trash / Litter	Yes or No
Yard Waste	Yes or No
Comments	Open text field
Follow-Up Required	Yes or No
Follow-Up Reason	Open text field
IDDE Inspection Needed	Yes or No
IDDE Reported	Yes or No

CATCH BASINS

Field	Domain
Feature ID	Unique identifier (CB = Catch Basin; DMH = Drain Manhole); auto populated and linked with feature
Condition	Needs Attention, Poor, Fair, Good, Excellent
Flow	None, Minimal, Normal, Significant, Flooded
Excess Sediment	Yes or No
Leaves	Yes or No
Rocks	Yes or No
Odor	Yes or No
Pet Waste	Yes or No
Foam Soap	Yes or No
Sewage	Yes or No
Follow -Up	Yes or No
Litter	Yes or No
Vegetative Mat / Excessive Algal Growth	Yes or No
Oil Sheen	Yes or No
Discoloration / Staining	Yes or No
Inspected By	Open field for inspector name
IDDE Inspection Needed	Yes or No
IDDE Reported	Yes or No

Attachment 3
Illicit Discharge Incident Form

ILLICIT DISCHARGE INCIDENT FORM

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

Incident ID:

Responder Information	
Call taken by:	Call date:
Call time:	Precipitation (inches) in past 48 hours:
Observer Information	
Date and time observed:	Observed during regular maintenance or inspections: ☐ Yes ☐ No

Citizen call-in: ☐ Yes ☐ No

Caller contact information (*optional*) or municipal employee information:

Observation Location *(complete one or more below)*

Latitude and longitude:

Stream address or outfall #:

Closest street address:

Nearby landmark:

Primary Location Description	**Secondary Location Description:**			
☐ Stream corridor (*In or adjacent to stream)*	☐ Outfall	☐ In-stream flow	☐ Along banks	☐ In roadway
☐ Upland area *(Land not adjacent to stream)*	☐ Near storm drain	☐ Near other water source (stormwater pond, wetland, etc.) Describe:		

Narrative description of location:

Upland Problem Indicator Description

☐ Dumping	☐ Oil/solvents/chemicals	☐ Sewage	☐ Sediment/track out
☐ Wash water, suds, etc.	☐ Other:		

Stream Corridor Problem Indicator Description

Odor	☐ None / Natural	☐ Musty	☐ Sulfide (rotten eggs); natural gas	☐ Petroleum (gas)
	☐ Sewage / septic	☐ Rancid/Sour	☐ Other: Describe in “Narrative” section	
Appearance / Clarity	☐ Clear	☐ Opaque	☐ Cloudy	
	☐ Other: Describe in “Narrative” section			
Floatables	☐ None	☐ Sewage solids (toilet paper, etc.)	☐ Algae / Floating green scum	
	☐ Foam	☐ Suds	☐ Vegetative mat	☐ Dead fish
	☐ Oil Sheen / Film ☐ Trash / Debris		☐ Other: Describe in “Narrative” section	

Narrative description of problem indicators:

Suspected Source (name, personal or vehicle description, license plate #, address, etc.):

Investigation Notes	
Work order number assigned to incident (if applicable):	
Initial investigation date:	Investigators:
☐ No Investigation made	Reason:
☐ Reported to different Department/Agency (including DEP)	Department/Agency: Notification Date: Name and contact of Person reported to: Actions Required:
☐ Investigated: No action necessary	
☐ 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:	
Notes:	

Attachment 4
Illicit Discharge Tracking Sheet

TOWN OF OLD ORCHARD BEACH
MS4 STORMWATER PROGRAM - MCM 3 ILLICIT DISCHARGE DETECTION AND ELIMINATION (IDDE)
ILLICIT DISCHARGE TRACKING SHEET

Date of Incident/Date Reported:	**Report Initiated by**: Phone, drop-in, contact info (optional), maintenance, inspection, etc.	**Location of Discharge**: If known - lat/long, outfall #, closest street address, nearby landmark, etc.	**Description of Discharge**: For example, dumping, wash water, suds, oil/solvents/chemicals, sewage, etc.	**Actions to be Taken**: Who, What, Where, When, and How… (what should be done).	**Description of Resolution**: Outcome of actions taken and any necessary follow-up (what was done).	**Date Resolved**:

Attachment 5
Quality Assurance Project Plan (QAPP)

STORMWATER MONITORING QUALITY ASSURANCE PROJECT PLAN (QAPP)

1.0 Background and Scope

This Quality Assurance Project Plan (QAPP) was developed based on a template prepared for the Interlocal Stormwater Working Group (ISWG), February 2021.

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 percent of their outfalls during the five-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 2022 MS4 General Permit requires sampling and analysis for the following parameters whether or not 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.

> 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.

The purpose of this QAPP is to provide sampling personnel information that will assist them in collecting samples and analyzing the samples using field equipment/test strips 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 select field equipment/test strips and analytical methods available to use to comply with the requirements for Dry Weather Outfall Monitoring.

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 as an attachment to the Town of Old Orchard Beach's IDDE Plan, and therefore does not contain all of the IDDE requirements associated with the MS4 General Permit. The IDDE Plan should be consulted to determine the Town's frequency of inspections. In addition, if there is evidence of an illicit discharge, the Town 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 the Town 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, as 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 to conduct dry weather monitoring.

Samples will be collected aseptically from a flowing source or from dammed water in the outfall pipe, meaning the opening of the sample bottle should not touch the outfall, catch basin or manhole, the sampler's fingers, etc. Samples should not be collected from stagnant water, including water in the sump of a catch basin. A sample pole may be used to aid in sample collection. If a structure is not flowing enough for a sample to be collected aseptically, a sample should not be collected at that time. In the event that an outfall is submerged, either partially or completely, or inaccessible, field staff will proceed to the first accessible upstream catch basin or manhole for the observation and sampling and report the location on the Field Data Collection Sheet. Field staff will continue to the next upstream structure until there is no longer an influence from the receiving water on the sampling.

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

Equipment	Use/Notes
Clip board and Field Data Collection Sheets	For organization of field sheet/writing surface; field sheets for dry weather screening and sampling
Chain of Custody Forms	To ensure proper handling of all samples
Non-latex gloves	To protect the sampler as well as the sample from contamination
Distilled water and rinse bottle	For rinsing sampling equipment
Paper towels	For wiping off sampling bottles
Garbage bags	For collecting any trash created
High beam flashlight	For looking in outfalls or manholes
Cooler with ice and thermometer	For transporting samples to the laboratory
Digital camera	For documenting field conditions at time of inspection
Small white board with pen	To document Outfall ID, date, and time in photo
Personal protective equipment	Reflective vest, safety glasses, and boots at a minimum, sun screen, bug spray
Portable handheld meter	For sampling temperature and conductivity
Test strips	For sampling ammonia and chlorine
Sharpies or water-proof pens	For labeling sample containers
Sheet of blank labels	To label sample bottles as needed
Sample bottles	For laboratory samples
Plastic beakers (250 mL) or disposable whirl bags	For sample collection (prior to pouring into sample containers).
Pry bar, pick, hammer, or small mallet	For opening catch basins and manholes when necessary
Sandbags	For damming low flows in order to take samples
Scissors or utility knife	Multiple uses
Measuring tape	Measure distances and depth of flow
Safety cones	Safety
Hand sanitizer	To clean hands
Zip ties/duct tape	For making field repairs
Rubber boots/waders	For accessing shallow streams/wet areas
Sampling pole and/or sampling pump and tubing	For accessing hard to reach outfalls and manholes
Box of 1 gallon plastic bags	Multiple uses, including storing “clean” and “dirty” beakers, storing soaked unbleached cotton pad for optical brightener sample, if used
First aid kit	For minor cuts/abrasions

For each outfall sampled, a Field Data Collection 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 strips. Note that the Field Data Collection 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).

The sample for E.coli or enterococci should be collected first, directly in a sterile bottle provided by the laboratory without rinsing first, and placed on ice. Other samples can be collected in a clean beaker/whirl bag or directly in sample containers. If possible, collect water from the flow directly in the sample bottle. Be careful not to disturb sediments or touch the inside of the sample container. If using laboratory supplied bottles or factory-sealed, disposable whirl bags for sampling, no preparation is needed. If using reused beakers or other device to collect the sample, triple rinse the device with distilled water and then in water to be sampled prior to each use. The same applies to sample vials and the meter probe.

Samples to 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 from the laboratory 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. Laboratory samples are to be accompanied by a chain of custody form as described in Section 5 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 strips 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. This QAPP does not specify CWA methods or Maine DEP certification for use of field equipment/test strips.

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 .

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. Prior to sampling, the sampler and Director of Public Works will determine what analysis method will be used for parameters with more than one option listed.

User manual(s) for field equipment to be utilized for dry weather monitoring are included as **Addendum 3** to this QAPP. The Town is not proposing the use of test kits, which would require safety data sheets (SDS). The field test strips are non-hazardous and do not require SDSs.

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**
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). **Preferred method for bacteria for discharges to freshwater.**
Enterococcus	SM 9230 B, C or D, (MPN including IDEXX Enterolert, or MF) EPA 1600 (MF)	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 water (with ammonia and either optical enhancers or surfactants. **Preferred method for bacteria for discharges to salt water.**
Human Bacteroides[1]	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.
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	
Total Residual Chlorine (select one method)	**CWA Method, Field Equipment, or Test Kit**	**Preservation**	**Holding time**	**Bottle needed**	**Notes on Use**
Chlorine	Industrial test Systems Ultra-Low Total Chlorine Test Strips and other mid-range chlorine test strips	None	Immediate (w/in 15 minutes) in Field	Field jar or beaker	As of 6/2020, USEPA had not used Ultra low chlorine test strips (0.2 to 0.5 mg/L). Informal review shows these should be used simultaneously with a mid-range (0.5 to 10 mg/l) test strips to double check range.
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	SM5540C	Ice	To lab within 24 hours Analyze within 48 hours	500 ml plastic bottle from lab	Works on most soaps (laundry detergent, personal care products, dish soap)
Optical brighteners	VWR handheld UV lamp: UV-A: 360-365 nm, model number 89131-488	None	Analyze within 7 days	Unbleached cotton pad wetted with sample placed in sealed baggie	Works only on water with high to moderate laundry detergent. Provides only presence/absence.
Optical brighteners	Maine Healthy Beaches (MHB) Fluorometer	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**
Pharmaceuticals and Personal Care Products (PPCPs)[1]	EPA 1694	Sulfuric Acid (pH <2) + Ice (4^oC)	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 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)

[1] Parameters only to be used in select circumstances or locations where more precise confirmation regarding the presence or absence of human sanitary sewage is required. Use of these parameters requires significant advanced coordination with laboratories.

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 strip methods listed in **Table 2** to assess dry weather flow.

Maine Certified Laboratories have standard reporting limits for the parameters that conform to the MS4 General Permit required reporting limits. The test strips listed in **Table 2** have a use range that is appropriate for the work being conducted, and which meets the MS4 required reporting limits. Test strips that have expired will not be used. Test strips and temperature/conductivity probes that have useful life limits will be replaced when they have reached the end of their useful lives.

4.2 Equipment or Rinsate Blanks. Where possible, dedicated equipment and containers are used to collect samples, so that equipment and rinsate blanks are not required to be collected and analyzed.

If equipment or collection containers are being used multiple times in the field for different sample locations during a sampling event, they should be triple rinsed in between samples with distilled water and then rinsed with the water to be sampled, and an equipment or rinsate blank should be collected and assessed to evaluate if there is carryover contamination from reuse of the same sampling equipment. A minimum of one equipment or rinsate blank will be collected per sample event using distilled water. A blank is to be prepared for each laboratory parameter to be analyzed, and are to be handled using procedures identical to those used for the laboratory samples. Refer to the USEPA Volunteer Monitor's Guide to Quality Assurance Project Plans for additional information (EPA Document 841-B-96-003).

5.0 Field Data Sheets and Chain of Custody

As described in Sampling Procedures, a Field Data Collection Sheet will be used to document sample collection. The Field Data Collection Sheet will document the type of field equipment or test strips used and results of any field analysis. An example Field Data Collection Sheet is 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. Laboratories typically provide a Chain of Custody with bottle orders. An example Chain of Custody is provided in **Addendum 2** 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, and the analytical method used.

7.0 Data Review and Follow up

Once all data has been received, it will be reviewed by the Director of Public Works or their designee. Data will be stored electronically or in paper format for at least three 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 Director of Public Works, they may opt to have another municipal staff person or third-party review the data. Data should be reviewed within two 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 3** are exceeded.

TABLE 3 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. This is considered an instantaneous level.
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. This is considered an instantaneous level.
Enterococci	54 CFU/100 ml – discharges into saline/estuarine Class SA or SB	These waters have a standard that no more than 10% of the samples may exceed this concentration in any 90 day interval. This is considered an instantaneous level. **(Note Maine Healthy Beaches single sample threshold is 104 MPN/100 ml for Coastal Beaches)**
Enterococci	94 CFU/100 ml – discharges into saline/estuarine Class SC	These waters have a standard that no more than 10% of the samples may exceed this concentration in any 90 day interval. This is considered an instantaneous level. **(Note Maine Healthy Beaches single sample threshold is 104 MPN/100 ml for Coastal Beaches)**

Parameter	Threshold Level for Additional Investigation	Notes/Discussion
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. (Rothenheber and Jones, 2018 and Boehm, Soller and Shanks 2015)	Any concentration of human source of sewage should be investigated.
Ammonia	≥ 0.50 mg/L	Taken from USEPA Draft 2012 Bacteria Source Tracking Protocol.
Chlorine	≥ 0.05 mg/L	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 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 IDDE Plan

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

Addenda

1. Example Field Data Collection Sheet and labels
2. Example Chain of Custody
3. User Manual(s) for Field Equipment

References:

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.

ISWG and SMSWG February, 2021. *Stormwater Monitoring Program QAPP Template*, February 2021, Revision 1.

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.

USEPA, 2012. *EPA New England Bacterial Source Tracking Protocol*, Draft January 2012. Available at: https://www3.epa.gov/region1/npdes/stormwater/ma/2014AppendixI.pdf

USEPA, 1996. *Volunteer Monitor's Guide to Quality Assurance Project Plans*, September 1996. EPA Document 841-B-96-003. Available at: https://www.epa.gov/sites/production/files/2015-06/documents/vol_qapp.pdf

Addendum 1
Example Field Data Collection Sheet and labels

Field Data Collection Sheet for Dry Weather Outfall Monitoring

Date:		Outfall ID:	
Time:		Location:	
Sampler:			
Weather:		Photos Taken: ☐ Yes ☐ No	
Temp:		Sample Type:	
		Sample Location:	

Field Parameters to Monitor

Parameter*	Result (units)	Equipment Used	Comments/Field Notes
Temperature	C or F		
Conductivity	µs		
Ammonia	mg/L		
Optical Brighteners, UV lamp (if used)	Not Present / Present		
Chlorine	mg/l		

Observations (unless already documented as part of outfall inspection: odor, color, clarity, excessive algal growth, etc):

Laboratory Analyses

Parameter*	Method/ Lab Code	Comments/Field Notes
E. coli (for freshwater)	SM 9223 B, EPA 1603,	
Enterococci (for marine/estuarine waters)	SM 9230 or EPA 1600	
Human Bacteriodes (if used)	qPCR	
Optical Brightener (if used)	Maine Healthy Beaches Fluorometer	
Surfactants (if used)	SM 5540C	
PPCPs (if used)	EPA 1694	

* Refer to QAPP for threshold triggering additional investigation

General Comments

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

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

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

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

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

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

Addendum 2
Example Chain 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 #:

Remarks:

Shipping Info: FEDEX UPS CLIENT

Airbill No:

Temp C Temp Blank Intact Not Intact

*	Sample Description	Date/Time Collected	Matrix water/soil /other	No. of Containers	Analysis and Container Type Preservatives									
					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

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:

Addendum 3
User Manual(s) for Field Equipment

Once field equipment is purchased by the Town, a copy of the user manual(s) will be included here. The user manual(s) will also be kept with the field equipment.

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Engineering a Better Environment

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Topsham, ME 04086
207.725.8721 | www.wright-pierce.com

Appendix F
Construction Site Inspection Forms

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3rd PARTY INSPECTION FIELD REPORT (IFR)

Project _____

Contract No. _____ Date: _____

Job Location _____

Owner _____

Design Engineer _____

Contractor: _____

Weather: _____ Temperature _____

Time On-Site _____ Time Leaving Site _____

Requested Inspection _____

Area of Work _____

ESC Inspection Completed: ☐ Yes ☐ No ☐ Site permanently stabilized, temporary ESC removed

Inspection Visitors/Personnel On-site:

Summary of Construction Activities/Comments/Observations:

Erosion and Sediment Control Inspection:

ESC Plan on site: ☐ Yes ☐ No ESC Log up to date: ☐ Yes ☐ No

Winter Controls in Place (Nov. 1 – April 15): ☐ Yes ☐ No

ESC Controls in Place:
☐ Stabilized Construction Entrance ☐ Silt Fence and/or Wood Waste Berm
☐ Silt sack / inlet protection ☐ Material Storage Areas / Stockpiles
☐ Other: _____

Track Out Observed: ☐ Yes ☐ No

Maintenance / Corrective action / Additional ESC needed: ☐ Yes* ☐ No

*If yes, see Actions Required below.

General Comments (including erosion observed):

Documents Submitted/Reviewed On-Site/Discussed:

Actions Required:

Action Follow-Up (Actions Noted during Previous Inspections):

Action/Deficiency Summary (Observed during previous inspection)	Date Observed	Resolved (Yes/No	Re-inspection Date(s)	Comments/Corrective Actions taken and/or Additional Observations

Document Tracking:

Date Documents Submitted	Reference Documents	Notes/Revisions
Pre-Construction Documents		
	Primary Contact for Project Communication	
	Contact Information for Construction Team	
	Construction Schedule	
	PDF of Site/Subdivision Plans and Details – *Issued for Construction*	
	Performance Guarantee and Escrow	
	Copy of Erosion and Sedimentation Control Plan *(A copy should be on-site at all times along with contractor logs)*	
	Copy of Approved Permits and Order of Conditions	
	Copy of the Post-Construction Management Plan, Signed Maintenance Agreement and List of Post-Construction BMPs in accordance with Ch 71 Requirements	
	Clearing and Grubbing	
	Erosion and Sedimentation Control	
	Wastewater Collection System (Sewer) Installation	
	Wastewater Collection System (Sewer) Testing	
	CCTV Inspection of Sewer Infrastructure	
	Storm Drain Installation (Infrastructure)	
	Storm Drain Installation (graded)	
	CCTV Inspection of Storm Drain Infrastructure	
	Stormwater BMPs (inspection by EOR Anticipated)	
	Site Subgrade	
	Aggregate Base Material	
	Aggregate Subbase Material	
	Pavement: Binder	
	Pavement: Surface	
	Loam and Seed/Landscaping	
	Substantial Completion	
	Final Completion	
Construction Documents		
	Erosion and Sedimentation Control Logs	
	ESC, Site Inspections and Field Reports by Engineer-of-Record or Developers Inspection Engineer	
	Stormwater BMP Certification by Engineer-of-Record	
	Roadway: Aggregate Gradation Results	
	Roadway: Compaction Testing Results	
	Roadway: Pavement Mix Design	
	Roadway: Weight-slips	
	Water Main Acceptance Letter from MaineWater	
	Sewer testing results	

Signed By: _____

Name _____ Title _____

Copy To:
Jeffrey Hinderliter, Town Planner, jhinderliter@oobmaine.com
Michael Foster, Associate Planner, mfoster@oobmaine.com
Joe Cooper, Director of Public Works, jcooper@oobmaine.com
Rick Haskell, Code Enforcement, rhaskell@oobmaine.com
Stephanie Hubbard, Wright-Pierce, stephanie.hubbard@wright-pierce.com
Jaime Wallace, Wright-Pierce, Jaime.wallace@wright-pierce.com
Developer
Contractor

Photos:

TOWN OF OLD ORCHARD BEACH
ANNUAL MS4 EROSION & SEDIMENTATION INSPECTION REPORT
for Construction Sites Equal to or Greater than One Acre

Part 1: General Information			
Project Name:			
Project Location:			
Inspection Date:			
Weather:		Temperature:	
Date & Amount of Last Rainfall:			
Inspector Name/Company:			
Inspector Qualifications:	PE		
Current Status of Project:			

Part II: Documentation		
ESC Plan on site?	☐YES ☐NO	
ESC Logs/Self Inspections up to date?	☐YES ☐NO	
Photos collected?	☐YES ☐NO	
Previous Third-Party Reports reviewed?	☐YES ☐NO	
Note any outstanding issues from previous inspection reports below and comments.		
		Fixed? ☐YES ☐NO
		Fixed? ☐YES ☐NO
		Fixed? ☐YES ☐NO
		Fixed? ☐YES ☐NO

Part III: Actions Required from Inspection		
Corrections/Actions Required	**Resolved?**	**Compliance Tracking/Deadlines**
	☐YES ☐NO	
	☐YES ☐NO	
	☐YES ☐NO	
	☐YES ☐NO	
	☐YES ☐NO	
	☐YES ☐NO	

TOWN OF OLD ORCHARD BEACH
ANNUAL MS4 EROSION & SEDIMENTATION INSPECTION REPORT
for Construction Sites Equal to or Greater than One Acre

Inspection Parameter	Inspection Results	Observations/Notes
Part IV: Overall Site BMPs		
Disturbed Areas Minimized	☐MR ☐Pass ☐Fail ☐NA	
Natural Buffers Protected	☐MR ☐Pass ☐Fail ☐NA	
Perimeter Controls in Place	☐MR ☐Pass ☐Fail ☐NA	
Stabilized Construction Entrance	☐MR ☐Pass ☐Fail ☐NA	
Track Out Observed	☐YES ☐NO	
Dust Control	☐MR ☐Pass ☐Fail ☐NA	
Dewatering Areas	☐MR ☐Pass ☐Fail ☐NA	
Good Housekeeping/Waste Management	☐MR ☐Pass ☐Fail ☐NA	
Part V: Erosion Controls/Sediment Barriers		
Types of ESCs used at Site:	☐ Wood Waste Berm ☐Silt Fence ☐Hay Bales ☐Silt Sock ☐Other:	
ESCs downgradient of disturbed areas	☐MR ☐Pass ☐Fail ☐NA	
ESCs adjacent to drainage channels	☐MR ☐Pass ☐Fail ☐NA	
ESCs downgradient of material stockpiles	☐MR ☐Pass ☐Fail ☐NA	
ESCs adjacent to lot construction	☐MR ☐Pass ☐Fail ☐NA	
Storm drain inlet protection	☐MR ☐Pass ☐Fail ☐NA	
Part VI: Temporary Site Stabilization		
Disturbed but inactive area stabilized w/ mulch or non-eroding cover	☐MR ☐Pass ☐Fail ☐NA	
No evidence of washing/rilling of topsoil	☐MR ☐Pass ☐Fail ☐NA	
Seeded areas protected with mulch or erosion control blanket	☐MR ☐Pass ☐Fail ☐NA	

TOWN OF OLD ORCHARD BEACH
ANNUAL MS4 EROSION & SEDIMENTATION INSPECTION REPORT
for Construction Sites Equal to or Greater than One Acre

Part VII: Permanent Site Stabilization		
90% cover of healthy vegetation established on vegetated areas	☐MR ☐Pass ☐Fail ☐NA	
Mulched landscape areas totally covered with approved mulch materials	☐MR ☐Pass ☐Fail ☐NA	
Riprap appears stable, well graded and functioning	☐MR ☐Pass ☐Fail ☐NA	
Soil adjacent to riprap areas appears stable	☐MR ☐Pass ☐Fail ☐NA	
Areas adjacent to roadways and parking lots stable?	☐MR ☐Pass ☐Fail ☐NA	
Runoff appears to be evenly distributed to buffers (no evidence of channelization)	☐MR ☐Pass ☐Fail ☐NA	
Catch basin(s) are capturing runoff without bypass to other areas	☐MR ☐Pass ☐Fail ☐NA	
Part VIII: Ditches, Channels, Swales		
Channel is clear of obstructions, sediment or debris	☐YES ☐NO	
Ditch Line	☐MR ☐Pass ☐Fail ☐NA	
Side Slopes	☐MR ☐Pass ☐Fail ☐NA	
Riprap Areas	☐MR ☐Pass ☐Fail ☐NA	
Vegetation in ditch line and side slopes	☐MR ☐Pass ☐Fail ☐NA	
Check Dams	☐MR ☐Pass ☐Fail ☐NA	
Part IX: Culverts		
No evidence of overtopping or flooding	☐MR ☐Pass ☐Fail ☐NA	
Culvert Outlet – Clear of debris, no erosion	☐MR ☐Pass ☐Fail ☐NA	
Culvert Inlet – Clear of debris, no erosion	☐MR ☐Pass ☐Fail ☐NA	
Apron and plunge pools	☐MR ☐Pass ☐Fail ☐NA	

TOWN OF OLD ORCHARD BEACH
ANNUAL MS4 EROSION & SEDIMENTATION INSPECTION REPORT
for Construction Sites Equal to or Greater than One Acre

Part X: Stormwater BMPs		
Stormwater BMPs constructed and receiving runoff	☐YES ☐NO	
Stormwater BMPs Used at Site:		
Embankments inspected for settlement, slope erosion, piping or slumping.	☐MR ☐Pass ☐Fail ☐NA	
Stormwater Inlets	☐MR ☐Pass ☐Fail ☐NA	
Trash rack and debris guards	☐MR ☐Pass ☐Fail ☐NA	
Sediment Forebays	☐MR ☐Pass ☐Fail ☐NA	
Outlet control structures	☐MR ☐Pass ☐Fail ☐NA	
Riprap Areas	☐MR ☐Pass ☐Fail ☐NA	
Level-lip Spreaders	☐MR ☐Pass ☐Fail ☐NA	
Proprietary Devices	☐MR ☐Pass ☐Fail ☐NA	
Part IV - Winter Stabilization (November 1 – April 15)		
Hay mulch is applied at 2x standard application rate	☐MR ☐Pass ☐Fail ☐NA	
Areas brought to final grade are stabilized each day	☐MR ☐Pass ☐Fail ☐NA	
Areas w/in 75’ of protected natural resource must double row of barriers	☐MR ☐Pass ☐Fail ☐NA	

Inspection Results:

MR = Maintenance Required (BMP functioning by needs attention),
Pass = BMP is functioning and no deficiencies noted during visual inspection,
Fail = BMP does not appear to be functioning during visual inspection and needs further evaluation, repair or replacement.
NA = Not Applicable

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