

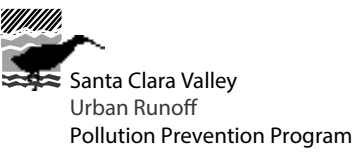
Blueprint for a Clean Bay

Best Management Practices for the Construction Industry

Remember: The property owner and the contractor share ultimate responsibility for the activities that occur on a construction site. You may be held responsible for any environmental damage caused by your subcontractors or employees.

Preventing Pollution: It's Up to Us

In the Santa Clara Valley, storm drains transport water directly to local creeks and San Francisco Bay without treatment. Stormwater pollution is a serious problem for wildlife dependent on our creeks and bays and for the people who live near polluted streams or baylands. Common sources of this pollution include spilled oil, fuel, and fluids from vehicles and heavy equipment; construction debris; sediment created by erosion; landscaping runoff containing pesticides or weed killers; and materials such as used motor oil, antifreeze, and paint products that people pour or spill into a street or storm drain.



Thirteen valley municipalities have joined together with Santa Clara County and the Santa Clara Valley Water District to educate local residents and businesses and fight stormwater pollution. This "blueprint" summarizes "Best Management Practices (BMPs) for stormwater pollution prevention.



Spill Response Agencies:
In the City of Sunnyvale, DIAL 9-1-1.
State Office of Emergency Service
Warning Center (24 hours)
1-800-852-7550
Santa Clara County Environmental
Health Services
(408) 299-6930

Small Business Hazardous Waste Disposal Program

Santa Clara County businesses that generate less than 27 gallons or 220 pounds of hazardous waste per month are eligible to use Santa Clara County's Small Business Hazardous Waste Disposal Program. Call (408) 299-7300 for a quote, more information or guidance on disposal.

Local Pollution Control Agencies:

County of Santa Clara
Pollution Prevention Program
(408) 441-1195
County of Santa Clara Integrated Waste
Management Program
(408) 441-1198
Santa Clara County Hazardous Waste
Program
(408) 299-7300
For information on the disposal of hazardous waste
County of Santa Clara District Attorney
Environmental Crimes Hotline
(408) 299-TIPS
Santa Clara Valley Water District
(408) 265-2600
Santa Clara Valley Water District Pollution Hotline
1-888-510-5151
Santa Clara County Recycling Hotline
1-800-533-8414
Regional Water Quality Control Board
Serving San Francisco Bay Region
(510) 622-2300
Sunnyvale Water Pollution Control Plant
(408) 730-7270
Sunnyvale Recycling Program
(408) 730-7262
Or visit www.ci.sunnyvale.ca.us/recycle
SMArT Station
(Green Team/Zanker of Sunnyvale)
Recycling Drop-Off Center,
Garbage Disposal
(408) 752-8530

Painting and Application of Solvents and Adhesives

Who should use this information?

- Painters
- Painter helpers
- Plasterers
- Graphic Artists
- Dry Wall Crews
- Floor Covering Installers
- General Contractors
- Home Builders
- Developers
- Homeowners

Storm Drain Pollution from Paints, Solvents, and Adhesives

All paints, solvents, and adhesives contain chemicals that are harmful to wildlife in local creeks, San Francisco Bay, and the Pacific Ocean. Toxic chemicals may come from liquid or solid products or from cleaning residues or rags. Paint material and wastes, adhesives and cleaning fluids should be recycled when possible, or disposed of properly to prevent these materials from flowing into storm drains and watercourses.



Doing the Job Right Handling Paint Products

- Keep all liquid paint products and wastes away from the gutter, street, and storm drains. Liquid residues from paints, thinners, solvents, glues, and cleaning fluids are hazardous wastes and must be disposed of as hazardous. Contact the Santa Clara County Hazardous Waste Program at (408) 299-7300.
- Wash water from painted buildings constructed before 1978 can contain high amounts of lead, even if paint chips are not present. Before you begin stripping paint or cleaning pre-1978 building exteriors with water under high pressure, test paint for lead by taking ink chip scrapings to a local laboratory. See Yellow Pages for a state-certified laboratory.
- If there is loose paint on the building, or if the paint tests positive for lead, block storm drains. Check with the wastewater treatment plant to determine whether you may discharge water to the sanitary sewer, or if you must send it offsite for disposal as hazardous waste.

Paint Removal

- Buildings constructed before 1978 may have lead paint in them. Test paint for lead by taking samples to a local environmental testing laboratory to determine if removed paint must be disposed of as hazardous waste.
- Paint chips and dust from non-hazardous dry stripping and sand blasting may be swept up or collected in plastic drop cloths and disposed of as trash.
- Chemical paint stripping residue and chips and dust from marine paints or paints containing lead, mercury or tributyltin must be disposed of as hazardous wastes. Lead-based paint removal requires a state-certified contractor.
- When stripping or cleaning buildings exteriors with high-pressure water, block storm drains. Direct wash water onto a dirt area, or check Sunnyvale Water Pollution Control Plant (408) 730-7270 to find out if you can collect (mop or vacuum) building cleaning water and dispose to the sanitary sewer. Sampling of the water may be required to assist the wastewater treatment authority in making its decision.

Painting Cleanup

- Never clean brushes or rinse paint containers into a street gutter, storm drain, French drain, or stream.
- For water-based paints, paint out brushes to the extent possible, and rinse into a drain that goes to the sanitary

sewer. Never pour paint down a storm drain. Dispose of excess liquids and residue as hazardous waste.

- For oil-based paints, paint out brushes to the extent possible and clean with thinner or solvent in a proper container. Filter and reuse thinners and solvents. Dispose of excess liquids and residue as hazardous waste.
- When thoroughly dry, empty paint cans, used brushes, rags, and drop cloths may be disposed of as garbage in a sanitary landfill. Leave lids off paint cans so the refuse collector can see that they are empty. Empty, dry paint cans also may be recycled as metal.
- Dispose of empty aerosol paint cans as hazardous waste or at household hazardous waste collection events.

Recycle/Reuse Leftover Paints Whenever Possible

- Donate excess water-based (latex) paint for reuse. Call the Santa Clara County Hazardous Waste Program at (408) 299-7300 for details.
- Reuse leftover oil-based paint. Dispose of non-recyclable thinners, sludge and unwanted paint as hazardous waste.
- Unopened cans of paint may be able to be returned to the paint vendor. Check with the vendor regarding its "buy-back" policy.

General Construction and Site Supervision

Who should use this information?

- General Contractors
- Site Supervisors
- Inspectors
- Home Builders
- Developers
- Homeowners



Doing the Job Right General Principles

- Keep an orderly site and ensure good housekeeping practices are used.
- Cover materials when they are not in use.
- Keep materials away from streets, storm drains and drainage channels.
- Ensure dust control water doesn't leave site or discharge to storm drains.

Advance Planning To Prevent Pollution

- Schedule excavation and grading activities for dry weather periods. To reduce soil erosion, plant temporary vegetation or place other erosion controls before rain begins. Use the Erosion and Sediment Control Field Manual available from the Regional Water Quality Control Board San Francisco Bay Region, as a reference.
- Control the amount of runoff crossing your site (especially during excavation) by using berms or temporary or permanent drainage ditches to divert water flow around the site. Reduce stormwater runoff velocities by constructing temporary check dams or berms where appropriate.
- Train your employees and subcontractors. Make sure everyone who works at the construction site is familiar with this information. Inform subcontractors about the stormwater requirements and their own responsibilities. Use the BASMA Blueprint for a Clean Bay as a construction best

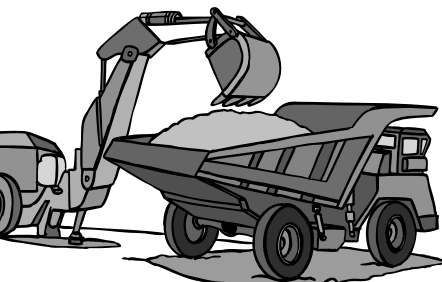
Storm Drain Pollution from Construction Activities

Construction sites are common sources of storm water pollution. Materials and wastes that blow or wash into a storm drain, gutter, or street have a direct impact on local creeks and the Bay.

As a contractor, or site supervisor, owner or operator of a site, you may be responsible for any environmental damage caused by your subcontractors or employees.

Earth-Moving and Dewatering Activities

Who should use this information?



- Bulldozer, Back Hoe, and Grading Machine Operators
- Dump Truck Drivers
- Site Supervisors
- General Contractors
- Home Builders
- Developers

Storm Drain Pollution from Earth-Moving Activities

Soil excavation and grading operations loosen large amounts of soil that can flow or blow into storm drains when handled improperly. Sediments in runoff can clog storm drains, smother aquatic life, and destroy habitats in creeks and the Bay. Effective erosion control practices reduce the amount of runoff crossing a site and slow the flow with check dams or roughened ground surfaces.

Contaminated groundwater is a common problem in the Santa Clara Valley. Depending on soil types and site history, groundwater pumped from construction sites may be contaminated with toxics (such as oil or solvents) or laden with sediments. Any of these pollutants can harm wildlife in creeks or the Bay, or interfere with wastewater treatment plant operation. Discharging sediment-laden water from a dewatering site into any water of the state without treatment is prohibited.

Doing the Job Right

General Business Practices

- Schedule excavation and grading work during dry weather.
- Perform major equipment repairs away from the job site.
- When refueling or vehicle/equipment maintenance must be done on site, designate a location away from storm drains.
- Do not use diesel oil to lubricate equipment parts, or clean equipment.

Practices During Construction

- Remove existing vegetation only when absolutely necessary. Plant temporary vegetation for erosion control on slopes or where construction is not immediately planned.
- Check for and repair leaking equipment, streams, and storm drains with wattles, or temporary drainage swales. Use check dams or ditches to divert runoff around excavations. Refer to the Regional Water Quality Control Board's Erosion and Sediment Control

Field Manual for proper erosion and sediment control measures, and California Stormwater Quality Association Stormwater Best Management Practice Handbook (construction, 2003)

- Cover stockpiles and excavated soil with secured tarps or plastic sheeting.

Dewatering Operations

Check for Toxic Pollutants

- Check for odors, discoloration, or an oily sheen on groundwater.
- Call your local wastewater treatment agency and ask whether the groundwater must be tested.
- If contamination is suspected, have the water tested by a certified laboratory.
- Depending on the test results, you may be allowed to discharge pumped groundwater to the storm drain (if no sediments present) or sanitary sewer. OR, you may be required to collect and haul pumped groundwater offsite for treatment and disposal at an appropriate treatment facility.

Check for Sediment Levels

- If the water is clear, the pumping time is less than 24 hours, and the flow rate is less than 20 gallons per minute, you may pump water to the street or storm drain.
- If the pumping time is more than 24 hours and the flow rate is greater than 20 gpm, call your local wastewater treatment plant for guidance.
- If the water is not clear, solids must be filtered or settled out by pumping to a settling tank prior to discharge. Options for filtering include:
 - Pumping through a perforate pipe sunk part way into a small pit filled with gravel.
 - Pumping from a bucket placed below water level using a submersible pump.
 - Pumping through a filtering device such as a swimming pool filter or filter fabric wrapped around end of suction pipe.
- When discharging to a storm drain, protect the inlet using a barrier of burlap bags filled with drain rock, or cover inlet with filter fabric anchored under the grate. OR pump water through a grassy swale prior to discharge.

Detecting Contaminated Soil or Groundwater

Contaminated groundwater is a common problem in the Santa Clara Valley. It is essential that all contractors and subcontractors involved know what to look for in detecting contaminated soil or groundwater, and testing ponded groundwater before pumping. Watch for any of these conditions:

- Unusual soil conditions, discoloration or odor.
- Abandoned underground tanks.
- Abandoned wells.
- Buried barrels, debris or trash.

If any of these are found follow the procedures below.

Fresh Concrete and Mortar Application

Who should use this information?

- Masons and Bricklayers
- Sidewalk Construction Crews
- Patio Construction Workers
- Construction Inspectors
- General Contractors
- Home Builders
- Developers
- Concrete Delivery/Pumping Workers



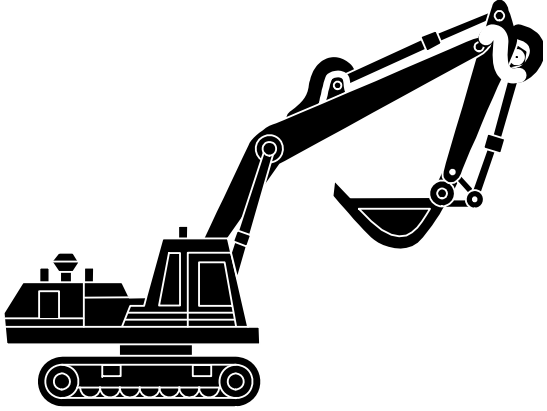
Storm Drain Pollution from Fresh Concrete And Mortar Applications

Fresh concrete and cement-related mortars that wash into lakes, streams, or estuaries are toxic to fish and the aquatic environment. Disposing of these materials to the storm drains or creeks can block storm drains, cause serious problems, and is prohibited by law.

Heavy Equipment Operation

Who should use this information?

- Vehicle and Equipment Operators
- Site Supervisors
- General Contractors
- Home Builders
- Developers



Stormwater Pollution from Heavy Equipment on Construction Sites

Poorly maintained vehicles and heavy equipment that leak fuel, oil, antifreeze or other fluids on the construction site are common sources of storm drain pollution. Prevent spills and leaks by isolating equipment from runoff channels, and by watching for leaks and other maintenance problems. Remove construction equipment from the site as soon as possible.

Doing the Job Right General Business Practices

- Wash out concrete mixers only in designated wash-out areas in your yard, away from storm drains and waterways, where the water will flow into a temporary wash pit in a dirt area. Let water percolate through soil and dispose of settled, hardened concrete as garbage. Whenever possible, recycle washout by pumping back into mixers for reuse.
- Wash out chutes onto dirt areas at site that do not flow to streets or drains.
- Always store both dry and wet materials under cover, protected from rainfall and runoff and away from storm drains or waterways. Protect dry materials from wind.
- Secure bags of cement after they are open. Be sure to keep wind-blown cement powder away from streets, gutters, storm drains, rain fall, and runoff.
- Do not use diesel fuel as a lubricant on concrete forms, tools, or trailers.

During Construction

- Don't mix up more fresh concrete or cement than you will use in a two-hour period.
- Set up and operate small mixers on tarps or heavy plastic drop cloths.
- When cleaning up after driveway or sidewalk construction, wash fines onto dirt areas, not down the driveway or into the street or storm drain.
- Protect applications of fresh concrete and mortar from rainfall and runoff until the material has dried.
- Wash down exposed aggregate concrete only when the wash water can (1) flow onto a dirt area; (2) drain onto a bermed surface from which it can be pumped and disposed of properly; or (3) be vacuumed from a catchment created by blocking a storm drain inlet. If necessary, divert runoff with temporary berms. Make sure runoff does not reach gutters or storm drains.
- When breaking up pavement, be sure to pick up all the pieces and dispose of properly. Recycle large chunks of broken concrete at a local recycling facility. Call the Sunnyvale Recycling Program at (408) 730-7262 for information.
- Never bury waste material. Dispose of small amounts of excess dry concrete, grout, and mortar in the trash.
- Never dispose of washout into the street, storm drains, drainage ditches, or streams.

Roadwork and Paving

Who should use this information?

- Road Crews
- Driveway/Sidewalk/Parking Lot Construction Crews
- Seal Coat Contractors
- Operators of Grading Equipment, Paving Machines, Dump Trucks, Concrete Mixers
- Construction Inspectors
- General Contractors
- Developers
- Home Builders



Storm Drain Pollution from Roadwork

Road paving, surfacing, and pavement removal happen right in the street, where there are numerous opportunities for asphalt, saw-cut slurry, or excavated material to illegally enter storm drains. Extra planning is required to store and dispose of materials properly and guard against pollution of storm drains, creeks, and the Bay.

Doing the Job Right

General Business Practices

- Develop and implement erosion/sediment control plans for roadway embankments.
- Schedule excavation and grading work during dry weather.
- Check for and repair leaking equipment.
- Perform major equipment repairs at designated areas in your maintenance yard, where cleanup is easier. Avoid performing equipment repairs at construction sites.
- When refueling or when vehicle/equipment maintenance must be done on site, designate a location away from storm drains and creeks.
- Do not use diesel oil to lubricate equipment parts or clean equipment.
- Recycle used oil, concrete, broken asphalt, etc., whenever possible, or dispose of properly.
- Take broken up concrete to a local recycling facility. Call the Sunnyvale Recycling Program at (408) 730-7262 for information.

During Construction

- Avoid paving and seal coating in wet weather, or when rain is forecast, to prevent fresh materials from contacting stormwater runoff.
- Cover and seal catch basins and manholes when applying seal coat, slurry seal, fog seal, or similar materials.
- Protect drainage ways by using earth dikes, sand bags, or other controls to divert or trap and filter runoff.
- Never wash excess material from exposed aggregate concrete or concrete treatments into a street or storm drain. Collect and recycle, or dispose to dirt area.
- Cover stockpiles (asphalt, sand, etc.) and other construction materials with plastic tarps. Protect from rainfall and prevent runoff with temporary roofs or plastic sheets and berms.
- Park paving machines over drip pans or absorbent material (cloth, rags, etc.) to catch drips when not in use.
- Clean up all spills and leaks using "dry" methods (with absorbent materials and/or rags). Dig up, remove, and properly dispose of contaminated soil.

- Collect and recycle or appropriately dispose of excess abrasive gravel or sand.
- Avoid over-application by water trucks for dust control.

Asphalt/Concrete Removal

- Avoid creating excess dust when breaking asphalt or concrete.
- After breaking up old pavement, be sure to remove all chunks and pieces. Make sure broken pavement does not come in contact with rainfall or runoff.
- When making saw cuts, use as little water as possible. Shovel or vacuum saw-cut slurry and remove from the site. Cover or protect storm drain inlets during saw-cutting. Sweep up, and properly dispose of, all residues.
- Sweep, never hose down streets to clean up tracked dirt. Use a street sweeper or vacuum truck. Do not dump vacuumed liquor in storm drains.

Doing the Job Right

Site Planning and Preventive Vehicle Maintenance

- Designate one area of the construction site, well away from streams or storm drain inlets, for auto and equipment parking, refueling, and routine vehicle and equipment maintenance. Contain the area with berms, sand bags, or other barriers.
- Maintain all vehicles and heavy equipment. Inspect frequently for an repair leaks.
- Perform major maintenance, repair jobs, and vehicle and equipment washing off site where cleanup is easier.
- If you must drain and replace motor oil, radiator coolant, or other fluids on site, use drip pans or drop cloths to catch drips and spills. Collect all spent fluids, store in separate containers. Recycle them wherever possible, otherwise dispose of them as hazardous wastes.
- Do not use diesel oil to lubricate equipment parts, or clean equipment. Use only water for any onsite cleaning.
- Cover exposed fifth wheel hitches and other oily or greasy equipment during rain events.
- Use as little water as possible for dust control. Ensure water used doesn't leave site or discharge to storm drains.

Spill Cleanup

- Clean up spills immediately when they happen.
- Never hose down "dirty" pavement or impermeable surfaces where fluids have spilled. Use dry cleanup methods (absorbent materials, cat litter, and/or rags) whenever possible and properly dispose of absorbent materials.
- Sweep up spilled dry materials immediately. Never attempt to "wash them away" with water, or bury them.
- Clean up spills on dirt areas by digging up and properly disposing of contaminated soil.
- Report significant spills to the appropriate local spill response agencies immediately. In Sunnyvale, dial 9-1-1 if hazardous materials might enter the storm drain.
- If the spill poses a significant hazard to human health and safety, property or the environment, you must also report it to the State Office of Emergency Services 1-800-852-7500.

Building Safety Division
City of Sunnyvale

Dec 22 2022

For installation in the City of Sunnyvale subject to code requirements

DIGITAL SET APPROVED
By Jonathan Kawamura

BUILDING-PLUMBING-ELECTRICAL-MECHANICAL
The stamping of this plan shall not be held to permit or to be an approval of the violation of any provision of any City or State Law.

JOB COPY
These plans must be kept on the job site at all times.
CITY OF SUNNYVALE

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