

POLLUTION CONTROL

1. APPLICABILITY

This specification is applicable to the control or reduction of pollution from all construction activities.

2. MATERIAL SPECIFICATIONS

There are no material specifications complementary to this specification. Any material specifications required shall be specified in Section 8 of this specification.

3. ITEMS TO BE INCLUDED IN CONTRACT SPECIFICATIONS AND DRAWINGS

- a. The area to be controlled should be defined and the limits to be treated shall be shown on the drawings and/or described in the construction specifications.
- b. If areas to be treated are not easily definable on the site map, such as some channel projects, the extent of treatment shall be fully described by notes or designated by stations or right-of-way limits.
- c. Restrictions or special requirements limiting the selection of best management practices for control or treatment should be specified.
- d. Special requirements designating the sequence of construction operations. These requirements might require temporary or prolonged shutdown periods of some or all construction operations.
- e. Alternate methods of control, if applicable.
- f. Any restrictions on amount of area disturbed before treatment is started.
- g. Any restriction on timing of installation, operation, or remove any of the controls or treatments. Stabilization and structural practices such as; diversions, stream crossings, sediment basins, sediment filters, and waterways are typically specified as temporary and to be removed. If any of these practices are to remain in place, specify in Section 8, along with any maintenance or changes required before final acceptance.
- h. Special pollution control requirements, such as sectional excavation or placement of materials, burying operations, waste area reclamation, blasting, clearing, dredging, or other unique construction procedure or operation.
- i. Water and chemicals for dust control is covered in Section 5. Payment for water for dust control may be included as an item of work under this specification or Construction Specification 10, Water for Construction. The intent is to be covered in Section 8 of this specification.

- j. Any other special requirements pertaining to this specification, including reference to applicable state and local laws and regulations.
- k. Storm Water Pollution Prevention Plan (SWPPP) requirements. Environmental Protection Agency or State requirements shall be followed as applicable.
- l. Method of measurement and payment.

4. CONSTRUCTION METHODS TO BE APPLIED IN CONTRACTS TO CONTROL POLLUTION

The following list does not include all possible erosion and pollution control methods. All personnel concerned with planning, design, and construction should study the site carefully and specify needed practices required to control erosion, sediment, and air pollution. Pollution control specifications are to be coordinated with the SWPPP requirements developed to meet the National Pollution Discharge Elimination System (NPDES) program.

a. Structures

- (1) Limit clearing and grubbing prior to actual need. Protect vegetation where possible.
- (2) Install terraces, diversions, or level spreaders, including stable outlets.
 - (a) Above and below borrow areas.
 - (b) Above earth emergency spillways.
 - (c) Above storage areas.
- (3) Control access and haul roads.
 - (a) Contour roads and grade surfaces away from slopes and toward controlled outlets.
 - (b) Dust control with water and/or chemicals.
 - (c) Erosion control by installing turnouts, culverts, and stabilize road ditches.
 - (d) Vegetate disturbed areas.
 - (e) Surface roughening or pitting.
- (4) Shape and control borrow areas. Reduce area and duration of exposed areas.
- (5) Install debris basins, brush dams, straw bale barriers and geotextile fences.
- (6) Locate, shape, size and protect by-pass channel.
 - (a) Use coffer dams.
 - (b) Pump extra water across construction area.

- (7) Sectional construction.
- (8) Timely installation of all structural and stabilization practices.
- (9) Control work sequence.
- (10) Complete as you go.
- (11) Winter or seasonal shut downs to minimize pollution control problems.
- (12) Good housekeeping practices, to prevent water or air pollution, in use at the work site at all times.
- (13) Seeding for temporary and/or permanent protection. Provide topsoil as appropriate.
- (14) Prevent wild fires. Burn only per regulations.
- (15) Prevent pollution by chemicals and lubricants.
- (16) Mulch unprotected areas.

b. Channels

- (1) Preserve natural vegetation where possible. Remove blocks if possible.
- (2) Leave old channel to function as long as possible. Perform new channel excavation as an initial construction activity.
- (3) Where possible, do not open new channel to flows until vegetation is established. Sequence work.
- (4) Seed or sod slopes immediately after construction. Provide topsoil as necessary.
- (5) Mulch or mat slopes immediately after disturbance.
- (6) Spray mulch, seed, fertilizer, and asphalt or polyvinyl resin, etc.
- (7) Begin excavation downstream and work upstream.
- (8) Use temporary grade control structures.
- (9) Limit clearing, clearing and grubbing, and snagging.
- (10) Limit disturbance of channel banks to one side. Delay and complete other side after the initial side is vegetated.

- (11) Channel construction should be performed in segments, completing each segment prior to starting the next segment.
- (12) Control storm water inlets into channel.
- (13) Install pipe inlets, grade control structures, etc., at the time of construction.
- (14) Install sediment traps in channel and provide for their clean out and maintenance.

5. DISCUSSION OF METHODS

a. Section 7, Measurement and Payment

- (1) Method 1 This method provides measurement and payment by the unit of work performed. The use of water and chemical suppressants inappropriately and excessive to need may be clarified in Section 8.
- (2) Method 2 This method provides for payment on the lump sum basis with progress payments determined from invoices provided by the Contractor.
- (3) Method 3 This method provides for payment on the lump sum basis with measurement on a prorated and equal basis for each monthly payment period.

When specifications are prepared using electronic procedures and all but one method are deleted for use in the contract specification, delete "All Methods The following provisions apply to all methods of measurement and payment." and left justify the remaining text.