

**Stormwater Pollution Prevention Plan  
(SWPPP) for: Public Works**

City of Portsmouth, NH

EPA NPDES Permit Number NHR041027

CERTIFICATION AND NOTIFICATION

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 have no personal knowledge that the information submitted is other than true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name: \_\_\_\_\_ Title: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

DRAFT

# Stormwater Pollution Prevention Plan for Portsmouth, NH Public Works

Facility Name: Portsmouth Public Works Facility

Facility Address: 680 Peverly Hill Road Portsmouth, NH 03801

## Section 1: Stormwater Pollution Prevention Plan Overview

This Stormwater Pollution Prevention Plan (SWPPP) does the following:

- Identifies the SWPPP team, by name and title
- Describes the facility, with information on location and activities, a site map, and a description of the stormwater drainage system;
- Identifies potential stormwater contaminants;
- Describes stormwater management control and best management practices (BMPs) needed to reduce pollutants in stormwater discharges; and
- Describes the facility’s monitoring plan;

## Section 2: Stormwater Management Program Team

Position	Name	Number	email
Public Works Deputy Director	Brian Goetz	(603) -766-1420	bfgoetz@cityofportsmouth.com
GIS Manager	James McCarty	(603) 766-1410	jtmccarty@cityofportsmouth.com
Stormwater and Water Quality GIS Specialist	Phoebe Rafferty	(603) 957-8425	prafferty@cityofportsmouth.com
Stormwater Foreman	Karl Snyder	(603)-828-5273	ksnyder@cityofportsmouth.com
Highway Foreman	Tobias Shea		tmshea@cityofporsmouth.com

## Section 3: Site Description

**Instructions:** Include a description of the facility. See the Maine DEP SWPPP for an example, or other SWPPPs that may already exist for your community (wastewater facilities, water treatment plants, etc.). A common description would include the name of the facility, the address, a two-sentence description of the facility (what it does, who it serves), and a description of the major components (operations building, equipment garage, salt storage barn, etc.). You will also need to develop a site map for your facility; the site map is recommended to include the items in the list below.

The Portsmouth Public Works Facility is located at 680 Peverly Hill Road in the City of Portsmouth, New Hampshire. The Facility is situated on 8.3 acres that is approximately 80% impervious. It is

comprised of various operations, including an Office Building, a Vehicle Maintenance Facility, a Recycling Center, a Fuel Distribution Depot, a Salt Storage Shed, and a Bulk Materials Storage Area. The facility was built in 1999 and operations commenced in January of 2000.

The Office Building, Maintenance Facility, and Vehicle Barn are located in a contiguous and connected building.

A map of the facility is included as **Attachment 1** of this SWPPP. The map identifies key buildings and storage areas, stormwater drainage areas, stormwater treatment BMPs, stormwater outfalls, and their receiving waters.

#### Vehicle Maintenance Facility

The Vehicle Maintenance Facility is divided into 2 adjoining sections, comprised of a working garage and vehicle barn, and services the entire Public Works and Water/Sewer Department fleet. The facility maintains regular working hours of 7:30 AM to 3:30 PM, Monday through Friday. During emergency operations, the facility is operating 24 hours per day.

The garage is where vehicles are repaired and serviced. In the garage there is a designated area for the storage of oil drums, solvents, and antifreeze. Likewise, used motor oil and anti-freeze is collected and stored in a designated area within the garage.

The vehicle barn is primarily for equipment storage and parking vehicles at the end of the workday.

#### Recycling Center

The Recycling Center is approximately 32,000 square feet and sits on a paved bituminous surface. The area is enclosed by an 8' high fence.

The Center accepts only municipal solid waste and recyclable material from City residents and small business owners at a rate of less than 30 tons per day. No commercial waste is collected, stored or processed at this Center. The Center accepts material for recycling, (i.e. cardboard, paper and commingle) wood waste, scrap metal, tires, electronics and bulky waste. There is also a *Do-It-Yourself* Used Oil Recycling Program and anti-freeze drop off service managed at the Center as well as a collection site for fluorescent light bulbs. Yard waste is also received at the Recycling Center.

#### Fuel Distribution Depot

There are two underground storage tanks, with associated dispensing pumps, that service the City vehicles used by the Public Works, School Department, Portsmouth Housing Authority, Police, Fire, and Water and Sewer Department. The facility receives product via private tanker trucks chosen through an annual bid process. There is a steel 12,000 gallon diesel tank, and a steel 5,000 gallon gasoline tank. This facility is permitted by the New Hampshire DES Waste Management Division (Facility Identification Number 0113665.) The fuel station has a concrete pad with passive limiting barriers, and is covered with a roof canopy. At this time no Stage II Vapor recovery is required under existing rules. However, there are plans to remodel the fuel distribution depot for the future.

#### Salt Storage Shed

The salt storage shed is an independent structure located behind the Public Works facility and next to the Fuel Distribution Depot and Recycling Center. The structure was constructed in May 2001. Its approximate capacity is 500 tons. During the winter season, the City may go through approximately 4,000 plus tons of salt. There are hydrodynamic separator units in the south east corner of the DPW that treat the water before it goes into the wetlands. Look at the map for more details.

**Bulk Materials Storage Area**

Bulk materials, such as loam, gravel sand and spoils pile are contained in concrete jersey barriers. Inventory, such as hydrants, pipes, valves, and catch basin components are stored on the far end of the salt shed. The inventory consists of large pieces and therefore, while there is exposure to storm water, contamination of the run off is minimal to none.

Table 3-1 includes a list of the primary industrial activities that occur at the facility and the potential pollutants that may be associated with each activity.

**Table 3-1 Locations of Potential Sources of Storm Water Contamination**

<b>Drainage Area</b>	<b>Potential Stormwater Contamination Point</b>	<b>Potential Pollutant</b>
D-01	Fuel Distribution Depot	Diesel and Gasoline
D-02	Recycling Center	Metals Suspended Solids Petroleum Hydrocarbons Anti-Freeze Fluorescent light bulbs Yard Waste Propane tanks (empty) Batteries Oil & oil filters
D-03	Vehicle Maintenance Facility	Oil Product Used Oil Parts Cleaner Anti-Freeze General Automobile Fluids Suspended Solids in vehicle wash water
D-03	Salt Storage Shed	Salt
D-03	Materials Storage	Suspended Solids
D-04	Employee Parking Lot	Automobile Fluids

## Section 4: Implementation

**Instructions:** Based on your facility activities and description in the previous section, the recommended activities and practices may change considerably. Please revise them as necessary. The sections have been laid out to be consistent with the relevant sections of the permit describing the SWPPP requirements (page 54-56).

This section describes preventative measures and good housekeeping practices used to contain and limit the exposure of various pollutants to stormwater. The following sections describe the relevant management practices that are implemented consistent with Section 2.3.7.2 (iv) in the MS4 permit. Unless otherwise stated, all measures will be implemented to be consistent with the schedule required in the MS4 permit, or no later than the end of year 5 of the permit if not otherwise described.

### Section 4.1: Minimize or Prevent Exposure

#### 4-1: Preventive Maintenance

The following table 4-1 describes minimized or prevent exposure methods that a practiced at this facility:

Facility Area or Activity	Drainage Area	Preventative Measures
Recycling Center	D-02	The used oil tank is a steel double walled container with a wide-mouth opening to limit the potential for spills during filling. This opening is covered with a lid. Therefore, there is minimal potential stormwater exposure from this source. There is a spill kit on site and a trained attendant working at the Center has a dip stick to measure the volume in the tank to avoid overfills. The tank is routinely emptied by a contracted certified used oil recycler. (The contractor is required to work in accordance with DOT requirements when loading and hauling this material.)
Fuel Distribution Depot	D-01	The Portsmouth Public Works Fuel Distribution Depot is protected from stormwater by a canopy. There is also a grooved concrete pad underneath the canopy.

	D-01:	<p>Tank #1 is a 12,000 gallon double walled Sti-p3 steel diesel underground storage tank (UST) with dimensions of 96" x 32'. Tank #2 is a 5,000 gallon double walled Sti-p3 steel gasoline UST with dimensions of 72" x 23'-10". Both tanks are equipped with Veedor Root liquid dry annular spill sensors connected to a Veedor Root TLS-300C-2 console/reader. The tanks are also equipped with an automatic tank gauge (Model 847390-107) connected to the same reader. The fill pipes are equipped with Pemeco spill containment structures (Model 111) with a five gallon capacity. Overfill protection is achieved through the use of OPW ball floats (Model 53VML-0160) and overfill flow shut-off valves (Model 53VML-0160) giving a 90% volume restriction. All tank monitoring and overfill/spill equipment conform to Env-Ws 411.26 and Env-Ws 411.35. Product is pumped through GASBOY fuel pumps connected to a fleet key GASBOY Terminal key reader. This facility is unmanned and managed through a computer located in the Public Works Dispatch office. Both tanks are reconciled monthly comparing fuel usage with deliveries in compliance with Env-Ws 411.11. Reconciliation records are kept for a minimum of three years in the Engineering Division.</p> <p>When filling vehicles with gasoline or diesel fuel, the automated keys are programmed for the capacity of each vehicle, thereby limiting potential for spill. In case of a spill, there is a spill kit nearby.</p>
Vehicle Maintenance Facility	D-03:	<p>Within the designated area, the drums are seated on pallets with secondary spill containment. Drums are located inside, under cover.</p> <p>Vehicles receive 3,000 mile check-up that limits potential for chronic leaks from vehicles. Vehicles are washed in the wash bay with a pressure washer and soap. The debris from the vehicles drain into an oil/grease separator trap in a catch basin.</p>
Employee Parking Lot	D-04:	Catch basins with inverted oil/ grease hoods in this system have sumps.

## Section 4.2: Good Housekeeping

### 4-2 Good Housekeeping

The following table 4-2 describes good housekeeping practices followed at this facility

<b>Drainage Area</b>	<b>Good Housekeeping Practices</b>
D-01 D-03 D-04	Street sweeping is performed at the Public Works Facility on a quarterly basis, with specific attention given to the employee parking lot, the fuel depot and in front of the salt shed.

D-01 D-02 D-03	Catch basins inspected and cleaned when necessary data is collected and stored in ArcCollector.
D-03	Combustible materials, such as the parts cleaner container, are stored in airtight metal containers.
D-03	Work practices require employees to use drip pans when working on all vehicles in the garage. Any incidental spills/drips are cleaned immediately and removed as required.
D-03	The loam and gravel piles are enclosed in a bin to contain run off of materials and minimize contamination of storm water runoff. The spoils pile is contained on a pervious surface where any potential storm water runoff is contained and percolates into the ground. Therefore, contamination to surface water is minimal.
D-03	An attendant is always present at the Recycling Center to ensure waste and recyclable material are from primarily residential sources and accepted items. Materials such as engine parts, which are not part of municipal solid waste, are rejected.
D-03	Litter control is performed by the Recycling Center staff regularly on a monthly schedule.
D-03	Oil/water separator [in Vehicle Maintenance Facility] are cleaned semi-annually.
D-02	<p>The cardboard, paper and commingled waste is collected and stored in enclosed containers. Thus these covered roll-offs limit the potential for storm water exposure and protect the integrity of the waste material for reuses.</p> <p>Wood waste and bulky waste are stored in open-top roll-off containers. Waste that is collected in these containers consists of solid material without any internal fluids such as, lumber, mattresses, and kitchen sinks. While there is exposure to stormwater, the risk of contamination is very low because there are no holes or leaks.</p> <p>To mitigate the risks associated with aluminum, copper, iron, lead, and zinc, scrap metal is stored in a roll-off container that is covered with a tarp. Therefore potential for metal leaching is minimal.</p> <p>The roll off container for the tires and electronics is completely enclosed; subsequently there is limited potential for storm water exposure.</p> <p>The roll-off container for tires and electronics is completely enclosed to limit potential for stormwater exposure</p> <p>The material is separated and stockpiled into 2 categories, brush and leaves/grass clippings. The piles are enclosed by concrete blocks to contain materials the brush pile is chipped and hauled away as needed, which is typically 3 times a year.</p>
D-03	The used motor oil is in a double-walled oil waste container with a hinged cover. It is stored in a primary containment area and surrounded by a secondary containment unit, which is made of concrete blocks and coated with a special impervious urethane sealant. To date, no significant spills or leaks occurred from the primary or secondary containment units.

### Vehicle and Equipment Wash water Requirement

Facility Area or Activity	Drainage Area	Good Housekeeping Measures
	D-03	To keep contaminants and other pollutants out of the City's water/sewer system there are no floor drains in the garage. To keep contaminants and other pollutants from surface water, policy was established prohibiting washing of vehicles in the garage. At this time, there are no cracks in the garage floor that would allow spills to drain into the ground and affect ground water.
	D-03	There are two floor drains in the vehicle barn. One is located on the southeast side; the other is located at the northwest side of the building. The vehicle barn floor is pitched toward these basins. The basins are connected to an oil/water separator, which is connected to the municipal sanitary sewer system. The vehicle barn is the sole designated location where vehicles are permitted to be washed.

### Section 4.3: Spill Prevention and Response

The following is a list of spill prevention and response procedures practiced at this facility:

- This facility has a written spill prevention and response policy that is consistent with the MS4 requirements described in Section 2.3.7.2 (iv);
- Spills will be contained as close to the source as possible with absorbent materials from the emergency spill kit, and a cover or dike that will protect any catch basins or other stormwater intake structures;
- The assigned spill response team leader will be advised immediately of all hazardous or regulated material spills, regardless of quantity;
- All spills will be evaluated to determine the necessary response;
- Staff are aware of spill prevention and response procedures;
- Spill response equipment is located at potential spill areas;
- Qualified personnel observe delivery transfers to and from fuel tanks;
- Outdoor drum and storage tank containment areas are checked for leaks;
- Above ground storage tanks are inspected regularly for signs of corrosion or leaks;
- Underground storage tank filling areas are inspected with trained personnel regularly for signs of spills.
- Spill Prevention and Response

Drainage Area	BMP
D-01 D-02 D-03	Spill kits are on site at fuel distribution depot, garage and Recycling Center Best management practice of berming the wood chip pile with a silt fence or other appropriate means during chipping operations are coordinated with the wood-

	chipping contractor.
	The Public Works Facility has an SPCC Plan.

### Section 4.5: Erosion and Sediment Control

Permit Language: *The permittee shall use structural and non-structural control measures at the facility to stabilize and contain runoff from exposed areas and to minimize or eliminate onsite erosion and sedimentation. Efforts to achieve this may include the use of flow velocity dissipation devices at discharge locations and within outfall channels where necessary to reduce erosion.*

There are no potential areas for erosion on this site. [If the facility has been deemed by the permittee to have no potential erosion areas]

#### Erosion and Sedimentation Controls

Facility Area	Drainage Area	BMP
	D-01 D-02 D-03 D-04	The majority of the Public Works facility is paved. Historic observations have shown no areas that are prone to erosion.
	D-02	A permanent grassy swale will be installed on the west side of the Recycling Center to receive and treat storm water exiting this site.

### Section 4.6: Stormwater Structural Treatment Measures and Management of Runoff

#### Management of Runoff

Drainage Area	BMP
D-03	Two stormwater separators are installed at the Facility; one at the north-east corner of the property, the other at the south-east corner of the property. The stormwater separators are designed to remove sediment, oil and grease from the stormwater run-off. Catch basins connected to the storm separator are cleaned once per year.

#### Specific Storm Drain BMPs

Drainage Area	Best Management Practice
D-03	Hydrodynamic Separators (2) - each are inspected quarterly and cleaned when necessary.
D-03	Gravel Wetland - Inspected quarterly. See attached O&M plans.
D-04	Catch Basins

## Section 4.7: Salt Storage Piles

City of Portsmouth has developed a covered or enclosed salt facility as described in the MS4 permit, and is following best practices to minimize the runoff exposure to any salt stockpiles.

### Salt Storage Pile

D-03	Delivery of the salt is from a private hauler, who dumps the salt material directly into the salt shed. Salt is loaded into public works vehicles for de-icing operations directly outside of the salt shed. The stockpile of salt is never exposed directly to rain or snow fall. However minor amounts of salt may spill on the pavement. This area is periodically swept into the shed as weather conditions allow. This area is inspected as part of the Routine Quarterly Inspections.
------	---

## Section 4.8: Employee Training

Key staff will be regularly trained on stormwater-related topics such as: system maintenance practices, salt storage and handling procedures, spill response and cleanup procedures, and other key topics. Please refer to City of Portsmouth's Stormwater Management Plan (SWMP) for additional details on employee training. See appendix for training log.

City of Portsmouth will retain records on employee training including:

- The training date, title, and duration;
- Municipal attendee list;
- Subjects covered during training.
- Employee Training

## Section 4.9: Maintenance of Control Measures

The following is a list of stormwater quarterly control measure maintenance procedures practiced at this facility:

- All control measures required by this permit will be maintained in effective operating condition;
- This SWPPP will be supplemented by on-site documentation describing maintenance procedures and a schedule outlining preventative maintenance of all control measures;
- City of Portsmouth will work to develop backup procedures and practices in case a runoff event occurs while a control measure is offline.

## Section 5.0: Inspection and Record Keeping

### Section 5.1: Site Inspections

City of Portsmouth will conduct quarterly (Jan-Mar, Apr-Jun, Jul-Sep, Oct-Dec) inspections of the facility that will cover all areas potentially exposed to stormwater and all stormwater control measures. At least one of the inspections will be conducted on an annual basis will be conducted when stormwater discharge is occurring. Additional inspections will occur on an as-needed basis if significant activities are exposed to stormwater. The inspections will contain the information included in Attachment 2, an example site inspection form.

Quarterly routine facility inspections will be conducted to assess material storage and handling areas, vehicle and equipment maintenance activities, and the facility storm drain system to ensure control measures are working properly. These inspections will ensure that there is no evidence of pollutants or materials being washed off site, assess if any corrective actions are needed, and minimize exposure to stormwater.

Inspections shall be conducted by “Qualified Personnel”, defined as those who possess the knowledge and skills to assess conditions and activities that could impact stormwater quality at the facility and can evaluate the effectiveness of the control measures. At least one member of the SWPPP team shall also participate.

The qualified personnel will be inspecting the following:

Recycling Facility (areas where waste is generated, received, stored, treated, or disposed of which are exposed to precipitation or stormwater run-off. For purposes of this (DPW Facilities Plan) this includes, but is not limited to the Recycling Center and all operations within.

The form provided in Appendix D shall be used to document the Facility Inspection. Completed Inspection forms shall be maintained, for a minimum of three (3) years, on-site with this SWPPP.

If control measures are discovered to need repair or be ineffective, whether as part of a routine inspection or otherwise, City of Portsmouth will repair or replace them as soon as practicable, and preferably before the next storm event.

### Section 5.2: Record Keeping

All relevant documentation associated with this SWPPP including inspection reports, training records, reported spills, waste handling and removal manifests and any corrective action statement will be retained either onsite attached with this SWPPP and/or within the City of Portsmouth’s online document database as required by Section 2.3.7.2 of the MS4 permit. These records can be found in cop.local\pubworks\stormwater\. Records will be maintained for at least five (5) years, as required by Section 4.2.1 of the MS4 Permit.

This SWPPP should be amended if there are any significant changes to facility operations or activities conducted onsite that could impact stormwater. The amended plan should describe the new activities

and planned control measures.

Section 6: CERTIFICATION AND NOTIFICATION

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 have no personal knowledge that the information submitted is other than true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name: \_\_\_\_\_ Title: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

*[Repeat as needed for multiple construction operators at the site.]*

DRAFT

# Attachments

**Attachment 1: Facility Site Map**

**Attachment 2: City Spill Response Plan**

**Attachment 3: NHDES Material Storage & Spill Response Fact Sheets**

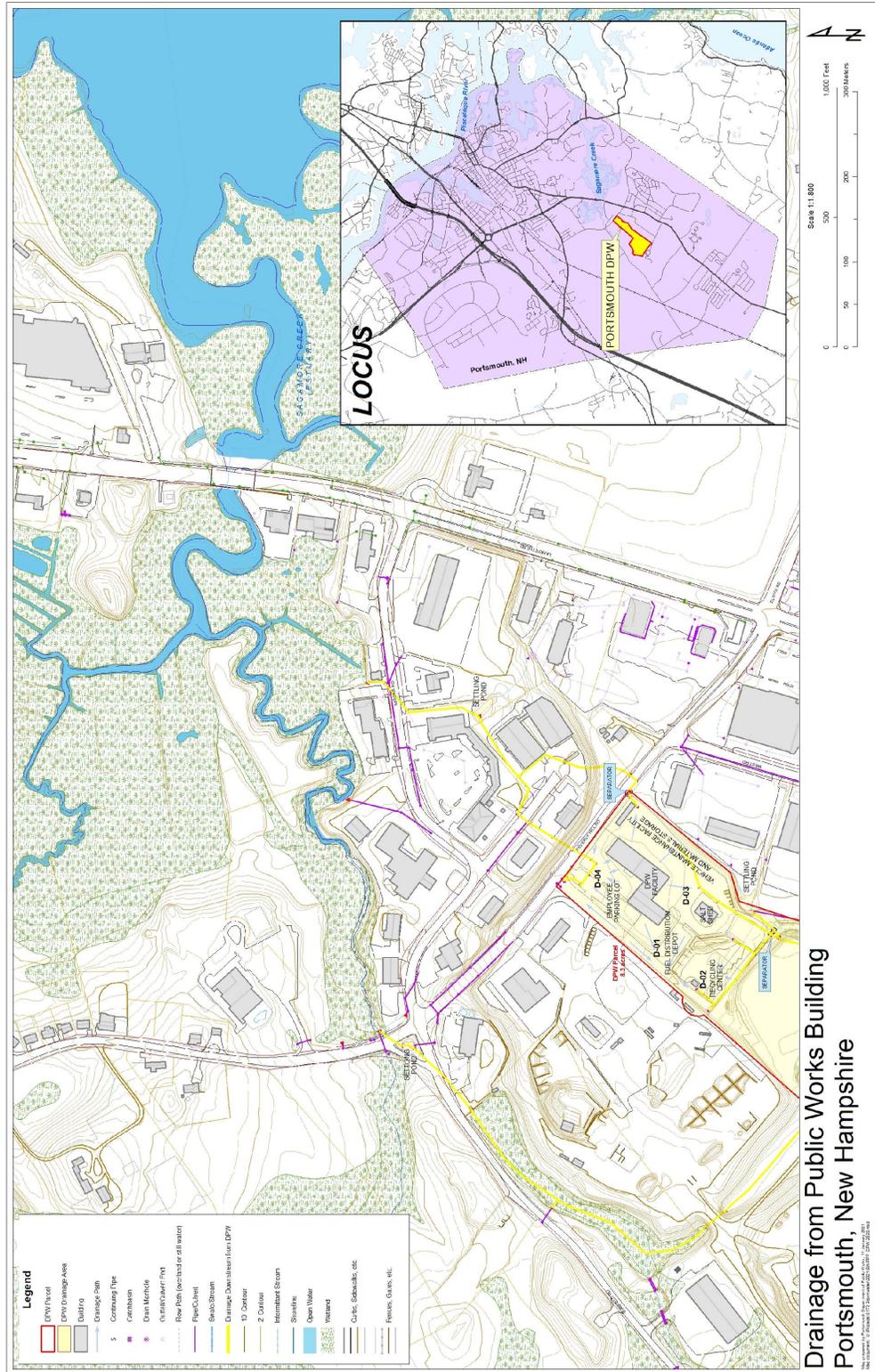
**Attachment 4: Employee Training Materials and Attendance Sign-in Sheet**

**Attachment 5: SWPPP Amendment and Corrective Action Log**

**Attachment 6: Quarterly Routine Inspection Form**

**Attachment 7: O&M Gravel Wetland**

Attachment 1: Facility site map identifying key buildings and sites, the location of all known floor drains that tie into the stormwater drainage system, stormwater outfalls, and their receiving waters.



**Portsmouth DPW Facility**  
**Quarterly Routine Inspection Form**  
 MS4 Permit Number *NHR041027*

Inspector(s): \_\_\_\_\_ Inspection Date: \_\_\_\_\_

Year: \_\_\_\_\_ Calendar Quarter: 1<sup>st</sup>\_\_\_\_, 2<sup>nd</sup>\_\_\_\_, 3<sup>rd</sup>\_\_\_\_ 4<sup>th</sup>\_\_\_\_

**Recent Weather Info:**

Current Weather Conditions\* \_\_\_\_\_ Last Rainfall Event: \_\_\_\_\_

Any Snowmelt Occurring: \_\_\_\_\_ Most Recent Sample Date: \_\_\_\_\_

**Facility Inspection Details:**

	Satisfactory Conditions* (Y or N)	BMPs Effective (Y or N)	Corrective Action Needed (Y or N)	Suggested Corrective Action or Comments
<b>Industrial Activity /Drainage Systems</b>				
<b>Vehicle Maintenance Facility</b>				
Indoor Petroleum Fluid Storage Area				
Vehicle Washing Area				
Oil/Water Separator				
Pavement Area in front of Vehicle Maint.				
<b>Vehicle Fueling Station / Concrete Pad</b>				
Spill Response Kit Available and Labeled				
<b>Recycling Center</b>				
Storage Roll-offs				
Misc. Storage Area				
Waste Oil Tank				
<b>Bulk Material Storage</b>				
CB Grit and Street Sweeping Storage area				
<b>Salt Shed &amp; Paved Area in Front of Shed</b>				
Sand Stockpile Contained				
Snow Storage Area				
Spreader Equipment Storage area				
<b>Stormwater Treatment BMPs</b>				
New Gravel Wetland				
Extended Detention basin				
Vegetated Swale				
<b>Other Notes / Photos Taken:</b>				

Notes: \*Satisfactory conditions typically means no evidence of recent spills or leaks indicated by visible fluids or staining in petroleum storage areas, no excessive accumulation of sediment or other material on paved areas, stockpiled material is not vulnerable to be washed off by stormwater and storm drainage conveyances/treatment BMPs are functioning as intended.

**CERTIFICATION STATEMENT**

DRAFT

DRAFT

DRAFT

Attachment 4: Employee Training Materials and Attendance Sign-In Shet

DRAFT

DRAFT

Attachment 6: Quarterly Routine Inspection Form

DRAFT

DRAFT