Welcome…

2015 Annual Storm Water Pollution Prevention Plan Training

Environmental and Land Use Planning (ELUP) Division
Agenda

• Introductions
• Review: SWPPP
• Objective & Goals
• Requirement 1: PPT
• Requirement 2: Dry Weather Observation Form
• Requirement 3: Spill & Incident Reporting Form
• Requirement 4: Site Maps
Agenda

• Requirement 5: Chemical Inventory Form
• Best Management Practices
• Consequences of Non-Compliance
• Summary
• Resources
• Q&A
Storm Water Group

- Matt Renaud – LAX Inspector
  - 424-646-9044 mrenaud@lawa.org
- Somvang Meksavanh – LAX/ONT Inspector
  - 424-646-6492 smeksavanh@lawa.org
- Kislev Ang – VNY Inspector
  - 424-646-6506 kang@lawa.org
Your LAWA Stormwater Team

- LAWA Storm Water Program Page

• 1972, 33 U.S.C. § 1251-1387
• The primary federal statute that addresses water pollution in the United States.
• § 301 has prohibited against “the discharge of any pollutant by any person”.
• “Discharge of Pollutants” Definition
  – “any addition of any pollutant to navigable waters from any point source”
Clean Water Act

• 1987 Amendment: §402(p) to include storm water discharges associated with municipal, and industrial activities.
Porter Cologne Act

• CCR § 13000-16104

• Established the Basin Plan and subsequently, the Regional Water Quality Control Boards

• Mandates Water Quality Standards
The New NPDES Permit

- Order 2014-0057-DWQ for Storm Water Discharges Associated with Industrial Activities
Permit Requirements

• Storm Water Pollution Prevention Plan (SWPPP)
  – Develop, Submit, Implement and Continuously Revise As Needed
Storm Water Pollution Prevention Plan (SWPPP) Associated with Industrial Activities

for

The Los Angeles International Airport

Facility Address:
1 World Way
Los Angeles, California 90045

Waste Discharge Identification (WDID):
4190004995

Exceedance Response Action (ERA) Status:
Baseline

Legally Responsible Person (LRP):
Los Angeles World Airports
1 World Way
Los Angeles, CA 90045
Robert Freeman
(424) 646-6474

SWPPP Preparation Date
June 30, 2015

Ontario International Airport

Facility Address:
1923 Avion Drive
Ontario, California 91761

Waste Discharge Identification (WDID):
8 361004993

Exceedance Response Action (ERA) Status:
Baseline

Legally Responsible Person (LRP):
Los Angeles World Airports
1 World Way
Los Angeles, CA 90045
Robert Freeman
(424) 646-6474

SWPPP Preparation Date
June 26, 2015

Van Nuys Airport

Facility Address:
16461 Sherman Way
Van Nuys, California 91406

Waste Discharge Identification (WDID):
4 19004994

Exceedance Response Action (ERA) Status:
Baseline

Legally Responsible Person (LRP):
Los Angeles World Airports
1 World Way
Los Angeles, CA 90045
Robert Freeman
(424) 646-6474

SWPPP Preparation Date
June 25, 2015
• LAWA Storm Water Program Page

https://www.lawa.org/welcome_lawa.aspx?id=1864
Permit Requirements

- Create a Pollution Prevention Team
- Employee Training
- Prepare a Site Map
- Potential Pollutant Sources Assessment & Elimination
- Best Management Practices (BMPs)
- Track & Maintain Records
To know WHAT you need to do to comply with the new NPDES Industrial General Permit and HOW to do it correctly.
Goals for Today’s Training

• Requirement 1: Pollution Prevention Team
• Requirement 2: Monthly Dry Weather Observation Form
• Requirement 3: Report Spills & Incidents
• Requirement 4: Prepare a Site Map
• Requirement 5: Chemical Inventory
Requirement 1:
Pollution Prevention Team (PPT)
• **Two People**
  – The Primary PPT Member
    • Name, Title, Phone Number, Email
  – The Alternate PPT Member
    • Name, Title, Phone Number, Email
PPT Roles & Duties

• Prepare a Site Map
• Implement Best Management Practices (BMPs)
• Conduct Monthly Dry Weather Observations
• Potential Pollutant Sources
  – Update Chemical Inventory
  – Report Spills & Incidents
  – Document Non-Storm Water Discharges (NSWDs)
• Employee Training
Requirement 2: Monthly Dry Weather Observation
### Monthly Dry Weather Visual Observation Form

**Facility Name:**

**Facility Address:**

**Observer Name:**

**FPT or Alternate:**

**Phone:**

**Signature:**

**LAWA Follow-up Requested?**

**Date and Year:**

---

**Are all impervious surfaces assessed regularly for spills, stains and other debris?**

**Yes** or **No**

**Has there been a change in onsite Chemical Inventory?**

**Yes** or **No** (If Yes, complete and include Stored Material Checklist)

**Has a spill occurred since the previous observation?**

**Yes** or **No**

**Was a Spill Incident Report Form submitted?**

**Yes** or **No** (If **No**, complete and include Spill Incident Report Form)

**Is Facility Map up to date?**

**Yes** or **No**

**Is Spill Response Plan up to date?**

**Yes** or **No**

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### Part 1. Non-Storm Water Discharge (NWWD) Observations

<table>
<thead>
<tr>
<th>Discharge Type</th>
<th>A. Discharge Observed?</th>
<th>B. Evidence of prior/current presence of NWWD at the source (Y/N)</th>
<th>C. Discharge occurred in the facility (Y/N)</th>
<th>D. EMDs in Place? (Y/N)</th>
<th>E. Dates of Discharge, EMDs, If any. Describe Discharge Observations, include supplemental photos if applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Storm Water</td>
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<tr>
<td>Wet Weather Discharge</td>
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<td>Dust</td>
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<td>Firefighting</td>
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<td>Road Wash Water</td>
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<td>Maintenance</td>
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<td>Atmospheric Emissions</td>
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<td>Storm Drainage</td>
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<td>Others</td>
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</tr>
</tbody>
</table>

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**Comments and Observations:**

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Los Angeles World Airports
Monthly Dry Weather Observation

- Facility Information

Monthly Dry Weather Visual Observation Form
(Forms due by the 5th of the month following the observation month; submit to stormwater@lawa.org)

<table>
<thead>
<tr>
<th>Facility Name:</th>
<th>Facility Address:</th>
<th>Observer Name:</th>
<th>Phone/email:</th>
<th>LAWA Follow-up Requested?</th>
<th>Change in PPT or Alternate?</th>
<th>Observation Date/Time:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tbody>
</table>

Los Angeles World Airports
• General Compliance Questions

Are all impervious surfaces assessed regularly for spills, stains and other debris? Yes □ or No □
Has there been a change in Onsite Chemical Inventory? Yes □ or No □ (If Yes, complete and include Stored Material Checklist)
Has a spill occurred since the previous observation? Yes □ or No □
   Was a Spill/Incident Report Form submitted? Yes □ or No □ (If "no", complete and include Spill/Incident Report Form)
Is Facility Map up to date? Yes □ No □; Is Spill Response Plan up to date? No □ or Yes □
Monthly Dry Weather Observation

- Non-Storm Water Discharge (NSWD) – Authorized

<table>
<thead>
<tr>
<th>Discharge Type</th>
<th>A. Discharge Observed?</th>
<th>B. Evidence of prior/current/potential/source of NSWD and/or source? (Y/N)</th>
<th>C. Discharge occurred in the facility? (Y/N)</th>
<th>D. Describe Pollutant Characteristics (Check if Present)</th>
<th>E. BMPs In Place? (Y/N)</th>
<th>F. Dates of Discharge, BMPs Utilized, Describe Discharge Observation. Include supplemental photos if applicable.</th>
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<tbody>
<tr>
<td>Authorized</td>
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<td>Fire Hydrant</td>
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<td>Flushing</td>
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<td>Potable Water Sources</td>
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<td>Drinking Fountain</td>
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<td>Atmospheric Condensates</td>
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<td>Irrigation Drainage/Landscape</td>
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<td>Others</td>
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</table>
### Monthly Dry Weather Observation

- **Non-Storm Water Discharge (NSWD)**
  - Unauthorized

<table>
<thead>
<tr>
<th>Discharge Type</th>
<th>A. Discharge Observed?</th>
<th>B. Evidence of prior/current/potential/source of NSWD and/or source? (Y/N)</th>
<th>C. Discharge occurred in the facility? (Y/N)</th>
<th>D. Describe Pollutant Characteristics (Check If Present)</th>
<th>E. BMPs In Place? (Y/N)</th>
<th>F. Dates of Discharge, BMPs Utilized, Describe Discharge Observation. Include supplemental photos if applicable.</th>
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<tbody>
<tr>
<td>Rinse/Wash Water</td>
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<td>Other</td>
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Monthly Dry Weather Observation

- Comments and Observation
## Monthly Dry Weather Observation

- **Best Management Practices**

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### Table: Best Management Practices

<table>
<thead>
<tr>
<th>Description of BMPs (Reference BMP Fact Sheet Number, SWPPP Table 4.1)</th>
<th>A. Facility BMPs (Check all Applicable reported BMPs are located in Table 4.1 of the SWPPP)</th>
<th>B. Change in BMPs or BMPs Not Used</th>
<th>C. Implementation Location (Check all Applicable)</th>
<th>D. Implementation Frequency</th>
<th>E. BMP Deficient?</th>
<th>F. BMP Comments (Corrective Action) Attach any supporting photos (including description)</th>
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<tbody>
<tr>
<td>Elimination of NWMO (LAWA 51); (Interception)</td>
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<tr>
<td>Aircraft Ground Vehicle and Equipment Maintenance (LAWA 70)</td>
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<tr>
<td>Aircraft, Vehicle and Equipment Washing (LAWA 70)</td>
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<td>Aircraft, Vehicle and Equipment Washing (SC-6)</td>
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<td>Aircraft Deicing (SC-5)</td>
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<td>Outdoor Material Handling (SCL)</td>
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<tr>
<td>Outdoor Storage of Significant Material (SCL); Energy Storage and Uncovered Outdoor Storage</td>
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<tr>
<td>Waste Handling and Disposal (SCL); Biomass and Uncovered Biomass</td>
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<td>Building and Grounds Maintenance (SC-9)</td>
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<td>Surface Water Pollution Prevention (SC-10); Employee protection training and recordkeeping</td>
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<td>Laboratory Service Operations (SC-11)</td>
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<tr>
<td>Outdoor Weatherproofing (SC-12); fence on permanent structure</td>
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<td>Fire Fighting Foam Storage (SC-13)</td>
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<td>Portable Water System (SC-14)</td>
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<td>Rangeland Rubber Removal (SC-15)</td>
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<td>Oil/Water Separators (LAWA 51)</td>
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<tr>
<td>Emergencies Spill Clean-up Plan (LAWA 51); spill kit and Plan</td>
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<td>Contamination of Existing Surface (CASAQA 16); Drainage System Maintenance (CASAQA 16)</td>
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<td>Flat Pools CASQA TC-20</td>
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<td>Expanded Detention (CASQA TC-17)</td>
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<tr>
<td>Evapotranspiration (CASQA TC-18)</td>
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</table>
Monthly Dry Weather Observation

• **Best Management Practices**

1. **Description of BMPs** (Reference BMP Fact Sheet Number; SWPPP Table 4.1 shows summary of the BMPs for each airport (List below shows BMPs implemented at LAWA and may not be airport specific.))

2. **Description of BMPs** (Reference BMP Fact Sheet Number; SWPPP Table 4.1 shows summary of the BMPs for each airport (List below shows BMPs implemented at LAWA and may not be airport specific.))

3. **Description of BMPs** (Reference BMP Fact Sheet Number; SWPPP Table 4.1 shows summary of the BMPs for each airport (List below shows BMPs implemented at LAWA and may not be airport specific.))

- **Elimination of NSWD** (LAWA SC1); **Illicit Connection**
- **Aircraft, Ground Vehicle, and Equipment Maintenance** (LAWA SC2)
- **Aircraft, Vehicle and Equipment Fueling** (LAWA SC3)
- **Aircraft, Vehicle and Equipment Washing** (SC4)
- **Aircraft Deicing** (SC5)
- **Outdoor Material Handling** (SC6)
- **Outdoor Storage of Significant Material** (SC7); **Storage Tanks and Uncovered Outdoor Storage**
- **Waste Handling and Disposal** (SC8); **Housekeeping and Uncovered Dumpsters**
- **Building and Grounds Maintenance** (SC9); **Housekeeping**
- **Storm Water Pollution Prevention** (SC10); **Employee awareness training and recordkeeping**
- **Education**
- **Lavatory Service Operations** (SC11)
- **Outdoor Washdown/Sweeping** (SC12); **Stains on pavement/concrete**
- **Fire Fighting Foam Discharge** (SC13)
- **Potable Water System Flushing** (SC14)
- **Runway Rubber Removal** (SC15)
- **Oil/Water Separators** (LAWA TC1)
- **Emergency Spill Cleanup Plan** (LAWA SR1); **Spill kits and Plan Posted**
- **Contaminated or Erodible Surfaces** (CASQA SC-40)
- **Drainage System Maintenance** (CASQA SC-44)
- **Wet Pond** (CASQA - TC-20)
- **Extended Detention Basin** (CASQA TC-22)
- **Media Filter** (CASQA TC-40)
- **Gravity Separator** (CASQA MP-51)
## LOS ANGELES WORLD AIRPORTS

### ELIMINATION OF NON-STORM WATER DISCHARGES TO STORM DRAINS

#### PURPOSE:

**Existing discharges:** Eliminate non-storm water discharges to the storm water collection system. Non-storm water discharges can be classified as follows: 1) Activity-based (subtle), and 2) Overt (hard pipe connection). Activity-based non-storm water discharges may include: wash water, deicing fluids, and spillage. Overt non-storm water discharges may include: process wastewater, treated cooling water, and sanitary wastewater.

**Prevention of illicit connections:** Prevent improper physical connections to the storm drain system from sanitary sewers, floor drains, industrial process discharge lines, and wash racks through education, developing project approval conditions, and performing both construction phase and post-construction inspections.

#### GENERAL APPROACH:

**Identification of Activity-Based (Subtle) Discharges:**
The following techniques may be used to identify activity-based non-storm water discharges to the storm water collection system:

- Perform frequent activity inspections to identify non-storm water discharges -

### TARGETED ACTIVITIES

- All Maintenance
- All Fueling
- All Washing
- Equipment Cleaning
- Cargo Handling
- All Storage
- Painting/Stripping
- Floor Washdowns
- Aircraft Deicing/Anti-Icing
- Garbage Collection
- Aircraft Lavatory Service
- Fire Fighting Equip. Testing
- Potable Water System Flush
- Runway Rubber Removal

### TARGETED POLLUTANTS

- Oil and Grease
- Vehicle Fluids
- Fuel
- Solvents/Cleaning Sol.
- Deicing/Anti-Icing Fluid
<table>
<thead>
<tr>
<th>Description of BMPs (Reference BMP Fact Sheet Number); SWPPP Table 4.1 shows summary of the BMPs for each airport (List below shows BMPs implemented at LAWA and may not be airport specific.)</th>
<th>A. Facility BMPs (Check All Applicable); Previously reported BMPs are located in Table 4.2 of the SWPPP</th>
<th>B. Change in BMP use on facility? New or Eliminated Use</th>
<th>C. Implementation Location (Check all Applicable)</th>
<th>D. Implementation Frequency</th>
<th>E. BMP Deficient?</th>
<th>F. BMP Comments (Corrective Actions); Attach Any Supporting Photos (including description)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elimination of NSWD (LAWA SC1); Illicit Connection</td>
<td>Outdoor Industrial Activities Areas</td>
<td>Outdoor Industrial Equipment and Storage Areas</td>
<td>Chemical Storage Areas</td>
<td>Others (Describe all other potential source of industrial pollutants)</td>
<td>Routine (Describe: Daily, Weekly, Monthly, Others, or As Needed)</td>
<td>Yes (describe in &quot;Comments&quot;) or No or Not Applicable - NA</td>
</tr>
</tbody>
</table>
### Description of BMPs
(Reference BMP Fact Sheet Number); SWPPP Table 4.1 shows summary of the BMPs for each airport (List below shows BMPs implemented at LAWA and may not be airport specific.)

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<tr>
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<tbody>
<tr>
<td>Elimination of NSWD (LAWA SC1); <strong>Illicit Connection</strong></td>
<td></td>
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</table>
## Monthly Dry Weather Observation

### Description of BMPs
(Reference BMP Fact Sheet Number); SWPPP Table 4.1 shows summary of the BMPs for each airport (List below shows BMPs implemented at LAWA and may not be airport specific.)

<table>
<thead>
<tr>
<th>Elimination of NSWD (LAWA SC1); Illicit Connection</th>
</tr>
</thead>
</table>

### C. Implementation Location (Check all Applicable)

<table>
<thead>
<tr>
<th>Outdoor Industrial Activities Areas</th>
<th>Outdoor Industrial Equipment and Storage Areas</th>
<th>Chemical Storage Areas</th>
<th>Others (Describe all other potential source of industrial pollutants)</th>
</tr>
</thead>
</table>
# Monthly Dry Weather Observation

## Description of BMPs
(Reference BMP Fact Sheet Number); SWPPP Table 4.1 shows summary of the BMPs for each airport (List below shows BMPs implemented at LAWA and may not be airport specific.)

<table>
<thead>
<tr>
<th>Description of BMPs</th>
<th>D. Implementation Frequency</th>
<th>E. BMP Deficient?</th>
<th>F. BMP Comments (Corrective Actions); Attach Any Supporting Photos (including description)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elimination of NSWD (LAWA SC1); <em>Illicit Connection</em></td>
<td>Routine (Describe: <strong>Daily</strong>, <strong>Weekly</strong>, <strong>Monthly</strong>, <strong>Others</strong>, or <strong>As Needed</strong>)</td>
<td><strong>Yes</strong> (describe in &quot;Comments&quot;) or <strong>No</strong> or Not Applicable - <strong>NA</strong></td>
<td></td>
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</tbody>
</table>
Monthly Dry Weather Observation

Email to

stormwater@lawa.org

On the 5th
of the following month
Break – 10 Minutes
Requirement 3: Spills & Incident Reporting
Spills & Incidents

• Prevent Spills
  – SOPs
  – BMPs
  – Training

• Clean Up Immediately
  – Small Spills: Train Employees in spill and leak response
  – Larger Spills: Report to ARCC, Ops or LAFD

• Report to Proper Authority/Agency
# Spills & Incidents

## Spill/Incident Report Form

**NOTIFY ARRC ASAP @ (424) 666-LAWA WHEN SPILL ENTERS STORM DRAIN**

**SUBMIT FORM TO STORMWATER@LAWA.ORG NO LATER THAN 24 HOURS AFTER SPILL OCCURRED**

- **Report:** Spills over 1 gal in volume (1 gallon could cover more than 60 square feet).
- **Any product enters into a storm drain.**
- **Any spill that you are not sure whether it is reportable or not.**
- **Any site spill that has a regulatory requirement to be reported.**

**IF ANY INFORMATION IS UNKNOWN, LEAVE BLANK FOR LAWA FOLLOW-UP.**

### Person Reporting
- **Name:**
- **Company:**
- **Phone:**
- **Email:**

### Date of Incident
- **Date of Incident:**
- **Material(s) Spilled/Discharged (i.e. Jet-A, gas, etc.):**
- **Quantity Spilled (gal):**

### Time of Incident
- **Weather Conditions:**

### Location of Spill (photo document):
- **Extent of Spill (Square Feet) (photo document):**

### Leaseholder Company Name:
- **Leaseholder’s Representative Name:**
- **Phone:**
- **Email:**

### Company Responsible for Spill/Incident:
- **Company Contact Person:**
- **Phone:**

### Person In Charge of Clean Up
- **Name:**
- **Company:**
- **Phone:**

### Quantity Contained:
- **Containment Method(s):**
- **Quantity Recovered:**

### Did Discharge Leave Lease Boundary?
- **Yes**
- **No**

### Immediate Actions Taken
- **Containment**
- **Evacuation**
- **System Shutdown**
- **Spill Characteristics (i.e. Phys/Chem):**
- **Other:**

### Source of Spill (Ex. Pipeline, Vehicle, Aircraft, Etc.):
- **Discharge Area:**
- **Storm Drain(s) impacted?:**
- **Soil Impacted?:**

### Cause of Spill or Factors Contributing to Release:
- **Equipment Failure**
- **Operator Error**
- **Faulty Process Design**

### ARRC Notified?
- **Yes**
- **No**

### Fire Dept Notified?
- **Yes**
- **No**

### LAWA Environmental Notified?
- **Yes**
- **No**

### Actions Taken to Prevent Re-Occurrence:

**FOR ELU P USE ONLY:**
- **Discharged from SW Conveyance System:**
- **Toxic Materials Identified in 40 CFR §302? Name:**
- **Oil & Gas Subs Exceeding Req (40 CFR §§ 116, 117, & 302) Name:**
- **Approx Qty of Material Discharged from SW conveyance:**
- **Manifest #:**
Spills & Incidents

NOTIFY ARCC ASAP @ (424) 646-LAWA WHEN SPILL ENTERS STORM DRAIN
SUBMIT FORM TO STORMWATER@LAWA.ORG NO LATER THAN 24 HOURS AFTER SPILL OCCURRED

Report:
- Spills over 1 gal in volume (1 gallon could cover more than 60 square feet).
- Any product enters into a storm drain.
- Any spill that you are not sure whether it is reportable or not.
- Any size spill that has a regulatory requirement to be reported.

IF ANY INFORMATION IS UNKNOWN, LEAVE BLANK FOR LAW A FOLLOW-UP.
Spills & Incidents

Email to

stormwater@lawa.org
Spills & Incidents

• Over 1 gallon
• Anytime something enters the Storm Drain
• Any size spill that has a regulatory requirement to be reported.

When in doubt, SUBMIT Form.
# Spills & Incidents

<table>
<thead>
<tr>
<th>Person Reporting</th>
<th>Date of Report:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name:</td>
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<tr>
<td></td>
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<tr>
<td>Company:</td>
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<tr>
<td>Phone:</td>
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<tr>
<td>Email:</td>
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</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Date of Incident:</th>
<th>Material(s) Spilled/Discharged (i.e. Jet-A, gas, etc.):</th>
<th>Quantity Spilled (gal):</th>
</tr>
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<tbody>
<tr>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Time of incident:</th>
<th>Extent of Spill (Square Feet) (photo document):</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Weather Conditions:</th>
<th>Location of Spill (photo document):</th>
</tr>
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<tbody>
<tr>
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</tbody>
</table>

Los Angeles World Airports
| **Leaseholder Company Name:** |  |
| **Leaseholder's Representative Name:** |  |
| **Phone:** | **Email:** |
| **Company Responsible for Spill/Incident:** |  |
| **Company Contact Person:** |  |
| **Phone:** | **Email:** |
## Spills & Incidents

<table>
<thead>
<tr>
<th>Person In Charge of Clean Up</th>
<th>Company:</th>
<th>Phone:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name:</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Quantity Contained:</th>
<th>Containment Method(s):</th>
<th>Quantity Recovered:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tbody>
</table>
# Spills & Incidents

<table>
<thead>
<tr>
<th>Quantity Contained:</th>
<th>Containment Method(s):</th>
<th>Quantity Recovered:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Did Discharge Leave Lease Boundary?</th>
<th>Spill Area:</th>
<th>Storm Drain(s) Impacted?</th>
<th>Soil Impacted?</th>
<th>Spill Characteristics (i.e. Phys/Chem):</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>Indoor</td>
<td>Yes</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>Outside</td>
<td>No</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Outside Covered</td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>Immediate Actions Taken:</th>
<th>Evacuation</th>
<th>Neutralization</th>
<th>System Shutdown</th>
<th>Other ____________</th>
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</thead>
<tbody>
<tr>
<td>Containment</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Foam Retardant</td>
<td></td>
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</tbody>
</table>
## Spills & Incidents

<table>
<thead>
<tr>
<th>Source of Spill (Ex. Pipeline, Vehicle, Aircraft, Etc):</th>
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<tbody>
<tr>
<td>(Blank)</td>
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</table>

<table>
<thead>
<tr>
<th>Cause of Spill or Factors Contributing to Release:</th>
<th>Disposal Method of Recovered Material:</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ Equipment Failure</td>
<td>☐ Training Deficiencies</td>
</tr>
<tr>
<td>☐ Operator Error</td>
<td>☐ Weather Conditions</td>
</tr>
<tr>
<td>☐ Faulty Process Design</td>
<td>☐ Other ___________________________</td>
</tr>
</tbody>
</table>

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[Image: Los Angeles World Airports]
## Spills & Incidents

<table>
<thead>
<tr>
<th>ARCC Notified?</th>
<th>Fire Dept Notified?</th>
<th>LAWA Environmental Notified?</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ Yes</td>
<td>☐ Yes</td>
<td>☐ Yes Who: ___________________</td>
</tr>
<tr>
<td>☐ No</td>
<td>☐ No</td>
<td>☐ No When: ___________________</td>
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<tr>
<td></td>
<td></td>
<td>☐ No</td>
</tr>
</tbody>
</table>
Spills & Incidents

Actions Taken to Prevent Re-Occurrence:
Spills & Incidents

FOR ELUP USE ONLY:

Discharged from SW Conveyance System?

☐ Toxic Materials ID'ed in 40 CFR §302? Name:

☐ Oil & Haz Subst Exceeding RQ (40 CFR §§ 110, 117, & 302)? Name:

☐ Approx QTY of material discharged from SW conveyance.

☐ Manifest #
Requirement 4: Site Map
• Must be legible and understandable
• May provide the required information on multiple site maps.
• Must Include
  – Business Name
  – Address
  – Legends
  – North Arrow
Site Map

Other Info to Include:

- Boundaries
- Drainage Areas
- Flow direction
- Water Bodies
- Storm Drain Inlets
- Storm Water Collection & Conveyance Systems
- Discharge Locations,
- Structural Control
- Impervious Areas
- Exposed Materials
- Sites of Past Spills
- Areas of Industrial Activity
Site Map
Email to

stormwater@lawa.org
Chemical Inventory
### Chemical Inventory

**Tenant's Name:**

**Tenant's Address:**

<table>
<thead>
<tr>
<th>A. Used On-Site?</th>
<th>Chemical</th>
<th>Quantity/Units</th>
<th>B. Stored on Site?</th>
<th>C. Secondary Containment Present?</th>
<th>M. Contact with Purchasers?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td></td>
<td></td>
<td>Yes</td>
<td>No</td>
<td>N/A</td>
</tr>
<tr>
<td>No</td>
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<td></td>
</tr>
</tbody>
</table>

- Anti-freeze
- Oil
- Brake Fluids
- Concrete Materials
- Caulk, Sealing
- Lubes
- Paint
- Coatings
- De-icing Solution
- Diesel
- Engine Oil
- Fluids
- Foaming Agent (AFFF)
- Foam
- Fuel Additive
- Fungicides
- Fuel
- Gasoline
- Grease
- Acid
- Chemicals
- Antifreeze
- Aircraft
- Alcohol
- Jet
- Motor
- Fluids
- Grease
- Fumes
- Antifreeze
- Airplane Systems (Testing)
- Aerosols
- Solvents
- Transmission Fluids
- Turbine Oil
- Waste Absorbent
- Waste Anti-freeze
- Waste Fluids
- Waste Hydraulics
- Waste Oil
- Waste Oil Filters
- Waste Paint
- Waste Solvents
- Other
- Other
- Other
- Other
- Other
Chemical Inventory

Submit an Updated Chemical Inventory Form

- Amount Typically Used, Handled, Stored, or Received has Changed
- A New Material is Added
- Use of a Material is Discontinued
Chemical Inventory

Email to

stormwater@lawa.org
Chemical Inventory

Tenant’s Name: ________________________________
Tenant’s Address: ________________________________
# Chemical Inventory

<table>
<thead>
<tr>
<th>A. Used On-Site?</th>
<th>Chemical</th>
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<tbody>
<tr>
<td>Yes</td>
<td>Acids</td>
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<tr>
<td></td>
<td>Anti-freeze</td>
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<tr>
<td></td>
<td>AV Gas</td>
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<tr>
<td></td>
<td>Brake Fluids</td>
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<tr>
<td></td>
<td>Concrete Materials</td>
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<tr>
<td></td>
<td>Caustic Solution</td>
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<tr>
<td></td>
<td>Degreasers</td>
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<tr>
<td></td>
<td>Deodorizing Solution</td>
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<tr>
<td></td>
<td>Diesel</td>
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<tr>
<td></td>
<td>Engine Oil</td>
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<tr>
<td></td>
<td>Fertilizer</td>
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<td></td>
<td>Foaming Agent (AFFF)</td>
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<td></td>
<td>Freon</td>
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<tr>
<td></td>
<td>Fuel Additive</td>
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<tr>
<td></td>
<td>Fungicide</td>
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<td>Grease</td>
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<td>HD Treatment Chemicals</td>
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<td></td>
<td>Hydraulic Fluids</td>
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<td>Isopropyl Alcohol</td>
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<td>Jet A</td>
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<td>Motor Oil</td>
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<td>Herbicide</td>
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<td>Propylene Glycol ( Dektop)</td>
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<td>Solvents</td>
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<td></td>
<td>Transmission Fluids</td>
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<tr>
<td></td>
<td>Turbine Oil</td>
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<td></td>
<td>Waste Absorbent</td>
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<td>Waste Oil</td>
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<td></td>
<td>Waste Oil Filters</td>
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<td></td>
<td>Waste Paint</td>
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<tr>
<td></td>
<td>Waste Solvents</td>
</tr>
<tr>
<td></td>
<td>Other</td>
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<td></td>
<td>Other</td>
</tr>
</tbody>
</table>

Los Angeles
World Airports
## Chemical Inventory

<table>
<thead>
<tr>
<th>Chemical</th>
<th>Quantity/Units</th>
<th>B. Stored on Site?</th>
<th>C. Secondary Containment Present?</th>
<th>D. Contact with Discharges?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Inside</td>
<td>Out Covered</td>
<td>Out Uncovered</td>
</tr>
<tr>
<td>Acids</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anti-freeze</td>
<td></td>
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<tr>
<td>AV Gas</td>
<td></td>
<td></td>
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<tr>
<td>Brake Fluids</td>
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<th>Chemical</th>
<th>Inside</th>
<th>Out Covered</th>
<th>Out Uncovered</th>
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</tbody>
</table>
# Chemical Inventory

<table>
<thead>
<tr>
<th>Chemical</th>
<th>C. Secondary Containment Present?</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>Yes</td>
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## Chemical Inventory

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<tr>
<th>Chemical</th>
<th>D. Contact with Discharges?</th>
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<tr>
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<tr>
<td>Brake Fluids</td>
<td></td>
</tr>
</tbody>
</table>
Break – 10 Minutes
Best Management Practices
Best Management Practices

• Definition

“A practice, or combination of practices, that is determined by a State (or designated area wide planning agency) after problem assessment, examination of alternative practices, and appropriate public participation to be the most effective, practicable (including technological, economic, and institutional considerations) means of preventing or reducing the amount of pollution generated by nonpoint sources to a level compatible with water quality goals.”
Best Management Practices

• Order 2014-0057-DWQ General Permit for Storm Water Discharges Association with Industrial Activities

  “The Discharger shall, to the extent feasible, implement and maintain all of the following minimum BMPs to reduce or prevent pollutants in industrial storm water discharges.”

• State Water Board requires that BMPs be implemented, documented and kept in the records!
## Source Control

<table>
<thead>
<tr>
<th>SC</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SC1</td>
<td>ELIMINATION OF NON-STORM WATER DISCHARGES TO STORM DRAIN</td>
</tr>
<tr>
<td>SC2</td>
<td>AIRCRAFT, GROUND VEHICLE AND EQUIPMENT MAINTENANCE</td>
</tr>
<tr>
<td>SC3</td>
<td>AIRCRAFT, GROUND VEHICLE, AND EQUIPMENT FUELING</td>
</tr>
<tr>
<td>SC4</td>
<td>AIRCRAFT, GROUND VEHICLE AND EQUIPMENT WASHING</td>
</tr>
<tr>
<td>SC5</td>
<td>AIRCRAFT DEICING/ANTI-ICING</td>
</tr>
<tr>
<td>SC6</td>
<td>OUTDOOR MATERIAL HANDLING</td>
</tr>
<tr>
<td>SC7</td>
<td>OUTDOOR STORAGE OF SIGNIFICANT MATERIAL</td>
</tr>
<tr>
<td>SC8</td>
<td>WASTE/GARBAGE HANDLING AND DISPOSAL</td>
</tr>
<tr>
<td>SC9</td>
<td>BUILDING AND GROUNDS MAINTENANCE</td>
</tr>
<tr>
<td>SC10</td>
<td>STORM WATER POLLUTION PREVENTION EDUCATION</td>
</tr>
<tr>
<td>SC11</td>
<td>LAVATORY SERVICE OPERATIONS</td>
</tr>
<tr>
<td>SC12</td>
<td>OUTDOOR WASHDOWN/SWEEPING</td>
</tr>
<tr>
<td>SC13</td>
<td>FIRE FIGHTING FOAM DISCHARGE</td>
</tr>
<tr>
<td>SC14</td>
<td>POTABLE WATER SYSTEM FLUSHING</td>
</tr>
<tr>
<td>SC15</td>
<td>RUNWAY RUBBER REMOVAL</td>
</tr>
</tbody>
</table>
BMPs

Treatment Control

TC1  OIL/WATER SEPARATORS

Spill Response

SR1  EMERGENCY SPILL CLEANUP PLANS

New Addition: CASQA BMPs

SC40  CONTAMINATED OR ERODIBLE AREAS
SC44  DRAINAGE SYSTEM MAINTENANCE
**Elimination of Non-storm Water Discharges to Storm Drains**

**Purpose:**

*Existing discharges:* Eliminate non-storm water discharges to the storm water collection system. Non-storm water discharges can be classified as follows: 1) *Activity-based* (subtle), and 2) *Overt* (hard pipe connection). Activity-based non-storm water discharges may include: wash water, deicing fluids, and spillage. Overt non-storm water discharges may include: process wastewater, treated cooling water, and sanitary wastewater.

*Prevention of illicit connections:* Prevent improper physical connections to the storm drain system from sanitary sewers, floor drains, industrial process discharge lines, and wash racks through education, developing project approval conditions, and performing both construction phase and post-construction inspections.

**General Approach:**

*Identification of Activity-Based (Subtle) Discharges:* The following techniques may be used to identify activity-based non-storm water discharges to the storm water collection system:

- Perform frequent activity inspections to identify non-storm water discharges - continuous visual inspection.

**Targeted Activities:**

- All Maintenance
- All Fueling
- All Washing
- Equipment Cleaning
- Cargo Handling
- All Storage
- Painting/Stripping
- Floor Washdowns
- Aircraft Deicing/Anti-Icing
- Garbage Collection
- Aircraft Lavatory Service
- Fire Fighting Equip. Testing
- Potable Water System Flush
- Runway Rubber Removal

**Targeted Pollutants:**

- Oil and Grease
- Vehicle Fluids
- Fuel
- Solvents/Cleaning Sol.
- Deicers/Anti-Ice Fluids
BMPs

• LAX Rules & Regulations

• LAWA SWPPPs
### Best Management Practices

<table>
<thead>
<tr>
<th>Description of BMPs</th>
<th>D. Implementation Frequency</th>
<th>E. BMP Deficient</th>
<th>F. BMP Comments/Corrective Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elimination of NSWD (LAWA SC7)</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Aircraft, Ground Vehicle and Equipment Maintenance (LAWA SC3)</td>
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<tr>
<td>Aircraft, Vehicle and Equipment Testing (LAWA SC9)</td>
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<tr>
<td>Aircraft, Vehicle and Equipment Washing (SC1)</td>
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</tr>
<tr>
<td>Aircraft Deicing (SC5)</td>
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<tr>
<td>Outdoor Material Handling (SC6)</td>
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</tr>
<tr>
<td>Outdoor Storage of Nonhazardous Material (SC7), Storage Tanks and Uncovered Outdoor Storage</td>
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<td></td>
</tr>
<tr>
<td>Waste Handling and Disposal (SC3), Hauling and Disposal Department</td>
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<tr>
<td>Building and Grounds Maintenance (SC9), Hauling and Disposal</td>
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<td>Storm Water Pollution Prevention (SC10), Employees Awareness, Training and Recordkeeping</td>
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<td>Laboratory Service Operations (SC11)</td>
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<td>Wrecks/ травяновое</td>
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<td>Fire Fighting Foam</td>
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<td>Protective System Flushing (SC12)</td>
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<td>Rainwater Runoff Removal (SC12)</td>
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<td>Highway</td>
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<td>Emergency Spill Cleanup Plan (LAWA SC3), Spill Kit, and Spill Control</td>
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<td>Contaminated or Eroded Surface (CASQA SC.49)</td>
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<td>Drainage System Maintenance (CASQA SC.44)</td>
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<td>Wet Pond (CASQA - TC-29)</td>
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<td>Extended Retention Area (CASQA TC-22)</td>
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<td>Media Filter (CASQA TC-25)</td>
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<td>Centrifuge Separator (CASQA MP-21)</td>
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<td>SC1</td>
<td>LOS ANGELES WORLD AIRPORTS</td>
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<td>ELIMINATION OF NON-STORM WATER DISCHARGES TO STORM DRAINS</td>
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</table>

- **Target Group:** EVERYONE
- **Target Pollutants:** EVERYTHING
Best Management Practices

LOS ANGELES WORLD AIRPORTS

SC1

ELIMINATION OF NON-STORM WATER DISCHARGES TO STORM DRAINS

• Key Approaches:
  – Assessments and Enforcement
  – Training Employees
  – Education Vendors/Public
LOS ANGELES WORLD AIRPORTS

| SC2 | AIRCRAFT, GROUND VEHICLE AND EQUIPMENT MAINTENANCE |

- **Target Group:** Facilities Performing Maintenance Activity/ies.
- **Key Approaches**
  - Conduct Maintenance Indoors
  - Prevent Discharges to the Storm Drain
  - Clean Catch Basins
  - Collect and Properly Dispose All Fluids
Best Management Practices

LOS ANGELES WORLD AIRPORTS

| SC3 | AIRCRAFT, GROUND VEHICLE, AND EQUIPMENT FUELING |

- **Target Group:** Facilities performing ANY fueling activity.

- **Key Approaches:**
  - Berm Fueling Area
  - Dry Method for Spill Clean Ups
  - Install Proper Fueling Equipment
Best Management Practices

• **Target Group:** Facilities Performing Washing or Degreasing Activity/ies

• **Key Approaches**
  – Use Designated Area
  – Use Dry Washing Techniques
  – Recycle wash water or discharge appropriately
  – Cover catch basins
  – Provide training

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<th>LOS ANGELES WORLD AIRPORTS</th>
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<td>SC4</td>
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</table>
### Best Management Practices

#### Target Group:
Facility with De-Icing Activity

#### Key Approaches:
- Perform in designated areas only
- Apply only required amounts of fluid
- Clean ramp area when done
- Implement forthcoming recommendations of FAA
## LOS ANGELES WORLD AIRPORTS

<table>
<thead>
<tr>
<th>SC6</th>
<th>OUTDOOR MATERIAL HANDLING</th>
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- **Target Group:**
  - Cargo Handling
  - Fuel Storage
  - Chemical Storage
  - Equipment Storage
• **Key Approaches:**
  – Conduct Loading/Unloading Under Cover
  – Transfer Materials in Paved Areas
  – Clean Up Spills
## Best Management Practices

### Target Group:
- Aircraft/Vehicle/Equipment Maintenance
- Aircraft/Vehicle Fueling
- Fuel/Chemical/Equipment Storage
- Cargo Handling
Best Management Practices

LOS ANGELES WORLD AIRPORTS

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<tr>
<th>SC7</th>
<th>OUTDOOR STORAGE OF SIGNIFICANT MATERIAL</th>
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• Key Approaches
  – Store materials indoors or under cover
  – Store drums/containers on pallets
  – Provide berming or secondary containment
  – Develop/implement an SPCC, if required
  – Perform and document periodic inspections
Best Management Practices

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<th>LOS ANGELES WORLD AIRPORTS</th>
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<tr>
<td>SC8</td>
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<tr>
<td>WASTE/GARBAGE HANDLING AND DISPOSAL</td>
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- **Target Group:**
  - Fuel/Chemical Storage
  - Painting/Stripping
  - Garbage Collection
# Best Management Practices

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<tr>
<td>SC8</td>
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<td>WASTE/GARBAGE HANDLING AND DISPOSAL</td>
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</table>

- **Key Approaches**
  - Cover Waste Storage Areas
  - Recycle Materials
  - Inspect & Clean Waste Storage Areas
  - Berm Waste Storage Areas
  - Clean Dumpsters in Designated Areas
  - Properly Dispose of Liquids
### Target Group
Facilities maintaining Building and/or Grounds.

### Key Approaches
- Clean and Sweep Paved Surfaces
- Clean Catch Basins
- Manage Use of Pesticides/Herbicides/Fertilizers
Best Management Practices

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<td><strong>SC10</strong></td>
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<tr>
<td>STORM WATER POLLUTION PREVENTION EDUCATION</td>
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</tbody>
</table>

- **Target Group:** EVERYONE
- **Key Approaches**
  - Perform inspections and enforcement
  - Provide training for employees
  - Promote education of vendors/public
• **Target Group:** Facilities with aircraft lavatory service performed on site and/or lavatory truck cleanout/backflushing.
## Key Approaches

- Discharge Only at Triturator Facilities
- Utilize Buckets/Pans
- Cleanout/Backflush Only at Triturator Facilities
- Spill Kit
### Best Management Practices

**Target Group:** Facilities performing Apron/Ramp/Outdoor Washing/Scrubbing/Wash-down

**KEY APPROACHES**
- Collect and discharge wash water to the sewer
- Use "dry" sweeping techniques
- Dispose of sweepings
### Best Management Practices

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<th>LOS ANGELES WORLD AIRPORTS</th>
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<td><strong>SC13</strong></td>
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</table>

- **Target Group:** Fire Fighting Equipment Testing and Flushing
- **Key Approaches**
  - Conduct Tests in Designated Areas
  - Properly Dispose/Recycle Foam Discharge
  - Service Sump Regularly
### Best Management Practices

#### POTABLE WATER SYSTEM FLUSHING

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<tr>
<th>SC14</th>
<th>POTABLE WATER SYSTEM FLUSHING</th>
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- **Target Group:** Facilities cleaning/washing aircraft/water truck potable water system

- **KEY APPROACHES**
  - Flush in Designated Areas
  - Collect Discharge and Discharge Sanitary Sewer
## Best Management Practices

### LOS ANGELES WORLD AIRPORTS

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<th>SC15</th>
<th>RUNWAY RUBBER REMOVAL</th>
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- **Target Group:** Facilities Performing Runway Rubber Removal
- **KEY APPROACHES**
  - Use Filter Fabric Over Culverts
  - Use Manual/Mechanical Methods to Remove Particulates
Los Angeles World Airports

TC1

Oil/Water Separators

- Target Group: Facilities Performing...
  - Aircraft/Vehicle/Equipment Maintenance/Fueling/Washing/Degreasing
  - Fuel/Chemical Storage
  - Cargo Handling
## LOS ANGELES WORLD AIRPORTS

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<th>TC1</th>
<th>OIL/WATER SEPARATORS</th>
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- **KEY APPROACHES**
  - Frequently inspect and clean separators
  - Replace absorbent pads as needed
**Best Management Practices**

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<td><strong>SR1</strong></td>
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<tr>
<td><strong>EMERGENCY SPILL CLEANUP PLANS</strong></td>
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</table>

- **Target Group: Facilities Performing...**
  - Aircraft/Vehicle/Equipment Maintenance/Fueling/Washing/Degreasing
  - Fuel/Chemical Storage
  - Cargo Handling
• **Key Approaches**
  – Develop/Implement SPCC (if required)
  – SPCC Training
  – Containment/Clean Up Spills
  – Spill Kit
  – Required Agency Notification
Contaminated or Erodible Areas SC-40

• **Target Group:** Facilities with areas bare of vegetation.

• **Key Approaches:**
  – Erosion and Sediment Control BMPs such as natural vegetation, hydro seeding, geotextiles, watering trucks, or degradable mulches.
• **Target Group**: Facilities with storm water conveyance systems.

• **Key Approaches**
  – Eliminate Illicit Discharges, Illicit Connections, Illegal Dumping, Prevent and Clean Up Spills
Best Management Practices

Target Group: LAX Facilities in the Imperial Drainage Basin

Key Approach
- You still can’t dump anything you want in the storm drain system
Media Filter

- **Target Group:** Facilities with Media Filters
- **Key Approach**
  - Maintain and Inspect Regularly
• Think “Storm Water Impact” when you’re surveying your facility.
• When you see a problem, fix it or find someone who can.
• Perform your Dry Weather Observation once a month, complete the form, submit no later than the 5th of the following month.
• One email for all forms: stormwater@lawa.org
Consequences of Non-Compliance
Consequences of Non-Compliance

• Dirty Shop → Unsafe Work Conditions
• Inefficient Operations
• Vehicle and Equipment Impoundment
• Operation Shutdowns
• Regulatory Oversight
• Non-Renewal of Leases
Consequences of Non-Compliance

- $1,791.00/Year Permit Fee*
- <$30,000/Year for Monitoring Requirements
- <$10,000/Year Consultant Fees for Annual Reporting
- <$20,000 For a Facility SWPPP
- >$3,000/serious violation/day*
- Potential Criminal Penalties

* Regional Water Quality Control Board
Resources

- LAWA Storm Water Program
  - SWPPPs
  - Forms
  - Permit
  - Contact Info
• BMPs
  – LAX Rules & Regulations
    • http://www.lawa.org/airops.aspx?id=862&linkidentifier=id&itemid=862
  – ONT Rules & Regulations
    • http://www.lawa.org/welcome_ont.aspx?id=2874
  – VNY Rules & Regulations
    • Use LAX Rules & Regs
    • Use VNY SWPPP
  – California Storm Water Quality Association
    • BMP Handbooks
      • https://www.casqa.org/resources/bmp-handbooks/industrial-commercial
• Robert Freeman – Airport Environmental Manager
  – 424-646-6474 rfreeman@lawa.org
• Lin Wang – Storm Water Supervisor
  – 424-646-6481 clwang@lawa.org
• Matt Renaud – LAX Inspector
  – 424-646-9044 mrenaud@lawa.org
• Somvang Meksavanh – LAX/ONT Inspector
  – 424-646-6492 smeksavanh@lawa.org
• Kislev Ang – VNY Inspector
  – 424-646-6506 kang@lawa.org
• Environmental General Number 424-646-6500
Q&A...