

**SECTION 10 - ENVIRONMENTAL CONTROLS AT WORK SITE  
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## SECTION 10 - ENVIRONMENTAL CONTROLS AT WORK SITE

### 10-1 DUST CONTROL

Dust control must conform to Section 17, "Dust Control," of these Specifications.

### 10-2 AIR POLLUTION CONTROL

The Contractor must comply with all Federal, State, Agency, and local air pollution control rules, regulations, ordinances, and statutes that apply to the Work and the Contractor's operations. The Contractor must also comply with the requirements of permits issued to the Agency noted or included in the Special Provisions.

### 10-3 BURNING

Unless otherwise provided in the Special Provisions or approved by the Agency in writing, material cannot be burned on site.

### 10-4 EROSION, SEDIMENT, AND WATER POLLUTION CONTROL

#### 10-4.01 General

The Federal Clean Water Act provides for the regulation and reduction of pollutants discharged into the Waters of the United States by extending National Pollutant Discharge Elimination System (NPDES) requirements to construction sites to prevent pollutants from construction activities or construction sites from entering storm drain systems. Storm drain systems consist of both constructed and natural facilities. The Contractor is responsible for protecting the local storm drain system from pollution by organizing, scheduling, and conducting operations to prevent, control, and abate water pollution from the Contractor's operations.

The required plan to control erosion, sediment and water pollution must be reviewed and accepted by the Agency before work begins. If the Contractor's methods fail to prevent erosion or sedimentation, the Contractor must revise and adjust the control measures to provide effective control and restore damage resulting from erosion or sedimentation originating from the Work and other sites the Contractor controls or passes through.

The Contractor's responsibility to provide erosion, sediment, and water pollution control ends at Field Acceptance (see Section 7-21.02, "Field Acceptance," of these specifications.)

The Contractor must designate a Water Pollution Control Manager (WPCM) whose duties include:

- Being responsible for water pollution control work.
- Being the primary contact for water pollution control work.
- Overseeing the implementation of the plan or program.
- Preparation and submittal of plans, amendments, and reports.
- Mobilization of crews to make immediate repairs to water pollution control.
- Ensuring that all employees have current water pollution control training.
- Being at the job site within 2 hours of being contacted.
- Stopping construction activities that are damaging water pollution control or causing water pollution.

The name of and contact information for the WPCM must be provided to the Agency at the pre-construction meeting.

#### **10-4.02 Regulations, Ordinances, Permits, and Specifications**

The Contractor must comply with all Federal, State, Agency and local permits, rules, regulations, ordinances, statutes, and Agency directions that apply to erosion, sediment, and water pollution control. The Contractor must comply with the most stringent regulation, ordinance, permit, or specification of the following applicable to the Work:

- This Section
- The Contract Special Provisions
- The County of Sacramento Land Grading and Erosion Control Ordinance (Chapter 16.44 of the Sacramento County Code)
- The County of Sacramento Stormwater Management and Discharge Control Ordinance (Chapter 15.12 of the Sacramento County Code)
- The County of Sacramento Municipal Separate Storm Sewer System (MS4) Permit
- The State of California General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities Order No. 2009-0009-DWQ and successor permits (Construction General Permit, CGP)

#### **10-4.03 Agency Requirements**

Contractors performing construction in the County of Sacramento are required to develop and implement one of the following plans to control erosion, sediment and water pollution. The required plan will be identified in the Special Provisions

1. A Stormwater Pollution Prevention Plan (SWPPP). (See Section 10-4.04, “Stormwater Pollution Prevention Plan (SWPPP),” of these Specifications.) The Contractor is responsible for knowing the CGP requirements for the specified Risk Level and how those requirements apply to the Work. The Risk Level will be identified in the Special Provisions.
2. An Erosion and Sediment Control Plan (ESCP). (See Section 10-4.05, “Erosion and Sediment Control Plan (ESCP),” of these Specifications.)
3. A Water Pollution Control Program. (See Section 10-4.06, “Water Pollution Control Program (WPCP),” of these Specifications.)

The Contractor must submit the required plan for review and acceptance prior to performing work. Unless specifically authorized in writing by the Agency, activities that could create water pollution (like potholing, clearing, grubbing, or similar ground-disturbing activities) must not be performed without a written plan to control water pollution.

The plan must indicate how the Contractor proposes to effectively control water pollution during the Work. The plan must show all water pollution control Best Management Practices (BMP’s) the Contractor will implement in connection with the Work, including inactive areas and completed work, and must describe how the Contractor will monitor the effectiveness of the plan. Standard Drawings 11-1 through 11-10 must be adhered to as applicable.

The Contractor must update the plan as frequently as required, or as directed by the Agency, to address the current stage of construction or whenever there is a change in construction activities or operations that affects the discharge of pollutants. The plan must be adjusted if the objective of reducing pollutants in discharges is not effectively achieved, or at the

direction of the Agency. Updates and adjustments to the plan must show additional control measures or revised operations, including those in areas not shown in the initially approved program, which are required on the project to control water pollution effectively. Amendments to the plan must be submitted to the Agency for review and acceptance. Upon approval of the amendment, the Contractor must implement the additional control measures or revised operations.

The Agency is not responsible for the Contractor's water pollution control plan, delays to the Work due to the Contractor's failure to prepare and implement a plan, or impacts resulting from the Agency's standard submittal review process.

#### **10-4.04 Stormwater Pollution Prevention Plan (SWPPP)**

##### **10-4.04.A General**

Construction projects disturbing 1 acre or more, or less than 1 acre if part of a larger development, and linear projects are covered under the State of California General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities Order No. 2009-0009-DWQ (CGP). The State Water Resources Control Board (State Board or SWRCB) will issue a Waste Discharge Identification Number (WDID) for the project. Work can not start until the WDID is issued and the SWPPP has been accepted by the Agency.

##### **10-4.04.B Contents**

At a minimum, the SWPPP must contain the following:

1. An ESCP as described in Section 10-4.05 including:
  - a. Discharge locations
  - b. Sampling locations
  - c. ATS location (if applicable)
2. A sampling and analysis plan that identifies and addresses all sampling and analysis required by the CGP for the specified Risk level
3. Sample Rain Event Action Plan (if applicable)
4. Copies of permits obtained by the Agency, including:
  - a. Fish & Wildlife permits
  - b. US Army Corps of Engineers permits
  - c. RWQCB 401 water quality certifications
  - d. Aerially deposited lead variance from the Department of Toxic Substance Control, aerially deposited lead variance notification, and RWQCB waste discharge requirements for aerially deposited lead reuse.

##### **10-4.04.C Preparation, Review, Acceptance**

Unless noted otherwise in the Special Provisions, the SWPPP must be prepared in accordance with the CGP. The SWPPP must be written, certified, and amended by a Qualified SWPPP Developer (QSD) as defined in the CGP. The SWPPP must be submitted to the Agency for review and acceptance, and implemented by the Contractor before Work starts. Unless otherwise stated in the Special Provisions, the Contractor must submit 3 hard copies for review and approval. Upon approval by the Agency, the Contractor must provide an electronic copy in MS Word, PDF, or another format acceptable for uploading to the SWRCB Storm Water Multi Application and Report Tracking System (SMARTS). A current, hard copy of the SWPPP must be kept onsite at all times and must immediately be presented to Agency and Regional

Water Quality Control Board (RWQCB or Regional Board) Inspectors, or personnel from other jurisdictional agencies, upon request. Failure to maintain and update the SWPPP or have the SWPPP readily available for review can result in a directive to stop work. (See Section 10-4.07, “Compliance,” of these Specifications.)

**10-4.04.D Implementation**

The individual responsible for the implementation of the SWPPP must be a Qualified SWPPP Practitioner (QSP) as defined in the CGP. All project personnel, inspectors, consultants, and contractors responsible for the use, installation, inspection, maintenance, and repair of Best Management Practices (BMP’s) on all County projects are required to attend a project-specific stormwater compliance meeting. (See Section 10-4.08, “Required Stormwater Regulatory Compliance ,” of these Specifications.)

**10-4.04.E Reporting**

If at any time the project is not in compliance, the Contractor must make a written report to the Agency within 2 Working Days of the event that caused the project to be out of compliance. By August 1st of each year, the Contractor must submit to the Agency all required information for the Annual Report required by the CGP.

**10-4.05 Erosion and Sediment Control Plan (ESCP)**

The Contractor must prepare an Erosion and Sediment Control Plan (ESCP) for a project that involves the grading, filling, excavating, storage, or disposal of 350 cubic yards or more of soil, or the clearing and grubbing of 1 acre or more. At a minimum, the ESCP must include the following information:

1. A site map showing:
  - a. A vicinity map.
  - b. Boundary lines of the property and each lot or parcel into which the site is proposed to be divided.
  - c. Construction site boundaries.
  - d. A delineation of the area to be cleared and grubbed.
  - e. On-site and surrounding watercourses, wetlands, sensitive habitats, and other features that are not to be disturbed.
  - f. Existing and proposed drainage systems.
  - g. Drainage area boundaries and acreages.
  - h. Existing roads and structures on the site, and on adjacent property.
  - i. Proposed roads and structures on the site, and on adjacent property.
  - j. Topography of existing ground including accurate contours at two foot intervals for slopes up to ten percent and five foot intervals for slopes over ten percent. Spot elevations are required where relatively flat conditions exist. The spot elevations or contour lines must be extended off-site for a minimum distance of 50 feet, or 100 feet in flat terrain.
  - k. Locations of existing vegetation, including oak trees, other trees over six inches in diameter measured at 4.5 feet above the ground, groves of trees
  - l. Elevations, location, extent and slope of proposed grading shown by contours, cross-sections or other means, including fills or other special features to be included in the work.
  - m. Locations of:
    - i. Storage areas for materials.
    - ii. Storage areas for waste.

- iii. Vehicle service and fueling areas.
    - iv. Loading/unloading of materials.
    - v. Vehicle access points.
    - vi. Water storage and water transfer for dust control and compaction.
  - n. Location of erosion and sediment control measures to be implemented or constructed prior to, during or after each proposed activity.
2. A statement of the quantity of material to be excavated, the quantity of material to be filled, whether the excavation or fill is permanent or temporary, and the amount of material to be imported to or exported from the site.
3. A schedule showing when:
  - a. Work activities will be performed that could cause the discharge of pollutants into stormwater.
  - b. Water pollution control practices associated with each construction phase will be implemented.
  - c. Soil stabilization and sediment control practices for disturbed soil areas will be implemented.
4. A description of and details for:
  - a. Erosion control measures and sediment control measures to be implemented or constructed prior to, during or after each proposed activity.
  - b. Dust control and construction site road and entrance stabilization measures.
  - c. Storage and disposal of construction materials.
5. A maintenance schedule and log for all erosion and sediment control measures.
6. Additional plans required by the Agency.

The Special Provisions will identify information, if any, to be provided by the Agency.

#### **10-4.06 Water Pollution Control Program (WPCP)**

If the Work does not fall under Sections 10-4.04 or 10-4.05 of these Specifications, the Contractor must prepare a Water Pollution Control Program (WPCP) detailing the following:

1. A map showing:
  - a. Location of soil stockpiles and solid waste containers.
  - b. Vehicle and equipment fueling, servicing, cleaning and storage areas.
  - c. Material storage areas.
  - d. Locations of erosion and sediment control BMPs.
  - e. Site drainage during execution of the Work.
  - f. Stabilized vehicle accesses
  - g. Concrete clean out areas.
2. Chemicals, potential pollutants and hazardous materials to be used.
3. Methods for (include copies of drawings, details, and/or descriptions):
  - a. Dewatering.
  - b. Street cleaning.
  - c. Managing run-on and run off.
  - d. Spill prevention and control.
  - e. Handling and disposal of solid waste.
  - f. Methods for safekeeping and secondary containment of chemicals, potential pollutants, and hazardous materials.
  - g. Storage and dispensing of fuel and lubricants.
  - h. Clean out and disposal of concrete.
  - i. Construction BMP maintenance, inspection, and repair.
  - j. Sanitation provisions
4. Site stabilization after completion of the work

5. Construction BMP implementation and removal schedule

The WPCP must be submitted to the Agency for review and acceptance prior to the beginning of work.

**10-4.07 Compliance**

If the Contractor fails to comply with requirements of this Section 10-4, “Erosion, Sedimentation, and Water Pollution Control,” the Agency can stop all or a portion of the Contractor’s operations and direct the installation of erosion, sedimentation, or water pollution control, the organizing and scheduling of work, the preparation of required reports or documentation, or other work required to achieve compliance. In accordance with Section 5-21, “Temporary Suspension or Delay of Work,” of these Specifications, the Contractor cannot resume work until the Agency’s directive has been complied with to the satisfaction of the Agency. Temporary suspensions or delays caused by the Contractor’s failure to comply with the requirements of this Section are considered avoidable delays. See Section 7-12.01, “Avoidable Delays,” of these Specifications. Compliance with the provisions in this Section does not relieve the Contractor of the responsibility for compliance with other Contract provisions.

The Contractor must install BMPs, maintain BMPs, perform inspections, remove BMPs, and prepare documentation required by the SWPPP, ESCP, or WPCP applicable to the Work. At a minimum, inspections must be done weekly and 24 hours prior to, during, and after each rain event, and every 24 hours during extended rain events. The Contractor is solely responsible for preparing and maintaining inspection and monitoring records; and for including those records in the SWPPP, ESCP or WPCP, copies of which must be made available to the Agency upon request.

The Contractor must immediately correct or replace a BMP deemed ineffective by the Contractor or Engineer. If the measures taken by the Contractor are inadequate to effectively control water pollution, the Agency can direct the Contractor to revise operations and/or water pollution control efforts. The Agency reserves the right to take corrective action and withhold Agency costs for corrective action from progress payments or final payment in accordance with Section 8-8, “Withholdings/Denial of Progress Payment Request,” of these Specifications.

All fines, including third-party claims, levied against the Agency as a result of Contractor's non-compliance are the Contractor's sole responsibility and will be withheld from progress payments or final payment in accordance with Section 8-8, “Withholdings/Denial of Progress Payment Request,” of these Specifications.

**10-4.08 Required Stormwater Regulatory Compliance Meeting**

The Contractor and all Subcontractors are required to attend a Stormwater Regulatory Compliance Meeting conducted by the County before construction activities begin. This meeting is mandatory for all construction personnel, including subcontractors and vendors, involved in construction activities that could have an impact on stormwater management.

The meeting will be provided at no cost to the Contractor or Subcontractors.

The meeting could last up to three hours depending on the complexity of the project and the potential for pollutants originating from the project. Full compensation for attending this meeting must be included in the prices paid for the various items of work and no separate payment will be made.

**10-4.09 Payment**

Unless noted otherwise in the Special Provisions, full compensation for preparing SWPPP, ESCP and WPCP plans, implementing, monitoring, inspecting and ensuring

compliance with erosion and sediment control and storm water pollution and prevention requirements is included in the prices paid for the various Contract items of work and no additional compensation will be paid.

#### **10-5 CONTROL OF WATER IN THE WORK**

Water encountered during construction must be disposed of by the Contractor in a manner that does not damage public or private property or create a nuisance or health hazard. The Contractor must apply for and obtain any permits required to dispose of the water. Unless otherwise authorized or directed by the Agency, the Contractor must furnish, install, and operate pumps, pipes, appliances, and equipment of sufficient capacity to keep excavations and accesses free from water until the excavation is backfilled to subgrade. Water must be discharged in a manner approved by the Agency and in compliance with all NPDES requirements. The Contractor is not allowed to dispose of water that contains sediment or other contaminants. The Contractor is responsible for providing filtration, settlement, or disposal facilities required to comply with the requirements of Section 10-4, "Erosion, Sediment, and Water Pollution Control," in this Section of these Specifications.

#### **10-6 NOT USED**

#### **10-7 CONTAMINATED OR HAZARDOUS MATERIALS**

The Contractor must comply with all Federal, State and local rules, regulations, ordinances, and statutes that apply to the handling, storage, and disposal of contaminated and hazardous materials. In the event hazardous or contaminated materials are encountered, the Contractor must stop work in the affected area and notify the Engineer immediately. The Agency will provide direction on how the contractor is to proceed. Unless otherwise directed in the Special Provisions, no work is to be done in the area of the contaminated or hazardous materials without written direction from the Agency.

Unless otherwise provided for in the Special Provisions, payment for handling, removal and disposal of hazardous or contaminated materials will be in accordance with Section 9 of these Specifications.

#### **10-8 USE OF EXPLOSIVES**

Explosives will not be allowed on the Work unless the Agency grants permission in writing or the use of explosives is specified in the Contract Documents, and then only under conditions as the Agency prescribes.

#### **10-9 SANITARY REGULATIONS**

The Contractor must comply with all Federal, State and local rules, regulations, ordinances, and statutes with respect to sanitation. The Contractor must obey and enforce sanitary requirements, and must take precautions against contagious or infectious diseases.

Sanitary conveniences for the use of the workers must be obscured from the public and constructed or installed and maintained by the Contractor. The Contractor must strictly enforce use of the facilities.

#### **10-10 NOT USED**



### **10-11 CLEANING UP**

The Contractor must keep the site in a neat, sanitary, and presentable condition. The Contractor must dispose of surplus materials, clean out drainage ditches and structures, and repair fences or other property damaged during the progress of the Work. When material is disposed of outside of an easement, street, or highway right-of-way, or other Agency-owned properties, the Contractor must do so in accordance with the Contract.

### **10-12 ARCHEOLOGICAL AND CULTURAL RESOURCES**

If archeological or cultural resources are discovered during the Work, the Contractor must cease all construction operations in the vicinity of the discovery until a qualified archeologist can assess the value of these resources and make recommendations to the State Historic Preservation Officer. Archeological and cultural resources include artifacts, large amounts of bone, shell, or flaked stone, and other evidence of human activity. If the State Historic Preservation Officer or the Agency directs that work be temporarily ceased at the location of an archeological or cultural find, the Contractor must temporarily suspend work at the location.

If the Agency or the State Historic Preservation Officer temporarily suspends a portion of the Work for cultural purposes, associated delays are considered unavoidable in accordance with Section 7-12.02, "Unavoidable Delays," of these Specifications.

### **10-13 PROTECTION OF EXISTING TREES**

Special attention must be given to protection of certain native and ornamental trees or shrubs, landmark trees, and native oak trees in the County of Sacramento. Additional requirements for specific trees may be shown on the Plans, or designated in the Special Provisions or by the Agency. No native oak trees are to be removed or disturbed unless specifically designated for removal on the Plans or by the Agency. Every reasonable effort must be made to avoid creating conditions adverse to the tree's health. The natural ground within the dripline of protected trees must remain as undisturbed as possible. The dripline area must be identified on the ground by a circle with a radius measurement from the trunk of the tree to the tip of its longest limb. The limb cannot be cut back in order to change the dripline. The area within the dripline is a critical portion of the root zone and defines the minimum protected area of each tree. Removing limbs within the dripline does not change the originally protected root zone. Measures required for protection of existing trees includes, but are not limited to, the following:

- Temporary protective barrier fencing, with a minimum height of 4 feet must be installed continuously around the dripline perimeter of the protected trees prior to beginning the Work.
- Signs, ropes, cables, or other items are not to be attached to a protected tree, except those cables recommended by a Certified Arborist for limb support.
- Vehicles, construction equipment, temporary or mobile buildings, supplies, materials, or facilities are not to be driven, parked, stockpiled, or located within the dripline of protected trees.
- Unauthorized grade cuts or fills are not permitted within the dripline of protected trees. Cuts or fills necessary beyond the dripline but near the protected trees must be contoured to drain away from the protected tree's dripline.

- Utility line trenching is not permitted within the driplines of protected trees. If it is necessary to install underground utilities within the dripline of a protected tree, the utility line must either be bored or drilled to avoid damaging roots. If the Agency determines boring or drilling is inappropriate, the utility line trench may be hand dug under the direct supervision of a Certified Arborist to avoid damaging roots.
- Roots approved by a Certified Arborist to be severed or that fall within the structural section of the facility to be constructed, including building foundations or wall footings, must be pruned cleanly and covered with moist earth as soon as possible. If, due to the construction, the roots must be unearthed for more than 2 hours, they must be kept moist and covered with wet burlap or an approved equal until they are covered by moist earth. Supporting structural buttress roots that provide stability to the tree or keep it from toppling must be protected in place. The Contractor must hand-dig in the dripline of protected trees to prevent root cutting and mangling. Roots one 1 inch or greater in diameter encountered within the tree's dripline must not be cut without the Agency's approval, and must be kept moist, as approved by the Agency, and covered with earth within 48 hours.
- Where required by the Agency, a piped aeration system and/or a post and grade beam foundation must be installed beneath that portion of the paving, foundation, or concrete slab that encroaches into the dripline of a protected tree. The piped aeration system must be installed under the direct supervision of a Certified Arborist.
- Only drought resistant plant species, tolerant of the natural and semi-arid environment of the native oak understory, are to be planted within the driplines of native oak trees.
- Sprinkler systems that irrigate or require trenching within the dripline of a native oak tree are not permitted. An above ground drip irrigation system that allows for controlled application rates may be installed to irrigate native or semi-arid plants within the dripline of a native oak tree.
- Protected trees within the Work area that require pruning for construction clearance must be pruned prior to beginning of construction. Native oak trees that require pruning of branches larger than 2 inches in diameter must be pruned by a Certified Arborist.