

Standard Erosion Control Documents

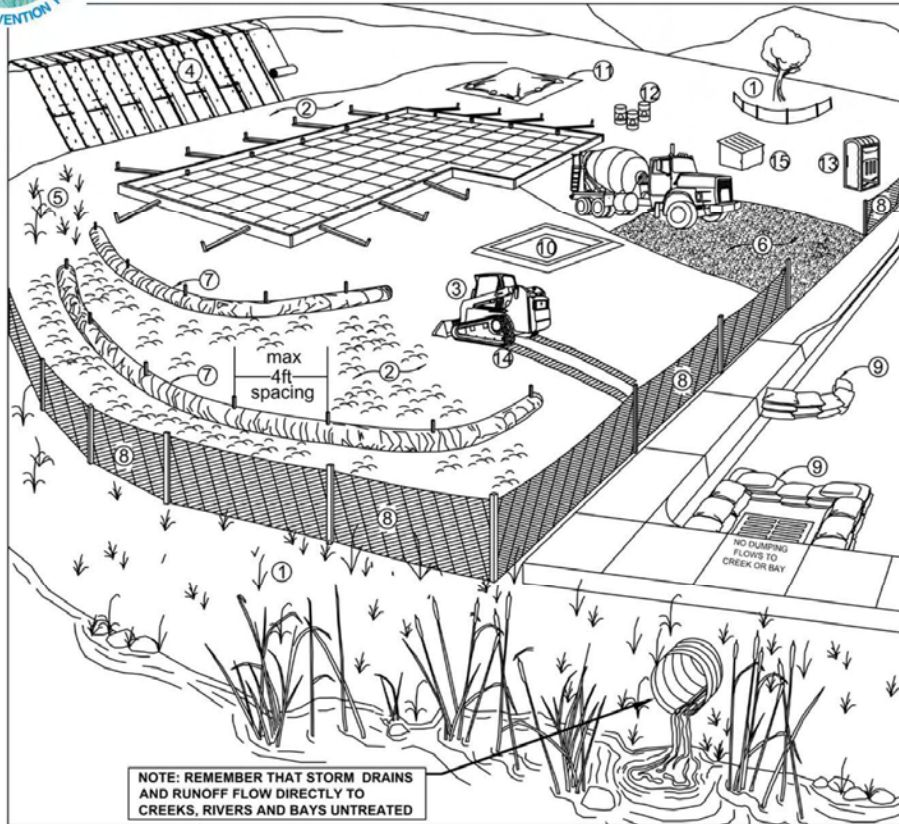
- a. MSTOPPP Standard Erosion Control Measures





## Marin County Stormwater Pollution Prevention Program

### Minimum Control Measures For Small Construction Projects



Erosion Controls	Sediment Controls	Good Housekeeping
NS Scheduling	6. Tracking Controls	10. Concrete Washout
1. Preserve Vegetation & Creek Set Backs	7. Fiber Rolls	11. Stockpile Management
2. Soil Cover	8. Silt Fence	12. Hazardous Material Management
3. Soil Preparation/ Roughening	9. Drain Inlet Protection	13. Sanitary Waste Management
4. Erosion Control Blankets	NS Trench Dewatering	14. Equipment and Vehicle Maintenance
5. Revegetation		15. Litter and Waste Management

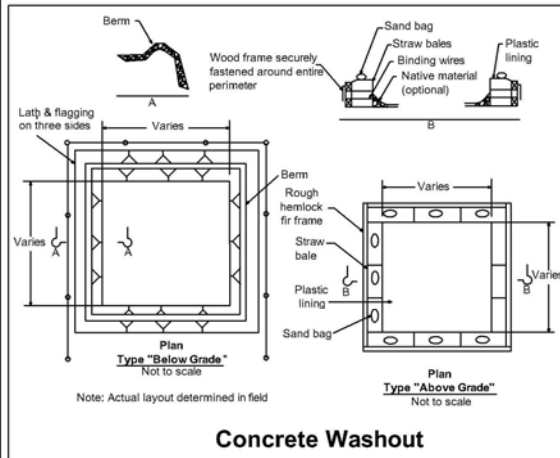
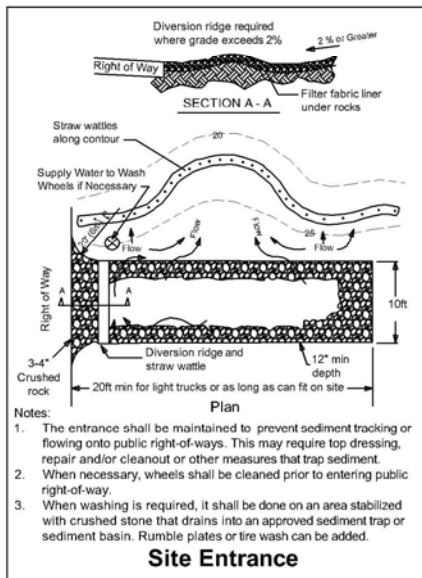
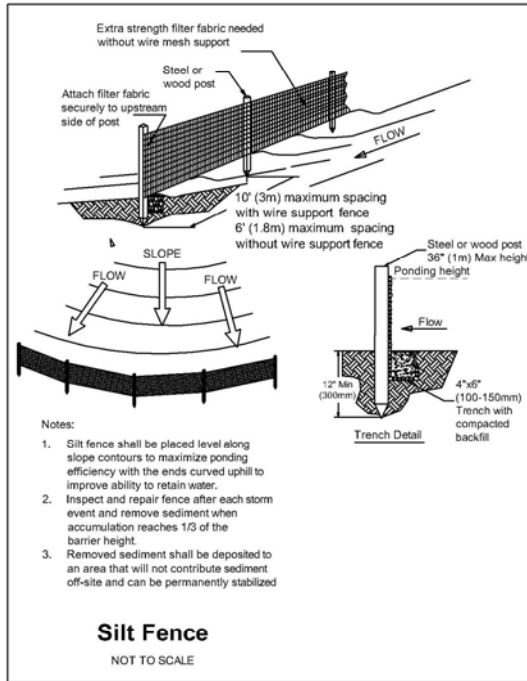
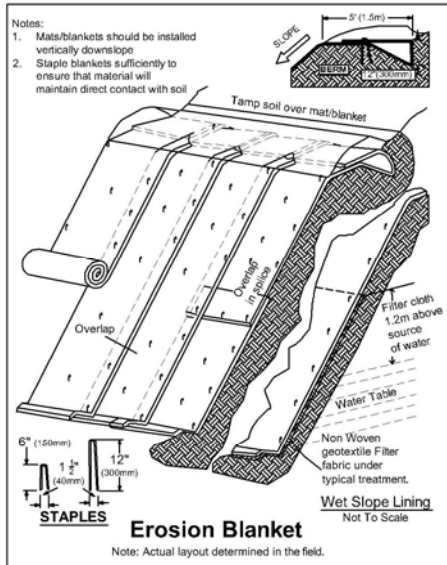
NS=not shown on graphic

**Note:** Select an **effective combination of control measures from each category**, Erosion Control, Sediment Control, and Good Housekeeping. Control measures shall be **continually implemented and maintained throughout the project** until activities are complete, disturbed areas are stabilized with permanent erosion controls, and the local agency has signed off on permits that may have been required for the project. **Inspect and maintain the control measures** before and after rain events, and as required by the local agency or state permit.

More detailed information on the BMPs can be found in the related California Stormwater Quality Association (CASQA) and California Department of Transportation (Caltrans) BMP Factsheets. CASQA factsheets are available by subscription in the *California Best Management Practices Handbook Portal: Construction* at <http://www.casqa.org>. Caltrans factsheets are available in the *Construction Site BMP Manual March 2003* at <http://www.dot.ca.gov/hq/construc/stormwater/manuals.htm>. Visit [www.mcstopp.org](http://www.mcstopp.org) for more information on construction site management and Erosion and Sediment Control Plans.

If you require materials in alternative formats, please contact:  
415-473-4381 voice/TTY or [disabilityaccess@co.marin.ca.us](mailto:disabilityaccess@co.marin.ca.us)

Control Measure		General Description
<b>Erosion Control Best Management Practices</b>		
N/A	Scheduling	Plan the project and develop a schedule showing each phase of construction. Schedule construction activities to reduce erosion potential, such as scheduling ground disturbing activities during the summer and phasing projects to minimize the amount of area disturbed. <i>For more info see the following factsheets: CASQA: EC-1; or Caltrans: SS-1.</i>
1	Preserve Existing Vegetation and Creek Setbacks	Preserve existing vegetation to the extent possible, especially along creek buffers. Show creek buffers on maps and identify areas to be preserved in the field with temporary fencing. Check with the local Planning and Public Works Departments for specific creek set back requirements. <i>For more info see the following factsheets: CASQA: EC-2; or Caltrans: SS-2.</i>
2	Soil Cover	Cover exposed soil with straw mulch and tackifier (or equivalent). <i>For more info see the following factsheets: CASQA: EC-3, EC-5, EC-6, EC-7, EC-8, EC-14, EC-16; or Caltrans: SS-2, SS-4, SS-5, SS-6, SS-7, SS-8.</i>
3	Soil Preparation/Roughening	Soil preparation is essential to vegetation establishment and BMP installation. It includes soil testing and amendments to promote vegetation growth as well as roughening surface soils by mechanical methods (decompacting, scarifying, stair stepping, etc.). <i>For more info see the following factsheets: CASQA: EC-15.</i>
4	Erosion Control Blankets	Install erosion control blankets (or equivalent) on disturbed sites with 3:1 slopes or steeper. Use wildlife-friendly blankets made of biodegradable natural materials. Avoid using blankets made with plastic netting or fixed aperture netting. See: <a href="http://www.coastal.ca.gov/nps/Wildlife-Friendly_Products.pdf">http://www.coastal.ca.gov/nps/Wildlife-Friendly_Products.pdf</a> . <i>For more info see the following factsheets: CASQA: EC-7; or Caltrans: SS-7.</i>
5	Revegetation	Re-vegetate areas of disturbed soil or vegetation as soon as practical. <i>For more info see the following factsheets: CASQA: EC-4; or Caltrans: SS-4.</i>
<b>Sediment Control Best Management Practices</b>		
6	Tracking Controls	Stabilize site entrance to prevent tracking soil offsite. Inspect streets daily and sweep street as needed. Require vehicles and workers to use stabilized entrance. Place crushed rock 12-inches deep over a geotextile, using angular rock between 4 and 6-in. Make the entrance as long as can be accommodated on the site, ideally long enough for 2 revolutions of the maximum tire size (16-20 feet long for most light trucks). Make the entrance wide enough to accommodate the largest vehicle that will access the site, ideally 10 feet wide with sufficient radii for turning in and out of the site. Rumble pads or rumble racks can be used in lieu of or in conjunction with rock entrances. Wheel washes may be needed where space is limited or where the site entrance and sweeping is not effective. <i>For more info see the following factsheets: CASQA: TC-1; TC-3; or Caltrans: TC-1; TC-3.</i>
7	Fiber Rolls	Use fiber rolls as a perimeter control measure, along contours of slopes, and around soil stockpiles. On slopes space rolls 10 to 20 feet apart (using closer spacing on steeper slopes). Install parallel to contour. If more than one roll is used in a row overlap roll do not abut. J-hook end of roll upslope. Install rolls per either Type 1 (stake rolls into shallow trenches) or Type 2 (stake in front and behind roll and lash with rope). Use wildlife-friendly fiber rolls made of biodegradable natural materials. Avoid using fiber rolls made with plastic netting or fixed aperture netting. See: <a href="http://www.coastal.ca.gov/nps/Wildlife-Friendly_Products.pdf">http://www.coastal.ca.gov/nps/Wildlife-Friendly_Products.pdf</a> . Manufactured linear sediment control or compost socks can be used in lieu of fiber rolls. <i>For more info see the following factsheets: CASQA: SE-5 (Type 1); SE-12, SE-13; or Caltrans: SC-5 (Type 1 and Type 2).</i>
8	Silt Fence	Use silt fence as a perimeter control measure, and around soil stockpiles. Install silt fence along contours. Key silt fence into the soil and stake. Do not use silt fence for concentrated water flows. Install fence at least 3 feet back from the slope to allow for sediment storage. Wire backed fence can be used for extra strength. Avoid installing silt fence on slopes because they are hard to maintain. Manufactured linear sediment control can be used in lieu of silt fences. <i>For more info see the following factsheets: CASQA: SE-1; SE-12; or Caltrans: SC-1.</i>
9	Drain Inlet Protection	Use gravel bags, (or similar product) around drain inlets located both onsite and in gutter as a last line of defense. Bags should be made of a woven fabric resistant to photo-degradation filled with 0.5-1-in washed crushed rock. Do not use sand bags or silt fence fabric for drain inlet protection. <i>For more info see the following factsheets: CASQA: SE-10; or Caltrans: SC-10.</i>
N/A	Trench Dewatering	Follow MCSTOPPP BMPs for trench dewatering. <a href="http://www.marincounty.org/depts/pw/divisions/mcstoppp/development/~media/Files/Departments/PW/mcstoppp/development/TrenchingSWReqMCSTOPPPFinal6_0_9.pdf">http://www.marincounty.org/depts/pw/divisions/mcstoppp/development/~media/Files/Departments/PW/mcstoppp/development/TrenchingSWReqMCSTOPPPFinal6_0_9.pdf</a> . <i>For more info see the following factsheets: CASQA: NS-2; or Caltrans: NS-2.</i>
<b>Good Housekeeping Best Management Practices</b>		
10	Concrete Washout	Construct a lined concrete washout site away from storm drains, waterbodies, or other drainages. Ideally, place adjacent to stabilized entrance. Clean as needed and remove at end of project. <i>For more info see the following factsheets: CASQA: WM-8; or Caltrans: WM-8.</i>
11	Stockpile Management	Cover all stockpiles and landscape material and berm properly with fiber rolls or sand bags. Keep behind the site perimeter control and away from waterbodies. <i>For more info see the following factsheets: CASQA: WM-3 or Caltrans: WM-3.</i>
12	Hazardous Material Management	Hazardous materials must be kept in closed containers that are covered and within secondary containment; do not place containers directly on soil. <i>For more info see the following factsheets: CASQA: WM-6; or Caltrans: WM-6.</i>
13	Sanitary Waste Management	Place portable toilets near stabilized site entrance, behind the curb and away from gutters, storm drain inlets, and waterbodies. Tie or stake portable toilets to prevent tipping and equip units with overflow pan/tray (most vendors provide these). <i>For more info see the following factsheets: CASQA: WM-9; or Caltrans: WM-9.</i>
14	Equipment and Vehicle Maintenance	Prevent equipment fluid leaks onto ground by placing drip pans or plastic tarps under equipment. Immediately clean up any spills or drips. <i>For more info see the following factsheets: CASQA: NS-8, NS-9, and NS-10; or Caltrans: NS-8, NS-9, and NS-10.</i>
15	Litter and Waste Management	Designate waste collection areas on site. Use watertight dumpsters and trash cans; inspect for leaks. Cover at the end of each work day and when it is raining or windy. Arrange for regular waste collection. Pick up site litter daily. <i>For more info see the following factsheets: CASQA: WM-5; or Caltrans: WM-5.</i>



*In Marin, all storm drains go directly to local waterways!*

# **POLLUTION PREVENTION IT'S PART OF THE PLAN**

## **MAKE SURE YOUR CREWS AND SUBS DO THE JOB RIGHT!**

Runoff from streets and other paved areas is a major source of pollution in San Francisco Bay. Construction activities can directly affect the health of the Bay unless contractors and crews plan ahead to keep dirt, debris, and other construction waste away from storm drains and local creeks. Following these guidelines will ensure your compliance with local ordinance requirements. Contact your local stormwater coordinator (see reverse). Storm drain polluters may be liable for fines!

### **EARTHWORK & CONTAMINATED SOILS**

- ▶ Avoid scheduling earth disturbing activities during the rainy season if possible. If grading activities during wet weather are allowed in your permit, be sure to implement all measures necessary to prevent erosion.
- ▶ Mature vegetation is the best form of erosion control. Minimize disturbance to existing vegetation whenever possible.
- ▶ If you disturb a slope during construction, prevent erosion by securing the soil with erosion control fabric, or seed with fast-growing grasses as soon as possible. Place a silt barrier downslope until soil is secure.
- ▶ Keep excavated soil on the site where it is least likely to collect in the street. Transfer to dump trucks should occur on the site, not in the street.
- ▶ Use sand bags, silt fences, hay bales, straw logs or other control measures to prevent the flow of silt off the site and into storm drains or creeks.

### **PAVING/ASPHALT WORK**

- ▶ Do not pave during wet weather or when rain is forecast.
- ▶ Always cover storm drain inlets and manholes when paving or applying seal coat, tack coat, slurry seal, or fog seal.
- ▶ Do not sweep or wash down excess materials into storm drains, ditches or creeks. Collect these materials and return them to stockpiles, or dispose of as trash.
- ▶ Do not use water to wash down fresh asphalt or concrete pavement.

### **DEWATERING OPERATIONS**

- ▶ Reuse water for dust control, irrigation, or another on-site purpose to the greatest extent possible.
- ▶ Be sure to call the local Stormwater Coordinator before discharging water to a street, storm drain, or creek. Filtration or diversion through a basin, tank, or sediment trap may be required.

### **MATERIALS STORAGE & WASTE DISPOSAL**

- ▶ Sweep streets and other paved areas daily. Never wash down streets or work areas with water!
- ▶ Be sure to store any stockpiles of dirt, sand, asphalt, concrete, grout, or mortar under cover and away from drainage areas. These materials must never reach a storm drain, or other watercourse.
- ▶ Wash out concrete equipment trucks off-site, or designate an on-site area for washing where water will flow into a temporary pit in a dirt area. Let the water seep into the soil and dispose of hardened concrete with trash.
- ▶ Divert water from washing exposed aggregate concrete to a dirt area where it will not run into a gutter, street, or storm drain.
- ▶ If a suitable dirt area is not available, collect the wash water and remove it for appropriate disposal off site.

### **HAZARDOUS MATERIALS MANAGEMENT**

- ▶ Label all hazardous materials/wastes (such as pesticides, paints, thinners, solvents, fuel, oil, and antifreeze) in accordance with city, state, and federal regulations.
- ▶ Store hazardous materials and wastes in secondary containment and cover them during wet weather.
- ▶ Follow manufacturer's application instructions for hazardous materials. Be careful not to use more than necessary.
- ▶ Do not apply chemicals outdoors when rain is forecast within 24 hours.
- ▶ Dispose of hazardous materials/waste at the Hazardous Waste Collection Facility. For more information: Novato businesses call 892-6395  
All other businesses in Marin call 485-5648

CONTINUED ON BACK

**MARIN COUNTY STORMWATER POLLUTION PREVENTION PROGRAM  
415.499.6528  
www.mcstoppp.org**

## PAINTING

- ▶ Never rinse paint brushes or materials into a storm drain or on the street!
- ▶ Paint out excess water-based paint before rinsing brushes, rollers, or containers in a sink. If you can't use a sink, direct wash water to a dirt area, and spade it into the dirt with a shovel.
- ▶ Paint out excess oil-based paint before cleaning brushes in paint thinner.
- ▶ Filter paint thinners and solvents for reuse whenever possible. Dispose of oil-based paint sludge and unusable thinner at the hazardous waste collection facility. (See reverse for Hazardous Materials Management.)

## LANDSCAPING

- ▶ Schedule grading and excavation projects for dry weather.
- ▶ Protect stockpiles and landscaping materials from wind and rain by storing them under tarps and secured plastic sheeting.
- ▶ Store pesticides, fertilizers, and other chemicals indoors or in a locked shed or storage cabinet.
- ▶ Make sure products are properly labeled and check inventory before buying additional products.
- ▶ Rinse containers and use rinse water as products before tossing out empty containers (5 gallons or less) in the trash.
- ▶ Get rid of unwanted products through the hazardous waste facility. (See reverse for Hazardous Materials Management.)
- ▶ Use temporary check dams or ditches to divert runoff away from storm drains.
- ▶ Protect storm drain inlets with berms, filter mats or other inlet protection measures.
- ▶ Revegetate the area. It's an excellent form of erosion control for any site.
- ▶ Collect lawn and garden clippings, pruning waste and tree trimmings. Chip, if necessary, and compost.
- ▶ Do not place yard waste in gutters. In communities with curbside yard waste recycling, leave clippings and pruning waste for pick-up in approved bags or containers or, take to a landfill that composts yard waste.
- ▶ Do not blow or rake leaves into the street.
- ▶ Call the County Stormwater Program at 499-6528 and ask for a copy of Bay-Friendly Landscape Guidelines for the Landscape Professional or visit [www.bayfriendly.org](http://www.bayfriendly.org)

## POOL/FOUNTAIN/SPA MAINTENANCE

- ▶ Never discharge pool or spa water (and/or backwash water) to a street or storm drain. Call the County at 499-6528 for a copy of "Here's What To Do with the Water" or look in "other businesses" under [www.mcstoppp.org](http://www.mcstoppp.org)

## VEHICLE & EQUIPMENT

### MAINTENANCE

- ▶ Frequently, inspect vehicles and equipment for leaks. Use drip pans to catch leaks until repairs are made; repair leaks promptly.
- ▶ Fuel and maintain vehicles on site only in a bermed area or over a drip pan that is big enough to prevent runoff.
- ▶ If you must clean vehicles or equipment on site, clean with water only - and in a bermed area that will not allow rinsewater to run into streets, stormdrains, ditches, or creeks.
- ▶ Do not clean vehicles or equipment on site using soaps, solvents, degreasers, steam cleaning equipment, etc.

### SAW CUTTING

- ▶ Always completely cover or barricade storm drain inlets when saw cutting. Use filter fabric, sand bags, or fine gravel dams to keep slurry out of the storm drain system. If saw-cut slurry enters a stormdrain, clean up immediately.
- ▶ Shovel, absorb, or vacuum saw-cut slurry and pick up all waste as soon as you are finished in one location and by the end of each work day.

### STORMWATER COORDINATORS (During Normal Business Hours)

**Town of San Anselmo**  
Rabi Elias/Dave Craig  
258-4616

**Town of Corte Madera**  
Kevin Kramer  
927-5057

**City of Belvedere**  
Scott Derdenger  
435-3838

**Town of Ross**  
Rob Maccario  
453-8287 ext. 163

**Town of Fairfax**  
Kathy Wilkie  
453-0291

**City of Novato**  
Dave Harlan  
899-8246

**City of Sausalito**  
Engineering  
289-4191

**City of San Rafael**  
Richard Landis  
485-3355

**County of Marin**  
Howard Bunce  
499-3748

**Town of Tiburon**  
Matt Swalberg  
435-7354

**City of Larkspur**  
Mike Myers  
927-5017

**City of Mill Valley**  
Jill Barnes  
388-4033 ext. 116

*To report illegal discharges to local waterways occurring after normal business hours, call 911; or, the County Sheriff's non-emergency line at 499-7233.*

*To report oil and chemical spills occurring in "open waters" or "on land" call 1-800-OILS911.*

*To report fish kills or poaching, call the California Department of Fish and Game at 1-888-334-2258.*