

This is a guidance document with sample specification language intended to be inserted into project specifications on this subject as appropriate to the agency's environmental goals. Certain provisions, where indicated, are required for U.S. federal agency projects. Sample specification language is numbered to clearly distinguish it from advisory or discussion material. Each sample is preceded by identification of the typical location in a specification section where it would appear using the SectionFormat™ of the Construction Specifications Institute; the six digit section number cited is per CSI Masterformat™ 2004 and the five digit section number cited parenthetically is per CSI Masterformat™ 1995.

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SECTION 01 57 19.13 (SECTION 01354) - ENVIRONMENTAL MANAGEMENT

SPECIFIER NOTE:

This section includes requirements for the protection of natural resources. This section emphasizes an integrated team approach to address environmental issues. This section does not address environmental remediation, abatement, regulatory requirements, or requirements for environmental impact statements/reports. Coordinate with requirements of other sections; verify that products and installation methods specified in other sections are environmentally appropriate.
Edit to suit location and project.

PART 1 GENERAL

1.1 SUMMARY

- A. Section includes:
1. Special requirements for environmental management during construction operations.
 2. Monitoring requirements.

SPECIFIER NOTE:

Coordinate requirements specified under this section with work specified under related sections. Edit below to suit project.

- B. Related Sections:
1. 01 30 00 (01300) - Administrative Requirements: Environmental Manager and Contractor training requirements.
 2. 01 40 00 (01400) – Quality Requirements: Meetings and project coordination.
 3. 01 41 00 (01411) – Regulatory Requirements
 4. 01 78 53 (01780) – Sustainable Design Closeout Documentation: Cleaning and final submittals.
 5. 31 10 00 (02230) – Site Clearing: Removal and storage of existing vegetation and topsoil.

1.2 DEFINITIONS

- A. Definitions pertaining to sustainable development: As defined in ASTM E2114.
- B. Environmental pollution and damage: The presence of chemical, physical, or biological elements or agents which adversely affect human health or welfare; unfavorably alter ecological balances; or degrade the utility of the environment for aesthetic, cultural, or historical purposes.

1.3 PRECONSTRUCTION MEETING

- A. After award of Contract and prior to the commencement of the Work, schedule and conduct meeting with Owner and Architect to discuss the proposed Environmental Protection Plan and to develop mutual understanding relative to details of environmental protection.

- B. Coordinate with Section 01 41 00 (01411) –I Regulatory Requirements.
 1. Schedule meeting in conjunction with preconstruction meeting for Environmental Regulatory Requirements.
 2. Verify procedures and requirements necessary to ensure implementation of Environmental Protection Plan is coordinated with applicable environmental regulatory requirements.

1.4 SUBMITTALS

SPECIFIER NOTE:

EO 13423 directs Federal agencies to “provide reports on agency implementation of this order to the Chairman of the Council [on Environmental Quality] on such schedule and in such format as the Chairman of the Council may require; and ... provide information and assistance to the Director of the Office of Management and Budget, the Chairman of the Council, and the Federal Environmental Executive.

Refer to <http://www.wbdg.org/sustainableEO>

Additionally, under the Sustainable Building requirements per Guiding Principle #2 Optimize Energy Performance, EO 13423 directs Federal agencies to “Enter data and lessons learned from sustainable buildings into the High Performance Buildings Database.” <http://femp.buildinggreen.com/>

Executive Order 13514; *Federal Leadership in Environmental, Energy, and Economic Performance*; was signed on October 5, 2009. <http://www.ofee.gov/execorders.asp> It expands upon the environmental performance requirements of EO 13423.

http://www1.eere.energy.gov/femp/regulations/printable_versions/eo13423.html

EO 13514 sets numerous Federal requirements in several areas, including:

- Federal agency heads must designate a senior management official to serve as Senior Sustainability Officer accountable for agency conformance, reporting to the Chair of the Council on Environmental Quality (CEQ) and the Director of the Office of Management and Budget (OMB). The Senior Sustainability Officer shall prepare targets for agency-wide reductions in 2020 for greenhouse gas (GHG) emissions and shall prepare and submit a multi-year Strategic Sustainability Performance Plan.
- Agency efforts and outcomes in implementing EO 13514 must be transparent and disclosed on publicly available Federal Web sites.
- OMB must prepare scorecards providing periodic evaluation of Federal agency performance. Scorecard results must be published on a publicly available Web site.

Documentation of environmental procedures can assist in required Agency reports.

- A. Environmental Protection Plan: Not less than 10 days before the Pre-construction meeting, prepare and submit an Environmental Protection Plan.
 1. Format: At a minimum, address the following elements:
 - a. Identification of Project.
 - b. Identification and contact information for Environmental Manager.
 - c. General site information.
 - d. Summary of Plan.
 - e. Procedures to address water resources.
 - f. Procedures to address land resources.
 - g. Procedures to address air resources.
 - h. Procedures to address fish and wildlife resources.
 - i. Monitoring procedures.
 2. Revise and resubmit Plan as required by Owner.
 - a. Approval of Contractor’s Plan will not relieve the Contractor of responsibility for compliance with applicable environmental regulations.
- B. Reports for Field Quality Control.

PART 2 - PRODUCTS

SPECIFIER NOTE:

For current designations under the Federal Biobased Products Preferred Procurement Program (FB4P), refer to www.biobased.ace.usda.gov. As of January 4, 2010, the Federal Register includes designations for approximately 60 product types. The requirements for purchasing biobased items apply to those items directly purchased by the federal agency. Under a construction contract, the contractor's use of hydraulic fluid in its bulldozers and backhoes is incidental to the purpose of its contract, so the contractor is not required to use biobased hydraulic fluids. The Office of the Federal Environmental Executive (OFEE) recommends that agencies encourage the use of these items, however.

Currently designated items that affect construction include:

- Roof Coatings
- Water Tank Coatings
- Adhesive and Mastic Removers
- Composite Panels
- Fertilizers
- Plastic Insulating Foam
- Carpet and Upholstery Cleaners
- Carpets
- Dust Suppressants
- Packaging Films
- Glass Cleaners
- Hydraulic Fluids – Stationary Equipment
- Wood and Concrete Sealers
- Cleaners

The USDA currently has identified about 150 items for which it is collecting test data needed for the additional designations of items that will extend preferred procurement status to include all qualifying biobased products.

A. Dust Control:

1. Biobased content:

- a. Dust Suppressants: Products formulated to reduce or eliminate the spread of dust associated with gravel roads, dirt parking lots, or similar sources of dust, including products used in equivalent indoor applications. Provide minimum 85% biobased content.
- b. Non-Durable Films: Products that are used in packaging, wrappings, linings, and other similar applications. Films that are intended for single use for short-term storage or protection before being discarded. Non-durable films that are designed to have longer lives when used are included in this item. Provide minimum 85% biobased content.
- c. Semi-Durable Films: Products that are used in packaging, wrappings, linings, and other similar applications. Films that are designed to resist water, ammonia, and other compounds, to be re-used, and to not readily biodegrade. Products in this item are typically used in the production of bags and packaging materials. Provide minimum 45% biobased content.

PART 3 EXECUTION

3.1 ENVIRONMENTAL PROTECTION

- A. Protection of natural resources: Comply with applicable regulations and these specifications. Preserve the natural resources within the Project boundaries and outside the limits of permanent Work performed under this Contract in their existing condition or restore to an equivalent or improved condition as approved by Owner.

SPECIFIER NOTE:

Green building rating systems often include provisions for minimizing disturbance of the site's topography, soils and vegetation. USGBC-LEED™ v3, for example, includes credit for reduced site disturbance,

limiting site disturbance to maximum 40 feet beyond the building perimeter, 10 feet beyond solid paving for pedestrian areas and parking, 15 feet beyond solid paving for roadways, and 25 feet beyond pervious paving. Green Globes – US also provides points for accommodating the building's functions, while minimizing disturbances.

1. Confine demolition and construction activities to **[work area limits indicated on the Drawings] [maximum 40 feet beyond the building perimeter, 10 feet beyond solid paving, and 25 feet beyond pervious paving]**.
 - a. Disposal operations for demolished and waste materials that are not identified to be salvaged, recycled or reused:
 - 1) Remove debris, rubbish, and other waste materials resulting from demolition and construction operations, from site.
 - 2) No burning permitted.
 - 3) Transport materials with appropriate vehicles and dispose off-site to areas that are approved for disposal by governing authorities having jurisdiction.
 - 4) Avoid spillage by covering and securing loads when hauling on or adjacent to public streets or highways. Remove spillage and sweep, wash, or otherwise clean project site, streets, or highways.
2. Water resources: Protect groundwater resources from contaminants.

SPECIFIER NOTE:

USGBC LEED includes a prerequisite that NPDES applies to all projects. Per EPA construction general permit, provisions of NPDES Phase I and Phase II would only apply to sites greater than 1 acre.

On November 23, 2009, the U.S. Environmental Protection Agency (EPA) issued effluent limitations guidelines and new source performance standards to control the discharge of pollutants from construction sites. The agency believes this rule, which takes effect in February 2010 and will be phased in over four years, will significantly improve the quality of water nationwide. It requires construction site owners and operators that disturb one or more acres to use best management practices to ensure that soil disturbed during construction activity does not pollute nearby water bodies. In addition, owners and operators of sites that impact 10 or more acres of land at one time will be required to monitor discharges and ensure they comply with specific limits on discharges to minimize the impact on nearby water bodies. This is the first time that EPA has imposed national monitoring requirements and enforceable numeric limitations on construction site stormwater discharges.

Refer to: <http://www.epa.gov/waterscience/guide/construction>

- a. Comply with requirements of the National Pollutant Discharge Elimination System (NPDES) and the State Pollutant Discharge Elimination System (SPDES).
 - 1) _____ Stormwater management for federal facilities under section 438 of the Energy Independence and Security Act (EISA):
<http://www.epa.gov/owow/nps/lid/section438/>
- b. Oily substances: Prevent oily or other hazardous substances from entering the ground, drainage areas, or local bodies of water.
 - 1) Store and service construction equipment at areas designated for collection of oil wastes.
- c. Mosquito abatement: Prevent ponding of stagnant water conducive to mosquito breeding habitat.
- d. Prevent run-off from site during demolition and construction operations.
- e. Stream Crossings: **[Equipment will not be permitted to ford live streams.] [Equipment will be permitted to ford live streams if temporary culverts or bridges are constructed for the purpose. Remove temporary culverts and bridges upon completion of work and repair the area to its original condition, unless otherwise accepted in writing by Architect.]**

SPECIFIER NOTE:

Coordinate below with work specified in Division 31 (2), Earthwork.

3. Land resources: Prior to construction, identify land resources to be preserved within the Work area. Do not remove, cut, deface, injure, or destroy land resources including trees, shrubs, vines, grasses, topsoil, and landforms without permission from Owner.
 - a. Conserve distinctive **[geological] [topographical] [historic]** features and character
 - b. Earthwork: As specified in Division 31 (2) and as follows:
 - 1) Erodible soils: Plan and conduct earthwork to minimize the duration of exposure of unprotected soils, except where the constructed feature obscures borrow areas, quarries, and waste material areas. Clear areas in reasonably sized increments only as needed to use the areas developed. Form earthwork to final grade as shown. Immediately protect side slopes and back slopes upon completion of rough grading.
 - 2) Delineate work zones so as to restrict compaction of soil elsewhere.
 - 3) Delineate buffer zones around moist areas **[and shorelines]**.
 - 4) Erosion and sedimentation control devices: Construct or install temporary and permanent erosion and sedimentation control features as required.

SPECIFIER NOTE:

For old growth and other significant trees and plants, it may be useful to have a more aggressive approach to protection than the standard prohibitions. The following is an example.

- c. Tree and plant protection:
 - 1) Prior to start of construction, tag each tree and plant scheduled to remain with value as approved by Owner. In the event of damage to tree or plant, Owner may at Owner's discretion, deduct the indicated value of the damaged tree or plant from the Contract Sum.
4. Air Resources: Comply with IAQ Management Plan and as follows:
 - a. Prevent creation of dust, air pollution, and odors.
 - b. Sequence construction to avoid disturbance to site to the greatest extent possible.
 - c. Use mulch, water sprinkling, temporary enclosures, and other appropriate methods to limit dust and dirt rising and scattering in air to lowest practical level.
 - 1) Do not use water when it may create hazardous or other adverse conditions such as flooding and pollution.
 - d. Store volatile liquids, including fuels and solvents, in closed containers.
 - e. Properly maintain equipment to reduce gaseous pollutant emissions.
5. Fish and Wildlife Resources: Manage and control construction activities to minimize interference with, disturbance of, and damage to fish and wildlife.
 - a. Do not disturb fish and wildlife.
 - b. Do not alter water flows or otherwise significantly disturb the native habitat related to the project and critical to the survival of fish and wildlife, except as indicated or specified.
 - c. Identify and conserve wildlife corridors that intersect the site.

3.2 FIELD QUALITY CONTROL

- A. General:
 1. Comply with requirements of agencies having jurisdiction and as specified herein.

2. Provide field practices, shipping, and handling of samples in accordance with ASTM D4840.
 3. Coordinate with Section 01 41 00 (01411) – Environmental Regulatory Requirements.
- B. Field Quality Control Reports: Provide in accordance with approved Environmental Protection Plan.

END OF SECTION