

Municipal Agency Program Training

Presented By



TECS Environmental



Municipal Agency Program

Training Scope

- **Items to be Covered**
 - ✓ General NPDES Requirements
 - ✓ Sewer Maintenance
 - ✓ Storm Drain Maintenance
 - ✓ Street Maintenance
 - ✓ Vehicle/Facility Maintenance
 - ✓ Landscape/Pool Maintenance
 - ✓ Parking Lot Maintenance



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NPDES Requirements

- **Generally**

- ✓ CWA/Porter Cologne require municipalities to control storm water discharges to MS4 from
 - industrial facilities
 - commercial facilities
 - residential sources
 - Municipal facilities
- ✓ Prohibit illicit discharges from
 - any source over which municipality has control
 - ✓ Non-compliance
 - penalties up to \$10,000 per day
 - Exposure to third party litigation



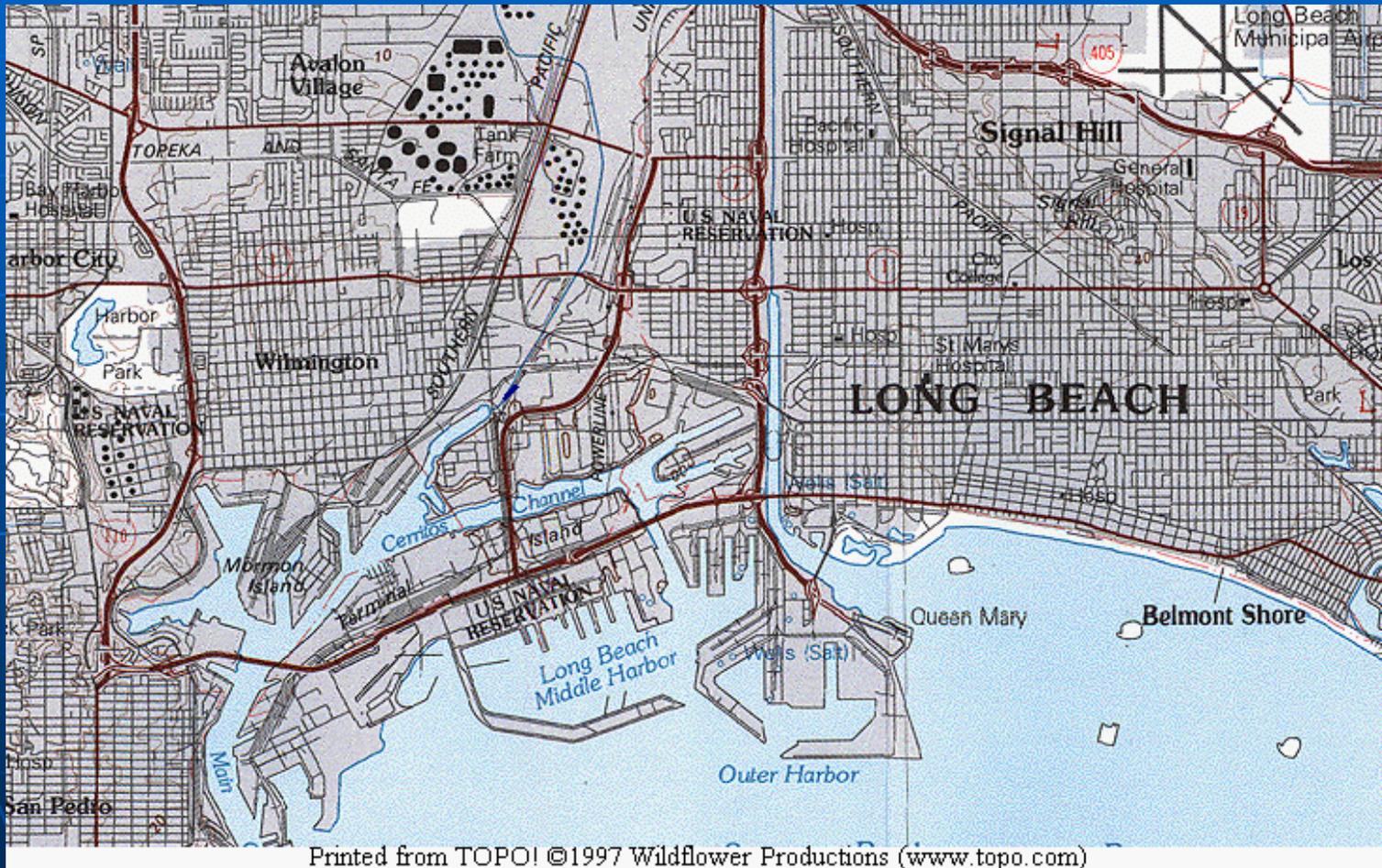
Municipal Agency Program NPDES Requirements

- **Storm Drain System (MS4)**
 - ✓ Streets, gutters, alleys, culverts, catch basins, storm drains, flood control channels





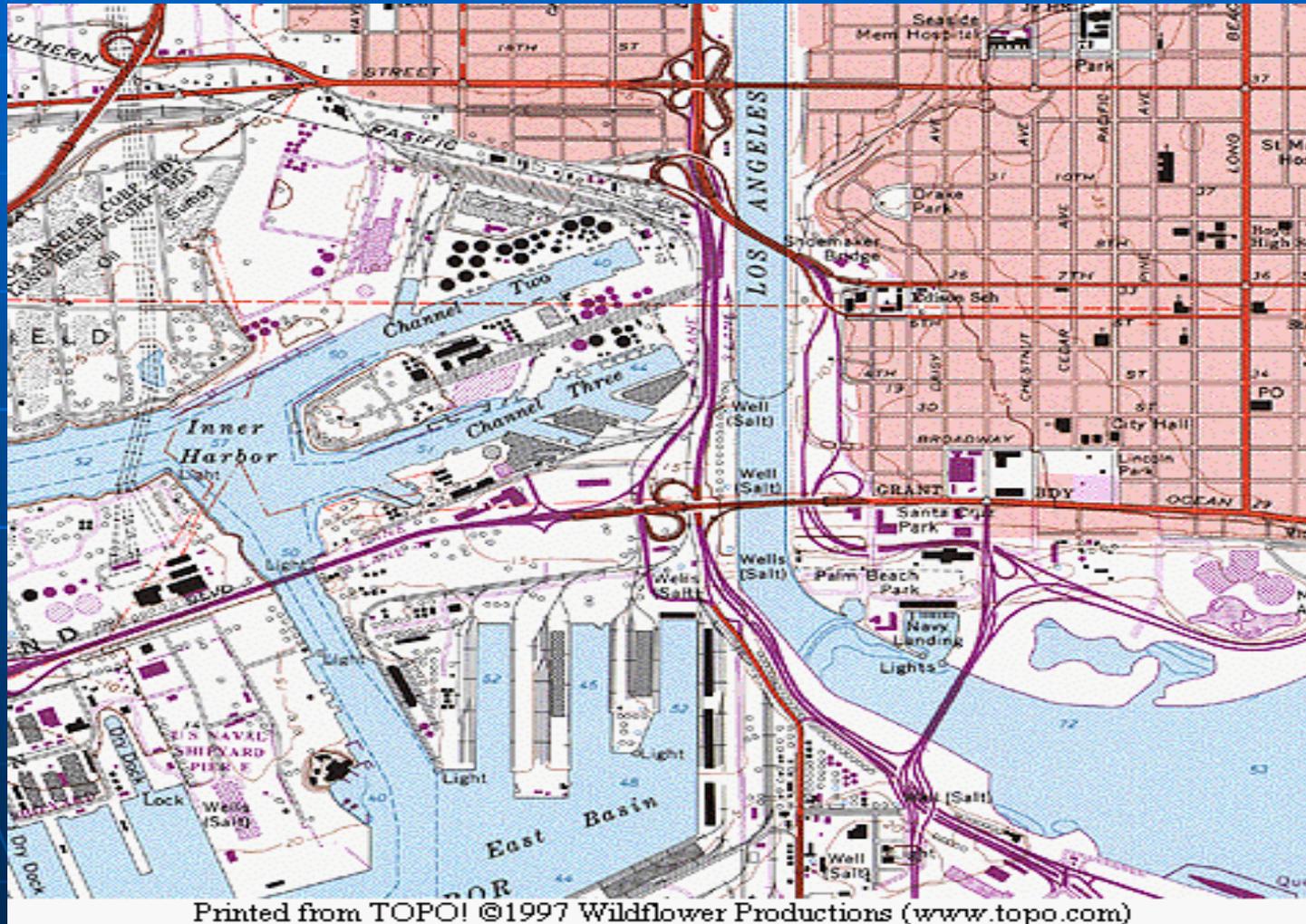
Municipal Agency Program NPDES Requirements





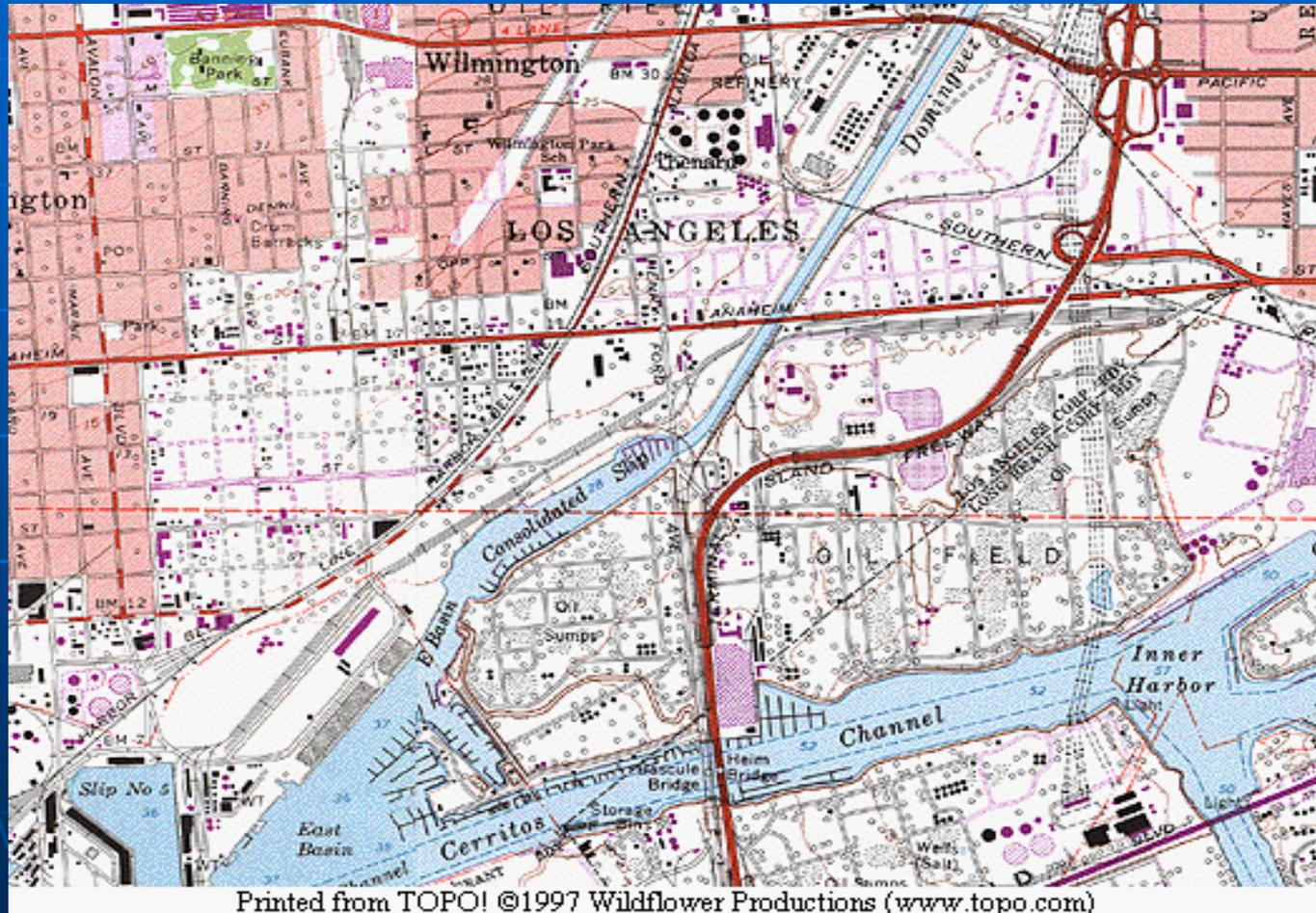
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NPDES Requirements





Municipal Agency Program NPDES Requirements





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NPDES Requirements

- **Illicit Discharges**
 - ✓ Any discharge not entirely composed of storm water except 18 exemptions (e.g., landscape irrigation, potable water, air conditioning condensate, flows associated with fire fighting)



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Sewage Systems

- **Overview**

- ✓ Sewage is harmful to water quality
- ✓ Disinfecting sewage spills can also impair water quality
- ✓ Sewage/flushing to the storm drain violates NPDES permit
- ✓ How to prevent spills
- ✓ How to control/clean-up spills
- ✓ Reporting requirements



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Sewage Systems

- **Sewage is harmful to beneficial uses of receiving waters**
 - ✓ Contains pathogens (bacteria, viruses, and parasites)
 - Harmful to swimmers/surfers
 - Harmful to aquatic life
 - ✓ Responsible for beach closures



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Sewage Systems





Municipal Agency Program Sewage Systems

- **Disinfectants Are Pollutants**
 - ✓ Chlorine can kill marine life and harm aquatic environments





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Sewage Systems

- **Spill Prevention**
 - ✓ TV lines to spot problems
 - ✓ Preempt root intrusion
 - ✓ Maintain lift stations





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Sewage Systems

▪ **Spill Control/Clean-Up**

- ✓ Fix problem first or prevent intrusion into storm drain? – judgment call
- ✓ Depends on who responds (1 or 2 individuals)
- ✓ General Rule: First, prevent sewage from entering storm drain:
 - Plug/cover catch basin opening with sand bags or other devices
 - Divert flow away from catch basin (sand bags, containment booms, damn blockers, etc.)



Municipal Agency Program Sewage Systems





Municipal Agency Program Sewage Systems





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Sewage Systems

- **Disinfectants Are Pollutants**
 - ✓ Know location of sensitive habitats aquatic & environments in receiving waters
 - ✓ Consider distance from point of disinfectant discharge and sensitive areas
 - ✓ Dilute with water to reduce disinfectant residual
 - ✓ Check with Los Angeles County Flood Control in re: disinfection and flushing



Municipal Agency Program Sewage Systems





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Storm Drain System

- **Overview**
 - ✓ Catch basin clean-outs
 - ✓ Identify clogged catch basins
 - ✓ Removal of trash from channels



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Storm Drain System

Catch Basin Clean-out Schedule





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Storm Drain System

Priority A Catch Basins

CB's generating high volumes of trash (sumps containing 40% or more trash twice during the wet season in spite of clean-outs). **Must be cleaned-out 2 times during the wet season and once during the dry season**

Priority B Catch Basins

CB's generating moderate volumes of trash (sumps containing 40% or more trash once during the wet season in spite of clean-outs). **Must be cleaned-out once during the wet season and once during the dry season**

Priority C Catch Basins

CB's generating low volumes trash (sumps containing less than 25% during the wet season). **Must be cleaned-out once prior to the on-set of the wet season**

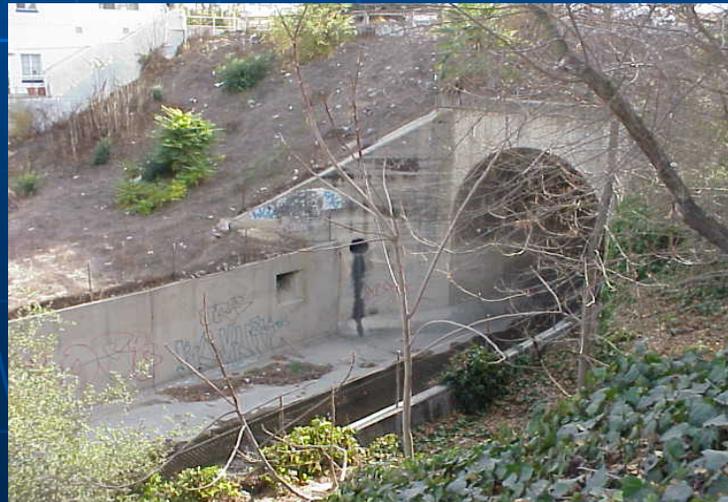


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Storm Drain System

Channel Debris Remove

- ✓ Remove between May and September (before wet season in October)
- ✓ During wet season, remove trash, weight and record.





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Storm Drain Maintenance - Sweeping





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Storm Drain Maintenance – Street Sweeping

Priority Schedule for Sweeping Streets

Priority A

Streets designated as generating high volumes of trash (10 or more pieces of man-made trash per block on the day before scheduled street sweeping). **Must be swept at least twice a month.** (Most cities sweep at this often or more)

Priority B

Streets designated as moderate volumes of trash (3 to 9 pieces of man-made trash per block on the day before scheduled street sweeping). **Must be swept at least once a month.**

Priority C

Streets designated as generating high volumes of trash (1 to 2 pieces of man-made trash per block on the day before scheduled street sweeping). **Must be swept as often as necessary but no less than once a year.**



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Street Maintenance

Overview of Street Repair BMPs

- ✓ Saw-cutting
- ✓ Slurrying
- ✓ Good Housekeeping
- ✓ Paving
- ✓ Material Disposal Practices



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Street Maintenance

Street Repair Work BMPs

- ✓ Saw-cut activities
 - Prevent materials from entering MS4
 - Avoid saw-cutting during wet weather

- ✓ Slurrying
 - Remove from street/gutter and dispose at appropriate designated location.

 - Prevent slurry from entering catch basin, maintenance holes, and storm drain inlets during wet cutting feasible, collect captured flow for proper disposal.

 - Clean up spills from equipment and activities and dispose properly.



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Street Maintenance

Street Repair Work BMPs (continued)

✓ Paving

- Prevent materials from entering catch basin opening, maintenance holes, storm drain inlets during application of materials (asphalt, seal coat, tack coat, concrete, slurry seal, fog seal, etc.)
- Avoid saw-cutting during wet weather
- Store paving materials away from drainage areas
- Clean equipment in a manner that does not cause discharges to the MS4.



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Street Maintenance

Street Repair Work BMPs (continued)

- ✓ Good Housekeeping
 - Sweep up dry materials and residue from cleaning operations.
 - Collect non-hazardous dry waste in designated, leak proof containers
 - Do not wash materials in MS4
 - Clean-up spills & leaks ASAP without flushing/washing to material to MS4.



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Street Maintenance

Street Repair Work BMPs (continued)

- ✓ Good Housekeeping
 - Check vehicles/equipment for leakage
 - Place stockpiled materials away from catch basins, storm drain inlets, drainage paths, and natural waterways.
 - Cover stockpiled materials using a tarp or other device that prevents contact with rain.
 - Properly dispose materials (e.g., hazardous materials)



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Street Maintenance





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Street Maintenance





Municipal Agency Program Vehicle/Facility Maintenance

■ Overview

- ✓ Control potential pollutant discharges to MS4 from municipal facilities
- ✓ Assess problem areas and prescribe BMPs/prepare Storm Water Pollution Prevention Plans
- ✓ Eliminate illicit discharges to the MS4



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Vehicle/Facility Maintenance

- **Control Potential Pollutant Discharges**
 - ✓ From corporate yards/other facilities where
 - chemical materials are stored, used, disposed (fuel, oil, transmission fluid, batteries, waste materials, etc.)
 - Look for exposure of material to storm water and non-storm water contact



Municipal Agency Program Vehicle/Facility Maintenance

- **Storm Water Pollution Prevention Plan**
 - ✓ Identifies on-site potential pollution problems
 - ✓ Prescribes BMPs



Municipal Agency Program Vehicle/Facility Maintenance

Improper Fuel Island Practice





Municipal Agency Program Vehicle/Facility Maintenance

Improper Storage





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Vehicle/Facility Maintenance

Improper Storage

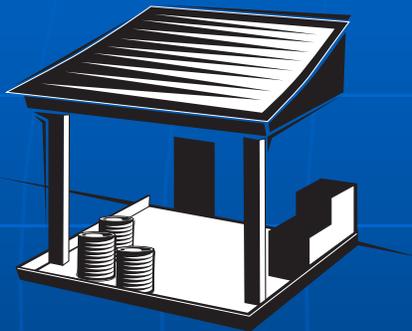




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Vehicle/Facility Maintenance

Proper Storage



Store materials containing pollutants (chemicals or particulates, including sediment) in a manner that prevents contact with runoff. The easiest way to do this is to store materials indoors. If only outdoor storage is possible, materials should be placed under a roof, tarp, or plastic sheeting), and off-the ground, using a pallet or a secondary containment device.



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Vehicle/Facility Maintenance

- Prescribe BMPs
 - ✓ Proper material storage
 - ✓ Maintain proper inventory
 - ✓ Dispose hazardous materials properly
 - ✓ Designate material handling/cleaning areas
 - ✓ Use alternatives to water
 - ✓ Manage trash properly



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Vehicle/Facility Maintenance

Proper Fuel Island BMP





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Vehicle/Facility Maintenance

Proper Trash Storage



Trash Management. Facility should be kept litter-free. Trash cans should be deployed in areas where litter is generated. They should also be equipped with lids and emptied-out as often as necessary to prevent overflow. Trash bins should be closed to prevent refuse migration.



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Vehicle/Facility Maintenance

Inventory Control



Maintain Proper Inventory. Excess ordering of materials containing pollutants could pose a problem if they are stored outdoors without proper coverage or containment. To avoid this problem, only order what is actually needed



Municipal Agency Program Vehicle/Facility Maintenance

■ Stop Illicit Discharges

- ✓ From corporate yards/other facilities to MS4
- ✓ Any discharge not entirely composed of storm water – except potable water, irrigation runoff, flows associated with fire fighting, air conditioning condensate, etc.



Municipal Agency Program Vehicle/Facility Maintenance

Illicit Discharges





Municipal Agency Program Vehicle/Facility Maintenance

Illicit Discharges





Municipal Agency Program Vehicle/Facility Maintenance

Illicit Discharges



Use Alternatives to Water. To save water and prevent illicit discharges, rely on cleaning methods that do not produce runoff. These include sweeping, bucket and mop, wet/dry vacuuming, and the use of absorbent materials.



Municipal Agency Program Vehicle/Facility Maintenance

Illicit Discharges



Set Aside Area for Washing/Cleaning Activities. Runoff from washing parts, vehicles, equipment, or other items outdoors can enter the storm drain system, resulting in an “illicit discharge.” Designate an area of the facility for this purpose, preferably indoors.



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Landscape/Recreational Facility Maintenance





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Landscape/Recreational Facility Maintenance

■ Overview

- ✓ Scope
- ✓ Chemical Management
 - Use Minimization
 - Proper Storage
 - Application
 - Disposal
- ✓ Native Vegetation Preservation



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Landscape/Recreational Facility Maintenance

■ Covers

- ✓ Golf courses
- ✓ Swimming pools
- ✓ Riding trails
- ✓ Recreational water bodies
- ✓ Picnic areas
- ✓ Sports fields
- ✓ Landscaped areas in parking lots



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Landscape/Recreational Facility Maintenance

■ Pesticide, Herbicide, Fertilizer Management

- ✓ Use according to applicable laws
- ✓ Use according to manufacture specs/MSDS
- ✓ Minimize use to prevent excess from being carried by runoff to MS4
- ✓ Avoid use in stormy weather
- ✓ Use good insects to kill bad ones (IPM)
- ✓ If possible, use mechanical devices
- ✓ Store properly (indoors/under cover, and raised to prevent rain water contact
- ✓ Preserve native vegetation – if possible



Municipal Agency Program Swimming Pools





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Swimming Pools

■ Problem

- ✓ If goes to storm drain
 - Illicit discharge (chlorinated)
 - Dechlorinate to 0.1 ppm
 - Backwash to sewer
- ✓ Disinfectant Storage and Use
 - Handle carefully to prevent spill
 - Prepare spill prevention plan
 - Store properly



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Parking Lot Maintenance

- **Requirement**
 - ✓ Make sure debris is removed from parking lots with 25 or more spaces
 - mechanical sweeping
 - manual sweeping



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Field Reporting

- **Requirement**
 - ✓ Report clogged catch basins and illicit discharges to illicit connection/discharge to designated personnel



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THE END