Welcome...

2015 IGP Storm Water Pollution Prevention Team Training
Environment and Land Use Planning (ELUP) Division
Agenda

• Why We Are Here
• The New NPDES Permit
• Best Management Practices
• Things To Do
• What We Need
• Consequences of Non-Compliance
• Resources
• Summary
• Q&A
Why We Are Here

• Training Required by the New Permit
  – NPDES General Permit Order 2014-0057-DWQ, H.1.f.i-v

• Better Operations
  – Cleaner, more organized facilities are better run.

• Saves Time
  – Everything in its place; less hassle from us.
Why We Are Here

• **Saves Money**
  – Less wasted materials; more efficient use of manpower; LAWA manages the Permit.

• **Prevent Violations**
  – 2000 - 2013 – 8419 Violations of NPDES Storm Water Permits Written in LA Region

• **Protect the environment**
  – It’s the right thing to do.
The New 2015 NPDES Industrial General Permit (IGP) for Storm Water Discharges Associated with Industrial Activities requires facilities to…
2015 IGP SWPPP Requirements

• Submit a Storm Water Pollution Prevention Plan (SWPPP)
  o Facility Name and Contact Information
  o Site Map
  o List of Industrial Materials
  o Description of Potential Pollution Sources
  o Assessment of Potential Pollutant Sources
  o Minimum BMPs
  o Advanced BMPs, if applicable
  o Monitoring Implementation Plan
  o Annual Comprehensive Facility Compliance Evaluation
  o Amendments as Required
2015 IGP SWPPP Requirements

• SWPPP must be Implemented and Continuously Revised as Needed (Quarterly for LAWA)
  – Submitted by July 1, 2015

• SWPPP must have Performance Standards to:
  – ID and evaluate all pollutant sources
  – ID and describe minimum BMPs (Section X.H.1) and advanced BMPs (Section X.H.2) implemented.
  – ID and describe conditions or circumstances which may require future revisions to be made to the SWPPP.
• Create a Pollution Prevention Team

  “Each facility must have a Pollution Prevention Team established and responsible for assisting with the implementation of the requirements in this General Permit. The Discharger shall include in the SWPPP detailed information about its Pollution Prevention Team”
• The Pollution Prevention Team Requirements
  a. The team members will assist in:
     • implementing the SWPPP
     • conducting the routine inspection requirements
  b. Describe the responsibilities, duties, and activities of each of the team members;
  c. Identify alternate team members.
2015 IGP Requirements

• Prepare a Site Map
  – Including notes, legends, a north arrow, and other data as appropriate to ensure the map is clear, legible and understandable.
  – May provide the required information on multiple site maps.
Include the following information on the site map:

- Boundaries; Drainage areas (w/ potentially impacted portions IDed); Flow direction; Water Bodies with soil erosion areas identified; storm drain inlets
- Storm water collection and conveyance systems, discharge locations, flow direction, and sample locations.
- Structural control measures affecting storm water discharges.
- Impervious Areas
- Exposed Materials and Sites of Past Spills.
- Areas of Industrial Activity
2015 IGP Requirements

- **Maintain a List of Industrial Materials**
  - Handled at the facility
  - Locations where each material is stored, received, shipped, and handled (also to be depicted on site map)
  - Typical quantities
  - Handling frequency

Table 2
2015 IGP Requirements

- **Must List Potential Pollutant Sources**
  - Industrial Processes (Table 2)
  - Material Handling and Storage Areas (Table 2)
  - Dust and Particulate Generating Activities
  - Significant Spills and Leaks
    - Evaluate the facility for areas where spills and leaks can likely occur
• Ensure the SWPPP includes (Table 3):
  – A list of past spills that entered the SD system
  – A list of any toxic chemicals
  – A list of spills with potential discharge to the SD system
• Must include the following information:
  – location, characteristics, quantity spilled;
  – quantity discharged;
  – cleanup actions;
  – the remaining quantity with potential to be discharged;
  – preventive measures to future spills

New LAWA SPILL REPORTING FORM for 2015
2015 IGP Requirements

- Must List Potential Pollutant Sources
  - Non-Storm Water Discharges (NSWDs)
    - ID all NSWDs, sources, and drainage areas;
    - Evaluate all drains
    - Eliminate unauthorized NSWDs
    - Describe all NSWDs in the SWPPP.
  - Erodible Surfaces
• Must Assess Potential Pollutant Sources
  – Narrative assessment of all areas with potential pollutant sources. At a minimum, shall include:
    • Areas of potential sources;
    • Potential pollutants in discharges;
    • Quantity, characteristics and locations of material;
    • Degree of storm water exposure;
    • Potential pollutant pathways;
    • Sampling, observation, and inspection records;
    • Effectiveness of Existing BMPs;
    • Effectiveness of Implementing Minimum BMPs;
    • ID pollutants contributing to 303(d) receiving waters impairment.
Authorized Non-Storm Water Discharges

- Fire Hydrant Flushing
- Potable Water System Testing
- Drinking Fountain and Atmospheric Condensates
- Irrigation/Landscape Drainage
- Uncontaminated Ground Water

If you have one of the above discharges LAWA needs to know to have it properly reported.

If you have a discharge into the storm drain system that is not listed above, it is a violation.
ID areas where the minimum BMPs will not adequately reduce or prevent pollutants in storm water. Advanced BMPs must be prescribed.

ID drainage areas with no exposure (in accordance with the definitions in Section XVII).

ID additional parameters that indicate the presence of pollutants in industrial storm water discharges.
2015 IGP Requirements

- **Best Management Practices (BMPs)**
  - Minimum BMPs

  “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.”
2015 IGP Requirements

• Good Housekeeping
  » Inspect/observe all outdoor areas;
  » Minimize or prevent material tracking;
  » Minimize dust generation;
  » Wash areas maintained clean after all wash activities;
  » Cover all materials to protect from rain and wind.

• Preventive Maintenance
  » ID all outdoor equipment and systems that may spill or leak;
  » Observe equipment for leaks or conditions that may result in leaks;
  » Schedule routine maintenance for equipment;
  » Establish procedures for prompt repair when conditions exist that may result spills or leaks.
• Spill and Leak Prevention and Response
  » Establish SOP and/or controls to minimize spills and leaks;
  » Develop and implement spill and leak response procedures.
  » Spilled/leaked materials shall be cleaned promptly.
  » Spilled/leaked materials shall be disposed properly;
  » ID and describe all spill and leak response equipment, location(s) and maintenance procedures;
  » Identify and train appropriate spill and leak response personnel;
  » Formal Spill Prevention and Response Plan for each facility is required.
• Material Handling and Waste Management
  » Prevent or minimize handling of industrial materials or wastes that can be readily mobilized by contact with storm water.
  » Contain all stored non-solid industrial materials or wastes that can be transported/dispersed by wind or storm water;
  » Cover waste and material storage containers when not in active use;
  » Divert run-on and storm water from all stockpiled materials;
  » Clean all spills
  » Observe and clean any outdoor material or equipment/containers that can be contaminated by materials or wastes.
• Erosion and Sediment Controls
  » Implement effective wind erosion controls;
  » Stabilize inactive areas effectively prior to a forecasted storm event;
  » Maintain effective perimeter controls;
  » Divert run-on and storm water generated from within the facility away from all erodible materials;
  » If sediment basins are implemented, ensure compliance with the design storm standards in Section X.H.6.;
  » All construction projects that disturb an acre or more of soil must file for a Construction General Permit with LAWA as the Legally Responsible Party.
2015 IGP Requirements

• Employee Training Program
  » At a minimum, train all team members in BMP implementation, BMP effectiveness evaluations, visual observations and monitoring activities.
  » Prepare or acquire appropriate training manuals or training materials;
  » ID personnel that need to be trained, their responsibilities, and the type of training they shall receive;
  » Provide a training schedule;
  » Maintain documentation of all completed training classes and the personnel that received training in the SWPPP;
  » LAWA will hold annual trainings for PPT, mandatory attendance by each leasehold.
2015 IGP Requirements

• Quality Assurance and Record Keeping

The Discharger shall:

» Develop and implement procedures to ensure that staff implements all elements of the SWPPP;

» Track and Record the implementation of BMPs identified in the SWPPP;

» Maintain records for BMP implementation, training, spills and clean-up response activities for a minimum of five (5) years.
• Must Develop, Implement, Document, and Assess Best Management Practices (BMPs)
  – Advanced BMPs
  • “In addition to the minimum BMPs described in Section X.H.1, the Discharger shall, to the extent feasible, implement and maintain any advanced BMPs identified in Section X.G.2.b, necessary to reduce or prevent discharges of pollutants in its storm water discharge in a manner that reflects best industry practice considering technological availability and economic practicability and achievability.”
Advanced BMPs

- Advanced BMPs may include one or more of the following BMPs:
  - Exposure Minimization BMPs
    - Roofs, Enclosures
  - Storm Water Containment and Discharge Reduction BMPs
    - Basins, Infiltration Wells
  - Treatment Control BMPs
    - Biofilters, Treatment Systems
  - Other Advanced BMPs
BMP Descriptions

• The Discharger shall ensure that the SWPPP identifies each BMP being implemented at the facility (Table 4), including:
  » The pollutant(s);
  » The frequency;
  » The locations;
  » The individual and/or position responsible for implementing the BMP;
  » The procedures to implement the BMP effectively;
  » The equipment and tools to implement BMPs;
  » BMPs that require more observations beyond the monthly inspection requirement.
• Identify and justify Minimum and/or Advanced BMPs not implemented.
• ID BMPs implemented in lieu of any Minimum or Advanced BMPs.
• Prepare Monitoring Implementation Plan
  • Discharge locations;
  • Visual observations of facilities;
  • Visual observations response.
LAX Drainage Basins

Sampling Location

Sampling Point
VNY Drainage Basins

Sampling Location
ONT Drainage Basins
Storm Water Pollution Prevention Plan (SWPPP)
Associated with Industrial Activities
2012 – 2013

September 2013

Prepared by:
Los Angeles World Airports
Environmental Services Division
7301 World Way West, 3rd Floor
Los Angeles, California 90045
Break – 15 Minutes
Best Management Practices (BMPs)
BMPs

- LAX Rules & Regulations
BMPs

Los Angeles World Airports

LAX Rules and Regulations

LOS ANGELES WORLD AIRPORTS

**SC1**

**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 - non-storm water discharges are typically the result of an activity being performed that generates water.

**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-Ice Fluid
BMPs

## Storm Water Control

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

Treatment Control

TC1  OIL/WATER SEPARATORS

Spill Response

SR1  EMERGENCY SPILL CLEANUP PLANS
Good Housekeeping

BMP Examples
Monthly Visual Observation/Inspection

Stormwater Compliance Inspections
Drainage Area Inspections
Inlet Protections

Watch Video
How it works, the Safe Drain™
Vehicle Washing Areas
Equipment Washing Area
Wash Water Disposal
Outdoor Storage Area
Material/Waste Storage
Non-Industrial Area Discharge
Non-Industrial Area Discharge
Preventive Maintenance - Examples

Vehicle/Equipment Hoses/Belts Replacement
Oil Changes
Tire Changes
Exercising Valves
Scheduled Storm Drain Filter Replacement
Observe Relevant Preventative Maintenance Schedules
# Annual Preventive Maintenance Schedule

<table>
<thead>
<tr>
<th>Task Description</th>
<th>Frequency</th>
<th>JAN</th>
<th>FEB</th>
<th>MAR</th>
<th>APR</th>
<th>MAY</th>
<th>JUN</th>
<th>JUL</th>
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<td>AHU02 Air Handler</td>
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<td>MUM02 Humidifier</td>
<td>1x/3weeks</td>
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<td>EDHD1 Duct Heat</td>
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<td>EDHD2 Duct Heat</td>
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<td>EF03 Exhaust Fan</td>
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Spill and Leak Prevention and Response

BMP Examples
Procedures and Controls

• A Formal Written Plan is required by the Permit
  – Post and Educate Employees On Your Facility Procedures.
Spill Response Procedures
Spill Response Equipment
ID & Train Personnel
Post the Spill Prevention Plan

• Where Contact Numbers Should Be Posted:
  – Chemical Storage Areas (all of them);
  – Guard Posts;
  – Company Information Boards;
  – With SPCCC Plans;
  – With the SWPPP;
  – Any Other Location Where It Will Be Beneficial.
Material Handling and Waste Management

BMP Examples
Materials & Waste Storage
Prevent Storm Water Contact
Cover Materials & Wastes
Clean Spills
Erosion and Sediment Controls
BMP Examples
Erosion and Sediment Controls

– For OVER 1 Acre of Disturbed Soil
  • Submit a SWPPP that is in compliance with the California Construction General Permit and the LAWA Rules and Regulations Handbook Guidelines (coming in 2015).
  • LAWA ERC will approve the SWPPP and file for the Permit as the Land Owner.

– For UNDER 1 Acre of Disturbed Soil
  • Comply with all Municipal Water Code Regulations for discharging Storm Water;
  • Comply with the IGP requirements.
Advanced BMPs
BMP Examples
Exposure Minimization
1 inch of rainfall on a 2,000 sq. ft. roof = 1,250 Gallons of Water

DID YOU KNOW?
Divert, Infiltrate, Reuse, Contain, Retain, or Reduce Storm Water Runoff (LID Requirements)
Other Treatment Control Tech
BMPs

- BMP Fact Sheets in LAWA Rules and Regulations
  - Appendix 2

- Photos of BMP Implementation
  - The Good
  - The Bad
  - The Ugly
Stained/Impacted Pavement
Improper Storage
Tire Storage
Drain Inlets
Miscellaneous
What You Need to Do
What YOU Need to Do

• Train Your Employees
  – Content
    • BMPs – Use the SWPPP as a Guide
    • Visual Inspection of Work Areas
  – Document the Training
    • Attendance
    • Educational Materials Provided
What YOU Need to Do

- Implement BMPs discussed earlier
What YOU Need to Do

• Clean Up AND Report ALL Spills
  – FOLLOW YOUR COMPANY’S SPILL RESPONSE PROTOCOLS
  – As a general guideline…
    • Secure the area.
    • Identify the spilled chemical.
    • Notify spill response personnel.
  – MORE IMPORTANTLY…

COMPLETE THE LAWA FORM. TURN IT IN.
What We Need From You
What We Need From You

• Two People for the Pollution Prevention Team (PPT)
  – The Primary Pollution Team Member
    • Name, Title, Phone Number, Email
  – The Alternate PPT Member
    • Name, Title, Phone Number, Email
What We Need From You

• Facility Map – Due Friday May 29th
  – See Slides 11-12 for required map elements
What We Need From You

- Documents & Information
  - Chemical Inventory List
  - Monthly Visual Inspection Reports
  - Annual Training Records
  - Spill Reports – When It Occurs
  - Any changes to facility operations – Monthly
    - Facility Layout
    - Materials/Wastes used or stored on site
    - Implemented BMPs
    - Others?
Consequences of Non-Compliance
NOTIFICATION TO CDG THAT YOUR LEASEHOLD BE REMOVED FROM OUR PERMIT

- $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
Consequences of Non-Compliance

• Dirty Shop → Unsafe Work Conditions
• Inefficient Operations
• Vehicle and Equipment Impoundment
• Operation Shutdowns
• Regulatory Oversight
• Non-Renewal of Leases
• Expensive Advanced BMPs to be Installed and Maintained
Resources

• LAWA SWPPPs

• BMP
  – 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
  – California Storm Water Quality Association
    • BMP Handbooks
      • https://www.casqa.org/resources/bmp-handbooks/industrial-commercial

• Forms - DUE THE 10TH OF EACH MONTH
  – Training Attendance
  – Monthly Inspection Form
  – Spill & Response Form
• Compliance with LAWA’s program will SAVE you time and money.
• Routine maintenance and housekeeping will SAVE time and money.
• LAWA ERC is a resource at your disposal.
• Compliance is mandatory, and fun.
Contact Information

• Robert Freeman – Airport Environmental Manager
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• Somvang Meksavanh – LAX/ONT Inspector
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• Sam Yang – VNY Inspector
  – 424-646-6494 syang@lawa.org

• Environmental General Number 424-646-6500