



Implementation of Best Management Practices (BMPs) is required in Morgan Hill during all construction activities to protect local waterways. Please review the attached Blueprint for a Clean Bay. For more information about construction BMPs, including trainings and materials, please review the resources listed below.

CITY CONSTRUCTION BMP BROCHURES

The following brochures are available on the City of Morgan Hill website at: <http://www.morgan-hill.ca.gov/1528/Construction-Best-Management-Practices>

- Dewatering Activities
- Earth-Moving and Heavy Equipment Operations
- Fresh Concrete and Mortar Application
- General Construction and Site Supervision
- Landscaping and Gardening
- Painting and Application of Solvents and Adhesives
- Roadwork and Paving

ONLINE TRAINING OPPORTUNITIES

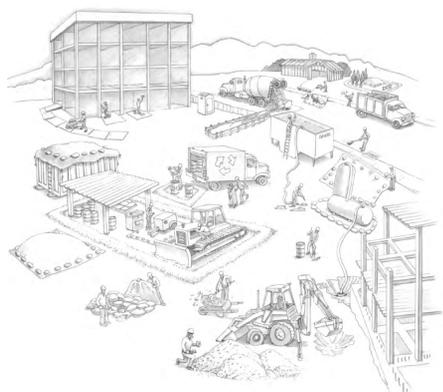
- StormwaterOne - Free Stormwater Management Webinars: <http://stormwaterone.com/free-training>
- California State University Sacramento – Stormwater Best Management Practices Online Course (\$190): <http://www.csuus.edu/stormwater-training/bmp.php>
- International Erosion Control Association Construction Site Stormwater Control (\$50 to \$65 per webinar): <http://icaa.learnerscommunity.com>

HANDBOOKS

- California Stormwater Quality Association Construction Best Management Practices Handbook: <https://www.casqa.org/resources/bmp-handbooks/construction>
- San Francisco Public Utilities Commission Construction Best Management Practices: <http://water.org/training/crowdocument.asp?documentid=4282>
- BASMAA Blueprint for a Clean Bay (attached): [http://www.scurpnpwp2k.com/vjdfs/0809Blueprint for A Clean Bay.pdf](http://www.scurpnpwp2k.com/vjdfs/0809Blueprint%20for%20A%20Clean%20Bay.pdf)

Blueprint for a Clean Bay

Best Management Practices to Prevent Stormwater Pollution from Construction-Related Activities



The Bay Area Stormwater Management Agencies Association (BASMAA), a consortium of Bay Area municipalities from Alameda, Contra Costa, Marin, San Mateo, Santa Clara, Solano, and Sonoma Counties, developed this booklet as a resource for all general contractors, home builders, and subcontractors working on construction sites.

Requirements for Dischargers

Municipal Stormwater Program
Municipalities in the Bay Area are required by federal regulations to develop programs to control the discharge of pollutants to the storm drain system, including the discharge of pollutants from construction sites and areas of new development. As a result, your development and construction projects are subject to new requirements designed to improve stormwater quality such as, expanded plan check and review, contract specifications, stormwater treatment measures, runoff monitoring, and increased site inspection. For more information on municipal requirements, please contact the municipal representative listed on the back cover of this booklet.

Projects Equal To Or Greater Than 1 Acre

If your construction activity will disturb one acre or more, you must obtain coverage under the General Construction Activity Storm Water Permit (General Construction Permit) issued by the SWRCB for stormwater discharges associated with construction activity. To obtain coverage under the General Permit, a Notice of Intent (NOI) must be filed with the SWRCB. The General Construction Permit requires you to prepare and carry out a "Stormwater Pollution Prevention Plan" or SWPPP. Your SWPPP must identify appropriate stormwater pollution prevention measures or best management practices (BMPs), like the ones described in this booklet, to reduce pollutants in stormwater discharges from the construction site both during and after construction is complete. A best management practice or BMP is defined as any program, technology, process, practice, operating method, measure, or device that controls, prevents, removes, or reduces pollution. The General Permit also requires permanent stormwater quality controls (see BASMAA's Start at the Source manual and CASQA's BMP Handbooks New Development and Redevelopment for examples). You should keep a copy of your SWPPP readily available on-site throughout construction.

Projects Less Than 1 Acre

If your project is less than one acre, you may still need to use BMPs to comply with local municipal requirements. Check with the local stormwater program (listed on back cover), or planning or engineering department for details.

For more information on the General Permits, call the State Water Resources Control Board's Stormwater Information Line at (916) 341-5537 or your local program.

Best Management Practices

General Practices

The following are some general principles that can significantly reduce pollution from construction activity and help make compliance with stormwater regulations easy:

- 1. Identify all storm drains, drainage swales and creeks located near the construction site and make sure all subcontractors are aware of their locations to prevent pollutants from entering them.
- 2. Clean up leaks, drips, and other spills immediately so they do not contact stormwater.
- 3. Refuel vehicles and heavy equipment in one designated location on the site and take care to clean up spills immediately.
- 4. Wash vehicles at an appropriate off-site facility. If equipment must be washed on-site, do not use soaps, solvents, degreasers, or steam cleaning equipment, and prevent wash water from entering the storm drain. If possible, direct wash water to a low point where it can evaporate and/or infiltrate.
- 5. Never wash down pavement or surfaces where materials have spilled. Use dry cleanup methods whenever possible.
- 6. Avoid contaminating clean runoff from areas adjacent to your site by using berms and/or temporary or permanent drainage ditches to divert water flow around the site. Reduce stormwater runoff velocities by constructing temporary check dams and/or berms where appropriate.
- 7. Protect all storm drain inlets using filter fabric cloth or other best management practices to prevent sediments from entering the storm drainage system during construction activities.
- 8. Keep materials out of the rain – prevent runoff/pollution at the source. Schedule clearing or heavy earthmoving activities for periods of dry weather. Cover exposed piles of soil, construction materials and wastes with plastic sheeting or temporary roofs. Before it rains, sweep and remove materials from surfaces that drain to storm drains, creeks, or channels.

Best Management Practices

Specific Practices

Following is a summary of specific best management practices for erosion and sediment control and contractor activities. For more information on erosion and sediment control BMPs and their design, please refer to the RWQCB Erosion and Sediment Control Field Manual (August 2002), the CASQA Stormwater Best Management Practice Handbook for Construction (January 2003), and the Association of Bay Area Governments (ABAG) Manual of Standards for Erosion & Sediment Control Measures (May 1995).

Erosion Prevention and Sediment Control

Prevent erosion
Soil erosion is the process by which soil particles are removed from the land surface, by wind, water and/or gravity. Soil particles removed by stormwater runoff are pollutants that when deposited in local creeks, lakes, Bay or Delta, can have negative impacts on aquatic habitat. Exposed soil after clearing, grading, or excavation is easily eroded by wind or water. The following practices will help prevent erosion from occurring on the construction site:

- 1. Keep pollutants off exposed surfaces. Place trash cans around the site to reduce litter. Dispose of non-hazardous construction wastes in covered dumpsters or recycling receptacles.
- 2. Practice source reduction – reduce waste by ordering only the amount you need to finish the job.
- 3. Do not over apply pesticides or fertilizers and follow manufacturers instructions for mixing and applying materials.
- 4. Recycle leftover materials whenever possible. Materials such as concrete, asphalt, scrap metal, solvents, degreasers, cleared vegetation, paper, rock, and vehicle maintenance materials such as used oil, antifreeze, batteries, and tires are recyclable (check with the local planning or building department for more information).
- 5. Dispose of all wastes properly. Materials that cannot be reused or recycled must be taken to an appropriate landfill or may require disposal as hazardous waste. Never throw debris into channels, creeks or into wetland areas. Never store or leave debris in the street or near a creek where it may contact runoff.
- 6. Illegal dumping is a violation subject to a fine and/or time in jail. Be sure that trailers carrying your materials are covered during transit. If not, the hauler may be cited and fined.
- 7. Train your employees and inform subcontractors about the stormwater requirements and their own responsibilities.
- 8. Phase grading operations to reduce disturbed areas and time of exposure.
- 9. Avoid excavation and grading during wet weather.
- 10. Limit on-site construction routes and stabilize construction entrance(s) and exit(s).
- 11. Remove existing vegetation only when absolutely necessary.
- 12. Construct diversion dikes and drainage swales to channel runoff around the site.
- 13. Use berms and drainage ditches to divert runoff around exposed areas. Place diversion ditches across the top of cut slopes.

Control sediment

Sedimentation is defined as the process of depositing sediments carried away by runoff. Sediments consist of soil particles, clays, sands, and other minerals. The purpose of sediment control practices is to remove sediments from stormwater before they are transported off-site or reach a storm drain inlet or nearby creek. The most effective sediment control practices reduce runoff velocity and trap or divert runoff allowing sediments to settle out.

- 1. Use terracing, rip rap, sand/gravel bags, rocks, fiber rolls, and/or temporary vegetation on slopes to reduce runoff velocity and trap sediments. Do not use asphalt rubble or other demolition debris for this purpose.
- 2. Use check dams in temporary drains and swales to reduce runoff velocity and promote sedimentation.
- 3. Protect storm drain inlets from sediment laden runoff. Storm drain inlet protection devices include sand/gravel bag barriers, filter

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- 2. Use check dams in temporary drains and swales to reduce runoff velocity and promote sedimentation.
- 3. Protect storm drain inlets from sediment laden runoff. Storm drain inlet protection devices include sand/gravel bag barriers, filter fabric fences, block and gravel filters, catch basin filter inserts, excavated drop inlet sediment traps, or a combination of these.
- 4. Collect and detain sediment-laden runoff in sediment traps (an excavated or bermed area or constructed device) to allow sediments to settle out prior to discharge.
- 5. Use sediment controls and filtration to remove sediments from dewatering discharges.
- 6. Prevent construction vehicle tires from tracking soil onto adjacent streets by constructing a temporary stone pad with a filter fabric underliner near the site exit where dirt and mud can be removed.
- 7. When cleaning sediments from streets, driveways and paved areas on construction sites, use dry sweeping methods where possible. If water must be used to flush pavement, collect runoff to settle out sediments and protect storm drain inlets.

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Best Management Practices

Keep fresh concrete and cement mortars out of gutters, storm drains, and creeks

Concrete and cement-related mortars that wash into gutters and storm drains are toxic to fish and the aquatic environment.

- 1. Locate mortar/taucco mixers inside bermed areas to avoid discharge to street or storm drains.
- 2. Avoid mixing excess amounts of fresh concrete or cement mortar.
- 3. Store dry and wet materials under cover, protected from rainfall and runoff.
- 4. Wash out concrete transit mixers only in designated wash-out areas where the water will flow into settling ponds or onto dirt or stockpiles of aggregate base or sand. Pump water from settling ponds to the sanitary sewer, where allowed. Whenever possible, recycle washout by pumping back into

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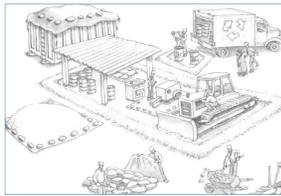


Recycle yard waste and tree prunings at a landfill that chips and composts plant material.

Best Management Practices

Store materials under cover

Wet and dry building materials with the potential to pollute runoff should be stored under cover and/or surrounded by berms when rain is forecast or during wet weather.



Store building materials under cover. Make sure dumpsters are properly covered to keep rain out.

- 1. Store stockpiled materials and wastes under a temporary roof or secured plastic sheeting or tarp.
- 2. Berm around storage areas to prevent contact with runoff.
- 3. Plaster or other powders can create large quantities of suspended solids in runoff, which may be toxic to aquatic life and cause serious environmental harm. Ensure that the materials are inert. Store all such potentially polluting dry materials – especially open bags – under a temporary roof or inside a building, or cover securely with an impermeable tarp. By covering drying dry materials, you may also help protect air quality, as well as water quality.
- 4. Store containers of paints, chemicals, solvents, and other hazardous materials in accordance with secondary containment regulations and under cover during rainy periods.

Cover and maintain dumpsters

Open and/or leaking dumpsters can be a source of stormwater pollution.

- 1. Cover open dumpsters with plastic sheeting or a tarp. Secure the sheeting or tarp around the perimeter of the dumpster. If your dumpster has a cover, close it.
- 2. If a dumpster is leaking, contain and collect leaking material. Return the dumpster to the leasing company for repair/exchange.
- 3. Do not clean dumpsters on-site. Return to leasing company for periodic cleaning, if necessary.

Collect and properly dispose of paint removal wastes

Paint removal wastes include chemical paint stripping

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- 3. When stripping or cleaning building exteriors with high-pressure water, cover or berm storm drain inlets. If possible (and allowed by your local wastewater treatment plant), collect (trap or vacuum) building cleaning water and discharge to the sanitary sewer. Alternatively, discharge noncontaminated wash water onto a dirt area and spade into the soil. Be sure to shovel or sweep up any debris that remains in the gutter and dispose of as garbage.

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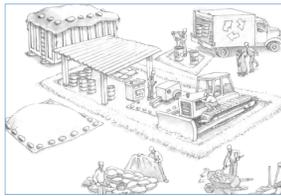
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- 4. Wash vehicles at an appropriate off-site facility. If equipment must be washed on-site, do not use soaps, solvents, degreasers, or steam cleaning equipment, and prevent wash water from entering the storm drain. If possible, direct wash water to a low point where it can evaporate and/or infiltrate.
- 5. Never wash down pavement or surfaces where materials have spilled. Use dry cleanup methods whenever possible.
- 6. Avoid contaminating clean runoff from areas adjacent to your site by using berms and/or temporary or permanent drainage ditches to divert water flow around the site. Reduce stormwater runoff velocities by constructing temporary check dams and/or berms where appropriate.
- 7. Protect all storm drain inlets using filter fabric cloth or other best management practices to prevent sediments from entering the storm drainage system during construction activities.
- 8. Keep materials out of the rain – prevent runoff/pollution at the source. Schedule clearing or heavy earthmoving activities for periods of dry weather. Cover exposed piles of soil, construction materials and wastes with plastic sheeting or temporary roofs. Before it rains, sweep and remove materials from surfaces that drain to storm drains, creeks, or channels.

Best Management Practices

Specific Practices

Following is a summary of specific best management practices for erosion and sediment control and contractor activities. For more information on erosion and sediment control BMPs and their design, please refer to the RWQCB Erosion and Sediment Control Field Manual (August