

February 10, 2026



PRESENTATION FOR: County of San Diego

# Stormwater Annual Training Series – Module 2: Applied Practices

PRESENTED BY: Jayne Janda-Timba PE, QSD, QSP, CGP-ToR, QISP  
& Mark Anderson QSP, CESSWI



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## Setting the Course

**Focus on Applied Practices of Best Management Practices as they relate to the Jurisdictional Runoff Management Program (JRMP), Watershed Protection Ordinance (WPO) as well as discussion of San Diego Regional Water Quality Control Board (SDRWQCB) compliance issues.**



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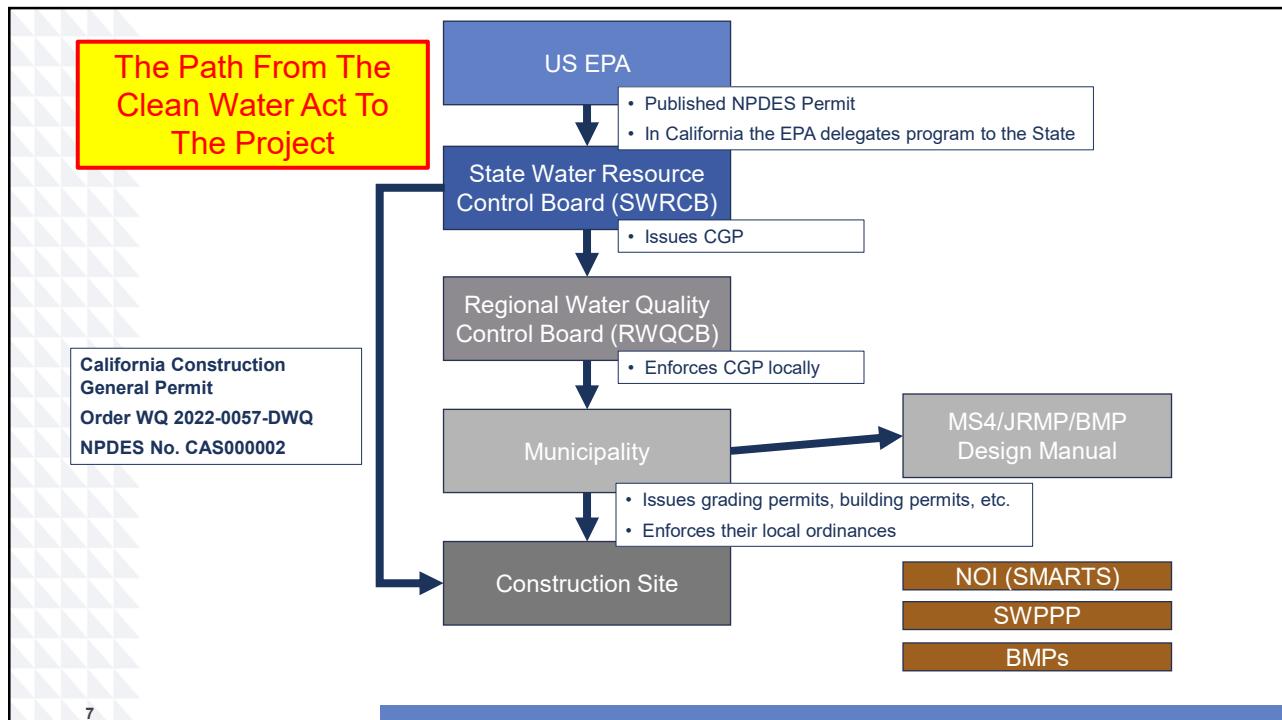
# Agenda



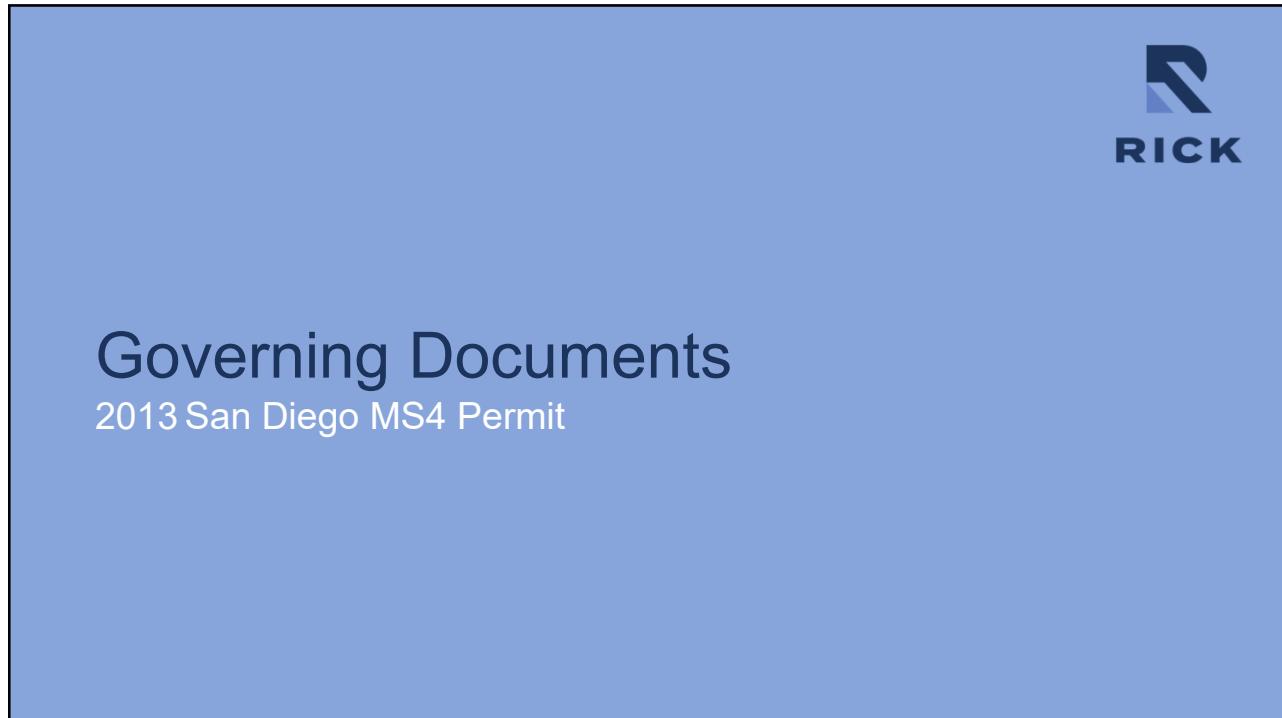
- Governing Documents
- Pollutant Sources
- Minimum Best Management Practices (BMPs)
- Minimum Inspection Practices
- Compliance Issues
- Resources for County Staff



## Governing Documents



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# Governing Documents

## 2013 MS4 Permit

- Requires development of:
  - Jurisdictional Runoff Management Programs (JRMPs)
  - Water Quality Improvement Plans (WQIPs)
- Requires County to adopt and enforce:
  - Watershed Ordinance
- Adopted by the San Diego Regional Water Quality Control Board (SDRWQCB) and applies to the 39 copermittees.
- County is a San Diego County co-permittee under the 2013 MS4 Permit.

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN DIEGO REGION

ORDER NO. R9-2015-0001  
AS AMENDED BY ORDER NOS. R9-2015-0001 AND R9-2015-0100  
NPDES NO. CAS0109266

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT  
AND WASTE DISCHARGE REQUIREMENTS FOR  
DISCHARGES FROM THE MUNICIPAL SEPARATE STORM SEWER SYSTEMS (MS4s)  
DRAINING THE WATERSHEDS WITHIN THE SAN DIEGO REGION

The San Diego County Copermittees in Table 1a are subject to waste discharge requirements set forth in this Order.

Table 1a. San Diego County Copermittees

City of Carlsbad	City of Oceanside
City of Chula Vista	City of Oceanside
City of Coronado	City of San Diego
City of Del Mar	City of San Marcos
City of El Cajon	City of Santee
City of Encinitas	City of Solana Beach
City of Escondido	City of Vista
City of Imperial Beach	County of San Diego
City of La Jolla	San Diego County Regional Airport Authority
City of Lemon Grove	San Diego Unified Port District
City of National City	

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# Governing Documents

## 2015 Jurisdictional Runoff Management Program (JRMP)



# Governing Documents

## JRMP: Section 7.2: Staff Training Element

Table 7.2 – Overview of Required Training Elements by Responsibility Type

Stormwater Training Elements	Principal Responsibilities		
	Program Implementation	Program Administration	Pollution Awareness & Reporting
<b>I. Background</b>	Required		
A. General Concepts		X	X
B. Regulatory Framework		X	
C. Program Updates		X	
<b>II. Pollutant Sources</b>			
A. Pollutants and Impacts		X	X
B. Pollutant-Generating Activities (PGAs)			
<b>III. Best Management Practices</b>			
A. Discharge Prohibitions		X	X
B. BMP Requirements (Planning / Implementation / Maintenance)			
<b>IV. Staff Responsibilities</b>			
A. Pollution Reporting		X	X
B. Documentation & Reporting		X	

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# Governing Documents

## JRMP:

**Section 4:**  
Construction Component

**Section 9:**  
Enforcement Response Plan



2015  
Jurisdictional  
Runoff  
Management  
Program

Revised Version (2019)



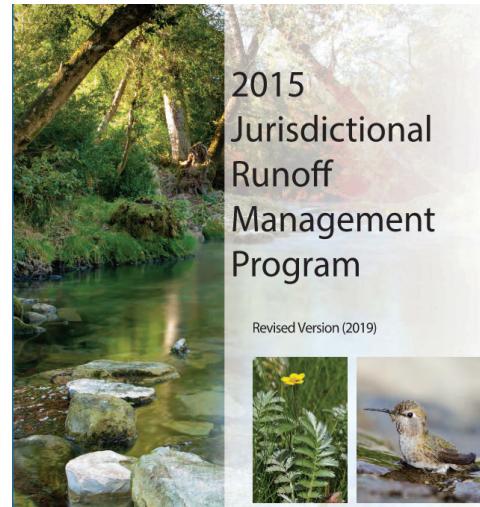
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# Governing Documents

## JRMP: Section 4: Construction Component

- Site Inventory
- Watershed Protection Ordinance
- Best Management Practice Requirements
- Program Implementation



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# Governing Documents

## JRMP: Section 4: Construction Component

### Section 4.4.1.1 Minimum BMP Requirements

- Project Planning;
- Good Site Management “Housekeeping,” including waste management;
- Non-stormwater Management;
- Erosion Control;
- Sediment Control;
- Run-on and Run-off Control;
- Active/Passive Sediment Treatment Systems, where applicable; and
- Any other construction BMPs suggested by the applicable WQIP and deemed to be effective at controlling erosion and sedimentation.

Required for all construction projects, regardless of size or whether the project has CGP coverage.

County requires these BMPs to be adequately implemented and maintained year-round on all non-exempt projects (Reference Section 4.2.2 for Exempt Projects)

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## Governing Documents

### JRMP: Section 4.2.4: Threat to Water Quality Prioritization

**Table 4.1- Definitions of Prioritization Criteria**

A project is:	If it meets these criteria:
Tributary to a sediment impaired CWA 303(d) Waterbody	<p>The project is located within a watershed listed as 303(d) impaired for sediment</p> <ul style="list-style-type: none"> <li>▪ Carlsbad Watershed, sub-basin 904.21; or</li> <li>▪ Carlsbad Watershed, sub-basin 904.61; or</li> <li>▪ Penasquitos Watershed, sub-basin 906.10; or</li> <li>▪ Tijuana Watershed, sub-basin 911.11; or</li> <li>▪ Other updated Watershed(s) on the EPA CWA 303(d) list.</li> </ul> <p><a href="http://www.swrcb.ca.gov/sandiego/water_issues/programs/303d_list/index.shtml">http://www.swrcb.ca.gov/sandiego/water_issues/programs/303d_list/index.shtml</a></p>
In, or adjacent to, an Environmentally Sensitive Area (ESA)	<p>The project is located within 200 feet of lands or receiving waters designated as any of the following:</p> <ul style="list-style-type: none"> <li>▪ RARE beneficial use; or</li> <li>▪ Areas of Significant Biological Significance (ASBS); or</li> <li>▪ Multiple Species Conservation Program (MSCP) preserve elements</li> </ul>
In a WQIP sediment is the Highest Priority Water Quality Condition(s)	<p>The project is located within a hydrologic subarea where sediment is known or suspected to contribute to the Highest Priority Water Quality Condition(s) in the WQIP.</p>

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## Governing Documents

### JRMP: Inspection Frequency (Example)

**Table 4.2 - Department of Public Works, PDCI Inspection Frequencies**

Project Priority	Minimum Inspection Frequency	Inspection Prioritization Criteria
Low	Twice during wet season	<ul style="list-style-type: none"> <li>▪ Inactive Grading Permits</li> <li>▪ The project disturbed area boundary is less than one acre.</li> </ul>
Medium	Monthly	<ul style="list-style-type: none"> <li>▪ The project disturbed area boundary is (1) greater than or equal to 50 acres, <u>but</u> (2) wet season grading will <u>not</u> occur; or</li> <li>▪ Project disturbed area boundary is (1) greater than or equal to one acre, <u>but</u> is not (2) a high TTWQ as defined by Table 4.1.</li> </ul>
High	Bi-Weekly	<ul style="list-style-type: none"> <li>▪ The project disturbed area boundary is (1) greater than or equal to 50 acres, <u>and</u> (2) wet season grading will occur; or</li> <li>▪ The project disturbed area boundary is (1) greater than or equal to one acre, <u>and</u> (2) is a high TTWQ as defined by Table 4.1.</li> </ul>

JRMP identifies the wet (rainy) season as October 1 through April 30

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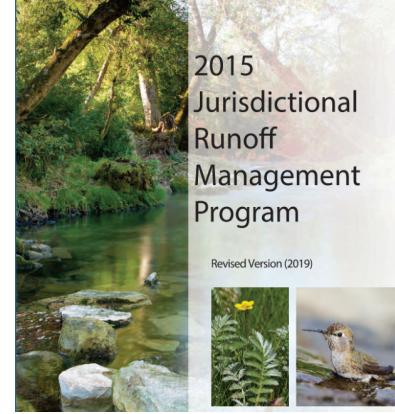
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# Governing Documents

## JRMP: Section 4: Construction Component

### Section 4.5.1.2.2 Inspection of Construction Sites

- For projects subject to the CGP, the Regional Board is responsible for verifying and enforcing requirements of the CGP.
- County Responsibilities:
  - Ensure CGP is in place prior to permitting
  - CGP is current and issued to property owner (permits are nontransferable)
  - SWPPP is site-specific
  - Need to report escalating enforcement actions



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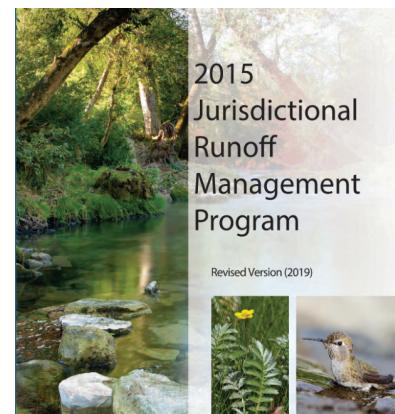
# Governing Documents

## JRMP: Section 4: Construction Component

### Section 4.5.1.2.2 Inspection of Construction Sites

The County is required to notify the SDRWQCB within 5 days of CGP:

- Non-filers
- Escalating enforcement actions (ACW)
- If the noncompliance poses a significant threat to water quality or may endanger health or the environment.



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# Governing Documents

## JRMP: Section 9: Enforcement Response Plan

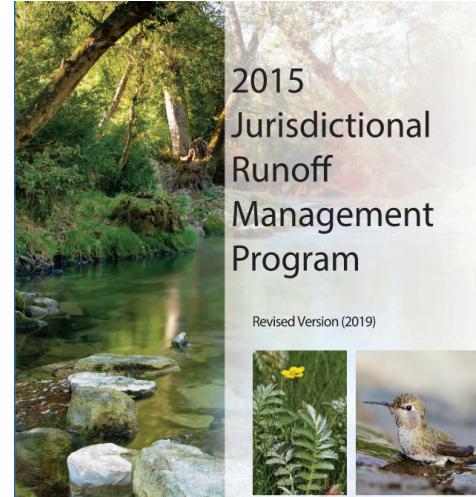
### Section 9.5: Routine Construction Management Enforcement

#### County Permitted (Private) Projects

- Educate the regulated community;
- Promote voluntary compliance within regulated community;
- Penalize and deprive violators of benefits gained from violations
- Prevent businesses from unfair business advantage through non-compliance; and
- Treat similar facility owners and operators equally and consistently pertaining to violations

#### Routine Enforcement Steps:

- Administrative Warnings
- Notice of Violation



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# Governing Documents

## JRMP: Section 9: Enforcement Response Plan

### Section 9.5: Routine Construction Management Enforcement

#### County CIP and Other Public Construction Projects

##### Contractors implement BMPs to maintain compliance with:

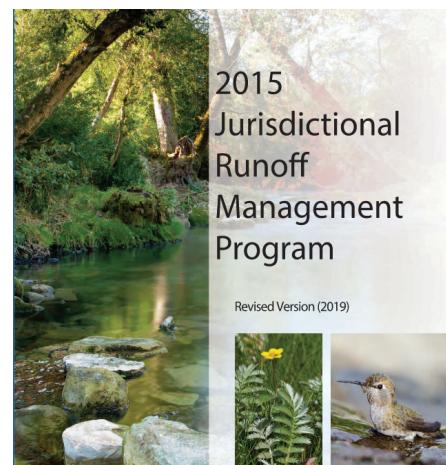
- NPDES provisions
- Watershed Protection Ordinance (WPO)

##### Contractors adhere to contract documents such as:

- Erosion and Sediment Control Plans
- Stormwater Pollution Prevention Plans (SWPPPs)
- Project specifications

##### Enforced as necessary by:

- Standard payment provisions
- Liquidated damage clauses
- Other means in standard contract documents



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# Governing Documents

## WQIP: Annual Report Form: San Diego River

JURISDICTIONAL RUNOFF MANAGEMENT PROGRAM ANNUAL REPORT FORM FY 2023-2024		D-3 December 12, 2024	
<b>I. COPERMITTEE INFORMATION</b> <p>I.A. Copermittee Name: County of San Diego (PRB 10222) I.B. Copermittee Primary Contact Information: Address: 5515 Overland Avenue, Suite 100 City: San Diego State: California Zip: 92123 Telephone: (619) 588-5747 Fax: (650) 455-5123 Email: <a href="mailto:Christine.Lohring@countyofsd.gov">Christine.Lohring@countyofsd.gov</a></p> <p>I.C. Copermittee Primary Contactor Information: Name: Christine Lohring Position: Director of Water Quality &amp; Toxics</p>			
<b>II. LEGAL AUTHORITY</b> <p>II.A. Has the Copermittee established adequate legal authority within its jurisdiction to control pollutant discharges into and from its MSA that complies with Order No. R9-2013-0001? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO</p> <p>II.B. A Principal Executive Officer, Ranking Elected Official, or Duly Authorized Representative has signed the Copermittee's annual report. <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO</p>			
<b>III. JURISDICTIONAL RUNOFF MANAGEMENT PROGRAM DOCUMENT UPDATE</b> <p>III.A. Was an update of the jurisdictional runoff management program document required or requested by the San Diego River Watershed Management Board? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO</p> <p>III.B. If YES to the question above, did the Copermittee update its jurisdictional runoff management program document and make it available on the Regional Clearinghouse? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO</p>			
<b>IV. DISCHARGE DETECTION AND ELIMINATION PROGRAM</b> <p>IV.A. Has the Copermittee implemented a program to detect and eliminate illicit discharges and connections to its MSA that complies with Order No. R9-2013-0001? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO</p> <p>IV.B.1 Number of non-storm water discharges reported by the public 465 IV.B.2 Number of non-storm water discharges detected by Copermittee staff or contractors 94 IV.B.3 Number of non-storm water discharges investigated by the Copermittee 559 IV.B.4 Number of sources of non-storm water discharges identified 168 IV.B.5 Number of non-storm water discharges eliminated 53 IV.B.6 Number of sources of illicit discharges or connections identified 97 IV.B.7 Number of illicit discharges or connections eliminated 84 IV.B.8 Number of enforcement actions issued 101 IV.B.9 Number of escalated enforcement actions issued 16</p>			
<b>V. DEVELOPMENT PLANNING PROGRAM</b> <p>V.A. Has the Copermittee implemented a development planning program that complies with Order No. R9-2013-0001? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO</p> <p>V.B. Was an update to the BMP Design Manual required or recommended by the San Diego Water Board? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO</p> <p>V.C. If YES to the question above, did the Copermittee update its BMP Design Manual and make it available on the Regional Clearinghouse? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO</p> <p>V.D.1 Number of proposed development projects in review 942 V.D.2 Number of Priority Development Projects in review 274 V.D.3 Number of Priority Development Projects approved 162 V.D.4 Number of approved Priority Development Projects exempt from any BMP requirements 0 V.D.5 Number of approved Priority Development Projects allowed alternative compliance 0 V.D.6 Number of Priority Development Projects granted occupancy 54</p> <p>V.E.1 Number of completed Priority Development Projects in inventory 729 V.E.2 Number of high priority Priority Development Project structural BMP inspections 6,406 V.E.3 Number of high priority Priority Development Project structural BMP violations 391 V.E.4 Number of enforcement actions issued 462 V.E.5 Number of escalated enforcement actions issued 3</p>			
<b>VI. CONSTRUCTION MANAGEMENT PROGRAM</b> <p>VI.A. Has the Copermittee implemented a construction management program that complies with Order No. R9-2013-0001? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO</p> <p>VI.B.1 Number of construction sites in inventory 3,903 VI.B.2 Number of active construction sites in inventory 3,828 VI.B.3 Number of completed construction sites in inventory 0 VI.B.4 Number of construction sites closed/completed during reporting period 1,367 VI.B.5 Number of construction site inspections 20,392 VI.B.6 Number of construction site violations 210 VI.B.7 Number of enforcement actions issued 375 VI.B.8 Number of escalated enforcement actions issued 36</p>			
<b>VII. EXISTING DEVELOPMENT MANAGEMENT PROGRAM</b> <p>VII.A. Has the Copermittee implemented an existing development management program that complies with Order No. R9-2013-0001? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO</p> <p>VII.B.1 Number of facilities or areas in inventory 295 VII.B.2 Number of existing development inspections 3,069 VII.B.3 Number of follow-up inspections 1,623 VII.B.4 Number of enforcement actions issued 199 VII.B.5 Number of construction site violations 13 VII.B.6 Number of escalated enforcement actions issued 1,120 VII.B.7 Number of enforcement actions issued 223</p>			
<b>VIII. PUBLIC EDUCATION AND PARTICIPATION</b> <p>VIII.A. Has the Copermittee implemented a public education program component that complies with Order No. R9-2013-0001? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO</p> <p>VIII.B. Has the Copermittee implemented a public participation program component that complies with Order No. R9-2013-0001? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO</p>			
<b>IX. FISCAL ANALYSIS</b> <p>Has the Copermittee attached to this form a summary of its fiscal analysis that complies with Order No. R9-2013-0001? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO</p>			
<b>X. CERTIFICATION</b> <p>I <input type="checkbox"/> Principal Executive Officer <input type="checkbox"/> Ranking Elected Official <input checked="" type="checkbox"/> Duly Authorized Representative certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and, to the best of my knowledge and belief, it is true, accurate, and complete. I understand and acknowledge that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.</p> <p>Signature:  Print Name: <u>WILLIAM MORGAN</u> Title: <u>INTERIM DIRECTOR</u> Telephone Number: <u>(650) 694-3087</u> Email: <u>WILLIAM.MORGAN@SDCOUNTY.GOV</u></p>			

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Governing Documents Watershed Protection Ordinance (WPO)			
<h1>Governing Documents</h1> <h2>Watershed Protection Ordinance (WPO)</h2>			

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# Governing Documents

## County of San Diego Watershed Protection Ordinance (WPO)

- The MS4 permit requires all co-permittees to adopt and enforce a WPO.
- Chapter 8. Watershed Protection Stormwater Management and Discharge Control
- Provides the County of SD the legal authority and mechanisms to regulate stormwater and urban runoff and **should be utilized for construction site compliance by any inspector/enforcement officer.**

The screenshot shows the San Diego County Code Chapter 8: Watershed Protection, Stormwater Management and Discharge Control. The page includes a table of contents on the left and the main text of the ordinance. Key sections visible include 'PURPOSE AND INTENT' and 'STORMWATER MANAGEMENT AND DISCHARGE CONTROL'.

[https://codelibrary.amlegal.com/codes/san\\_diego/latest/sandiego\\_regs/0-0-0-129574](https://codelibrary.amlegal.com/codes/san_diego/latest/sandiego_regs/0-0-0-129574)

\*\*\*Section 67.809 (Attachment 2.2) of the WPO for minimum BMP requirements to implement and maintain for construction projects.

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# Governing Documents

## Watershed Protection Ordinance (WPO)

### Enforcement Actions Available to Inspectors (Section 67.814 of WPO):

- Stop Work Order
- Administrative Citation Warning
- Administrative Citations
- Arrests and Citations, Civil Penalties



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# Agenda

**RICK**

- Governing Documents
- Pollutant Sources
- Minimum Best Management Practices (BMPs)
- Minimum Inspection Practices
- Compliance Issues
- Resources for County Staff

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**RICK**

# Pollutant Sources

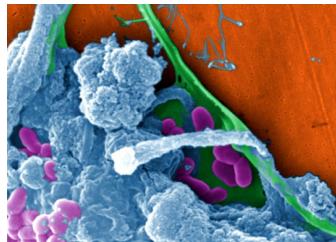
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## Pollutant Sources

### Common Pollutants:

- Sediment
- Trash
- Nutrients
- Bacteria
- Oil & Grease/Metals



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## Pollutant Sources

### Impacts on water quality:

- Altered pH
- Increased turbidity
- Higher levels of toxic substances (metals, pesticides)
- Rise in Pathogens (E. coli, fecal coliform)
- Decreased oxygen (trash)



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# Pollutant Sources

## Impacts on water quality (continued):

[https://www.sandiegocounty.gov/content/dam/sdc/dpw/WATERSHED\\_PROTECTION\\_PROGRAM/watershedpdf/water\\_pollutants.pdf](https://www.sandiegocounty.gov/content/dam/sdc/dpw/WATERSHED_PROTECTION_PROGRAM/watershedpdf/water_pollutants.pdf)

Pollutant Impacts on Water Quality	
<b>Sediment</b>	Sediment is a common component of stormwater, and can be a pollutant. Sediment can be with photosynthesis, respiration, growth, reproduction, and oxygen exchange in water bodies. Sediment can transport other pollutants that are attached to it including nutrients, trace metals, and hydrocarbons. Sediment is the primary component of total suspended solids (TSS), a common water quality parameter.
<b>Nutrients</b>	Nutrients including nitrogen and phosphorous are the major plant nutrients used for fertilizing landscapes, and are often found in stormwater. These nutrients can result in excessive or accelerated growth of vegetation, such as algae, resulting in impaired use of water in lakes and other sources of water supply. For example, nutrients have led to a loss of water clarity in Lake Tahoe. In addition, un-ionized ammonia (one of the nitrogen forms) can be toxic to aquatic life.
<b>Bacteria and Viruses</b>	Bacteria and viruses are common contaminants of stormwater. For separate storm drain systems, sources of these contaminants include animal excrement and sanitary sewer overflow. High levels of indicator bacteria in stormwater have led to the closure of beaches, lakes, and rivers to contact recreation such as swimming.
<b>Oil and Grease</b>	Oil and grease includes a wide array of hydrocarbon compounds, some of which are toxic to aquatic organisms at low concentrations. Sources of oil and grease include leakage, spills, cleaning and sloughing associated with vehicle and equipment tires and surfaces, and improper disposal of oil and grease.
<b>Metals</b>	Metals including lead, zinc, cadmium, copper, chromium, and nickel are commonly found in stormwater. Many of the artificial surfaces of the urban environment (e.g., galvanized metal paint, automobiles, or preserved wood) contain metals, which enter stormwater as surfaces corrode, flake, dissolve, decay, or leach. Over half of surface metal load comes from roads and construction sites (Metzger, 2002). Metals, even at low concentrations, they are toxic to aquatic organisms, can bioaccumulate (accumulate to toxic levels in aquatic animals such as fish), and have the potential to contaminate drinking water supplies.
<b>Organics</b>	Organics may be found in stormwater at low concentrations. Often synthetic organic compounds (adhesives, cleaners, sealants, solvents, etc.) are widely applied and may be improperly stored and disposed. In addition, deliberate dumping of these chemicals into storm drains and inlets causes environmental harm to waterways.
<b>Pesticides</b>	Pesticides (insecticides, fungicides, herbicides, and rodenticides) have been repeatedly detected in stormwater at toxic levels, even when pesticides have been applied in accordance with label instructions. As pesticide use has increased, so too have concerns about the adverse effects of pesticides on the environment and human health. Accumulation of these compounds in sensitive aquatic organisms, such as plankton, provides an avenue for toxins to move through the food chain, resulting in elevated levels of toxins in organisms that feed on them, such as fish and birds.
<b>Gross Pollutants</b>	Gross Pollutants (trash, debris and floatables) may include heavy metals, pesticides, and bacteria in stormwater. Typically resulting from an urban environment, industrial sites and construction sites, trash and floatables may create an aesthetic "eye sore" in waterways. Gross pollutants also include plant debris (such as leaves and lawn-clippings from lawns and gardens) and excess nutrients, such as phosphorus and other organic matter. Such substances may harbor bacteria, viruses, vectors, and depress the dissolved oxygen levels in streams, lakes and estuaries sometimes causing fish kills.
<b>Vector Production</b>	Vector production (e.g., mosquitoes, flies, and rodents) is frequently associated with sheltered habitats and standing water. Unless designed and maintained properly, standing water may occur in treatment control BMP's for 72 hours or more, thus providing a source for vector habitat and reproduction (Metzger, 2002).

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# Pollutant Sources

## Pollutants in Water Quality Improvement Plans (WQIPs)



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## Pollutant Sources

### Water Quality Improvement Plans (WQIPs) within County of San Diego

- Carlsbad
- San Diego Bay
- San Diego River
- San Luis Rey
- San Dieguito
- Tijuana River

\*Priority Pollutants are identified by watershed



[https://projectcleanwater.org/wma\\_plans/wqip/](https://projectcleanwater.org/wma_plans/wqip/)

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## Pollutant Sources

### WQIPs in SD region prioritizes:

- Bacteria/Pathogens
- Nutrients
- Sediment/Turbidity
- Metals
- Trash/Litter
- Toxic Organic Compounds
- Hydromodification



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# Pollutant Sources

## Pollutant Generating Activities

### Land Development/Construction

- Clearing, Grading, Excavation
- Demolition Activities
- Soil Stockpiling, Earthwork
- Concrete/Masonry Work
- Asphalt Paving/Saw Cutting
- Equipment Fueling, Maintenance and Leaks



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# Pollutant Sources

## Pollutant Generating Activities

### Land Development/Construction (continued)

- Painting, Coating, Solvent Use
- Material Storage and Handling
- Waste Management
- Dewatering and Pumping
- Landscaping and Irrigation



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# Agenda



- Governing Documents
- Pollutant Sources
- Minimum Best Management Practices (BMPs)
- Minimum Inspection Practices
- Compliance Issues
- Resources for County Staff

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## Minimum Best Management Practices (BMPs)

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## Minimum BMPs

### JRMP: Minimum BMP Requirements

County requires these BMPs to be adequately implemented and maintained year-round on all non-exempt projects (Reference Section 4.2.2 for Exempt Projects)

- Project Planning;
- Good Site Management “Housekeeping,” including waste management;
- Non-stormwater Management;
- Erosion Control;
- Sediment Control;
- Run-on and Run-off Control;
- Active/Passive Sediment Treatment Systems, where applicable; and
- Any other construction BMPs suggested by the applicable WQIP and deemed to be effective at controlling erosion and sedimentation.

\*\*\*Proper installation and maintenance must be implemented for BMPs to be effective.

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## Minimum BMPs

### CASQA BMP Handbook

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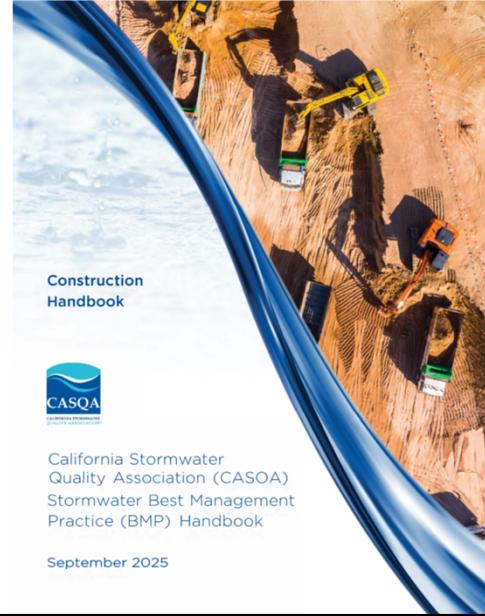
## Minimum BMPs

### CASQA BMP Handbook

Contains the CASQA BMP Factsheets

- Description and Purpose
- Suitable Applications
- Limitations
- Implementation
- Inspection and Maintenance

\*Available in Spanish



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## Minimum BMPs

### CASQA BMP Handbook

All County Departments have been provided a subscription copy (paid for by WPP)

Subscribers by Department:

Name	Dept/Division	email
Pirouzian, Ali	DPW CE	<a href="mailto:Ali.Pirouzian@sdcounty.ca.gov">Ali.Pirouzian@sdcounty.ca.gov</a>
Colmenero, Alphonso	PDS	<a href="mailto:Alphonso.Colmenero@sdcounty.ca.gov">Alphonso.Colmenero@sdcounty.ca.gov</a>
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Jason Forga	DPW Airports	<a href="mailto:Jason.Forga@sdcounty.ca.gov">Jason.Forga@sdcounty.ca.gov</a>

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20

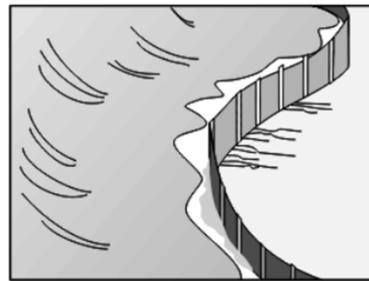
## Minimum BMPs

### CASQA BMP Handbook: Example: Silt Fence (SE-1)

#### Description and Purpose

The silt fence detains water promoting sedimentation of coarse sediment behind the fence.

#### Silt Fence



#### SE-1

##### Categories

EC	Erosion Control	<input type="checkbox"/>
SE	Sediment Control	<input checked="" type="checkbox"/>
TC	Tracking Control	<input type="checkbox"/>
WE	Wind Erosion Control	<input type="checkbox"/>
NS	Non-Stormwater	<input type="checkbox"/>
WM	Management Control	<input type="checkbox"/>
	Waste Management and Materials Pollution Control	<input type="checkbox"/>

##### Legend:

<input checked="" type="checkbox"/>	Primary Category
<input type="checkbox"/>	Secondary Category

##### Targeted Constituents

Sediment (coarse sediment)	<input checked="" type="checkbox"/>
Nutrients	<input type="checkbox"/>
Trash	<input type="checkbox"/>
Metals	<input type="checkbox"/>
Bacteria	<input type="checkbox"/>
Oil and Grease	<input type="checkbox"/>

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## Minimum BMPs

### CASQA BMP Handbook: Example: Silt Fence (SE-1)

#### Suitable Applications

Suitable for perimeter control, placed below areas where sheet flows discharge from the site.

##### Suitable Applications

Silt fences are suitable for perimeter control, placed below areas where sheet flows discharge from the site. They could also be used as interior controls below disturbed areas where runoff may occur in the form of sheet and rill erosion and around inlets within disturbed areas (Storm Drain Inlet Protection, SE-10). Silt fences should not be used in locations where the flow is concentrated. Silt fences should always be used in combination with erosion controls. Suitable applications include:

- At perimeter of a project (although they should not be installed up and down slopes).
- Below the toe or down slope of exposed and erodible slopes.
- Along streams and channels.
- Around temporary spoil areas and stockpiles.
- Around inlets.
- Below other small cleared areas.

On the Ground  
Organics

##### Potential Alternatives

SE-5 Fiber Rolls
SE-6 Gravel Bag Berm SE-12
Manufactured Linear Sediment Controls
SE-13 Compost Socks and Berms
SE-14 Biofilter Bags

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Stormwater Quality Association



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## Minimum BMPs

### CASQA BMP Handbook: Example: Silt Fence (SE-1)

#### Silt Fence

**SE-1**

#### Limitations

Limitations of the BMP if not implemented and maintained effectively.

#### Limitations

- Do not use in streams, channels, drain inlets, or anywhere flow is concentrated.
- Do not use in locations where ponded water may cause a flooding hazard.
- Do not use silt fence to divert water flows or place across any contour line.
- Improperly installed fences are subject to failure from undercutting, overtopping, or collapsing.
- Must be trenched and keyed in.
- According to the State Water Board's *CGP Review, Issue #2* (2014), silt fences reinforced with metal or plastic mesh should be avoided due to plastic pollution and wildlife concerns.
- Not intended for use as a substitute for Fiber Rolls (SE-5), when fiber rolls are being used as a slope interruption device.
- Do not use on slopes subject to creeping, slumping, or landslides.

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## Minimum BMPs

### CASQA BMP Handbook: Example: Silt Fence (SE-1)

#### Implementation

Temporary sediment barrier to trap coarse sediment by intercepting and detaining sediment-laden runoff from disturbed areas in order to promote sedimentation behind the fence.

#### Implementation General

A silt fence is a temporary sediment barrier consisting of woven geotextile stretched across and attached to supporting posts, trenched-in, and, depending upon the strength of fabric used, supported with plastic or wire mesh fence. Silt fences trap coarse sediment by intercepting and detaining sediment-laden runoff from disturbed areas in order to promote sedimentation behind the fence.

The following layout and installation guidance can improve performance and should be followed:

- Silt fence should be used in combination with erosion controls up-slope in order to provide the most effective sediment control.
- Silt fence alone is not effective at reducing turbidity. (Barrett and Malina, 2004)
- Designers should consider diverting sediment laden water to a temporary sediment basin or trap. (EPA, 2012)
- Use principally in areas where sheet flow occurs.
- Install along a level contour, so water does not pond more than 1.5 ft. at any point along the silt fence.
- Provide sufficient room for runoff to pond behind the fence and to allow sediment removal equipment to pass between the silt fence and toes of slopes or other obstructions. About 1200 ft.<sup>2</sup> of ponding area should be provided for every acre draining to the fence.
- Efficiency of silt fences is primarily dependent on the detention time of the runoff behind the control. (Barrett and Malina, 2004)

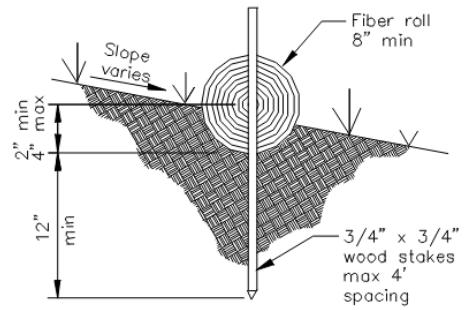
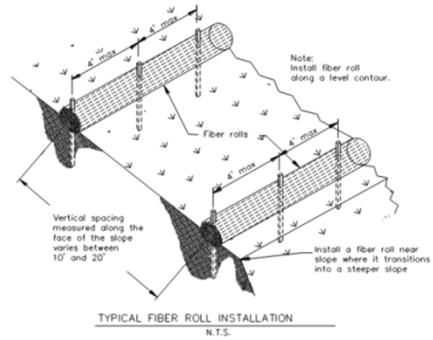
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## Minimum BMPs

### Fiber Rolls

SE-5



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## Minimum BMPs

### Project Planning



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## Minimum BMPs

### Project Planning

- Scheduling

Example: Don't plan  
Mass Grading during  
the rainy season.



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## Minimum BMPs

Good Site Management “Housekeeping” including Waste Management

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## Minimum BMPs

### Good Site Management “Housekeeping”: Waste Management



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## Minimum BMPs

### Good Site Management “Housekeeping”: Waste Management



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## Minimum BMPs

### Good Site Management “Housekeeping”: Concrete Waste Management



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## Minimum BMPs

### Good Site Management “Housekeeping”: Stockpile Management



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# Minimum BMPs

## Non-Stormwater Management

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## Minimum BMPs

### Non-Stormwater Management: Wash Waters



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## Minimum BMPs

### Non-Stormwater Management: Broken water lines



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## Minimum BMPs

### Non-Stormwater Management: Oil and Grease



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## Minimum BMPs

### Non-Stormwater Management: Chemicals, Paints, other Fluids



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## Minimum BMPs

### Erosion Control

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## Minimum BMPs

### Erosion Control: Geotextiles and Mats



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## Minimum BMPs

### Erosion Control: Hydraulic Mulch/Hydroseed



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## Minimum BMPs

### Erosion Control: Soil Binders



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## Minimum BMPs

### Erosion Control: Earth Dikes and Drainage Swales



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# Minimum BMPs

## Sediment Control

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## Minimum BMPs

### Sediment Control: Silt Fence



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## Minimum BMPs

### Sediment Control: Check Dams



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## Minimum BMPs

### Sediment Control: Storm Drain Inlet Protection



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## Minimum BMPs

### Sediment Control: Tracking Control



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## Minimum BMPs

### Run-on and Run-off Control

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## Minimum BMPs

### Run-on and Run-off Control:



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## Minimum BMPs

Active / Passive Treatment

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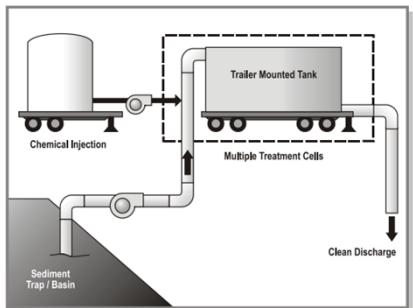
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## Minimum BMPs

### Active Treatment: Not applicable for all projects

- May be necessary if groundwater is encountered as an example.

#### **Active Treatment Systems**



Must complete an Active Treatment Plan in accordance with Attachment F of the CGP

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## Minimum BMPs

### Passive Treatment: Not applicable for all projects

- May be necessary if project cannot discharge “clean” runoff through typical minimum BMPs



Must complete a Passive Treatment Plan in accordance with Attachment G of the CGP

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## Minimum BMPs

### Dewatering Requirements

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## Dewatering Requirements

**Dewatering:** Dewatering Plan required

- County to verify adequacy (BMPs, inspection, testing) of plan prior to dewatering



Mechanical pumping or syphoning of non-potable water specifically related to construction activities must meet the dewatering requirements of Attachment J of the CGP

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# Agenda



- Governing Documents
- Pollutant Sources
- Minimum Best Management Practices (BMPs)
- Minimum Inspection Practices
- Compliance Issues
- Resources for County Staff

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## Minimum Inspection Practices

Example/resource inspectors could use to ensure complete inspections.

Best Management Practice	Good Condition	Corrective Action Required	Comments
Storm Drain Inlet Protection	Yes	No	
Debris / Waste Management	Yes	No	
Vehicle / Materials Storage	Yes	No	
Material Washout	Yes	No	
Spill Control / Containment	Yes	No	
Stabilized Entrance / Exits	Yes	No	
Sediment Control	Yes	No	
Erosion Control	Yes	No	
Dust / Wind Erosion Control	Yes	No	
Stockpile Management	Yes	No	
Pavement Maintenance	Yes	No	
BMP Installation/ Maintenance	Yes	No	
Surplus BMPs Available	Yes	No	
Good Housekeeping	Yes	No	
	Yes	No	

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# Agenda

**RICK**

- Governing Documents
- Pollutant Sources
- Minimum Best Management Practices (BMPs)
- Minimum Inspection Practices
- Compliance Issues
- Resources for County Staff

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**RICK**

## Compliance Issues

San Diego Regional Water Quality Control Board (SDRWQCB)

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**San Diego Water Board**

**Module 2 – Erosion & Sediment Control Essentials**

**CALIFORNIA Water Boards**

February 10, 19, and 25, 2026

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## **Introduction**

- San Diego Water Board Perspective
- CGP Example: Aldi Ramona - Is the construction within the grading plan limits?
- County Building Permit/Minor Grading Example: Alpine – Requiring County and SDWBD Minimum BMPs

California Water Boards

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## San Diego Water Board Perspective

- Inspectors are the first to see issues come up at construction sites.
- The SDWBD relies on inspector extensive field experience and relationship with project developers and applicants to assist the County in meeting its Regional MS4 Permit obligations.



California Water Boards

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## San Diego Water Board Perspective

- The SDWBD does not expect inspectors to know all of the requirements of the CGP or the Regional MS4 Permit.
- **We do expect inspectors to identify common issues at construction sites, document them when they first occur, and get resolution quickly.**



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## **CGP Example: Aldi Ramona - Is the construction within the grading plan limits?**



## California Water Boards

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## **CGP Example: Aldi Ramona - Is the construction within the grading plan limits?**

For a CGP enrolled project – **any construction activities outside of the CGP enrolled area is a violation of the CGP and the County Grading Ordinance.**

**This includes:** contractor parking offsite, material storage, utility installation, clearing, grading, grubbing.



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## **CGP Example: Aldi Ramona - Is the construction within the grading plan limits?**

- SDWBD issued enforcement against developer under the CGP.
- County designated vernal pool habitat was destroyed.
- Developer and County had to restore the habitat.



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## **County Building Permit/Minor Grading Example: Alpine – Requiring County and SDWBD Minimum BMPs**

- Applicant cleared area in excess of approved grading permit.
- Multiple ongoing public complaints received for sediment discharges and not implementing basic BMPs to San Diego Water Board.



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## County Building Permit/Minor Grading Example: Alpine – Requiring County and SDWBD Minimum BMPs

Lack of complaint response and requiring applicant to correctly install basic BMPs resulted in escalation to County upper management to resolve Regional MS4 Permit compliance issues.



Long Term Erosion without BMPs



Silt fence not installed correctly

California Water Boards

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## Conclusion



- As an inspector, **your role is critical** to the County maintaining its regulatory compliance with the San Diego Water Board.
- **An inspector does not need to be an expert** to identify issues that need to be addressed immediately.
- **Issues that come to the SDWBD's attention and escalate quickly should have been resolved at the field level** with the inspector's experience and knowledge of County required minimum BMP requirements.

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## Conclusion

- The applicant deserves to have the correct information provided AND required about the BMP requirements.
- The San Diego Water Board prefers compliance over enforcement:

Consistent with 40 Code of Federal Regulations §§ 122.26(a)(9)(i)(D) and 122.26(a)(9)(i)(C), a **Regional Water Board may require any discharge of stormwater and non-stormwater from construction activity that is not regulated by this General Permit**, and that may cause or contribute to an exceedance of a water quality standard, **to obtain General Permit coverage**.

California Water Boards

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## Web Links

### San Diego Water Board

[Home | San Diego Regional Water Quality Control Board](https://www.sdrwqcb.org/)

### MS4 Regional Permit

[https://waterboards.ca.gov/water\\_issues/programs/stormwater/phase\\_i\\_municipal.html](https://waterboards.ca.gov/water_issues/programs/stormwater/phase_i_municipal.html)

### State Water Board 2022 CGP

[https://waterboards.ca.gov/water\\_issues/programs/stormwater/construction/general\\_permit\\_reissuance.html](https://waterboards.ca.gov/water_issues/programs/stormwater/construction/general_permit_reissuance.html)

California Water Boards

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45

## San Diego Water Board Contact Information

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Questions?



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# Agenda

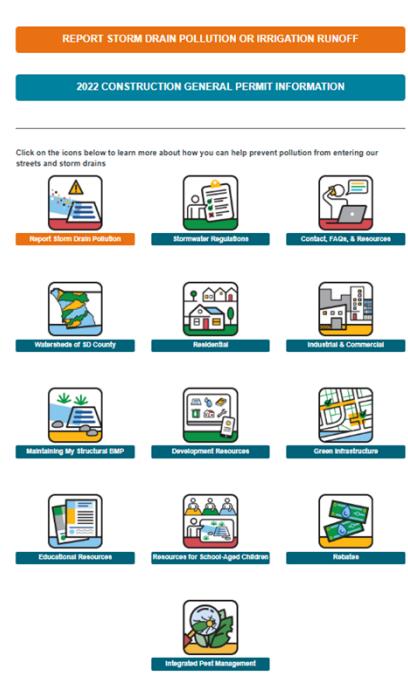


- Governing Documents
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## Watershed Protection Homepage

<https://www.sandiegocounty.gov/content/sdc/dpw/watersheds.html>



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# Watershed Protection Homepage

Educational Resources to hand out to support customer education and corrective actions (hyperlinks).

[Erosion and Sediment Control BMPs](#) →

[Preventing Erosion](#)

[Masonry and Cement](#)

[Loading Areas and Dumpsters](#)

## EROSION AND SEDIMENT BMPs

**Did you know**  
that water in the storm drain system flows directly to our rivers, creeks, bays, and ocean – along with pollutants it carries?

**Best Management Practices (BMPs)** help protect water quality to reduce or prevent sources of pollutants across San Diego County, which ultimately decreases the amount of pollutants in our stormwater.

**Sediment** is the most common pollutant in our waterways and comes from eroded soils. **BMPs must be implemented** at construction sites to prevent sediment from leaving the area. It is important that erosion and sediment control BMPs are properly installed and maintained in order to function effectively.

**Cravel Bag Berm** (SC-6 Caltrans Factsheet for more info)

**Silt Fence** (SC-1 Caltrans Factsheet for more info)

**WHAT IT DOES:** Intercept runoff, reduce flow velocity, and remove sediment from runoff.

**WHERE IT'S USED:** Down slope of disturbed soil around stockpiles, along streams and channels, paved areas, and the perimeter of a project.

**HOW TO INSTALL:** Bags should be aligned in rows without any gaps between bags. They can be used in overlapping layers or stacked when necessary.

**MAINTENANCE ALERT:** Must be maintained and replaced, since degraded or damaged bags can discharge sediment.

**WHAT IT DOES:** Intercept runoff, reduce flow velocity, and remove sediment from runoff.

**WHERE IT'S USED:** Level areas, down slope of disturbed soil, around stockpiles, along streams and channels, and the perimeter of a project.

**HOW TO INSTALL:** The bottom of the silt fence must be buried at least 12 inches and support posts should be less than 6 feet apart.

**MAINTENANCE ALERT:** Must be maintained and replaced since the fabric has a limited lifespan.

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# Department of Public Works

<https://www.sandiegocounty.gov/content/sdc/dpw/watersheds/CGP.html>

**SanDiegoCounty.gov Home** **Department of Public Works** **ENHANCED BY Google** **SEARCH**

**Construction General Permit** **EMAIL** **PRINT** **Select Language** **Powered by Google Translate**

**\*\*\*ATTENTION\*\*\***

The 2009 Construction Stormwater General Permit (CGP) has expired. All construction sites meeting the criteria for a CGP must enroll for coverage under the 2022 permit. These include projects that disturb one (1) or more acres of soil or whose projects disturb less than one acre but are part of a larger common plan of development that in total disturbs one or more acres.

Construction activities cannot occur until a new Waste Discharge Identification (WDOI) Number is issued by the State Waterboards

To obtain a current WDOI Number, please certify and the required Permit Registration Documents via Stormwater Multiple Application and Report Tracking System (SMARTS).

Permit coverage begins once a WDOI Number is assigned by Waterboard staff. For more information about the 2022 CGP and related changes, visit the State Waterboards Website.

**URGENT NOTICE: CONSTRUCTION PROJECTS**



The LUEG Open Performance website provides a look into how the Land Use & Environment Group makes your life BETTER through the use of performance measures and data.

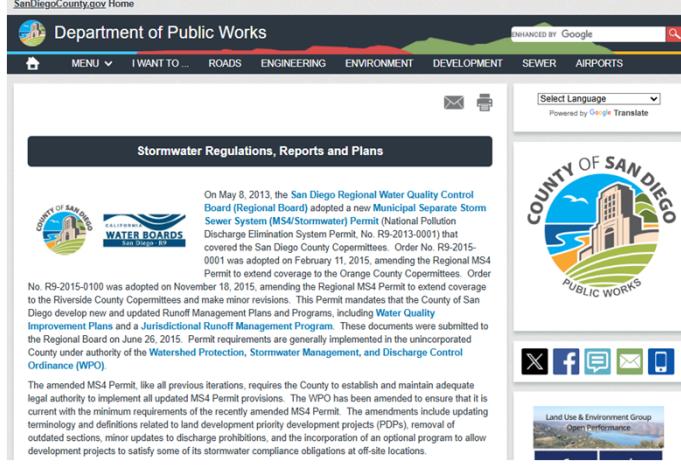
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# Department of Public Works

<https://www.sandiegocounty.gov/content/sdc/dpw/watersheds/ordinance.html>



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On January 27, 2016 the County Board of Supervisor's adopted the Watershed Protection, Stormwater Management, and Discharge Control Ordinance (WPO). The WPO became effective February 26, 2016.

### Watershed Protection Ordinance

- [County of San Diego Watershed Protection, Stormwater Management, and Discharge Control Ordinance](#) (Effective February 26, 2016)
- [Prior Lawful Approval Letter to Applicants on February 26, 2016 Deadline](#)
- [Prior Lawful Approval Sample Letter to Applicants on February 16, 2021 Deadline](#)

### Stormwater (MS4) Permit, Reports and Plans

- [California Regional Water Quality Control Board \(RWQCB\), Municipal Separate Storm Sewer System \(MS4\) Permit](#)
- [California Regional Water Quality Control Board – San Diego Region](#)
- [Jurisdictional Runoff Management Program and Illegal Discharge Investigation Procedures](#) - Submitted to the Regional Water Quality Control Board on June 26, 2015. This document provides information on ways the County will implement programs and strategies to reduce pollutants from entering the storm drain system.
- [Water Quality Improvement Plans](#) - Submitted to the Regional Water Quality Control Board on September 29, 2015. These plans outline how the County will improve water quality in the region.
- [Trash Amendments Track 1 Implementation Plan](#) - Submitted to the Regional Water Quality Control Board on December 3, 2018. The plan provides a map of identified Priority Land Uses, storm drain inlets and drainage, a time schedule to achieve full compliance with the trash discharge prohibition, a proposed approach to using Equivalent Alternative Land Uses to achieve compliance, and a summary of coordination with Caltrans.



The LUEG Open Performance website provides a look into how the Land Use & Environment Group makes your life **BETTER** through the use of performance measures and data.

#### Popular Services

- [DPW Contacts and Office Locations](#)
- [Potholes](#)
- [Survey Records System \(SRS\)](#)
- [Recycling](#)
- [County Maintained Roads](#)
- [Sewers](#)
- [CEQA Public Review](#)
- [Flood Control](#)

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**Stormwater (MS4) Permit, Reports and Plans**

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**Other State Water Resources Control Board Permits**

- **State Water Resources Control Board's Industrial General Permit** - Regulatory information and requirements for industrial facilities subject to the WRCB's IGP.
- **State Water Resources Control Board's Construction General Permit** - Regulatory information and requirements for projects that are subject to the WRCB's CGP.

**Manuals & Resources**

- **Best Management Practice Design Manual Webpage**. For land development and public improvement projects, this manual focuses on project design requirements and related post-construction requirements. The manual includes Chapters, Appendices, and Submittal Templates.
- **County Development Resources Webpage**. The categories include: Manuals, Green Infrastructure, Design Templates & Details, GIS, Cost Tools, Prior Lawful Approval, Stormwater Regulations, Submittal Templates, Hydromodification, Calculators & Modeling Software, Maintenance, Training, and Help.
- **Regional Development Resources Webpage**. Project Clean Water is the page devoted to regional resources. Categories include: Model BMP Design Manual, Model BMP Design Manual Help Desk, Water Quality Equivalency Guide, Watershed Management Area Analysis (WMAA), and Training Materials.

[Watershed Protection Home Page](#)

data.

**Popular Services**

- [DPW Contacts and Office Locations](#)
- [Potholes](#)
- [Survey Records System \(SRS\)](#)
- [Recycling](#)
- [County Maintained Roads](#)
- [Sewers](#)
- [CEQA Public Review](#)
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[More Services](#)

**COUNTYNEWSCENTER**

Take the Warrior Hike Challenge

From Homeless to Housed – Veteran Enjoys His New

County Supervisors Appoint New Treasurer-Tax Collector

[More Stories](#)

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**JRMP 2019**  
[https://www.sandiegocounty.gov/content/dam/sdc/dpw/WATERSHED\\_PROTECTION\\_PROGRAM/watershedpdf/JRMP.pdf](https://www.sandiegocounty.gov/content/dam/sdc/dpw/WATERSHED_PROTECTION_PROGRAM/watershedpdf/JRMP.pdf)

**WPO 2016**  
[https://codelibrary.amlegal.com/codes/san\\_diego/latest/sandiego\\_regs/0-0-0-129574](https://codelibrary.amlegal.com/codes/san_diego/latest/sandiego_regs/0-0-0-129574)

**MS4 Permit 2013**  
[https://www.waterboards.ca.gov/san\\_diego/water\\_issues/programs/stormwater/sd\\_stormwater.html](https://www.waterboards.ca.gov/san_diego/water_issues/programs/stormwater/sd_stormwater.html)

**CGP 2022**  
[https://www.waterboards.ca.gov/board\\_decisions/adopted\\_orders/water\\_quality/2022/wqo\\_2022-0057-dwq.pdf](https://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2022/wqo_2022-0057-dwq.pdf)

**CASQA 2025 BMP Handbook (Paid Subscription Required)**  
<https://www.casqa.org/resources/bmp-handbooks>

**Caltrans 2024 Construction BMP Manual**  
[https://dot.ca.gov/-/media/dot-media/programs/construction/documents/environmental-compliance/construction-site-bmps\\_final-march-2024\\_a11y.pdf](https://dot.ca.gov/-/media/dot-media/programs/construction/documents/environmental-compliance/construction-site-bmps_final-march-2024_a11y.pdf)

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# Questions

