

# **Regulations for Earthmoving and Sedimentation Control, Title X, Chapter 1**

**WHEREAS**, the Yap State Environmental Protection Agency is authorized, pursuant to Title 18, Section 1507(a), of the Yap State Code, to promulgate regulations to carry out the purposes of the Yap State Environmental Quality Protection Act; and

**WHEREAS**, the Yap State Environmental Protection Agency has drafted Regulations for Earthmoving and Sedimentation Control and such regulations have been subject to public comment as required by the State Administrative Procedures Act;

**NOW THEREFORE**, pursuant to authority vested in it by law, the Yap State Environmental Protection Agency hereby adopts and promulgates Regulations for Earthmoving and Sedimentation Control, Title X, Chapter 1.

The effective date of these regulations shall be twenty days from November 09, 1994.

/s/  
Chairman,  
Yap State Environmental Protection Agency

Received and filed on November 9, 1994.

/s/  
Attorney General,  
Yap State

Received and filed on November 9, 1994.

/s/  
Clerk  
Yap State Legislature

## **YAP STATE ENVIRONMENTAL PROTECTION AGENCY FEDERATED STATES OF MICRONESIA**

### **ADOPTED REGULATIONS**

### **TITLE X - EARTHMOVING ACTIVITIES**

### **CHAPTER 1 - REGULATIONS FOR EARTHMOVING AND SEDIMENTATION CONTROL**

### **PART I. GENERAL PROVISIONS**

1.1 **Authority:** These regulations are promulgated by the Environmental Protection Agency ("EPA") pursuant to 18 YSC 1507 (a), as amended. These regulations have the force and effect of law.

1.2 **Applicability:** These regulations shall apply to all earthmoving activities, as defined in these regulations, as follows:

- (a) Ongoing activities of a continuous nature such as dredging, quarrying, etc., shall be in compliance with these regulations within one (1) month of the, effective date of these regulations.
- (b) Construction activities in progress on the effective date of these regulations shall comply immediately to the extent possible, and fully within three (3) months of the effective date of these regulations
- (c) All new projects and new operations that begin on or after the effective date of these regulations shall comply fully with these regulations.

1.3 **Extensions:** The EPA may grant extensions of the time before the regulations shall apply on a showing of undue hardship by a person engaged in activities covered by subsections 1.2(a) and (b) of these regulations.

1.4 **Definitions:** The following words and terms, when used in these regulations, shall have the following meanings, unless the context clearly indicates otherwise:

- (a) "Accelerated Erosion" means the removal of the surface of the land through the combined action of a person's activities and the natural process, at a rate greater than would occur by the natural process.
- (b) "Accelerated Sedimentation" means sedimentation resulting from the combined action of a person's activities and the natural process resulting from storms, heavy rains, and high winds, at a greater rate than would result from the natural processes alone.
- (c) "The Agency" or "EPA" means the Yap State Environmental Protection Agency or its Executive Officer.
- (d) The "Board" means the Yap State Environmental Protection Board.
- (e) "Conveyance Channel" means a channel other than an interceptor channel used for the conveyance of water through a project area.
- (f) "Diversion Terrace" means a channel or dike constructed upslope of a project for the purpose of diverting stormwater away from an unprotected slope.
- (g) "Earthmoving Activity" means any construction or other activity which disturbs or alters the surface of the land, a coral reef, or bottom of a lagoon, including but not limited to excavations, dredging, embankments, land reclamation in a lagoon, land development, subdivision development, mineral extraction, ocean disposal, and the moving, depositing or storing of soil, rock, coral, or earth.
- (h) "Embankment" or "Fill" means a deposit of soil, rock, or other material placed by any person.
- (i) "Erosion" means the natural process by which the surface of the land is worn away by the action of water, wind, or chemical action.

- (j) "Excavation" means a cavity formed by activities including, but not limited to, quarrying, dredging, uncovering, displacing, or relocating soil, coral, or rock.
- (k) "Interceptor Channel" means a channel or dike constructed across a slope for the purpose of intercepting water, reducing the velocity of water flow, and diverting it to outlets from where it can be disposed.
- (l) "Land Developer" means any person who is engaged in land development as the principal, rather than an agent or contractor.
- (m) "Land Development" means the construction, installing, placing, planting, or building of surface structures, land reclamation, navigation channels, harbors, utility lines or wires, piers, shopping centers and malls, causeways, golf courses, apartment complexes, hotels, schools, roads, highways, parking areas, or any other similar activities.
- (n) "Person" means any individual, corporation, partnership, association, government (including Yap State and the Federated States of Micronesia and any political subdivisions thereof), government agency, municipality, commission, foundation, non-government organization, or any other institution or entity.
- (o) "Sediment" means soils or other surface materials transported by water as the result of erosion or earthmoving activity within a reef or in a lagoon.
  - (p) "Sedimentation Retention Boom" means an impermeable membrane suspended from floats and weighted to the bottom of water bodies and arranged in a linear manner such that all sediments are confined to the local area of marine earthmoving activity.
- (q) "Sedimentation" means the process by which sediment is deposited on the bottom of bodies of water, including but not limited to streams, ponds, lakes, the bottom of lagoons, or the tops of underwater reefs.
- (r) "Stabilization" means the proper placing, grading and covering of soil, rock or earth, including the use of vegetation, to ensure their resistance to erosion, sliding or other movement.
- (s) "Subdivision" means the division or re-division of a lot, tract, or parcel of land by any means into two or more lots, tracts, parcels, or other division of land including changes in existing lot lines for the purpose, whether immediate or future, of lease, transfer of ownership or building or lot development.
- (t) "Turbidity" means the loss of light transmission or visibility in water as a result of increased sediment load or excessive and unnatural biological production.
- (u) "Wetland" means any area of land with terrestrial type vegetation that is temporarily or permanently covered by fresh or brackish water.

## **PART II. EROSION AND SEDIMENTATION CONTROL MEASURES AND ACTIVITIES.**

**2.1 General Requirements:** The types of erosion and sedimentation control facilities that are incorporated into all earthmoving activities shall be those in Part 2.2 and 2.3 of this sub-chapter relating to control measures and facilities, unless the person performing the earthmoving activities provides the agency with an erosion and sedimentation control plan showing that other measures and facilities will be equally effective in preventing accelerated erosion and accelerated sedimentation.

**2.2 Control Measures:**

- (a) Applicability. The provisions of this part shall apply to all earthmoving activities which have not been stabilized.
- (b) Limited Exposed Areas. All earthmoving activities shall be planned and earned out in such a manner so as to minimize the area of disturbed land, reef, or lagoon.
- (c) Containment of underwater sedimentation. All sedimentation resulting from underwater earthmoving activities shall be contained, confined, and restricted by the best available technology in such a manner that turbidities will be kept to a minimum.
- (d) Velocity Control. All permanent facilities for the conveyance of water around, through; or from a project shall be designed or contain appurtenances to limit the velocity of flow in the facilities to a speed that will not cause significant erosion, and in any event to be less than 1.5 feet per second.
- (e) Stabilization. All slopes, channels, ditches, or any disturbed area shall be stabilized as soon as possible after the final grade or final earthmoving has been completed within a section or area of a project.  
Upon completion of the project, all areas which were disturbed by the project shall be stabilized so that accelerated erosion and accelerated sedimentation will be prevented.
- (f) Containment of Fills and Reclaimed Land Within Bodies of Water, Tidal Pools or Zones, or Flood Plains or Zones. Before filling or land development within a body of water or within a tidal pool or zone or within a flood plain or zone, adequate sea walls and breakwater facilities shall be constructed to safely contain the fill without failure and to prevent accelerated sedimentation.
- (g) Interim Stabilization. Where it is not possible to immediately install permanent stabilization facilities in a disturbed area after the final earthmoving has been completed, or where the activity ceases for more than 20 calendar days, interim stabilization measures shall be promptly implemented.
- (h) Collection of Runoff. To the maximum extent feasible, runoff from a project area shall be collected and diverted to facilities for removal of sediment.
- (i) Solid Separation. Runoff from a project area shall not be discharged into the waters of Yap State without effective means to prevent sedimentation.
- (j) Control Measures. Any erosion and sedimentation control facility required or necessary to protect areas for erosion during the stabilization period shall be maintained until stabilization is completed.

**2.3 Control Facilities:**

(a) Sedimentation Retention Booms. Sedimentation retention booms, as defined under 1.4 (p), shall be used to restrict accelerated sedimentation around earthmoving or earth-disturbing activities, on reefs or in lagoons in all cases, except when a finding has been made by actual demonstration that no facilities are needed to prevent accelerated sedimentation. Approval of use of alternate facilities or a finding that no facilities are necessary must be by the Agency, its Executive Officer, or other designee.

(b) Diversion Terraces.

(1) Diversion Terraces, as defined in 1.4, shall be constructed up-grade of a project area to convey runoff around the project area. They shall have sufficient capacity to convey such runoff without overflowing. For temporary diversion, the channel shall have a capacity to convey 2.0 cubic feet per second per acre of land tributary to it. For permanent diversion, the channel shall have the capacity to convey 4.0 cubic feet per second per acre to land tributary to it.

(2) Diversion Terraces shall be grassed or lined with erosion resistant material to prevent accelerated erosion within the channel.

(3) Outlet structures shall be designed to reduce discharge velocity to a level that will not cause accelerated erosion, and in any event to maintain a discharge velocity of less than 3.0 feet per second, and shall be stabilized before use.

(c) Sea wall and breakwater facilities. Sea wall and breakwaters to contain fill or reclaim land shall be sufficiently watertight to prevent accelerated sedimentation, well-constructed on a solid foundation, and to a level at least two (2) feet above the highest tide or flood level of historical knowledge, and those facilities shall be planned, designed and constructed under the direction of a person trained and experienced in building breakwater or sea wall facilities. In cases where the bottom of footings of sea wall or breakwater facilities must be placed below the level of mean low tide, the facilities shall be planned, designed and constructed under the direction of a licensed engineer trained and experienced in the building of such structures.

(d) Interceptor Channels.

(1) Interceptor channels may be used within a project area to reduce the velocity of flow and thus prevent accelerated erosion.

(2) Water collected by interceptor channels shall be conveyed to sedimentation basins or to vegetated areas but not directly to streams.

(3) Outlets to vegetated areas shall be designed to reduce the discharge velocity to a level that will not cause accelerated erosion, and in any event to maintain an outlet velocity of less than 3.0 feet per second.

(e) Channels of Conveyance. All channels used to convey water through a project area shall be designed to reduce the speed of flow of surface runoff so as not to cause accelerated erosion, and in any event to have a velocity of less than 1.5 feet per second. Where this is not possible, channels shall be grassed or lined with erosion resistant materials.

(f) Solid separation facilities.

(1) A basin for settling solids out of water shall be structurally sound and have sufficient capacity to hold the water that drains into the basin until the solids have

settled out. This basin shall have a capacity of not less than 8,000 cubic feet for each acre of disturbing project area which drains into the basin.

(2) The basin shall be cleaned when the settling of solids has reduced its capacity by 25%.

(3) Outlet structures shall be designed to allow only adequately settled water to be discharged, and at a rate that will not cause accelerated erosion. These outlet structures shall be designed to pass a minimum of 215 cubic feet per second for each acre of project area which drains into the basin.

(4) The outlet structure from the sedimentation basin shall discharge into a natural waterway.

(5) The sedimentation basin shall be structurally sound and protected from unauthorized acts of third parties.

(g) Hydraulic Dredging Fills.

The discharge from pumps or hydraulic dredges used to construct fills shall be sufficiently treated and retained long enough with dikes, levees, sea walls, or other structures so that accelerated sedimentation will not take place in the waters of Yap State which receive the effluent. Transmission pipelines transporting fill material will be maintained in a watertight condition at all times during excavation and fill operation.

(h) Ocean-going Barges Scows or Vessels for Hauling Dredged Soil.

Such vessels operating in waters of Yap State will be sufficiently tight and secure that accelerated sedimentation will not occur by reason of leaking or premature dumping due to faulty mechanisms.

### **PART III. EROSION AND SEDIMENTATION CONTROL PLAN**

**3.1 General Requirements:** All earthmoving activities within Yap State shall be conducted in accordance with these regulations and in such a way as to prevent accelerated erosion and acceleration of sedimentation. To accomplish this, all persons engaging in earthmoving activities shall notify the Agency, and are required, shall design, implement and maintain erosion and sedimentation control measures which effectively prevent accelerated erosion and sedimentation. These erosion and sedimentation control measures shall be set forth in a plan as described in Parts 3.2 and 3.3 of this sub-chapter and shall available at all times at the site of the earthmoving activity.

**3.2 Preparation:** The erosion and sedimentation control plan shall be prepared by a person trained and experienced in erosion and sedimentation control methods and techniques.

**3.3 Design:** The erosion and sedimentation control plan shall be designed to prevent acceleration of erosion and acceleration of sedimentation and shall consider all factors which contribute to erosion or sedimentation, including, but not limited to the following:

- (a) the topographic and hydrographic features of the project area;
- (b) the types, depth, slopes, and areal extent of the soils, coral and reef;
- (c) the original state of the plant and animal life in the area;
- (d) the proportion of coral on any coral reef which may be affected by the earthmoving whether the coral is alive or dead;
- (e) the proposed alteration of the area;
- (f) the amount of run-off from the project area and its upstream watershed area;
- (g) the staging of earthmoving activities;
- (h) temporary control measures and facilities for use during earthmoving activities;
- (i) permanent control measures and facilities for long-term protection; and
- (j) a maintenance program for the control facilities including disposal of materials removed from the control facilities or project area.

3.4 If the project involves an earthmoving activity in a lagoon or on a reef or any body of water, the plan shall give an account of marine life populations in the area and adjacent to the area of earthmoving activity as well as existing water quality. The baseline study shall be made prior to any earthmoving activity by a person trained and experienced in aquatic biology.

## **PART IV. RESTORATION**

4.1 **Final Measures:** On completion of stabilization, all unnecessary or unstable control facilities shall be removed, the area shall be graded, and the soil shall be stabilized.

4.2 The Agency may also require the developer, to the maximum extent feasible given current technology, to restore the project site or adjacent areas affected by the development to a condition such that the ecological functions of the environments) at and adjacent to the site are of equivalent value as such functions were at or adjacent to the site prior to the earthmoving activity.

## **PART V. NOTIFICATION**

### **5.1 Requirement of Notification**

(a) Any person who engages in earthmoving activity within Yap State shall first notify the Agency or its designee of the proposed activity if it:

- 1) Involves the use of heavy equipment including, but not limited to, front-ended loaders, backhoes, graders, draglines, etc;
- 2) Involves the movement of more than 10 cubic yards of soil, rock, coral, etc. in any single project; or
- 3) Will result in the filling in of wetlands or coastal waters, including mangroves.

(b) Such notification shall be in a form approved by the Agency and shall be submitted by the person undertaking the earthmoving activity. In the case of land development, the notification shall be submitted by the land developer rather than the contractor or agent.

(c) Within five (5) days of receipt of the notification, the Agency shall issue a written acknowledgment of such notification. The Agency may thereafter require the person engaging in earthmoving activities to submit an earthmoving and sedimentation control plan.

(d) Following notification, the Agency may hold a public hearing to determine the merits of the earthmoving/sedimentation control plan and may impose conditions on such a development consistent with the objectives objectives of the Environmental Quality Protection Act.

**5.2 Violations.** If the EPA finds that a person has engaged in earthmoving activities requiring notification, as described in 5.1(a) above without notifying the Agency, or is in violation of any conditions imposed in accordance with Section 5.1(d) above, or is otherwise in violation of these regulations, the Board may give notice to the persons) of its intent to issue a Cease and Desist order or to order compliance forthwith with this subchapter or order that they take remedial and preventative action. In the event of such notice to the person or persons, a request may be made to the Board by the persons affected within five (5) days after service thereof that the Agency holds a public hearing on the proposed order or orders on receipt of this request and public hearing shall be held in accordance with applicable provisions of the State Administrative Procedure Act. The Board may, at the conclusion of the hearing, or, at the expiration of the time set in the notice, issue the proposed order or orders. The order or orders shall be final on issuance by the Agency.

**5.3 Emergency Orders:** In the case of immediate and irreparable injury, which shall be presumed in the case of actual or presumed harm to the natural environment, the Agency may issue an emergency order to cease and desist and take remedial and preventative action, and such order shall take effect immediately and shall remain in effect until a hearing is held and final action is taken or the matter is otherwise resolved; but in no event shall such an emergency order remain in effect for more than twenty (20) days. The person or persons affected by such order may request an expedited hearing by the Board, which shall be held at the earliest possible time.

**5.4 Review and appeals:** Persons adversely affected by an order of the Board made after hearing accordance with 5.2 may request review by the Yap State Government under the State Administrative Procedure Act.

## **PART VI. RESPONSIBILITIES OF FINANCIAL & LOCAL GOVERNING BODIES.**

**6.1 Notification required:** Any person who issues building permits or loans for the purposes of building shall notify EPA or its Executive Officer immediately upon receipt of an application for a loan or building permit involving an earthmovmg activity by forwarding to EPA office a copy of the application.

**6.2 Issue of loans or building permits:** No person shall issue a loan or building permit to those engaged in earthmoving activities that require notification to EPA, until the agency omits authorized representative has issued an acknowledgment of such notification pursuant to Part 5:1(c) of these regulations and has approved the Erosion and Sedimentation Control Plan if one is required.

## **PART VII. PENALTIES**

### **7.1 Violation of Orders**

- (a) Any person who violates a Cease and Desist Order or other order of compliance with this sub-section shall be liable for civil penalties as provided in the Environmental Quality Protection Act.

### **7.2 Violation of Regulation**

- (a) Any person who violates any provisions of these regulations shall be liable for civil penalties as provided in the Environmental Quality Protection Act.