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 SectionFormatTM of the Construction Specifications Institute.

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. Section 01300- Administrative Requirements: Environmental Manager and Contractor training requirements.
   2. Section 01400 – Quality Control: Meetings and project coordination.
   3. Section 01411 –Environmental Regulatory Requirements
   4. Section 01780 – Closeout Submittals: Cleaning and final submittals.
   5. Section 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 01411 – Environmental 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

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

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™ v2.2, 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
2. Water resources: Protect groundwater resources from contaminants.
   a. Comply with requirements of the National Pollutant Discharge Elimination System (NPDES) and the State Pollutant Discharge Elimination System (SPDES).
   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 2, sitework.

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 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.

   b. Tree and plant protection: As specified in Division 2 and as follows:
      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 01411 – Environmental Regulatory Requirements.

B. Field Quality Control Reports: Provide in accordance with approved Environmental Protection Plan.

END OF SECTION