

**STANFORD UNIVERSITY
SPECIAL CONDITIONS
FOR
WATER DISCHARGE MANAGEMENT
AND
ENVIRONMENTAL POLLUTION PREVENTION**

I. PURPOSE OF THESE SPECIAL CONDITIONS

- A. The purpose of these Special Conditions and the requirements herein is to prevent the pollution of Stanford's storm drainage and sanitary sewer systems and the environment from construction projects and operations & maintenance activities. Following these requirements will facilitate compliance with environmental regulations to reduce discharges of materials and wastes, including metal debris, detergents, pesticides, grease, lubricants, and other contaminants, and reducing erosion and sedimentation. Storm drainage systems discharge surface water runoff directly to creeks and the San Francisco Bay without treatment. Wastewater treatment plants are sensitive to hazardous chemicals, heavy metals loading, and grease. The Contractor shall be liable for any noncompliance or fines related to disregarding applicable laws and the requirements in these Special Conditions.
- B. These requirements are based on the following permits and ordinances applicable to Stanford University from our local and regional permitting agencies (Santa Clara County, City of Palo Alto):
- C. California Regional Water Quality Control Board, San Francisco Bay Region, Municipal Regional Stormwater NPDES Permit (MRP). NPDES Permit No. CAS612008, http://www.swrcb.ca.gov/water_issues/programs/stormwater/docs/phase1r2_2009_0074.pdf
- D. State Water Resources Control Board General Construction Permit (GCP). NPDES Permit No.CAS000002, http://www.swrcb.ca.gov/water_issues/programs/stormwater/constpermits.shtml
- E. Santa Clara County Ordinance Code (Stanford is located within unincorporated Santa Clara County). http://www.sccgov.org/scc_ordinance/TOC057.HTM
- F. The City of Palo Alto Municipal Code – Sewer Use Ordinance (Stanford discharges wastewater to the City of Palo Alto Regional Water Quality Control Plant and maintains a permit to discharge wastewater). http://www.cityofpaloalto.org/depts/clk/municipal_code.asp (Title 16, Section 09)

II. GENERAL REQUIREMENTS

A. Non-hazardous Material / Waste Management

1. Designated Area

Propose designated areas of the project site, for approval by Stanford's Project Manager, suitable for material delivery, storage, and waste collection that, to the maximum extent practicable, are near project entrances and away from catch basins, gutters, drainage courses, and creeks.

2. Stockpiled Project Materials (e.g., excavated or imported earth, sand, aggregate base, spoils, fly-ash, stucco, hydrated lime, pressure treated lumber, or other similar project materials)
 - a. Store stockpiled project material at least ten feet away from catch basins and drainage inlets. Stockpiled material shall be kept clear of gutters, swales and drainage channels.
 - b. Do not allow stockpiled material to enter storm drains or creeks.
 - c. Cover and berm loose stockpiled project materials that are not actively being used. Covers shall be held securely in place to prevent movement by wind, precipitation, or other means.
 - d. Implement best management practices, see “*California Storm Water Best Management Practice Handbook - Construction Activity*” by the California Stormwater Quality Association (CASQA), to prevent the off-site tracking of loose project and landscape materials. <http://www.casqa.org/>
3. Dust Control

Use non-potable water to control dust on a daily basis/as needed or as directed by Stanford’s Project Manager.
4. Street Sweeping

At the end of each working day or as directed by Stanford Project Manager, clean and sweep roadways, haul routes and on-site paved areas of all materials attributed to or involved in the work. Do not use water to wash or flush down streets in place of street sweeping.
5. Recycling
 - a. Recycle aggregate base material, asphalt concrete, and Portland cement concrete when required by provisions of the Specifications or by notes on the Drawings.
 - b. In addition, to the maximum extent practicable, reuse or recycle any useful project materials generated during the project subject to approval by Stanford Project Manager.
6. Disposal
 - a. At the end of each working day, collect all scrap, debris, and waste material, and dispose of such materials properly.
 - b. Cover all waste disposal containers at the end of every business day and during rain events.
 - c. Inspect dumpsters for leaks and contact dumpster supplier to replace or repair dumpsters that leak.
 - d. Do not discharge water on-site from cleaning dumpsters.
 - e. Arrange for regular waste collection before dumpsters overflow.

B. Hazardous Material / Waste Management

1. Storage
 - a. 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.
 - b. Store all hazardous materials and all hazardous wastes in accordance with secondary containment regulations,
 - c. Store hazardous materials in watertight containers or in a storage shed (completely enclosed).

- d. 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.
 - e. Prevent the disposal of any rinse or wash waters or materials on impervious or pervious site surfaces or into the storm drain system.
 - f. Ensure proper placement and containment of sanitation facilities (e.g., portable toilets) to prevent discharges of pollutants to the storm water drainage system.
2. Usage
- a. Chemicals shall not be applied when rain is forecast within 48 hours or during wet weather unless specifically approved by the Stanford Project Manager.
 - b. Do not over-apply pesticides or fertilizers and 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.
3. Wastewater Disposal
- Wastewater generated from projects or operations & maintenance activities must comply with discharge standards outlined in the City of Palo Alto Municipal Code, Sewer Use Ordinance, 16.09.040. A copy of the Sewer Use Ordinance can be found at: http://www.cityofpaloalto.org/depts/clk/municipal_code.asp
4. Hazardous Waste Disposal
- a. Properly label and arrange for regular hazardous waste collection to comply with time limits (90 days) on storage of hazardous wastes.
 - b. Arrange with project manager for hazardous waste pick up and disposal by Environmental Health and Safety.

C. Spill Prevention and Control

- 1. Keep a stockpile of spill cleanup materials, such as rags or absorbents, readily accessible on-site.
- 2. 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 II.B.4. above.
- 3. Do not wash any spilled material into streets, gutters, storm drains, or creeks and do not bury spilled hazardous materials.
- 4. Update and post "Emergency and Spill Response Notifications for Construction and Operations & Maintenance Activities," see Attachment B.
- 5. Immediately report any hazardous material spill greater than one quart to Stanford University Environmental Health and Safety Department **(650) 725-9999**, and to the Stanford Project Manager.
- 6. Immediately report any **sewage spills** to the Stanford 24-hour operations & maintenance customer service at **(650) 723-2281**.

D. Vehicle / Equipment Cleaning

- 1. Do not perform vehicle or equipment cleaning on site or in the street using soaps, solvents, degreasers, steam cleaning equipment, or equivalent methods.
- 2. 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.

E. Vehicle / Equipment Maintenance and Fueling

1. Perform repairs, 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.
2. Keep a stockpile of spill cleanup materials, such as rags or absorbents, readily accessible on-site.
3. 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 II.B.4. above.
4. Do not wash any spilled material into streets, gutters, storm drains, or creeks and do not bury spilled hazardous materials.
5. Report any **hazardous materials spill** (greater than quart) to Stanford University Environmental Health and Safety Department **(650) 725-9999**, and to the Stanford Project Manager.
6. 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.
7. Recycle waste oil and antifreeze, to the maximum extent practicable.
8. Comply with Federal, State, and County requirements for aboveground storage tanks and portable generators.

F. Contractor Training and Awareness

1. Train all employees and sub-contractors on the environmental pollution prevention requirements contained in these Special Conditions.
2. Keep records of all environmental pollution prevention training on site for the duration of the project/contract.
3. Inform contracted entities of the environmental pollution prevention requirements and include appropriate provisions to ensure that these requirements are met.
4. Keep records of subcontractor notification of environmental pollution prevention requirements on site for the duration of the project/contract.
5. Post warning signs in areas treated with chemicals.
6. Paint new catch basins, constructed as part of the project, with the “NO DUMPING – FLOWS TO BAY” stencil available from Stanford University (650) 723-9747 or 725-7864.

III. ACTIVITY-SPECIFIC REQUIREMENTS

A. Dewatering Operations

1. Groundwater Dewatering (in general, groundwater is not found at Stanford shallower than 25 feet below natural ground surface)
 - a. Notify the Stanford Project Manager at least one month prior to any anticipated groundwater dewatering discharges. Sample and analyze the groundwater to be discharged for pH, turbidity, TSS, TPH, VOCs, and metals and provide the results to the Stanford Project Manager for review to determine appropriate discharge method.
 - b. If the project is found to be within an area of groundwater contamination not so identified on the Drawings or in the Specifications, contact the Stanford Project Manager for direction as to if and how to proceed with the dewatering operation.
2. Construction Site Rainfall Dewatering

- a. Comply with site Stormwater Pollution Prevention Plan (SWPPP) dewatering requirements.
 - b. Check for odors, visible sheen, turbidity or discolored water prior to discharge.
 - c. Maintain appropriate best management practices to prevent erosion at the discharge point and at rates that avoid scouring to downstream water bodies.
 - d. Employ appropriate best management practices to ensure the pumped water is free of pollutants. Discharge shall have pH between 6.0 and 9.0 and turbidity no higher than 500 NTU.
3. Utility Infrastructure Dewatering (Vaults)
- a. Follow “Procedure for Planned Discharges of Rainwater or Wastewater” (Attachment A).
 - b. Check for odors, visible sheen, turbidity or discolored water prior to discharge.
 - c. Suspected contaminated rainwater may not be discharged to the storm drain.

B. Paving Operations

1. Project Site Management
 - a. Obtain Stanford Project Manager’s approval when scheduling paving within 48 hours of, or during, wet weather.
 - b. Protect drainage courses by using control measures such as filter fabric, straw waddles, and rock bags as necessary to divert runoff and trap and filter sediment.
 - c. Place drip pans or absorbent material under paving equipment when not in use.
 - d. Cover catch basins and manholes when paving or applying seal coat, tack coat, slurry seal, or fog seal.
2. Paving Waste Management
 - a. Do 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, either collect the sand and return it to the stockpile or dispose of it in a trash container.
 - b. Do not use water to wash down fresh asphalt concrete pavement.

C. Saw Cutting

1. During saw cutting, cover or barricade all nearby catch basins using control measures, such as filter fabric, straw waddles, and fine gravel dams, as necessary to keep slurry out of the storm drain system. When protecting a catch basin, ensure that the entire opening is covered.
2. Shovel, absorb, or vacuum saw-cut slurry during or immediately following saw-cutting. 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. Do not use water to wash down saw-cut slurry or waste.
3. If saw cut slurry enters catch basins, remove the slurry from the storm drain system immediately and report the spill to Stanford Maintenance Customer Service at **650-723-2281**.

D. Contaminated Soil Management

1. On all projects involving grading or excavation, visually observe encountered materials and identify 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.

2. 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 as directed by the Stanford Project Manager. The soil shall be managed as required by the Stanford Project Manager.
3. If the project is found to have contaminated soil not within an area of soil contamination identified on the Drawings, contact the Stanford Project Manager for direction as to how to proceed.

E. Concrete, Grout, Stucco and Mortar Waste Management

1. Material Management

Store concrete, grout, stucco, and mortar away from drainage areas and ensure that these materials do not enter the storm drain system.

2. Concrete/grout/stucco/mortar wash out.

- a. Do not wash out concrete, grout, stucco, and mortar into streets, gutters, storm drains, or creeks.
- b. Avoid mixing excess amounts of fresh concrete, grout, stucco, and mortar on-site.
- c. Store dry and wet materials away from waterways and storm drains; cover and contain to protect from rainfall and prevent runoff.
- d. Wash out trucks and equipment only in designated wash-out areas that are appropriately sized to handle expected waste and are water-tight.
- e. Establish a location for the washout area away from watercourses and storm drains. The washout area shall be appropriately sized to handle the expected volume at the site. Allow the water to evaporate and dispose of the hardened concrete in a trash container. If a suitable washout area is not available, collect the wash-out water and dispose of it at an off-site facility approved for such use.
- f. Cover all washout areas and containers during rain events.

3. Exposed Aggregate Concrete Wash Water

- a. Contain and manage exposed aggregate concrete wash water as outlined in section III.E.2. above.
- b. Collect and return sweepings from exposed aggregate concrete to a stockpile or dispose of the waste in a trash container.

F. Painting

1. Painting Cleanup

a. Designated Area

- (1) Clean painting equipment and tools in a designated area that will not allow run-on of storm water or runoff of spills.
- (2) Do not allow wash water from cleaning of painting equipment and tools into streets, gutters, storm drains, or creeks.

b. Water-based Paint

- (1) Remove as much excess paint as possible from brushes, rollers, and equipment before starting cleanup.
- (2) Dispose of wash water from aqueous cleaning of equipment and tools to the sanitary sewer.

- c. Oil-based Paint
 - (1) Remove as much excess paint as possible from brushes, rollers, and equipment before starting cleanup.
 - (2) To the maximum extent practicable, filter paint thinner and solvents for reuse.
 - (3) Dispose of waste thinner and solvent, and sludge from cleaning of equipment and tools as hazardous waste, as described in section II.B.4. above.
- 2. Material / Waste Management
 - a. Store paint, solvents, chemicals, and waste materials in compliance with the requirements of the Owner and all applicable Federal, State and County regulations. Store these materials in a designated area that will not allow run-on of storm water or runoff of spills.
 - b. Return usable containers of thinners, solvents, oil and water-based paints to shop or place of business as surplus materials.
 - c. Manage any unusable paints, thinners and solvents, (e.g.: contaminated materials, unknown materials, dried out paints, unlabeled containers), as hazardous waste in accordance with section II.B.4.
 - d. Dispose of dry, empty paint cans/buckets, old brushes, rollers, rags and drop cloths in the trash.
- G. Erosion and Sediment Controls - maximize the control of erosion and sediment by using the most current version of Best Management Practices (BMPs) for erosion and sedimentation in the current version of "*California Storm Water Best Management Practice Handbook - Construction Activity*" by the California Stormwater Quality Association (CASQA).
 - 1. Storm Water Pollution Prevention Plan (SWPPP)
 - SWPPPs shall be prepared by the Stanford Project Manager for all construction sites 1 acre or larger that will be under construction of exterior improvements or site work. Incorporate all requirements detailed in the developed SWPPP at construction sites.
 - 2. Scheduling
 - a. Incorporate erosion and sediment control items in the construction schedule.
 - b. Avoid or minimize land disturbing activities scheduled between October and April (rainy season). Extra BMPs shall be implemented to protect the site from erosion between those dates.
 - c. Wherever possible, schedule major grading operations in dry-weather months (May – October)
 - d. 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.
 - 3. Perimeter Controls
 - Install effective perimeter controls (e.g., fiber rolls, silt fence, etc.) around the perimeter of the site to prevent rainwater run-on and run-off from the site.
 - 4. Stabilized Construction Entrance/Exit
 - Install a stabilized entrance/exit to minimize the tracking of mud and dirt onto adjacent roads by project vehicles.
 - 5. Storm Drain Inlet Protection/Filters
 - Install temporary storm drain inlet protection or filters within the project fence line 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.

6. Monitoring

- a. 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.
- b. Contact the **Utilities Environmental Group** at **650-723-9747** for monitoring form specifications and/or examples.
- c. Transmit pdf copies of all monitoring forms to the Environmental Group office via email (tracyd@stanford.edu or martyl@bonair.stanford.edu).

H. Pipe Cleaning Discharges (e.g., newly installed pipe systems, heating hot water, chilled water, etc.)

1. Provide the following information to the Utilities Environmental Group no less than seven working days prior to anticipated discharge:
 - a. Cleaning Chemical MSDS
 - b. Quantity of product to be used
 - c. Concentration of product to be used
2. Follow “Procedure for Planned Discharges of Rainwater or Wastewater” (Attachment A).

I. Surface Cleaning (e.g., roof tiles, buildings, sidewalks, etc.)

1. Block all storm drains located in the cleaning area.
2. Filter cleaning runoff to remove debris.
3. Collect all wash water from cleaning operation and dispose of to the sanitary sewer.
4. Follow “Procedure for Planned Discharges of Rainwater or Wastewater” (Attachment A).
5. If cleaning product is to be used, provide the following information to the Environmental Compliance Group no less than seven working days prior to anticipated discharge:
 - a. Chemical MSDS
 - b. Quantity/Concentration of product to be used
 - c. Total volume of wastewater

J. Potable Water Discharges (e.g., hydrant testing, water main disinfection)

1. Implement appropriate best management practices for dechlorination, and sediment and erosion controls.
2. Sample the discharged water once every 30 minutes and maintain a pH between 6.5 – 8.5, Turbidity less than 50 NTU and Chlorine Residual less than 0.05 mg/L.
3. Follow “Procedure for Planned Discharges of Rainwater or Wastewater” (Attachment A).

Stanford University Procedure for Planned Discharges of Rainwater or Wastewater

Name of Requester/Discharger:	
Phone Number for Requester/Discharger:	
Project Name/Number or Utility System:	
Date Discharge Request Submitted:	
Date(s) of Expected Discharge:	

STEP 1: IDENTIFY DISCHARGE TYPE (Page 2): _____

Identify your discharge type from the list on page 2. Some discharges may have multiple discharge options based on presence or absence of contaminants in the water.

STEP 2: IDENTIFY DISCHARGE OPTIONS:

Review discharge option from list on page 2. Check the box of the preferred discharge option. Identify specific location or manhole number. Fill in discharge details.

<input type="checkbox"/> Option 1 Landscape Location	<input type="checkbox"/> Option 2 Sanitary Sewer Manhole #	<input type="checkbox"/> Option 3 Storm Drain Manhole #
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Discharge Details

Type of liquid to be discharged:	
Current location of liquid to be discharged:	
Purpose of discharge:	
Approximate volume:	
Expected duration of discharge:	

STEP 3: COMPLY WITH DISCHARGE REQUIREMENTS:

Follow all discharge requirements associated with your discharge type from the list on the next page. Return this form to the Stanford Water Department or Environmental Quality Group for discharge approval.

STEP 4: RECEIVE APPROVAL FOR DISCHARGE:

Once form has been approved, you may discharge per the requirements specified above.

For Internal Use Only	
Date discharge approved:	
Name of approver:	
Date of field inspection (if necessary)	
MSDS reviewed?	
Meets sewer discharge requirements?	
File copy of discharge procedure at: S:\Groups\Utilities\DischargeProcedures	

DISCHARGE TYPES, OPTIONS, AND REQUIREMENTS	STEP 2: DISCHARGE OPTIONS:			
	Discharge to Landscaping	Discharge to Sanitary Sewer	Discharge to Storm Drain	Hazardous Waste Disposal
STEP 1: IDENTIFY DISCHARGE TYPE:	Option 1	Option 2	Option 3	Option 4
Utility vault dewatering				
Clean rainwater	①		①	
Polluted water (e.g. oily layer on top, DriTherm, etc.)		②		③
Pipe cleaning wastewater		②		③
Potable dechloraminated water	①		①	
Fire hydrant testing	①		①	
Fire flow/emergency shower testing	①		①	
Potable water pipe flushing	①		①	
Surface cleaning wastewater (roof tiles, buildings)	①		①	
Surface cleaning wastewater (sidewalks, plazas, loading docks)		②		③
Elevator sump dewatering		②		③
Swimming pool/spa wastewater		②		
Decorative fountain wastewater		②		
Mobile business wastewater (car wash, carpet cleaning)		②		③
STEP 3: DISCHARGE REQUIREMENTS (REQUIREMENTS ASSOCIATED WITH DISCHARGE OPTIONS FROM STEP 2)				
	Option 1	Option 2	Option 3	Option 4
Contact Stanford Water Shop for discharge location approval.	●	●	●	
Discharger handles setup and traffic control if needed (Public Safety).	●	●	●	
Check for odors, oily layer, turbidity, discolored water prior to discharge.	●		●	
Protect landscaping and ground from erosion and scouring downstream.	●			
Filter runoff to remove debris/suspended solids.	●		●	
Dechlorinate potable water discharge, if needed (>0.02mg/L).	●		●	
Block all storm drains located in discharge area.		●		●
Collect wastewater and discharge to sanitary sewer.		●		
Provide volume of discharge.	●	●	●	●
The following are required for discharges that contain chemicals/contaminants:		●		
Contact Stanford Environmental Group 7 days prior to discharge/project for discharge approval.		●		●
Provide product MSDS.		●		●
Provide quantity of chemical in use.		●		
Provide dilution factor of chemical in use.		●		
Provide pH of chemical.		●		●

① - Clean water only, no chemicals, debris, or turbidity; dechlorinate potable water discharges.

② - Water must meet sanitary sewer discharge requirements. Contact Stanford Environmental Group.

③ - If wastewater is not sewerable, schedule hazardous waste pick up through Environmental Health and Safety.

Stanford Contacts for Discharge of Rainwater and Wastewater Approval

Water Shop: 650-723-1300, 650-723-2281, richards@bonair.stanford.edu

Environmental Group: 650-725-7864, 650-723-9747, martyr@bonair.stanford.edu, tracyd@stanford.edu

Environmental Health and Safety: 650-723-0448



Emergency and Spill Response Notifications For Construction and Operations & Maintenance Activities

IF: Health Threatening Situation - In the event of an imminent or actual emergency that threatens local or public health or safety; or the environment outside the immediate area:

- 1) **CALL 911 (9-911 campus phone; OR 650-321-2231 from a cell phone)**
FOR THE FIRE DEPARTMENT. REMAIN IN THE AREA.
- 2) ACTIVATE LOCAL ALARM SYSTEM
- 3) Once personal safety is established, proceed with non-health threatening actions and notifications, below.
- 4) CALL Stanford's Maintenance Customer Service at 650-723-2281.

IF: Release to Environment, Non-Health Threatening Situation – In the event of a spill or release to the environment (storm drain, soil) or spill or release greater than one quart of diesel/fuel/oil * **see note below**:

- 1) Contain spill with kitty litter or other absorbent material.
- 2) Look in storm catchment basins, drains, gutters to determine if spilled material was released to storm drain.
- 3) Protect storm drains from spilled material. Use "Drain Blocker" pad or similar to cover any threatened storm drain.
- 4) Notify: Stanford EHS as soon as situation allows 650-725-9999
 - State what happened, estimate how much was spilled
 - Your name
 - Location and time of incident
 - What is needed to clean up spill
 - Request containers for waste
- 5) Notify: Stanford's Maintenance Customer Service at 650-723-2281.

Summary Emergency Phone Numbers	
Emergency Off Campus	911
Emergency On Campus	9-911
Emergency From Cell Phone	650-321-2231
Stanford Environmental Health and Safety	650-725-9999
Stanford Maintenance Customer Service	650-723-2281
Stanford Project Manager (Cell Phone)	Contractor to Update

* All spills of any other hazardous materials must be reported to EH&S (650-725-9999)