

## **ENVIRONMENTAL PROTECTION PLAN(S) REQUIREMENTS FOR THEIR APPLICATION, PREPARATION AND IMPLEMENTATION**

- 1.0 **Environmental Protection Plan.** An Environmental Protection Plan (EPP) shall be required for all projects depending on the intensity and scope of the project, at the discretion of the Guam EPA Administrator. This Plan will describe the methods, practices and equipment to be used on site: expected or anticipated environmental problems during and after construction and the methods, practices and equipment that may be used to avoid, mitigate or control potential adverse effects on the environment. EPPs are specifically identified in 22 Guam Annotated Regulations, Division II, Chapter 10, Section 10103.C.5(d). The purpose of Chapter 10 (Guam Soil Erosion and Sediment Control Regulations) is to protect and maintain at all times a high quality of environment and not allow environmental degradation of the quality of land, water and air by any pollutants, including all physical, chemical and biological agents created or generated specifically through nonpoint sources. It is also the purpose of this Guidance to implement nonpoint source pollution management measures consistent with the latest AGuam Nonpoint Source Program®, the latest AGuam Stormwater and Erosion & Sedimentation Control Manual® guidelines and recommendations, consistent with Section 6217(g) Guidance Specifications of the Coastal Zone Management Act Reauthorization Amendments of 1990, Guam Animal Feedlot Regulations and consistent with the USDA, Natural Resources Conservation Service technical specifications.

EPPs are applicable to all land and water areas of Guam and all projects, activities and facilities by private, and governmental sectors, including, the Government of Guam and all Federal Agencies on Guam. Accordingly, an EPP shall be submitted as an integral part and in support of any application for a permit, and specifically Clearing and Grading and/or Construction Permits authorizing such work unless the requirement is waived in writing by the Administrator of the Guam Environmental Protection Agency.

The EPP shall be developed, prepared and submitted by the permit applicant who shall, preferably, be the party responsible for carrying out the work and who owns, operates or maintains the improvements to the property or facility. The EPP shall describe the work to be undertaken and use of the property or facility, including all methods, practices of manual and mechanical work to be employed, the potential temporary and permanent environmental impacts or problems that may be encountered and the environmental protection management measures, methods and practices that will be employed to minimize, reduce or eliminate the impacts or problems to be encountered or as may have been described in an EIA/EIS for the proposed project, activity or facility.

Prior to the issuance of a permit for the work, project or activity, the permit applicant/contractor/developer shall meet with the Guam EPA and, on government projects, the Contracting Officer, to discuss the proposed environmental protection plan. The meeting shall develop a mutual and specific understanding relative to details of environmental protection, including required reports, provisions and measures to be taken

should the permit holder fail to provide adequate protection in an adequate and timely manner. Not more than ten (10) days after the meeting, the permit applicant shall submit for approval the proposed environmental protection plan. The EPP shall be implemented prior to the commencement of work, project or activity and shall continue to be implemented for the duration of the work, project or activity.

EPPs shall include, as appropriate, nonpoint source control management measures including erosion and sedimentation control (as addressed in the Guam Soil Erosion and Sediment Control Regulations), vegetation, wildlife and coral/marine resource protection measures, fugitive dust control, solid and hazardous waste management and disposal procedures, nutrient management plan, integrated pest management strategy/plan, confined animal facility's management plan, irrigation water management plan, personnel safety procedures, work site maintenance, and typhoon contingency plans, as necessary, depending on the work, project, activity and facility function. Guidance on the development and preparation of EPPs is available through the Guam Environmental Protection Agency. Where application of fertilizers, nutrients and/or pesticides are part of an agricultural activity for post construction performance, applicants must be consistent with the Natural Resources Conservation Service (NRCS) guidance and must conform specifically to the 6217 (g) Guidance specifications in the preparation of nutrient management and/or integrated pest management plans.

2.0 **EPP Implementation Requirements:** The Contractor, owner or operator shall provide and maintain the Environmental Protection Plan during the life of the permit/duration of the work and duration of the activity, project or function of the facility at the property. Environmental protection during the work or startup shall be provided to facilitate permanent environmental protection and/or to effectively control pollution that may develop or occur during construction work or normal practices associated with permanent control features incorporated in the project. The Contractor-s, owner-s and operator-s operations shall comply with all federal, state and local regulations pertaining to water, air, solid waste and noise pollution including the guidance specifications for management measures for sources of nonpoint pollution.

3.0 **List of Governing Regulations and References**

- 3.1 Guam Soil Erosion and Sediment Control Regulations (GEPA, updated in 2000) and Best Management Practices.
- 3.2 Guam Water Quality Standards (GEPA, updated 2001)
- 3.3 Pesticide Regulations (GEPA)
- 3.4 Guam Air Pollution Control Standards and Regulations.
- 3.5 Hazardous Waste Management Regulations (GEPA, updated in 1992)
- 3.6 Guam Storm Drainage Manual (DPW, 1980) or latest version
- 3.7 Guam Animal Feedlot Regulations
- 3.8 Onsite Wastewater Treatment and Disposal System Regulations for Residential Septic Tank and Leaching System and Temporary Toilet Facilities (updated and

- adopted July 2, 1987), GEPA
- 3.9 Executive Order No. 91-27: Established Interim Guidelines for the Protection of Guam's Wetlands was signed and promulgated on November 12, 1991.
  - 3.10 Guidebook to Development Requirements on Guam
  - 3.11 National Resource Conservation Service, U.S. Department of Agriculture Assistance Programs
  - 3.12 University of Guam, College of Agriculture and Life Sciences Assistance and Extension Services
  - 3.13 EPA Guidance Specifying Management Measures for Sources of Nonpoint Pollution in Coastal Waters. (1993) EPA doc. 840-B-92-002
- 4.0 **Definitions of Contaminants:**
- 4.1 **Sediment.** Soil and other debris that has been eroded and transported by runoff water.
  - 4.2 **Solid Waste.** Rubbish, debris, garbage and together discarded solid materials resulting from industrial, commercial, and agricultural operations and from community activities.
  - 4.3 **Rubbish.** A variety of combustible and noncombustible waste such as paper, boxes, and glass and crockery, metal and lumber scrap, tin cans and bones.
  - 4.4 **Debris.** Includes both combustible and noncombustible wastes such as ashes, wastes materials that result from construction or maintenance and repair work, leaves and tree trimmings.
  - 4.5 **Site Chemicals and Chemical Waste.** Includes petroleum products, bituminous materials, salts, acids, alkalies, herbicides, pesticides, organic chemicals and inorganic wastes which may be used in construction, agricultural, landscaping or other site work or control operations in such a manner as to be a source of pollution of land and water resources.
  - 4.6 **Nutrients.** Includes fertilizers and other soil additives applied as part of agricultural or landscaping operations which, if applied in excessive quantities, misapplied or ill-managed, can be a source of pollution of land and water resources.
  - 4.7 **Microbiological.** Includes fecal coliform and total coliform in concentrations above ambient levels.
  - 4.8 **Sanitary Waste.**
    - 1. **Sewage.** That which is considered as domestic sanitary sewage.
    - 2. **Garbage.** Refuse and scraps resulting from preparation, cooking, dispensing and consumption of food.
- 5.0 **Protection of Natural Resources:**
- 5.1 **General.** It is intended that the natural resources within the project boundaries and outside the limits of permanent work performed under this project be preserved in their existing condition or, if affected, to be restored to an equivalent or improved condition upon completion of the work. The permit

holder/contractor shall confine his construction activities to areas defined by permits, the work schedule, and approved plans and specifications.

- 5.2 **Air Resources** It shall be the responsibility of the permit holder to investigate and comply with all applicable federal, state and local regulations concerning any discharge (directly or indirectly) of pollutants to the Air. The permit holder shall incorporate compliance requirements in the EPP. All work under an authorized permit shall be performed in such a manner that any adverse environmental impacts, as established may have been established by an Environmental Impact Assessment or Statement, where applicable, are reduced to a level that is acceptable to Guam EPA.
- Dust shall be kept down at all times, including non-working hours, weekends and holidays. Soil at the site, haul roads and other areas disturbed by the permit holder's operations shall be sprinkled or treated with dust suppressors as necessary to control dust, with care taken not to create sedimentation problems. No dry power brooming will be permitted. Vacuuming, wet sweeping, wet mopping or wet power brooming shall be used instead. Air blowing will be permitted only for cleaning off non-particulate debris, such as reinforcing re-bars. No sand blasting will be permitted unless the dust there from is confined. Only wet cutting of concrete blocks, concrete and asphalt will be permitted. No unnecessary shaking of bags will be permitted where concrete mortar and plaster milling is done.
- 5.3 **Noise.** The Contractor shall comply with all federal, state and local regulations pertaining to the control of noise emanating from a construction site. The maximum use of low-noise-emission products as certified by the Environmental Protection Agency shall be made when available. No blasting or use of explosives will be permitted without written permission and/or approval of the Guam Fire Department, Guam EPA and, on government projects, the Contracting Officer, and only during the designated times.
- 5.4 **Land Resources.** It shall be the responsibility of the permit holder to investigate and comply with all applicable federal, state and local regulations concerning any discharge (directly or indirectly) of pollutants to the ground. The permit holder shall incorporate compliance requirements in the EPP. All work under an authorized permit shall be performed in such a manner that any adverse environmental impacts, as established may have been established by an Environmental Impact Assessment or Statement, where applicable, are reduced to a level that is acceptable to Guam EPA. Except in areas marked on the plans and allowed by permits to be cleared, disturbed, graded or otherwise altered or destroyed, the permit holder shall not remove, cut deface, injure, or destroy trees or shrubs. No ropes, cables or guys shall be fastened to or attached to any existing nearby trees for anchorages unless specifically authorized. Authorization

shall be secured through an amendment to the permit authorizing the work or, in the case of a government project, the Contracting Officer's approval. Where such special emergency use is permitted, the Contractor shall be responsible for any damage resulting from such use.

- 5.5 **Protection Plan ( During Construction).** Where trees may possibly be defaced, bruised, injured or otherwise damaged by the Contractor's activity, equipment, or by his blasting, dumping, or other operations, the Contractor shall submit a plan for protecting such trees. Rocks that are displaced into uncleared areas shall be removed. Monuments, markers, cultural and historic artifacts and works of art shall be protected before beginning operations. A pre-construction survey including photographs shall be accomplished by the Contractor and a report of such surveys furnished when required by the permitting agency (for clearing and grading permits, the permitting agency is Guam EPA).
- 5.6 **Protection Plan (Post Construction).** Reduce erosion and to the extent practicable retain sediment on-site during and after construction. Remove temporary control structures and restore the affected area, and dispose of sediments in accordance with the Guam EPA Soil Erosion and Sediment Control Regulations. All storm drain inlets that are made operable during the construction should be protected so that sediment-laden water will not enter the conveyance system without first being filtered or otherwise treated to remove sediments. Regular inspection and maintenance shall be implemented for erosion control practices to remain effective and until such time the disturbed area has been fully restored and stabilized.
- 5.7 **Repair or Restoration.** Any trees or other landscape features scarred or damaged by the permit holder's equipment or operations shall be repaired and/or restored to its original condition at the permit holder's expense. The Guam EPA and, on government projects, the Contracting Officer shall approve the repair and/or restoration prior to its initiation.
- 5.8 **Temporary Construction.** The Contractor shall obliterate all signs of temporary construction facilities such as haul roads, work areas, foundations of temporary structures, stockpiles of excess or waste materials, or any vestiges of construction as directed by Guam EPA and, on government projects, the Contracting Officer. Temporary roads, parking areas, and any other areas that have become compacted or shaped shall be leveled, plowed, and 3 inches of topsoil, spread and seeded as directed.
- 5.9 **Water Resources (Marine, Surface and Ground waters).** It shall be the responsibility of the permit holder to investigate and comply with all applicable federal, state and local regulations concerning any discharge (directly or

indirectly) of pollutants to the ground and natural waters (marine and surface). The permit holder shall incorporate compliance requirements in the EPP including the preparation and submission of the Water Quality Monitoring Plan if the activity involves works on the marine and surface waters of Guam. All work under an authorized permit shall be performed in such a manner that any adverse environmental impacts, as may have been established by an Environmental Impact Assessment or Statement, where applicable, are reduced to a level that is acceptable to Guam EPA.

- 5.10 **Stream Crossing.** Stream crossings by fording with equipment shall be limited so as to control turbidity. In areas of frequent crossings, temporary culverts or bridge structures shall be installed. Such temporary culverts or bridge structures shall be removed at the completion of the project and the area repaired in conformance with its original condition or as indicated or specified.
- 5.11 **Oily Substances.** At all times, special measures shall be taken to prevent oily or other hazardous substances from entering the ground, drainage areas, of local bodies of water in such quantities as to affect normal use.
- 5.12 **Fish and Wildlife Resources.** The permit holder shall at all times perform all work and take such steps required to prevent any interference or disturbance to fish and wildlife. The permit holder will not be permitted to alter water flows or otherwise significantly disturb native habitats adjacent to the project area which are critical to fish and wildlife, except as may be indicated or specified.
- 5.13 **Historical and Archaeological Resources.** All items having any apparent historical or archaeological interests which are discovered in the course of any clearing, grading or construction activities shall be carefully preserved and reported immediately to the Guam (Territorial) Archaeologist of the Department of Parks and Recreation, Government of Guam and, on government projects, the Contracting Officer for determination of actions to be taken.

## 6.0 **Erosion and Sediment Control Measures**

All clearing, grubbing, grading, embankments or filling, excavating, stockpiling or other earth-moving operations including those associated with the construction and operation and maintenance activities for roads, highways and bridges and associated run-off systems, to be performed by private and government sectors, including the Government of Guam and Federal Agencies on Guam require a permit as provided for in 21 GCA, Chapter 66 (as amended) must conform to the G guidance specifications for management measures for sources of nonpoint pollution in coastal waters and shall comply with the Guam Soil Erosion and Sediment Control Regulations (most current editions) and the maintenance activities and operation of roads, highways and bridges shall comply with the NPS permitting requirements under the Guam Erosion Control Regulations. In

addition, the following supplementary requirements shall apply:

- 6.1 **Burn-Off.** Burn-off of ground cover will not be permitted.
- 6.2 **Borrow Areas.** Borrow areas, on or off-site, shall be managed and controlled to prevent sediment from entering nearby streams, lakes, estuaries or marine waters. Restoration of the areas, including areas outside the borrowed area disturbed by the borrow and haul operations shall include grading, replacement of topsoil and establishment of permanent vegetative cover. The vertical sides of the borrow pit shall be uniformly graded to a slope of 30 degrees or less. The bottoms of the borrow pit shall be uniformly graded to provide a flat bottom. If specified elsewhere in the specifications, an outfall ditch shall be provided from the borrow pit.
- 6.3 **Reduction of Exposure of Unprotected Erodible Soils.** Earthwork which has been brought to a final grade shall be immediately paved or otherwise finished as indicated and specified. Side slopes and back slopes shall be protected immediately upon completion of rough grading. All earthworks shall be planned and conducted in such a manner as to minimize the area and duration of exposure of unprotected soils.
- 6.4 **Temporary Protection of Erodible Soils.** Such methods as may be necessary shall be utilized to effectively prevent erosion and control sedimentation, including but not limited to the following.
- 6.5 **Mechanical Retardation and Control of Run-Off.** The rate of runoff from the construction site shall be mechanically retarded and controlled. This includes construction of diversion ditches, benches, and berms to retard and divert runoff to protect drainage courses.
- 6.6 **Sediment Basins.** Sediment shall be trapped in temporary or permanent sediment basins. The basins shall be designed to accommodate the runoff of a local 20 year storm and shall be pumped dry and all sediment removed after each storm. Overflow shall be by paved weir or by vertical overflow pipe, draining from the surface. The collected sediment shall be transported off of government property and disposed of in a manner that complies with federal, state, and local requirements. The Contractor shall institute effluent quality monitoring programs as required by state and local environmental agencies.
- 6.7 **Borrow.** Borrow will not be permitted in areas where suitable environmental controls are not possible.
- 6.8 **Vegetation and Mulch.** Temporary protection shall be provided on all side and back slopes as soon as rough grading is completed or sufficient soil is exposed to require protection to

prevent erosion. Such protection shall be by accelerated growth of permanent vegetation, temporary vegetation, mulching or netting. Slopes too steep for stabilization by other means shall be stabilized by hydro-seeding, mulching anchored in place, covered by anchored netting, sodding, or such combination of these and other methods as may be necessary for effective erosion control. The permit holder shall incorporate nutrient management and integrated pest management plans as part of the EPP for slope stabilization, maintenance and protection.

7.0 **Control and Disposal of Solid Waste, and Chemical and Sanitary and Animal waste.**

7.1 **General.** Wastes shall be picked up and placed in containers which are to be emptied on a regular schedule. All handling and disposal shall be so conducted as to prevent contamination of the site and any other areas. On completion, the areas shall be left clean and natural-looking. All signs of temporary construction and activities incidental to construction of the required permanent work in place shall be obliterated.

7.2 **Disposal of Rubbish and Debris.** Rubbish, garbage and debris disposal shall be as follows:

1. **Removal from Government or Private Property.** The permit holder shall transport all waste off to government or private property and dispose of it in a manner that complies with federal, state and local requirements. The permit holder shall provide the Guam EPA and, on government projects, the Contracting Officer a copy of state and/or local permit or license which reflects such agency's approval and compliance with their solid waste disposal regulations. The permit or license and the location of the disposal area shall be provided to Guam EPA and the Contracting Officer prior to transporting any material off to Government property.
2. **Garbage Disposal.** When the construction project is located in an area where garbage collection by the station is accomplished on a scheduled basis, the Contractor shall place garbage in an appropriate container and the station will provide pick up and disposal service. In areas where there is no scheduled garbage collection, the Contractor shall transport the garbage to a pick-up point or disposal area and pay the appropriate disposal fees. The preparation, cooking, and disposing of food are strictly prohibited on the project site.
3. **Sewage, Odor, and Pest Control.** Sewage shall be disposed of through connection to public sewer systems. Where such systems are not available, chemical toilets or comparably effective units shall be used with wastes periodically emptied into the public sewer systems. Provisions shall be included for masking or elimination of odors and pest control compliance with federal, state and local regulations shall be established by the Contractor providing the Contracting Officer with a copy of the permit or license when applicable.
4. **Site Chemical Control Plan.** Where site chemicals in the form of herbicides, pesticides, fertilizer or other chemicals for application as part or attendant to the

work, or in the case of certain agricultural activities application will continue post construction, the permit holder shall develop a pesticide and nutrient management plans for appropriate new activities as part of the EPP. The plan shall include evaluation of soil/physical characteristics of appropriate sites, use/development of IPM strategies, a consideration of most desirable pesticide, calibration of spray equipment, and use of anti-backflow devices, per the intent of NRCS Guidance specifications for management measures for sources of nonpoint pollution.

5. **Chemical Waste.** Site chemicals and chemical waste shall be stored in corrosion resistant containers, removed from the project site, and disposed of not less frequently than monthly unless directed otherwise. Handling and disposal of chemical waste shall be in accordance with standard established practices and in conformance with Hazardous Waste Regulations. Fueling and lubricating of equipment and motor vehicles shall be conducted in a manner that affords the maximum protection against spill and evaporation. Lubricants to be discarded and burned oil shall be disposed of in accordance with approved procedures meeting federal state and local regulations. For oil and hazardous material spills which may be large enough to violate federal, state and local regulations, Guam EPA and, on government projects, the Contracting Officer shall be notified immediately.
  
6. **Confined Animal Waste.** Wastewater and runoff from confined animal facilities shall be controlled to substantially reduce significant increases in pollutant loadings to surface and ground water. In handling waste and runoff water, control systems shall be designed to protect surface and groundwater from contamination and shall comply with the management measures for facility wastewater and runoff for confined animal facility management as mandated by the guidance specifying management measures for sources of nonpoint pollution for the duration of the activity, project or function of the facility.