

SPECIAL CONDITIONS
FOR
STORM WATER POLLUTION PREVENTION

I GENERAL

- A. The goal of these requirements is to prevent the pollution of surface water runoff from construction projects by keeping pollution out of storm drains, by reducing the exposure and discharge of materials and wastes to storm water, and by reducing erosion and sedimentation. Storm drains discharge surface water runoff directly to creeks and the San Francisco Bay without treatment. Contractor shall be liable for any fine levied in conjunction with disregard of these special conditions.
- B. Contractor shall comply with the following requirements.
1. Non-hazardous Material / Waste Management
 - a. Designated Area
Contractor shall propose designated areas of the project site, for approval by the Owner, suitable for material delivery, storage, and waste collection that, to the maximum extent practicable, are near construction entrances and away from catch basins, gutters, drainage courses, and creeks.
 - b. Granular Material
Granular material is defined as any excavated or imported earth, sand, aggregate base, or other similar construction materials.
 - 1) Contractor shall store granular material at least ten feet away from catch basins and curb returns. Granular material shall be kept clear of gutters, swales and drainage channels.
 - 2) Contractor shall not allow granular material to enter storm drains or creeks.
 - 3) When rain is forecast within 24 hours or during wet weather, Owner may require Contractor to cover granular material with tarpaulin or plastic sheeting and to surround the material with sandbags. Covers shall be held securely in place to prevent movement by wind or other means.
 - c. Dust Control
Contractor shall use non-potable water to control dust on a daily basis or as directed by Owner.
 - d. Street Sweeping
At the end of each working day or as directed by Owner, Contractor shall clean and sweep roadways and on-site paved areas of all materials attributed to or involved in the work. Contractor shall not use water to flush down streets in place of street sweeping.
 - e. Recycling

- 1) Contractor shall recycle aggregate base material, asphalt concrete, and Portland cement concrete when required by provisions of the Specifications or by notes on the Drawings.
 - 2) In addition, to the maximum extent practicable, Contractor shall reuse or recycle any useful construction materials generated during the project subject to approval by Owner.
- f. Disposal
- 1) At the end of each working day, Contractor shall collect all scrap, debris, and waste material, and dispose of such materials properly.
 - 2) Contractor shall inspect dumpsters for leaks and contact dumpster supplier to replace or repair dumpsters that leak.
 - 3) Contractor shall not discharge water on-site from cleaning dumpsters.
 - 4) Contractor shall arrange for regular waste collection before dumpsters overflow.
2. Hazardous Material / Waste Management
- a. Storage
- 1) Contractor shall label and store all hazardous materials, such as pesticides, paints, thinners, solvents and fuels; and all hazardous wastes, such as waste oil and antifreeze; in accordance with Owner's requirements and all applicable Federal, State and County regulations.
 - 2) Contractor shall store all hazardous materials and all hazardous wastes in accordance with secondary containment regulations, and it is recommended that these materials and wastes be covered, as necessary to avoid potential management of collected rainwater as a hazardous waste.
 - 3) Contractor shall keep an accurate, up-to-date inventory, including Material Safety Data Sheets (MSDS), of hazardous materials and hazardous wastes stored on-site, to assist emergency response personnel in the event of a hazardous materials incident.
- b. Usage
- 1) When rain is forecast within 24 hours or during wet weather, Owner may prohibit Contractor from applying chemicals in outside areas.
 - 2) Contractor shall not over-apply pesticides or fertilizers and shall follow material manufacturer's instructions regarding uses, protective equipment, ventilation, flammability, and mixing of chemicals. Over-application of a pesticide constitutes a "label violation" subject to an enforcement action by the Santa Clara County Agriculture Department.
- c. Disposal
- 1) Contractor shall arrange for regular hazardous waste collection to comply with time limits on storage of hazardous wastes.
 - 2) Contractor shall arrange with project manager for hazardous waste pickup by Environmental Health and Safety.

3. Spill Prevention and Control

- a. Contractor shall keep a stockpile of spill cleanup materials, such as rags or absorbents, readily accessible on-site.
 - b. Contractor shall immediately contain and prevent leaks and spills from entering storm drains, and properly clean up and dispose of the waste and cleanup materials. If the waste is hazardous, Contractor shall handle the waste as described in section B.2.c. above.
 - c. Contractor shall not wash any spilled material into streets, gutters, storm drains, or creeks and shall not bury spilled hazardous materials.
 - d. Contractor shall immediately report any hazardous material spills to Stanford University Environmental Health and Safety Department (650) 725-9999, and to the Stanford Project Manager.
4. Vehicle / Equipment Cleaning
- a. Contractor shall not perform vehicle or equipment cleaning on-site or in the street using soaps, solvents, degreasers, steam cleaning equipment, or equivalent methods.
 - b. Contractor shall perform vehicle or equipment cleaning, with water only, in a designated, bermed area that will not allow rinse water to run off-site or into streets, gutters, storm drains, or creeks.
5. Vehicle / Equipment Maintenance and Fueling
- a. Contractor shall perform maintenance and fueling of vehicles or equipment in a designated, bermed area or over a drip pan that will not allow run-on of storm water or runoff of spills.
 - b. Contractor shall use secondary containment, such as a drip pan, to catch leaks or spills any time that vehicle or equipment fluids are dispensed, changed, or poured.
 - c. Contractor shall keep a stockpile of spill cleanup materials, such as rags or absorbents, readily accessible on-site.
 - d. Contractor shall clean up leaks and spills of vehicle or equipment fluids immediately and dispose of the waste and cleanup materials as hazardous waste, as described in section B.2.c. above.
 - e. Contractor shall not wash any spilled material into streets, gutters, storm drains, or creeks and shall not bury spilled hazardous materials.
 - f. Contractor shall report any hazardous materials spill to Stanford University Environmental Health and Safety Department (650) 725-9999, and to the Stanford Project Manager.
 - g. Contractor shall inspect vehicles and equipment arriving on-site for leaking fluids and shall promptly repair leaking vehicles and equipment. Drip pans shall be used to catch leaks until repairs are made.
 - h. Contractor shall recycle waste oil and antifreeze, to the maximum extent practicable.
 - i. Contractor shall comply with Federal, State, and County requirements for aboveground storage tanks.
6. Contractors Training and Awareness

- a. Contractor shall train all employees and sub-contractors on the storm water pollution prevention requirements contained in these Specifications.
- b. Contractor shall inform sub-contractors of the storm water pollution prevention contract requirements and include appropriate subcontract provisions to ensure that these requirements are met.
- c. The Contractor shall post warning signs in areas treated with chemicals.
- d. The Contractor shall paint new catch basins, constructed as part of the project, with the “No Dumping” stencil available from Stanford University (650) 725-7864 or 723-9747.

II ACTIVITY-SPECIFIC REQUIREMENTS

A. The goal of these requirements is to prevent the pollution of storm water runoff on Stanford University construction projects. Contractor shall comply with the following requirements.

1. Dewatering Operations (In general, ground water is not found at Stanford shallower than 25 feet below natural ground surface)
 - a. Sediment Control
 - 1) Contractor shall route water through a control measure such as a sediment trap, sediment basin or Baker tank, to remove settleable solids prior to discharge to the storm drain system.
 - 2) Approval of the control measure shall be obtained in advance from Owner.
 - 3) Filtration of the water following the control measure may be required on a case-by-case basis.
 - 4) If Owner determines that the dewatering operations would not generate an appreciable amount of settleable solids, the control measure requirement in 1) above may be waived.
 - 5) The Contractor shall reuse water for other needs, such as dust control or irrigation to the maximum extent practicable.
 - b. Contaminated Groundwater
 - 1) If the project is within an area of known groundwater contamination, then water from dewatering operations shall be tested prior to discharge. Areas of known ground water contamination within the project area will be identified on the plans. With prior approval of the Owner, and if the water quality meets Regional Water Quality Control Board (RWQCB) standards, then it may be discharged to the storm drain. If the water quality meets City of Palo Alto Municipal Code section 16.09.110, then it may be discharged to the sanitary sewer with prior approval from the Owner. Otherwise, the water shall be treated or hauled off-site for proper disposal.
 - 2) If the project is not within an area of known groundwater contamination, then monitoring shall only be required if directed by the Owner. The Contractor shall follow section A.1.b.1. above, if contamination is found.
 - 3) If the project is found to be within an area of groundwater contamination not so identified by the Owner on the Drawings or in these Specifications, additional work performed by Contractor will be considered as extra work.

2. Paving Operations
 - a. Project Site Management
 - 1) When rain is forecast within 24 hours or during wet weather, Owner may request the contractor to reschedule paving.
 - 2) Owner may direct Contractor to protect drainage courses by using control measures, such as filter fabric, straw waddles, and sand bags as necessary to divert runoff or trap and filter sediment.
 - 3) Contractor shall place drip pans or absorbent material under paving equipment when not in use.
 - 4) Contractor shall cover catch basins and manholes when paving or applying seal coat, tack coat, slurry seal, or fog seal.
 - 5) If the paving operation includes an on-site mixing plant, Contractor shall comply with Santa Clara County General Industrial Activities Storm Water Permit requirements.
 - b. Paving Waste Management
 - 1) Contractor shall not sweep or wash down excess sand (placed as part of a sand seal or to absorb excess oil) into gutters, storm drains, or creeks. Instead, the Contractor shall either collect the sand and return it to the stockpile, or dispose of it in a trash container.
 - 2) Contractor shall not use water to wash down fresh asphalt concrete pavement.
3. Saw Cutting
 - a. During saw cutting, Contractor shall cover or barricade all nearby catch basins using control measures, such as filter fabric, straw waddles, sand bags, and fine gravel dams, as necessary to keep slurry out of the storm drain system. When protecting a catch basin, Contractor shall ensure that the entire opening is covered.
 - b. Contractor shall shovel, absorb, or vacuum saw cut slurry during or immediately following saw cutting. Contractor shall pick up the residual waste slurry prior to opening the area to pedestrian or vehicular traffic or at the end of each working day, whichever is sooner. Contractor shall not use water to wash down saw cut slurry or waste.
 - c. If saw cut slurry enters catch basins, Contractor shall remove the slurry from the storm drain system immediately.
 - d. Contractor is liable for any fine levied in conjunction with disregard of these saw-cut specifications.
4. Contaminated Soil Management
 - a. On all projects involving grading or excavation, Contractor shall look for contaminated soil as evidenced by site history, discoloration, odor, differences in soil properties, abandoned underground tanks or pipes, or buried debris. Areas of known soil contamination within the project area will be identified on the Drawings or in the Specifications. If the project is not within an area of known soil contamination and no evidence of soil contamination is found, then testing of the soil shall only be required if directed by Owner.

- b. If the project is within an area of known soil contamination or evidence of soil contamination is found, then soil from grading or excavation operations shall be tested. The soil shall be managed as required by Owner or other designated agency.
 - c. If the project is found to be within an area of soil contamination not so identified by Owner on the Drawings or in these Specifications, additional work performed by Contractor will be considered extra work.
5. Concrete, Grout, and Mortar Waste Management
- a. Material Management
Contractor shall store concrete, grout, and mortar away from drainage areas and ensure that these materials do not enter the storm drain system.
 - b. Concrete Truck/Equipment Wash Out
 - 1) Contractor shall not wash out concrete trucks or equipment into streets, gutters, storm drains, or creeks.
 - 2) Avoid mixing excess amounts of fresh concrete or cement mortar on-site.
 - 3) Store dry and wet materials away from waterways and storm drains; cover and contain to protect from rainfall and prevent runoff.
 - 4) Contractor shall perform washout of concrete trucks or equipment only in designated wash-out areas where the water will flow into a temporary pit in a dirt area or onto stockpiles of aggregate base or sand.
 - 5) The Contractor shall identify a location for the waste water pit away from watercourses and storm drains. Dig or construct the pit large enough to hold the waste. Let the water percolate into the soil or evaporate and dispose of the hardened concrete in a trash container. If a suitable dirt area is not available, then Contractor shall collect the wash water and remove it off-site.
 - c. Exposed Aggregate Concrete Wash Water
 - 1) Contractor shall avoid creating runoff by draining water from washing of exposed aggregate concrete to a dirt area. If a suitable dirt area is not available, then Contractor shall filter the wash water through straw bales/waddles or equivalent material before discharging to the sanitary sewer.
 - 2) Contractor shall collect and return sweepings from exposed aggregate concrete to a stockpile or dispose of the waste in a trash container.
6. Painting
- a. Painting Cleanup
 - 1) Designated Area
 - a) Contractor shall conduct cleaning of painting equipment and tools in a designated area that will not allow run-on of storm water or runoff of spills
 - b) Contractor shall not allow wash water from cleaning of painting equipment and tools into streets, gutters, storm drains, or creeks.
 - 2) Water-based Paint
 - a) Contractor shall remove as much excess paint as possible from brushes, rollers, and equipment before starting cleanup.

- b) To the maximum extent practicable, Contractor shall dispose of wash water from aqueous cleaning of equipment and tools to the sanitary sewer.
 - c) Otherwise, Contractor shall direct wash water onto dirt area and spade in.
 - 3) Oil-based Paint
 - a) Contractor shall remove as much excess paint as possible from brushes, rollers, and equipment before starting cleanup.
 - b) To the maximum extent practicable, Contractor shall filter paint thinner and solvents for reuse.
 - c) Contractor shall dispose of waste thinner and solvent, and sludge from cleaning of equipment and tools as hazardous waste, as described in section 1.01.B.2.c.
 - b. Material / Waste Management
 - 1) Contractor shall store paint, solvents, chemicals, and waste materials in compliance with the requirements of the Owner and all applicable Federal, State and County regulations. Contractor shall store these materials in a designated area that will not allow run-on of storm water or runoff of spills.
 - 2) Contractor shall dispose of excess thinners, solvents, oil- and water-based paint as hazardous waste.
 - 3) Contractor shall dispose of dry, empty paint cans/buckets, old brushes, rollers, rags and drop cloths in the trash.
7. Erosion and Sediment Controls - Contractor shall maximize the control of erosion and sediment by using the most current version of Best Management Practices for erosion and sedimentation in the *California Storm Water Best Management Practice Handbook - Construction Activity, or the Erosion and Sediment Control Field Manual – California Regional Water Quality Control Board San Francisco Bay Region- Current Version*
- a. Storm Water Pollution Prevention Plan (SWPPP)

SWPPPs shall be prepared for all construction sites that will be under construction of exterior improvements or sitework. Contractors shall incorporate all requirements detailed in the developed SWPPP at construction sites. Please contact the Environmental Quality Group for specific instruction at 650-723-9747.
 - b. Scheduling
 - 1) The Contractor shall incorporate erosion and sediment control items in the construction schedule.
 - 2) The Contractor shall avoid or minimize land disturbing activities scheduled between October 1st and April 1st (rainy season). Extra BMPs shall be implemented to protect the site from erosion.
 - 3) Wherever possible, contractor shall schedule major grading operations in dry-weather months (April 1st – October 1st)

- 4) Contractor shall schedule enough time before start of rainy season to put additional BMPs in place to protect site from erosion. Campus Storm Water Inspector will visit site at the end of September to ensure proper storm water protection.
- c. Fiber Rolls/Silt Fence
 - 1) Contractor shall install fiber or silt fence at the perimeter of the site before the start of the rainy season to prevent rainwater run-on and run-off from the site.
 - d. Stabilized Construction Entrance/Exit
 - 1) Contractor shall install a stabilized entrance/exit to minimize the tracking of mud and dirt onto adjacent roads by construction vehicles.
 - e. Storm Drain Inlet Protection/Filters
 - 1) Contractor shall install temporary storm drain inlet protection or filters to improve the quality of water being discharged to the inlets or catch basins or to prevent sediment from accumulating during the non-rainy season. Storm Drain protection is required year round.
 - f. Monitoring
 - 1) Contractor shall monitor the effectiveness of the BMPs used on site before, during and after rain events. Inspections should take place weekly during the duration of the project.
 - 2) Contact the Environmental Group at 650-723-9747 for monitoring form specifications and/or examples.
 - 3) Copies of all monitoring forms shall be forwarded to the Environmental Group office at fax number 650-723-3191.

Storm Water Pollution Prevention Plan Resource List

1. Publications:

Erosion and Sediment Control Field Manual (Current Edition)
California Regional Water Quality Control Board

Order from-
San Francisco Estuary Project
1515 Clay Street, Suite 1400
Oakland, CA 94612
(510) 622-2465
or <http://store.abag.ca.gov/construction.asp>

Guidelines for Construction Projects
CA RWQCB San Francisco Bay Region
Order from-
<http://store.abag.ca.gov/construction.asp>

Manual of Standard for Erosion and Sediment Control
Association of Bar Area Governments
Order from-
ABAG
P.O. Box 2050
Oakland, CA 94604
(510) 464-7900

CASQA Handbook
Stormwater Best Management Practice Handbook
California Stormwater Quality Association
Order from-
www.cabmphandbooks.com

Many more publications and training information can be found at the CA State Water Quality Control Board website <http://www.swrcb.ca.gov/stormwtr/training.html>.

2. Agencies and Associations that can offer technical assistance:

International Erosion Control Association, <http://www.ieca.org/>

Natural Resources Conservation Service, <http://www.nrcs.usda.gov/>

United States Geologic Service, <http://www.usgs.gov/>

Suggested format for SWPPP inspection report:

Storm Water Pollution Prevention Site Inspection Form *									
General Information									
Project:		WDID#:							
Inspection Type: ----- Monthly		----- Pre Storm		----- Post Storm		----- Audit to Determine Compliance w/			
Weather: ----- Sunny		----- Cloudy		----- Rain		Rain Amount: ----- Inches			
Estimate of Storm's Start Time:		----- am / pm		Time Lapsed Since Last Storm:		----- Days:			
Date of Inspection:									
Project Manager:				Company:			Phone:		
Superintendent:				Company:			Phone:		
Inspector:				Company:			Phone:		
Best Management Practices (Site Review)									
1. RUN-ON		E=Effective		S=Satisfactory		NM=Needs Maintenance		NE=Not Evaluated	
Diversion of Run-On		<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A					
Surface Roughening		<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A					
2. Erosion Control		E=Effective		S=Satisfactory		NM=Needs Maintenance		NE=Not Evaluated	
Temp. Slope Stabilization		<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A		Blanket <input type="checkbox"/>		Spray <input type="checkbox"/> Landscaped <input type="checkbox"/>	
Perm. Slope Stabilization		<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A		Blanket <input type="checkbox"/>		Spray <input type="checkbox"/> Landscaped <input type="checkbox"/>	
Flat Lot Stabilization		<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A		Blanket <input type="checkbox"/>		Spray <input type="checkbox"/> Landscaped <input type="checkbox"/>	
Other Stabilization		<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A		Blanket <input type="checkbox"/>		Spray <input type="checkbox"/> Landscaped <input type="checkbox"/>	
3. Sediment Control Measures		E=Effective		S=Satisfactory		NM=Needs Maintenance		NE=Not Evaluated	
Silt Fence		<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A		Fiber Roll <input type="checkbox"/>		Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Dust Control		<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A		Safety Fence/Perimeter Con <input type="checkbox"/>		Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Sediment Trap		<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A		Check Dams <input type="checkbox"/>		Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Sediment Basin		<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A		Are Stockpiles Covered <input type="checkbox"/>		Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Stabilized CST Entrance		<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A		Storm Water Inlet Protection <input type="checkbox"/>		Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Storm Water Out Let Protec		<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A					
4. Post Construction		E=Effective		S=Satisfactory		NM=Needs Maintenance		NE=Not Evaluated	
Post CST Implemented		<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A		Other Post CST BMP's <input type="checkbox"/>		Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
5. Housekeeping Practices		E=Effective		S=Satisfactory		NM=Needs Maintenance		NE=Not Evaluated	
General housekeeping		<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A		Sampling Kit On Site <input type="checkbox"/>		Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Hazardous Material-Storage		<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A		Above Ground Storage Tanl <input type="checkbox"/>		Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
		<input type="checkbox"/> Covered		<input type="checkbox"/> Uncovered		CST Material Storage <input type="checkbox"/>		Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Waste Collection/Litter		<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A		<input type="checkbox"/> Metal Bin(s)		Lot # -----	
Concrete Wash-Out		<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A		Street Sweeping <input type="checkbox"/>		Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Dewatering Operations		<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A		Stockpile Management <input type="checkbox"/>		Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Spill Kit On Site/Other		<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A		Portable Toilet <input type="checkbox"/>		Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
6. Other BMPs		E=Effective		S=Satisfactory		NM=Needs Maintenance		NE=Not Evaluated	
		<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A				<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Observations:									
* Note: Inspection/Monitoring will be performed weekly at a minimum and before and after storm events and once each 24-hour period during extended storm events to identify BMP effectiveness and implement repairs or design changes as soon as feasible depending upon field conditions.									

