

**Please complete the
pre-workshop survey**

C.6 Workshop Pre-Workshop Knowledge Survey





CONTRA COSTA
CLEAN WATER
PROGRAM

Construction Stormwater Inspection Workshop Provision C.6 Training



Sandy Mathews, CPESC, QSD, January 30, 2024



WELCOME

Logistics

Cell phones

- Please silence them

Questions

- Ask as we go along

Disclaimer

- Images and mention of commercial products or services should not be construed as an actual or implied endorsement or recommendation

Overview and Introductions

Welcome and Complete Knowledge Survey	9:00-9:05
Construction Phase Stormwater Pollutants & Regulations	9:05-9:15
MRP Provision C.6	9:15-9:30
C.6 BMP Toolbox	9:30-9:50
Break	9:50-10:00
Inspections and Documentation Best Practices and Tools	10:00-10:15
Inspection Situations	10:15-10:30
2022 CGP Overview	10:30-10:50
Wrap up and Complete Knowledge Survey and Evaluation	10:50-11:00

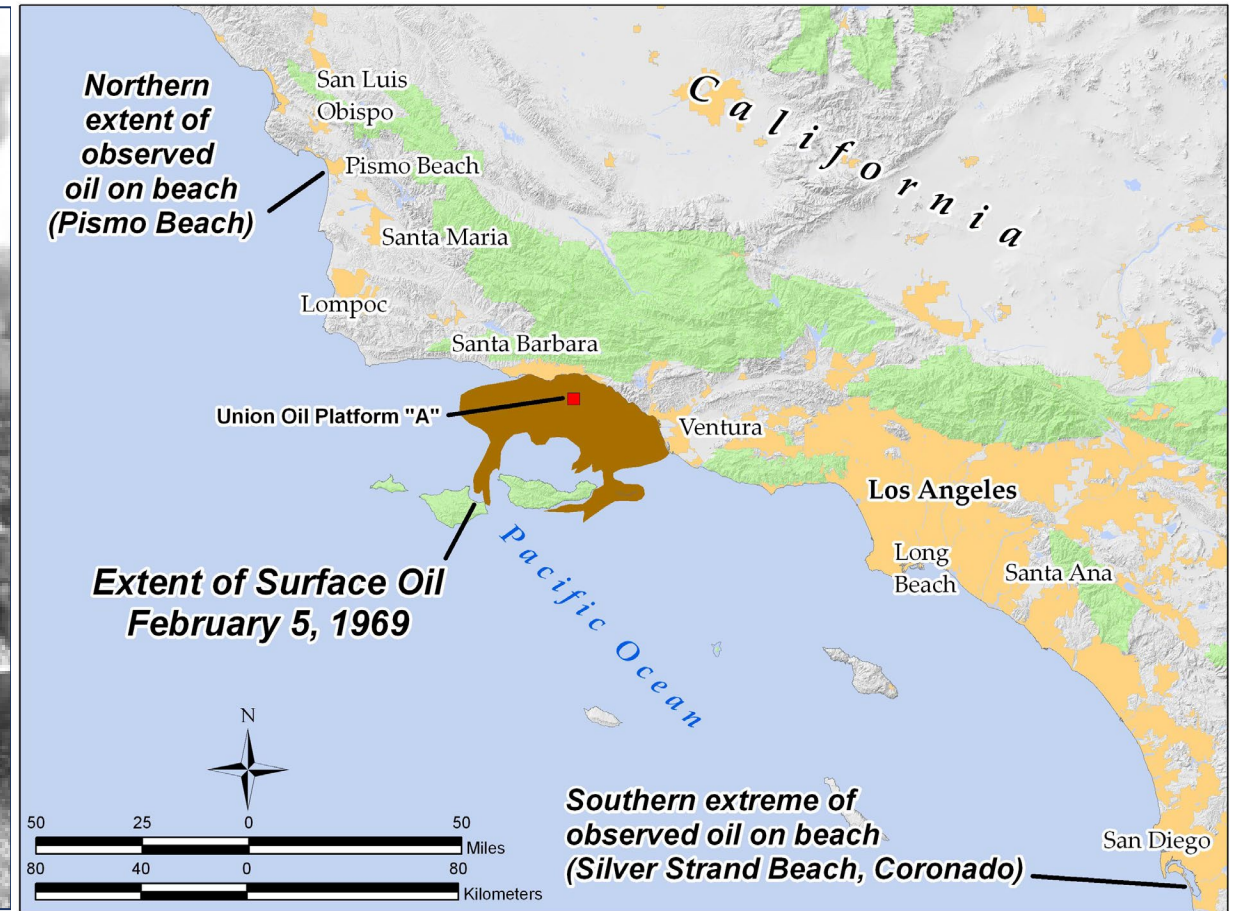
Setting

Regulations & Construction Phase Stormwater
Pollutants

Cuyahoga River Fires

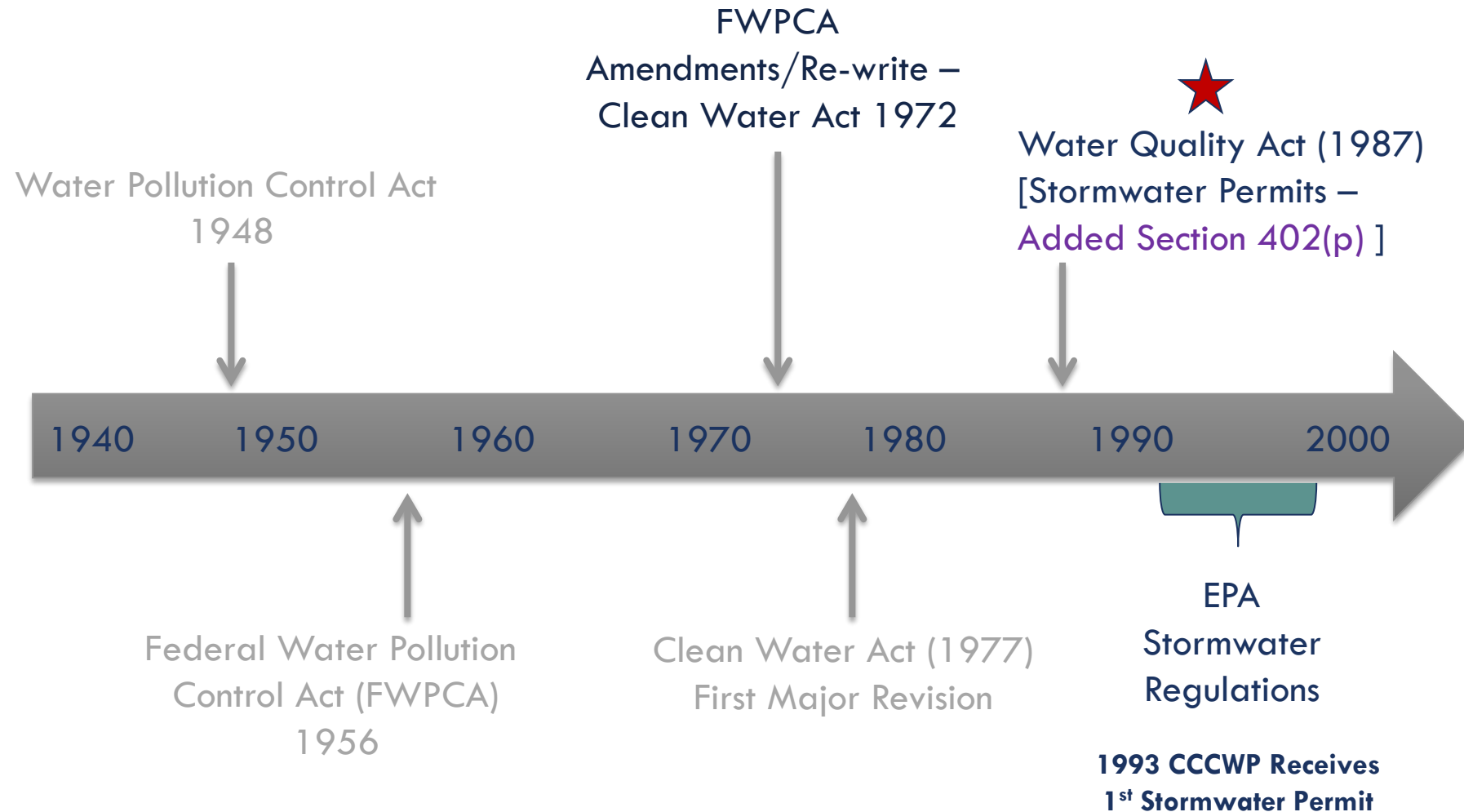


Union Oil Platform Blowout



By Antandrus at English Wikipedia, CC BY-SA 3.0,
<https://commons.wikimedia.org/w/index.php?curid=16365110>

Clean Water Act – Brief History



Construction phase potential pollutants



Common sources of water pollutants on construction sites

Material/Activity	Pollutant	Effect on Creeks
Grading/soil disturbance	Sediment	<ul style="list-style-type: none"> Fills spawning gravels, clogs gills, impairs ability to hunt Carries other pollutants
Concrete wastewater	pH	<ul style="list-style-type: none"> Toxic to aquatic life
Concrete wastewater Vehicle fueling & maintenance	Metals	<ul style="list-style-type: none"> Toxic to aquatic life
Paints and solvents	Synthetic organic compounds	<ul style="list-style-type: none"> Toxic to aquatic life
Landscape trimmings and fertilizers	Nutrients, Biochemical oxygen demand	<ul style="list-style-type: none"> Causes algal blooms, depletes oxygen
Asphalt/Paving Vehicle fueling & maintenance	Oil & grease	<ul style="list-style-type: none"> Causes sheen, toxic to aquatic life





Mouth of Baxter Creek in Richmond



Marsh Creek in Oakley at the Site of a Recently Completed Restoration Project



Green Valley Creek in Danville, a Tributary to San Ramon Creek in the Upper Walnut Creek Watershed



Mouth of Rheem Creek in Point Pinole Regional Shoreline



Cerrito Creek in El Cerrito

Two permits regulate construction site stormwater discharges

Municipal Regional Stormwater Permit



Construction General Stormwater Permit

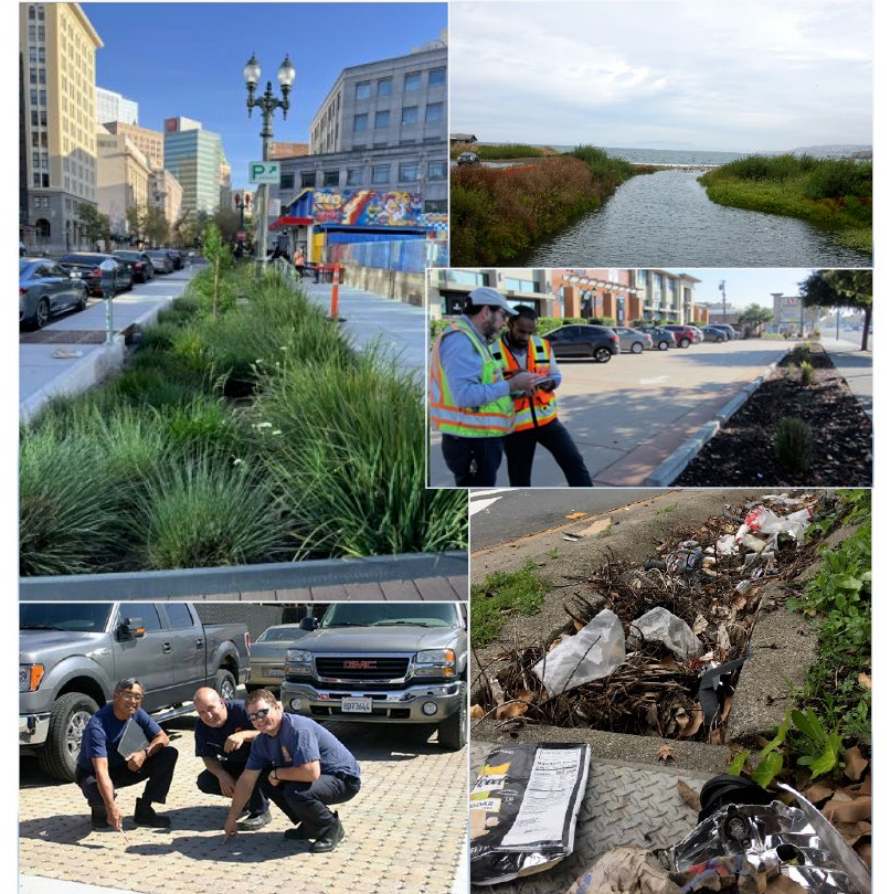


**NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
GENERAL PERMIT FOR STORMWATER DISCHARGES ASSOCIATED WITH
CONSTRUCTION AND LAND DISTURBANCE ACTIVITIES
(GENERAL PERMIT)**

ORDER WQ 2022-0057-DWQ
NPDES NO. **CAS000002**

**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



MRP Provision C.6

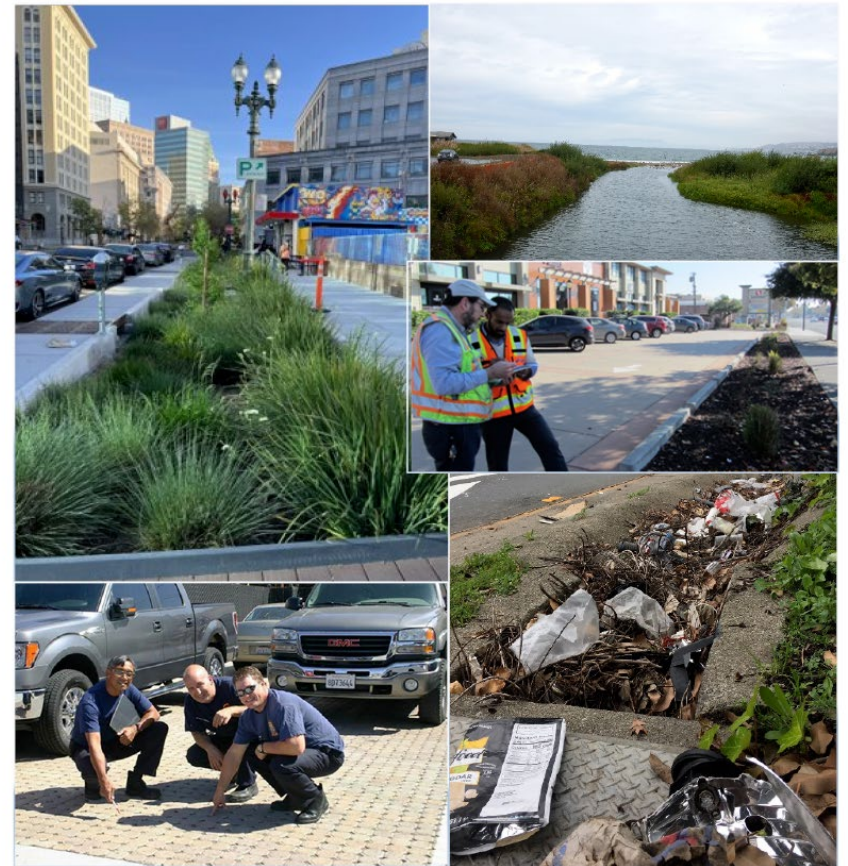
Construction Site Control

Municipal Regional Permit (MRP) 3.0

- Each agency implements programs to protect water quality
- Provision C.6 requires a Construction Site Control program
 - Prevent discharge of construction related pollutants
- MRP was reissued in 2022, but Provision C.6 was largely unchanged

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



MRP specifies six elements for construction site control programs



C.6.a – Legal Authority



C.6.b – Enforcement Response Plan (ERP)



C.6.c – Best Management Practices Categories



C.6.d – Plan Approval Process



C.6.e – Inspections, tracking, and reporting



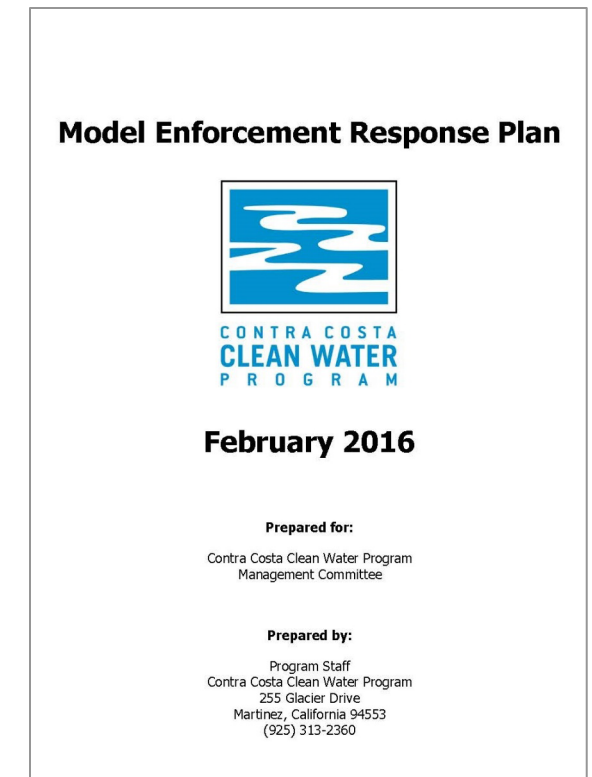
C.6.f – Staff training

C.6.a – Legal Authority

- Each jurisdiction is required to have the legal authority and ability to prevent discharges of pollutants and implement progressively stricter enforcement
 - Require effective stormwater pollutant controls
 - Oversee and inspect projects
 - Require expedient cleanup

C.6.b – Enforcement Response Plan

- ERP provides guidance for inspectors on **initiating** and **escalating** enforcement actions to achieve **timely correction**
- Each agency created its own ERP
 - Based on local ordinance
 - CCCWP model provided guidance



C.6.c – Best Management Practices Categories

- All sites must implement BMPs in the following categories
 1. Erosion Control
 2. Sediment Control
 3. Run-on and Runoff Control
 4. Active Treatment Systems (as needed)
 5. Good Site Management
 6. Non-Stormwater Management

C.6.d – Plan Approval Process

Before issuing a grading permit ...

- Review erosion control plan
 - Conforms to the local grading ordinance and other local requirements
 - Contains seasonally appropriate and effective BMPs
- Confirm sites one acre or more have filed for coverage under the State Construction General Permit (CGP)
 - Site has a WDID #
- Provide educational materials, as appropriate

C.6.e – Inspections



Send annual wet season notification by September 1



Conduct monthly inspections October – April



Review adequacy of BMPs and consistency with local ordinances



Require timely corrections of actual or potential problems observed

Monthly Rainy Season Inspections Required

≥1 acre sites

- Sites that disturb 1 acre or more of land (CGP sites)

Hillside projects

- Sites disturbing ≥5,000 sf of land that:
 - Meet local hillside development criteria Or
 - Are in local hillside development zones
 - Or
 - Where there are no local criteria, sites with ≥15% slope

High priority sites

- Determined by the Regional Board or local jurisdiction
 - Erosion potential, soil type
 - Slope
 - Size/type
 - Sensitivity/proximity of receiving water
 - NSWDS
 - Other factors

Rainy season is October - April

PCBs Demolition Site Inspections

Demolition of applicable structures containing building materials with PCBs concentrations of 50 ppm or greater

Wet Season

- **Inspect minimum of once during wet season during demolition**
- Conduct additional wet season inspections as specified in your program


Dry Season

- Inspect as specified in your program

Specifics determined by the program implemented by each agency

C.6.e – Tracking

- Use written or electronic inspection form
 - Program developed a standard inspection form
- Track/log data
 - Inspection log must be made available to Regional Water Board during inspections or audits
- Follow ERP if violations are identified

Construction Site Inspection Report					
Project Name:				Inspection Date:	
Location				Current weather (check all that apply) <input type="checkbox"/> Sunny <input type="checkbox"/> Cloudy <input type="checkbox"/> Windy <input type="checkbox"/> Rainy	
Permit No.		Permit Type: <input type="checkbox"/> Building <input type="checkbox"/> Grading <input type="checkbox"/> Site Development <input type="checkbox"/> CIP Project		Has there been rainfall with runoff since last inspection? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Project Type: <input type="checkbox"/> Commercial/Industrial <input type="checkbox"/> Residential <input type="checkbox"/> Street Improvement <input type="checkbox"/> Landscaping				Reason for inspection: <input type="checkbox"/> Routine <input type="checkbox"/> Pre-Rain	
Does the project disturb one acre or more? <input type="checkbox"/> Yes <input type="checkbox"/> No		Erosion Control Plan on site? <input type="checkbox"/> Yes <input type="checkbox"/> No		<input type="checkbox"/> During Rain <input type="checkbox"/> After Rain <input type="checkbox"/> Follow-up	
SWPPP on site? <input type="checkbox"/> Yes <input type="checkbox"/> No Date on SWPPP:		Date on Erosion Control Plan:		<input type="checkbox"/> Other (state):	
Covered by Statewide Construction General Permit? <input type="checkbox"/> Yes <input type="checkbox"/> No				High Priority Site? <input type="checkbox"/> Yes <input type="checkbox"/> No	
					
If, following discovery of a violation, more than 10 business days will be required to achieve compliance, then include a rationale for that schedule in the comments.					
Erosion Control Measures					
Jute Netting/Fiber Blankets	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Comments
Mulch	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Hydroseed/Soil Binder/Compost Blanket	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Mark Areas to be Preserved	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Tree Protection Fencing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Riparian Area Barrier	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Sediment Control Measures					
Wattles/Fiber Rolls/Compost Socks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Comments
Silt Fences/Compost Berms	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Sedimentation Basin	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Inlet Filters (bags, sand, gravel)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Dust Control	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Stabilized Construction Entrance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Check Dams	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Street Sweeping	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Earth Dikes/Drainage Swales	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Run-on and Run-off Control					
Earth Dikes/Drainage Swales	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Comments
Sampling is conducted if required (CIPs only)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Active Treatment System					
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Comments
Good Site Management					
Construction Materials (wood, cement, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Comments
Petroleum Products (oil, fuel)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Hazardous Materials ((paint, solvents)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Waste Systems Management	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Soil Stockpiles	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Vehicle Servicing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Non-Stormwater Management					
Concrete Washout Area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Comments
Sampling is conducted if required (CIPs only)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Discharge Points					
Are the discharge points free of evidence of illicit discharge? <input type="checkbox"/> Yes <input type="checkbox"/> No					Comments
Enforcement and Follow-up		Date Problem First Identified:		Next Follow Up Inspection Date:	
Comments					
Enforcement Action: <input type="checkbox"/> None/In compliance <input type="checkbox"/> Verbal Notice <input type="checkbox"/> Notice to Comply <input type="checkbox"/> Notice of Violation <input type="checkbox"/> Stop Work <input type="checkbox"/> Administrative Fine					
Resolution <input type="checkbox"/> Problem Fixed <input type="checkbox"/> Need More Time <input type="checkbox"/> Escalate Enforcement <input type="checkbox"/> Date Problem Resolved:					
Was there rain with runoff after the problem was identified and before it was resolved? <input type="checkbox"/> Yes <input type="checkbox"/> No					
Inspector		Signature			Date

DRAFT 2023-24 Forms

C.6.e – Reporting (Annual Report Form Excerpts)

C.6.e.iii.(3)(a), (b), (c), (d) ▶ Site/Inspection Totals

<p>Total number of construction sites requiring inspections during at least part of the Permit year; (C.6.e.iii.1.a)</p>	<p>Total number of active hillside sites disturbing <1 acre of soil requiring inspection (C.6.e.iii.1.b)</p>	<p>Number of High Priority Sites (sites disturbing < 1 acre of soil requiring storm water runoff quality inspection) (C.6.e.iii. 1.d)</p>	<p>Number of sites disturbing ≥ 1 acre of soil (C.6.e.iii.1.c)</p>	<p>Total number of storm water runoff quality inspections conducted (include only Hillside Sites, High Priority Sites and sites disturbing 1 acre or more) (C.6.e.iii. 1.e)</p>
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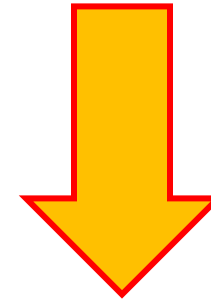
C.6.e.iii.(1)(f) ▶ Construction Related Storm Water Enforcement Actions

Guidance: Do not leave any cells blank. Provide a brief description of each enforcement action level (e.g., verbal warning, notice of violation, stop work order, legal action, etc.)

	<p>Enforcement Action (as listed in ERP)¹</p>	<p>Number Enforcement Actions Issued</p>
Level 1 ²		
Level 2		
Level 3		
Level 4		
Total		

C.6.e – Reporting (Annual Report Form Excerpts)

DRAFT 2023-24 Forms



New MRP 3 requirement

C.6.f.iii ► Staff Training Summary

Training Name	Training Dates	Topics Covered	Total Number of Inspectors (both municipal and non-municipal staff)	No. of Inspectors in Attendance (both municipal and non-municipal staff)

Comments:

Guidance: Use this area if needed to explain any information in the Staff Training Summary. Include training of any contractors or other entities performing inspections. If there was no training in this FY state that here.

C.6.f – Staff Training

- Provide training or access to training for staff involved in construction site stormwater inspections
- Training to be provided at least every other year



**Today's workshop meets the
C.6.f training requirement**

MRP Provision C.6 Summary of Key Requirements





Best Management Practices

C.6 BMP Toolbox

Basic principles of stormwater quality protection

- Sites need to **Plan** for stormwater protection

- Sites need to **use and maintain BMPs** at appropriate levels year-round
 - **Minimize** pollutant exposure
 - **Protect** exposed pollutants

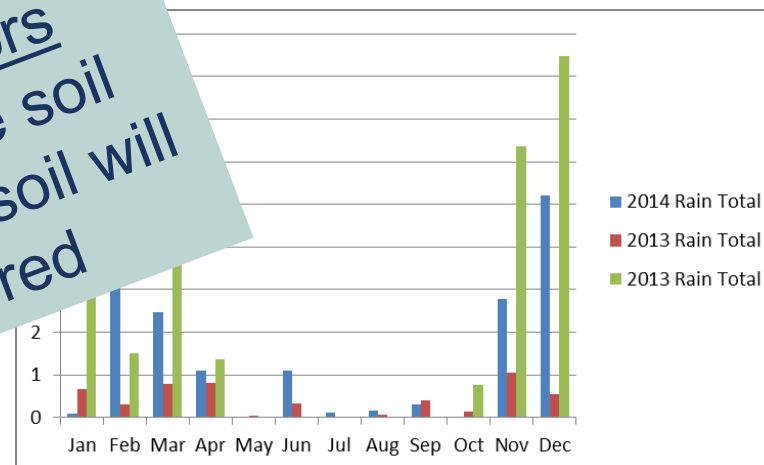
- Sites need to **use BMPs in layers** to protect water quality and plan for accidents

C.6 Minimum BMP Categories Toolbox

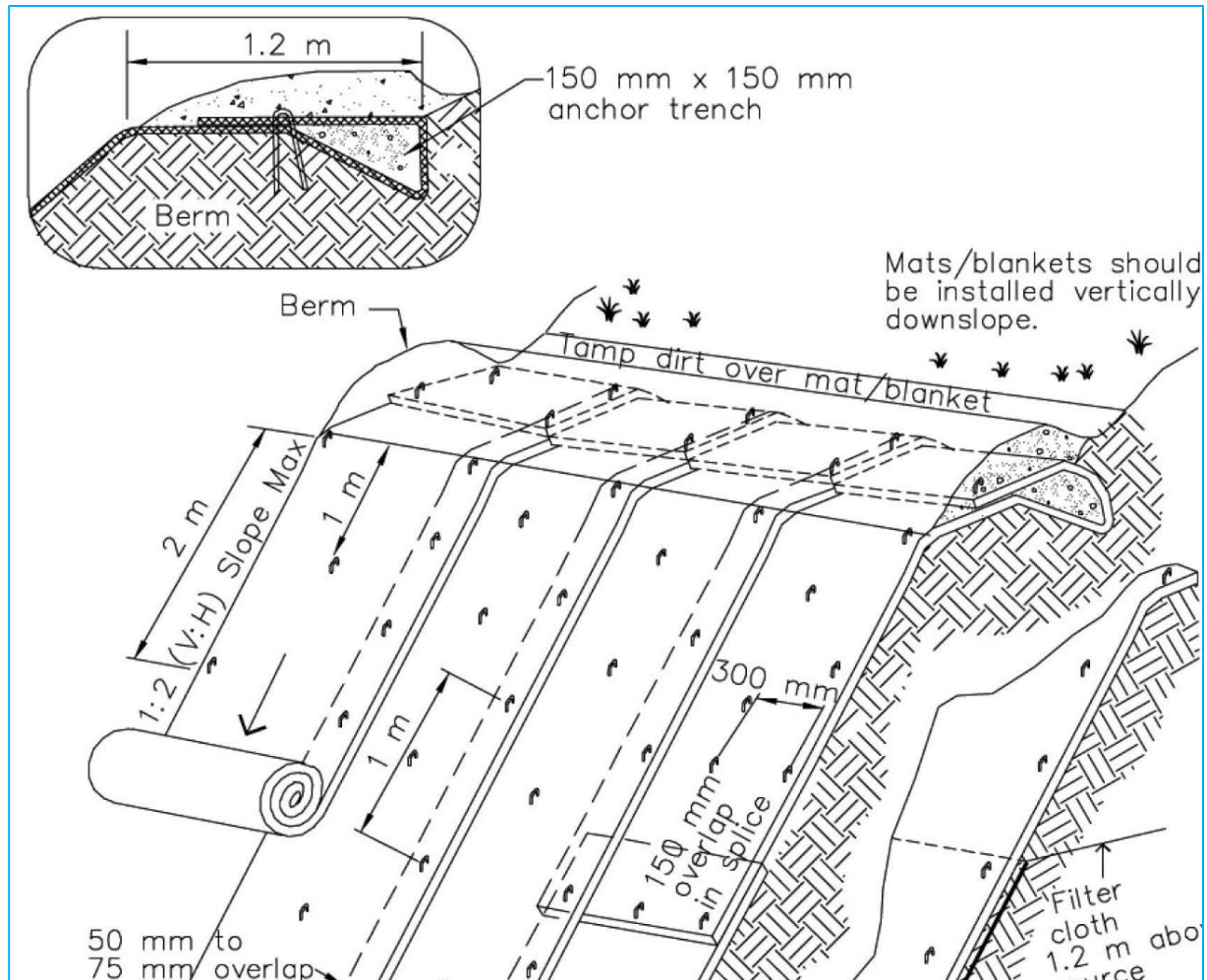
BMP	Typical Applications
1. Erosion Control	Apply <u>on</u> graded areas and soil stockpiles.
2. Sediment Control	Apply <u>around</u> graded areas, soil stockpiles, landscape materials, site perimeter, at inlets/ catch basins. Includes sweeping and tracking.
3. Run-on and Runoff Control	Diverts water away from disturbed areas and controls water leaving site.
4. Active Treatment Systems	Chemical treatment systems to remove sediment. Not common.
5. Good Site Management	Good housekeeping and site management throughout site, especially material laydown areas.
6. Non-Stormwater Management	Water conservation and practices to prevent non-stormwater discharges.

Erosion controls

- Protects soil and prevents soil particles from becoming detached by rainfall, flowing water or wind
- Soil protected as a resource
- Source controls that prevent soil from becoming a pollutant



Fiber (Erosion Control) Blankets



Tips for Inspectors

- Blanket overlap – no gaps
- Stapled to soil
- Not stretched
- Anchored at top
- Install vertically downslope
- Natural fiber nets for permanent installations



Hydroseeding/Hydromulch

Tips for Inspectors

- Look for complete coverage of soil
- Look for erosion rills
- Seeds need irrigation or light rains to germinate
- Best if soil is track walked or roughened before application



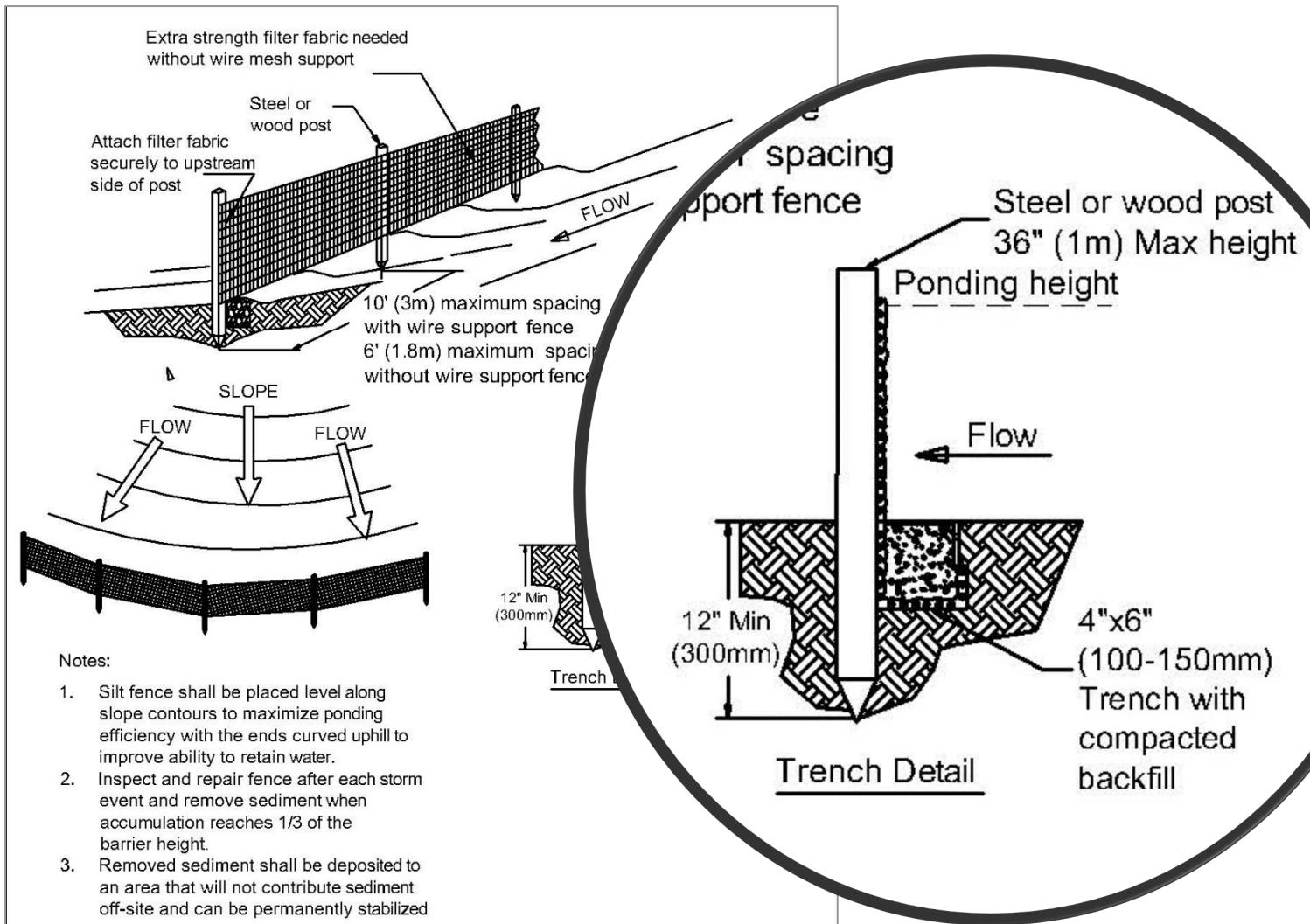
Sediment controls

- Practices that trap dirt particles – sediment – once they have been detached by rain, flowing water, or wind
 - Various practices to slow and detain water to allow sediment to settle
 - Treatment controls that remove soil from water or wind

- Tip for Inspectors
- Look for sediment controls where runoff will leave the site



Silt Fence



Tips for Inspectors

- Installed on contour!
- Ponds water – is there space?
- Tug test – trenched and compacted
- Sediment no more than 1/3 height
- No gaps between sections
- Look for undercutting (or light under fence)
- Cannot use in concentrated flow paths



Fiber Rolls (Wattles)

Tips for Inspectors

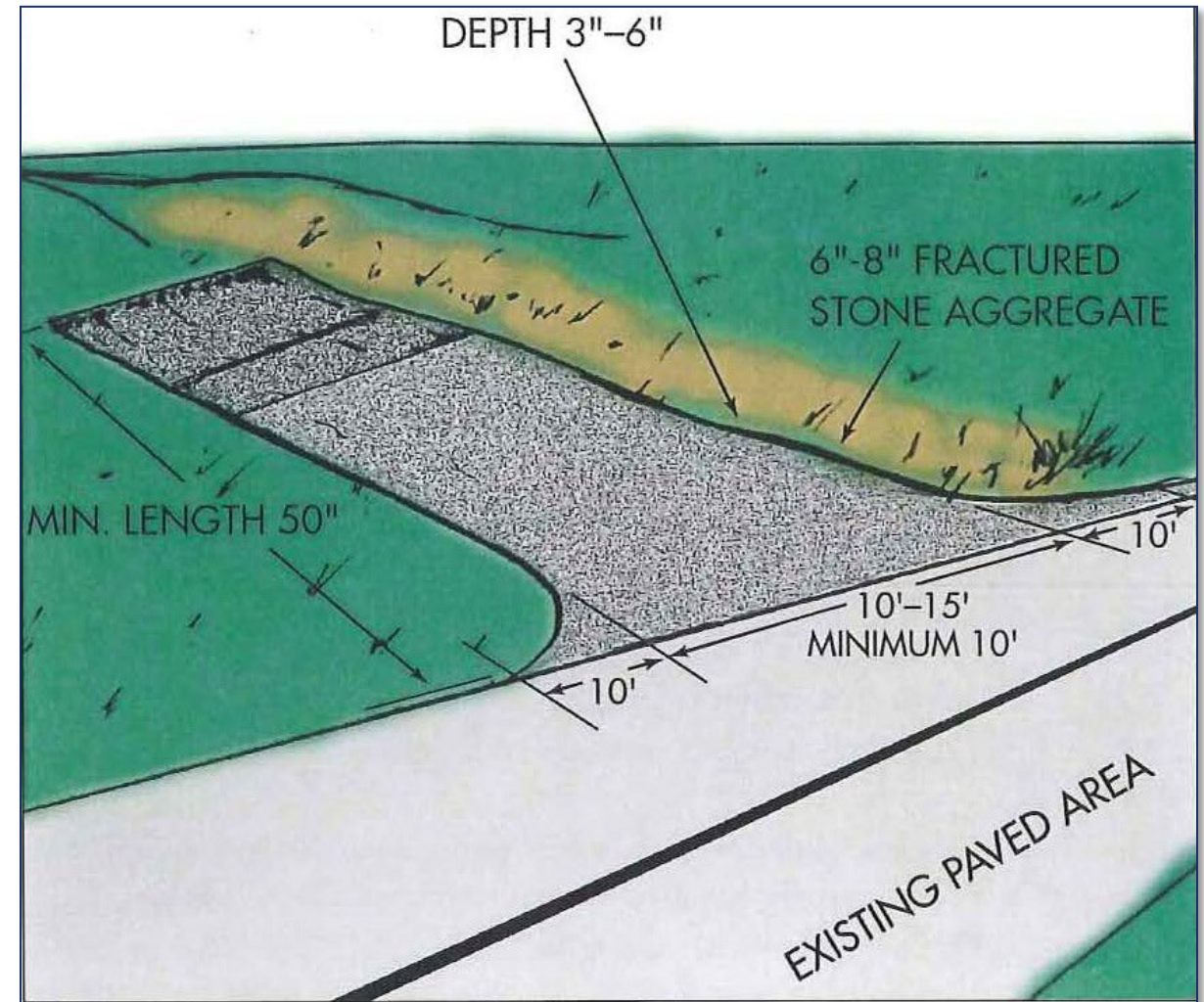
- Installed on contour!
- Cannot be used on pavement
- Toe test – can you lift the wattle with you toe?
- Overlapped sections
- Look for undercutting
- J-hook ends upslope

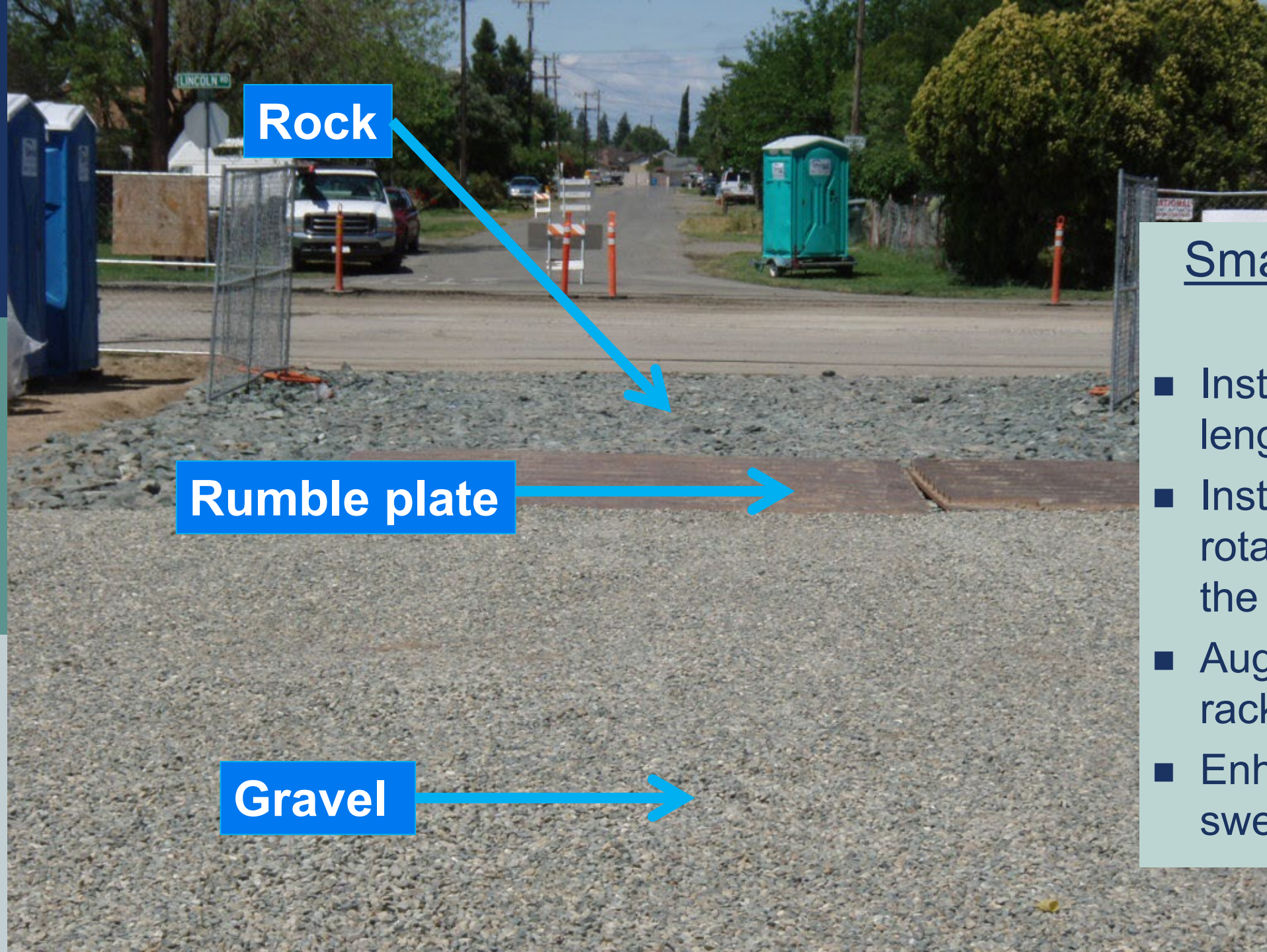
Type 2 Installation



Stabilized Entrance/Exit Standard Design

- Rock pad underlain with a geotextile fabric
 - 10 feet wide – accommodate width of vehicles
 - 50 feet long – accommodate several wheel rotations
 - 3-inch to 8-inch rock (sources vary on rock size)
 - 6 to 12 inches deep layer of rocks





Rock

Rumble plate

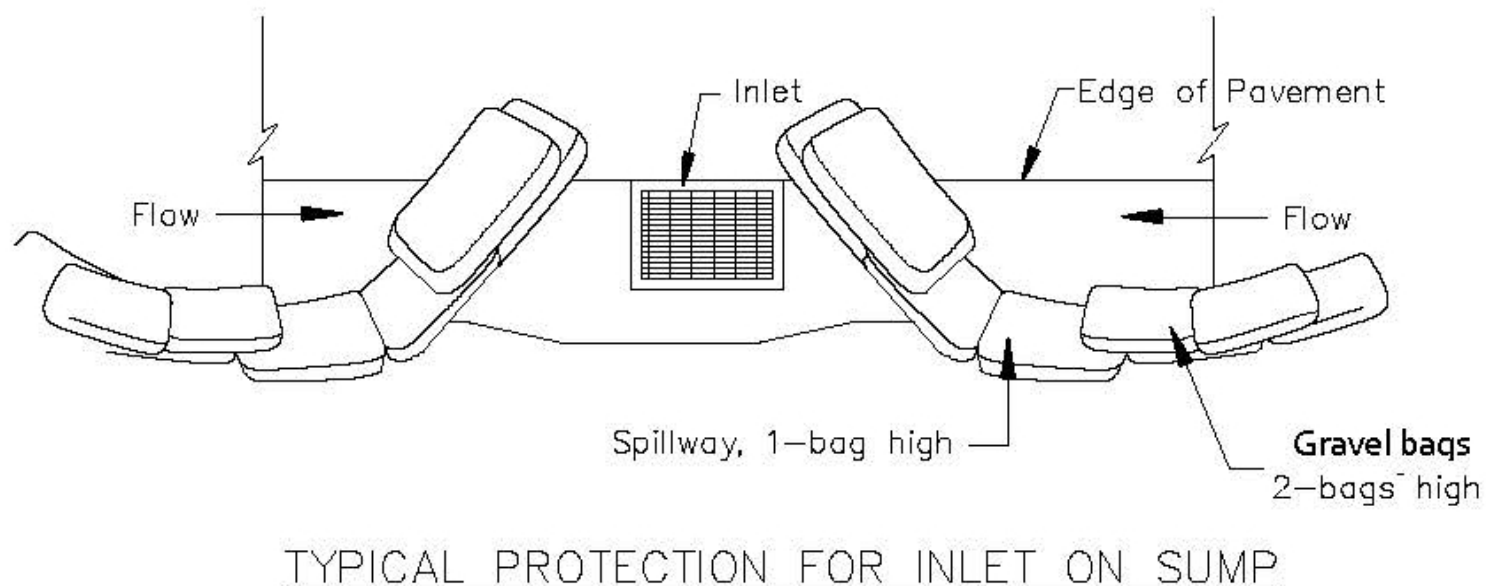
Gravel

Small Site Tips for Inspectors

- Install maximum length site will allow
- Install to allow two full rotations of tires of the typical vehicle
- Augment with rumble racks
- Enhance street sweeping

Drain Inlet Protection

Last Line of Defense



Tips for Inspectors

- Cannot be the only BMP!
- Look for protection at drains on-site and immediately off-site
- Woven geotextile bags (in good condition)
- Bags filled with gravel
- Not stacked higher than curb line
- Spillway for water to get to DI
- Cannot use silt fence fabric over inlet

Active Treatment Systems

- System that uses chemical coagulation, chemical flocculation, or electro-coagulation to reduce turbidity
- Systems typically include basins or holding tanks, pumps, filtration units, and online monitoring systems
- If ATS is used must meet the CGP ATS requirements



Tips for Inspectors

- Check how chemicals are stored
 - Secondary containment!
- Check the discharge point
 - Effluent should be clear
 - No signs of erosion

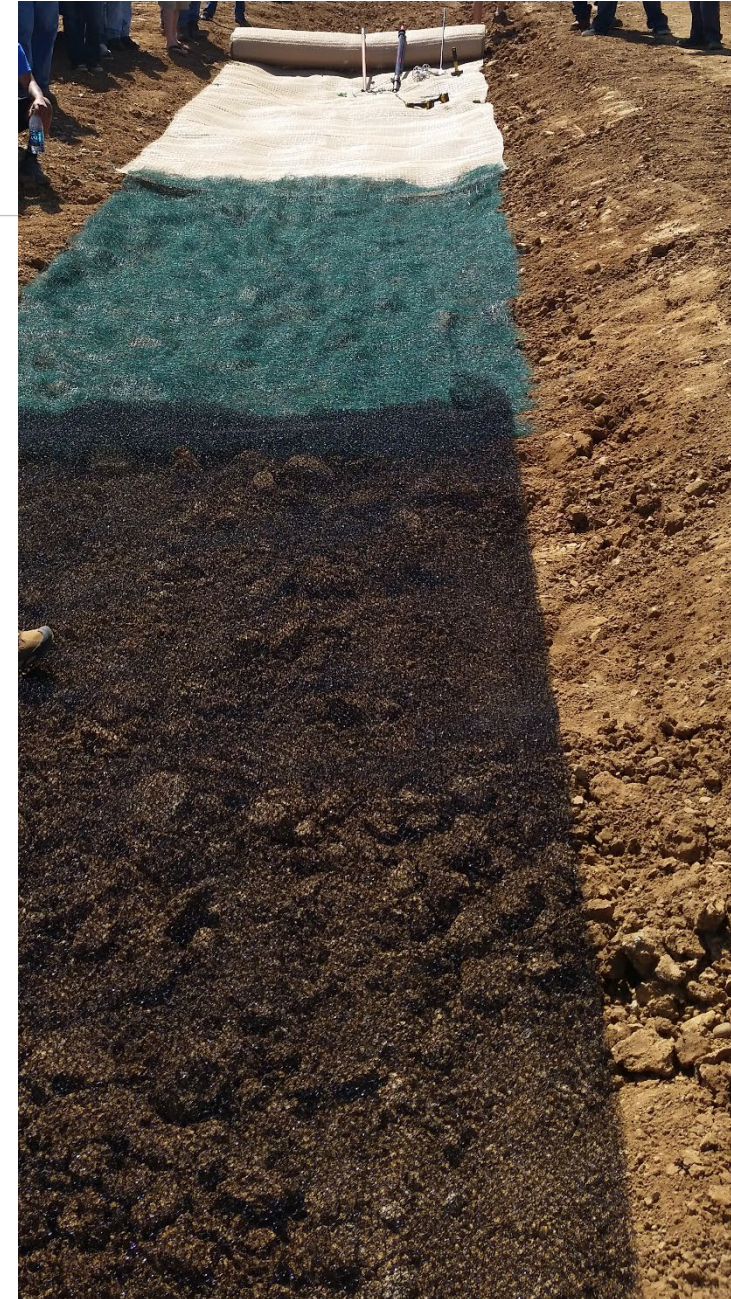
Run-on and Runoff Controls

Run-on Control

- Manage/divert runoff and dry weather flows that originate outside the project around the project or disturbed areas

Runoff Control

- Manage runoff within the project
 - Prevent runoff from flowing through disturbed areas
 - Direct runoff to sediment controls



Good housekeeping

- Source control practices that minimize exposure of construction materials and waste to rain and wind



- Tip for Inspectors
- Check material and waste storage areas
 - Is the site prepared for spills and leaks

Stockpile Management



Tip for Inspectors

- Covers for inactive soil piles
- Covers tied down
- Perimeter controls for soil piles

Sanitary Waste Management

- Manage sanitary wastes by providing convenient, appropriately placed, well-maintained facilities
- Arrange for regular service and disposal

Tips for Inspectors

- Placed on flat surface and secure units
- Out of gutter and away from storm drains
- Secondary containment



Tips for Inspectors

- Covers in place or available to be deployed
- Excessive litter on site
- Uncontained piles of trash
- Leaks from bins

Waste and Litter Management



Non-Stormwater Management



Tips for Inspectors

- Look for evidence of discharge, e.g., stains, wet areas
- Ask about hoses or unlabeled pipes

Concrete Washout



Tips for Inspectors

- Wash out set up before start of concrete operations
- Leaks or damaged containers
- Overtopping
- Away from storm drains

Copper is a Significant Water Quality Concern

- Copper is used in a variety of architectural features
 - When installed these features may be cleaned, treated (patinated), or washed
- Treatment solutions and rinse or wash water from copper features must be collected for proper disposal



Source: Wiki commons,
<http://www.rutlandguttersupply.com/copper-dome.asp>

Tips for Inspectors

- Ask operators about plans treat or wash copper features

C.6 Minimum BMP Recap

BMP	Typical Applications
1. Erosion Control	Apply <u>on</u> graded areas and soil stockpiles.
2. Sediment Control	Apply <u>around</u> graded areas, soil stockpiles, landscape materials, site perimeter, at inlets/ catch basins. Includes sweeping and tracking
3. Run-on and Runoff Control	Diverts water away from disturbed areas and controls water leaving site.
4. Active Treatment Systems	Not common, chemical treatment systems to remove sediment.
5. Good Site Management	Good housekeeping and site management throughout site, especially material laydown areas.
6. Non-stormwater Management	Water conservation and practices to prevent non-stormwater discharges.

Inspections and Documentation

Best Practices and Tools

Goals of Inspection

Assess compliance with local ordinances

Check adequacy and effectiveness of BMPs

Require correction of problems

Observe

- Evidence of sediment discharges
- Evidence of discharge of construction materials
- Evidence of illicit connections/discharges

Educate on stormwater pollution prevention

Preparation for Inspection

- Review existing information
 - Past Inspection Records
 - Site Plan/SWPPP Plan
 - Check with other inspectors
- Other useful information
 - SWPPP or Erosion Control Plan
 - Locate site with mapping tools (e.g., GIS, Google Maps) to understand location in watershed
 - Information in SMARTS on CGP sites
 - Annual Reports
 - Monitoring data (pH, turbidity)



Aplicación de Concreto Fresco y Ladrillo



Mejores Prácticas Para la Industria de Construcción



Programa de Agua
Del Condado de Co
Costa

Preparation for Inspection

- Gather equipment and tools
 - PPE – hard hat, safety glasses, safety shoes, vest
 - Identification
 - Copy of Site Map, plan, schedule
 - Inspection form blanks or field log
 - Camera
 - Enforcement documents
 - Brochures/info

HEAVY EQUIPMENT OPERATION




Best Management Practices for the Construction Industry



Contra Costa
Clean Water Program

Documenting the Inspection

- Complete the inspection form
- Mirrors the MRP requirements
 - Facilitates reporting
 - Provide consistency across agencies
- Accounts for CGP requirements
 - Used for CIPs

Construction Site Inspection Report						
Project Name:			Inspection Date:			
Location			Current weather (check all that apply) <input type="checkbox"/> Sunny <input type="checkbox"/> Cloudy <input type="checkbox"/> Windy <input type="checkbox"/> Rainy			
Permit No.		Permit Type: <input type="checkbox"/> Building <input type="checkbox"/> Grading <input type="checkbox"/> Site Development <input type="checkbox"/> CIP Project				
Project Type: <input type="checkbox"/> Commercial/Industrial <input type="checkbox"/> Residential <input type="checkbox"/> Street Improvement <input type="checkbox"/> Landscaping						
Does the project disturb one acre or more? <input type="checkbox"/> Yes <input type="checkbox"/> No			Erosion Control Plan on site? <input type="checkbox"/> Yes <input type="checkbox"/> No			
Copy of NOI submitted? <input type="checkbox"/> Yes <input type="checkbox"/> No			Date on SWPPP: _____			
SWPPP on site? <input type="checkbox"/> Yes <input type="checkbox"/> No			Date on Erosion Control Plan: _____			
Covered by Statewide Construction General Permit? <input type="checkbox"/> Yes <input type="checkbox"/> No			High Priority Site? <input type="checkbox"/> Yes <input type="checkbox"/> No			
			Not Applicable	Adequate	Needs Attention	Violation
			If, following discovery of a violation, more than 10 business days will be required to achieve compliance, then include a rationale for that schedule in the comments.			
Erosion Control Measures			Comments			
Jute Netting/Fiber Blankets						
Mulch						
Hydroseed/Soil Binder/Compost Blanket						
Mark Areas to be Preserved						
Tree Protection Fencing						
Riparian Area Barrier						
Sediment Control Measures			Comments			
Wattles/Fiber Rolls/Compost Socks						
Silt Fences/Compost Berms						
Sedimentation Basin						
Inlet Filters (bags, sand, gravel)						
Dust Control						
Stabilized Construction Entrance						
Check Dams						
Street Sweeping						
Earth Dikes/Drainage Swales						
Run-on and Run-off Control			Comments			
Earth Dikes/Drainage Swales						
Sampling is conducted if required (CIPs only)						
Active Treatment System			Comments			
Good Site Management			Comments			
Construction Materials (wood, cement, etc.)						
Petroleum Products (oil, fuel)						
Hazardous Materials (paint, solvents)						
Waste Systems Management						
Soil Stockpiles						
Vehicle Servicing						
Non-Stormwater Management			Comments			
Concrete Washout Area						
Sampling is conducted if required (CIPs only)						
Discharge Points			Comments			
Are the discharge points free of evidence of illicit discharge? <input type="checkbox"/> Yes <input type="checkbox"/> No						
Enforcement and Follow-up		Date Problem First Identified:		Next Follow Up Inspection Date:		
Comments						
Enforcement Action: <input type="checkbox"/> None/In compliance <input type="checkbox"/> Verbal Notice <input type="checkbox"/> Notice to Comply <input type="checkbox"/> Notice of Violation <input type="checkbox"/> Stop Work <input type="checkbox"/> Administrative Fine						
Resolution <input type="checkbox"/> Problem Fixed <input type="checkbox"/> Need More Time <input type="checkbox"/> Escalate Enforcement			Date Problem Resolved:			
Was there rain with runoff after the problem was identified and before it was resolved? <input type="checkbox"/> Yes <input type="checkbox"/> No						
Inspector		Signature		Date		


Construction Site Inspection Report

Inspection Guidelines

Project Name:			
Location		Current weather (check all that apply) <input type="checkbox"/> Sunny <input type="checkbox"/> Cloudy <input type="checkbox"/> Windy <input type="checkbox"/> Rainy	
Permit No.	Permit Type:	<input type="checkbox"/> Building	<input type="checkbox"/> Grading
		<input type="checkbox"/> Site Development	<input type="checkbox"/> CIP Project
Project Type:		<input type="checkbox"/> Commercial/Industrial	<input type="checkbox"/> Residential
		<input type="checkbox"/> Street Improvement	<input type="checkbox"/> Landscaping
Does the project disturb one acre or more?		<input type="checkbox"/> Yes ↓	<input type="checkbox"/> No ↓
Copy of NOI submitted?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Erosion Control Plan on site? <input type="checkbox"/> Yes <input type="checkbox"/> No	
SWPPP on site?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Date on Erosion Control Plan:	
Covered by Statewide Construction General Permit?		<input type="checkbox"/> Yes <input type="checkbox"/> No	High Priority Site? <input type="checkbox"/> Yes <input type="checkbox"/> No

Project Information

Inspection Day Information

	Not Applicable	Adequate	Needs Attention	Violation	
					
If, following discovery of a violation, more than 10 business days will be required to achieve compliance, then include a rationale for that schedule in the comments.					
Erosion Control Measures					Comments
Jute Netting/Fiber Blankets	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Mulch	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Hydroseed/Soil Binder/Compost Blanket	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Mark Areas to be Preserved	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Tree Protection Fencing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Riparian Area Barrier	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Sediment Control Measures					Comments
Wattles/Fiber Rolls/Compost Socks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Silt Fences/Compost Berms	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Sedimentation Basin	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Inlet Filters (bags, sand, gravel)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Dust Control	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Stabilized Construction Entrance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Check Dams	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Street Sweeping	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Earth Dikes/Drainage Swales	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Run-on and Run-off Control					Comments
Earth Dikes/Drainage Swales	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Sampling is conducted if required (CIPs only)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Active Treatment System					Comments
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Good Site Management					Comments
Construction Materials (wood, cement, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Petroleum Products (oil, fuel)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Hazardous Materials (paint, solvents)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Waste Systems Management	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Soil Stockpiles	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Vehicle Servicing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Non-Stormwater Management					Comments
Concrete Washout Area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Sampling is conducted if required (CIPs only)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Discharge Points					Comments
Are the discharge points free of evidence of illicit discharge?					<input type="checkbox"/> Yes <input type="checkbox"/> No

BMP Observations

Illicit Discharge Observations

Follow-up Actions

Sign & Date Form

Enforcement and Follow-up	Date Problem First Identified:	Next Follow Up Inspection Date:
Comments		
Enforcement Action: <input type="checkbox"/> None/In compliance <input type="checkbox"/> Verbal Notice <input type="checkbox"/> Notice to Comply <input type="checkbox"/> Notice of Violation <input type="checkbox"/> Stop Work <input type="checkbox"/> Administrative Fine		
Resolution <input type="checkbox"/> Problem Fixed <input type="checkbox"/> Need More Time <input type="checkbox"/> Escalate Enforcement		Date Problem Resolved:
Was there rain with runoff after the problem was identified and before it was resolved? <input type="checkbox"/> Yes <input type="checkbox"/> No		
Inspector	Signature	Date

Document BMP Observations and Actual and Potential Illicit Discharges

- ☑ Not Applicable
- ☑ Adequate
- ☑ Needs Attention
- ☑ Violation
- Comments
 - Document needed actions for BMPs identified as Needs Attention or Violations
 - For actual or potential discharges give a time-frame to correct
 - Before next rain event or 10 business days
 - If longer than 10 business days, provide justification



Use the Inspection Form to Document Enforcement

- Re-inspection
- Enforcement action taken
- Resolution

Enforcement and Follow-up	Date Problem First Identified:	Next Follow Up Inspection Date:
Comments Enforcement Action: <input type="checkbox"/> None/In compliance <input type="checkbox"/> Verbal Notice <input type="checkbox"/> Notice to Comply <input type="checkbox"/> Notice of Violation <input type="checkbox"/> Stop Work <input type="checkbox"/> Administrative Fine		
Resolution <input type="checkbox"/> Problem Fixed <input type="checkbox"/> Need More Time <input type="checkbox"/> Escalate Enforcement <input type="checkbox"/> Date Problem Resolved: Was there rain with runoff after the problem was identified and before it was resolved? <input type="checkbox"/> Yes <input type="checkbox"/> No		
Inspector	Signature	Date

Inspection Situations











Downstream of site



Upstream of site













2022 Construction General Stormwater Permit

2022 CGP

https://www.waterboards.ca.gov/water_issues/programs/stormwater/construction.html

CALIFORNIA STATE WATER RESOURCES CONTROL BOARD
1001 I Street Sacramento, CA 95814
<https://www.waterboards.ca.gov>

**NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
GENERAL PERMIT FOR STORMWATER DISCHARGES ASSOCIATED WITH
CONSTRUCTION AND LAND DISTURBANCE ACTIVITIES
(GENERAL PERMIT)**

ORDER WQ 2022-0057-DWQ
NPDES NO. **CAS000002**

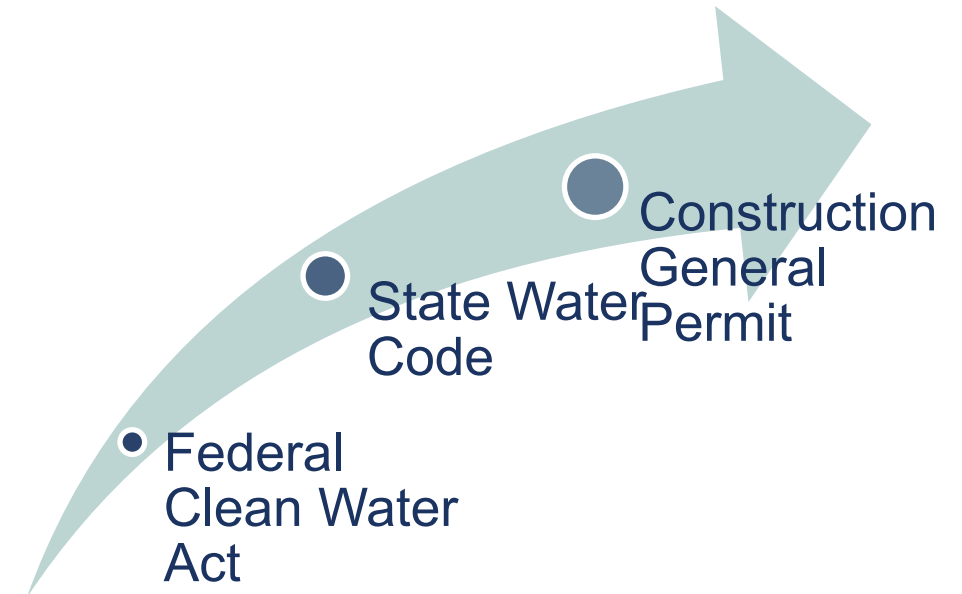
This Order was adopted by the State Water Resources Control Board on:	September 8, 2022
This Order shall become effective on:	September 1, 2023
The statewide programmatic permitting option per Section III.B.4 of this Order shall become effective on:	December 17, 2022
This Order shall expire on:	August 31, 2028

IT IS HEREBY ORDERED that this Order supersedes Order 2009-0009-DWQ as amended by Order 2010-0014-DWQ and 2012-0006-DWQ except for: (1) the requirement to submit annual reports by September 1, 2023, (2) enforcement purposes, and (3) as set forth in Section III.C of this Order. The discharger shall comply with the requirements in this Order to meet the provisions contained in Division 7 of the California Water Code (commencing with § 13000) and regulations adopted thereunder, and the provisions of the federal Clean Water Act and regulations and guidelines adopted thereunder.

IT IS ALSO HEREBY ORDERED that on or after December 17, 2022, a discharger deploying Executive Order N-73-20 may obtain regulatory coverage through the statewide programmatic permitting option in Section III.B.4 under Order 2009-0009-DWQ as amended by Orders 2010-0014-DWQ and 2012-0006-DWQ until September 1, 2023.

CGP implements federal and state water quality requirements

- Construction sites that disturb \geq one acre of soil
 - Statewide general permit
 - Regulates stormwater and some non-stormwater discharges from construction sites
- Issued to the construction site (landowner)
- Requires plans and BMPs to protect stormwater and prevent non-stormwater discharges



Basic CGP requirements



Develop a Stormwater Pollution Prevention Plan (SWPPP)



Develop Post Construction BMP Plan



Submit a Permit Application – Notice of Intent (NOI)



Implement and maintain the BMPs and SWPPP



Monitor the site



Complete and certify annual reports



File a Notice of Termination (NOT)

2022 CGP effective date and regulatory transition period



- Two parallel CGPs will be in effect from 9/1/2023 until 9/1/2025
- Projects with active WDID numbers before 9/1/2023, can remain under the 2009 CGP until the end of the transition period
 - New area added to an existing project after 9/1/2023 will be under the 2022 CGP

Getting coverage under the 2022 CGP

New/Changed Requirements

- New SMARTS interface for the 2022 CGP
- Permit fee based on total disturbed area
- Submit Post Construction Plans with CGP application
- Projects separated by ¼ mile are not considered a common plan of development

Stormwater Multiple Application and Report Tracking System

California Water Boards | CalEPA California Environmental Protection Agency | CA.GOV

You are logged in as Sandra Mathews. If this account does not belong to you, please log out.

Start a New Application | Active Applications | File Reports | Account Management | Recertify Existing Applications | Document Ready for Certification

Pending Applications
View and continue applications that are in progress or have been returned.

Submitted Applications
Manage active and terminated applications processed by the State Water Board.
(Submit a Change of Information, amend a Stormwater Pollution Prevention Plan, convert to a No Exposure Certification, view inspections and reports, etc.)

Documents Ready for Certification
For the Legally Responsible Person and Duly Authorized Representative(s):
View, certify, and submit documents to the State Water Board.

File Reports
View previously submitted reports and submit new reports to ensure permit compliance.

Account Management
Perform administrative tasks associated with your account.
(Update organization info, manage Legally Responsible Person, manage linked users, manage Compliance Groups, view outstanding invoices, self-certify as a QSD, etc.)

Recertify Existing Application
Recertify an annual No Exposure Certification or coverage under a reissued General Permit.

CGP projects in Contra Costa need to comply with C.3 requirements

- Upload an attachment or web source of the post construction standards
- Upload preliminary or approved Post Construction BMP Plan and calculations
 - If uploading a preliminary plan, need to upload approved plans within 14-days of plan approval by the local agency



CONTRA COSTA
CLEAN WATER
PROGRAM

STORMWATER C.3 GUIDEBOOK

Stormwater Quality Requirements for Development Applications

8th Edition
December 23, 2022
Visit www.ccleanwater.org for updates.

Qualified SWPPP Developer and Practitioner responsibilities

- Projects must have QSD and QSP throughout the project
- Mandates QSDs and QSPs conduct specified inspections that may not be delegated
- QSPs must provide specified training to staff performing delegated tasks
 - Foundational training, e.g., how to use weather forecasts
 - Site specific training, e.g., where to collect samples at the site
- State Water Board may take action against QSDs and QSPs found to be negligent
- QSDs and QSPs must complete a reissuance review for the 2022 CGP prior to their credential expiration
 - Self-certified QSDs (e.g., professional engineers) must complete the recertification process within a year of the effective date

Fundamental changes to inspections and monitoring



Definition of the
qualifying precipitation
event (QPE)



Sampling frequency
and reporting



Data evaluation



Who does inspections

New term: Qualifying Precipitation Event

- A QPE is any weather pattern that is forecast to have a **50 percent or greater Probability of Precipitation** and a **Quantitative Precipitation Forecast (QPF) of 0.5 inches or more within a 24-hour period**.
 - The event begins with the 24-hour period when 0.5 inches has been forecast and continues on subsequent 24-hour periods when 0.25 inches of precipitation or more is forecast
- Use the National Weather Service Weather Table
 - <https://www.weather.gov/wrh/wxtable>

2009 Qualifying Rain Event Definition

Any event that produces 0.5 inches or more precipitation with a 48 hour or greater period between rain events.

Qualifying Precipitation Example #1

	December 31				January 1				January 2				January 3			
Time	4a	10a	4p	10p	4a	10a	4p	10p	4a	10a	4p	10p	4a	10a	4p	10p
PoP	55	95	100	40	15	-	-	-	-	5	50	55	30	30	30	35
QPF	0.02	0.13	0.83	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.1	0.01	0.01	0.01	0.04
QPE	1st QPE – Start & End				No QPE				No QPE				No QPE			

	January 4				January 5				January 6				January 7			
Time	4a	10a	4p	10p	4a	10a	4p	10p	4a	10a	4p	10p	4a	10a	4p	10p
PoP	35	45	60	80	75	55	35	30	20	15	15	15	-	-	-	-
QPF	0.05	0.11	0.28	0.51	0.35	0.30	0.27	0.11	0.07	0.05	0.00	0.00	0.00	0.00	0.00	0.00
QPE	No QPE		2nd QPE – Day 1 (Start)				2nd QPE – Day 2 (End)		No QPE				No QPE			

PoP = Probability of Precipitation

QPF = Quantitative Precipitation Forecast

QPE = Qualifying Precipitation Event

Source: California Water Boards

Sampling frequency, reporting, and data evaluation

- pH and turbidity sampling frequency
 - Collect one sample from each actively discharging location each 24-hour period of the QPE
 - 1 discharge point = 1 sample per day
 - 10 discharge points = 10 samples per day
- pH and turbidity data must be uploaded to SMARTS after each precipitation event
 - NAL exceedance: Within 10 days of the completion of the precipitation event
 - Data within NAL: Within 30 days of the completion of the precipitation event
- Evaluation of pH and turbidity Numeric Action Levels (NALs)
 - **No more averaging of results**
 - Exceedance occurs when any sample exceeds the NAL value

Parameter	NAL
pH	< 6.5 to > 8.5
Turbidity	> 250 NTU

Only trained QSP Delegates, QSPs, or QSDs may collect samples

Who can perform inspections

Inspection Type	QSD	QSP	QSP-Delegate
Twice annual	<input checked="" type="checkbox"/>		
Within 30 days of construction start and replacing QSD	<input checked="" type="checkbox"/>		
As requested by Regional Water Board	<input checked="" type="checkbox"/>		
Inactive sites – within 14 days of COI approval	<input checked="" type="checkbox"/>		
Within 14 days of NAL exceedance	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Monthly	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Pre-precipitation event	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Weekly	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
During and post-precipitation event	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Inactive sites – Monthly and pre-precipitation event	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Prior to COI and NOT submissions	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	

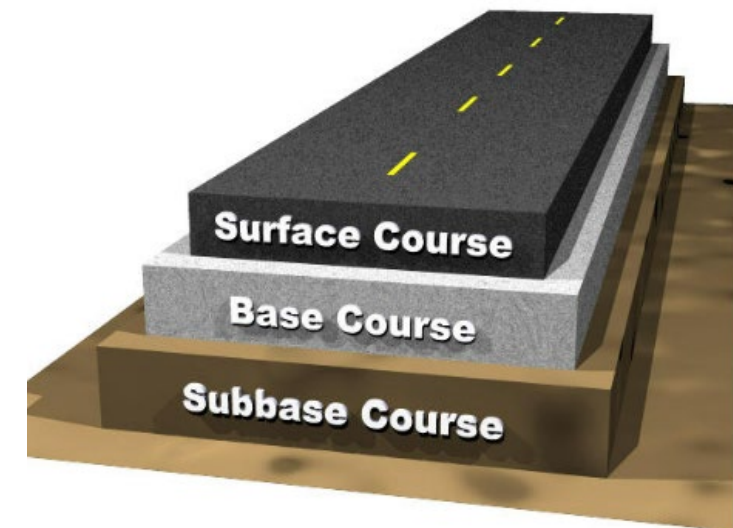
CGP Required CGP Allowed

New definition: Routine Maintenance for Roads

Routine maintenance for road and highway projects is defined as the replacement of the structural section, but not when the activity exposes the underlying soil or erodible subgrade.

- Road maintenance projects that *expose* ≥ 1 acre of soil and/or subgrade are subject to the CGP

Order Section II.B.1
Attachment B Glossary



Source: <https://pavementinteractive.org/>

New requirement: Reducing acreage on residential subdivision

- 2022 CGP allows projects to remove residential lots from CGP coverage
 - Lots can be removed before final stabilization of the front and/or back yards

- Must meet the following criteria
 - All construction is complete
 - Lot is less than one acre of disturbance
 - Home is sold to individual homeowner
 - Certificate of Occupancy issued
 - Temporary stabilization BMPs are installed
 - Homeowner is contracted to
 - Maintain BMPs
 - Complete final stabilization within one year



Source: California Water Boards

Order Section III.F.2.b

New BMPs and Controls

- Passive Treatment BMPs

- Use must comply with Attachment G



- Dewatering plans or permits

- West County – Develop dewatering plan per Attachment J
- East County – Apply for the Central Valley Regional General Dewatering Permit for
 - [Order R5-2022-0006-01](#)
 - **Projects need to plan well in advance to acquire the dewatering permit**

Dewatering is mechanical pumping or siphoning non-potable water from excavations, foundations, vaults, impoundments, trenches and groundwater removal specifically related to construction activities

New/Changed requirements: Terminating CGP coverage

- Final erosion control BMPs cannot have plastic nets (wildlife entrapment)
- QSP must inspect and complete inspection report that verifies the site meets the termination criteria
- Photos demonstrating final stabilization and the applicable post-construction BMPs
- More detailed final site map(s)
 - Photo orientation references, locations of permanent erosion/sediment control and post construction BMPs, etc.
- Long-term maintenance plan for the post-construction BMPs

- NOT is automatically approved after 30 days if Regional Water Board does not act on it

Wrap up and resources

- CGP - https://www.waterboards.ca.gov/water_issues/programs/stormwater/construction.html
- SMARTS - <https://smarts.waterboards.ca.gov/smarts/faces/SwSmartsLogin.xhtml>
- SMARTS help guides - https://www.waterboards.ca.gov/water_issues/programs/stormwater/smarts/construction/construction_help_guides.html
- CASQA Construction BMP Handbook and SWPPP Template <https://www.casqa.org/resources/bmp-handbooks/construction-bmp>
- 2022 CGP Reissuance Review (for the public) <https://www.casqa.org/resources/training/cgp-training-program/2022-cgp-reissuance-review> (QSDs and QSPs need to complete the review in their accounts to get credit)
- State Water Board CGP Roadshow https://www.waterboards.ca.gov/water_issues/programs/stormwater/construction/general_permit_reissuance.html#roadshow

**Please complete the
post-workshop survey and
evaluation**

C.6 Workshop Post-Workshop Knowledge Survey & Evaluation

