

Article 4
Flood Hazard Areas

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NOTE: Rule-making authority cited for formulation of regulations governing Flood Hazard Areas, 21 GCA §66405.

§3401. Authority. These Rules and Regulations are promulgated by the Territorial Planning Commission under authority of 21 GCA Chapter 61 and Chapter 62. and Executive Order No. 78-20.

§3402. Purpose. The purpose of these Rules and Regulations is to establish procedural guidelines and performance standards for management of flood hazard areas, pursuant to Executive Order No. 78-20, and the National Flood Insurance and Guam Coastal Management Programs.

§3403. Intent. These Rules and Regulations apply to those land areas delineated as Flood Hazard Areas of Particular Concern on an official map, as approved by the Territorial Planning Commission and retained for public inspection by the Department of Land Management, Public Works, Parks and Recreation, Agriculture, the Bureau of Planning, the Guam Environmental Protection Agency and Public Utilities Agency of Guam, government of Guam. The official map is subject to amendment as additional data becomes available or a flood event expands a designated boundary. A designated flood boundary will be reduced only upon completion of an approved flood control project. Those activities or developments occurring only partially within a designated or recognized flood hazard area shall be subject to these Rules and Regulations. These Rules and Regulations supplement all other provisions of the law relating to land use and shall remain in effect until such time as amended by the Territorial Planning Commission. These Rules and Regulations shall apply to all developments on government of Guam or private lands. Compliance with these Rules and Regulations should precede submittal of applications for any required Federal permits.

§3404. Definitions. (a) *Area of Particular Concern (APC)*: A specifically designated geographic area where the presence of unique or significant natural resources, geologic constraints, hazards or other exceptional geographic characteristics warrants and requires the application of extraordinary regulatory or management measures in order to insure the retention of such exceptional qualities or to insure the health, safety and welfare of the general public.

(b) *Flood*: The general and temporary condition of partial or complete inundation or normally dry land areas from:

- (1) abnormally high coastal waters resulting from tropical storms, typhoons or tsunamis;
- (2) overflow of streams, rivers and wetlands;
- (3) excessive drainage of rainfall into sinkholes and low-lying basins.

(c) *Flood Hazard Area, Flood Prone Area, Flood Plain*: Any land area subject to flood- conditions or susceptible to inundation, including wetlands, and areas subject to a one percent (1%) or greater chance of flooding in any given year (100-year flood), as designated on the official map of Flood Hazard Areas.

(d) *Wetland*: Those areas that are inundated by surface or ground water with a frequency sufficient to support and under normal circumstances does or would support a prevalence of vegetative or aquatic life that requires saturated or seasonally saturated conditions for growth or reproduction. Wetlands generally include swamps, marshes, mangroves, natural ponds, surface springs, estuaries and similar such areas.

(e) *Floodproofing*: Any combination of structural or non-structural measures or adjustments to properties and structures that would reduce flood loss to facilities, structures or the contents of buildings. Structural floodproofing involves the ability to resist hydrostatic and hydrodynamic pressure and the effect of buoyancy.

(f) *Flood Control Measures*: Any dam, wall, embankment, levee, dike, abutment, basin, culvert, channelization or other means specifically designed to alter the natural course of waters within or affecting a flood hazard area.

(g) *Structure*: Any building with walls, supports or roofing; or gas or liquid storage tank which is affixed to the land.

(h) *Development*: The placement or erection of any solid material or structure; discharge or disposal of any dredged material or of any gaseous, liquid, solid or thermal waste; grading, removing, dredging, mining or extraction of any materials; change in the density or intensity of use of land, including but not limited to, subdivision of land and any other division of land including lot parcelling; change in the intensity of use of water, ecology related thereto, or of access thereto; construction or reconstruction, demolition or alteration of the size of any structure, including any facility of any private, public or municipal utility, and the removal of significant vegetation.

(i) *Environmental Impact Assessment (EIA)*: A detailed description of a proposed action including: Information and technical data adequate to permit a careful analysis of environmental, economic and social impacts; discussion of the probable impact on the environment and any direct or indirect consequences that may result from the action; any adverse effects that cannot be avoided; alternatives to the proposed action that might avoid some or all of the adverse environmental effects; assessment of the cumulative long-term effects of the proposed action including its relationship to short-term use of the environment in comparison with long-term productivity and irreversible or irretrievable commitments of resources.

(j) *Commission*: Means the Territorial Planning Commission.

§3405. Procedures for Flood Hazard Area Management. (a) Before issuance of any permit for development within a designated flood hazard area, a tentative plan for the proposed development shall be submitted to the Building Permit Division, Department of Public Works including a thorough description of the proposed development and the following specific information:

- (1) The name and address of the owner or owners of record, of the developer and of the person preparing the map.
- (2) Date, north arrow and scale.
- (3) A key map locating the development's relation to surrounding areas.

(4) The exact length and bearing of the exterior boundaries of the development, referenced to the Guam Geodetic Triangulation Control Network or such alternative system of triangulation control as the Territorial Surveyor may direct.

(5) The accurate placement and outline of structures existing on the site.

(6) The location, names and existing widths of adjacent street rights-of-way.

(7) Topography with contour intervals of two (2) feet.

(8) The location and dimensions of all known existing easements and reservations.

(9) The location of existing utilities and drainage facilities located within or adjacent to the proposed development.

(10) The approximate layout and approximate dimensions of each structure, facility or use proposed within the development.

(11) Areas intended to be reserved for public use.

(12) A description of all floodproofing measures to be utilized in the proposed development.

(13) An indication of the water surface elevation of the 100-year flood if the development involves a land area greater than fifty (50) lots or five (5) acres.

(b) A tentative plan of the proposed development shall be prepared in sufficient detail so as to permit its complete analysis by the Building Permit, Engineering and Hydraulics Division of the Department of Public Works. The tentative plan shall include a schedule indicating the approximate dates when construction or development stages are planned to begin and be completed. These divisions may require submittal of detailed construction drawings and/or preparation of an EIA for analysis prior to issuance of any clearing, grading, building or other permit.

(c) A performance bond or undertaking may be required by the Department of Public Works for any development undertaken pursuant to an approved tentative plan with a flood hazard area. The amount of the bond shall be one hundred ten percent (110%) of the infrastructure costs of the project, and not less than Two

Thousand Dollars (\$2,000.00). The entire bond or any undertaking of any portion thereof shall be forfeited as determined by the Director, Department of Public Works for failure to comply with any applicable flood hazard areas, wetland, water quality or zoning regulations except as allowed for under a variance or other legal exception from such requirements. The entire bond or any portion thereof shall be forfeited as is required to complete the site preparation and infrastructure features or restoration of the project should these not be completed by the developer.

(d) The Building Permit Division, Department of Public Works shall either approve, including approval with conditions, or disapproved in whole or in part the proposed tentative development plan. Upon receipt of permission by the Department for development within a flood hazard area, the applicant may proceed to apply for such other permits as may be required by the local or federal government.

(e) If a field inspection by relevant agencies concludes that the development has not adhered to all applicable rules and regulations or conditions imposed by the Commission or Department of Public Works, the Attorney General shall take such action as necessary to ensure compliance with such requirements, including requests for restraining orders or revocation of permission for building in the flood hazard area.

(f) Any expansion of an approved development project, which exceeds fifty percent (50%) of the physical value of the original structure or development, shall require application for a new building permit for development within the flood hazard area.

(g) During all phases of a proposed development project and application for permit, the land area shall be open for inspection by all interested agencies or parties.

(h) If a development project is not completed or operations totally cease within the time period, if any, indicated on the approved permit, the developer shall be required to restore the natural appearance and biological character of the flood hazard area to its condition prior to institution of the development to the maximum extent practicable.

(i) Variances to such procedures and standards, as outlined in these Rules and Regulations may be granted

through appeal to the Commission which may permit such variances only upon written finding that the applicant satisfied all of the criteria outlined for granting zoning variances under 21 GCA §61617.

(j) Current uses not adhering to these Rules and Regulations shall not require a Flood Hazard Area Building Permit and shall be classified as legal nonconforming uses unless declared to be a hazard to public health, safety and welfare by the Department of Public Health and Social Services, at which time they will be subject to conformance with these Rules and Regulations.

(k) Expansion of existing nonconforming uses or reactivation of uses which have been totally abandoned for a period of one (1) year shall require application for a Flood Hazard Area Building Permit.

(l) Emergency repairs of existing flood- damaged structures shall not require application for a Flood Hazard Area Building Permit if completed within a period of six (6) months after a flood event and do not involve major structural or developmental expansion. After the above-stated time period, major repairs shall require application for a Flood Hazard Area Building Permit.

§3406. Standards for Flood Hazard Area Management. (a) All development within flood hazard areas shall comply with all water quality, erosion and sedimentation control standards and other applicable pollution standards as promulgated by the Guam Environmental Protection Agency and, if applicable, Wetland Rules and Regulations as promulgated by the Territorial Planning Commission.

(b) Flood Hazard Areas shall not be graded, dredged or filled such that natural topographic drain ways are altered unless issued a Flood Hazard Area Permit by the Department of Public Works.

(c) Approved developments shall be designed to the maximum extent practicable to maintain the natural flow during flood conditions, not create backwater effects or expand a flood hazard area into previously non-flood prone areas.

(d) All approved bridges and culverts shall have openings of sufficient width for adequate passage of flood discharge and debris during a 100-year flood.

(e) Whenever possible, buildings in flood hazard areas shall be connected to a community sewer system. Septic tanks, leaching fields, outhouses or other on-site sewage disposal systems within flood hazard areas may be approved by the Guam Environmental Protection Agency. Any sanitary sewage system shall be designed to minimize or eliminate infiltration of flood waters into the system and discharges from the system into flood waters.

(f) New and replacement water supply systems shall be designed to minimize or eliminate infiltration of flood waters into the systems.

(g) No development shall be permitted, within sink hole or low-lying basins, as designated on the Bureau of Planning's Community Design Plans, which would inhibit the recharge of water into the underground aquifer system or be subject to flood damage.

(h) Fill materials (including trees and vegetation) shall not be discarded into flood hazard areas such as to impede the natural flood flow or velocity by creating an accumulation of loose debris.

(i) Open storage of significant quantities of buoyant, light, loose or unsecured material shall be prohibited within flood hazard areas.

(j) Storage within flood hazard areas of toxic chemicals, fertilizers, pesticides, biological wastes or other contaminant substances which would be subject to dispersal into flood waters during periods of inundation shall be prohibited (even though storage of such substances might be in conformance with pollution control standards during non-flood conditions).

(k) Excessive removal of natural vegetation in a flood hazard area (though not promoting erosion during non-flood conditions) which would promote erosion during flood conditions shall be prohibited, unless demonstrated to the satisfaction of the Guam Environmental Protection Agency that erosion control measures would satisfactorily prevent erosion and sedimentation or that such action is necessary for agricultural field farming. (Note: Deep-rooted natural vegetation such as trees and shrubs absorb water to greater depths and reduce flood levels much more effectively than shallow-rooted grasses and weeds that dominate lands after natural vegetation is cleared.)

(l) All approved flood control measures and structures shall be periodically maintained and immediately repaired

in cases of failure. Flood control measures shall not increase flood heights in upstream areas or cause erosion of lands not previously subject to a higher flood level or increased flood velocity. (Note: Channelization can particularly increase flood velocity due to a reduction in natural impediments to flow. Thus, channeled flood waters should be directed to a suitable point of discharge.)

(m) Flood control measures or development shall not reduce the water supply or biological productivity of a wetland habitat.

(n) An approved seawall for stormwave protection shall not impair public access, contribute to shoreline erosion or significantly disturb scenic vistas or visual quality and shall be sufficiently storm-resistant and structurally safe so as not to create a health or safety hazard.

(o) All approved developments within flood hazard areas shall be floodproofed to the maximum extent practicable. (Note: All exposed doors should be watertight and exposed glass should be wire-reinforced.) (Use of materials which easily deteriorate when exposed to water should not be used.)

(p) Below-ground basements, building space, storage or parking shall be prohibited within flood hazard areas.

(q) Libraries, schools, post offices, museums and other public-use structures, whose maintenance is at public expense or which are used for storage of valuable flood-vulnerable materials, the preservation of which is in the public interest, shall not be located within flood hazard areas.

(r) Cemeteries shall not be located within flood hazard areas. Expansion of existing cemeteries within flood hazard areas shall be permitted as a nonconforming use.

(s) All electrical equipment and the lowest floor of approved structures shall be elevated above the maximum known flood elevation.

(t) All approved structures, including mobile or modular homes and other lightweight structures, shall be anchored to prevent flotation, collapse or lateral movement of the structure or portions of the structure during flood conditions. Ties shall be provided at each of the four (4) corners of the home with two (2) additional ties per side at intermediate locations.

(u) Posts, piles or similar techniques for elevating structures in flood hazard areas shall be secured in concrete footings or by imbedment in the ground to a depth sufficient to withstand hydrostatic or hydrodynamic load, anticipated scour and/or uplift.

(v) Approved structures shall be planned for construction with the longitudinal axis parallel to the direction of flood flow or wave assault whenever possible and additional or adjoining structures shall be planned for placement on the same flood-flow lines as the established structures.

(w) Recreational development such as ballparks or agricultural field farming which does not involve major structural developments does not require issuance of a Flood Hazard Area Permit if outside wetland habitats. Archaeological investigation or restoration of historical sites does not require a Flood Hazard Area Permit. (Note: Floodplains have a high capability for low-intensity uses such as open-space scenic areas, wildlife habitats, groundwater recharge areas, outdoor recreation, field farming and livestock grazing.)

§3407. Designation of Flood Hazard Areas. (a) The Commission shall designate as initial flood hazard areas of particular concern those floodplain designations submitted by the Bureau of Planning for approval under the National Flood Insurance Program.

(b) Subsequent proposed additions, deletions or revisions to these initial flood hazard area designations shall be submitted to the Territorial Planner who shall circulate such proposed changes to SDRC member agencies, the Department of Agriculture and the U.S. Army Corps of Engineers, and other interested agencies or, upon request, private parties.

(c) Upon review by all SDRC members and other interested agencies the proposed flood hazard area shall be submitted to the Commission with recommendations for approval, disapproval or modification. The Commission, upon holding a public hearing in the Commissioner's Office nearest the subject flood hazard areas in which at least ten (10) days notice is provided in a newspaper of general circulation, shall either approve, disapprove or approve with modification the requested flood hazard area designation.

(d) All initially and subsequently approved flood hazard areas shall be officially noted and recorded by the Department of Land Management, Department of Public Works and the Bureau of Planning on official flood hazard area map. Copies of such official flood hazard area maps shall be available to the general public and shall be provided to and retained by all SDRC member agencies.

(e) Officially designated flood hazard areas of too small a size to be accurately delineated on such official maps which are the subject of proposed development shall be verified through on-site field inspection by the Department of Public Works Hydraulics Division. If any portion of the proposed development is determined to be in the designated flood hazard area such development shall be subject to these Rules and Regulations.

NOTE: Adopted and filed October 1981.