Stormwater Pollution Prevention Plan

for:

Pease International Tradeport
Portsmouth, NH 03801

SWPPP Contact:
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INTRODUCTION

This Storm Water Pollution Prevention Plan (SWPPP) has been prepared for The Pease International Tradeport in accordance with the requirements of the United States Environmental Protection Agency (EPA) National Pollutant Discharge Elimination System (NPDES) Individual Permit No. NH0090000 (The Permit). In accordance with the permit, the SWPPP must include:

- A designated storm water pollution prevention team
- A description of potential pollutant sources
- A description of stormwater measures and controls
- A signature and certification of the facility owner or designated official.

This SWPPP is comprised of eight sections and the Appendix. Section 1 presents a description of the facility and lists facility contact information. Section 2 identifies potential pollutant sources located at the Tradeport. Section 3 discusses various storm water measures and controls. Section 4 lists schedules and procedures for monitoring storm water runoff from the Tradeport. Section 5 discusses quarterly visual and annual comprehensive site inspections. Section 6 discusses the required documentation to support eligibility considerations under other federal laws. Section 7 includes the SWPPP Certification statement signed by the PDA Executive Director. Section 8 discusses modifications to the SWPPP that may be required due to changes in Tradeport activities. And the appendices include a copy of the permit and various types of supportive documentation.

Background

Portsmouth International Airport at Pease (PSM) is located at the site of the former Pease Air Force Base which closed operations in 1991. In 1992 and 1997 the Air Force granted leasehold interests to the Pease Development Authority (PDA), an agency of the State of New Hampshire established pursuant to NH RSA 12-G, to implement the comprehensive conversion and redevelopment of the former Air Force Base. Subsequently, PDA received title to the property.

PDA operates and maintains PSM and oversees landside development activities. Local municipalities have a role in reviewing development proposals and also provide fire, police and municipal services in accordance with the RSA and established agreements. These agreements include a wastewater disposal and water service facility license agreement that gives operational responsibility of the WWTP to the City of Portsmouth.

PDA is the holder of NPDES Permit #NH0090000. The permit is an individual permit and covers industrial activities associated with stormwater runoff from the airport and the discharge of treated effluent from the Pease WWTP. The permit was originally issued to the Air Force, was transferred to PDA in 1992, and was renewed by EPA in 2000. Prior to the expiration of the permit in August of 2005, PDA submitted a reapplication. EPA did not issue a new permit. However, correspondence from the EPA dated July 7, 2005 indicates receipt of the PDA’s reapplication and states the conditions of the present permit will continue in force until the new permit is issued. A copy of this correspondence is kept with the permit in Appendix R.
This SWPPP is prepared in conjunction with Permit NH009000 and specifically identifies potential stormwater quality impacts from airport related activities. The plan details airport operations that are conducted by PDA (owner) and its tenants. Stormwater discharges from the WWTP are discussed in a separate SWPPP prepared by the City of Portsmouth. Landside tenants not associated with airport activities are also located within the permitted outfall watersheds. As of this date, the majority of these tenants are office users and are excluded from the NPDES program. The remainder of the landside tenants can be classified as light manufacturing or general warehousing. Each of these tenants will determine its need for a SWPPP and/or its eligibility for the No Exposure Exclusion. Copies of the Notices of Intent or No Exposure Certifications for these industrial landside tenants can be found in Appendix C.
SECTION 1: FACILITY DESCRIPTION AND CONTACT INFORMATION

1.1 Facility Information

Facility Information
Name of Facility: Pease International Tradeport
Street: 135 Corporate Drive (Waste Water Treatment Plant)
City: Portsmouth
County or Similar Subdivision: Rockingham County
State: NH
ZIP Code: 03801
Permit Tracking Number: NH0090000
Latitude/Longitude
Latitude: 43° 04’ 40.64”
Longitude: 70°49’23.60”
Method for determining latitude/longitude: Airport Reference Point located on airfield, recorded by FAA
Is the facility located in Indian Country? No
Is this facility considered a Federal Facility? No
Estimated area of industrial activity at site exposed to stormwater: 1,100 acres

Discharge Information
Does this facility discharge stormwater into an MS4? No

Name(s) of water(s) that receive stormwater from your facility:

The Tradeport lies within the Piscataqua River Basin. The Piscataqua River is a 13-mile long tidally influenced river located to the northeast of the site that discharges to the Atlantic Ocean. Great Bay and Little Bay, located to the west and northwest of the Tradeport are tidal embayments that discharge to the Piscataqua River. The General Location Map in Appendix A shows the site and surrounding water bodies.

The topography at the site is gently rolling coastal terrain. The predominant feature is a ridge that extends in a northwest/southeast direction at an elevation of about 100 feet based on the National Geodetic Vertical Datum (NGVD). The airport runway and parking apron are located along this ridge. Most of the site is between 60 and 100 feet in elevation, with exterior portions of the site sloping down toward surrounding water bodies.

Stormwater runoff on the site is collected in an extensive catch basin system and conveyed through subsurface drainage pipes to various receiving streams and ditches. These streams discharge to Great Bay, Little Bay or the Piscataqua River.

The General Location Map in Appendix A and Site Map in Appendix B show the locations of the four permitted stormwater outfalls and representative sample locations. (Outfall 5 is associated with the WWTP and is described in a separate document.) Presented below is a description of the drainage areas on the site.
that are tributary to the permitted outfalls.

**Representative Sample Location A & G (Existing Outfall 001 Hodgson Brook):** Stormwater runoff from much of the eastern portion of the site discharges at various points to Hodgson Brook, which flows southeast to North Mill Pond before reaching the Piscataqua River. The watershed includes the aprons on either side of the hangar at 14 Aviation Avenue, thereby making this outfall part of the airport drainage system.

Existing Outfall 001 is south of the Wastewater Treatment Plant (WWTP), and just southeast of the intersection of Corporate Drive and Rye Street. It includes both the northwestern reach of the Brook (starting in the NHANG cantonment area) and the western reach also known as Newfields Ditch. Representative sample location A represents approximately 471.3 acres of Hodgson Brook watershed covers the southeast portion of the NHANG and stretches east across International Drive and covers the majority of Corporate Drive. Sample location G is approximately 317.7 acres and stretches from Flight Line Road east across NH Avenue and International Drive and includes Newfield’s Ditch. This area is primarily commercial office buildings and industrial with the exception of the following airport uses: NHANG; Airport Terminal; and, Hanger area near 14 Aviation Ave. The industrial uses occur indoors and include Lonz, Sig Sauer, Cisco Brewery, and Westinghouse. The offsite areas include the Home Depot Store and portions of Spaulding Turnpike and NH Turnpike.

**Representative Sample Location B (Existing Outfall 002 Flagstone Brook):** Flagstone Brook flows north from the site, via a culvert underneath Arboretum Drive, and eventually discharges to Little Bay. Representative sample location is at the end of pipe discharging to Flagstone Brook. Downstream of the sample location is a meandering stream recently enhanced by NHDOT and preserved as a conservation area. No commercial discharge is currently located between sampling location B and Arboretum Drive.

The land draining to the representative sample location B is approximately 231.5 acres and consists of the far northern portion of the aircraft parking apron and several NHANG buildings, including two aircraft hangars (buildings 253 and 254). Over the last twenty-five years little to no aircraft activity has occurred at this location and the apron has been used intermittently for vehicle parking and concrete rubble stockpiles. Subsurface drains convey stormwater runoff originating on the apron to sample location B at the northeast edge of the apron. The outfall is approximately 100-feet downstream of a 42-inch diameter pipe.

**Representative Sample Location C (Existing Outfall 003 McIntyre Brook):** Much of the runway and the entire main aircraft parking apron, comprising approximately 611.7 acres, drains to McIntyre Brook, which discharges to Great Bay. Most of the stormwater runoff is conveyed through subsurface drains, but about 30 percent of the area is drained by surface ditches and overland flow. Sample location C is at the downstream end of an oil water separator that captures and treats the first flush of stormwater. There is an overflow bypass that discharges stormwater directly to the brook. This discharge would consist of the second flush of cleaner stormwater.

The following structures are located in the watershed: Port City Air and fuel farm, T-hangers, Electric Vault, Haven Well, Radar Station, Run-up enclosure, Nav-Aid equipment shelters, 5 shade hangers (containing PDA’s fuel and deicing tanks) and the 14 Aviation Ave fuel farm. There are abandoned underground pipelines along the apron that previously carried jet fuel to fueling ports that existed over the surface of the apron.
Representative Sample Location D (Existing Outfall 004 Grafton Ditch): Grafton Ditch drains approximately 348.7 acres of the southern portion of the site. Sample location D is located near the intersection of Grafton Drive and Aviation Avenue. The ditch flows southeast from the outfall and then east where it discharges to Lower Grafton Brook and Hodgson Brook, eventually discharging to the Piscataqua River via North Mill Pond in Portsmouth.

The outfall pipe is 60 inches in diameter and drains an area along the southwest edge of the parking apron, including a Fixed Base Operator hanger, five aircraft hangars (Buildings 212, 213, 215 Executive Hangar, and 110 Aviation Ave Corporate Hangar, and a fuel farm associated with the Executive Hangar). Flow through the outfall drains only about 22 percent of the Grafton Ditch drainage area on the Tradeport land. The remainder of representative area is drained to wetlands located south of Corporate Drive.

Outfall 005: The City of Portsmouth monitors Outfall 5 in association with activities conducted at the waste water treatment plant.

Representative Sample Location E: A small portion of the northern end of the runway discharges to Peverly Brook via a 36-inch drain pipe. Peverly Brook is located on the northwest portion of the site with a drainage area of approximately 59.2 acres. Most of this land is undeveloped which flows overland to Great Bay or Little Bay.

Representative Sample Location F: Paul’s Brook watershed is approximately 167.8 acres including the former bulk fuel storage area off Arboratm Drive and now used occasionally for vehicle parking. This watershed flows northeast from the site and discharges to the Piscataqua River. There are a few commercial buildings located east of Arboratm Drive that drain to Paul’s Brook.

Other Stormwater Discharges

There are small areas of the Tradeport site that do not drain representative screening location A through G. In general, these areas have little development associated with them and the runcfl is characterized predominantly by overland flow to streams.

Pease Boulevard Entrance Area - A small area along the eastern site border near the Pease Boulevard entrance to the Tradeport drains to an unnamed stream. The stream flows northeast and discharges to the Piscataqua River. The drainage area comprises a largely undeveloped tract of land north of Pease Boulevard and a portion of the Cisco Brewery site south of the road.

Pickering Brook - An undeveloped area along the northern site border drains to Pickering Brook by overland flow. The Newington Town Forest is included in this watershed. Pickering Brook merges with Flagstone Brook north of the Pease parcel boundary.

Golf Course - The golf course is located along the southwesterly edge of the site. Stormwater runoff from land occupied by a portion of the golf course, as well as a small portion of the site abutting the runway, flows overland to an unnamed stream that discharges to Great Bay.

Are any of your discharges directly into any segment of an “impaired” water? Yes (EPA Waterbody
Reports can be found in Appendix H)

1. Name of the impaired water: Upper Hodgson Brook, Segment NHRIV600031001-05
   Identify the pollutant(s) causing the impairment: Mercury, Chloride, Manganese, Benthic Macroinvertebrates, Benthic Macroinvertebrates Bioassessments, Dissolved Oxygen, Dissolved Oxygen Saturation, E. Coli, pH, Habitat Assessment
   For pollutants identified, which do you have reason to believe will be present in your discharge? Mercury
   For pollutants identified, which have a completed TMDL? E. Coli, Mercury

2. Name of the impaired water: Lower Grafton Brook, Segment NHRIV600031001-06
   Identify the pollutant(s) causing the impairment: Mercury, Aluminum, Arsenic, Chromium, Total Chromium, Copper, Iron, Lead, Manganese, Zinc
   For pollutants identified, which do you have reason to believe will be present in your discharge? Mercury
   For pollutants identified, which have a completed TMDL? Mercury

3. Name of the impaired water: McIntyre Brook, Segment NHRIV600030904-11
   Identify the pollutant(s) causing the impairment: Mercury, Manganese
   For pollutants identified, which do you have reason to believe will be present in your discharge? Mercury
   For pollutants identified, which have a completed TMDL? Mercury

4. Name of the impaired water: Paul's Brook, Segment NHRIV600031001-07
   Identify the pollutant(s) causing the impairment: Mercury, Benthic Macroinvertebrates, Benthic Macroinvertebrates Bioassessments, Chloride, DDD, Dissolved Oxygen, E. Coli,
   For pollutants identified, which do you have reason to believe will be present in your discharge? Mercury
   For pollutants identified, which have a completed TMDL? Mercury, E. Coli

5. Name of the impaired water: Unnamed Brook (on Pease Golf Course), Segment NHRIV600030904-07
   Identify the pollutant(s) causing the impairment: Mercury
   For pollutants identified, which do you have reason to believe will be present in your discharge? Mercury
   For pollutants identified, which have a completed TMDL? Mercury
6. Name of the impaired water: **Pickering & Flagstone Brooks, Segment NHRIV600031001-01**
   Identify the pollutant(s) causing the impairment: **Mercury, Aluminum, Iron**
   For pollutants identified, which do you have reason to believe will be present in your discharge?
   **Mercury**
   For pollutants identified, which have a completed TMDL? **Mercury**

7. Name of the impaired water: **Railway Brook, Segment NHRIV600031001-08**
   Identify the pollutant(s) causing the impairment: **Mercury, Iron**
   For pollutants identified, which do you have reason to believe will be present in your discharge?
   **Mercury**
   For pollutants identified, which have a completed TMDL? **Mercury**

Do you discharge into a receiving water designated as a Tier 2 (or Tier 2.5) water? **No**
Are any of your stormwater discharges subject to effluent guidelines? **No**
Primary SIC Code or 2-letter Activity Code: **4581 Airport, Flying Fields, and Airport Terminal Services**
1.2  Contact Information/Responsible Parties

Facility Operator:
Name: Pease Development Authority
Address: 55 International Drive
City, State, Zip Code: Portsmouth, NH 03801
Telephone Number: (603) 433-6088
Email address: info@peasedev.org
Fax number: (603) 427-0433

Facility Owner:
Name: Pease Development Authority
Address: 55 International Drive
City, State, Zip Code: Portsmouth, NH 03801
Telephone Number: (603) 433-6088
Email address: info@peasedev.org
Fax number: (603) 427-0433

24 Hour Emergency SWPPP Contact:
Name: Maria Stowell, PE
Telephone number: Work: (603) 766-9296, Cell: (603) 365-6476
Email address: maria.stowell@peasedev.org
Fax number: (603) 427-0433
1.3 Stormwater Pollution Prevention Team

<table>
<thead>
<tr>
<th>Staff Names</th>
<th>Individual Responsibilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maria Stowell, PE</td>
<td>NPDES Permit Compliance, 24/7 emergency contact, commitment of resources to implement corrective actions, SWPP training, SWPPP updates, SPCC updates</td>
</tr>
<tr>
<td>766-9296</td>
<td></td>
</tr>
<tr>
<td>Michael Matos, PE</td>
<td>NPDES Permit Compliance, SWPP training, SWPPP updates, SPCC updates</td>
</tr>
<tr>
<td>766-9292</td>
<td></td>
</tr>
<tr>
<td>Jared Sheehan</td>
<td>NPDES Permit Compliance, SWPP training, SWPPP updates, SPCC updates</td>
</tr>
<tr>
<td>766-9298</td>
<td></td>
</tr>
<tr>
<td>Paul Brean</td>
<td>Overall management of airport</td>
</tr>
<tr>
<td>766-9230</td>
<td></td>
</tr>
<tr>
<td>Andrew Pomeroy</td>
<td>Overall management of airport activities</td>
</tr>
<tr>
<td>766-9231</td>
<td></td>
</tr>
<tr>
<td>Frannie Frank</td>
<td>Supervisor of PDA Maintenance Operations including runway deicing,</td>
</tr>
<tr>
<td>766-9241</td>
<td>Responsible for the implementation and maintenance of control measures/BMP's as well as corrective actions</td>
</tr>
<tr>
<td>Andrew Smith</td>
<td>NHANG Environmental Manager - Responsible for compliance with SWPPP at facility as well as maintaining and implementing NHANG SPCC Plan</td>
</tr>
<tr>
<td>430-2336</td>
<td></td>
</tr>
<tr>
<td>Kathy Temple</td>
<td>Port City Air Line Operator Manager - Responsible for compliance with SWPPP at facility as well as maintaining and implementing PCA SPCC Plan</td>
</tr>
<tr>
<td>W:430-1111</td>
<td></td>
</tr>
<tr>
<td>Don Delande</td>
<td>Seacoast Air Cargo General Manager - Responsible for compliance with SWPPP at facility</td>
</tr>
<tr>
<td>431-6826</td>
<td></td>
</tr>
<tr>
<td>Frank Diglio</td>
<td>Plane Sense and Security Manager - Responsible for compliance with SWPP at facility</td>
</tr>
<tr>
<td>501-7795</td>
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<tr>
<td>James Girard</td>
<td>Executive Hangar Manager - Responsible for compliance with SWPPP at facility as well as maintaining and implementing Executive Hangar SPCC Plan</td>
</tr>
<tr>
<td>334-6427</td>
<td></td>
</tr>
<tr>
<td>Douglas Thompson</td>
<td>Fisher Scientific- Responsible for compliance with SWPPP at facility</td>
</tr>
<tr>
<td>Peter Ferguson</td>
<td>Carlisle Capital- Responsible for compliance with SWPPP at facility</td>
</tr>
<tr>
<td>508-353-5173</td>
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</tbody>
</table>

1.4 Activities at the Facility

The Pease International Tradeport is a business and aviation industrial park of over 3,000 acres located in southeastern New Hampshire and situated within the City of Portsmouth and the Towns of Newington and Greenland. Approximately 25% to 30% of the area is dedicated to aviation uses.

Facilities at PSM include a domestic and international air passenger terminal, general aviation facilities, air cargo facilities, an 11,300 foot runway and associated taxiways and aircraft parking aprons. Additionally,
the New Hampshire Air National Guard (NHANG) Base is located at Pease and occupies approximately 218 acres.

Landside facilities at Pease include: business and professional offices; manufacturing buildings; educational and research & development uses; restaurants and other convenience and retail facilities; and customary accessory uses related to these activities.

PDA leases property, both landside and airside, to a variety of businesses as noted above. Approximately 7,000 +/- people are currently employed by Tradeport tenants. Lists of all Tradeport tenants and the use occurring at the tenant’s facilities can be found in Appendix D and Appendix E.

Due to past Air Force activities which resulted in releases of hazardous substances, Pease Air Force Base was listed on the National Priorities List (NPL) update of February 21, 1990. The Air Force has undertaken an aggressive remedial action plan and continues to oversee and monitor the cleanup of Pease. Currently all systems are OPS (Operating Properly and Successfully).

1.5 General Location Map

The site location is shown on a United States Geological Survey (USGS) Quadrangle Map which can be found in Appendix A.

1.6 Site Map

The Site Map depicts the facility layout and surface drainage patterns for the Tradeport and can be found in Appendix B.
SECTION 2: POTENTIAL POLLUTANT SOURCES

Pollutants can be introduced to stormwater from a number of different sources and activities conducted at the Tradeport. This generally includes any activity where chemicals are exposed to stormwater. The purpose of this section is to identify the types of potential pollutants found at the Tradeport based on observed and reported activities, review of historical spills, and review of stormwater sampling and analysis results.

2.1 Industrial Activity and Associated Pollutants

Tradeport tenants conduct activities that could potentially impact stormwater quality and these activities require specific BMP’s to best address potential impacts. These activities have been broken down into fourteen specific types that encompass all those considered important to stormwater quality. Some tenants perform no industrial activity or conduct a small-scale operation at one location. Others perform several of the fourteen activities listed below at a number of different buildings and locations. PDA maintains an inventory of all tenants at the Tradeport, whether they are located airside or landside, and tracks their activities to ensure that they are in compliance with land use ordinances. An alphabetized inventory can be found in Appendix D and an inventory by address can be found in Appendix E. The following subsections describe sources of potential pollutants for each of the thirteen activities.

2.1.1 Aircraft, Vehicle or Equipment Maintenance

Aircraft, vehicles and/or equipment are maintained by several tenants at the Tradeport, including the Air National Guard, Pease Development Authority, Alpha Flying, Port City Air, and corporate hangars. Based on site visits and interviews with Tradeport tenants, most maintenance activities are conducted indoors and pose a limited potential for significant pollutant exposure to stormwater.

Potential Pollutants

Potential pollutants from airplane maintenance include petroleum products in the form of motor oils, lubricants, degreasers, waste oils, and coolants. The likelihood that these would be exposed to storm water is low due to the fact that these products are stored inside and any floor drains located in the maintenance hangars are connected to the sanitary system. Exposure to storm water would only occur if the items were spilled outside and left to become exposed.

2.1.2 Aircraft/Equipment Fueling and Fuel Storage

Most fueling operations are, by necessity, conducted outdoors. This activity requires close and careful attention to prevent mishaps that may lead to surface and/or groundwater pollution. The Air National Guard maintains 9 aircraft (KC-135 R) which they refuel and has installed a state of the art fuel distribution system. The system consists of 2 - 450,000 gallon JP8 jet fuel storage tanks that have a dyke secondary containment system. The tanks are sheltered from precipitation. The distribution lines are double walled stainless steel equipped with a leak detection system. The fuel line is a continuous loop from the pump house to the apron and then returns. When activated the fuel is circulated through the system. This allows the planes to be filled or unfilled as necessary. The fuel area is located on the Northeast side of the Tradeport. All refueling is conducted on concrete or paved surfaces.
The New Hampshire Air National Guard also maintains a bulk fuel storage area – (2) 12,000 gallon aboveground gasoline storage tanks (AST’s) and (2) 12,000 gallon diesel AST’s - on the northeast side of the site. There is secondary containment around these tanks to keep any spills from migrating away from the site. The system is equipped with a leak detection system. Detailed information on the BFSA is contained in ANG’s SPCC Plan on file at the PDA offices.

On the aircraft parking apron, the Air National Guard has installed two 20,000 gallon oil water separators that serve to treat stormwater that falls on the apron and to control spills. These oil water separators can contain 10,000 gallons of contaminants each.

Port City Aircraft Repair (PCA) is the Fixed Base Operator (FBO) that provides refueling services for most other aircraft at the Tradeport. Aircraft fueling is typically accomplished by use of a fuel truck that transports the fuel to parked aircraft. PCA maintains four above-ground fuel storage tanks (with containment) and several refueling tank trucks at the southern end of the parking apron. The two jet fuel storage tanks have a capacity of 20,000 gallons each; the aviation gas storage tank has a capacity of 12,000 gallons; the diesel storage tank has a capacity of 400 gallons; and the gasoline storage tank has a capacity of 1,000 gallons. The trucks are in a well-kept, concrete-paved area with the pumping equipment at the rear of the trucks covered when not in use. Pan American Airways had several fuel storage tanks located in front of their maintenance hangar. These tanks contain 100,000 gallons of jet fuel (5 tanks @ 20,000 gallons each), 14,000 gallons of aviation gas, 3,000 gallons of diesel and 3,000 gallons of gasoline. There is also a 6,447 gallon tank of deicing fluid (located inside the building). These fuel tanks are now operated by Port City Air.

Executive Hanger also has a 20,000 gallon tank of jet fuel (fully contained) located near 120 Aviation Avenue. Planes are fueled directly from the tank without the use of a fuel truck.

Pease Development Authority maintains three above ground storage tanks including a 10,000-gallon deicing fluid tank, a 2,000-gallon diesel tank and a 1,000-gallon gasoline tank in one of the shade hangars on the parking apron. The fuel tanks have containment systems to contain leaks or spills. PDA maintains a vehicle fueling site on the apron and also transports diesel fuel in a trailer mounted tank to various emergency generators on the Tradeport.

More detailed information on site maintenance, operations, and tank storage at each site is contained within each owners Spill Prevention Control and Countermeasures Plan on file at the PDA offices.

Potential Pollutants
Aircraft and equipment fuels are potential pollutants. Large volumes of petroleum products and, to a much lesser extent, other liquid chemicals are stored in tanks at the Tradeport. Chemicals and fuels stored indoors or under cover are not a source of pollutants in stormwater or are outdoor tanks with adequate containment capacity. Outdoor above - ground tanks without adequate containment represent a potentially significant pollutant source in the event of spills, leaks or wash off during rainstorms. The risk for the aviation fuel stored to become exposed to storm water is medium. There is a risk for diesel fuel to become exposed to storm water during fueling operations and delivery of fuel to fuel farms. PDA takes great efforts to encourage the use of secondary
containment and doubled wall storage tanks whenever a fuel storage system is constructed. In addition, PDA requires Spill Prevention, Control and Countermeasure Plan plans be developed for all above ground fuel distribution systems in accordance with 40 CFR Part 112.

2.1.3 Aircraft/Equipment Wash Water and Wastewater
Washing in uncontained outdoor areas can allow detergents and soaps used in the process to discharge to storm drains or drain to the subsurface. The detergents will appear in stormwater in the form of surfactants. The Permit limits the discharge of surfactants to 0.2 mg/l, essentially prohibiting any outdoor aircraft or vehicle washing.

Indoor aircraft and vehicle washing is conducted by the FBO, corporate hangars, Alpha Flying, Pease Development Authority and the Air National Guard. The Air National Guard washes aircraft inside Buildings 254 and 251. The Guard washes vehicles inside Building 157 and the Fire Department. Pease Development Authority washes vehicles inside 7 Lee Street. In all cases, wash water is discharged through floor drains connected to the sanitary sewer.

Potential Pollutants
Phosphorus (found in many soaps) can contribute to eutrophication (a reduction in dissolved oxygen in water bodies caused by an increase of mineral and organic nutrients and a resultant increase in aquatic vegetation growth) of rivers and lakes. Grease and oil from vehicle washing can be picked up in wash water and transported to receiving waters. There is currently no risk of storm water coming into contact with wash waters at the Airport because outdoor aircraft and equipment washing is prohibited.

2.1.4 Vehicle, Aircraft, and Equipment Storage
The PDA and its tenants maintain a number of vehicles and equipment for their operations. The majority of vehicles or equipment used by the PDA for Airport maintenance and snow removal is stored at 7 Lee Street. Privately owned small aircraft are stored outside on either a paved aircraft tie-down, beneath shelters, or inside hangars.

Potential pollutants
Potential pollutants from vehicle and equipment storage include residual motor oils, lubricants, greases, and coolants. The risk of storm water becoming exposed to fluids or residual petroleum products is dependent on the storage location. Inside storage poses a low risk to stormwater but outdoor storage poses a medium risk.

2.1.5 Deicing Materials
There are three types of deicers used at the Tradeport, potassium acetate (liquid) and sodium formate (solid) for runway deicing and propylene glycol for aircraft deicing. Deicing is conducted by Pease Development Authority, the FBO and the Air National Guard.

Propylene glycol is used exclusively to deice aircraft. The Fixed Base Operator conducts aircraft deicing for private flight businesses. The Air National Guard deices its own aircraft as well as portions of the northern end of the apron as is necessary for flight operations. When required, PDA deices the entire runway, a single taxiway along the length of the parking apron, and connecting taxiways for aircraft ground transport.
All deicing activities are conducted at designated areas on the apron and documented in Aircraft Deicing Reports (Appendix L) which are sent to the PDA and their environmental consultant after each event. Aircraft deicing by the Fixed Based Operator is performed in open-ended shade hangars on the apron. These hangars do not have floor drains connected to the sanitary system. The aircraft remain in the shade hangars until ready to depart. There is no containment system for aircraft that are deiced outdoors, nor is there a containment system for runway/apron deicing.

The Guard also retains the option of postponing flights (and deicing operations) in the event of inclement weather. They can also partially store aircraft within hangars, limiting the need for deicing to the tail sections of aircraft.

Potential pollutants
Potential pollutants from deicing activities include potassium acetate (liquid), Sodium Formate (solid), and propylene glycol. As there are no containment provisions provided for on the airfield the risk of stormwater becoming exposed to deicing products is high.

2.1.6 Rubbish Storage
There are many dumpsters located on the Tradeport each serving its various tenant. Tenants are encouraged to keep covers in a closed position to prevent storm water from entering the containers as well as emptying them on a routine basis to prevent overtopping.

Potential pollutants
Potential pollutants from rubbish storage include pieces of trash being carried out of the containers by wind or precipitation events and storm water picking up residual fluids inside trash containers. The risk of storm water becoming contaminated from lubricants, paints, degreasers, etc. from uncovered dumpsters is low.

2.1.7 Building and Grounds Maintenance
Building and grounds maintenance includes snow plowing, mowing the grass, brush removal, sidewalk maintenance, runway/apron maintenance, storm drain system maintenance, roadway maintenance, and maintenance of the electrical and mechanical systems of each building. In addition, the golf course uses pesticides and herbicides to maintain the course.

Potential pollutants
Potential pollutants from building and grounds maintenance include pesticides, herbicides, organic matter loading from grass clippings, crack sealant, gasoline, and residual oils or greases from building and grounds maintenance equipment. The potential for storm water to become impacted by building and grounds maintenance equipment is medium due to the infrequent use of the materials during precipitation events. There is some potential for the exposure of gasoline to precipitation during the fueling of maintenance equipment, however, such releases would be small and any such releases would be cleaned up immediately.
2.1.8 Fire Fighting
Fire fighting activities at the airport may involve chemical-based or fuel oil-based fires, and specific flame retardants may be required. At the airport, the New Hampshire Air National Guard (NHANG) has a fire department equipped to handle the types of fires that can be expected on the aircraft movement areas. The NHANG fire department uses Aqueous Film Forming Foam (AFFF) as a flame retardant for fuel oil fires and also maintains an AFFF system for fighting fires within its aircraft hangar. Three other aircraft hangers are equipped with AFFF fire fighting capabilities including Executive Hangar, Alpha Flying and Port City Aircraft Repair. All four locations discharge dissipated AFFF to the sanitary sewer system through floor drains. The hangar at 14 Aviation Avenue utilizes a water only deluge system for fire fighting. In addition, the City of Portsmouth has a fire station at the Tradeport.

Periodic testing is required by building inspection officials and by property insurance covers to ensure that these fire fighting capabilities are in proper working order. Additionally, the NHANG fire department conducts training exercises on the airfield. This testing and training may result in controlled releases of small amounts of AFFF.

Potential Pollutants
Potential pollutants from fire fighting activities include AFFF. The risk for storm water to come into contact with AFFF is low due to the fact that this chemical is discharged inside a facility through floor drains to the sanitary sewer. However, if there was a fire on the airfield, the risk for storm water to come into contact with AFFF is high as there would be no containment.

2.1.9 Site Remediation
The Air Force is responsible for the remediation of all adverse environmental impacts caused by past activities at the former Pease Air Force Base. The AF contractor oversees the cleanup and monitoring work. This activity has been going on for over 20 years and is steadily decreasing with most of the remedial systems being given the operating properly and successfully (OPS) designation.

Notwithstanding the fee acquisition of much of the Pease property by the PDA, the AF maintains restrictions on land use and underground construction in many Areas of Special Notice (ASN), Use Restriction Zones (URZ), and Groundwater Management Zones (GMZ). In these areas tenants and/or their contractors are advised of any special actions that may be needed to protect surface water quality.

There are several sites at the Tradeport that were formerly used as landfill sites by the Air Force. There are two closed construction rubble dump sites (former AF dumps CRD-I and CRD-2) on the Tradeport. These have been designated as Use Restriction Zones to prevent future disturbances. The other Air Force dumps were excavated and consolidated into one area, the site of former landfill 5 (LF-5) near the North Apron. LF-5 has been closed and capped and the Air Force continues to monitor groundwater in the area.

Potential Pollutants
Cleanup of designated hazardous waste sites often involves bringing contaminate soils and water to the surface. Improper handling and storage of these materials can be a source of stormwater
pollution. Landfills can typically impact surface water in two ways. One is by leachate migration to groundwater and subsequent discharge of groundwater to surface waters. The other occurs if a landfill is not properly capped (or closed), in which case chemicals can be washed off to the storm drain system. In ASN, URZ’s and GMZ’s airfield dewatering and excavation may require the treatment of extracted water before surface discharge. Potential pollutants from these activities is low as all work proposed in these areas require notification and review of the proposed activity by the Air Force and DES. If any concerns are raised a detailed engineering plan with oversight would be required to address any potential pollution impacts.

2.1.10 Manufacturing
There are currently no airfield tenants that perform manufacturing. However, there is a potential for aircraft manufacturing on the airfield. Any future manufacturing tenants will be required to properly handle liquid chemicals, toxins or solvents that may be used in their manufacturing. In addition, they will be provided SWPP training by the PDA and be required to adhere to the SWPPP.

A number of landside tenants are involved in manufacturing. These tenants are covered under their own EPA MSGP where applicable.

Potential Pollutants
Potential pollutants from manufacturing activities vary greatly depending the product being manufactured. The risk for storm water to come into contact with manufacturing activities is low due to the fact that these activities are conducted indoors.

2.1.11 Aircraft or Vehicle Painting and Stripping
Paint and paint related materials, such as thinners and solvents, are potential pollutants in stormwater. This is more likely when painting occurs outdoors and if paints are applied with a spray applicator.

The Air National Guard has a paint shop located in a maintenance hangar (Building 254). This is used to paint aircraft parts, miscellaneous equipment, and vehicles. Aircraft are occasionally "touched up" in Building 254 as well. PDA occasionally will perform vehicle painting at its maintenance shop at 7 Lee St. These activities occur indoors and have limited potential for stormwater pollution.

The PDA performs regular airfield marking maintenance which consists of painting demarcation lines on the aprons, taxiways, and runways with waterborne paint. The painting is not allowed when there is moisture or precipitation in the air; therefore there is little chance of paint entering the stormwater system. The Air National Guard also completes pavement striping in the same fashion as the PDA.

Potential Pollutants
Potential pollutants from painting and stripping include spilled paint, thinners, solvents, paint chips and sand. The risk for storm water to come into contact with painting products is low as a majority of these activities are conducted indoors and those activities conducted outdoors are only performed during dry conditions.
2.1.12 Runway Rubber Removal
Runway rubber removal involves the use of high pressure water, abrasives, chemicals and/or other mechanical means to remove the rubber that builds up on airport landing strips. The buildup of rubber affects the level of friction of the runway, most noticeable as a reduction in braking and ground handling performance. This can lead to incidents such as runway overrun or a lateral slide off the runway. The Federal Aviation Administration (FAA) specifies friction levels for safe operation of planes and measures friction coefficients for the evaluation of appropriate friction levels.

Potential Pollutants
Potential pollutants from runway rubber removal activities include the abrasives or chemicals used remove the built up rubber. The risk for storm water pollution as a result of these activities is low as PDA uses a citrus based, environmentally friendly product to assist removing accumulated rubber from the runway pavement.

2.1.13 Loading / Unloading
The loading/unloading of materials usually takes place outside on docks or terminals; therefore, materials spilled, leaked, or lost during loading/unloading may collect in the soil or on other surfaces and have the potential to be carried away by stormwater runoff or when the area is cleaned. Additionally, rainfall may wash pollutants from machinery used to unload or move materials.

The tenants with the potential for conducting this type of material transfer are indicated in Appendix F. Many of these facilities reportedly conduct loading/unloading activities indoors or under cover, limiting pollutant exposure to stormwater.

Potential Pollutants
Potential pollutants from loading and unloading activities vary depending on the material that is being loaded/unloaded. However, leaks from equipment used to load/unload are a potential pollutant. The risk for storm water to come into contact with these activities is medium as these activities are typically conducted outdoors.

2.1.14 Warehousing / Bulk Storage
Some airport tenants may conduct warehousing or bulk storage of various materials as an accessory use to a primary site activity. For example the air cargo facility at 139 Flightline Road may temporarily store materials in transit. Although most of these materials are non-polluting, some may have potential for entering the stormwater if improperly stored or loaded/unloaded.

Any landside tenant operating a warehouse will be covered under EPA’s multisector general permit, where applicable.

Appendix F presents a summary of each airport tenant and indicates the types of activities they conduct at the Tradeport. Individual tenants will be responsible for implementing appropriate BMPs based on agreements with PDA to comply with environmental regulations. Appendix G presents a listing of tenants and potential pollutants. Based on the types of activities conducted by each tenant, the table identifies pollutants that could be exposed to stormwater if proper management
practices are not followed.

**Potential Pollutants**
Potential pollutants from warehousing / bulk storage activities vary depending on the type of material stored. The risk for stormwater to come into contact with these activities is low due to the fact that these activities occur indoors.

In summary, the following table identifies the fourteen industrial activities that could potentially impact stormwater quality and their associated pollutants:

<table>
<thead>
<tr>
<th>Industrial Activity</th>
<th>Associated Pollutants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aircraft, Vehicle, or Equipment Maintenance</td>
<td>Lubricants, oils, coolants, fuels</td>
</tr>
<tr>
<td>Aircraft/equipment fueling and fuel storage</td>
<td>Aviation fuel (Jet A &amp; 100LL), used oil, diesel fuel, #2 heating oil</td>
</tr>
<tr>
<td>Aircraft/equipment wash water and wastewater</td>
<td>Surfactants</td>
</tr>
<tr>
<td>Vehicle, aircraft, and equipment storage</td>
<td>Lubricants, oils, coolants, fuels</td>
</tr>
<tr>
<td>Deicing materials</td>
<td>Sodium formate, potassium acetate, propylene glycol</td>
</tr>
<tr>
<td>Rubbish storage</td>
<td>Trash and/or leakage of waste water containing lubricants, paints, and degreasers from dumpsters</td>
</tr>
<tr>
<td>Building and grounds maintenance</td>
<td>Pesticides, herbicides, lubricants, fuels, oils</td>
</tr>
<tr>
<td>Fire Fighting</td>
<td>AFFF</td>
</tr>
<tr>
<td>Site Remediation</td>
<td>Varies</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>Varies</td>
</tr>
<tr>
<td>Vehicle Painting or Striping</td>
<td>Paints, paint thinners, sand</td>
</tr>
<tr>
<td>Runway Rubber Removal</td>
<td>Rubber removal abrasives and chemicals</td>
</tr>
<tr>
<td>Material Loading and Unloading</td>
<td>Varies</td>
</tr>
<tr>
<td>Warehouse Bulk Storage</td>
<td>Varies</td>
</tr>
</tbody>
</table>

### 2.2 Spills and Leaks

All spills which have occurred in the last three years and any spills that may occur in the future on the Tradeport have been or will be documented on Incident Reports which can be found in Appendix M.

Significant spills are identified as releases of oil or hazardous substances in excess of quantities that are reportable under Clean Water Act Rules or Comprehensive Environmental Response Compensation and Liability Act (CERCLA) Rules. Significant spills may also include releases of oil or hazardous substances that are not in excess of reporting requirements.

Petroleum spills (including gasoline, heating oil, fuel oils, lubricating oil, hydraulic oil, and asphalt residues) must also be reported to the New Hampshire Department of Environmental Services (NHDES) Waste Management Division; however, procedures and requirements for reporting vary depending on the material
spilled. New Hampshire state statutes (Env-Or 604.06) require that all petroleum spills be reported if any of the following situations occur:

- A discharge of any oil into surface water or groundwater of the state;
- A discharge of 25 gallons or more of oil to land;
- A discharge of less than 25 gallons of oil to land unless the discharge is cleaned up immediately and properly disposed of;
- A discharge of oil that results in the presence of vapors that pose an imminent threat to human health;
- A discharge of oil resulting in a violation of the groundwater quality criteria of Env-Or 603.01 in a sample collected from a water supply well; or
- A discharge of oil resulting in the detection of non-aqueous phase liquids (NAPL).

In the event of a hazardous material release, all hazardous material spills must first be immediately reported to the local fire department, and then to the NHDES Special Investigations Section. If a hazardous material spill occurs during non-business hours, the local fire department should be contacted, as well as the New Hampshire State Police, who will then contact the NHDES.

Potential sites where spills or leaks could occur at the Airport and the outfalls to which they could discharge are included in the following table:

<table>
<thead>
<tr>
<th>Areas of Site Where Potential Spills/Leaks Could Occur</th>
<th>Location</th>
<th>Outfalls</th>
</tr>
</thead>
<tbody>
<tr>
<td>PCA Fuel Farm</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Pan Am Fuel Farm</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>NHANG Fuel Farm</td>
<td></td>
<td>Paul's Brook</td>
</tr>
<tr>
<td>Executive Hangar Fuel Farm</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Aircraft Apron</td>
<td></td>
<td>1,2,3,4</td>
</tr>
<tr>
<td>PGC Maintenance</td>
<td></td>
<td>Unnamed stream to Great Bay</td>
</tr>
<tr>
<td>PSM Maintenance (7 Lee Street)</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Leased T-Hangars</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Aircraft Tie-down areas</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Carlisle Hangar</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Alpha Flying Hangar</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Seacoast Air Cargo</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Runways and Taxiways</td>
<td></td>
<td>3 or Peaverly Brook</td>
</tr>
</tbody>
</table>

**2.3 Non-Stormwater Discharges Documentation**

Non-storm water discharges to waters of the United States that are not authorized by a NPDES permit are unlawful and must be eliminated. Part I Section B.7 of the Permit states: ...discharges from outfalls 001 - 004 shall be composed entirely of stormwater. The following non-stormwater discharges are authorized by
this permit provided they are addressed in the SWPPP: fire fighting activities; fire hydrant flushing; potable water sources including water line flushing; drinking fountain water, uncontaminated compressor condensate; irrigation drainage; lawn watering; routine external building washdown that does not use detergents or other compounds; pavement wash waters where detergents are not used; air conditioning condensates; compressor condensate; uncontaminated springs; uncontaminated ground water; and foundation or footing drains where flows are not contaminated with process materials such as solvents.

All of the aforementioned discharges will potentially occur on site. In the instances of building and pavement washings, no detergents are allowed. Where lawn watering and irrigation is practiced, care is taken to not overwater and is conducted at night when evaporation is minimized. In these situations as well as the others listed in the permit, only uncontaminated water is discharged.

The exception is with firefighting activities. Fires involving aircraft require the use of chemical agents to safely extinguish flames fed by jet fuel. The Aircraft Rescue and Fire Fighting (ARFF) station at Pease Airport will use a foaming agent, Aqueous Film Forming Foam (AFF) to extinguish aircraft or fueling station fires. Similarly, the newly constructed hangars at Pease are equipped with fire suppression systems that discharge foams.

To be effective when needed in the event of a fire, the systems must be tested periodically. The ARFF is required by the FAA to test annually its fire fighting capabilities with regards to AFF and Dry Chemical products. The annual test is conducted under the supervision of FAA inspectors and the NHANG Environmental Management Office. Requirements and guidance for the tests are put forth in NFPA 403, NFPA 412, NFPA 414, and Air Force TO 36A12-8-8-I. At no time does the AFF or Dry Chemical fire fighting products enter the storm drain infrastructure at Portsmouth International Airport at Pease.

Additionally a Triennial Exercise is required by the FAA to be conducted every three years. This exercise evaluates the readiness and capabilities of the ARFF team, first responders, local hospitals, law enforcement agencies, ambulance and helicopter services, American Red Cross, NHANG, FBO, and airport operations. Under FAA regulation part 139 the triennial exercise demonstrates the airports use of the emergency operations plan and is required for airport certification. As part of this full scale exercise the ARFF department demonstrates the capability of their firefighting equipment during the exercise. Treated water from the City of Portsmouth distribution system will be used by ARFF team and no AFF will be used during the exercise. Water will be sprayed from multiple fire trucks around or adjacent to the aircraft used in the exercise. The water will be directed to grass areas off taxiways, aprons, or the runway to allow the water to infiltrate into the subsurface and to prevent a non-stormwater discharge to surface water. Best management practices will be implement to prevent the exercise water from entering the storm drain system. This may include covering storm drains during exercise activities and the use of erosion controls as needed. After the completion of each triennial exercise BMPs will be evaluated and updated as needed. Details of the 2017 Triennial Exercise and ARFF flushing procedure are located in Appendix I.

### 2.4 Salt Storage

Storage and management of salt for deicing operations can be a source of contamination of surface and groundwater which could lead to a violation of state water quality standards. Poor salt management practices have already led to waterbody impairments for two of the seven waterbodies (Paul's Brook and Hodgson Brook) identified in Section 1.1 of this SWPPP. These products dissolve in precipitation and
either infiltrate through the ground surface to groundwater, or run off into surface water. Ideally salt storage facilities should be completely enclosed, with storage and working areas on impervious surfaces such as asphalt or coated concrete. There should be stormwater drainage controls to prevent runoff water and snow melt from contacting or running through loading and material storage areas. Overhead cover to protect material from exposure to snow and rain should be installed to minimize runoff and inventory loss. A fixed roof is preferred over a tarp because it is very difficult to keep storage piles completely covered with tarps during the winter months and storm events.

Salt storage piles on the Tradeport are located at:

- 320 Corporate Drive
- 72 Pease Boulevard
- 101 International Drive
- 200 International Drive
- 207 International Drive
- 14 Manchester Square
- Air National Guard

2.5 Sampling Data Summary

The Permit requires stormwater monitoring for Outfalls 001 - 004 and stipulates discharge limitations, measurement frequency, and sample types. These specific requirements can be found in Part I, Section B.1 through B.4 of the Permit which can be found in Appendix R. Sampling Data can be found on file at the PDA Engineering Department.
SECTION 3: STORMWATER CONTROL MEASURES

Compliance with the Permit requires the SWPPP include a description of stormwater measures and controls which can be implemented to minimize the potential impact of pollutants to stormwater. The following sections describe these measures and controls:

3.1 **Minimize Exposure**

The practices and structural controls used to minimize the exposure of industrial activities to rain, snow, snowmelt, and runoff are the following:

- Materials and equipment are routinely inspected for leaks.
- Spills and leaks are cleaned up using dry methods so that the pollutants are not discharged in the stormwater.
- Cleaning operations are performed indoors and washwaters are captured in floor drains routed to sanitary sewer systems.
- The prohibition of washing of aircraft and ground service vehicles outside of the hangars.
- The provision of spill cleanup kits at selected locations.
- The requirement that all aircraft and ground service vehicle maintenance be conducted indoors or under cover whenever possible.
- Bulk fuel storage systems utilize spill/overflow containment to prevent the exposure of pollutants to stormwater.

3.2 **Good Housekeeping**

Housekeeping practices are designed to maintain a clean and orderly work environment. Often the most effective first step towards preventing pollution in stormwater from industrial sites involves merely using common sense to improve the facility’s basic housekeeping methods. The following are some simple procedures that a facility must incorporate into an effective housekeeping program:

- Improve operation and maintenance of industrial machinery and processes.
- Implement careful material storage practices.
- Maintain up-to-date material inventory.
- Train employees about good housekeeping practices.

The following sections describe these good housekeeping practices.

3.2.1 **Operation and Maintenance**

These practices ensure that processes and equipment are working well. Improved operation and maintenance practices are very easy to implement. The following are basic operation and maintenance BMPs that shall be incorporated in the good housekeeping program:

- Maintain dry and clean floors and ground surfaces by using brooms, shovels, vacuum cleaners, or cleaning machines.
- Regularly pickup and dispose of garbage and waste material.
- Make sure equipment is working properly.
- Routinely inspect for leaks or conditions that could lead to discharges of chemicals or contact of stormwater with raw materials, intermediate materials, waste materials, or products.
- Ensure that spill cleanup procedures are understood by employees.

3.2.2 Material Storage Practices
Improper storage can result in the release of materials and chemicals that can cause stormwater runoff pollution. Proper storage techniques include:
- Providing adequate aisle space to facilitate material transfer and easy access for inspections.
- Storing containers, drums, and bags away from direct traffic routes to prevent accidental spills.
- Stacking containers according to manufacturers’ instructions to avoid damaging the containers from improper weight distribution.
- Storing containers on pallets or similar devices to prevent corrosion of the containers which can result when containers come in contact with moisture on the ground.
- Assigning the responsibility of hazardous material inventory to a limited number of people who are trained to handle hazardous materials.

3.2.3 Material Inventory Procedures
Keep an up-to-date inventory of all materials (hazardous and non-hazardous) present on the site to prevent overstocking. Track how materials are stored and handled onsite, and identify which materials and activities pose the most risk to the environment. Improved material tracking and inventory practices, such as instituting a shelf-life program, reduce the waste that results from overstocking and the disposal of out-dated materials. The following instructions explain the basic steps to completing a material inventory:
- Identify all chemical substances present in the workplace. Walk through the facility and review the purchase orders for the previous year. List all the chemical substances used in the workplace, and then make sure you have the Material Safety Data Sheet (MSDS) for each.
- Label all containers to show the name and type of substance, stock number, expiration date, health hazard, suggestions for handling, and first aid information. This information can usually be found on the MSDS.
- Clearly mark on the inventory hazardous materials that require special handling, storage, use, and disposal considerations.

3.2.4 Employee Participation
Frequent and proper training in good housekeeping techniques reduces the possibility that chemicals or equipment will be mishandled. Involve employees in good housekeeping practices:
- Incorporate information sessions on good housekeeping practices into the facility’s employee training program
- Discuss good housekeeping at employee meetings
- Publicize pollution prevention concepts through posters
- Post bulletin boards with updated good housekeeping procedures, tips and reminders.
Good housekeeping practices include keeping all open areas of the facility clean and orderly. Common problem areas to consider include individual solid waste and recycling storage areas at facilities. BMPs should include routine inspections of these areas, regular removal of recyclables, and routine inspections of tanks and containers for leaks and general condition. Rubbish should be
stored in covered containers that do not contain weep holes, and the entire facility should be kept clean from errant litter that might become transported into water bodies with storm water.

3.3 Maintenance

Preventive maintenance involves the regular inspection and testing of equipment and operational systems. These inspections uncover conditions such as cracks or slow leaks which could cause breakdowns or failures that result in discharges of chemicals to storm sewers and surface waters. The program prevents breakdowns and failures by adjustment, repair or replacement of equipment. The preventive maintenance program includes the following elements:

- Identify the equipment, systems, and facility areas to be inspected.
- Schedule periodic inspections or tests of these equipment and systems.
- Appropriate and timely adjustment, repair or replacement of equipment and systems.
- Maintenance of complete records on inspections, equipment, and systems (Maintenance Logs are kept in Appendix N).

3.3.1 Identification of Equipment to Inspect
The following list identifies types of equipment to include in the preventive maintenance inspection and testing program:

- Pipes
- Pumps
- Storage tanks and bins
- Pressure vessels
- Pressure release valves
- Process and material handling equipment
- Stormwater management devices (oil/water separators, catch basins, or other structural or treatment BMPs).

3.3.2 Schedule Routine Preventive Maintenance Inspections
Set schedules for routine inspections, include examinations for leaks, corrosion, support or foundation failure, or other forms of deterioration or leaks in your inspection. Look for spots or puddles of chemicals and document any detection of smoke, fumes, or other signs of leaks. This can be done by making sure storage tanks are solid and strong enough to hold materials.

3.3.3 Equipment Repair or Replacement
Promptly repair defective equipment found during inspections and testing. Keeping spare parts for equipment that needs frequent repair is another practice that can help avoid problems and equipment down-time.

3.3.4 Records on Preventive Maintenance
Include a record system for scheduling tests and documenting inspections in the preventive maintenance program. Record test results and follow up with corrective action. Make sure records are complete and detailed.
3.4 **Spill Prevention and Response**

Compliance with the Permit requires the SWPPP include a description of spill prevention and response procedures developed to minimize the potential of pollutants to impact stormwater. Preventive measures include placing barriers between material storage and traffic areas, secondary containment provisions, and implementing procedures for material storage and handling. Response procedures include notification of appropriate facility personnel, emergency agencies, and regulatory agencies, and procedures for stopping, containing and cleaning up spills. Measures for cleaning up hazardous material spills or leaks must be consistent with applicable Resource Conservation and Recovery Act (RCRA) regulations including management of waste materials, spill residues, and spill debris. Employees who may cause, detect, or respond to a spill or leak must be trained in these procedures and have necessary spill response equipment available. Contact information for individuals and agencies that must be notified in the event of a spill is included in Section 1.2 of this SWPPP.

3.4.1 **Material Handling Procedures and Storage Requirements**

Following is a list of activities or alternatives that will reduce the potential for spills to occur or impact stormwater quality:

- Install leak detection devices, overflow controls, and diversion berms.
- Disconnect all floor drains from processing areas that lead to the storm sewer.
- Use filling procedures for tanks and other equipment that minimize spills.
- Use material transfer procedures that reduce the chance of leaks or spills.

3.4.2 **Spill Response Procedures and Equipment**

In the event that spill prevention measures fail, a swiftly executed response will reduce or prevent contamination of stormwater. This response includes:

- Procedures to notify appropriate authorities providing assistance [police, fire, hospital, Publicly Owned Treatment Works (POTW), etc.]. In addition, tenants should notify PDA of any spill, and PDA, in turn, should notify appropriate authorities at EPA and NHDES.
- Spill containment, diversion, isolation, and cleanup.
- Spill response equipment including:
  - Safety equipment such as respirators, eye guards, protective clothing, fire extinguisher, and two-way radios.
  - Cleanup equipment such as brooms, barriers, sweeps, adsorbents, containers, etc.

Following any spill, evaluate the success of the response and potential ways it can be improved.

3.5 **Erosion and Sediment Controls**

Compliance with the Permit requires the SWPPP include a description sediment and erosion controls implemented in areas that may be subject to significant soil erosion. The Tradeport is not currently at risk for sedimentation or erosion. The Tradeport is well graded and slopes maintain adequate vegetation to protect them from erosion. Standard erosion and sedimentation control measures will be implemented during future capital improvement construction projects as well as private development projects. All CIP and private development projects are evaluated during the permitting process to minimize potential sediment and erosion issues during construction. Typically sediment and erosion controls are installed as the first phase of construction during these projects.
3.6 Management of Runoff

Numerous best management practices (BMP's) are currently in place and/or practiced at the Tradeport. A stormwater BMP is defined as any program, technology, process, siting criteria, operating method, measure or device which controls, removes, or reduces pollution. The Permit requires the development and implementation of BMP's to address pollutants entering the stormwater system. Areas of actual or potential pollutant contact are evaluated and applicable BMP's implemented to eliminate or minimize the potential for pollution. These measures act to control the discharge of pollutants to stormwater, and hence improve the quality of the brooks, streams and rivers that receive stormwater runoff from the Tradeport.

BMP's can be classified into two categories based on the intended stormwater control objective. These two categories are:

- Baseline
- Activity-specific

Baseline BMPs are typically inexpensive practices that must be implemented at all facilities. Activity specific BMPs must be implemented only if that activity is present at a facility.

3.6.1 Baseline BMP's

Baseline BMPs are inexpensive, relatively simple, and applicable to a wide variety of activities. Many facilities at the Tradeport already have many of these measures in place for product loss prevention, accidents and fire prevention, worker health and safety, or to comply with other environmental regulations. Some examples include routine inspection of above ground tanks, clean and orderly operations, and spill prevention and response training for firefighting personnel. A very important baseline BMP is spill prevention and response plans, which have been developed by the Pease Development Authority and all tenants maintaining oil storage facilities meeting the requirements of 40 CFR Part 112. Another important baseline BMP is inspection of oil/water separators.

The eight BMPs listed below should be evaluated by each tenant conducting industrial operations:

- Good housekeeping,
- Preventive maintenance,
- Visual inspections,
- Spill prevention and response,
- Sediment and erosion prevention,
- Traditional storm water management practices,
- Employee training, and
- Recordkeeping and reporting.

3.6.2 Activity Specific BMP's

Activity specific BMP's can additionally be divided into pollutant source and treatment controls, both of which are present at the Tradeport. Source control is an effective non-structural way of
controlling the amounts of pollutants entering stormwater runoff. A wide range of pollutants are washed off of impervious surfaces during runoff events. Removing these contaminants from the urban landscape prior to precipitation can effectively limit the amounts of pollutants contained in the stormwater runoff. Source control can be accomplished by a number of different processes including: limiting applications of fertilizers, pesticides and herbicides; periodic street sweeping to remove trash, litter and particulates from streets; collection and disposal of lawn debris; periodic cleaning of catch basins; elimination of improper dumping of used oil, antifreeze, household cleaners, paint, etc. into storm drains; and identification and elimination of illicit cross-connections between sanitary sewers and storm sewers. Source controls currently in use at the Tradeport include the following:

- Storage of chemicals and materials inside, under cover.
- Aircraft and vehicle maintenance activities limited to inside hangers and buildings.
- Aircraft and vehicle washing performed in buildings with drains to sanitary sewer.
- Minimum use of lawn care products.
- Tank inspections and fueling procedures for aircraft fueling.
- Drain shutoffs in NH Air National Guard hangers.
- Leak detection in NHANG aircraft refueling system
- Secondary containment of fuel tanks at PDA, Port City Air, Executive Hanger and NHANG

Treatment controls also presently exist at the Tradeport. Two structures, one an oil/water separator on McIntyre Brook and the other, a structure on Flagstone Brook, act to prevent oil and other floatables from passing downstream. Additionally, the NHANG has installed 2 underground oil-water separators under the apron in the cantonment area and the PDA has installed 2 underground oil-water separators under the General Aviation Apron as well as one water quality unit adjacent to TW A1.

The oil/water separator on McIntyre Brook is located at the west edge of the runway. The separator has overall dimensions of 82-feet long by 43-feet wide. Two basins (each 72-feet by 20-feet) allow the lighter products, such as oil, to rise to the surface. Flow is conveyed to the separator from two directions via a 12" drain line and a 42" drain line. Storm flows greater than the capacity of these drain lines by-pass the separator and are discharged directly to McIntyre Brook.

The oil/water separator on McIntyre Brook has been evaluated based on American Petroleum Institute (API) design criteria. The criteria requires that the detention time in the separator be sufficiently long to allow any oil globule 0.015 cm in diameter or larger to rise to the surface. The separator meets this criterion, however, a maximum flow velocity of 3 feet per minute (fpm) is also recommended. At velocities greater than 3 fpm, turbulence may limit the rise of small globules to the surface. The separator will operate effectively during small storms, and will have reduced effectiveness as the storms become larger.

While not an oil/water separator, the structure located on Flagstone Brook attempts to serve a similar function. It is located approximately 1/2 mile below the storm drain outfall. Flagstone Brook, in this reach, is a slow, meandering brook with wetland plants along the edges. The structure is a
concrete beam placed across the brook upstream of a drop structure. The concrete beam has a clear span of approximately 20-feet and submergence depth of 1-foot.

The separators are treatment BMP's, which are only effective if properly maintained. The following are some simple procedures that shall be implemented to keep the oil water separators operating effectively.

- Train employees about the purpose and proper operation of the separator.
- Inspect the separator yearly or after a spill to the storm drainage system.
- Clean any oil, floatable and sediment from the separator yearly or sooner if necessary.
- Maintain the structure of the separator, making any needed repairs within one month of observation.
- Document each inspection
- Review the separator’s inspection reports yearly, to assess the effectiveness of source control BMPs implemented at the Tradeport.

The NHANG has installed two 20,000 gallon oil water separators. They are connected to the drainage system for the apron area. Each tank can capture 10,000 gallons of product. The tanks are installed as a containment system that would capture contaminants in the event of an aircraft fuel leak that enters into the storm drain system.

PDA has also installed two oil/water separators (one 15,000 gallon and one 25,000 gallon) beneath the general aviation apron. This work was completed as part of AIP 32. In addition, Water Quality Units were installed during the construction of the bypass taxiway A1 as part of AIP 38 in 2008.

The quality of stormwater runoff has also been improved as the result of the demolition of old Air Force facilities and replacement with new development. All new development at the Tradeport is designed to treat runoff before it enters the municipal system. The construction of detention ponds, treatment swales and design for sheet flow has improved quality and controlled peak flow volumes.

Tradeport tenants must select the proper measures or BMP’s that will eliminate or reduce pollutant loadings in stormwater discharges from each facility. At a minimum, each tenant and associated facility must evaluate the need to implement appropriate baseline BMPs. In addition to the baseline BMPs, if a specific activity occurs at a facility, then the appropriate BMPs listed for that activity must be implemented.

3.7 Salt Storage Piles or Piles Containing Salt

A description of BMP’s and structural control measures for salt storage are included in section 2.4 of this SWPPP.

3.8 Employee Training

Employee and tenant training is essential to effective implementation of the SWPPP. Employees and Tenants of the Tradeport will be trained annually on preventing spills, procedures and protocol for response to a spill, and material handling and storage issues. Certifications will be provided outlining the
requirements of the SWPPP, and each employee, as well as tenants, will be required to review the certification and sign it stating that they understand what is required of them. A copy of the training presentation will be kept in Appendix I of this SWPPP. Copies of the signed forms are kept on file at the PDA Engineering Department.

3.9 Non-Stormwater Discharges

A description of Non-Stormwater Discharges is included in section 2.3 of this SWPPP.

3.10 Waste, Garbage and Floatable Debris

As discussed in Section 2.1.6, trash and other solid waste is placed in covered receptacles which is regularly removed for proper off-site disposal.

3.11 Dust Generation and Vehicle Tracking of Industrial Materials

Care should be taken to minimize the generation of dust and off-site tracking of raw, final, or waste materials. Dust control practices can reduce the activities and air movement that cause dust to be generated. Airborne particles pose a dual threat to the environment and human health. Dust carried off-site increases the likelihood of water pollution.

Control measures to minimize the generation of dust include adding vegetative cover to areas that are not expected to handle vehicle traffic, mulching recently disturbed areas, and providing wind breaks to reduce the wind velocity through an area of construction.

To reduce the vehicle tracking of materials, tenants should keep stored or spilled materials away from all roads within the site. This will prevent off-site vehicle tracking of potential pollutants to stormwater.

There are no exposed surfaces to generate dust at the Tradeport and no industrial processes are conducted there that would generate fugitive materials that could subsequently be tracked off-site by vehicles. During the construction of any airport improvements or private developments, the engineers and contractors would employ construction BMP’s to minimize the generation of dust, and whenever required, develop and implement a separate construction SWPPP.
SECTION 4: SCHEDULES AND PROCEDURES FOR MONITORING

The Permit requires PDA to sample outfalls 001, 002, 003, and 004 on a monthly basis for various parameters. The Permit specifies the samples taken shall be the "grab sample" type which is defined by the Permit as an individual sample collected in a period of less than fifteen minutes. Sampling is conducted by PDA's on call environmental engineering consultant during qualified rainfall events. Samples are then analyzed by a certified laboratory and reported to PDA's consultant. Finally, a Discharge Monitoring Report is prepared and submitted to the EPA. Each June, PDA, PDA's environmental consultant and NHDES meet to review sampling and reporting procedures to ensure compliance with the Permit. In addition, the PDA participates in a quality assurance review of our selected laboratory in conjunction with NHDES each year.

Sampling requirements for each outfall are outlined in the following table:

<table>
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<tr>
<th>Outfall</th>
<th>Sampling Frequency</th>
<th>Pollutant</th>
<th>Numeric Limitation</th>
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<td>BOD</td>
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</tr>
<tr>
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<td>Monthly</td>
<td>pH</td>
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</tr>
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<td>Volatile organics</td>
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<tr>
<td>1, 2, 3, 4</td>
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<td>PAH</td>
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SECTION 5: INSPECTIONS

5.1 Quarterly Visual Monitoring Inspections

Quarterly visual monitoring inspections at each outfall are performed by Tradeport personnel or other qualified persons during qualifying storm events. A qualifying storm is a precipitation event with "measurable" runoff that was preceded by at least 72 hours without measurable runoff.

Samples should be collected within 30 minutes of the start of runoff from the storm event when possible. The sample should be collected by immersing a clear glass or plastic container directly into the flow of the discharge at the outfall. The sampler should avoid collecting the sample from the receiving water. A visual assessment should then be made to evaluate the following water quality characteristics:

- Color
- Odor
- Clarity
- Floating solids
- Settled solids
- Suspended solids
- Foam
- Oil sheen
- Other obvious indicators of storm water pollution.

Each monitoring event should be documented in the field by filling out a sampling form for each outfall (see Appendix J). There is no requirement to retain the collected samples after the water quality characteristics listed above have been documented. Copies of the completed forms will be retained in Appendix J.

5.2 Comprehensive Site Inspections

Pursuant to Part I, Section B.12 of the Permit, the Tradeport or its consultant will conduct annual comprehensive site inspections of activities covered by the permit. The inspections will be conducted by qualified personnel with at least one member of the Pollution Prevention Team participating in the inspection. The inspection will pay particular attention to areas identified in the SWPPP as potential pollutant sources and areas where spills and leaks have occurred in the previous three years.

The personnel conducting the inspections will examine the following:

- Industrial materials, residue, or trash that may have or could come into contact with storm water;
- Leaks or spills from industrial equipment, drums, tanks, and other containers;
- Incidents of offsite tracking of industrial or waste materials, or sediment where vehicles enter or exit the site;
- Tracking or blowing of materials;
- Fuel farms
• Control measures needing replacement, maintenance, or repair; and
• General housekeeping procedures of the Airport and its tenants.

Comprehensive site inspections will be conducted during periods of actual deicing operations if applicable (typically in December). Each annual inspection will be documented by the completion of an inspection form (see Appendix K), and copies of the completed forms will be included in Appendix K and retained with the SWPPP.
SECTION 6: DOCUMENTATION TO SUPPORT ELIGIBILITY CONSIDERATIONS UNDER OTHER FEDERAL LAWS

6.1 Documentation Regarding Endangered Species.

PDA has coordinated with the New Hampshire Natural Heritage Bureau to verify that the storm water discharges from the facility will not adversely affect any species that are federally-listed as endangered or threatened under the Endangered Species Act (ESA) and will not result in the adverse modification or destruction of habitat that is federally-designated as "critical habitat" under the ESA. A copy of the correspondence from the Natural Heritage Bureau documenting listed species in proximity to the Tradeport is included in Appendix O of this SWPPP.
SECTION 7: SWPPP 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.

Name: David R. Kellen
Signature: [Signature]
Title: Executive Director
Date: 11/18/11
SECTION 8: SWPPP MODIFICATIONS

Pursuant to Part I B.10. of the Permit, this SWPPP shall be amended whenever there is a change in design construction, operation or maintenance, that has a significant effect on the potential for the discharge of pollutants or if the SWPPP is ineffective in eliminating or significantly minimizing pollutants from the sources identified.

Documentation of any corrective actions will be included in the annual compliance report and maintained in Appendix K of this SWPPP.

Modifications to this SWPPP in response to a corrective action or for any other reason, will be made by the PDA or its consultant and documented in Appendix P.
SWPPP APPENDICIES

Appendix A – General Location Map

Appendix B – Site Map

Appendix C – NOI’s & No Exposure Certifications for Industrial Landside Tenants

Appendix D – Overview of Tenants and Facility Uses

Appendix E – Overview of Tenants and Facility Uses by Address

Appendix F – Overview of Airport Tenants and Potential Pollutant Activities

Appendix G – Summary of Potential Pollutants from Tenants at the Tradeport

Appendix H – EPA Impaired Water Reports

Appendix I – Employee Training Documentation

Appendix J – Quarterly Visual Monitoring Inspection Documentation

Appendix K – Comprehensive Site Inspection Documentation

Appendix L – Aircraft Deicing Report

Appendix M – Documentation of Spill & Leaks

Appendix N – Maintenance Logs

Appendix O – Documentation Regarding Endangered Species

Appendix P – SWPPP Modification Log

Appendix Q – EPA Fact Sheet for Sector S

Appendix R – NPDES Permit No. NH0090000