

# American Association of Airports Executives

Airport Name: Orland-Haigh Field

Airport Address:

4115 County Road P Orland, CA 95963

Airport WDID: 5A115001573

## Storm Water Pollution Prevention Plan

For Compliance with the State Water Resources Control Board Water Quality Order NO. 97-03-DWQ  
National Pollutant Discharge Elimination System General Permit NO. CAS000001

Updated *July 2010*

## **SWPPP PLAN ORGANIZATION**

1. Implementation Schedule
2. Objectives
3. Planning and Organization
4. Site Map
5. List of Significant Materials
6. Description of Potential Pollutants Sources
7. Assessment of Potential Pollutants Sources
8. Storm Water Best Management Practices
9. Annual Comprehensive Site Compliance Evaluation
10. SWPPP General Requirements

The Following plan is compiled to meet the Storm Water Pollution Prevention Plan (SWPPP) requirements established in Section A of the California State Water Resources Control Board (State Water Board) National Pollutant Discharge Elimination System (NPDES) General Permit No. CAS000001 for Discharges of Storm Water Associated with Industrial Activities Excluding Construction Activities (General Permit). This introductory section discusses the Plan implementation schedule and the SWPPP objectives.

## **1. IMPLEMENTATION SCHEDULE**

The General Permit required that the existing Airport SWPPP be reviewed and updated by August 1, 1997. American Associations of Airport Executives (AAAAE) Group Monitoring Airports complied with this requirement by reviewing the existing site plan and completing the attached *AAAAE SWPPP Checklist*, and *Checklist Attachments*. Appendix 1 to this document is the completed checklist for the Airport. Throughout the following SWPPP there are references to the *Checklist* and the *Checklist Attachments* for compliance with portions of the General Permit SWPPP requirements.

## **2. SWPPP OBJECTIVES**

The SWPPP has two major objectives:

- To identify and evaluate sources of pollutants associated with industrial activities that may affect the quality of storm water discharges and authorized non-storm water discharges from the Airport,
- To identify and implement site specific Best Management Practices (BMPs) to reduce or prevent pollutants associate with industrial activities in storm water discharges and authorized non-storm water discharges.

The following SWPPP document accomplishes these objectives

## **3. PLANNING AND ORGANIZATION**

### Pollution Prevention Team

The following form identifies the Airport individuals that are responsible for developing and revising the SWPPP, assisting with implementation of the SWPPP, and conducting the monitoring program activities.

As personnel changes occur at the Airport, the SWPPP Pollution Prevention Team form, Figure 3-1, will be updated. The current form is retained with the SWPPP document.

Review of Existing Airport Plans

The following SWPPP references other Airport environmental plans, inspections and policies where appropriate. The SWPPP team continues to review and incorporate appropriate portions of other Airport plans where there is overlap in the regulatory requirements.

The following plans have been compiled by the Airport and are referred to or referenced as the source of compliance information throughout this document.

*(List any environmental documents, FAA documents, SPCC plans, etc., that contain practices, policies or procedures that are related to storm water protection efforts conducted at the Airport)*


## SWPPP Pollution Prevention Team

Figure 3-1

Name: Ken Dunn  
Phone: (530) 865-1173

Title: Airport Site Worker  
24 hr. Phone: (530) 865-1173

Storm water responsibilities: Performs all storm water monitoring, completes non-storm water visual observation forms, storm water visual observation form, conducts daily site inspections, and assists in annual industrial activity inspections.

Name: Randy Murphy  
Phone: (530) 934-6541

Title: Deputy Director, PPWA  
24 hr. Phone: (530) 934-6541

Storm water responsibilities: Oversees SWPPP program, collects and reviews all forms, conducts annual industrial activity inspections, and submits

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

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

Phone: \_\_\_\_\_

24 hr. Phone: \_\_\_\_\_

Storm water responsibilities: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

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

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

Phone: \_\_\_\_\_

24 hr. Phone: \_\_\_\_\_

Storm water responsibilities: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

#### **4. AIRPORT SWPPP SITE MAP**

##### Site Map

The Airport site map is attached. The SWPPP site map is 8-1/2 x 11 inches or larger and contains all of the permit required information that is relevant to the site.

Page 2 of the attached completed *AAAE SWPPP Checklist* summarizes all the information contained on the site map and whether that information is relevant to the site. Some of the requirements may be checked as "DNA" meaning that the site does not have that particular feature and the information "Does Not Apply".

The accuracy of the site map is reviewed at least annually during the Annual Comprehensive Site Compliance Evaluation (ACSCE). The ACSCE documentation is maintained at the airport with the SWPPP. The Airport ACSCE documentation serves as written record of the completion of the annual SWPPP and SWPPP site map review and update.

#### **5. LIST OF SIGNIFICANT MATERIALS**

The Airport SWPPP lists the significant materials handled and stored at the Airport. This list includes all materials that qualify as a "Significant Material" according to the following permit definition

*"Significant Materials, includes, but is not limited to: raw materials, fuels: materials such as solvent, detergents, and plastic pellets; finished materials such as metallic products; raw materials used in food processing or production, hazardous substances designated under Section 101 (14) of CERLCA; any chemical the Airport is required to report pursuant to Section 313 of Title 11/ of SARA; fertilizers; pesticides; and waste products such as ashes, slag, and sludge that have the potential to be released with storm water discharges ..."*

The list of site specific significant materials and the location where the materials are stored, received, shipped, and handled, as well as the typical quantities used is summarized in the following table entitled *Significant Materials on Site*, Table 5-1. The materials table is completed by a SWPPP team member and maintained in the Airport SWPPP document.

## Significant Materials on Site

Table 5-1

Material Name	Location Received	Location Stored	Location Handled	Location Shipped	Typical Quantities Stored	Frequency On Site	Waste Products Recycled Off Site	Waste Product Removed by Contractor
AvGas	Fuel Tank	Above Ground Tank westside of runup area	AvGas is pumped from truck to tank	NA	10,000 gallons	Always	NA	NA
Hydraulic Fluid	FBO Operators	Inside Buildings	Inside Buildings		Insignificant materials on site	Always	Yes	
Solvents	FBO Operators	Inside Buildings	Inside Buildings		Insignificant materials on site	Always	Yes	
Coolant (antifreeze)	FBO Operators	Inside Buildings	Inside Buildings		Insignificant materials on site	Always	Yes	

## 6. DESCRIPTION OF POTENTIAL POLLUTANT SOURCES

The following SWPPP section includes a narrative description of all of the industrial activities occurring at the Airport. The description includes associated potential pollutant sources and the potential pollutants that may be exposed to storm water discharges and authorized non-storm water discharges.

The *AAAE SWPPP Checklist Attachment 2*, included in this Airport SWPPP document provides a summary of all areas of industrial activities, potential pollutants sources and potential pollutants in the storm water and authorized non-storm water discharges. *Attachment 2* of the Checklist is equivalent in content to the permit required *Assessment of Potential Pollution Sources and Corresponding Best Management Practices Summary* table, also called *Table B*.

A narrative description of the industrial activities occurring at the site, the potential pollutant sources and the associated potential pollutants are provided for the following permit required issues, when relevant to the Airport:

- Industrial Processes -Industrial Activities
- Material Handling and Storage Areas
- Dust and Particulate Generating Activities
- Significant Spills and Leaks
- Non-Storm Water Discharges
- Soil Erosion

### Industrial Processes

The Industrial Activities at the Airport consist of:

- Aircraft fueling
- Aircraft maintenance
- Vehicle maintenance
- other -see attached Industrial Process Description Form, Figure 6-1

Each process is discussed in full below.

### **AIRCRAFT FUELING**

**Describe the aircraft fueling process:** Fueling is provided by a 24-hour card lock system. The pilot taxis up to the above ground fueling facility. A credit card is necessary to activate the system.

The fuel hose is on a spring-loaded reel. After activating the system, the user releases the hose and pushes the handle on the side of the fuel pump to dispense av gas. After fueling is complete, the hose winds up on the reel.



## 6. DESCRIPTION OF POTENTIAL POLLUTANT SOURCES (continued)

**List the fueling locations at the Airport:** The airport has one fueling location: the 24hour card lock system located on the east side of the taxiway between the hangars and the runways.

**Fuel type(s):** AV 100

**Fuel characteristics:** See attached MSDS \_\_\_\_\_

**Typical Fuel Quantity:** The storage tank holds a maximum of 10,000 gallons. The typical fuel quantity is 5,000 gallons.

**Fuel tank containment:** The fuel tank is located on an impervious concrete pad with asphalt shoulders to the pad to prevent run-off. The fueling hose has a containment shelf to prevent fuel spillage from early or late fuel handle release or a possible problem with the fuel filter.

The potential pollutant source is the transfer of fuel. The potential pollutants from the Airport aircraft fueling process are aviation fuel.

### AIRCRAFT MAINTENANCE

**Describe the aircraft maintenance activities occurring:** The Orland Airport has one fixed base operator: Herfi Aircraft. The fixed base operators perform engine overhauls, routine maintenance work, oil changes, etc. Private pilots may perform aircraft maintenance on personal aircraft and all maintenance is conducted inside.

**List the locations where aircraft maintenance occurs at the Airport:** The Orland Airport has one fixed base operator: Herfi Aircraft. The fixed base operators perform engine overhauls, routine maintenance work, oil changes, etc.

All maintenance activities are conducted inside hangars. The use of drip pans is employed during maintenance procedures.

Any maintenance operations performed by private parties are also conducted within the hangars.

**Aircraft maintenance materials type, quantity, and disposal:** The materials associated with aircraft maintenance are summarized in the *Significant Materials on Site* table. Please refer to the *Significant Materials on Site*, Table 5-1 of this document for a complete list of maintenance materials used, storage locations and quantities information.

**Aircraft maintenance material characteristics:** See attached MSDS

**For any aircraft maintenance materials stored outside, list containment methods:** All maintenance material stored in metal barrels and secondary containment to preclude potential pollution problems.

## **6. DESCRIPTION OF POTENTIAL POLLUTANT SOURCES (continued)**

### **AIRCRAFT MAINTENANCE (continued)**

The potential pollutant source is aircraft maintenance. Aircraft maintenance is performed indoors, eliminating the potential for maintenance materials to impact storm water.

**List potential pollutants from outdoor aircraft maintenance activities: N/A**

**List Potential pollutants from outdoor vehicle maintenance activities: N/A**

**OTHER INDUSTRIAL PROCESSES that occur at the Airport, that are not addressed completely by the above discussion, where there is a potential that the activity is a source of pollutant impact to the Airport storm water runoff, must be documented on the following form, *Industrial Process Description*, Figure 6-1. Figure 6-1 is only to be completed if there is a potential for Airport activity to impact the storm water runoff. All completed copies of the Industrial Process Description form must be retained with the SWPPP document.**

### **AIRCRAFT PAINT SHOP**

The potential pollutant source is paint. All paint removal occurs within the hangar. No paint removal activity is allowed outside the structure. A water mist is used to control the dust during the removal process. The water is retained within the building. The resultant residue is swept up and put in containers with lids and properly disposed of. To ensure that water does not drain outside the building, the bottom of the building is caulked. To prevent other residue from escaping through the ventilation fan, a secondary containment is installed.

The repainting occurs within a paint booth. The paint booth has filters for any paint mist. All painting occurs inside; no painting is allowed outside.

**List potential pollutants from outdoor aircraft painting activities: N/A**

## Industrial Process Description

Figure 6-1

Describe Activity / Potential Pollutant

Source: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Site location Activity Occurs: \_\_\_\_\_

\_\_\_\_\_

Type of Materials Used in Process: \_\_\_\_\_

\_\_\_\_\_

Characteristic of Materials Used in Process: SEE MSDS for materials

Typical Material Quantities Used: \_\_\_\_\_

\_\_\_\_\_

Material Disposal Methods: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Cleaning and Rinsing Activities Associated with Process: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Containment Methods Associated with Activity or Materials used: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

List Potential Storm Water Pollutants: \_\_\_\_\_

\_\_\_\_\_

## 6. DESCRIPTION OF POTENTIAL POLLUTANT SOURCES (continued)

### Material Handling and Storage

The Airport stores and handles fuel and maintenance materials. The type, characteristics, quantity, and containment of fuel and maintenance materials were discussed above in the Industrial Processes section. The potential pollutant sources and potential pollutants that may impact the storm water runoff and the authorized non-storm water runoff from fuel and maintenance material handling and storage are also discussed in the *AAAE Checklist, Attachment 2, the Potential Pollutant Source and BMP Summary Table*. The handling, storage, and transfer methods of significant materials used at the Airport are discussed below.

### Material Handling and Storage Areas

Areas discussed are:

- Fuel Storage and Handling
- Maintenance Material Storage and Handling
- Other -Significant Material Handling and Storage form, Figure 6-2

### **FUEL STORAGE AND HANDLING**

#### **Describe fuel handling and storage area:**

Aviation Fuel: Av gas is stored in a double-walled above ground storage tank. The fuel storage area is located between the hangars and the runway. The fuel storage tank is located on an impervious concrete pad with an asphalt shoulder to prevent fuel run-off in case of a spill.

#### **Describe fuel receiving and loading procedures:**

Aviation Fuel: The Airport Attendant is present when fuel is delivered. The attendant performs all necessary tests to ensure the delivery is AVgas. The attendant remains on site during the entire fuel delivery process to ensure safe fuel handling. The fueling is dispensed by self-service. Fuel can only be dispensed when a valid credit card is used to activate the system. Any fuel spill would be absorbed with the kitty litter and disposed of properly.

## **6. DESCRIPTION OF POTENTIAL POLLUTANT SOURCES (continued)**

### **FUEL STORAGE AND HANDLING (continued)**

#### **Briefly describe spill procedures:**

The fuel site is equipped with absorbent material, a bucket and a shovel. If a fuel spill occurs, the spill will be covered with absorbent material, pick up the material with the shovel and place it in the bucket and properly dispose of the mixture.

The major spill kit contains a containment boom, absorbent material and a shovel. The containment boom is placed around the spill to prevent the fuel from spreading, then the absorbent material is spread over the fuel, and then the resulting material is scooped up and properly disposed of.

### **MAINTENANCE MATERIALS STORAGE AND HANDLING**

Most aircraft maintenance materials are stored and handled inside.

For any maintenance materials that are stored or in an area where there is potential impact to the storm water, the handling and storage techniques are described in full. The *Significant Material Handling and Storage* form, Figure 6-2 is used to document any outdoor usage and storage techniques. This form contains a description of handling and storage methods implemented to prevent or minimize exposure of the maintenance materials to storm water runoff and authorized non-storm water runoff. Figure 6-2 is maintained with the SWPPP document. This form is only completed when outdoor use or storage of materials exists at the Airport.

### **OTHER SIGNIFICANT MATERIAL HANDLING AND STORAGE AREAS**

The handling techniques, implemented for any other materials (herbicides, pesticides, paint, deicing chemicals, etc.) used or stored at the Airport in significant quantities where there is a potential for exposure to storm water runoff through use, transfer, and storage, must be documented in this SWPPP Section. The form titled *Significant Material Handling and Storage*, Figure 6-2, is completed for each such material at the Airport. The completed forms are maintained with the SWPPP document.

## Significant Material Handling and Storage

Figure 6-2

Type of material, potential pollutant: agriculture operations

Characteristics:

Quantity: Infrequent use by agriculture aviation operators.

Description of site area where material is handled: See Exhibit "A", Resolution No. 2004-27

Description of material storage area: See Exhibit "A", Resolution No. 2004-27

Brief description of the material receiving procedures: See Exhibit "A", Resolution No. 2004-27

Brief description of the material loading procedures: See Exhibit "A", Resolution No. 2004-27

Description of material spill/leak prevention procedures: See Exhibit "A". Resolution No. 2004-27.

Description of material containment: See Exhibit "A". Resolution No. 2004-27.

Brief description of material disposal technique: See Exhibit "A". Resolution No. 2004-27.

## **6. DESCRIPTION OF POTENTIAL POLLUTANT SOURCES (continued)**

### Dust and Particulate Generating Activities

The Airport site is a highly impervious paved surface and with several buildings and there are no activities occurring which produce or generate significant amounts of dust or particulate.

There is a fruit and vegetable pulp drying operation.

The aircraft painting facility conducts operations within the building. However, the need for sealing of building and a filter or secondary containment system for the ventilation fan is warranted to ensure containment of possible pollutants.

## Dust and Particulate Generating Activities

Table 6-1

<b>Describe Activity</b>	<b>Location at Airport</b>	<b>Characteristic of Particulate</b>	<b>Outfall Draining Dust Deposit Areas</b>	<b>Estimated Quantity</b>
Fruit and vegetable pulp drying	Westside of airport	Dust from drying operation	Drainage remains on site	
Aircraft painting	Conducted within commercial hangar		Water mist used to control no drainage outside building, sealing of building perimeter and filter or secondary containment of ventilation fan	



## 6. DESCRIPTION OF POTENTIAL POLLUTANT SOURCES (continued)

### Significant Spills and Leaks

Spills and leaks can be a potential pollutant source. The source location is typically where the spill or leak has occurred, and is dependent on the industrial activities occurring in the area. The types of potential pollutants in the storm water and authorized non-storm water discharges from spills and leaks are typically fuels, oils, and engine fluids. Please refer to the *Significant Materials on Site*, Table 5-1, for a complete list of potential pollutants that might be spilled or leaked at the Airport.

The record of spills at the Airport is maintained on a *Record of Spills* table, Table 6-2. The spill record describes the approximate quantity spilled, and the clean up or remedial action taken. The preventative measures taken to avoid future or continued spills are discussed in the Airport SWPPP in Section 8, Best Management Practices. There are spill prevention and clean up procedures and plans implemented at the Airport.

The following *Record of Spills* table is completed and maintained with the Airport SWPPP document. All known Airport spills and leaks are recorded on table 6-2 or similar table and maintained in the SWPPP document. The General Permit requires that the spill record for this SWPPP begin with any spills occurring from April 17, 1994 on. Historical spill tables containing this information are attached.

## Record of Spills and Leaks

<b>Date Spill Occurred</b>	<b>Location of Spill</b>	<b>Type of material</b>	<b>Characteristic of material</b>	<b>Estimated Quantity Spilled</b>	<b>Estimated Quantity Remaining</b>	<b>Clean up Response</b>
No Spills Recorded in 1999-2010						
No Spills recorded as of May 2011						

## 6. DESCRIPTION OF POTENTIAL POLLUTANT SOURCES (continued)

### Non-Storm Water Discharges

Non-storm water discharges can be a significant potential pollutant source. The location of the pollutant source area is difficult to identify because non-storm water discharges can occur anywhere at the Airport. The SWPPP team conducts routine observations of all Airport discharge locations to help control the impact from non-storm water discharges. The potential pollutants in non-storm water discharges depend on the source, but in general may include detergents, metals, fuels, oils, and engine fluids.

Quarterly non-storm water visual observations are conducted to verify that there are no unauthorized non-storm water discharges occurring at the Airport. Each observation is completed at all Airport outfall locations and documented on the *Non-Storm Water Visual Observation Form*. All of the non-storm water forms are then reviewed and submitted as part of the Airport Annual Comprehensive Site Compliance Evaluation. Any discharges discovered are immediately inspected, the source identified and the discharge eliminated.

The General Permit has established a set of conditions to allow certain non-storm water discharges in the storm water conveyance system. The following listed non-storm water discharges are considered "authorized non-storm water discharges" if they meet the conditions below. (The information below is excerpted from the new California General Permit.)

### Authorized Non-Storm Water Discharges:

Fire hydrant flushing; potable water sources; including potable water sources related to the operation, maintenance or testing of potable water systems; drinking fountain water; atmospheric condensates including refrigeration, air conditioning, and compressor condensate; irrigation drainage; landscape watering; springs; ground water; foundation or footing drainage; and sea water infiltration where the sea waters are discharged back to into the sea water source.

### Conditions:

1. The non-storm water discharges are in compliance with Regional Water Board requirements.
2. The non-storm water discharges are in compliance with local agency ordinances and/or requirements.
3. BMPs are specifically included in the SWPPP to a) prevent or reduce the contact of non-storm water discharges with significant materials or equipment and b) minimize, to the extent practicable, the flow or volume of non-storm water discharges.
4. The non-storm water discharges do not contain significant quantities of pollutants.
5. The monitoring program includes quarterly visual observations of each non-storm water discharge and its sources to ensure that the BMPs are being implemented and are effective.
6. The non-storm water discharges are reported and described annually as part of the annual report.

## 6. DESCRIPTION OF POTENTIAL POLLUTANT SOURCES (continued)

### Non-Storm Water Discharges

Any non-storm water discharges that qualify according to the above information as authorized non-storm water discharges are documented and included in the Airport SWPPP. The *AAAE Checklist, Attachment 1*, included below as *the Authorized Non-storm Water Discharge Information Form* (Figure 6-3) is used to complete the General Permit documentation requirements for authorized discharges. This form includes the required authorized non-storm water discharge BMP information.

Authorized non-storm water discharges are also inspected quarterly, when occurring, to verify that the discharge is not carrying significant amounts of pollutants. The quarterly observations are documented on the *Authorized Non-storm Water Visual Observation Form*. The observation forms are reviewed and submitted as part of the Airport ACSCE.

**Authorized Non-Storm Water Discharge Information Form**

Figure 6-3

(Complete one form for each non-storm discharge)

Describe the authorized discharge source: Landscape watering

What is the approximate quantity of the discharge? A few gallons

What is the approximate frequency of the discharge? During the months of April through October, approximately once a week.

Is the discharge exposed to materials or equipment where potential pollutant contact can occur?

No  Yes \_\_\_\_\_, if yes complete the sections below. If no, skip to bottom of form and sign and date.

List best management practices implemented to reduce contact of authorized discharge with significant materials or equipment. For example berming a path for the flow around any material stockpiles, store pollutant laden equipment in areas not exposed to non-storm discharge flow, piping non-storm water flow around industrial areas, or covering exposed pollutants.

---

---

---

---

---

---

Describe below the implementation schedule for any of the above listed BMPs that are not currently implemented. \_\_\_\_\_

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

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

## **6. DESCRIPTION OF POTENTIAL POLLUTANT SOURCES (continued)**

### Soil Erosion

The Airport is flat with significant impervious areas, soil erosion is not an issue and does not need to be addressed as a potential pollutant source in the SWPPP. No BMPs are necessary at the Airport to control erosion.

## 7. ASSESSMENT OF POTENTIAL POLLUTANT SOURCES

The General Permit requires that the Airport SWPPP include a narrative assessment of all the industrial activities or potential pollutant sources identified above in Section 6. The assessment must consider:

- Areas of the Airport that are likely sources of pollutants in the storm water discharges and authorized non-storm water discharges,
- Which pollutants are likely to be present in the discharges.

Areas of likely pollutant impact are:

- Aircraft and Vehicle fueling, fuel storage and transfer
- Other sources, see the completed forms, *Assessment of Likely Pollutant Sources*, Figure 7-1

### AIRCRAFT FUELING

The aircraft fueling is a significant industrial activity occurring at the Airport where there is direct exposure of potential fueling pollutants to storm water runoff. BMPs have been implemented to control the impact from the aircraft fueling process; however, fueling occurs outside where spills, leaks, equipment failure, or human error can cause exposure of aviation fuel to storm water runoff. Therefore, the aircraft fueling areas at the Airport are identified as likely sources of pollutants.

Drainage areas and Airport locations impacted by aircraft fueling: Spillage would occur only on the taxiways or at the storage location for the tank on paved ground. If fuel did runoff, it would be into the lined drained along the taxiway. The drain empties to the south of the paved area on airport property.

The pollutant likely to be present in storm water runoff and authorized non-storm water from aircraft fueling areas is aviation fuel.

## 7. ASSESSMENT OF POTENTIAL POLLUTANT SOURCES

The General Permit requires that the Airport SWPPP include a narrative assessment of all the industrial activities or potential pollutant sources identified above in Section 6. The assessment must consider:

- Areas of the Airport that are likely sources of pollutants in the storm water discharges and authorized non-storm water discharges,
- Which pollutants are likely to be present in the discharges.

Areas of likely pollutant impact are:

- Aircraft fueling, fuel storage and transfer
- Other sources, see the completed forms, *Assessment of Likely Pollutant Sources*, Figure 7-1

### AIRCRAFT FUELING

The aircraft fueling is a significant industrial activity occurring at the Airport where there is direct exposure of potential fueling pollutants to storm water runoff. BMPs have been implemented to control the impact from the aircraft fueling process; however, fueling occurs outside where spills, leaks, equipment failure, or human error can cause exposure of aviation fuel to storm water runoff. Therefore, the aircraft fueling areas at the Airport are identified as likely sources of pollutants.

Drainage areas and Airport locations impacted by aircraft fueling: The fueling area. Only a significant spill would impact a drainage area. The drainage area would be to the southeast across the taxiway towards the hangars and this all impervious surface.

The pollutant likely to be present in storm water runoff and authorized non-storm water from aircraft fueling areas is aviation fuel.

### LANDSCAPE WATERING

An authorized non-storm water discharge would be landscape watering, specifically the trees on the north side of the Pilots' Lounge. The pollutant likely to be present would be dirt.

### AIRCRAFT PAINTING

Aircraft painting could be a significant industrial activity at the Airport. All activity occurs within the building. The BMPs to control the impact have been water mist to contain dust particulates, sealing of the building perimeter to prevent leakage of water or dust to the outside and installation of a containment system on the exhaust fan to prevent dust from getting outside.

The pollutant likely to be present would be soda dust from the paint removal process.

### ASSESSMENT OF OTHER AREAS

If the Airport conducts any other industrial practices outdoors (maintenance, material storage, aircraft washing, etc.) for which there are limited BMPs implemented, or the area has experienced frequent spills or leaks, or large quantities of significant materials are stored in a manner where there is potential exposure, or there is significant run-on from offsite the following form, Figure 7-1 must be completed. One *Assessment of Likely Pollutant Sources* form, Figure 7, must be completed for each of these identified



Orland Haigh Field Airport SWPPP

areas at the Airport. The completed forms must be maintained in the Airport SWPPP following this section, Section 7.

Haigh-Orland Airport does not have any outdoor industrial practices. The Airport has not experienced frequent spills or leaks, or large quantities of significant materials stored where there is a potential exposure, or there is significant run-on from offsite.

## Assessment of Likely Pollutant Sources

Figure 7-1

Describe Industrial Activity: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Describe site location of the industrial activity: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Check any of the appropriate assessment reasons for identifying this area as a likely pollutant source:

- Activity conducted outdoors       Limited BMPs       Frequent spills or leaks  
 Significant quantities of materials handled       Contaminated run-on from offsite  
 Other, explain: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

List all pollutants associated with the above activity that are likely to be found in the storm water runoff or authorized non-storm water runoff from contact with this area:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

## **8. STORM WATER BEST MANAGEMENT PRACTICES**

The Airport has many structural and non-structural controls in place to prevent pollutants associated with industrial activities from potentially coming in contact with storm water. The industrial activities, associated pollutant source, and corresponding best management practices for this Airport are summarized in the attached *AAAE SWPPP Checklist, Attachment 2, the Potential Pollutant Source and BMP Summary* table.

The General Permit requires that a narrative discussion be provided in the SWPPP for all non-structural and structural BMPs implemented or to be implemented at the Airport. The effectiveness of each BMP must also be included in the BMP narrative.

### Non-Structural BMPs

The non-structural BMPs at the Airport consist of practices, procedures, and awareness training that prevents or greatly reduce contact of pollutants with storm water runoff. The General Permit contains a list of non-structural BMPs that should be considered:

- Good Housekeeping
- Preventative Maintenance
- Spill Response
- Material Handling and Storage
- Employee Training
- Waste Handling / Recycling
- Record keeping and Internal Reporting
- Erosion Control and Site Stabilization
- Inspections
- Quality Assurance

The narrative discussion of non-structural BMPs below, will included only those BMPs that are applicable to the Airport.

### **GOOD HOUSEKEEPING**

The Airport critical areas where good housekeeping is a priority are aircraft and vehicle fueling, material storage, and the maintenance areas. These areas are kept clean by sweeping, debris removal, immediate spill response and proper storage and labeling of materials.

## 8. STORM WATER BEST MANAGEMENT PRACTICES (continued)

### GOOD HOUSEKEEPING (continued)

The specific good housekeeping BMPs conducted for each of the Airport industrial activity areas are listed below. The effectiveness of the listed practices is circled.

**Aircraft Fueling Areas:** Fuel is provided at an above ground storage tank. The system is activated with a credit card. The airport attendant performs daily inspections dependent on the level of activity. The attendant inspects for debris on the ground and proper storage of fuel hose.

---

BMP effectiveness	fair	good	excellent
-------------------	------	------	-----------

**Material Storage Area Indoors:** Indoor storage of material is in original containers or properly labeled with properly fitting covers.

---

BMP effectiveness	fair	good	excellent
-------------------	------	------	-----------

**Material Storage Areas Outdoors:** Outdoor material storage is with double containment and/or under cover to protect from the weather.

---

BMP effectiveness	fair	good	excellent
-------------------	------	------	-----------

Aircraft Washing Area: N/A Not allowed.

---

BMP effectiveness	fair	good	excellent
-------------------	------	------	-----------

**Maintenance Areas:** All maintenance is conducted indoors. Maintenance is not allowed to be conducted outdoors. Airport attendant monitors for compliance.

---

BMP effectiveness	fair	good	excellent
-------------------	------	------	-----------

## 8. STORM WATER BEST MANAGEMENT PRACTICES (continued)

### GOOD HOUSEKEEPING (continued)

**Ramp Areas:** Airport Attendant daily checks ramp areas for debris. Any discovered material is removed. Airport attendant also daily monitors for holes in pavement and reports for repair.

---

BMP effectiveness	fair	good	excellent
-------------------	------	------	-----------

**Runway / Taxiway Areas:** Airport Attendant conducts a daily inspection. Any debris is removed. Lights are monitored. If repair work is needed, Attendant reports to the County Buildings and Grounds Department and a Notam is issued, if necessary.

---

BMP effectiveness	fair	good	excellent
-------------------	------	------	-----------

List any other Good housekeeping BMPs conducted at the Airport that were not addressed in the above section. Include a brief discussion of the effectiveness of the practice.

**List effectiveness of the above BMPs:** Excellent

### PREVENTATIVE MAINTENANCE

The entire Airport is inspected annually. This is a complete maintenance and inspection procedure of the industrial activity areas, equipment, stored materials, BMPs and Airport outfalls. The inspection is documented and as with all SWPPP and storm water documentation the records are maintained for 5 years.

The specific preventative maintenance BMPs conducted for each of the Airport industrial activity areas and equipment are listed below. The effectiveness of the listed practices is circled.

**8. STORM WATER BEST MANAGEMENT PRACTICES (continued)**

**PREVENTATIVE MAINTENANCE (continued)**

**Aircraft fuel storage areas and equipment:** Daily inspection of fuel hose and appurtenant equipment is conducted. Repairs or replacement are completed as needed. Inventory of fuel monitored on a daily basis. Inventory monitoring would detect the possibility of any leaks from the storage tank.

---

BMP effectiveness	fair	good	excellent
-------------------	------	------	-----------

**Aircraft fueling areas:** Routine sweeping of area to ensure cleanliness of area and monitor spills or leaks.

---

BMP effectiveness	fair	good	excellent
-------------------	------	------	-----------

**Material storage area indoors:** Inspections are conducted to verify containers have proper labeling and covers.

---

BMP effectiveness	fair	good	excellent
-------------------	------	------	-----------

**Material storage areas outdoors:** Annual inspections are conducted to verify containers have secondary containment in good repair.

---

BMP effectiveness	fair	good	excellent
-------------------	------	------	-----------

## 8. STORM WATER BEST MANAGEMENT PRACTICES (continued)

### PREVENTATIVE MAINTENANCE (continued)

**Maintenance Areas:** Annual inspections are conducted to verify best management procedures are being followed.

---

BMP effectiveness	fair	good	excellent
-------------------	------	------	-----------

**Ramp Areas:** Daily inspections are conducted. Sweeping of areas to prevent rocks and debris of entering storm water. If any spills are detected, clean-up measures are immediately implemented.

---

BMP effectiveness	fair	good	excellent
-------------------	------	------	-----------

**Runway / Taxiway Areas:** Daily inspections are conducted. Sweeping of areas to prevent rocks and debris from entering storm water. If any spills are detected, clean-up measures are immediately implemented.

---

BMP effectiveness	fair	good	excellent
-------------------	------	------	-----------

List any other Good housekeeping BMPs conducted at the Airport that were not addressed in the above section. Include a brief discussion of the effectiveness of the practice.

**Other Airport Good Housekeeping BMPs:** Used oil container. The Airport Attendant daily monitors to ensure proper use of storage facility: lid on storage container is in place, monitor for spills and clean-up if needed.

**List effectiveness of the above BMPs:** Excellent

The General Permit requires that the storm water conveyance system and storm water structural controls are inspected routinely along with the area and equipment inspections discussed above. The Airport SWPPP Personnel are responsible for monthly wet season inspections of the industrial Airport outfalls. These inspections are conducted to verify sound physical structure of the outfall as well as to inspect the water quality of the storm water runoff leaving the site. These documented inspections at the final point in the system, the outfall, serve as inspections of the entire storm system. The documented inspections are part of the annual report submitted to the Regional Board.

**8. STORM WATER BEST MANAGEMENT PRACTICES (continued)**

**PREVENTATIVE MAINTENANCE (continued)**

The inspection and or maintenance of the structural controls listed below that are implemented at the Airport are recorded below.

Fuel Spill Kits: Once a quarter

Overhead Coverage: Roof inspection once a year.

The effectiveness of the preventative maintenance programs in place at the Airport can in part be judged by the storm water data from the AAAE Airport samplers. The data has shown throughout the last five years of testing that there is no significant contamination leaving the Airport in storm water runoff. The records from visual inspections of water quality of the Airport runoff also consistently show no signs of pollutants.

**SPILL RESPONSE**

The Airport has in place a Site Specific Spill Plan. List all Airport spill response plans:

---

---

The above listed documents are maintained, updated and reviewed by appropriate Airport personnel. The plan components will not be repeated in this SWPPP, for details concerning the spill response plan please refer to the above mentioned documents.

List other spill response BMPs implemented at the Airport that are not discussed in the above listed documents:

---

---

Airport spill response BMPs effectiveness \_\_\_\_\_

---

---

---

---



## **8. STORM WATER BEST MANAGEMENT PRACTICES (continued)**

### **MATERIAL HANDLING AND STORAGE**

The material handling and storage procedures for aircraft fuel and vehicle fuel are discussed above in Section 6. For any other materials that are handled and stored outdoors, the Significant Material Handling and Storage form, Figure 6-2 is completed. The material handling form lists all the material handling and storage techniques implemented to prevent contact of the materials with storm water runoff.

Describe the effectiveness of the aviation fuel handling and storage BMPs: The BMPs are effective. The Airport has not experienced any spills of aviation fuel during handling and storage.

Describe the effectiveness of other significant material handling and storage BMPs implemented at the Airport:

The Orland Airport has not experienced any spills of material that would contact storm water runoff.

## **8. STORM WATER BEST MANAGEMENT PRACTICES (continued)**

### **EMPLOYEE TRAINING**

Employee training is critical to the success of the SWPPP and the Airport storm water management. Airport personnel that are responsible for implementing activities identified in the SWPPP, conducting inspections, sampling and visual observations, and overall Airport storm water management are trained. A representative from the Airport SWPPP team attended a daylong seminar in November of 1997 for storm water management training. The training meetings provide an opportunity for storm water management techniques to be shared and any new permit requirements to be explained.

Airport training conducted that is related to storm water management is recorded on Table 8-1, or a similar table, and maintained with the Airport SWPPP. The Employee Training Record table is used to track when the Airport BMP and procedures training occurs and which Airport employees attend.

Below is a brief summary of the effectiveness of the employee training conducted at the Airport:

The Airport has not experienced any spills from fuel, waste oil or other materials.

### **WASTE HANDLING / RECYCLING**

All waste significant materials are removed by contractors and recycled when possible. All the significant materials handled and the disposal techniques for any waste materials are summarized in Table 5-1 , *Significant Materials on Site*. Any waste materials at the site that are stored and handled outdoors are described on the completed form, *Significant Materials Handling and Storage*, Figure 6-2. The completed form contains all the procedures for handling and disposing of the waste material.

Below is a brief summary on the effectiveness of waste material disposal BMPs at the Airport:

## Storm Water Employee Training Record

Table 8-1

Training Topic	Training Conducted By	Date of Training	Employees Attending Training
Storm water training seminar (Oakland, CA)	Airport California Monitoring Group	12/7/2005	Ken Dunn Doug Holvik
Storm Water Training (conference call)	Airport California Monitoring Group	12/14/2006	Ken Dunn
SWPPP (conference call)	Airport California Monitoring Group	5/10/2010	Ken Dunn

**8. STORM WATER BEST MANAGEMENT PRACTICES (continued)**

**RECORD KEEPING AND INTERNAL REPORTING**

The Airport has established an environmental file containing all the required reports and inspection documentation. The Airport SWPPP team is responsible for recording all incidences of spills, all visual observations, and storm water inspections. The documents are shared and reviewed with other appropriate Airport personnel. The records are retained with the SWPPP document in the Airport environmental file. Records will be retained for the required 5 years.

The records are reviewed during the Airport ACSCE, by the Airport SWPPP team and the Group Leader prior to annual report submission, and by the Group Leader once again during the Group Leader Airport Inspection. Any incomplete or inaccurate records are addressed and corrected.

Briefly evaluate the effectiveness of the Airport's record keeping and internal reporting of storm water related information: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**EROSION CONTROL AND SITE STABILIZATION**

The Airport has a potential problem area for erosion at the retention pond intake at the southeast corner of the Airport. Daily inspection is conducted during the storm season.

**8. STORM WATER BEST MANAGEMENT PRACTICES (continued)****INSPECTIONS**

The Airport SWPPP personnel are trained to complete many Airport inspections. The procedures for conducting all the storm water inspections are detailed in the AAAE Group Monitoring Plan (GMP) submitted and approved by the State Water Resources Control Board (SWRCB). The procedures are also detailed in the AAAE Monitoring Manual distributed to all group Airports. The procedures for conducting the inspections including pollutant source investigations are on pages 13-17 of the AAAE GMP. The routine and annual inspections conducted by the Airport SWPPP personnel are listed below. The inspections are recorded on forms specifically developed for AAAE Airport storm water and are also listed below.

<b>Type of Inspection</b>	<b>Report Form</b>	<b>Frequency</b>
Non-Storm water discharges	Non-Storm Water Visual observation Form	Quarterly
Authorized non-storm water discharges	Authorized Non-Storm Water Visual Observation Form	Quarterly
Water quality of storm water discharges	Storm Water Visual Observation Form	Monthly, October-April
Inspection of potential pollutant sources	Industrial Activity Area Observation Form	Annually
Inspection of implemented BMP's	BMP Evaluation and Observation Form	Annually

The Airport SWPPP personnel are also responsible for conducting a review of the inspection documents to verify that the inspections were done correctly and that any required follow up action was completed. The review of the inspection information is completed annually and documented on the *ACSCE Report Summary Form*. All of the above forms are submitted to the Group Leader for review, are compiled and submitted to the Regional Water Quality Boards, and are maintained with the SWPPP documents in the Airport environmental file.

The extensive preventative maintenance and storm water inspections conducted at the Airport are highly effective. Potential pollutant releases do not occur because the problem is discovered through the inspection processes prior to any release or equipment failure.

**QUALITY ASSURANCE**

The Airport has a number of checks and balances for insuring that the elements of the SWPPP and monitoring program are conducted. The inspections, training and monitoring are all documented. The records are reviewed by the Airport SWPPP team and the Group Leaders. Any potential concerns with the Airport's program compliance are addressed immediately.

## 8. STORM WATER BEST MANAGEMENT PRACTICES (continued)

### QUALITY ASSURANCE (continued)

The Group leaders conduct an extensive Airport inspection twice within the permit compliance term. The detailed procedures for the quality assurance inspection are included in the AAAE GMP, pages 24-26. A series of observations are conducted and recorded. The inspection forms completed during the Group leader Inspection are listed below:

- *Observation Activity Record Review Form*
- *Airport Visual Inspection Form*
- *Airport SWPPP Review*
- *Authorized Non-Storm Water Inspection Form*
- *Alternative BMP Inspection Form*

The above outlined system of reviews and inspections is very effective at ensuring that the Airport is complying with and implementing all the components of the Airport SWPPP and Monitoring Program.

### Structural BMPs

Structural BMPs are structural devices or treatment facilities that prevent or reduce pollutants in storm water and authorized non-storm water discharges. When nonstructural BMPs are not sufficiently reducing pollutant loads alone, the General Permit requires the following minimum structural BMPs be considered:

- Overhead Coverage
- Retention Ponds
- Control Devices
- Secondary Containment Structures
- Treatment
- Other Structural BMPs

The narrative discussion of structural BMPs below, will included only those BMPs that are applicable to the Airport.

### **OVERHEAD COVERAGE**

This includes structures that provide horizontal coverage of materials, chemicals, and industrial activities (i.e. aircraft maintenance) eliminating contact of potential pollutant sources with storm water and authorized non-storm water.

Listed below are all the areas where overhead coverage is implemented at the Airport:

The FBOs, Herfi and NorCal Restorers, and the private and public hangars.

The effectiveness of the overhead coverage implemented at the Airport is summarized below:

The storm water inspections have verified no contamination from the above sources. There is no site evidence of contamination from the above sources.

## **8. STORM WATER BEST MANAGEMENT PRACTICES (continued)**

### **RETENTION PONDS**

This includes basins, ponds, surface impoundments, bermed areas, etc., that do not allow storm water to discharges from the Airport.

Listed below are the Airport areas where retention of storm water is implemented as storm water BMP:

The Orland-Haigh Airport has two retention basins one at the northwest corner and one at the southeast corner of the airport. The basin is completed and will handle normal storm water runoff.

The effectiveness of the Airport retention BMPs implemented is summarized below:

The retention basins will ensure that the storm water remains on site during a normal storm.

## **8. STORM WATER BEST MANAGEMENT PRACTICES (continued)**

### **CONTROL DEVICES**

This includes berms, pallets or other means of channeling or routing runoff away from potential pollutants sources or areas.

The controls device BMPs implemented at the Airport are listed below: *N/A*

The effectiveness of the control devices implemented at the Airport is summarized below:

### **SECONDARY CONTAINMENT STRUCTURES**

This includes structures around storage tanks, drums or industrial activity areas for the purpose of containing leaks and spills.

The secondary containment BMPs implemented at the Airport are listed below:

The above ground fuel storage tank is a double-walled storage tank.

The effectiveness of the secondary containment structures implemented at the Airport is summarized below:

The fuel tank has not experienced any ruptures or spills. The secondary containment is effective.



**8. STORM WATER BEST MANAGEMENT PRACTICES (continued)**

**TREATMENT**

This includes inlet controls (catch basin or inlet filters), infiltration devices, oil water separators, vegetative swales, stormceptors, etc., that reduce the pollutants in the storm water or authorized non-storm water discharges.

Listed below are all the treatment type BMPs implemented at the Airport: N/A

---

---

---

---

---

---

---

The effectiveness of the treatment BMPs implemented at the Airport is summarized below:

---

---

---

**OTHER STRUCTURAL CONTROLS**

Any other structural controls implemented at the Airport that can not be categorized by the listed structural controls above should be listed below:

---

---

---

The effectiveness of the alternative structural BMPs implemented at the Airport is summarized below:

---

---

---

## 9. ANNUAL COMPREHENSIVE SITE COMPLIANCE EVALUATION

The Airport operator conducts one comprehensive site compliance evaluation (ACSCE) in each reporting period July 1 -June 30. The information below has been excerpted from the AAAE GMP and summarizes the Airport SWPPP team roles and objectives in completing the Airport ACSCE.

The evaluations are conducted within 8 -16 months of each other. The evaluation is documented on a series of forms that lead the Inspector through the required observations and evaluations. The evaluation includes all of the following inspections and reviews.

Visual inspections of all the potential pollutant sources at the Airport are conducted. Potential pollutant sources are identified as industrial activity areas or locations. Each of the industrial activity areas and the BMPs implemented in the area, are described on the *Industrial Activity Area Observation Form*. The industrial activity areas are also inspected for any evidence of pollutants entering the storm system from the industrial activity area. All pollution inspections are recorded on the Industrial Activity Area Observation Form.

A review and evaluation of all implemented BMPs to determine whether the BMPs are adequate, properly implemented, and maintained is completed. The review and evaluation are recorded on the *BMP Evaluation and Observation Form*. A BMP form is completed for each of the identified industrial activity areas or potential pollutant sources at the site. The review includes an evaluation of both structural and non-structural BMPs. Visual inspections of the BMPs are conducted when appropriate to determine that the structural BMPs are functioning properly and that all listed pollution control equipment is available and has been maintained.

The Inspector completes the *Annual Comprehensive Site Compliance Evaluation Report Summary Form*. The ACSCE summary contains the following information: identification of the personnel responsible for the evaluations; the date the evaluation occurred; confirmation of the review of all visual observation records, inspection records and sampling analysis results; a determination as to whether the Airport SWPPP requires revision; a schedule for SWPPP revision if required; any incident of non-compliance; and any corrective action required. The entire review and evaluation process is used to help the Inspector determine whether improvements need to be made to the Airport's BMPs and thus revisions to the Airport SWPPP. Any revisions to the SWPPP are implemented in accordance to the requirements in the General permit Section A (1 O) (e).

The review of the monitoring results and the BMP evaluations are used as a tool to determine whether the Airport is in compliance with the Airport SWPPP and the General Permit. Completion and signing of the *Annual Comprehensive Site Compliance Evaluation Certification*, is indication that the Inspector has determined that the Airport is in compliance with the General Permit. The signature statement on the above form is in accordance with Standard Provisions 9 and 10 of Section C of the General Permit.

## **9. ANNUAL COMPREHENSIVE SITE COMPLIANCE EVALUATION (continued)**

An evaluation report is compiled with all the above described forms, completed during the ACSCE process. The complete report is submitted each year to the appropriate Regional Water Quality Board as part of the Airport Annual Report. The ACSCE documentation contains all the General Permit required information. The records of the ACSCE are maintained for the required 5 years.

## **10 SWPPP GENERAL REQUIREMENTS**

The Airport SWPPP is retained on site, and can be made available upon request by the Regional Water Board or the local municipality.

Upon notification from the Regional Water Board or municipality that the Airport SWPPP does not meet the minimum requirements of the General Permit, the Airport will submit a SWPPP revision and implementation schedule to the agency. Within 14 days after implementing the required revisions the Airport will submit a written certification to the agency that the revisions have been implemented.

Prior to substantial changes in industrial activities, at the Airport, the SWPPP will be revised and new BMPs implemented as appropriate.

Required revisions to the Airport SWPPP will be made within 90 days unless the revisions require significant structural changes. If the 90 day limit cannot be met then the Airport will provide a report to the Regional Water Board containing the following information:

- Description of the portion of the SWPPP that is infeasible to implement by the deadline
- A justification for the time extension
- A schedule for completing and implementing that portion of the SWPPP
- Description of the interim BMPs to reduce potential pollutant exposure to storm water runoff.