Training

RIVERSIDE COUNTY
WATERSHED PROTECTION

Municipal Facilities and Activities

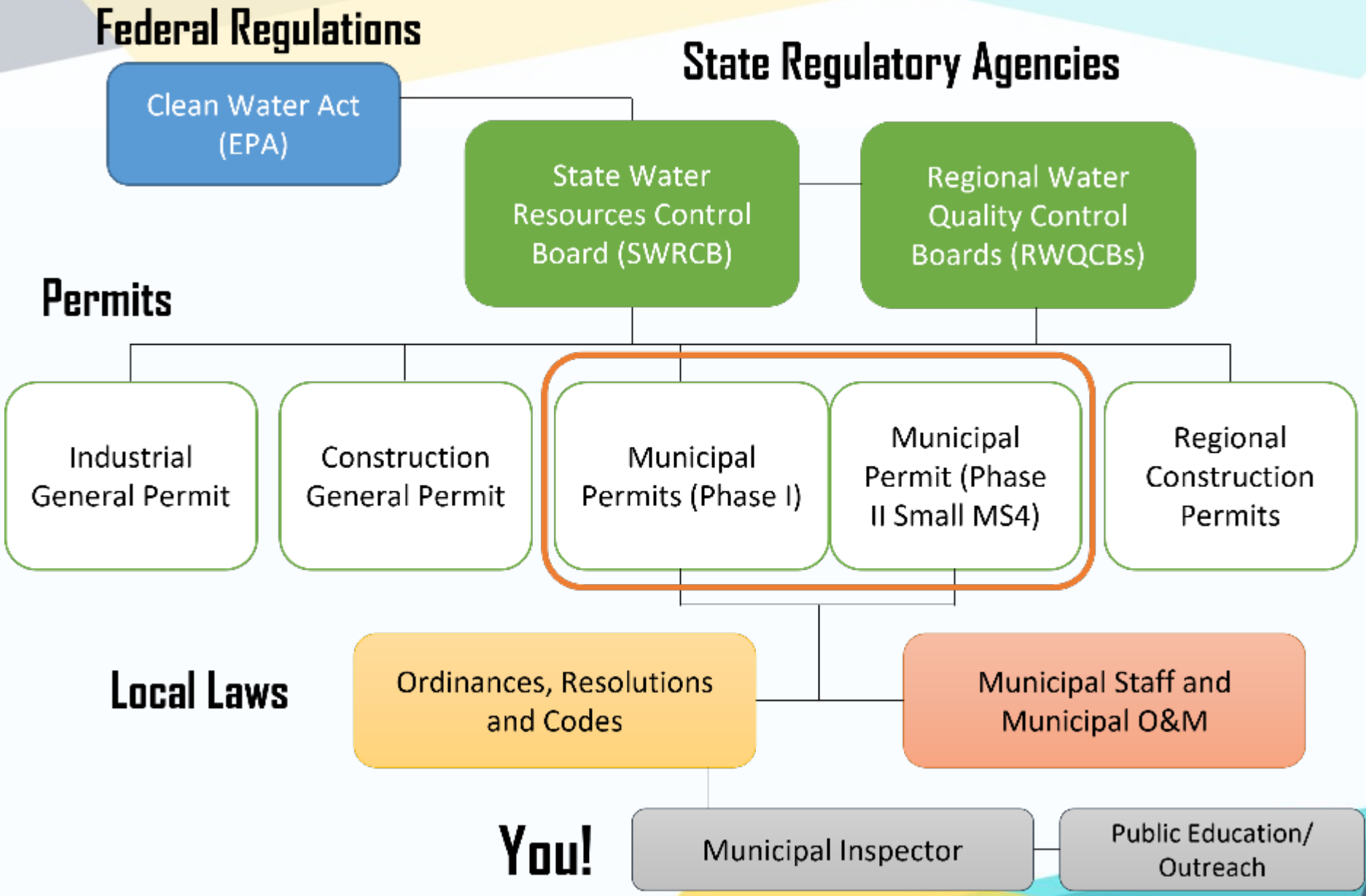
Prepared for: Whitewater River Region Permittees
Presented By: CASC Engineering and Consulting, Inc.
Spring 2023

Training Goals

Upon completion of this course, students will be able to:

- Understand local and state requirements for municipal facilities and activities
- Properly implement and maintain BMPs at municipal facilities
- Identify illicit connections/illegal discharges
- Gain a basic knowledge of the Municipal Facility Pollution Prevention Plan

Local and State Requirements for Municipal Facilities and Activities


Federal Regulations
Clean Water Act (EPA)
State Regulatory Agencies
State Water Resources Control Board (SWRCB)
Regional Water Quality Control Boards (RWQCBs)
Permits
Industrial General Permit
Construction General Permit
Municipal Permits (Phase I)
Municipal Permit (Phase II Small MS4)
Regional Construction Permits
Local Laws
Ordinances, Resolutions and Codes
Municipal Staff and Municipal O&M
You!
Municipal Inspector
Public Education/ Outreach

The Whitewater River Region MS4 Permit

- Regulates the discharge of pollutants from Municipal Separate Storm Sewer Systems (MS4)
- Section F "Best Management Practices" outlines the programs that must be implemented.

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD

COLORADO RIVER BASIN REGION

73-720 Fred Waring Drive, Suite 100, Palm Desert, CA 92260
Phone: (760) 346-7491 • Fax (760) 341-6820
http://www.waterboards.ca.gov/coloradoriver

ORDER NO. R7-2013-0011
NPDES NO. CAS617002

WASTE DISCHARGE REQUIREMENT
FOR
DISCHARGES FROM THE MUNICIPAL SEPARATE STORM SEWER SYSTEM (*MS4*)
WITHIN THE WHITEWATER RIVER WATERSHED
RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT,
OWNER/OPERATOR
COUNTY OF RIVERSIDE, OWNER/OPERATOR
COACHELLA VALLEY WATER DISTRICT, OWNER/OPERATOR
AND INCORPORATED CITIES OF RIVERSIDE COUNTY WITHIN THE
WHITEWATER RIVER BASIN, OWNERS/OPERATORS

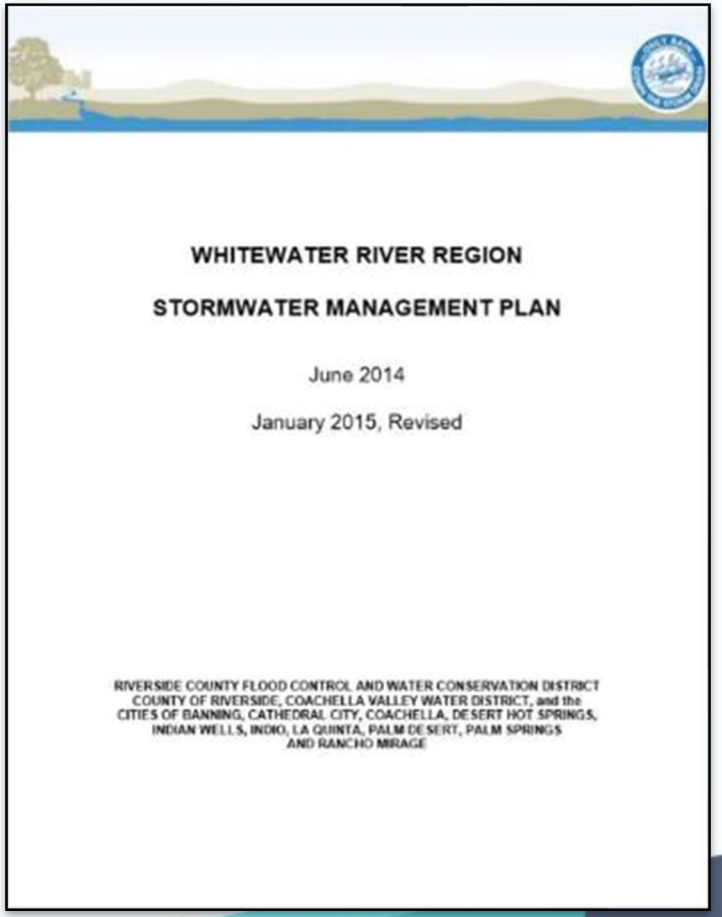
Permittees and Co-Permittees Covered by the WWR MS4 Permit

- Riverside County Flood Control and Water Conservation District*
- County of Riverside*
- Banning
- Cathedral City
- Coachella
- Coachella Valley Water District
- Desert Hot Springs
- Indian Wells
- Indio
- La Quinta
- Palm Desert
- Palm Springs
- Rancho Mirage

**Agencies also covered by separate MS4 permits within San Diego and Santa Ana Regional Board jurisdiction*

Stormwater Management Plan (SWMP)

The SWMP is the document that provides guidance to the cities to manage urban runoff to comply with the requirements of the MS4 Permit.



Program Elements of the SWMP

1.0 Program Management

2.0 Detection and Elimination of Illicit Connections and Illegal Discharges

3.0 Commercial/Industrial Facilities Program

4.0 New Development/ Redevelopment

5.0 Private Construction Activities

6.0 Permittee Facilities and Activities

7.0 Public Education and Outreach Program

8.0 Monitoring Program

9.0 Annual Reporting

10.0 TMDL Implementation

Brief Overview of Relevant Program Elements

Illicit Connections and Illegal Discharges (IC/ID)

Illicit Connections and Illegal Discharges (IC/ID)

Complete Illicit Connection/ Illegal Discharge (IC/ID) training is covered in a separate course.

Illegal Discharge

- Federal regulations define an illegal discharge as

"...any discharge to an MS4 that is not composed entirely of stormwater..." with some exceptions

- See Section C of the MS4 Permit for Allowable Discharges

Illegal Discharge

- Washwater flows are generated from a wide variety of activities and operations. Examples include:
  - Pool cleaning washwater and pool filter discharges
  - Discharges of gray water (laundry) from homes
  - Commercial carwash wastewater
  - Fleet washing
  - Commercial laundry wastewater
  - Floor washing to shop drains

Illegal Discharge

- More examples:
  - Power / pressure washing
  - Hosing off individual sidewalks and driveways
  - Routine washing of fueling areas, outdoor storage areas, and parking lots
  - Construction equipment cleanouts

Here is an example of wash water from sidewalk power washing

Illegal Discharge

Sewage and **septage** flows are produced from sewer pipes and septic systems.

Sewage has the greatest potential to produce direct illegal discharges within any urban subwatershed, regardless of the diverse land uses that it comprises.

The most commonly reported sewage-related direct discharges

- broken sanitary sewer lines
- cross-connections
- straight pipe discharges
- indirect sources include failing septic systems

Illegal Discharge

Sewage can also be linked to significant indirect illegal discharges

- sanitary sewer overflows
- septic system failure
- sewage dumping from recreational vehicles.

Illegal Discharge

Liquid wastes refer to a wide variety of flows, such as

- oil,
- paint,
- process water (radiator flushing water, plating bath wastewater, etc.)

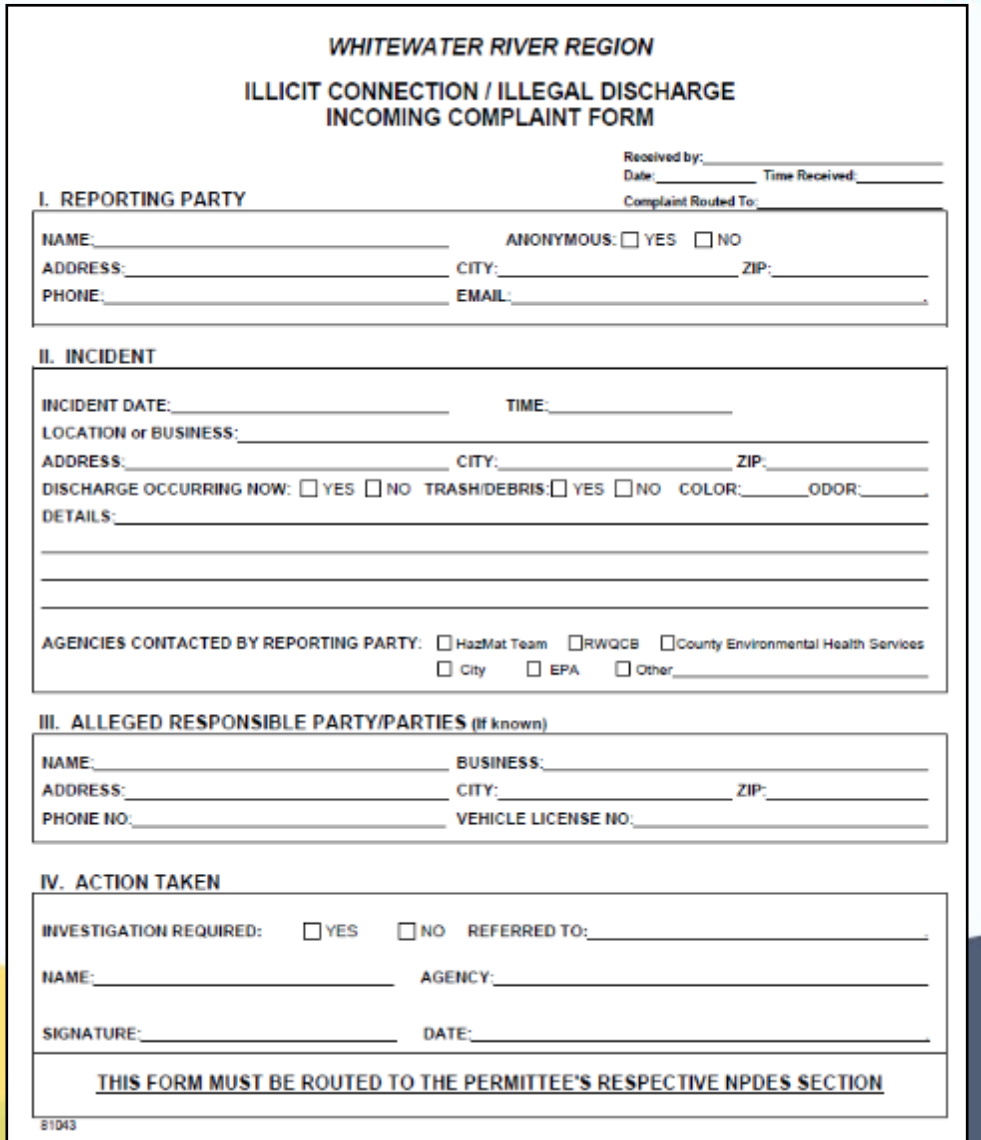
Liquid dumping occurs intermittently at sites that improperly dispose of rinse water and wash water during maintenance and cleanup operations. A common example is cleaning deep fryers in the parking lot of fast-food operations.

Illicit Connection

The permit defines an Illicit Connection (IC) as any connection to the MS4 that is prohibited under local, state, and federal statutes, ordinances, codes or regulations.

IC/ID and Spill Documentation

- Within 24 hours of notification, Permittee must initiate an investigation.
  - During inspections
  - From other agencies
  - From Hotline



WHITEWATER RIVER REGION

ILLICIT CONNECTION / ILLEGAL DISCHARGE INCOMING COMPLAINT FORM

Received by:_____
Date:_____ Time Received:_____
Complaint Routed To:_____

I. REPORTING PARTY

NAME:_____ ANONYMOUS: ☐ YES ☐ NO
ADDRESS:_____ CITY:_____ ZIP:_____
PHONE:_____ EMAIL:_____

II. INCIDENT

INCIDENT DATE:_____ TIME:_____
LOCATION or BUSINESS:_____
ADDRESS:_____ CITY:_____ ZIP:_____
DISCHARGE OCCURRING NOW: ☐ YES ☐ NO TRASH/DEBRIS: ☐ YES ☐ NO COLOR:_____ ODOR:_____
DETAILS:_____

AGENCIES CONTACTED BY REPORTING PARTY: ☐ HazMat Team ☐ RWQCB ☐ County Environmental Health Services ☐ City ☐ EPA ☐ Other_____

III. ALLEGED RESPONSIBLE PARTY/PARTIES (If known)

NAME:_____ BUSINESS:_____
ADDRESS:_____ CITY:_____ ZIP:_____
PHONE NO:_____ VEHICLE LICENSE NO:_____

IV. ACTION TAKEN

INVESTIGATION REQUIRED: ☐ YES ☐ NO REFERRED TO:_____
NAME:_____ AGENCY:_____
SIGNATURE:_____ DATE:_____

THIS FORM MUST BE ROUTED TO THE PERMITTEE'S RESPECTIVE NPDES SECTION

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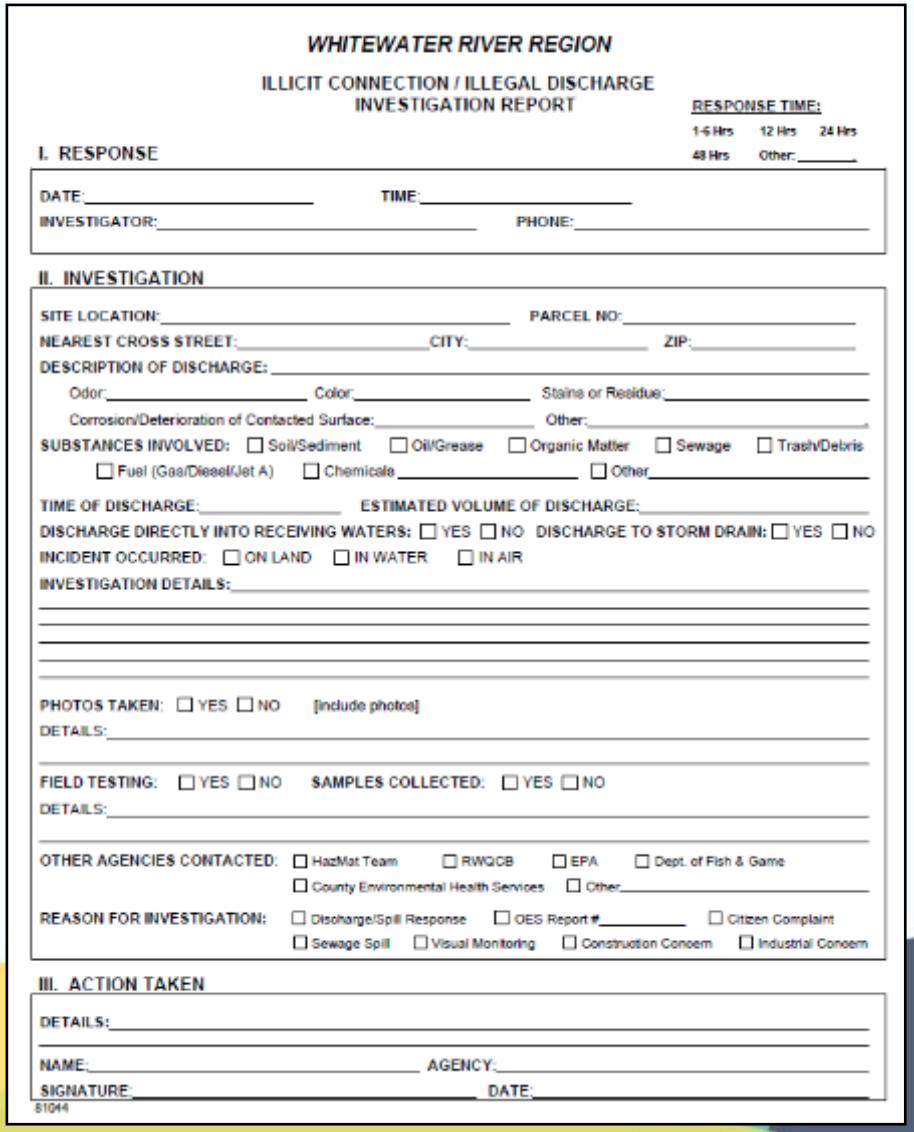
IC/ID and Spill Documentation

- Sewage spills, refer to Sanitary Sewer Overflow Guidance Document, SWMP Appendix F
- Hazardous materials, refer to Cal OES Emergency Release Follow-up Notice Reporting Form 304, SWMP Appendix D
- Other incidents and unauthorized discharges, may use forms in SWMP Appendix D, or other methods that collect minimum information detailed in SWMP



WHITEWATER RIVER REGION

ILLICIT CONNECTION / ILLEGAL DISCHARGE INVESTIGATION REPORT

RESPONSE TIME: 1-6 Hrs 12 Hrs 24 Hrs 48 Hrs Other:_____

I. RESPONSE

DATE:_____ TIME:_____

INVESTIGATOR:_____ PHONE:_____

II. INVESTIGATION

SITE LOCATION:_____ PARCEL NO:_____

NEAREST CROSS STREET:_____ CITY:_____ ZIP:_____

DESCRIPTION OF DISCHARGE:_____

Odor:_____ Color:_____ Stains or Residue:_____

Corrosion/Deterioration of Contacted Surface:_____ Other:_____

SUBSTANCES INVOLVED: ☐ Soil/Sediment ☐ Oil/Grease ☐ Organic Matter ☐ Sewage ☐ Trash/Debris ☐ Fuel (Gas/Diesel/Jet A) ☐ Chemicals_____ ☐ Other_____

TIME OF DISCHARGE:_____ ESTIMATED VOLUME OF DISCHARGE:_____

DISCHARGE DIRECTLY INTO RECEIVING WATERS: ☐ YES ☐ NO DISCHARGE TO STORM DRAIN: ☐ YES ☐ NO

INCIDENT OCCURRED: ☐ ON LAND ☐ IN WATER ☐ IN AIR

INVESTIGATION DETAILS:_____

PHOTOS TAKEN: ☐ YES ☐ NO [include photos]

DETAILS:_____

FIELD TESTING: ☐ YES ☐ NO SAMPLES COLLECTED: ☐ YES ☐ NO

DETAILS:_____

OTHER AGENCIES CONTACTED: ☐ HazMat Team ☐ RWQCB ☐ EPA ☐ Dept. of Fish & Game ☐ County Environmental Health Services ☐ Other_____

REASON FOR INVESTIGATION: ☐ Discharge/Spill Response ☐ OES Report #_____ ☐ Citizen Complaint ☐ Sewage Spill ☐ Visual Monitoring ☐ Construction Concern ☐ Industrial Concern

III. ACTION TAKEN

DETAILS:_____

NAME:_____ AGENCY:_____

SIGNATURE:_____ DATE:_____

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IC/ID and Spill Reporting

- Permittees with jurisdiction over a spill must report within 24 hours:
  - A sewage spill over 1,000 gallons or could impact water contact recreation
  - An oil spill that could impact wildlife
  - A hazardous material spill where residents are evacuated
  - A spill of reportable quantities of hazardous waste
  - Any spill reportable to California Office of Emergency Services (Cal OES)
- Report to:
  - Regional Water Board (760) 346-7491
  - Cal OES (800) 852-7550

IC/ID Surveillance

- Source identification (during commercial/industrial inspections and routine inspections if an IC/ID is observed)
- Field screening (during various department routine activities)
- Regional quarterly dry weather monitoring at select outfalls

Industrial General Permit (IGP)

Reminder:

Commercial and Industrial Inspection Training is covered for the three Riverside County Watersheds in a specific Area-Wide Training

General Industry has its own Permit

- 1991 California's Industrial General Permit was Adopted
  - Excluded Construction Activity
- 1992 Monitoring Requirements were amended
- 1997 Third Iteration Permit
- 2014 Current Permit (effective July 1, 2015)
  - Order 2014-0057-DWQ, NPDES No. CAS000001
  - Amended in 2015 & 2018
  - http://www.swrcb.ca.gov/water_issues/programs/stormwater/industrial.shtml

Industrial General Permit (IGP)

- Who it Covers :
  - Manufacturing facilities
  - Mining/oil and gas facilities
  - Hazardous waste treatment, storage, or disposal facilities
  - Landfills, land application sites, and open dumps that receive industrial waste
  - Recycling facilities such as metal scrap yards, battery reclaimers, salvage yards, automobile yards
  - Steam electric generating facilities
  - Transportation facilities that conduct any type of vehicle maintenance such as fueling, cleaning, repairing, etc.
  - Sewage treatment plants
  - Certain facilities (often referred to as "light industry") where industrial materials, equipment, or activities are exposed to storm water.

What do we need to know about the IGP?

- Some municipal facilities will require coverage
- When investigating a business, check if the facility has coverage under the IGP
  - Refer to the IGP for Categories requiring coverage
  - Confirm that they have a Storm Water Pollution Prevention Plan (SWPPP).
  - Report facility to Regional Board if they need to file a Notice of Intent (NOI) for coverage.

ATTACHMENT A

FACILITIES COVERED BY NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) GENERAL PERMIT FOR STORM WATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITIES (GENERAL PERMIT)

1. Facilities Subject To Storm Water Effluent Limitations Guidelines, New Source Performance Standards, or Toxic Pollutant Effluent Standards Found in 40 Code of Federal Regulations, Chapter I, Subchapter N (Subchapter N):

   Cement Manufacturing (40 C.F.R. Part 411); Feedlots (40 C.F.R. Part 412); Fertilizer Manufacturing (40 C.F.R. Part 418); Petroleum Refining (40 C.F.R. Part 419), Phosphate Manufacturing (40 C.F.R. Part 422), Steam Electric (40 C.F.R. Part 423), Coal Mining (40 C.F.R. Part 434), Mineral Mining and Processing (40 C.F.R. Part 436), Ore Mining and Dressing (40 C.F.R. Part 440), Asphalt Emulsion (40 C.F.R. Part 443), Landfills (40 C.F.R. Part 445), and Airport Deicing (40 C.F.R. Part 449).

2. Manufacturing Facilities:

   Facilities with Standard Industrial Classifications (SICs) 20XX through 39XX, 4221 through 4225. (This category combines categories 2 and 10 of the previous general permit.)

3. Oil and Gas/Mining Facilities:

   Facilities classified as SICs 10XX through 14XX, including active or inactive mining operations (except for areas of coal mining operations no longer meeting the definition of a reclamation area under 40 Code of Federal Regulations. 434.11(1) because the performance bond issued to the facility by the appropriate Surface Mining Control and Reclamation Acts authority has been released, or except for areas of non-coal mining operations which have been released from applicable State or Federal reclamation requirements after December 17, 1990) and oil and gas exploration, production, processing, or treatment operations, or transmission facilities that discharge storm water contaminated by contact with or that has come into contact with any overburden, raw material, intermediate products, finished products, by-products, or waste products located on the site of such operations. Inactive mining operations are mining sites that are not being actively mined, but which have an identifiable owner/operator. Inactive mining sites do not include sites where mining claims are being maintained prior to disturbances associated with the extraction, beneficiation, or processing of mined material; or sites where minimal activities are undertaken for the sole purpose of maintaining a mining claim.

4. Hazardous Waste Treatment, Storage, or Disposal Facilities:

   Hazardous waste treatment, storage, or disposal facilities, including any facility operating under interim status or a general permit under Subtitle C of the Federal Resource, Conservation, and Recovery Act.

5. Landfills, Land Application Sites, and Open Dumps:

   Landfills, land application sites, and open dumps that receive or have received industrial waste from any facility within any other category of this Attachment; including facilities subject to regulation under Subtitle D of the Federal Resource, Conservation, and Recovery Act, and facilities that have accepted wastes from construction activities (construction activities include any clearing, grading, or excavation that results in disturbance).

6. Recycling Facilities:

   Facilities involved in the recycling of materials, including metal scrapyards, battery reclaimers, salvage yards, and automobile junkyards, including but limited to those classified as Standard Industrial Classification 5015 and 5093.

7. Steam Electric Power Generating Facilities:

   Any facility that generates steam for electric power through the combustion of coal, oil, wood, etc.

8. Transportation Facilities:

   Facilities with SICs 40XX through 45XX (except 4221-25) and 5171 with vehicle maintenance shops, equipment cleaning operations, or airport deicing operations. Only those portions of the facility involved in vehicle maintenance (including vehicle rehabilitation, mechanical repairs, painting, fueling, and lubrication) or other operations identified under this Permit as associated with industrial activity.

9. Sewage or Wastewater Treatment Works:

   Facilities used in the storage, treatment, recycling, and reclamation of municipal or domestic sewage, including land dedicated to the disposal of sewage sludge, that are located within the confines of the facility, with a design flow of one million gallons per day or more, or required to have an approved pretreatment program under 40 Code of Federal Regulations part 403. Not included are farm lands, domestic gardens, or lands used for sludge management where sludge is beneficially reused and are not physically located in the confines of the facility, or areas that are in compliance with Section 405 of the Clean Water Act.

IGP - Appendix A

RIVERSIDE COUNTY
WATERSHED PROTECTION

Construction General Permit (CGP)

Construction General Permit (CGP)

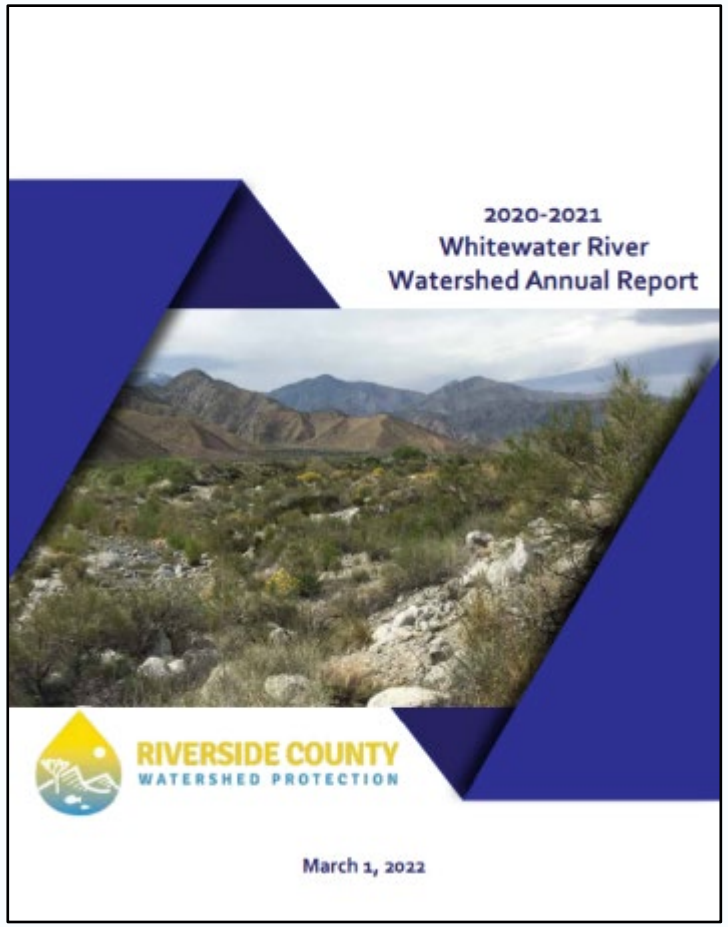
Training on the 2009 Construction General Permit (CGP) and the 2022 CGP are covered in separate courses.

What do we need to know about the CGP?

- New permit effective September 1, 2023
- Requirements apply to Public Works projects and private development projects
- Prior to issuing grading permit, verify the project has obtained coverage under the CGP
- Projects subject to post-construction requirements (WQMP/LID) must submit the document to SMARTS at time of NOI filing
  - Documents approved by the MS4 will be available to the public: make sure they are compliant!

Annual Reporting

Annual Reporting



- Annual reporting is a key element of MS4 compliance
  - to assess program effectiveness,
  - highlight accomplishments, and
  - describe changes to be implemented.

Question

What document requires the Co-Permittees to prevent pollution from their MS4s from entering receiving waters?

Question

Are Co-Permittees required to enforce the IGP?

Question

Is Annual Reporting used to help Co-Permittees assess Program effectiveness?

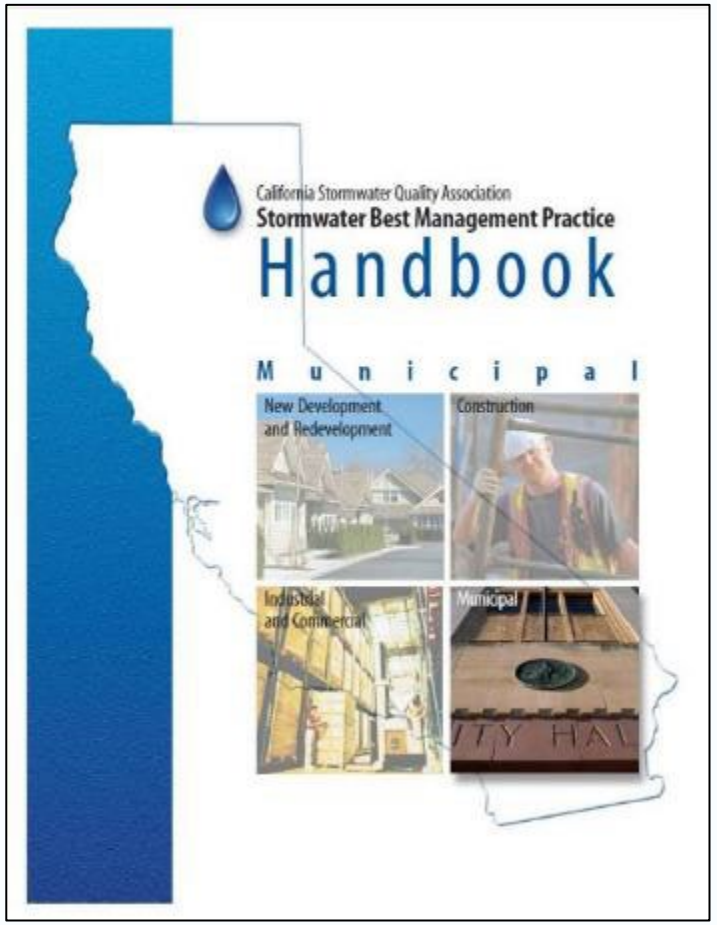
Permittee (Municipal) Facilities and Activities: Tools

Permittee Facilities

- Corporate Yards
- Parks and Recreation Facilities, including golf courses
- Community Centers & Libraries
- Warehouses
- Fire & Police Stations
- Hazardous Material Storage
- Animal Shelters
- Swimming Pools
- Potable Water Treatment Facilities

RIVERSIDE COUNTY
WATERSHED PROTECTION

Best Management Practices

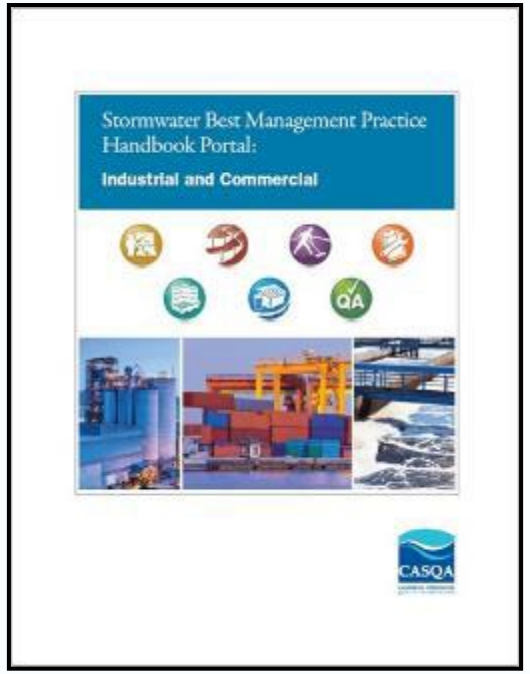


- The Municipal handbook from California Stormwater Quality Association (CASQA) has BMP fact sheets, forms and guidance to help you implement permit requirements

https://www.casqa.org/resources/bmp-handbooks/municipal-bmp-handbook

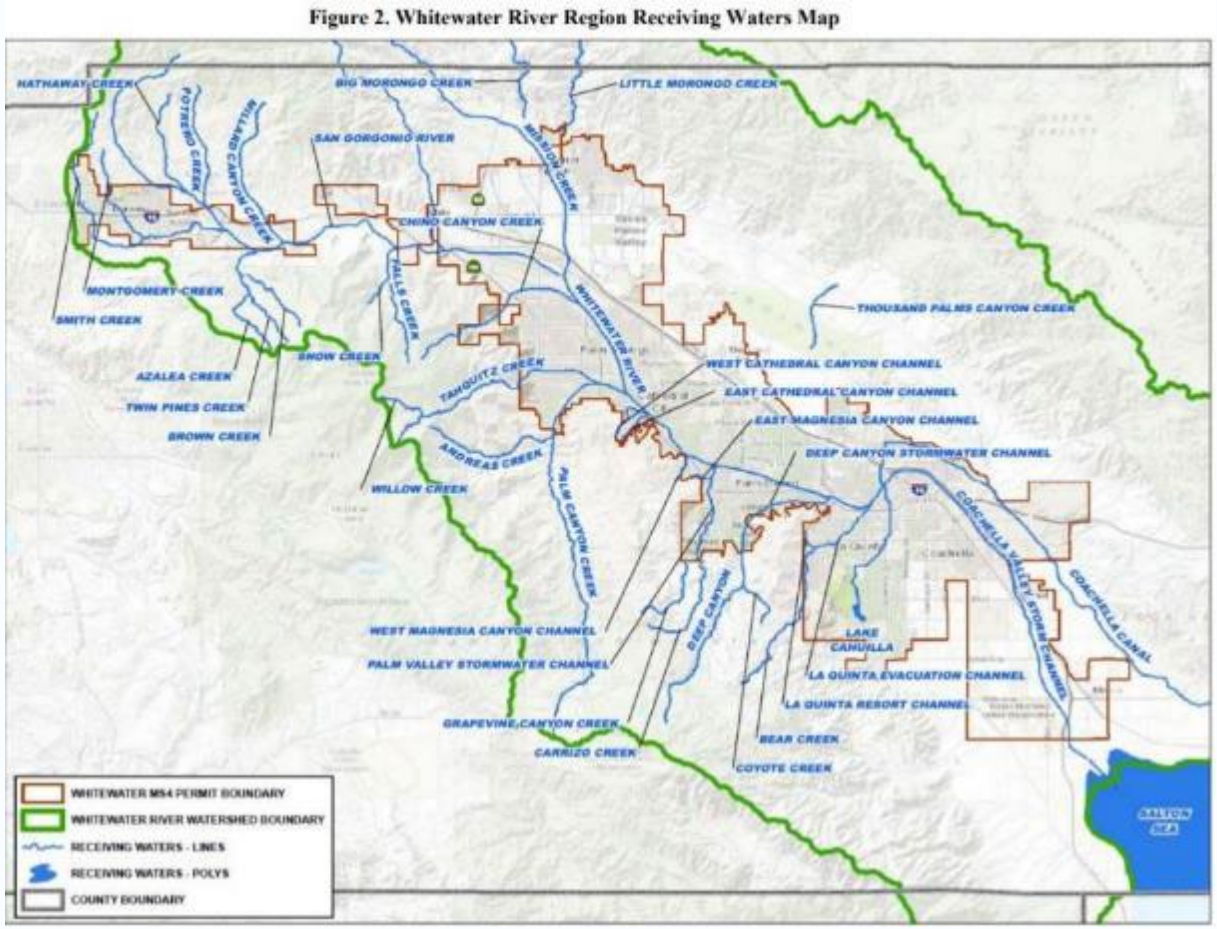
Additional Resources

- CASQA has four handbooks:
  - Municipal
  - Industrial and Commercial
  - New Development and Redevelopment
  - Construction
  - https://www.casqa.org/resources/bmp-handbooks



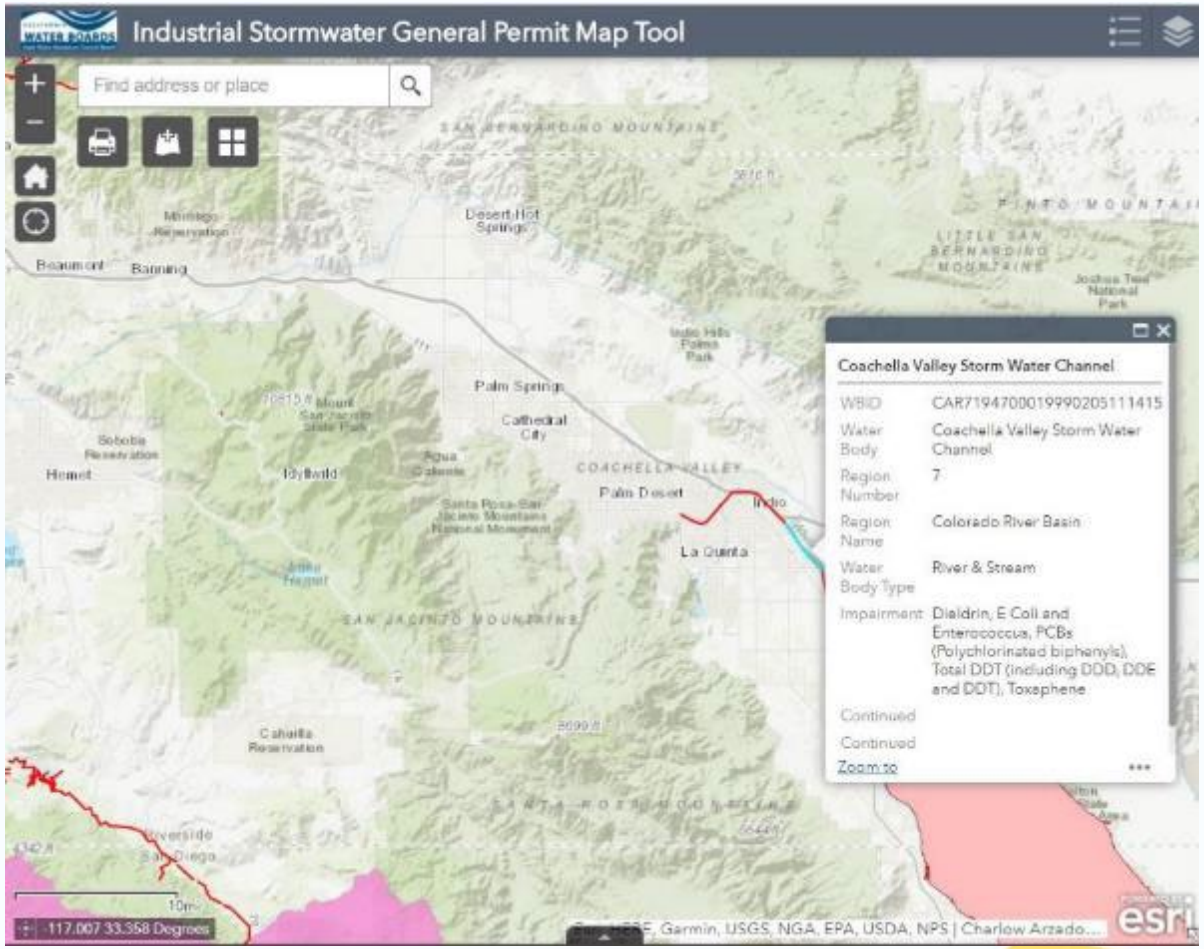
- The US EPA's website also offers many resources
  - https://www.epa.gov/npdes
  - https://www.epa.gov/wqs-tech

Water Quality Impairments



- Staff needs to know current water quality impairments to prioritize:
  - Inspection frequency
  - Violations
  - Enforcement

Example: Impairment Information



- Industrial Stormwater Program Mapping Tool
  - Watersheds
  - Impaired waterbodies
  - Permitted facilities

Click on the Mapping Tools at https://www.waterboards.ca.gov/water_issues/programs/stormwater/industrial.html

Sediment

Metals

Nutrients

Trash & Debris

Pesticides

Common Municipal Facility Pollutants

Oil & Grease

Question

True or False:
Inspection frequencies are based on potential facility impairments and receiving water impairments.

Question

Which of these facilities is NOT considered a municipal facility?

Permittee (Municipal) Facilities and Activities: Requirements

Municipal Facilities Requirements

- SWMP Section 6.0 discusses strategies for implementing the permit that each Permittee must implement. Includes:
  - Planning for Post-Construction BMPs
  - Fire Fighting Agency BMPs
  - Training for Maintenance Employees
  - Data Tracking, Annual Reporting and Evaluation/Assessment
  - Permittee Construction Activities
  - O&M of Permittee Facilities

Planning for Post-Construction BMPs in Public Works Projects

Complete training on Water Quality Management Plans (WQMP) is provided in a separate course.

Fire Fighting Agency BMPs

- SWMP Appendix L contains recommended BMPs
  - Fire sprinkler acceptance and testing BMPs
  - Fire hydrant testing BMPs
  - Discharges associated with fire training activities
  - Discharges associated with post-emergency firefighting activities
  - Discharges associated with activities conducted at fire facilities
  - Discharges associated with emergency firefighting activities
  - Discharges associated with hazardous materials spills

Training for Maintenance Employees

- What needs to be done?
  - Annually attend training covering topics discussed today
  - Streets and roads maintenance staff also conduct tailgate training every other year to review road maintenance activities
  - Staff responsible for pesticide applications are trained and certified under FIFRA

Data Tracking, Annual Reporting and Evaluation/ Assessment

- What needs to be done?
  - Maintain records: Permittee facilities, inspections, MS4 maintenance schedule, list of pesticide applicators
  - Use data to fill out the annual report form
  - Assess whether program goals have been achieved

Permittee Facilities and Activities Program

Program Goals

I Maintain a current map of MS4 Outfalls, Receiving Waters and the MS4 Permit Boundary
II For facilities with outdoor materials storage or maintenance areas: confirm that BMPs described in each facility's Municipal Facility Pollution Prevention Plans are implemented
III Confirm that basins, inlets and open channels that are part of the Permittee's MS4 are maintained on the schedule developed by the Permittee

Goal Addressed	Program Element Assessment Request	Response	Additional Information Requested or Provided	2013 MS4 Permit Section(s)
I	Have you ensured that the MS4 Permit boundary engulfs all urbanized areas around your jurisdiction, reviewed your MS4 Outfalls and confirmed that the WWR Region map is current as it applies to your jurisdictional area?			E.3.c., F.1.e.v.1
II	Provide the total percentage of facilities requiring Municipal Facility Pollution Prevention Plans that were inspected during the reporting year			F.1.e.ii.
II	Provide a narrative summary of the results of municipal facility inspections, including a summary of deficiencies noted and corrective actions taken, if any.			F.1.e.ii.
III	Did your agency conduct maintenance of its MS4 facilities on a developed schedule? Provide a summary of MS4 facilities which were maintained during the reporting year; include types of facilities maintained (e.g. channel, inlet, Major Outfall, basin, etc.)			F.1.e.v.2 - 3
I-III	To the best of your knowledge, did your Permittee Facilities and Activities program achieve the program goals stated above?			F.1.e.x.
I - III	If you answered No to the question above, review applicable activities and BMPs to identify any modifications which may be needed to improve program effectiveness. Have you attached a work plan and schedule to this Annual Report which addresses proposed program modifications?			F.1.e.xi.

Permittee Construction Activities

- What needs to be done?
  - Public works projects must comply with the Construction General Permit (CGP)
  - This applies to projects 1 acre or larger (or part of another project 1 acre or larger)

Permittee Construction Activities

- See SWMP Section 5 for guidance
- File for coverage
- Prepare a Storm Water Pollution Prevention Plan (SWPPP) or Erosivity Waiver if qualifying
- Implement BMPs
- Conduct inspections

Question

How often do staff involved with implementing maintenance activities need to attend training?

O&M of Municipal Facilities

- What needs to be done?
  - Sewage Systems (SSO Coordination)
  - Landscape Maintenance (Pesticide Management)
  - Streets and Roads Maintenance
  - MS4 (Drainage) Facility Maintenance
  - Other Municipal Facilities and Operations

O&M: SSO Coordination

- Notify the applicable sewer agency and give them access to your facilities to allow them to contain and minimize impacts to receiving waters.

O&M: SSO Coordination

O&M: SSO Coordination

O&M: Landscape Maintenance (Pesticide Management)

Objectives

- Contain
- Educate
- Reduce/Minimize
- Product Substitution

Targeted Constituents

Sediment	☑
Nutrients	☑
Trash	☑
Metals	
Bacteria	
Oil and Grease	
Organics	
Oxygen Demanding	☑

Description

Landscape maintenance activities include vegetation removal; herbicide and insecticide application; fertilizer application; watering; and other gardening and lawn care practices. Vegetation control typically involves a combination of chemical (herbicide) application and mechanical methods. All of these maintenance practices have the potential to contribute pollutants to the storm drain system. The major objectives of this BMP are to minimize the discharge of pesticides, herbicides and fertilizers to the storm drain system and receiving waters; prevent the disposal of landscape waste into the storm drain system by collecting and properly disposing of clippings and cuttings, and educating employees and the public.

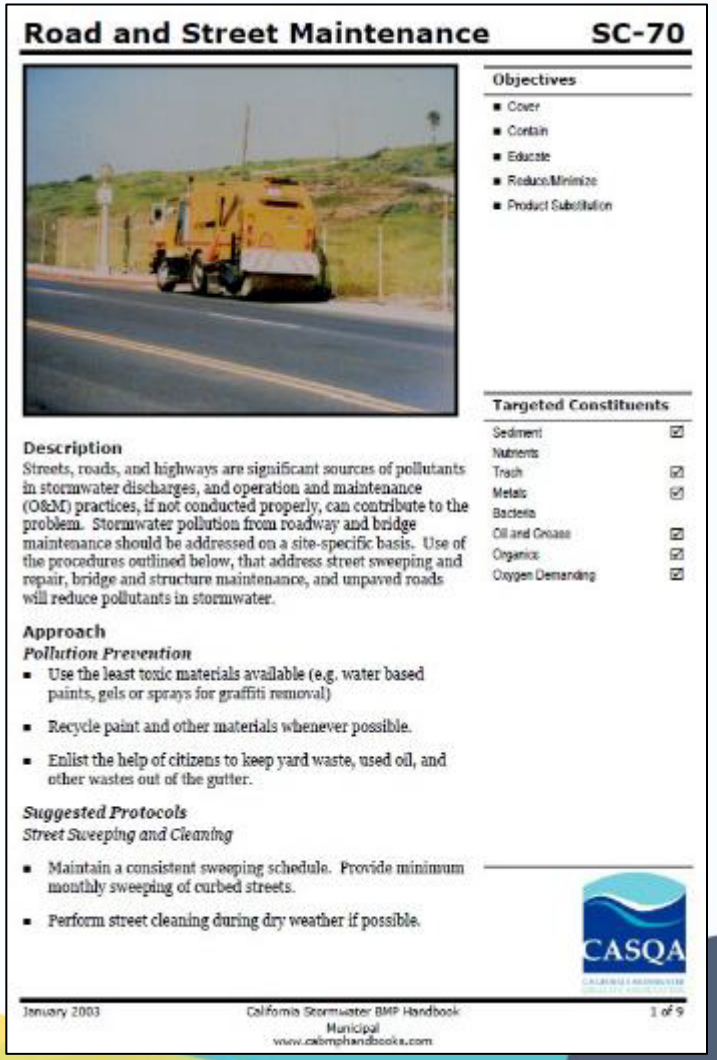
- Pesticides are required to be applied in accordance with state and federal regulations.
- Some Permittees implement an Integrated Pest Management Program (IPM).
- Permittees are responsible for education and outreach of the proper application, management and harmful impacts of pesticides (and nutrients from fertilizers) to the MS4s.

O&M: Landscape Maintenance (Pesticide Management)

- Toxic substances (from pesticides, petroleum products, metals, and industrial Wastes)
  - May cause acute and/or chronic toxicity and may bioaccumulate in organisms to levels that may be harmful to human health.
- Nutrients (from fertilizer use, firefighting chemicals, decaying plants, confined animal facilities, pets, and wildlife)
  - May cause excessive algal blooms. These blooms may lead to problems with odor, color and increased turbidity, and may depress the dissolved oxygen content leading to fish kills.

O&M: Streets and Roads

- Require road maintenance personnel to review BMP fact sheet SC-70 every other year and implement BMPs during maintenance activities.
- Incorporate applicable BMPs into road maintenance contracts.



Road and Street Maintenance **SC-70**

Objectives
- Cover
- Contain
- Educate
- Reduce/Minimize
- Product Substitution

Targeted Constituents

Sediment	☑
Nutrients	
Trash	☑
Metals	☑
Bacteria	
Oil and Grease	☑
Organics	☑
Oxygen Demanding	☑

Description

Streets, roads, and highways are significant sources of pollutants in stormwater discharges, and operation and maintenance (O&M) practices, if not conducted properly, can contribute to the problem. Stormwater pollution from roadway and bridge maintenance should be addressed on a site-specific basis. Use of the procedures outlined below, that address street sweeping and repair, bridge and structure maintenance, and unpaved roads will reduce pollutants in stormwater.

Approach

Pollution Prevention
- Use the least toxic materials available (e.g. water based paints, gels or sprays for graffiti removal)
- Recycle paint and other materials whenever possible.
- Enlist the help of citizens to keep yard waste, used oil, and other wastes out of the gutter.

Suggested Protocols

Street Sweeping and Cleaning
- Maintain a consistent sweeping schedule. Provide minimum monthly sweeping of curbed streets.
- Perform street cleaning during dry weather if possible.

CASQA

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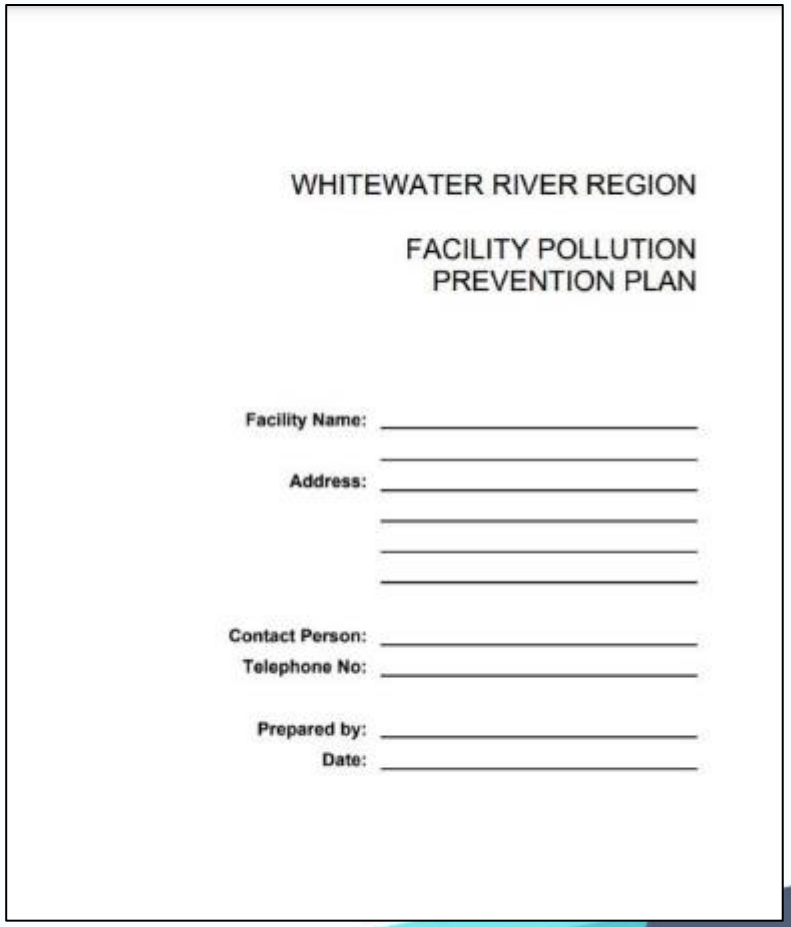
O&M: MS4 (Drainage) Facilities

- Continue to implement maintenance schedules for basins, inlets and open channels.
- Continue field programs to detect and prevent dumping or illegal discharges.

O&M: Other Municipal Facilities and Operations

- For facilities with **outdoor materials storage or maintenance areas**, prepare/update a Municipal Facility Pollution Prevention Plan (MFPPP).
- A template is included in Appendix K of the SWMP.
- Annually inspect these facilities for proper BMP implementation.



WHITEWATER RIVER REGION

FACILITY POLLUTION PREVENTION PLAN

Facility Name: _____

_____

Address: _____

_____

_____

_____

Contact Person: _____

Telephone No: _____

Prepared by: _____

Date: _____

O&M: Other Facilities Requiring a MFPPP

- As of 2015, this list from the SWMP represented the applicable municipal facilities.
- Permittees should review and update the list annually.

Table 6-3. Permittee Facilities Inventory

Note: *This inventory reflects only those Permittee facilities that have outdoor materials storage or maintenance areas. This inventory does not include Permittee facilities having coverage under individual NPDES permits or the General Industrial Permit.*

Permittee	Corporate Yards	Parks & Recreation Facilities	Civic or Community Centers & Libraries	Ware-houses	Fire Stations	Police Stations	Hazardous Materials Storage Facilities*	Animal Shelters	Swimming Pools	Potable Water Treatment Facilities
County of Riverside	5	1	0	0	22	0	0	0	5	3
Banning	1	0	0	0	0	0	0	0	0	1
Cathedral City	1	8	3	0	3	1	0	0	0	0
Coachella	1	5	0	0	1	0	1	0	2	5
Desert Hot Springs	1	5	1	0	2	1	1	0	1	0
Indian Wells	1	1	1	0	1	1	1	0	0	0
Indio	1	0	0	0	0	0	0	0	0	0
La Quinta	1	12 Parks 1 Golf Course 1 Fitness Center	4	0	3	2	0	0	1	0
Palm Desert	1	1	0	0	0	1	0	0	1	0
Palm Springs	1	2 Rec Center; 1 golf course	0	0	4	1	1	1	1	0
Rancho Mirage	1	4	3	0	2	1	0	0	0	0
Coachella Valley Water District	2	0	0	2	0	0	0	0	0	0
Riverside County Flood Control & Water Conservation District	0	0	0	0	0	0	0	0	0	0

* Includes household hazardous waste collection facilities.

Question

True or False:
Municipal facilities with outdoor material storage or maintenance areas must prepare a Facility Pollution Prevention Plan and implement BMPs

Best Management Practices

Suggested BMPs

- The SWMP has lists of suggested BMPs for municipal facilities.
- Choose these, or others, as appropriate for your facilities.

Updated 2003

Municipal Handbook References

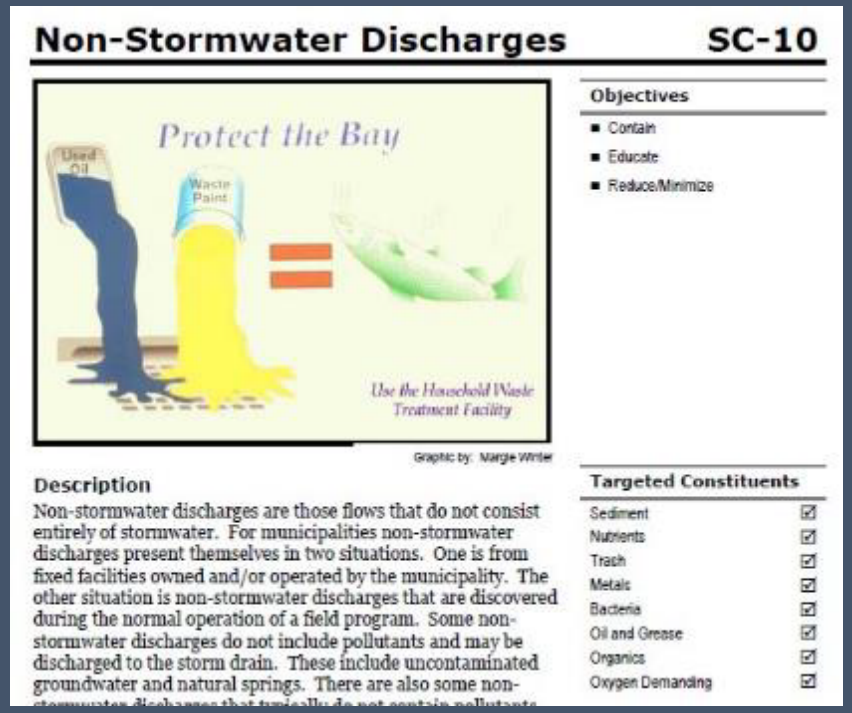
SC-10	Non-Stormwater Discharges	SC-43	Parking/Storage Area Maintenance
SC-11	Spill Prevention, Control and Cleanup	SC-60	Housekeeping Practices
SC-20	Vehicle and Equipment Fueling	SC-61	Safer Alternative Products
SC-21	Vehicle and Equipment Cleaning	SC-70	Road and Street Maintenance
SC-22	Vehicle and Equipment Repair	SC-71	Plaza and Sidewalk Cleaning
SC-30	Outdoor Loading/Unloading	SC-72	Fountains & Pools Maintenance
SC-31	Outdoor Container Storage	SC-73	Landscape Maintenance
SC-32	Outdoor Equipment Maintenance	SC-74	Drainage System Maintenance
SC-33	Outdoor Storage of Raw Materials	SC-75	Waste Handling and Disposal
SC-34	Waste Handling and Disposal	SC-76	Water and Sewer Utility Maintenance
SC-41	Building and Grounds Maintenance		

Updated 2019

Industrial Handbook References

SC-10	Non-Stormwater Discharges	SC-34	Waste Handling and Disposal
SC-11	Spill Prevention, Control and Cleanup	SC-35	Safer Alternative Products
SC-20	Vehicle and Equipment Fueling	SC-40	Contaminated or Erodible Areas
SC-21	Vehicle and Equipment Cleaning	SC-41	Building & Grounds Maintenance
SC-22	Vehicle and Equipment Repair	SC-42	Building Repair and Construction
SC-30	Outdoor Loading /Unloading of Materials	SC-43	Parking/Storage Area Maintenance
SC-31	Outdoor Liquid Container Storage	SC-44	Drainage System Maintenance
SC-33	Outdoor Storage of Raw Materials		

Non-Stormwater Discharges



Non-Stormwater Discharges **SC-10**

Graphic by: Margie Writer

Objectives

- Contain
- Educate
- Reduce/Minimize

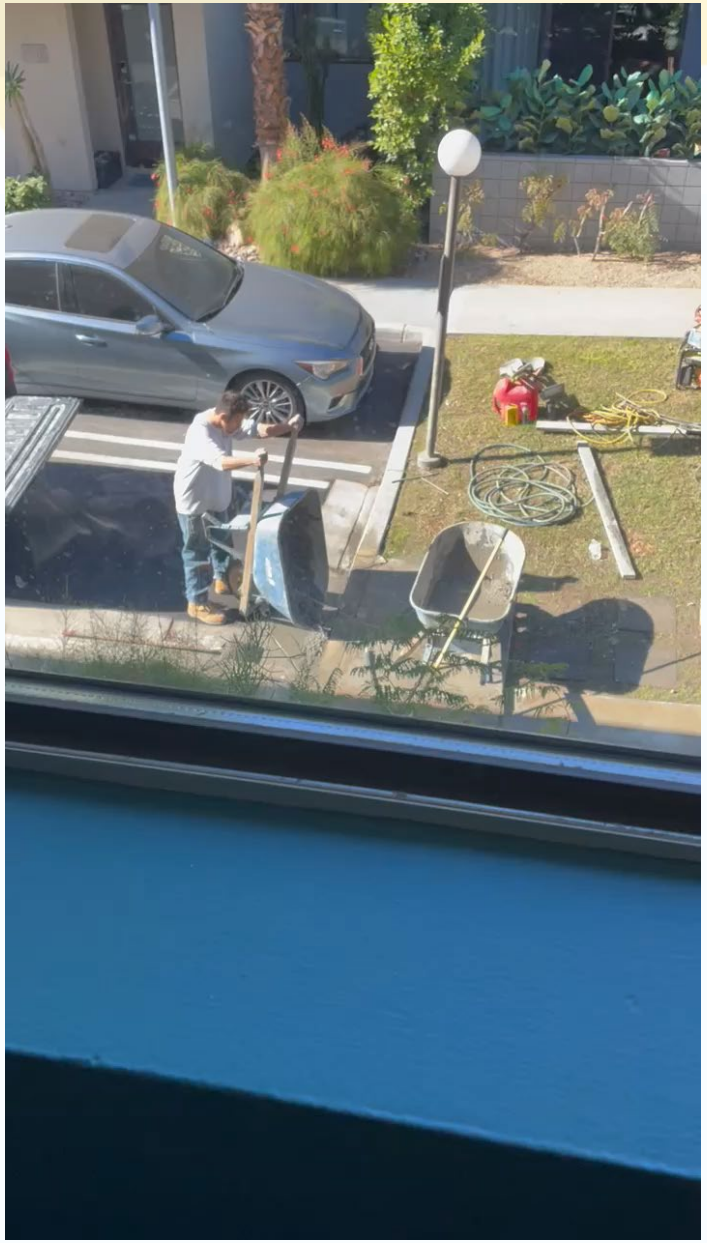
Description

Non-stormwater discharges are those flows that do not consist entirely of stormwater. For municipalities non-stormwater discharges present themselves in two situations. One is from fixed facilities owned and/or operated by the municipality. The other situation is non-stormwater discharges that are discovered during the normal operation of a field program. Some non-stormwater discharges do not include pollutants and may be discharged to the storm drain. These include uncontaminated groundwater and natural springs. There are also some non-

Targeted Constituents

Sediment	☑
Nutrients	☑
Trash	☑
Metals	☑
Bacteria	☑
Oil and Grease	☑
Organics	☑
Oxygen Demanding	☑

Washwater residue is observed coming from the back entrance of this building.



Permittees received a complaint about illegal discharges to the storm drain system. Fortunately, a resident caught the actions on video.

- Post “No Dumping” signs with a phone number for reporting and penalties
- Stencil storm drains to prevent illegal disposal of pollutants
- Implement landscaping and beautification measures to discourage future dumping

- Install lighting to discourage future dumping
- Regularly clean up hot spots and other drainage areas where illegal dumping and disposal occur

Spill Prevention, Control & Cleanup

An effective spill response plan should include…

- Spill and leak prevention measures.
- Spill response procedures.
- Spill cleanup procedures
- Reporting
- Training

How would you clean up each spill?

For O&G, use an absorbent spill kit (kitty litter for example) to absorb the oil and grease and sweep away the litter once it has been absorbed and properly dispose.

For liquid spills, the liquid can be held between berms and then vacuumed up with a wet vacuum. Any sediment left over after dried should be swept up and disposed of.

Hazmat spills should be reported to existing hazardous materials response programs (like the Fire Department Hazmat Team)

Vehicle and Equipment Fueling

SC-20 Vehicle and Equipment Fueling

Description

Spills and leaks that occur during vehicle and equipment fueling can contribute hydrocarbons, oil and grease, and heavy metals to stormwater runoff. Implementing the following best management practices (BMPs) can help prevent fuel spills and leaks.

Approach

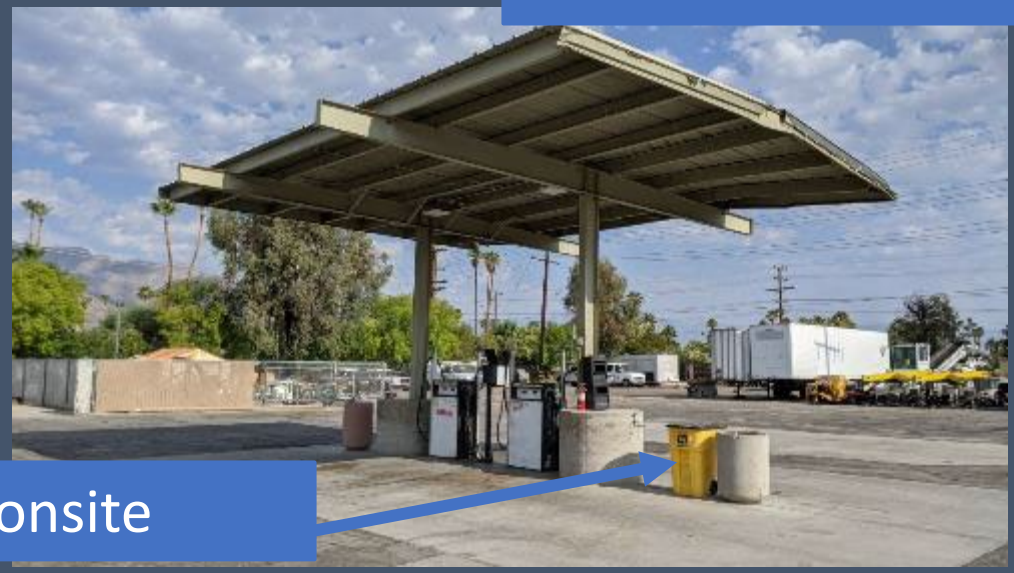
Reduce the potential for pollutant discharge through source control pollution prevention and BMP implementation. Successful implementation depends on effective training of employees on applicable BMPs and general pollution prevention strategies and objectives.

General Pollution Prevention Protocols

- Use properly maintained off-site fueling stations whenever possible. These businesses are better equipped to handle fuel and spills properly.
- Focus pollution prevention activities on containment of spills and leaks, most of which may occur during liquid transfers.

Objectives	
Cover	
Contain	
Educate	
Reduce/Minimize	
Substitute Products	
Targeted Constituents	
Sediment	
Nutrients	
Trash	✓
Metals	✓
Bacteria	
Oil and Grease	✓
Organics	✓
Minimum BMPs Covered	
Good Housekeeping	✓
Preventative Maintenance	✓
Spill and Leak Prevention and Response	✓

spill kit onsite to clean fuel waste off cement



spill kit onsite

Vehicle and Equipment Cleaning

Covered wash rack with sloped drainage.

Drains in vehicle cleaning areas can prevent ponding waters or water discharging from your site.
See SC-21

Vehicle and Equipment Repair

Vehicle and Equipment Repair SC-22

Photo Credit: Geoff Brosseau

Objectives

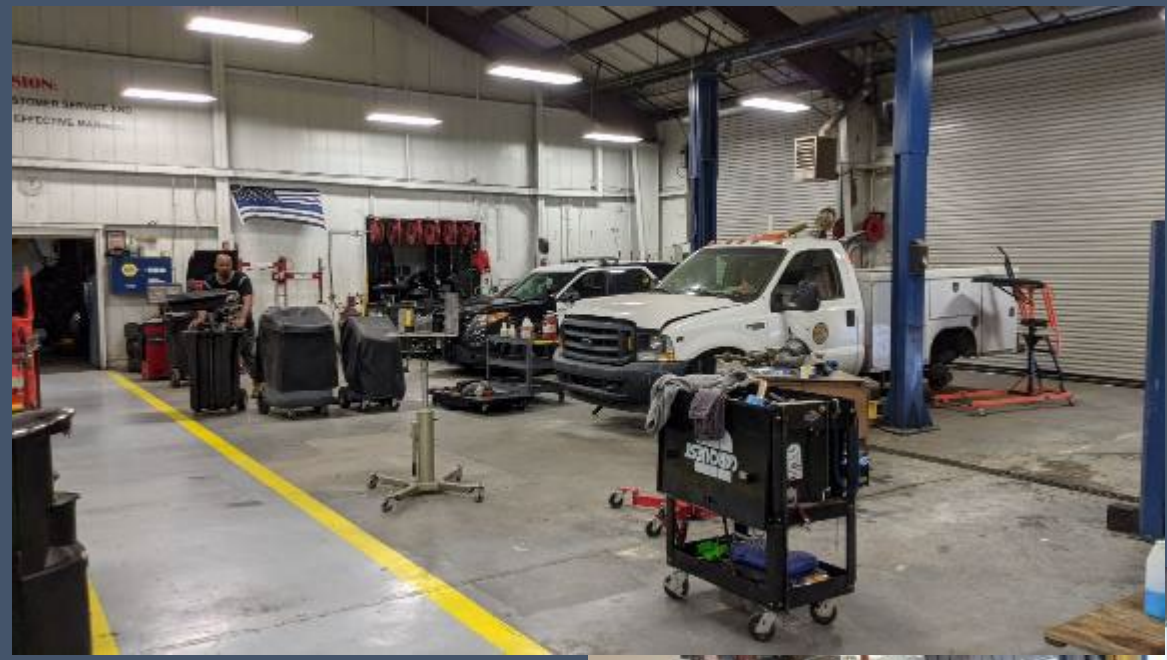
- Cover
- Contain
- Educate
- Reduce/Minimize
- Product Substitution

Description

Vehicle or equipment maintenance and repair is potentially a significant source of stormwater pollution, due to the use of materials and wastes created that are harmful to humans and the environment. Engine repair and service (e.g. parts cleaning), replacement of fluids (e.g. oil change), and outdoor equipment storage and parking (dripping engines) can impact water quality if stormwater runoff from areas with these activities occurring on them becomes polluted by a variety of contaminants. Implementation of the following activities will prevent or reduce the discharge of pollutants to stormwater from vehicle and equipment maintenance and repair activities.

Targeted Constituents

Sediment	
Nutrients	
Trash	
Metals	☑
Bacteria	
Oil and Grease	☑
Organics	☑
Oxygen Demanding	



All vehicle and equipment repair should be conducted indoors if possible. If repairs are done outside, a designated area should be used. Additionally, equipment must be kept clean, ground protection must be used, and all equipment must be constantly monitored for spills and leaks to make sure no fluids get into the storm drain.

Outdoor Loading/Unloading

Clean all materials spilled, leaked, or lost immediately from outdoor loading docks.

See SC-30

Outdoor (Liquid) Container Storage

Accidental releases of materials from above ground liquid storage tanks, drums, and dumpsters have the potential to contaminate stormwater with many different pollutants.

This fuel tank is surrounded by gravel to help eliminate spreading and make for easy cleanup if a spill was to occur.
See SC-31.

Outdoor (Liquid) Container Storage

Blue overflow container shows evidence of corrosion

Well maintained double walled container of oxalate. No corrosion or leakage is observed. See SC-31

Select the image with the proper liquid containment storage

These containers are not placed on top of the proper spill containment.

Liquid containers are not properly placed on spill containment

While these liquid containers are
containment platforms which col
if you look closely, you can
containment platform have been placed upside down
and therefore will not be able to collect any liquid that may spill out.

All liquid storage is placed on top of a properly placed spill containment pallets and all containers of liquid are secured with a lid.

Outdoor Equipment O&M

Outdoor Equipment Maintenance SC-32

Description

Outside process equipment operations and maintenance can contaminate stormwater runoff. Activities, such as grinding, painting, coating, sanding, degreasing or parts cleaning, landfills and waste piles, solid waste treatment and disposal, are examples of process operations that can lead to contamination of stormwater runoff. Source controls for outdoor process equipment operations and maintenance include reducing the amount of waste created, enclosing or covering all or some of the equipment, installing secondary containment, and training employees.

Approach

Pollution Prevention

- Perform the activity during dry periods.
- Use non-toxic chemicals for maintenance and minimize or eliminate the use of solvents.

Suggested Protocols

- Consider enclosing the activity in a building and connecting the floor drains to the sanitary sewer.
- Cover the work area with a permanent roof.
- Minimize contact of stormwater with outside process equipment operations through berming and drainage routing (runon prevention). If allowed, connect process equipment

Objectives

- Cover
- Contain
- Educate
- Reduce/Minimize
- Product Substitution

Targeted Constituents

Sediment	☑
Nutrients	
Trash	☑
Metals	☑
Bacteria	
Oil and Grease	☑
Organics	☑
Oxygen Demanding	

One way to limit stormwater contamination is by covering the area in which outdoor equipment is being stored

Outdoor Storage of Raw Materials

Notice how the raw materials are not bermed or covered here.

Do not overtop these areas in case of high winds!
See SC-33

Waste Handling & Disposal

All trash and debris must go inside of the dumpsters. Trash should not be left on the ground.

Bins should remain closed when not in use

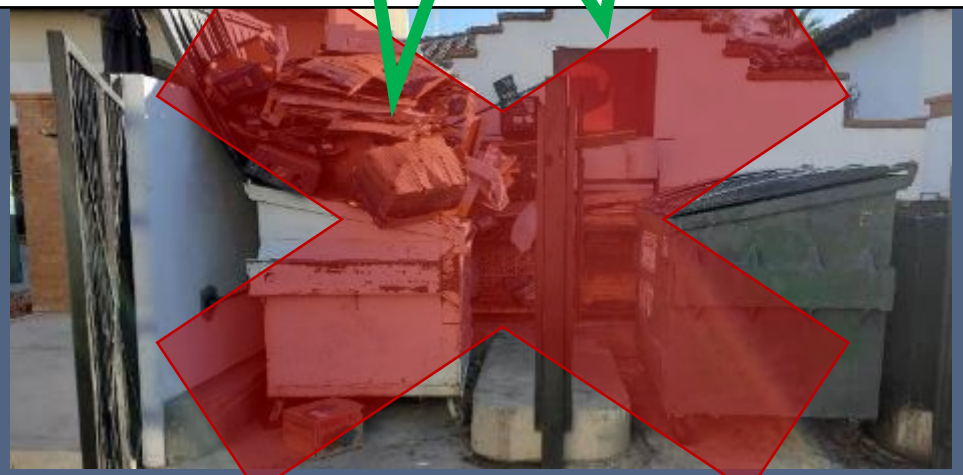
Select the image with the proper waste handling mea

While the bin lids are securely closed, trash and debris being left on the ground can contaminate stormwater.

The WWR MS4 Permit requires use of proper litter receptacles including a roof, awning, or attached lid over containers.

Trash receptacle lid is securely closed and the ground is clear of all debris.

Overflowing trash bins cause trash to end up on the ground and make it impossible to properly close the trash bin's required lid.



Safer Alternative Products

SC-35 Safer Alternative Products

Description

Promote the use of less harmful products and products that contain little or no total maximum daily load (TMDL) or 303(d) list pollutants. Alternatives exist for most product classes, including chemical fertilizers, pesticides, cleaning solutions, janitorial chemicals, automotive and paint products, and consumables (e.g., batteries and fluorescent lamps).

Approach

Pattern a new program after the many established programs around the state and country. Integrate this best management practice (BMP) as much as possible with existing programs at your facility.

Develop a comprehensive program based on the following:

- ☐ The Precautionary Principle, which is an alternative to the Risk Assessment model, which says it is acceptable to use a potentially harmful product until physical evidence of its harmful effects are established and deemed too costly from an environmental or public health perspective. For instance, a risk assessment approach might say it is acceptable to use a pesticide until there is direct proof of an environmental impact. The Precautionary

Objectives	
▪ *Educate*	
▪ *Reduce/Minimize*	
▪ *Substitute Products*	
Targeted Constituents	
Sediment	
Nutrients	✓
Trash	
Metals	✓
Bacteria	
Oil and Grease	✓
Organics	✓
Minimum BMPs Covered	
Good Housekeeping	
Preventative Maintenance	
Spill and Leak Prevention and Response	
Material Handling & Waste Management	
Erosion and Sediment Controls	
Employee Training Program	✓
Quality Assurance Record Keeping	

Contaminated and Erodible Areas

Implement erosion and sediment controls (like a silt fence, fiber roll, gravel bag or even a curb and gutter) to stabilize soils and reduce pollutant discharges from contaminated or erodible surfaces

Parking Maintenance, Building and Grounds Maintenance, and Housekeeping Practices

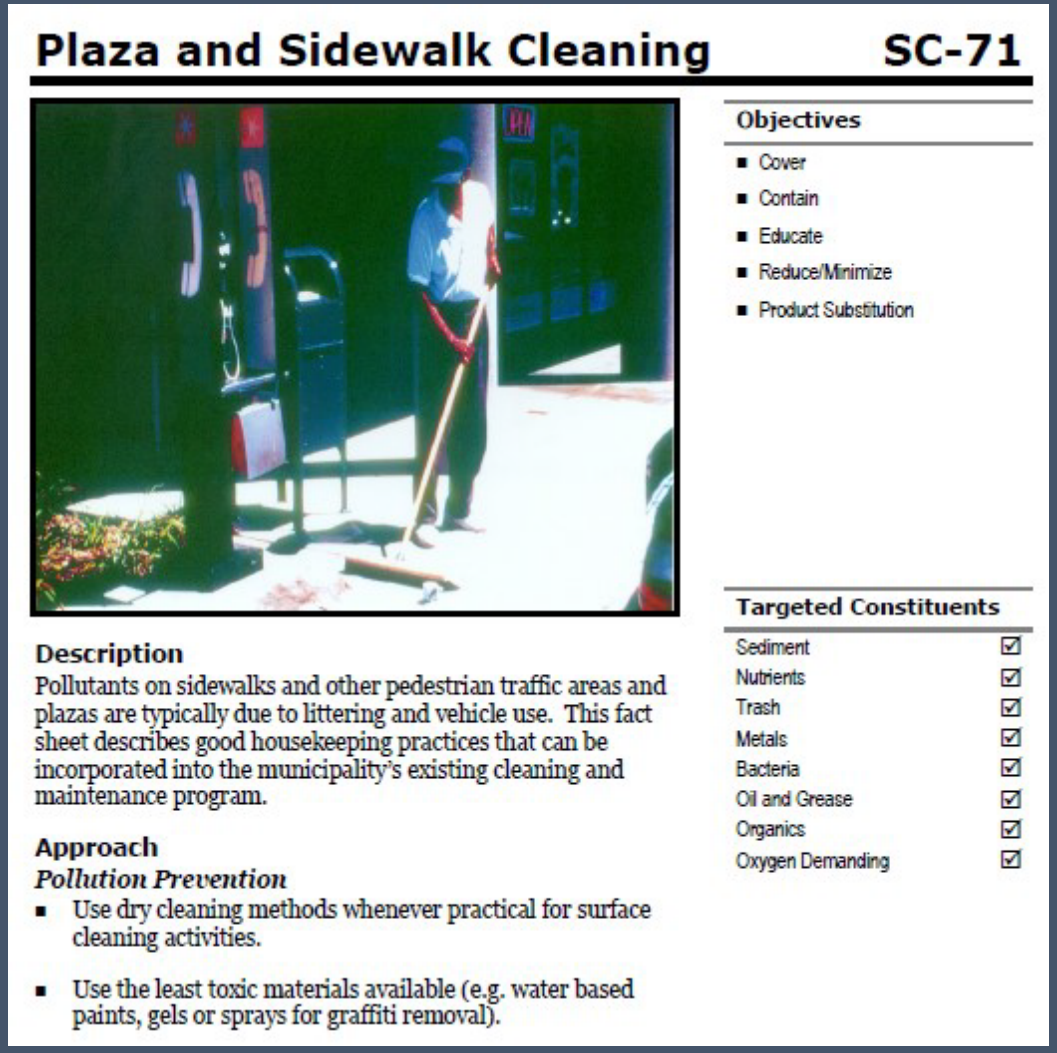
Parking lots and storage areas can contribute a number of substances that can enter receiving waters through stormwater runoff and non stormwater discharges.

It is important to follow appropriate BMPs, housekeeping measures, and employee training to ensure cleanliness.

Road & Street Maintenance

- Maintain consistent sweeping schedule, preferably during dry weather
- Protect inlets prior to maintenance activities
- Dispose of excess; do not allow into drainage system

Plaza & Sidewalk Cleaning



Plaza and Sidewalk Cleaning **SC-71**

Objectives

- Cover
- Contain
- Educate
- Reduce/Minimize
- Product Substitution

Targeted Constituents

Sediment	☑
Nutrients	☑
Trash	☑
Metals	☑
Bacteria	☑
Oil and Grease	☑
Organics	☑
Oxygen Demanding	☑

Description

Pollutants on sidewalks and other pedestrian traffic areas and plazas are typically due to littering and vehicle use. This fact sheet describes good housekeeping practices that can be incorporated into the municipality's existing cleaning and maintenance program.

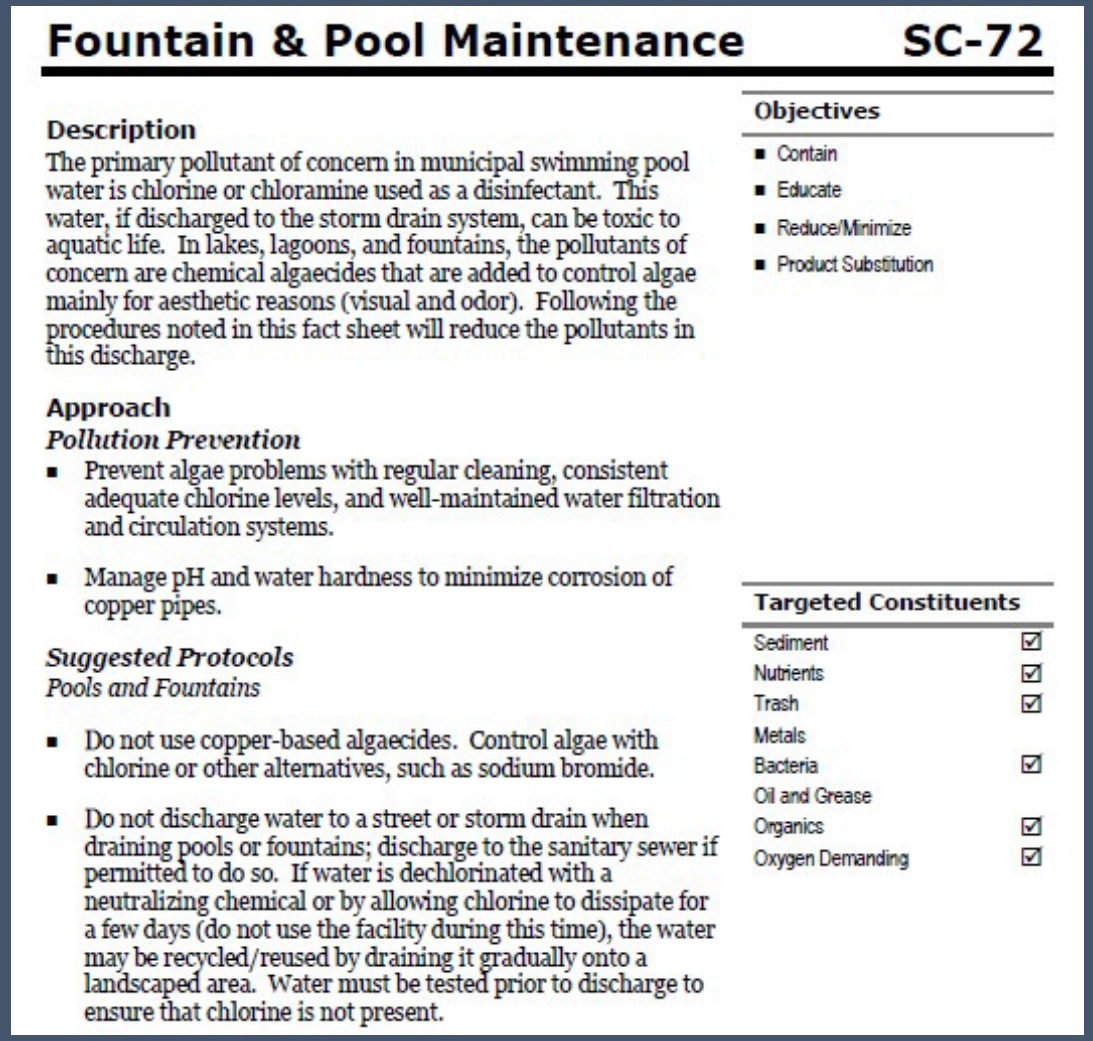
Approach

Pollution Prevention

- Use dry cleaning methods whenever practical for surface cleaning activities.
- Use the least toxic materials available (e.g. water based paints, gels or sprays for graffiti removal).

- Use dry cleaning methods, or the least toxic materials
- Protect inlets prior to cleaning activities
- Provide adequate trash receptacles in high traffic areas, and maintain frequently

Fountain & Pool Maintenance



Fountain & Pool Maintenance SC-72

Description

The primary pollutant of concern in municipal swimming pool water is chlorine or chloramine used as a disinfectant. This water, if discharged to the storm drain system, can be toxic to aquatic life. In lakes, lagoons, and fountains, the pollutants of concern are chemical algaecides that are added to control algae mainly for aesthetic reasons (visual and odor). Following the procedures noted in this fact sheet will reduce the pollutants in this discharge.

Approach

Pollution Prevention

- Prevent algae problems with regular cleaning, consistent adequate chlorine levels, and well-maintained water filtration and circulation systems.
- Manage pH and water hardness to minimize corrosion of copper pipes.

Suggested Protocols

Pools and Fountains

- Do not use copper-based algaecides. Control algae with chlorine or other alternatives, such as sodium bromide.
- Do not discharge water to a street or storm drain when draining pools or fountains; discharge to the sanitary sewer if permitted to do so. If water is dechlorinated with a neutralizing chemical or by allowing chlorine to dissipate for a few days (do not use the facility during this time), the water may be recycled/reused by draining it gradually onto a landscaped area. Water must be tested prior to discharge to ensure that chlorine is not present.

Objectives

- Contain
- Educate
- Reduce/Minimize
- Product Substitution

Targeted Constituents

Sediment	☑
Nutrients	☑
Trash	☑
Metals	
Bacteria	☑
Oil and Grease	
Organics	☑
Oxygen Demanding	☑

- Control algae with chlorine rather than copper-based algaecides
- Discharge water to sanitary sewer where permitted
- Dechlorinate and recycle/reuse

Landscape Maintenance

Vegetation removal, herbicide/insecticide application, watering, and other lawncare practices have the potential to contribute pollutants to the storm drain system.

Must reduce, minimize, contain, and educate employees (and the public) in order to prevent the disposal of landscape waste into the storm drain system.

Drainage System Maintenance

Maintaining catch basins, stormwater inlets, and other structures on a regular basis will remove pollutants, prevent clogging of the downstream conveyance system, restore catch basins' sediment trapping capacity and ensure the system functions properly to avoid flooding.

Water & Sewer Utility Maintenance

Some activities and accidents can result in the discharge of pollutants that can pose a risk to health and the quality of receiving waters.

Sewage incident response and investigation may involve a coordinated effort between staff from a number of different agencies and departments.

You have successfully completed the WWR Municipal Training

- Questions may be asked via:
  - Contacting your NPDES Coordinator
  - Contacting Charlene Warren at RCFC & WCD, cwarren@rivco.org