# Construction Site Stormwater Inspections -Regulatory Basics

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### June 20, 2023



# **Topics Covered**

Regulatory Basics

Construction General Permit

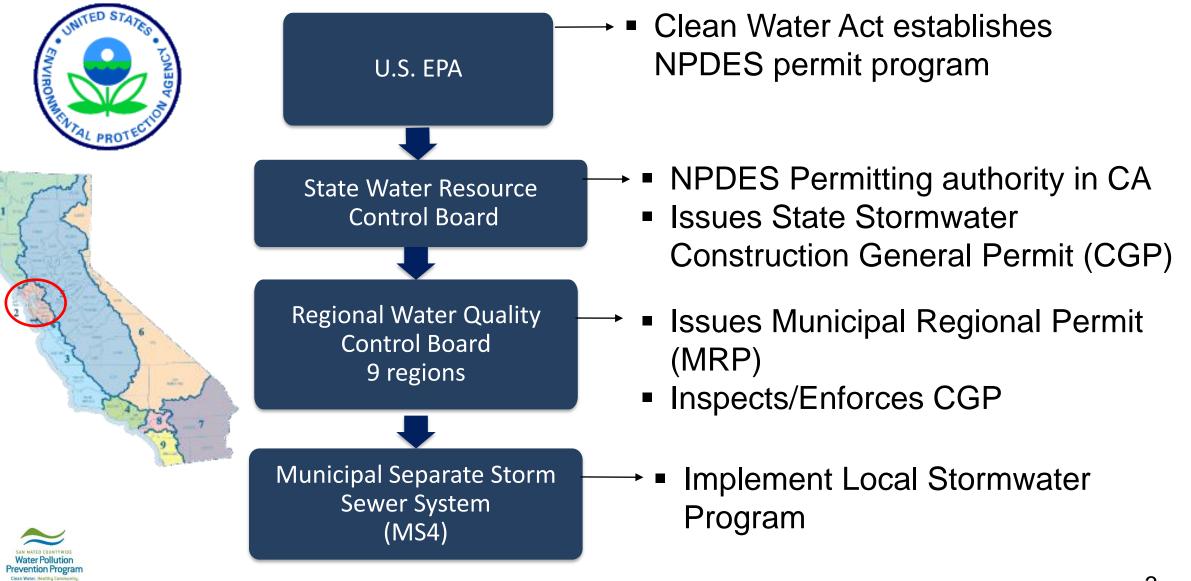
Municipal Regional Permit

Resources

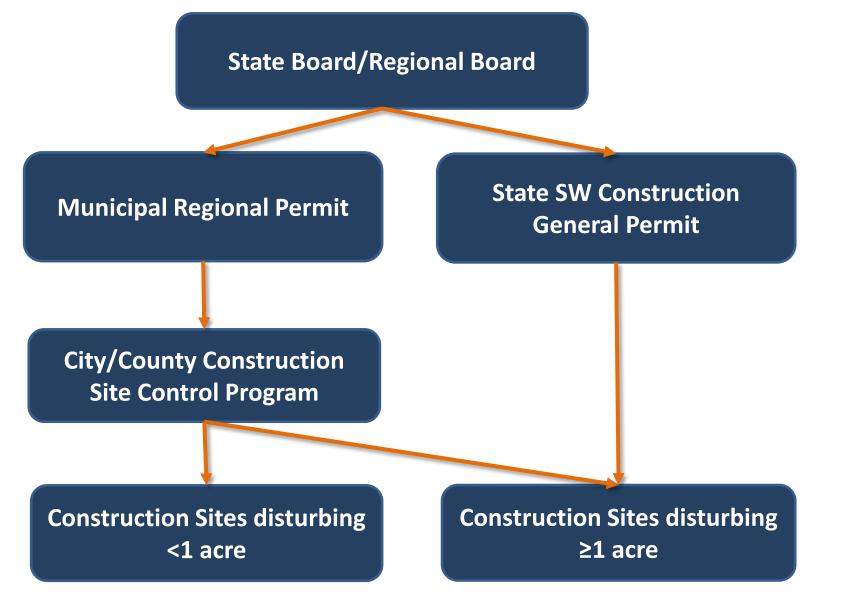




# **Stormwater Regulations**



## **Construction Site Regulations**





### ■ Applies to projects that disturb ≥1 acre

- Stormwater Pollution Prevention Plan (SWPPP)
- Best Management Practices (BMPs)
- Conduct inspections
- Conduct sampling
- Report in SMARTs
- QSP/QSD certification





### 2022 CGP Update – Effective 9/1/23

- Projects permitted under 2009 CGP have until 9/1/25
- QSD/QSP Responsibilities
  - Specific periodic inspections
  - Site specific training for delegated responsibilities
  - CASQA CGP Training Team developing reissuance review

### Monitoring Requirements

- Qualifying Precipitation Event (QPE): forecast of  $\geq$  50% probability of precipitation & quantitative precipitation forecast of  $\geq$  0.5 inches within 24 hr
- -1 sample per discharge location every 24 hrs of QPE



- Replace Rain Event Action Plans with pre-QPE inspection by QSP

### 2022 CGP Update – Effective 9/1/23

Attachment H – TMDLs

-Pescadero and Butano Creek Sediment TMDLs

-Comply with CGP

- New BMP Implementation Requirements
  - -Attachment J Dewatering
  - -Attachment G Passive Treatment

—Attachment D – Risk Level Requirements: surface water buffers, preservation of topsoil, control of pollutants in demolition debris



### Demolition of Existing Structures

- Risk Level 2 & 3 (Attachment D)
- Prevent exposing demolition materials to precipitation
- Demolition materials should be covered with an impermeable barrier (e.g., plastic sheeting) prior to precipitation
- Dischargers unable to cover demolished material, that were not previously investigated or found to be absent of applicable pollutants in reportable quantities, shall sample for any non-visible pollutants that may be in stormwater discharges (e.g., asbestos, leaded paint, or PCBs)
- PCBs used between 1950 -1980 and should be considered to be potentially present in structures built during that timeframe



### MRP requirements

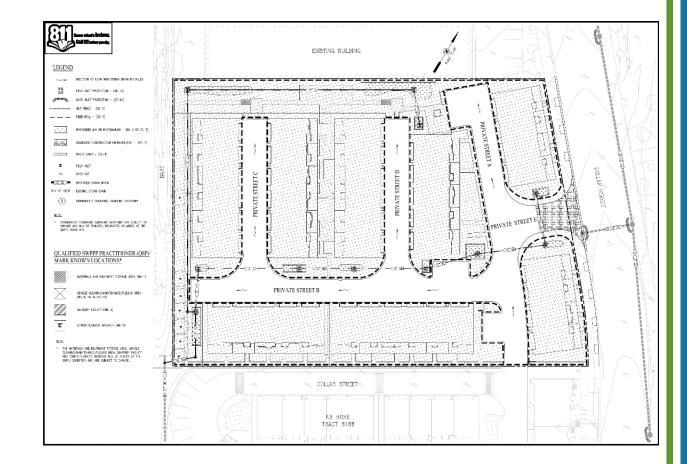
- Verify owners of construction sites that disturb ≥ 1 acre file NOI
- Inspect sites that disturb ≥ 1 acre each month during wet season





### Tips for Municipalities

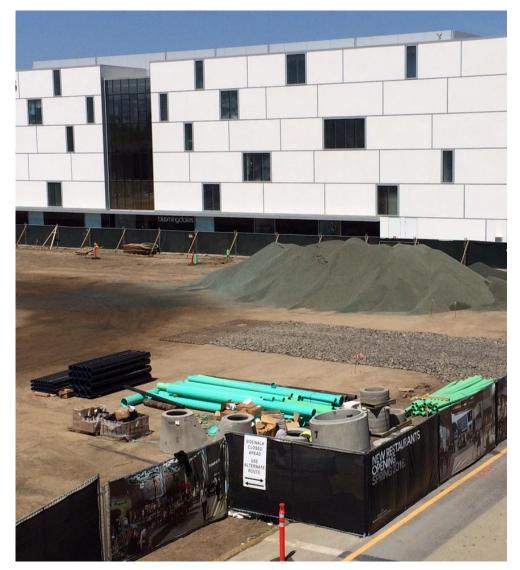
 Reviewing SWPPP, talking with QSP, etc. may help inform your MRP inspection





### Tips for Municipalities

- Overall site compliance reflects on your inspection program
- Public projects ≥ 1 acre must file for coverage under the CGP





# **Municipal Regional Permit**



# **Municipal Regional Permit**

- San Francisco Bay Municipal Regional Stormwater Permit - MRP
- 79 Permittees in five counties
- SMCWPPP assists County, OneShoreline, 15 cities and 5 towns with compliance





## **Municipal Regional Permit**

- First adopted 10/14/2009
- Permit renewed every 5 years
- MRP 2.0 Effective 1/1/2016
- MRP 3.0 Effective date 7/1/2022
  - https://www.waterboards.ca.gov/sanfranc iscobay/board\_decisions/adopted\_orders /2022/R2-2022-0018.pdf

California Regional Water Quality Control Board San Francisco Bay Region Municipal Regional Stormwater NPDES Permit

> Order No. R2-2022-0018 NPDES Permit No. CAS612008 May 11, 2022





### San Mateo County Applicable MRP Provisions

Topic S	Specific	Pollutant	t Specific	Monitoring/Reporting		
C.2 Municipal Operations	C.6 Construction Site Controls	C.9 Pesticides Toxicity Control	C.13 Copper Controls	C.8 Water Quality Monitoring	C.16 Discharges to ASBS	
C.3 New Development and Redevelopment	C.7 Public Information and Outreach	C.10 Trash Load Reduction	C.14 Bacteria Controls	C.20 Cost Reporting	C.21 Asset Management	
C.4 Industrial/ Commercial Site Controls	C.15 Exempted and Conditionally Exempted Discharges	C.11/12 PCB and Mercury Controls	C.18 Control of Sediment Discharges from Coastal SMC			
C.5 Illicit Discharge Controls	C.17 Unsheltered Homeless Populations					



**Construction Site Control Program (MRP Provision C6)** 

- Prevent discharges of pollutants and impacts on receiving waters
- Require appropriate BMPs in 6 categories
  - at ALL construction sites (private and public)
     ALL year long





# **Construction Site Control Program**

### Legal authority

- Site Inspection
- Require BMPs
  - -Site specific
  - -Seasonally appropriate
  - -Phase appropriate
- Issue Enforcement Actions





# **Construction Site Control Program**

### Plan approval process

- Review erosion/sediment control plans or SWPPPs
   SWPPPs must include erosion/sediment control plans and drawings
- Verify sites ≥ 1 acre have filed for Notice of Intent (NOI)
- Provide outreach as appropriate



# **Construction Site Control Program**

### Six BMP categories

- Erosion Control
- Sediment Control
- Good Site Management
- Non-Stormwater Management
- Run-on and Run-off Control
- Active Treatment Systems (ATS)



# **Minimum Inspection Requirements**

- Pre-wet season notification (e.g., letter) by September 1st
- Monthly inspections during wet season
  - October 1<sup>st</sup> April 30<sup>th</sup>





# **Minimum Inspection Requirements**

- Applies to following sites (public & private)
  - Disturbing  $\geq$  1 acre
  - Hillside projects disturbing  $\geq$  5,000 sq ft
    - -Defined in 2016 AR
    - –Default criteria average slope ≥15%
    - -7 agencies w/map or criteria
  - Identified as "high priority" by municipality
    - -Defined by municipality



 Example criteria: proximity to creek, sensitivity of creek, erosion potential, etc.



# **Inspection Content**

- Assessment of compliance with ordinance, permits and implementation/maintenance of erosion/sediment control plan or SWPPP
- Assessment of adequacy/effectiveness of site-specific BMPs
- Visual Observations
  - Actual discharges or evidence of sediment and/or construction-related materials into storm drains/waterbodies
  - Illicit connections or potential illicit connections
- Education as needed



# **Inspection Recordkeeping and Reporting**

- Complete inspection form for every required inspection
- Track inspection data in database/spreadsheet
  - Specific data required by MRP SAMATED CONSTRUCTION SITE INSPECTION REPORT
  - New: department, agency, or other entity performing the Follow-up inspection Building Permit Grading Permit Gite Development CIP Project NOI Required: ( SWPPP on site? (Y/N Project covered under statewide Construction General Permit'
  - Can be requested by RWB at an PG&E) Inspection Finding (A / NM / P / NAY

					Jute Netting/Fib	er Blankets						
			Weether			Problems Observed						
Site Name	Inspection Date	Inspector	Weather During Inspection	Enforcement	Erosion Control	Run-on & Runoff	Sediment Control	Active Treatment	Good Site Management	Non-Stormwater Management	Illicit Discharge	
Panoramic Views	9/30/2015	Kristin Kerr	Clear	Written Warning			х					
Panoramic Views	10/15/2015	Jill Bicknell	Clear	No Action								
Panoramic Views	11/15/2015	Jill Bicknell	Rain	Stop Work Order	x		x				x	
Panoramic Views	11/15/2015	Jill Bicknell	Rain	No Action								
	•	•			Silt Fences / Co	mpost Berms			-			
				<u> </u>	Sedimentation I	Basin						
				Ĩ	Check Dams							
				ī	Inlet Filters (Gra	avel bags)						
				<u>]</u>	📕 Earth Dikes / Di	ainage Swales						
				11. R	un-on and Runoff	Control						

10 business days (or as specified in this notice) may result in PENALTIES described on page 2!

Institutiona

Street Improvement

Commercial/Industria

Grading

Y/N - If Yes, inspect monthly during wet season.

Location on site/Comments

I andscapir

Other



- Guidance for inspectors to take consistent actions to bring sites into compliance
- Identify enforcement tools
- Identify roles and responsibilities
- Enforcement procedures

Each Permittee has their own ERP

Appropriate time periods for corrective actions

17. Enforcement/Follow-Up	Date pro	blem first identified:_		Next follow-up in	spection date:			
Comments:	<u> </u>				1 <u>1 2</u> 11		<u></u>	
Enforcement: 🛛 None/In c	ompliance	Verbal Warning	D Notice of Violation	Device to Comply	Stop Work	Administrative Fine		
18. Resolution: 🛛 Problem F	Fixed 🖬	Veed More Time (inc	lude rationale in comn	nents) 🛛 Escalate E	nforcement	Date resolved:	/	1
Was there rain with runoff a Comments:	fter problem.	n identified and befor	e resolution? 📮 Yes		ltems correcte	d during inspection (see	comm	ients)



### Potential discharge field scenario examples

- Housekeeping issues
- Inadequate waste or materials management
- Evidence of actual discharges
- Lack of emergency response plans
- Lack of BMPs
- Inadequate BMPs
- Inappropriate BMPs



### Actual discharge field scenario example

• Observed or documented flow of unauthorized, illicit or pollutant-containing stormwater discharges to the MS4





### Corrective Actions

- Active discharge cease immediately
- Corrective actions w/in 10 business days or before next rain event
  - If allow longer document rationale, including expected time frame for compliance





### Verify corrective actions

- Problem fixed by end of inspection
- Follow-up inspection
- Site submits photographs





# Source Control: PCBs (Provision C.12.g)

- Manage PCB-Containing Materials and Wastes During Building Demolition Activities
  - Implement established protocols
  - Inspect demolition sites to ensure effective BMPs
  - Enhance construction site control program to minimize migration of PCBs from demolition activities



# Source Control: Copper (Provision C.13.a)

- Runoff from architectural copper can impact water quality and aquatic life
  - Concerns during installation, treatment and washing
- When issuing building permits require BMPs
- Annually report permitting and enforcement







### Requirements for Architectural Copper

Protect water quality during installation, cleaning, treating, and washing!

### Copper from Buildings May Harm Aquatic Life

Copper can harm aquatic life in San Francisco Bay. Water that comes into contact with architectural copper may contribute to impacts, especially during installation, cleaning, treating, or washing. Patination solutions that are used to obtain the desired shade of green or brown typically contain acids. After treatment, when the copper is rinsed to remove these acids, the rinse water is a source of pollutants. Municipalities prohibit discharges to the storm drain of water used in the installation, cleaning, treating and washing of architectural copper.



Building with copper flashing. gutter and drainpipe.

### Use Best Management Practices (BMPs)

The following Best Management Practices (BMPs) must be implemented to prevent prohibited discharges to storm drains.

During Installation

- If possible, purchase copper materials that have been pre-patinated at the factory.
- If patination is done on-site, implement one or more of the following BMPs:
  - Discharge the rinse water to landscaping. Ensure that the rinse water does not flow to the street or storm drain. Block off storm drain inlet if needed.
  - Collect rinse water in a tank and pump to the sanitary sewer. Contact your local sanitary sewer agency before discharging to the sanitary sewer.
  - Collect the rinse water in a tank and haul off-site for proper disposal.
- Consider coating the copper materials with an impervious coating that prevents further corrosion and runoff. This will also maintain the desired color for a longer time, requiring prohibited discharge. The water must be less maintenance.



Storm drain inlet is blocked to prevent pumped and disposed of properly.

### During Maintenance

Implement the following BMPs during routine maintenance activities, such as power washing the roof, re-patination or re-application of impervious coating:

- Block storm drain inlets as needed to prevent runoff from entering storm drains.
- Discharge the wash water to landscaping or to the sanitary sewer (with permission from the local sanitary sewer agency). If this is not an option, haul the wash water off-site for proper disposal.

### Protect the Bay/Ocean and yourself!

If you are responsible for a discharge to the storm drain of nonstormwater generated by installing, cleaning, treating or washing copper architectural features, you are in violation of the municipal stormwater ordinance and may be subject to a fine.



Contact Information



### The San Mateo Countywide Water Pollution Prevention Program lists municipal stormwater contacts at www.flowstobay.org (click on "Business", then "New Development", then "local permitting agency")





### SMCWPPP Website: www.flowstobay.org

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### Construction Best Practices

During development projects, hazardous debris like cement wash and asphalt can make their way into the storm drain system and pollute the waterways.

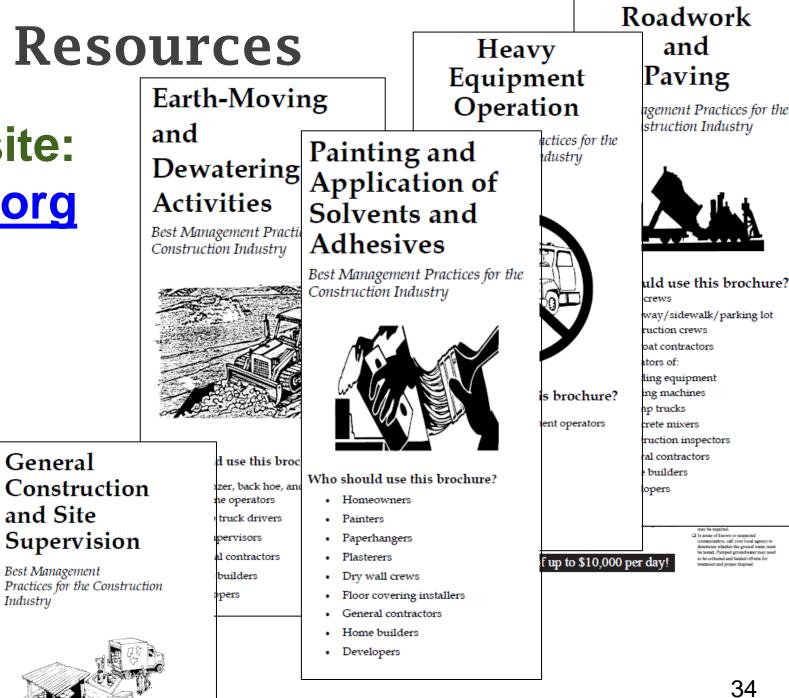
Read below for the best practices for preventing stormwater pollution during development and construction projects and for additional resources.



# SMCWPPP Website: and www.flowstobay.org BMP Plan Sheet BMP brochures

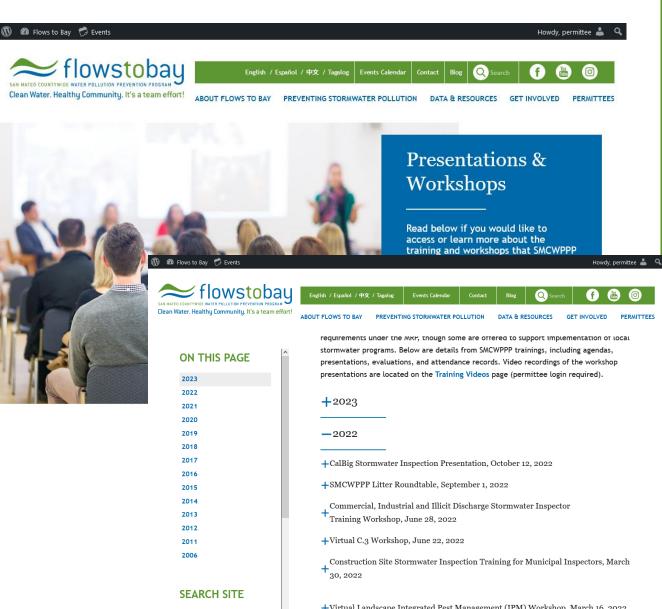
Industry





### SMCWPPP Website: www.flowstobay.org

- BMP Plan Sheet
- BMP brochures
- Workshop Powerpoint
   presentations





+Virtual Landscape Integrated Pest Management (IPM) Workshop, March 16, 2022

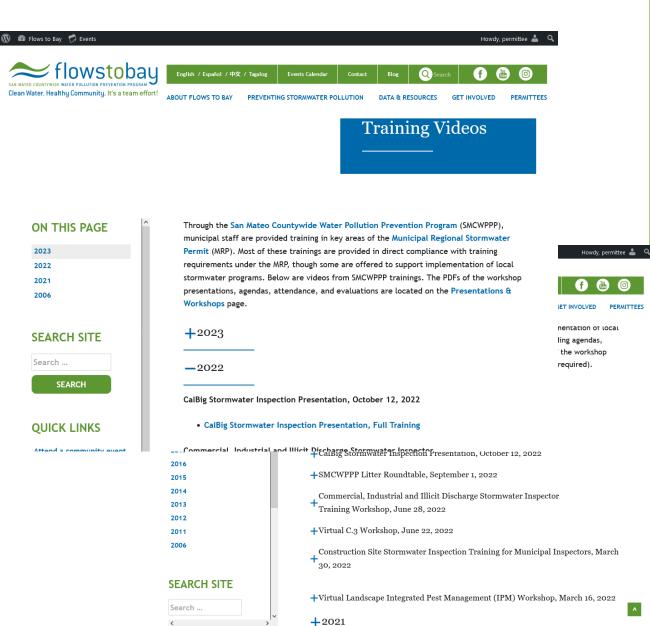
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Search

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### SMCWPPP Website: www.flowstobay.org

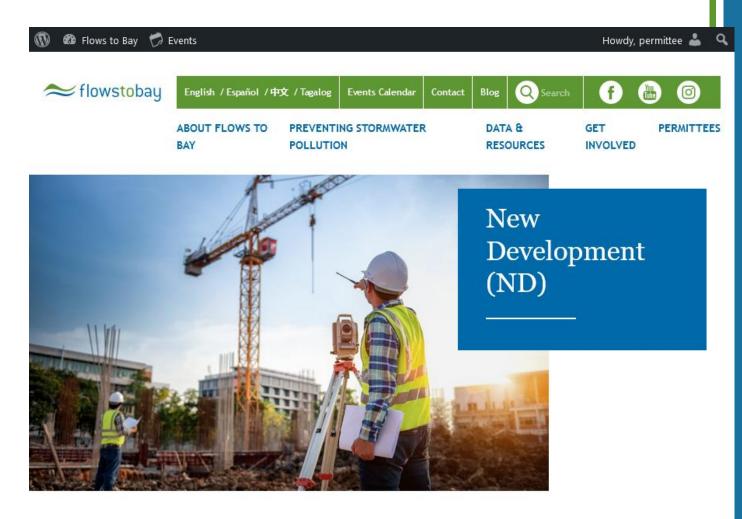
- BMP Plan Sheet
- BMP brochures
- Workshop Powerpoint
   presentations
- Recorded presentations
   members only section





### SMCWPPP Website: www.flowstobay.org

Permittees-Members
 Only webpage



### **ON THIS PAGE**

Meeting Agenda & Minutes

Materials for use by Municipal Staff

Programs to Manage PCBs During Building Demolition +Meeting Agenda & Minutes

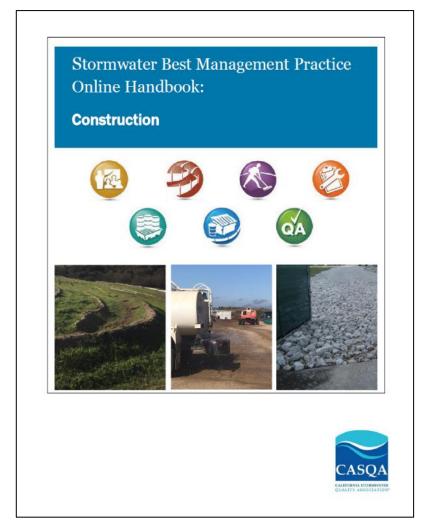
+Materials for use by Municipal Staff

Programs to Manage PCBs During Building Demolition



### CASQA Construction BMP Handbook Portal – www.casqa.org

 Contact your agency SW coordinator for information on how to access web subscription





## **CASQA BMP Fact Sheets**

### **Erosion Control BMP**

EC-1	Scheduling
EC-2	Preservation of Existing
EC-3	Hydraulic Mulch
EC-4	Hydroseeding
EC-5	Soil Binders
EC-6	Straw Mulch
EC-7	Geotextiles&Mats
EC-8	Wood Mulching
EC-9	Earth Dikes and Drainage Swales
EC-10	Velocity Dissipation Devices
EC-11	Slope Drains
EC-12	Streambank Stabilization
EC-14	Compost Blankets
EC-15	Soil Preparation/Roughening
EC-16	Non-Vegetative Stabilization
Water Pollut Prevention Pro	

Clean Water, Healthy Community

### **Sediment Control BMPs**

SE-1	Silt Fence
SE-2	Sediment Basin
SE-3	Sediment Trap
SE-4	Check Dam
SE-5	Fiber Rolls
SE-6	Gravel Bag Berm
SE-7	Street Sweeping and Vacuuming
SE-8	Sandbag Barrier
SE-9	Straw Bale Barrier
SE-10	Storm Drain Inlet Protection
SE-11	Active Treatment Systems
SE-12	Manufactured Linear Sediment Controls
SE-13	Compost Socks and Berms
SE-14	Biofilter Bags

### Wind Erosion Control BMPs

WE-1 Wind Erosion Control

### **Temporary Tracking Control BMPs**

TC-1	Stabilized Construction
	Entrance/Exit

- TC-2 Stabilized Construction Roadway
- TC-3 Entrance/Outlet Tire Wash

### Non-Stormwater Management BMPs

NS-1	Water Conservation Practices
NS-2	Dewatering Operations
NS-3	Paving and Grinding Operations
NS-4	Temporary Stream Crossing
NS-5	Clear Water Diversion
NS-6	Illicit Connection/Discharge
NS-7	Potable Water/Irrigation
NS-8	Vehicle and Equipment Cleaning
NS-9	Vehicle and Equipment Fueling
NS-10	Vehicle and Equipment Maintenance
NS-11	Pile Driving Operations
NS-12	Concrete Curing
NS-14	Concrete Finishing
NS-15	Material Over Water
NS-16	Demolition Adjacent to Water
NS-17	Temporary Batch Plants

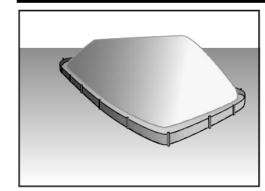
Clean Water. Healthy Community.

## CASQA BMP Fact Sheets

Wast	e Management and Materials Pollution Control BMPs
WM-1	Material Delivery and Storage
WM-2	Material Use
WM-3	Stockpile Management
WM-4	Spill Prevention and Control
WM-5	Solid Waste Management
WM-6	Hazardous Waste Management
WM-7	Contaminated Soil Management
WM-8	Concrete Waste Management
WM-9	Sanitary/Septic Waste Management
WM- 10	Liquid Waste Management

### **CASQA BMP Fact Sheets**

### Stockpile Management



Categories				
EC	Erosion Control	_		
SE	Sediment Control	x		
TC	Tracking Control			
WE	Wind Erosion Control			
NS	Non-Stormwater Management Control	X		
WM	Waste Management and Materials Pollution Control	Ø		
Legend: Primary Category				

Secondary Category

**WM-3** 

### Description and Purpose

Stockpile management procedures and practices are designed to reduce or eliminate air and stormwater pollution from stockpiles of soil, soil amendments, sand, paving materials such as portland cement concrete (PCC) rubble, asphalt concrete (AC), asphalt concrete rubble, aggregate base, aggregate sub base or pre-mixed aggregate, asphalt minder (so called "cold mix" asphalt), and pressure treated wood.

### Suitable Applications

Implement in all projects that stockpile soil and other loose materials.

### Limitations

- Plastic sheeting as a stockpile protection is temporary and hard to manage in windy conditions. Where plastic is used, consider use of plastic tarps with nylon reinforcement which may be more durable than standard sheeting.
- Plastic sheeting can increase runoff volume due to lack of infiltration and potentially cause perimeter control failure.
- Plastic sheeting breaks down faster in sunlight.
- The use of Plastic materials and photodegradable plastics should be avoided.

### Implementation Protection of stockpiles is a year-round requirement. To properly manage stockpiles:

www.interne	
Nutrients	V
Trash	V
Metals	V
Bacteria	
Oil and Grease	V
Organics	$\checkmark$

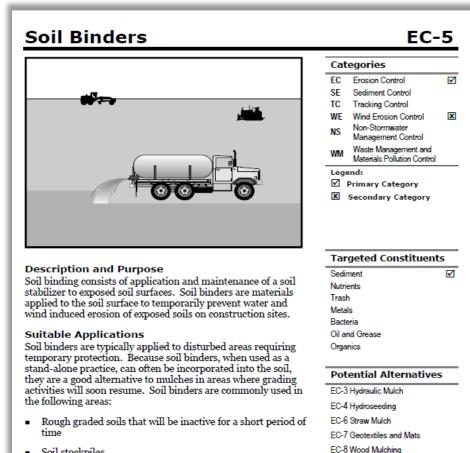
Targeted Constituents

Sediment

### Potential Alternatives None

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- Soil stockpiles
- Temporary haul roads prior to placement of crushed rock
- Compacted soil road base
- Construction staging, materials storage, and layout areas

### Limitations

 Soil binders are temporary in nature and may need reapplication.



### November 2009

California Stormwater BMP Handbook Construction www.casga.org

1 of 8



July 2012

California Stormwater BMP Handbook Construction www.casga.org

1 of 3

### Videos

- State Water Resources Control Board <u>Construction</u> <u>General Permit Introduction</u> (9:50)
- County of San Diego <u>Stormwater Strategies: How to</u> <u>Protect Stormdrains</u> (2011) (6:51)
- County of San Diego <u>Stormwater Strategies: Erosion</u> and Sediment Control (2011) (9:12)
- County of San Diego <u>Stormwater Strategies: How to</u> <u>Install Fiber Rolls</u> (2011) (7:10)



# **Contact Information**

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