

# Stormwater Management Plan (SWMP)



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# **Portsmouth Naval Shipyard**

## **Stormwater Management Plan December 2021**

### **Introduction**

The Maine Department of Environmental Protection (MEDEP) is the permitting authority for the National Pollution Discharge Elimination System (NPDES) in the state of Maine. In accordance with Phase II stormwater regulations, the MEDEP has issued a General Permit for the Discharge of Stormwater from State or Federally Owned Municipal Separate Storm Sewer Systems (MS4s). As a Federal facility located within a designated Urbanized Area, Portsmouth Naval Shipyard applied for coverage under a General Permit which is effective on October 1, 2022 and expires on October 1, 2027. PNS's General Permit Number is #MER042000. The General Permit does not affect the requirements under other applicable Maine statutes such as Coastal Zone Management Act, Site Location of Development (Site Law), Stormwater Management, and Natural Resource Protection Act (NRPA). The General Permit requires that PNS create a five-year Stormwater Management Plan (SWMP) to address the following six minimum control measures:

1. Education and 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 Facility Operations

The six minimum control measures and associated best management practices (BMPs) are identified in table 1.

### **Background**

The mission of Portsmouth Naval Shipyard is to support the national defense of the United States (U.S.) by performing repair, maintenance, modernization and deactivation of U. S. Navy submarines. The population of the PNS is approximately 7,000 civilian employees (including tenants) and 900 assigned fulltime and transient military personnel. Approximately 200 active duty personnel reside at PNS at any given time.

PNS is located in Kittery, Maine and occupies Seavey Island, a 278-acre island located near the mouth of the Piscataqua River within York County. PNS is connected to Kittery by two bridges. The Piscataqua River forms the southern portion of the boundary between the states of Maine and New Hampshire. PNS is located approximately three nautical miles from the Atlantic Ocean and is surrounded by navigable water.

PNS is the largest employer in the area and is one of the largest employers in both Maine and New Hampshire. The facility's economic impact on the surrounding area is significant.

PNS's Environmental Management Program is divided between the Naval Sea Systems Command (NAVSEA) Environmental Division of the Occupational Safety, Health and Environmental (OSHE) Code 106.3 and Naval Facilities Engineering Systems Command (NAVFAC) Public Works Department Maine (PWD-ME). Engineers and environmental protection specialists in the Environmental Division are responsible for stormwater program management.

PNS is a member of local boards and maintains multiple mutual assistance agreements throughout the area to reduce hazardous spills and increase emergency response effectiveness. PNS maintains a mutual assistance agreement with the New Hampshire Department of Environmental Services (NHDES), is a member of the Local Emergency Planning Committee (LEPC) and has mutual aid agreements with both the York County Emergency Management Agency (YCEMA) and the Kittery Fire Department.

PNS's mutual assistance agreement with NHDES has been in place since May 2012. Prior to partnering with NHDES, PNS was a member of the now discontinued Piscataqua River Cooperative from October 1996 to May 2012. The partnership between NHDES and PNS comes from the shared vested interests both organizations have along the shores of the Piscataqua River. The purpose of the partnership is to provide combined resources for rapid emergency containment and control of a petroleum product spill anywhere on the river. PNS has a very well trained and equipped Facility Response Team that is able to support the agreement.

Since April 1992, PNS has maintained a Mutual Aid Agreement with the YCEMA to provide emergency response to incidents involving the release of hazardous substances.

PNS also has a mutual aid agreement with the Kittery Fire Department to provide assistance for both fires and hazardous substance releases.



## **Portsmouth Naval Shipyard**

### **Purpose**

The Shipyard shall develop, implement, and enforce a Stormwater Management Plan (SWMP) implementing six minimum control measures, set forth in the Shipyard's General Permit for the Discharge of Stormwater from State or Federally Owned MS4s, Permit #MER042000. These control measures are designed to reduce the discharge of pollutants from the Shipyard, to the maximum extent practicable, to protect water quality and satisfy the appropriate water quality requirements of the Clean Water Act. The Plan and all Minimum Control Measures must be substantially implemented by October 1, 2027. The General Permit requires the permittee to submit an annual report based on a reporting period of July 1 to June 30. The report shall be submitted to the Department for review and approval by September 15<sup>th</sup> each year.

### **References**

- General Permit for the Discharge of Stormwater from State or Federally Owned Municipal Separate Storm Sewer Systems, MEDEP, July 1, 2013

- MEDEP Multi-Sector General Permit (MSGP), Maine Pollutant Discharge Elimination System (MPDES), Stormwater Discharge Associated with Industrial Activity, December 7, 2016
- Stormwater Pollution Prevention Plan (SWPPP), Portsmouth Naval Shipyard, February 16, 2017
- Environmental Protection Program Manual, NAVSHIPYD PTSMH INSTRUCTION 5090.1
- Stormwater Management Plan, Portsmouth Naval Shipyard, October 21, 2013
- Stormwater Management Annual Report for 2017/2018 (Year 5), Portsmouth Naval Shipyard

## Appendices

- A. Illicit Discharge Detection and Elimination Plan
- B. Inspection Forms

## Stormwater Program Overview

The Shipyard has developed and implemented a stormwater program. The Phase II regulations and the MEDEP General Permit for the Discharge of Stormwater from State or Federally Owned Municipal Separate Storm Sewer Systems (MS4s) enhance the program. Information about the MSGP stormwater program is described below.

In 2001, the MEDEP received authority to administer the federal program. In October 2005, and most recently in December 2016, MEDEP issued a general permit, known as the Multi-Sector General Permit (MSGP), for stormwater discharges associated with industrial activity. These successive permits ultimately replaced a similar general permit that the EPA had issued in 2000 and by which the Shipyard was first covered.

The Shipyard has maintained a stormwater permit since the EPA promulgated regulations under the CWA. The Portsmouth Naval Shipyard currently maintains coverage under the MEDEP MSGP (MER05B441) by having submitted a Notice of Intent (NOI) with the MEDEP, thereby agreeing to comply with the terms and conditions of the MSGP. A condition of this permit is the development and implementation of a Stormwater Pollution Prevention Plan (SWPPP). The SWPPP establishes policy, responsibilities and procedures for the stormwater pollution prevention program and provides technical guidance on the prevention of pollution due to stormwater runoff from Shipyard industrial areas. The Shipyard must comply with the permit requirements for the following industrial sectors co-located at the Shipyard:

- Ship Building and Repair Facilities
- Hazardous Waste Storage & Transfer Facilities
- Steam Electric Generating Facilities
- Land Transportation and Warehousing

The storm water program is designed to reduce pollutants being discharged into receiving waters of the United States. Elimination of any potential non-storm water discharges and source control are the major elements of the program. The SWPPP consists of Best Management Practices (BMPs), structural controls, training, inspection policies, and storm water sampling. The controls and policies are intended to work together to minimize storm water pollution from the Shipyard.

The SWPPP is part of an overall storm water program designed to regulate storm water quality from industrial facilities. Elimination of non-storm water discharges to the storm drain system is a major requirement of the storm water program. Under the multi-sector industrial permit, all non-storm water discharges not currently covered under an existing NPDES permit must be terminated. Any personnel with knowledge of an existing illicit discharge into the storm drain system is trained to contact the Environmental Division's Storm Water and Wastewater Program Manager at (207) 703-3111 to initiate corrective action.

A storm water monitoring and sampling plan is also a required element of the MSGP Storm Water Program. Samples of storm water runoff are collected to evaluate the effectiveness of the implemented BMPs.

The Shipyard's Stormwater Program includes cleaning of stormwater structural components such as grease traps and catch basins. Included in the catch basin cleaning is a component to complete an inspection record to enable the Shipyard to evaluate cleaning frequency needs and condition of the structure. The stormwater program also includes a street sweeping program. The Shipyard purchased a state-of-the-art street sweeper to help with paved surface cleanup on a regular basis.

Visual monitoring continues to be performed under the MSGP, sampling results are indicative of low turbidity and contaminant levels in these stormwater discharges. These results suggest that continued implementation of stormwater BMPs and good operations & maintenance practices are resulting in the reduction of pollution.

## **Environmental Programs Overview**

**Hazardous Waste (HW).** The Shipyard has established standardized procedures for HW generators to use in the handling, storage, packaging, marking and transfer of HW in compliance with Federal, State of Maine, and Navy requirements. The Shipyard also operates a permitted Hazardous Waste Storage Facility (HWSF) located on the Shipyard. HW is defined as a waste that is specifically listed in EPA or state environmental regulations or exhibits a hazardous characteristic of ignitability, corrosivity, reactivity or toxicity as defined by either the EPA or MEDEP.

Code 106.3 (Environmental Division) personnel have created standardized waste sampling procedures to confirm if a waste exhibits a hazardous characteristic and

performs sampling and sampling oversight to ensure all suspect waste is classified properly on the Shipyard.

The handling, accumulation, and storage of HW are very heavily regulated. The Shipyard has an established network of HW accumulation areas to effectively manage the HW it generates. All personnel on the Shipyard receive HW awareness training annually and more extensive initial and annual recurring training is provided to those that handle HW.

In May of 2001, the HWSF at the Shipyard became licensed as a Commercial HWSF capable of receiving HW from other Department of Defense (DoD) New England Facilities. The centralized consolidation HWSF provides a better service at a better price to DoD facilities. Shipyard HWSF personnel have extensive training and knowledge in HW management and have developed a Record Management System, providing full cradle-to-grave tracking of all HW shipments.

**Hazardous Material Management.** The Navy established a Navy-wide program called Consolidated Hazardous Material Reutilization and Inventory Management Program (CHRIMP). The Navy-wide material management concept deals with hazardous material (HM) through acquisition, storage, issuance and disposal preparation from one or more central control and distribution points at the Shipyard.

It is the policy of the Shipyard to support the philosophy of CHRIMP in an effort to reduce the quantities of HM purchased, stored, and used in the performance of its mission. It is also the policy of this Shipyard to support the requirements of both the environmental and occupational health communities to identify the use of HM and minimize its impact on the user as well as the environment by reducing and controlling the quantities of HM stored at the facility. This includes the reuse of expired shelf-life (ESL) material whenever possible.

**Oil and Oily Waste Handling Program.** Oil is used in many facilities throughout the Shipyard. The Oil and Oily Waste Handling Program is responsible for establishing procedures and methods to prevent discharge of oil from non-transportation-related facilities from entering navigable water or adjoining shorelines. The Oil and Oily Waste Handling Program is also responsible for providing information on what to do in case of a spill and how to dispose of oily waste and waste oil.

**Solid Waste Program.** The Shipyard has established operating procedures for collection, categorization, segregation, and disposal of solid waste on the Shipyard. As part of the Shipyard's program to improve environmental procedures, the Shipyard has combined the management of both solid waste and recycling as an Integrated Solid Waste Management Program. All dumpsters are required to be either watertight or covered when not actively being loaded.

- Burnable waste is collected in red covered dumpsters.
- Non-burnable waste (i.e. rubber, plastic) is collected in black open top dumpsters.

- Wood waste is collected in open top three-yard brown dumpsters and consolidated in open top 30-yard roll-offs.
- Cardboard is collected in blue covered dumpsters.
- Empty paint containers are collected in orange enclosed dumpsters.
- Scrap metal (mixed) is collected in three-yard gray open top dumpsters and consolidated for disposal in Navy Qualified Recycling Program (QRP) 30-yard covered roll-offs.

Collection and storage of wood and mixed metals in dumpsters and roll-offs minimizes exposure and contaminants by keeping the waste off the ground.

The Shipyard prohibits hazardous wastes from being thrown into non-hazardous waste dumpsters. The Shipyard's solid waste contractor and QRP scrap metal contractors are responsible for inspecting container integrity, and the containment of contents before transporting off installation to disposal site.



## Table 1: Six Minimum Control Measures

The following table describes each of the six required minimum control measures that the Shipyard is required to address as part of the General Permit and actions taken to address each measure.

### MCM1 – Education/Outreach Program (Program)

Objective: Implement an ongoing Education/Outreach Program addressing stormwater discharges and impacts on water bodies and steps that can be taken to reduce pollutants in stormwater runoff.

BMP ID #	BMP	Measurable Goal(s)	Responsible Party	Implementation Deadline
1.1	Outreach to Raise Awareness Campaign (broad)	<p>PNS will update the BMP Awareness Plan in accordance with this GP. PNS will submit Plan to MEDEP by December 1, 2022. The plan is considered approved unless MEDEP responds in writing or verbally otherwise by February 1, 2023. Begin implementation of the Plan within one week of its approval. A baseline evaluation will be conducted in permit year one with the goal of increasing awareness by 15% over the permit cycle.</p> <p><u>Target Audience:</u> Civilian and Military employees/residents located at Portsmouth Naval Shipyard.</p> <p><u>Overarching Message:</u> “All stormwater at Portsmouth Naval Shipyard that enters a storm drain goes directly to the Piscataqua River, untreated.”</p> <p><u>Outreach Tools:</u> A minimum of three outreach tools will be used each year from the following list: PNS Facebook, Digital Signage, Outreach Event Tables, Posters, Pamphlets, Occupational Safety, Health, and Environment (OSHE) Briefings</p>	Code 106.3	Annual

BMP ID #	BMP	Measurable Goal(s)	Responsible Party	Implementation Deadline
		<p><u>Evaluate Effectiveness:</u> PNS issues annual environmental awareness to be conducted by all employees at PNS. This provides an opportunity to insert knowledge check questions specific to stormwater that will be used to annually evaluate percentage of employees that are aware of stormwaters path to the Piscataqua River.</p>		
1.2	Outreach to Change Behavior (targeted)	<p>PNS will update the BMP Adoption Plan in accordance with this GP. PNS will submit Plan to MEDEP by December 1, 2022. The plan is considered approved unless MEDEP responds in writing or verbally otherwise by February 1, 2023. Begin implementation of the Plan within one week of its approval.</p> <p><u>Target Audience:</u> Civilian and Military employees that use specific smoke shacks that have been identified as high priority during previous permit cycles.</p> <p><u>Overarching Message:</u> Cigarette butts are one of the most commonly littered items in the world. Cigarette butts that are littered enter storm drains and eventually end up in the Piscataqua river.</p> <p><u>Outreach Tools:</u> A minimum of three outreach tools will be used each year from the following list: PNS Facebook, Digital Signage, Outreach Event Tables, Posters, Pamphlets, Occupational Safety, Health, and Environment (OSHE) Briefings</p> <p><u>Evaluate Effectiveness:</u> Semi-Annually, PNS will count cigarette butts located in and around targeted smoke shacks. Based on the number present, a</p>	Code 106.3	Annual

<b>BMP ID #</b>	<b>BMP</b>	<b>Measurable Goal(s)</b>	<b>Responsible Party</b>	<b>Implementation Deadline</b>
		predetermined rating will be assigned. This rating will be used to determine over the permit cycle if behavior changes have occurred. Annual cigarette butt clean up at targeted smoke shacks will occur in the fall to establish a clean baseline for the next calendar year inspections.		
1.3	Evaluate Effectiveness	PNS will submit an annual report as required by September 15 each year. The annual report will document progress made on each BMP, tools and methods used to raise awareness, determined effectiveness and plans for the following permit year.	Code 106.3	Annual

## MCM 2 - Public Involvement and Participation

Objective: Involve the facility's community in both the planning and implementation process of improving water quality and reducing storm water quantity via the storm water program.

BMP ID #	BMP	Measurable Goal(s)	Responsible Party	Implementation Deadline
2.1	Public Notice	<p>The Portsmouth Naval Shipyard will comply with applicable state and local public notice requirements. Public notices will be posted on the PNS Intranet. PNS has established a Stormwater Pollution Prevention Team consisting of stakeholders with impacts on the implementation of this GP. The SWPP Team will meet two times per permit year. Meeting topics and attendance will be documented in the annual report.</p> <p>PNS Code 106 Water Program Manager will also be an active participant in the Southern Maine Stormwater Working Group (SMSWG). Thousands of employees commute from towns throughout Southern Maine. PNS feels that being engaged in the SMSWG can be mutually beneficial.</p> <p>For construction development, PNS will comply with Site Law Public Notice requirement. This is a requirement to include proof of public notice as part of any Site Law Minor or Major Amendment. The public notice must be published in a locally circulated newspaper within 30 days prior to filling of the application with MEDEP. The public is instructed to submit comments directly to the Bureau of Land Resources – MEDEP, per the Notice of Intent to File guidance from MEDEP.</p>	Code 106.3/PWD-ME	Annual

2.2	Public Event	<p>PNS will annually host a 'public' event that includes a pollution prevention and/or water quality theme. Public events will be restricted to general Shipyard public to include civilian and active duty personnel. Public event will either be from the list included in the 2022 GP or PNS will consult with MEDEP to ensure alternate public event satisfies the requirement.</p>	Code 106.3/PWD- ME	Annual
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### MCM3 - Illicit Discharge Detection and Elimination (IDDE) Program

Objective: Implement and enforce a program to detect and eliminate illicit discharges and non-stormwater discharges. The program must address illicit discharges in the following four components: 1) Procedures for prioritizing watersheds, 2) procedures for tracing the source of an illicit discharge, 3) procedures for removing the source of the discharges, and 4) procedures for program evaluation and assessment.

BMP ID #	BMP	Measurable Goal(s)	Responsible Party	Implementation Deadline
3.1	Implement a non-stormwater discharge ordinance	For tenants, civilian and military personnel, Local Instruction 5090.9C Stormwater Protection Plan establishes the non-stormwater discharge ordinance. This local instruction will be reviewed annually and updated as necessary.	Code 106.3	Annual
3.2	Maintain written IDDE Plan	PNS has issued Standard Operating Procedure (SOP) for Illicit Discharge Detection and Elimination Procedure and will be updated to meet new permit requirements.	Code 106.3	Annual
3.3	Maintain a map(s) of storm sewer systems	PWD-ME maintains and updates storm sewer maps as needed.	PWD-ME	Annual
3.4	Implement a dry weather outfall inspection program	Each outfall shall be inspected (using inspection form in appendix B) at least once over the permit cycle. If dry weather discharge is observed, PNS will sample the discharge to determine if the discharge is an illicit discharge and then investigate until either a source is identified, or it has been determined that the evidence of the illicit discharge is due to naturally occurring sources. Inspection and investigation will be accomplished in accordance with SOP 106-027 found in Appendix A.	Code 106.3	All outfalls shall be inspected once during permit cycle
3.5	Notification and actions upon confirming illicit discharge.	Code 106 and PWD-ME will notify all responsible parties affected by existing illicit discharge and tag out all processes/equipment contributing to the illicit discharge. Where elimination of an illicit discharge	Code 106.3/PWD-ME	As needed/Report annually

BMP ID #	BMP	Measurable Goal(s)	Responsible Party	Implementation Deadline
		within 60 calendar days of its identification and verification is not possible, PNS will establish an expeditious schedule for elimination and all pertinent information will be included in the annual report.		
3.6	Wet weather assessment for the potential of illicit discharges during wet weather events	Code 106 to incorporate procedures for conducting wet weather assessments into the IDDE Plan. Wet weather assessment of all outfalls will be completed by the end of 5-year permit cycle.	Code 106.3	All outfalls shall be inspected once during permit cycle
3.7	Reporting of Sanitary Sewer Overflows (SSOs)	Document the sanitary sewer overflow events that discharge to the MS4 and corrective actions taken.	Code 106.3	Each occurrence

#### MCM4 - Construction Site Stormwater Runoff Control

Objective: Implement and enforce a program to minimize or eliminate pollutants in any stormwater runoff to the regulated small MS4 from construction activities that result in a land disturbance of greater than or equal to one acre.

BMP ID #	BMP	Measurable Goal(s)	Responsible Party	Implementation Deadline
4.1	Regulatory mechanism that requires the use of erosion and sediment control BMPs at construction sites	PNS holds a Maine Site Location of Development Act (SLDA) permit. When initiating a construction action on yard, PNS is required, at a minimum to comply with the Basic Standards regarding Erosion and Sediment Controls (within Chapter 500. Stormwater Management Law).	PWD-ME	Annual
4.2	Procedures for site plan review	PNS has an established procedure for Site Plan Review. All projects start with an Environmental (EV) checklist in the planning phase. Once an EV checklist is issued, PWD-ME and Code 106.3 Environmental evaluate the potential for permitting, i.e., Site Law, Stormwater Management, MCGP, Hazardous Waste, Clean Air Compliance, tanks, etc. As the design progresses permitting documents are developed, and if required, treatment systems are designed. Review by environmental division occurs at each stage of the design process. If permits are required, PWD-ME ensure the permits are included in the contract documents and work with the site contractor to ensure they are aware of the permit conditions during the award, pre-construction, EV kickoff meetings, etc.	PWD-ME/Code 106.3	Annual
4.3	Procedures for notifying construction site developers and operators of the requirements for	PWD-ME has established Temporary Environmental Controls (Section 01 57 19.00 22). These controls are applicable to all Design-Bid-Build and Design-Build projects at Portsmouth Naval Shipyard. This document outlines plans and content required to	PWD-ME	Annual



BMP ID #	BMP	Measurable Goal(s)	Responsible Party	Implementation Deadline
	<p>registration under the Maine Construction General Permit and Chapter 500, Stormwater Management.</p>	<p>ensure Environmental requirements are met. An Environmental Management Plan is submitted by the contractor providing a general overview of project impact areas including; stormwater, hazardous waste, prevention of releases to the environment, dewatering, etc.</p> <p>A separate Storm Water Management/Erosion and Sediment Control Plan includes detailed site plans for control measures.</p> <ul style="list-style-type: none"> <li>• Ground cover</li> <li>• Erodible soils</li> <li>• Temporary measures</li> <li>• Mechanical retardation and control runoff</li> <li>• Vegetation and mulch</li> <li>• Effective selection, implementation and maintenance of BMPs</li> <li>• Wastewater disposal methods</li> </ul> <p>Code 106/PWD-ME shall review the Temporary Environmental Specs annually and update as necessary.</p>		
4.4	<p>Inspection of construction sites</p>	<p>Inspections of construction sites &gt; 1 acre are done in accordance with requirements set forth in the GP.</p> <ul style="list-style-type: none"> <li>• A minimum of three inspections must be completed during the active earth-moving phase of construction.</li> <li>• A minimum of one inspection must be completed annually until project reaches substantial completion.</li> </ul>	Code 106.3	As required/Annual

BMP ID #	BMP	Measurable Goal(s)	Responsible Party	Implementation Deadline
		<ul style="list-style-type: none"> <li>• One of the three inspections must be at project completion to ensure the site reached permanent stabilization and all temporary erosion and sediment controls have been removed.</li> <li>• Documentation of construction inspections, enforcement action and corrective actions taken.</li> </ul>		
4.5	Develop written procedures for site inspection and enforcement.	Develop an SOP for conducting inspections of construction sites to include frequency, inspection criteria, corrective actions, and enforcement.	Code 106.3	PY 1

### MCM5 – Post-Construction Stormwater Management in New Development and Redevelopment

Objective: Implement and enforce a program to address post construction 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 that discharge into the MS4 or directly to waters of the State other than groundwater.

BMP ID #	BMP	Measurable Goal(s)	Responsible Party	Implementation Deadline
5.1	Structural and/or Non Structural Strategies to Minimize Water Quality Impacts	PNS will continue to follow Low Impact Design for all new development and redevelopment projects as required by our Site Location of Development permit. The stormwater treatment systems PNS installs are in accordance with MEDEP regulations.	PWD-ME	As needed
5.2	Develop and Implement a Post Construction Discharge Program	<p>PNS will continue to annually inspect post construction BMPs that were installed on or after July 1, 2008. The inspections will determine if the BMP is adequately maintained and is functioning as intended or requires maintenance.</p> <p>In permit year 1, PNS will formally develop a written site specific Post Construction Discharge Program to include a list of BMPs, inspection schedule, inspection criteria, corrective actions, and enforcement. Currently PNS is operating under the direct requirements of Site Law permit and Chapter 500.</p>	PWD-ME/Code 106.3	Annual

**MCM6 – Pollution Prevention/Good Housekeeping for Facility Operations**

Objective: Mitigate or eliminate pollutant runoff from the Portsmouth Naval Shipyard.

BMP ID #	BMP	Measurable Goal(s)	Responsible Party	Implementation Deadline
6.1	Maintain an inventory of all operations conducted in, on, or associated with the permittees facility.	PNS has a mixture of industrial, residential, and open space. Activities performed in all areas have the potential to cause or contribute to stormwater or surface water pollution. Industrial sources are covered under the PNS Industrial MSGP and current SWPPP while the municipal activities are incorporated into the Grounds Maintenance Manual. PWD-ME/Code 106.3 will maintain an inventory of all activities.	PWD-ME/Code 106.3	Annual
6.2	Grounds Maintenance Manual	<p>The PNS Grounds Maintenance Manual will be updated prior to the effective date of this GP and must be reviewed annually by Code 106.3 and PWD-ME.</p> <p>PNS has developed and implemented Instructions to fulfill the requirements of the Shipyards Stormwater Multi-Sector General Permit for Industrial Activities.</p> <p>PNS has developed a number of instructions to identify equipment and establish procedures and methods to prevent the discharge of oil, hazardous material, or hazardous waste related to onshore facilities into or upon navigable waters of the United States or adjoining shorelines.</p> <p>Reference:  <ul style="list-style-type: none"> <li>• NAVSHIPYD PTSMHINST 5090.1A Chapter 12 - Oil Pollution Prevention</li> </ul> </p>	Code 106.3/ PWD-ME	Annual

BMP ID #	BMP	Measurable Goal(s)	Responsible Party	Implementation Deadline
		<ul style="list-style-type: none"> <li>• NAVSHIPYD PTSMHINST 5090.3F - Oil Spill Prevention Control and Countermeasures Plan</li> <li>• NAVSHIPYD PTSMHINST 5090.24C – Oils and Oily Mixtures Operations Manual</li> <li>• NAVSHIPYD PTSMHINST 5090.30A – Hazardous Waste Generator Standards</li> <li>• NAVSEA OSHE Control Manual Chapter 320, local Appendix K</li> </ul>		
6.3	Training	<p>PNS conducts annual Environmental Awareness training for all employees. The training provides a general overview of activities and steps to take to prevent or reduce stormwater pollution.</p> <p>Specific sector training is provided to employees whose daily tasks present a greater potential to impact stormwater.</p> <p>PNS will document the types of training presented, the number of employees that received training, their occupation, the length of the training and training content delivered in each annual report.</p>	Code 106.3	Annual
6.4	Implement Street Sweeping Program	PNS will continue to implement a program to sweep all paved streets and parking lots maintained by the Shipyard at least once a year as soon as possible after snowmelt to the extent allowable under State or Federal law.	PWD-ME	Continuous
6.5	Implement Catch Basic Program	PNS will continue to implement a program to evaluate and, if necessary, clean catch basins and other stormwater structures that accumulate sediment.	PWD-ME	Annual

BMP ID #	BMP	Measurable Goal(s)	Responsible Party	Implementation Deadline
		<p>PNS has developed its own maintenance and cleanout plan to address its 800-plus catch basins and to meet the intent of the permits. Current PNS practice is as follows:</p> <ul style="list-style-type: none"> <li>-A contractor conducts catch basin cleaning and documents required maintenance.</li> <li>-Catch basin cleanouts are prioritized using historical data from previous cleanouts. For example, catch basins with previously noted significant accumulations are cleaned out annually. Those with little to no sediment accumulation may be cleaned out in another one or two years. The contractor completes all catch basin cleanouts within three years.</li> <li>-Sediment from cleanouts is properly disposed of through PNS's Hazardous Waste Facility.</li> </ul> <p>Historical data shows that most catch basins are less than 50 percent full prior to cleaning. Having one plan for both permits is advantageous for PNS to easily and efficiently complete cleanings for all catch basins. There are additional measures in place, such as inspectors checking catch basins covered under the MSGP industrial sectors to ensure that sediment depth of the sump is less than 2/3rds full.</p>		

BMP ID #	BMP	Measurable Goal(s)	Responsible Party	Implementation Deadline
6.6	Repair and Upgrading of Stormwater Conveyances, Structures and Outfalls	PNS will continue to evaluate conveyances, structures and outfalls on a predetermined schedule and upgrade as necessary.	PWD-ME	Continuous
6.7	Implement written procedures outlined in a stormwater pollution prevention plan SWPPP for vehicle or equipment maintenance areas, fueling areas and from all other vehicle and equipment cleaning facilities that are owned or operated by permittee	Portsmouth Naval Shipyard maintains a SWPPP in accordance with the Multi-Sector General Permit #MER05B441 / Waste Discharge License (WDL) #W008227-5Y-B-R. The SWPPP and Grounds Maintenance Manual are reviewed annually and updated when deemed necessary.	Code 106.3	Continuous

## **Allowable Non-Stormwater Discharges**

The General Permit authorizes the following non-stormwater discharges provided they do not cause or contribute to a violation of water quality standards as determined by the Department. These discharges are not considered as significant contributors of pollutants on the Shipyard.

- landscape irrigation
- diverted stream flows
- rising ground waters
- uncontaminated ground water infiltration (as defined at 40 CFR 35.2005(20))
- uncontaminated pumped ground water
- uncontaminated flows from foundation drains
- air conditioning and compressor condensate
- irrigation water
- flows from uncontaminated springs
- uncontaminated water from crawl space pumps
- uncontaminated flows from footing drains
- lawn watering runoff
- flows from riparian habitats and wetlands
- residual street wash water (where spills/leaks of toxic or hazardous materials have not occurred unless all spilled material has been removed and detergents are not used)
- hydrant flushing and firefighting activity runoff
- water line flushing and discharges from potable water sources
- individual residential car washing
- dechlorinated swimming pool discharges

## **Steam Condensate**

As an industrial facility with a power plant, the Shipyard generates steam for heating used throughout the Shipyard. Steam condensate discharges at numerous locations that typically discharge to the ground and eventually to the storm drain system. All the storm drains ultimately discharge to the Piscataqua River. The river provides mixing and dilution of any potential thermal impact. The stormwater General Permit allows for air conditioner condensate, but is silent on steam condensate. The Shipyard understands this may be a global issue as many urban, state and industrial sites use steam to heat. In an effort to determine the potential impact the discharge of steam condensate may have on water quality, two steam condensate discharge samples were collected and analyzed for a number of parameters with EPA "benchmark" values listed in the MSGP. The samples were exceptionally clean. Below are the results from the two samples.



Steam Condensate Analytical Results  
Sample Date: 12/10/03  
Portsmouth Naval Shipyard  
Kittery, Maine

Parameter	Building 43	Building 64	EPA Stormwater Benchmark Values
TSS (mg/l)	ND (<1)	ND (<1)	100
Chloride (mg/l)	ND (<1)	ND (<1)	860
Oil & Grease (mg/l)	ND (<5)	ND (<5)	15
COD (mg/l)	15	ND (<13)	120
Ammonia (mg/l)	ND (<1)	ND (<1)	19
Mercury (ug/l)	ND (<0.5)	ND (<0.5)	2.4
Nitrate+Nitrite (N) (mg/l)	ND (<0.05)	ND (<0.05)	0.68
pH	6.6	6.0	6.0 - 9.0
Aluminum (mg/l)	ND (<0.5)	ND (<0.5)	0.75
Antimony (mg/l)	ND (<0.5)	ND (<0.5)	0.636
Arsenic (mg/l)	ND (<0.1)	ND (<0.1)	0.16854
Beryllium (mg/l)	ND (<0.1)	ND (<0.1)	0.13
Cadmium (mg/l)	ND (<0.01)	ND (<0.01)	0.0159
Copper (mg/l)	ND (<0.05)	ND (<0.05)	0.0636
Iron (mg/l)	ND (<1.0)	ND (<1.0)	1.0
Lead (mg/l)	ND (<0.05)	ND (<0.05)	0.0816
Magnesium (mg/l)	ND (<0.05)	ND (<0.05)	0.0636
Manganese (mg/l)	ND (<1.0)	ND (<1.0)	1.0
Nickel (mg/l)	ND (<1.0)	ND (<1.0)	1.417
Selenium (mg/l)	ND (<0.1)	ND (<0.1)	0.2385
Silver (mg/l)	ND (<0.01)	ND (<0.01)	0.0318
Zinc (mg/l)	ND (<0.1)	ND (<0.1)	0.117
Phosphorus (mg/l)	ND (<1.0)	ND (<1.0)	2.0

Based on the analytical results and mixing & dilution from the Piscataqua River, the Shipyard does not consider the discharge of steam condensate as a significant contributor of pollutants and the effects on water quality in the Piscataqua River are de minimis and is considered an allowable non-stormwater discharge pursuant to the General Permit.

### Reporting and Record Keeping Requirements

The General Permit requires the permittee to submit an annual report based on a reporting period of July 1 to June 30. The Shipyard must submit a report to the MEDEP Stormwater Coordinator by September 15, 2023, and annually thereafter by September 15 for the Department's review and approval. The report must include the following:

- The status of compliance with permit conditions based on the permittee's Plan, an assessment of the appropriateness of identified best management practices, progress towards achieving identified measurable goals for each of the Minimum Control Measures and progress towards achieving the goal of reducing the discharge of pollutants to the Maximum Extent Practicable.
- Results of information collected and analyzed, including monitoring data, if any, during the reporting period.
- A summary of the stormwater activities the Shipyard intends to undertake pursuant to its Plan during the next reporting cycle.
- Changes in any identified BMPs or measurable goals that apply to the Plan.
- A summary describing the activities, progress, and accomplishments for each of the minimum control measures #1 through #6 (including such items as the status of education and out reach efforts, public involvement activities, stormwater mapping efforts, dry weather inspections, 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, and the status of good housekeeping/pollution prevention program).

### **Standard General Restrictions**

A discharge covered by the General Permit may not:

- Contain any pollutant, including toxic substances, in quantities or concentrations, which may cause or contribute to any adverse impact on the receiving water;
- Be to a receiving water which is not meeting its classification standard for any characteristic which may be affected by the discharge; or
- Impart color, taste, turbidity, radioactivity, settleable materials, floating substances or other properties that cause the receiving water to be unsuitable for the designated uses ascribed to its classification.

## Certification Signatures

*The signature of the permittee's principal executive officer and any individual or individuals responsible for actually preparing the Plan, each of whom shall certify in writing as follows:*

"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 that 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."

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Robert C. Burley  
By direction of the Shipyard Commander

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Adam Gagne  
Environmental Engineer, Code 106.31

**Appendix A: Illicit Discharge Detection and Elimination Plan**

OCCUPATIONAL, SAFETY, HEALTH, AND ENVIRONMENTAL OFFICE  
STANDARD OPERATING PROCEDURE (SOP) 106 - 027

Title: ILLICIT DISCHARGE DETECTION AND ELIMINATION PROCEDURE (IDDE)

- Ref:
- (a) Maine Department of Environmental Protection,  
General Permit for the Discharge of Stormwater from State  
or Federally Owned Municipal Separate Storm Sewer Systems  
Permit, MER042000
  - (b) NAVSHIPD PTSMHINST 5090.1, Chapter 7: Water Pollution  
Prevention and Wastewater Management
  - (c) NAVSHIPYD PTSMHINST 11000.1A, Building Monitor Program
  - (d) NAVSHIPYD PTSMHINST 5100.82E, Volume 2, Part I, Chapter I:  
Confined Space Entry - Gas Free Naval Maritime Confined  
Space Program
  - (e) 2016 Maine Multi-Sector General Permit (MSGP) for  
Stormwater Discharge Associated With Industrial Activity.  
Maine Pollutant Discharge Elimination System (MEPDES)  
Permit number MER050000, Waste Discharge License number  
W008227-MN-C-R

1. Purpose. To provide a procedure on how to detect and eliminate  
illicit discharges and non-stormwater discharges to the  
Portsmouth Naval Shipyard (PNS) stormwater drainage system as required  
by reference (a).
2. Cancels. Standard Operating Procedure (SOP) 106-027, 26 Jan 2017
3. Effective Date.
4. Scope. This SOP applies to illicit and non-stormwater discharge  
sources on PNS that may enter the stormwater drainage system.  
Reference (b) assigns Code 106 the responsibility to monitor, identify  
and correct any illicit wastewater or stormwater discharges at PNS.

5. Procedure to Prevent or Confirm Illicit Discharges and Non-Stormwater Discharges. Code 106.3 will:

5.1. Review facility and infrastructure construction and renovation project drawings for incorrect designs and improper stormwater drainage connections. Submit comments to Public Works Department - Maine (PWD-ME) or their contractor to correct designs.

5.2. Per reference (c), review self-help requests submitted to PWD-ME to identify potential illicit discharges, as needed.

5.3. Upon discovery during the conductance of regular work or when notified by a shop, tenant, or other individual of a potential illicit discharge, investigate the discharge following the steps in section 6.

5.4. Ensure storm sewer system infrastructure maps are updated and reviewed annually for accuracy per reference (a). If illicit discharges are found or suspected, follow the steps in section 6.

5.5. Conduct dry weather outfall visual inspections per reference (a). If there are potential indicators of an illicit discharge, continue further investigation upstream and follow the steps in section 6.

**Table 1: Potential Indicators of an Illicit Discharge**

Staining or Residue
Flow: Trickle, moderate, over half-full
Odor: Sewage, rancid/sour, sulfide, petroleum/gas, ammonia, chlorine, chemicals
Color or Discoloration
Turbidity
Floatables: Sewage, suds, petroleum (oil sheen), scum, foam, garbage
Other: Excessive algal growth

5.5.1. Investigate outfalls showing one or more signs of potential illicit discharge indicators.

5.5.1.1 Where dry weather flow is present, Code 106 must sample the discharge to determine if the discharge is an illicit discharge and then must investigate until either a source is

identified, or it has been determined that the evidence of the illicit discharge is due to naturally occurring sources.

5.5.1.2 Sampling and analysis must include, but not limited to:

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

5.5.2. Determine tidal influence of outfall flow. If tidal influence is suspected, investigators will work both upstream of the outfall and at the outfall to confirm the source of flow and verify the illicit discharge. Investigators may have to return after multiple slack tides to determine tidal influence.

5.5.3. Follow all safety and confined space requirements when investigating illicit discharges.

5.5.3.1. Within 6 feet of an unguarded edge of a pier or dry dock or when there is a risk of falling into the Piscataqua River due to rocky terrain or slippery conditions personnel will wear a personal floatation device (PFD) and conduct the investigation in pairs.

5.5.3.2. Within the Controlled Industrial Area (CIA) personnel are required to wear a hardhat and safety shoes; safety glasses and hearing protecting are worn as needed.

5.5.3.3. Solid storm drain/sanitary sewer covers and open storm drain grates are heavy. Caution should be taken when lifting covers and grates to avoid injury.

5.5.3.4. Prior to opening solid storm drain or sanitary sewer covers contact the appropriate organization for "gas free" testing: NAVFAC x1887, PNS gas free engineers x1504, x1475, or x6936; or Shop 99 (207)994-4364. Open storm drain grates typically do not require "gas free" procedures unless there is suspicion of a dangerous condition, e.g. rotten egg, natural gas, or gasoline odor; discernable amount of flammable liquid on top of water, etc.

5.5.3.5. Below grade storm drain and sanitary sewer manholes are considered "confined spaces." Personnel will not allow any body part to cross the plane of the storm drain open grate or solid cover or sanitary sewer system cover boundary without having 6010 training and confined space entry approval per reference (d).

Approval includes obtaining "gas free" testing and having a confined space attendant present prior to entry.

5.6. Conduct wet weather outfall visual assessment per reference (a). If there are potential indicators of an illicit discharge, continue further investigation upstream and follow the steps in section 6.

## 6. Illicit Discharge Elimination Procedures and Non-Stormwater Discharge Notification Procedures.

### 6.1. Notifications

6.1.1. All Code 106 personnel notify the Stormwater Program Manager at (207)703-3111 of any potential illicit and non-stormwater discharges.

6.1.2. Code 106.32 notify the Stormwater Program Manager of any unauthorized release or discharge (e.g., spill or leak) to a water of the State for the Stormwater Program Manager to prepare a corrective action report (CAR) as required per reference (a).

6.2. The Stormwater Program Manager will ensure the following steps take place:

6.2.1. Confirm the illicit or non-stormwater discharge by reviewing PNS maps (i.e. storm drain distribution system or sanitary sewer maps), construction or facility design drawings, drain investigation reports; performing visual inspections, conducting personnel interviews, dye testing, etc.

6.2.2. Find and terminate the source of an illicit or non-stormwater discharge. Instruct the shop or responsible person to remove the discharge source to the stormwater drainage system by tagging out a valve, equipment or process that is creating the illicit discharge.

6.2.3. If the source cannot be immediately terminated, generate an Occupation Health, Safety, and Environmental Deficiency Report (OSHEDR) to document and track progress towards correcting the illicit discharge.

6.2.4. Work with the shop, equipment owner, process owner, and/or PWD-ME to design and implement a solution to eliminate the illicit or non-stormwater discharge. If facility or infrastructure work is required, ensure a PWD-ME Work Request (WR) is created.



## 7. Training

7.1. IDDE and non-stormwater awareness training is provided to PNS personnel by:

7.1.1. Code 106.3 conducts Routine Facility Inspections (RFI's) as required by reference (e). RFI's include observing the physical condition of and around outfall(s). Personnel are trained in allowable and non-allowable stormwater discharges and to look for evidence of pollutants in discharges and/or the receiving water in dry and wet weather conditions. If non-allowable discharges or pollutants are found, inspectors notify the Stormwater Program Manager to conduct follow-up actions.

7.1.2. Code 106.3 conducts dry weather outfall inspections as required per reference (a). Personnel receive IDDE awareness training prior to conducting inspections.

7.1.3. All PNS employees take Annual Environmental Awareness training which details allowable and non-allowable discharges to the stormwater and sanitary sewer systems.

7.1.4. In accordance with reference (c), PWD-ME provides training to building monitors on self-help project approval requirements. Any new wastewater streams or discharges to the stormwater or sanitary sewer systems are identified in the self-help process and reviewed by PWD-ME, Code 106.1 and Code 106.3 as applicable.

7.1.5. PNS employees who perform submarine maintenance receive training on Task Group Instructions (TGI's). TGI's that have stormwater or sanitary sewer discharges require shop personnel to contact Code 106.3 prior to performing discharge actions to ensure preventative measures are in-place to prevent illicit discharges.

7.1.6. Code 106.3 provides public education and outreach to PNS employees and tenants through the use of wastewater and stormwater pollution prevention articles, bulletins, and messages.

7.2. Outfall inspectors will be trained on this IDDE procedure by the Stormwater Program Manager or other trained individual deemed competent by the Stormwater Program manager. A training roster will be completed and a copy will be maintained by the Stormwater Program Manager.

R. C. BURLEY

Distribution:

106.3 (all personnel)

## **Appendix B: Inspection Forms**

## MS4 Construction Inspection Form for Sediment and Erosion Control

Project Title: Project Contractor Company: Contractor POC:	Date of Inspection:
Code 106.3 Inspector(s): Andy Smith NAVFAC POC & Ext:	Inspection Time:      AM/PM
Pictures Taken:	Weather:
Type of Inspection: Initial / Return / Winter Stabilization / Final Stabilization / Deficiency Follow-Up	
Inspection Parameters	Comments/Follow up Date
1) Construction area disturbance greater than 1 acre?	Yes / No
2) Does contractor have Erosion and Sediment Control Plan, drawings, and inspection log on site?	Yes / No / NA
3) Is the contractor or third party inspector conducting inspections at least once per week as well as before and after rain events as required by the NAVFAC project specifications and Maine Construction General Permit Appendix B?	Yes / No / NA
4) Is the construction entrance clean with no trackout of sediment?	Yes / No
5) Is waste properly managed (concrete washout disposed of properly, no liquids in waste container, waste containers closed)?	Yes / No
6) Are there any petroleum or hazardous materials on site? If so, are spill controls in place?	Yes / No / NA
Review the site plan for sediment and erosion control requirements. Select "Fail" if contractor needs to make corrections or repairs, and describe briefly repairs needed.	
Catch Basin Protection	Pass / Fail / NA
Silt Fence /Hay bales	Pass / Fail / NA
Erosion Control Berm or Sock	Pass / Fail / NA
Dust Control	Pass / Fail / NA
Dewatering	Pass / Fail / NA
Other:	Pass / Fail / NA



# Dry-Weather Outfall Inspection Form

## SECTION 1: GENERAL INFORMATION

Date:	Time:	Precipitation < 0.1' in last 48 hrs?: <input type="checkbox"/> Yes <input type="checkbox"/> No
City: Kittery	State: ME	Map Quadrant:
Location Description:		

## SECTION 2: OUTFALL DESCRIPTION

Outfall ID:	Photos Taken? Y / N	Lat:	Long:
Outfall Type: <input type="checkbox"/> Closed Pipe <input type="checkbox"/> Open Channel			
Vegetation Around Outfall <input type="checkbox"/> None <input type="checkbox"/> Dead <input type="checkbox"/> Some Vegetation <input type="checkbox"/> High Vegetation			
Pipe Type <input type="checkbox"/> Cast Iron <input type="checkbox"/> PVC <input type="checkbox"/> RCP <input type="checkbox"/> Concrete <input type="checkbox"/> Vitrified Clay <input type="checkbox"/> Other			
Deposits/Stains/Residue: <input type="checkbox"/> None <input type="checkbox"/> Sediment <input type="checkbox"/> White residue <input type="checkbox"/> Oily <input type="checkbox"/> Paint <input type="checkbox"/> Flow Line <input type="checkbox"/> Other			
Receiving Waterbody: Piscataqua River			

## SECTION 3: FIELD SCREENING OBSERVATION

Flow description: <input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Over half-full <input type="checkbox"/> No Flow, below attributes are N/A	
Odor	<input type="checkbox"/> None <input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Sulfide (rotten egg) <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Ammonia <input type="checkbox"/> Chlorine <input type="checkbox"/> Chemicals <input type="checkbox"/> Other Relative Severity: <input type="checkbox"/> Faint <input type="checkbox"/> Strong <input type="checkbox"/> Very Strong
Color	<input type="checkbox"/> Clear <input type="checkbox"/> White <input type="checkbox"/> Gray <input type="checkbox"/> Black <input type="checkbox"/> Orange/Rust <input type="checkbox"/> Red <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Brown <input type="checkbox"/> Other Relative Intensity: <input type="checkbox"/> Faint <input type="checkbox"/> Dark <input type="checkbox"/> Very Dark
Turbidity	<input type="checkbox"/> Clear <input type="checkbox"/> Cloudy <input type="checkbox"/> Muddy <input type="checkbox"/> Milky <input type="checkbox"/> Other Relative Intensity: <input type="checkbox"/> Slight <input type="checkbox"/> Moderate <input type="checkbox"/> High

Floatables	<input type="checkbox"/> None <input type="checkbox"/> Sewage, toilet paper, etc. <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Scum <input type="checkbox"/> Foam <input type="checkbox"/> Garbage <input type="checkbox"/> Other Relative Severity (Add comment): <input type="checkbox"/> Few/Slight <input type="checkbox"/> Moderate <input type="checkbox"/> Heavy
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**SECTION 4: RESULT OF DRY-WEATHER SCREENING INVESTIGATION**

Potential Illicit Discharge: <input type="checkbox"/> None <input type="checkbox"/> Unlikely <input type="checkbox"/> Possible <input type="checkbox"/> Probable <input type="checkbox"/> Obvious Possible source of discharge:
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**SECTION 5: SIGNATURE AND ADDITIONAL COMMENTS**

Signature:	Date:
Inspector (Print Name):	Badge #:
Comments or additional actions to be taken:	