

**ORDINANCE NO. 2010-FC\_\_\_\_\_**

**AN ORDINANCE OF THE BOARD OF DIRECTORS OF THE PIMA COUNTY FLOOD CONTROL DISTRICT RELATING TO FLOODPLAIN MANAGEMENT CODIFYING THE PIMA COUNTY FLOODPLAIN AND EROSION HAZARD MANAGEMENT ORDINANCE AS TITLE 16 OF THE PIMA COUNTY CODE**

WHEREAS, on December 16, 1974, the Pima County Board of Supervisors adopted Ordinance No. 1974-86, called the Pima County Floodplain and Erosion Hazard Management Ordinance (the "Floodplain Ordinance"), and

WHEREAS, on July 12, 1983, and on July 24, 1984, the Pima County Board of Supervisors adopted Ordinance Nos. 1983-FC1 and 1984-FC1 replacing Ordinance No. 1974-86, and

WHEREAS, the Arizona Legislature authorized the boards of directors of county flood control districts to adopt floodplain management regulations designed to promote the public health, safety and general welfare pursuant to Arizona Revised Statutes, Title 48, Section 48-3603, and

WHEREAS, on May 7, 1985, the Board of Supervisors, acting as the Board of Directors of the Pima County Flood Control District, adopted Ordinance No. 1985-FC1 replacing Ordinance No. 1983-FC1, as amended by Ordinance No. 1984-FC1, and

WHEREAS, on April 12, 1988, the Board of Supervisors, acting as the Board of Directors of the Pima County Flood Control District, adopted Ordinance No. 1988-FC1 replacing Ordinance No. 1984-FC1, and

WHEREAS, on December 6, 1988, the Board of Supervisors, acting as the Board of Directors of the Pima County Flood Control District, adopted Ordinance No. 1988-FC2 replacing Ordinance No. 1988-FC1, and

WHEREAS, Ordinance No. 1988-FC2 was amended by Ordinance Nos. 1994-FC2 as adopted on July 19, 1994, 1995-FC1 as adopted August 1, 1995, and 1998-FC1 as adopted July 14, 1998, and

WHEREAS, the Pima County Board of Supervisors, acting as the Board of Directors of the Flood Control District, officially codified the Floodplain Ordinance and its various amendments as Title 16 of the Pima County Code on June 1, 1999 by Ordinance No. 1999-FC1, and

WHEREAS, the Pima County Board of Supervisors, acting as the Board of Directors of the Flood Control District, officially amended Title 16 of the Pima County Code on September 6, 2005 by Ordinance No. 2005-FC2, and

WHEREAS, the Pima County Flood Control District Board of Directors has determined it to be in the best interests of the residents of Pima County that the current Floodplain Ordinance, as codified in Title 16 of the Pima County Code, be amended to establish the most current floodplain erosion and riparian habitat regulations,

NOW THEREFORE, IT IS ORDAINED BY THE BOARD OF DIRECTORS OF THE FLOOD CONTROL DISTRICT OF PIMA COUNTY,

**SECTION 1.** Title 16 of the Pima County Code shall hereby read as follows:

**TITLE 16**

**Chapters:**

**16.04 General Provisions**

**16.08 Definitions**

**16.12 Exemptions and Nonconforming Uses**

**16.16 Floodplain Maps and Boundaries**

**16.20 Use-Permits General Provisions**

**16.24 Floodway Requirements**

**16.26 Floodway Fringe Area Requirements**

**16.28 Erosion Hazard Areas and Building Setbacks**

**16.30 Watercourse and Riparian Habitat Protection and Mitigation Requirements**

**16.34 Manufactured Homes and Manufactured Home Parks and Subdivisions**

**16.36 Subdivision and Development**

**16.38 Maintenance of Private Drainage Improvements**

**16.42 Sediment and Erosion Control**

**16.44 Vehicular Access**

**16.48 Runoff Detention Systems**

**16.52 Sand, Gravel and Other Excavation Operations**

**16.54 Administration and Compliance**

**16.56 Appeals and Variances**

**16.60 Amendments**

**16.64 Enforcement**

## Chapter 16.04

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### GENERAL PROVISIONS

#### Sections:

**16.04.010 Short title.**

**16.04.020 Authority.**

**16.04.030 Contents and purpose of provisions.**

**16.04.040 Application and enforcement.**

**16.04.050 Performance standards.**

**16.04.060 Interpretation of provisions-conflict resolution.**

**16.04.070 Cooperative agreements and consultants.**

**16.04.080 Units of measure.**

**16.04.090 Warning and disclaimer of liability.**

**16.04.100 Severability**

#### **16.04.010**

##### **Short title.**

The ordinance codified in this title may be referred to as the "Floodplain Management Ordinance." (Ord. 2010 FC-1, Ord. 1999 FC-1 § 1 (part), 1999; Ord. 1988 FC-2 Art. 1, 1988)

#### **16.04.020**

##### **Authority**

A. The State of Arizona has delegated the responsibility to each county flood control district to adopt floodplain regulations designed to promote the public health, safety and general welfare of its citizenry as provided under the Arizona Revised Statutes, Title 48, Chapter 21, Article 1, Sections 48-3601 through 3629. More specifically, A.R.S. 48-3609 directs county flood control districts to adopt floodplain regulations that:

1. Regulate all development of land, construction of residential, commercial or industrial structures or uses of any kind which may divert, retard or obstruct flood water and threaten public health or safety or the general welfare; and
2. Establish minimum flood protection elevations and flood damage prevention requirements for uses, structures and facilities which are vulnerable to flood damage; and
3. Delineate or by rule require developers of land to delineate floodplains consistent with the criteria developed by the director of water resources; and
4. Comply with state and local land use plans and ordinances, if any.

B. In conformance with A.R.S. 48-3609, this ordinance provides for protection of the public health safety and welfare by regulation of flood and erosion hazard areas to control flood hazards and prevent repetitive loss from flood damage, and to carry out the requirements of the National Flood Insurance Program.

1. The flood hazard areas of Pima County are subject to periodic inundation which may result in loss of life and property, create health and safety hazards, disrupt commerce and governmental services, require extraordinary public expenditures for flood protection and relief, and impair the tax base, all of which adversely affect the public health, safety, and general welfare.
2. These flood losses are caused by the cumulative effect of obstructions in areas of special flood hazards which increase flood heights, flow velocities, and cause flood and erosion

damage. Uses that are inadequately flood-proofed, elevated, or otherwise protected from flood damage, also contribute to the flood loss. (Ord. 2010 FC-1, Ord. 2005 FC-2 § 2 (part), 2005)

### **16.04.030**

#### **Contents and purpose of provisions.**

- A. This title is one aspect of land and resource management planning in Pima County for watercourses, flood waters, drainage, and floodplains as well as those associated floodplain features relating to erosion, sedimentation, and riparian habitat. Floodplain management must be seen in perspective, not only as flood hazard minimization but also as one element of an integrated program of natural resource management and flood and erosion hazard reduction.
- B. The Pima County Flood Control District recognizes that it is both necessary and desirable to maintain a balanced and cooperative relationship between human communities and the land and resources that sustain them. Maintaining the stability of the environment is essential.
- C. It is the intent of the Pima County Flood Control District that:
  - 1. The highest and best use of regulatory floodplains within the County is for maintenance of natural hydrologic and hydraulic stream flow processes, with consideration for groundwater recharge, aesthetics, natural open space, recreation areas, and flora, fauna, and other wildlife habitat resources;
  - 2. Any human habitation or structural developments, which limit natural processes within floodprone or erosion hazard areas, be discouraged, and shall be limited to the extent allowable by law;
  - 3. Lands within the regulatory floodplain including riparian habitat and erosion hazard areas are managed by the Pima County Flood Control District to preserve or enhance natural values and expressed resource management goals;
  - 4. Regulatory controls for floodplain management emphasize overall watershed management, and prevention of unwise human occupation or encroachment into regulatory floodplain and erosion hazard areas; and
  - 5. Natural floodplain areas, streams, washes, arroyos, rivers, and drainage courses should be preserved in their natural riverine condition, whenever possible, and any land-use proposal, that utilizes this approach, will be considered superior to all others.
- D. The purpose of this title is to protect the public health, safety, and general welfare of the citizens of Pima County, and protect the natural character of our watercourses, water resources, and environment by adopting regulations designed to:
  - 1. Minimize flood and erosion damages;
  - 2. Meet or exceed state and federal requirements relating to floodplain management, thereby enabling Pima County residents to purchase low-cost flood insurance; receive disaster relief, should the need arise; and seek residential and commercial real-estate loans;
  - 3. Establish minimum flood protection elevations and damage prevention requirements for structures and other types of development that may be vulnerable to flood and erosion damage;
  - 4. Regulate encroachment and building development located within areas subject to flooding, or erosion, or located within riparian habitat areas, and assure that the flood-carrying capacity within the altered and/or relocated portion of any watercourse is maintained;
  - 5. Encourage the most effective expenditures of public money for flood control projects;

6. Minimize the need for rescue and relief efforts associated with flooding and erosion, which are generally undertaken at the expense of the general public;
  7. Minimize damage to public facilities and utilities, such as water and gas mains; electric, telephone and sewer lines; and streets and bridges located in regulatory floodplain and erosion hazard areas;
  8. Help maintain a stable tax base by providing for the protection of regulatory floodplain and erosion hazard areas;
  9. Inform the public where property lies within a regulatory floodplain, riparian habitat area or erosion hazard area;
  10. Ensure that those who occupy areas within regulatory floodplain and erosion hazard areas assume the responsibility for their actions within those areas;
  11. Protect, preserve and enhance groundwater recharge; and
  12. Encourage the preservation of natural washes, riparian habitat, as well as preserve the riverine environment.
- E. In order to accomplish protection of public health and safety and reduction of flood losses, this ordinance includes methods and provisions for:
1. Restricting or prohibiting uses which are dangerous to health, safety and property due to water or erosion hazards, or which result in increased erosion, flood heights or velocities, or flood volumes;
  2. Requiring that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction;
  3. Controlling the alteration of natural floodplains, stream channels and natural protective barriers, which help accommodate or channel flood waters;
  4. Controlling filling, grading, dredging and other development which may increase flood damage; and
  5. Preventing or regulating the construction of flood barriers that will unnaturally divert flood waters may increase flood hazards in other areas. (Ord. 2010 FC-1, Ord. 2005 FC-2 § 2 (part), 2005; Ord. 1999 FC-1 § 1 (part), 1999; Ord. 1988 FC-2 Art. 2 (B), (C), 1988)

#### **16.04.040**

##### **Application and enforcement.**

- A. The ordinance codified in Title 16 of the Pima County Code shall apply to those floodplains, erosion hazard areas, and riparian habitat areas defined and regulated herein.
- B. This title shall be applicable and enforceable in the incorporated, as well as the unincorporated areas of Pima County, including public lands, but excluding Indian and military reservations and those incorporated areas of cities or towns which have elected to assume separate floodplain management powers and duties pursuant to Section 48-3610 of the Arizona Revised Statutes. (Ord. 2005 FC-2 § 2 (part), 2005; Ord. 1999 FC-1 § 1 (part), 1999; Ord. 1988 FC-2 Art. 2 (A), (E), 1988)

#### **16.04.050**

##### **Performance standards.**

The performance requirements as specified in this title are minimum standards and address general floodplain management requirements. Specific projects may warrant additional requirements that may be imposed by the Pima County Flood Control District. The Pima County Flood Control District has the authority to establish standards and/or policies, as necessary, to

carry out the provisions of this title. All drainage design standards, river and basin management plans, riparian preservation and mitigation standards, environmental protection, or other land-use plans approved by Pima County and the Flood Control District are hereby incorporated into this title. All applicable floodplain management, flood hazard and flood control regulations, rules and standards promulgated by the state of Arizona and the federal government are hereby incorporated into this title. (Ord. 2005 FC-2 § 2 (part), 2005; Ord. 1999 FC-1 § 1 (part), 1999; Ord. 1988 FC-2 Art. 2 (F), 1988)

#### **16.04.060**

##### **Interpretation of provisions-conflict resolution.**

A. In the interpretation and application of this ordinance, all provisions shall be:

1. Considered as minimum requirements;
2. Liberally construed in favor of the governing body; and
3. Deemed to neither limit nor repeal any other powers granted to Pima County under any state statute.

B. Where this title conflicts with or overlaps with any other ordinance or regulation, easement, covenant or deed restriction, whichever imposes the more stringent restriction shall prevail. (Ord. 2010 FC-1; Ord. 2005 FC-2 § 2 (part), 2005; Ord. 1999 FC-1 § 1 (part), 1999; Ord. 1988 FC-2 Art. 2 (D), 1988)

#### **16.04.070**

##### **Cooperative agreements and consultants.**

Pima County may retain consultants and experts, and may enter into cooperative agreements for the delineation of regulatory floodplains, floodways, riparian habitat, and erosion hazard areas, or for other assistance and guidance considered appropriate and necessary. (Ord. 2005 FC-2 § 2 (part), 2005; Ord. 1999 FC-1 §§ 1 (part) 1999; Ord. 1988 FC-2 Art. 20 (A), 1988)

#### **16.04.080**

##### **Units of measure.**

All units of measure contained in this title, whether expressed or implied, are intended to be in the English system of units. (Ord. 1999 FC-1 § 1 (part), 1999; Ord. 1988 FC-2 Art. 20 (C), 1988)

#### **16.04.090**

##### **Warning and disclaimer of liability.**

The degree of flood protection required by this title is considered reasonable for regulatory purposes, and is based on engineering and scientific methods of study. Larger floods may occur on occasion or the flood height may be increased by manmade or natural causes, such as bridge openings restricted by debris. This title does not imply that areas located outside of the regulatory floodway, floodway fringe area, floodplain, riparian habitat, or erosion hazard areas, or land-uses permitted within such areas, will be free from flooding or flood damage. This title shall not create liability on the part of Pima County, the Pima County Flood Control District or any officer or employee thereof for any flood damages that may result from reliance on this title or any administrative decision based upon this title. (Ord. 2005 FC-2 § 2 (part), 2005; Ord. 1999 FC-1 § 1 (part), 1999; Ord. 1988 FC-2 Art. 3, 1988)

#### **16.04.100**

**Severability**

This Ordinance and the various parts thereof are hereby declared to be severable. Should any section of this Ordinance be declared by the courts to be unconstitutional or invalid, such decision shall not affect the validity of the Ordinance as a whole, or any portion thereof other than the section so declared to be unconstitutional or invalid. (Ord. 2010 FC-1)

## Chapter 16.08

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### DEFINITIONS

#### Sections:

- 16.08.010 Application of definitions and general usage.
- 16.08.020 Appeal.
- 16.08.030 Arizona Department of Water Resources.
- 16.08.040 Balanced drainage basin.
- 16.08.050 Base flood.
- 16.08.060 Base flood elevation.
- 16.08.070 Basement.
- 16.08.080 Board.
- 16.08.090 Board of Supervisors.
- 16.08.100 Chief Engineer.
- 16.08.110 County Engineer.
- 16.08.120 Critical drainage basin.
- 16.08.130 Critical or balanced drainage basin management plan.
- 16.08.140 Cumulative substantial damage.
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- 16.08.160 Detention system.
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- 16.08.180 District.
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- 16.08.220 Encroachment.
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- 16.08.250 Exemption.
- 16.08.260 Flood Control District Advisory Committee.
- 16.08.270 Flood Insurance Study.
- 16.08.280 Flood or flood waters.
- 16.08.290 Floodplain.
- 16.08.300 Floodplain Administrator.
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- 16.08.330 Floodplain use permit.
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- 16.08.400 Highest adjacent grade.
- 16.08.410 Historic structure.
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- 16.08.430 Important Riparian Area.**
- 16.08.440 Levee.**
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- 16.08.510 Mining reclamation plan.**
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- 16.08.570 Reach.**
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- 16.08.590 Regulatory flood elevation.**
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- 16.08.610 Retention system.**
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- 16.08.630 Setback.**
- 16.08.640 Sheet flooding area.**
- 16.08.650 Special Flood Hazard Area.**
- 16.08.660 Start of construction.**
- 16.08.670 Structure.**
- 16.08.680 Substantial damage.**
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- 16.08.700 Technical Review Committee.**
- 16.08.710 Variance.**
- 16.08.720 Violation.**
- 16.08.730 Waiver by the Chief Engineer.**
- 16.08.740 Watercourse.**
- 16.08.750 Watercourse master plan.**
- 16.08.760 Watershed.**
- 16.08.770 Written Finding by the Chief Engineer**
- 16.08.780 Xeroriparian.**

#### **16.08.010**

##### **Application of definitions and general usage.**

The following definitions and general usage shall apply to words and phrases used in Title 16 of this code.

- A. When parts of the Arizona Revised Statutes are adopted by reference or referred to in this title, the abbreviation A.R.S. will be used.
- B. When parts of the Arizona Administrative Code are adopted by reference or referred to in this title, the abbreviation A.A.C. will be used.

- C. References to the U.S. Code of Federal Regulations refer sequentially to the title of the Code of Federal Regulations (CFR), part, section and paragraph, e.g., 44 CFR 62.01(a), means Title 44, Code of Federal Regulations, Part 62 Section .01, Paragraph (a)).
- D. When parts of the National Federal Flood Insurance Program are adopted or referenced, the following terms shall be used:
  - 1. "NFIP" means National Flood Insurance Program.
  - 2. "FEMA" means the Federal Emergency Management Agency under the U.S. Department of Homeland Security.
  - 3. "FIRM" means Flood Insurance Rate Map as adopted by FEMA that delineates special flood hazards and risk premium zones.
  - 4. "FBFM" means Flood Boundary and Floodway Map as adopted by FEMA to delineate areas of special flood hazards including floodways.
  - 5. "FHBM" means Flood Hazard Boundary Map as adopted by FEMA for areas of flood hazards.
  - 6. "Community" is the term used by FEMA for all political bodies that administer floodplain regulations whether those are towns, cities, counties, districts, parishes, etc.
  - 7. "Jurisdiction" is a term used by FEMA and ADWR that includes communities, states, tribal nations and other federal land owners like the Bureau of Land Management and the National Forest Service.
  - 8. "Reasonably safe from flooding" is a term used to indicate that conditions of the National Flood Insurance Program are met for the base flood.
- E. "State Standard" means a document defining standards for floodplain management as adopted by the Arizona Department of Water Resources pursuant to A.R.S. Section § 48-3605(A). An abbreviation for a specific standard of SS3-96 means State Standard Number 3 as adopted in 1996.
- F. All units of measure contained in this title, whether expressed or implied, are intended to be in the English system of units. The following units of measures and abbreviations will be used:
  - 1. When referring to the volume of flow, "cubic feet per second" will be abbreviated as cfs.
  - 2. When referring to the velocity of the flow, "feet per second" will be abbreviated as fps.
- G. When referring to timeframes for action, and unless otherwise noted, "days" shall mean business days. (Ord. 2010 FC-1; Ord. 2005 FC-2 § 2 (part), 2005; Ord. 1999 FC-1 § 1 (part), 1999; Ord. 1988 FC-2 Art. 4 (part), 1988)

#### **16.08.020**

##### **Appeal**

"Appeal" means a written request for a technical review of the Chief Engineer's written finding, as defined in 16.08.770, concerning the denial of a floodplain use permit, or a boundary determination of a regulatory floodplain, floodway, erosion hazard area, or riparian habitat. The appeal of a final decision and order of the Chief Engineer regarding a floodplain violation shall be pursuant to 16.64.070. (Ord. 2010 FC-1)

#### **16.08.030**

##### **Arizona Department of Water Resources.**

"Arizona Department of Water Resources," known from this point forward as ADWR, is the state agency assigned with oversight of flood control as provided for in Title 48 Chapter 21 of the A.R.S. (Ord. 2005 FC-2 § 2 (part), 2005).

**16.08.040**

**Balanced drainage basin.**

"Balanced drainage basin" means a drainage basin or watershed which contains flood water channels, natural or manmade, and/or flood control structures that are adequate to contain existing runoff from the base flood produced by the basin or watershed, but in which additional runoff may not be safely contained by said channels or structures. All drainage basins shall be considered to be balanced basins unless a basin has been designated as a critical drainage basin. (Ord. 2010 FC-1; Ord. 1999 FC-1 § 1 (part), 1999; Ord. 1988 FC-2 Art. 4 (part), 1988)

**16.08.050**

**Base flood.**

"Base flood" means a flood with a one-percent probability of being equaled or exceeded in any given year. Commonly referred to as the 100-year flood, this flood shall be determined from an analysis of floods on a particular watercourse and other watercourses in the same general region in accordance with the criteria established by the director of the ADWR, or the Flood Control District Board, which criterion is hereby incorporated by reference and made a part of this title. (Ord. 2010-FC-1; Ord. 2005 FC-2 § 2 (part), 2005; Ord. 1999 FC-1 § 1 (part), 1999; Ord. 1988 FC-2 Art. 4 (part), 1988)

**16.08.060**

**Base flood elevation.**

"Base flood elevation" means the calculated water-surface elevation of the base flood. (Ord. 1999-FC-1 §§ 1 (part) 1999; Ord. 1988-FC2 Art. 4 (part), 1988)

**16.08.070**

**Basement.**

"Basement" means any area of a building having its floor sub-grade (below ground level) on all sides. (Ord. 2005-FC2 § 2 (part), 2005)

**16.08.080**

**Board.**

"Board" means the Board of Supervisors of Pima County sitting as the Board of Directors for the Flood Control District, known from this point forward as the Board, as the governing body for codes, ordinances and other regulations relating to floodplain management within Pima County, but excluding Indian and military reservations and incorporated communities that elected to assume separate floodplain management duties and powers, as set forth in the A.R.S., Title 48, Chapter 21 Districts. (Ord. 2005 FC-2 § 2 (part), 2005; Ord. 1999 FC-1 § 1 (part), 1999; Ord. 1988 FC-2 Art. 4 (part), 1988)

**16.08.090**

**Board of Supervisors.**

"Board of Supervisors," means the governing body of Pima County as defined in Title 11, Chapter 2, of the A.R.S. (Ord. 2005-FC2 § 2 (part), 2005)

**16.08.100**

**Chief Engineer.**

"Chief Engineer" means an official of Pima County or authorized representative of the Flood Control District whose duties are as set forth in A.R.S. Section 48-3603, and who is an Arizona registered civil engineer in the state of Arizona. For the Flood Control District, the Chief Engineer is also the director of the Pima County Flood Control District. The Chief Engineer, or an authorized designee, is in charge of enforcement of this title, and is responsible for administrating appeals and waivers to engineering standards specified in this title. (Ord. 2005 FC-2 § 2 (part), 2005)

**16.08.110**

**County Engineer.**

"County Engineer" means an official of Pima County whose duties are set forth in A.R.S. Section 11-562 and 48-3603. The County Engineer is also the director of the Pima County Department of Transportation. (Ord. 2005 FC-2 § 2 (part), 2005; Ord. 1999 FC-1 § 1 (part), 1999; Ord. 1988 FC-2 Art. 4 (part), 1988)

**16.08.120**

**Critical drainage basin.**

"Critical drainage basin" means a drainage basin or watershed that contains flood water channels, natural or manmade, and/or flood control structures that cannot convey existing runoff during a base flood produced by the basin or watershed, and which has a documented history of severe hazards. (Ord. 1999 FC-1 § 1 (part), 1999; Ord. 1988 FC-2 Art. 4 (part), 1988)

**16.08.130**

**Critical or balanced drainage basin management plan.**

"Critical or balanced drainage basin management plan" means a site-specific plan for a balanced or critical basin or watershed which has been prepared for and approved by Pima County, and provides a conceptual plan for orderly development of flood control, floodplain management, and associated erosion hazard-control measures that may be necessary as a result of urbanization within the basin or watershed. (Ord. 2005 FC-2 § 2 (part), 2005; Ord. 1999 FC-1 § 1 (part), 1999; Ord. 1988 FC-2 Art. 4 (part), 1988)

**16.08.140**

**Cumulative substantial damage.**

"Cumulative substantial damage" means the total cost of all repairs to a structure that has incurred repetitive loss or damage in order to determine the applicability of the substantial improvement provisions of this Title. When the total cost of all repairs to the repetitive loss structure equals or exceeds the 50% substantial improvement threshold, the structure must be brought into compliance. (Ord. 2010 FC-1; Ord. 2005 FC-2 § 2 (part), 2005)

**16.08.150**

**Cumulative substantial improvement.**

"Cumulative substantial improvement" means the total cost of all improvements, modifications, additions, reconstruction, or repairs to a structure in order to determine the applicability of the substantial improvement provisions of this Title. When the total cost of all improvements, modifications, additions, reconstruction or repairs equals or exceeds the 50% substantial improvement threshold, the structure must be brought into compliance. The cumulative substantial improvement provision does not apply to tenant improvements of commercial structures or to the subsequent remodeling of any residential facility (e.g. kitchen or bathroom) that have been remodeled previously and accounted for under this provision. (Ord. 2010 FC-1; Ord. 2005-FC2 § 2 (part), 2005)

**16.08.160**

**Detention system.**

"Detention system" means a type of flood control system that delays the downstream progress of flood waters in a controlled manner, generally through the combined use of a temporary storage area and a metered outlet device, which causes a lengthening of the duration of flow and thereby reduces downstream flood peaks. (Ord. 1999 FC-1 § 1 (part), 1999; Ord. 1988 FC-2 Art. 4 (part), 1988)

**16.08.170**

**Development.**

"Development" means any manmade change to improved or unimproved real estate, including, but not limited to, buildings or other structures, mining, dredging, filling, grading, paving, fencing, excavating or drilling or storage of equipment or materials. (Ord. 2005 FC-2 § 2 (part), 2005; Ord. 1999 FC-1 § 1 (part), 1999; Ord. 1988 FC-2 Art. 4 (part), 1988)

**16.08.180**

**District.**

"District" means the County Flood Control District, as established by Title 48, Chapter 21 of the A.R.S., which is named in Pima County as the Pima County Flood Control District and known from this point forward as the District. (Ord. 2005 FC-2 § 2 (part), 2005)

**16.08.190**

**Drainage area.**

"Drainage area" means the upstream contributing watershed area measured at a single point of drainage concentration and is expressed in units of area. Other terms for this are catchment area, watershed, and river basin. (Ord. 2010 FC-1; Ord. 1999 FC-1 § 1 (part), 1999; Ord. 1988 FC-2 Art. 4 (part), 1988)

**16.08.200**

**Dry well.**

"Dry well" means a deep hole covered and designed in such a manner so as to hold storm water runoff until it infiltrates into the ground. (Ord. 1999 FC-1 § 1 (part), 1999; Ord. 1988 FC-2 Art. 4 (part), 1988)

**16.08.210**

**Dwelling unit.**

"Dwelling unit" means a place of residence that may be located in a single or multiple dwelling building or a manufactured home. (Ord. 1999 FC-1 § 1 (part), 1999; Ord. 1988 FC-2 Art. 4 (part), 1988)

#### **16.08.220**

##### **Encroachment.**

"Encroachment" means the placement of uses, materials, fill, or structures into the regulatory floodplain in a manner that impedes or adversely modifies the flow conveyance capacity of the channel and/or regulatory floodplain of a watercourse.

- A. An equal degree of encroachment is the standard applied to the evaluation of the effect of an encroachment within the regulatory floodplain with respect to the degree in which flood water heights or flow velocities may be changed as a result of the encroachment and assumes that all property owners on both sides of the watercourse are provided with an equal right to encroach to the same degree within that reach of the watercourse and modify the flow capacity within the floodplain including increasing the flood height or flow velocity.
- B. Since the factors affecting hydraulic efficiency are usually not uniform within a reach, this standard may not result in equally measured distances between floodway limit lines and the regulatory floodplain boundaries of a watercourse. (Ord. 2010 FC-1; Ord. 2005 FC-2 § 2 (part), 2005; Ord. 1999 FC-1 § 1 (part), 1999; Ord. 1988 FC-2 Art. 4 (part), 1988)

#### **16.08.230**

##### **Erosion**

"Erosion" means the physical process where flowing flood water removes sediment and earthen material causing the banks and beds of stream channels to wear away and degrade over time. (Ord. 2005 FC-2 § 2 (part), 2005)

#### **16.08.240**

##### **Erosion hazard area.**

"Erosion hazard area" means the lands adjoining a watercourse regulated by this title that are deemed by the Chief Engineer to be subject to flood-related erosion losses. (Ord. 1999 FC-1 § 1 (part), 1999; Ord. 1988 FC-2 Art. 4 (part), 1988)

#### **16.08.250**

##### **Exemption.**

"Exemption" to this title means that a federal, state and/or local law has identified a land use, construction activity, and/or other action as allowed and immune to local regulations. Exempted uses shall not be affected or prohibited by the provisions of this title including those exempted land uses as provided for in A.R.S. Section 11-830 and 48-3609 as identified in Section 16.12 of this title. (Ord. 2005 FC-2 § 2 (part), 2005)

#### **16.08.260**

##### **Flood Control District Advisory Committee.**

"Flood Control District Advisory Committee" means the technical committee established by resolution of the Board, to act as an advisory committee to the Board on technical floodplain management and District issues. (Ord. 2005 FC-2 § 2 (part), 2005)

**16.08.270**

**Flood Insurance Study.**

"Flood Insurance Study" means an engineering study conducted through FEMA to identify certain flood hazard areas in an engineering study. For Pima County, the flood insurance study is a report entitled, "The Flood Insurance Study for the Unincorporated Areas of Pima County, Arizona," dated February 15, 1983, with accompanying FIRMs and flood boundary and floodway maps. This flood insurance study includes its accompanying maps along with all subsequent amendments by the federal government to the flood insurance study. (Ord. 2005-FC2 § 2 (part), 2005)

**16.08.280**

**Flood or floodwater.**

"Flood" or "floodwater" means a temporary rise in water level including groundwater or overflow of water onto lands not normally covered by water. (Ord. 1999 FC-1 § 1 (part), 1999; Ord. 1988 FC-2 Art. 4 (part), 1988)

**16.08.290**

**Floodplain.**

"Floodplain" means any areas within a watercourse which have been or may be covered partially or wholly by flood waters from the base flood including land that have been, or may be, subject to flooding from storm water runoff, overflow of flood waters from a watercourse, alluvial fans, sheet flood zones, or other property subject to flooding. The floodplain includes the stream channel, the floodway, and the floodway fringe area. (Ord. 2010 FC-1; Ord. 2005 FC-2 § 2 (part), 2005)

**16.08.300**

**Floodplain Administrator.**

"Floodplain Administrator" means the Chief Engineer or authorized representative of the District appointed by the Chief Engineer, who is also a registered civil engineer in the state of Arizona, whose duty is to oversee administration and enforcement of the floodplain management regulations contained within this ordinance as required by the NFIP. (Ord. 2005 FC-2 § 2 (part), 2005)

**16.08.310**

**Floodplain management.**

"Floodplain management" means the operation of an integrated natural resource management program, encompassing corrective and preventive measures for reducing flood and erosion damage. Floodplain management includes, but is not limited to, emergency preparedness planning, flood control works and floodplain management regulations. (Ord. 1999 FC-1 § 1 (part) 999; Ord. 1988 FC-2 Art. 4 (part), 1988)

**16.08.320**

**Floodplain management regulations.**

"Floodplain management regulations" means the codes, ordinances and other regulations relating to the use of land and construction within the regulatory floodplain, including zoning ordinances, subdivision regulations, building codes, housing codes, setback requirements, open area

regulations and similar methods of control affecting the use and development of these areas. (Ord. 1999 FC-1 § 1 (part), 1999; Ord. 1988 FC-2 Art. 4 (part), 1988)

**16.08.330**

**Floodplain use permit.**

"Floodplain use permit" means an official document that authorizes specific activity within a regulatory floodplain, riparian habitat, or erosion hazard area. (Ord. 2010 FC-1; Ord. 2005 FC-2 § 2 (part), 2005; Ord. 1999 FC-1 § 1 (part), 1999; Ord. 1988 FC-2 Art. 4 (part), 1988)

**16.08.340**

**Flood proofing.**

"Flood proofing" means provisions, changes or adjustments primarily for the purpose of reducing or eliminating flood damages to property and improvements subject to flooding. (Ord. 1999 FC-1 § 1 (part), 1999; Ord. 1988 FC-2 Art. 4 (part), 1988)

**16.08.350**

**Floodway area.**

"Floodway area" means that portion of the floodplain which must be preserved in order to maintain the flood carrying capacity of the base flood. Floodway areas regulated by this title include:

- A. Federal floodway areas as delineated by FEMA;
- B. Administrative floodways for major watercourses with a base flood peak discharge of 2,000 cfs or more as determined through engineering analyses using ADWR standards or other applicable engineering method.
  - 1. Administrative floodway areas include the primary channel of the watercourse and any adjacent land areas that are necessary to convey the base flood without cumulatively increasing the water-surface elevation more than 1 foot above the base flood elevation under normal flow conditions;
  - 2. In addition, when geologic features confine the flow of a watercourse the following additional areas shall be considered floodway areas:
    - a. Areas necessary to convey the base flood without increasing the water surface elevation more than a tenth (0.1) of a foot above the base flood elevation under normal flow conditions,
    - b. Areas of frequent inundation as defined by the 4% annual chance (25-year) flood,
    - c. Areas with excessive flow depths and velocities ( $dv^2$ ), as defined in 16.26.050.G, and
    - d. Active flow paths and channels based on the presence of unconsolidated alluvium related to fluvial processes and the potential for the flow paths to meander over time.
  - 3. A watercourse can be considered confined when the ratio of the wetted top-widths of the floodplains associated with the base flood and the 25-year flood is 1.25 or less and the height of the geologic features are at least 1.5 times the hydraulic depth of the base flood. The watercourse shall be considered confined through all reaches where this criteria is present both upstream and downstream of the subject area.
- C. The primary channel of all regulatory minor watercourses with a base flood peak discharge of less than 2,000 cfs; (Ord. 2010 FC-1; Ord. 2005 FC-2 § 2 (part), 2005; Ord. 1999 FC-1 § 1 (part), 1999; Ord. 1998 FC-1 Section 1, 1998; Ord. 1988 FC-2 Art. 4 (part), 1988)



**16.08.360**

**Floodway fringe area.**

"Floodway fringe area" is a term used by FEMA to designate the floodplain area lying outside the floodway, but within the regulatory floodplain. For the purposes of this title, the floodway fringe area is also the regulatory floodplain wherever a floodway has not been defined for a regulatory watercourse. (Ord. 2010 FC-1; Ord. 2005 FC-2 § 2 (part), 2005; Ord. 1999 FC-1 § 1 (part), 1999; Ord. 1988 FC-2 Art. 4 (part), 1988)

**16.08.370**

**Geologic floodplain.**

"Geologic floodplain" means those lands adjacent to a watercourse that have been subject to fluvial processes during the Holocene epoch (i.e., approximately the past 10,000 years). The geologic floodplain may be different from the regulatory floodplain. (Ord. 2010 FC-1; Ord. 1999 FC-1 § 1 (part), 1999; Ord. 1988 FC-2 Art. 4 (part), 1988)

**16.08.380**

**Habitat mitigation.**

"Habitat mitigation" for purposes of Chapter 16.30 of the Pima County Code means providing a new riparian habitat of similar quality to that which was removed as a result of physical improvements or development to a piece of property located within floodplain, an erosion hazard area, or riparian habitat regulated by this ordinance. (Ord. 2005 FC-2 § 2 (part), 2005)

**16.08.390**

**Hardship.**

Hardship means, for the purposes of approving variances of regulation under the NFIP, the exceptional hardship which would result from a failure to grant the requested variance. The governing body requires that the variance be exceptional, unusual and peculiar to the property involved. Mere economic or financial hardship alone is not exceptional. Inconvenience, aesthetic considerations, physical disabilities, personal preferences or the disapproval of one's neighbors likewise cannot, as a rule, qualify as an exceptional hardship. All of these problems can be resolved through other means without granting a variance, even if the alternative is more expensive, or requires the property owner to build elsewhere or put the parcel to a different use than originally intended. (Ord. 2005 FC-2 § 2 (part), 2005)

**16.08.400**

**Highest adjacent grade.**

"Highest adjacent grade" means the highest natural elevation of the ground surface prior to construction next to the proposed walls of a structure. (Ord. 2005-FC2 § 2 (part), 2005)

**16.08.410**

**Historic structure.**

"Historic structure" means a building:

- A. Listed individually in the National Register of Historic Places (a listing maintained by the Department of Interior) or preliminarily determined by the Secretary of the Interior (Secretary) as meeting the requirements for individual listing on the National Register;

- B. Certified or preliminarily determined by the Secretary as contributing to the historical significance of a registered historic district or a district preliminarily determined by the Secretary to qualify as a registered historic district;
- C. Individually listed on a state inventory of historic places in states with historic preservation programs which have been approved by the Secretary; or
- D. Individually listed on a local inventory of historic places in communities with historic preservation programs that have been certified either by an approved state program as determined by the Secretary; or directly by the Secretary in states without approved programs. (Ord. 2005 FC-2 § 2 (part), 2005)

**16.08.420**

**Hydroriparian.**

"Hydroriparian" for purposes of this title, means riparian habitat designated as hydroriparian on maps adopted by the Board. These riparian habitats are generally associated with perennial watercourses and/or springs. Plant communities are dominated by obligate or preferential wetland plant species such as willow and cottonwood. (Ord. 2005 FC-2 § 2 (part), 2005)

**16.08.430**

**Important Riparian Area.**

"Important Riparian Area," for purposes of this title, means riparian areas designated as Important Riparian Areas on maps adopted by the Board for their hydrologic, geomorphic, and biological values. These areas provide a critical function for landscape linkage and connectivity with other habitats and provide biological corridors. Important Riparian Areas include hydroriparian, mesoriparian, and xeroriparian class A, B, C, and D habitat areas. (Ord. 2005 FC-2 § 2 (part), 2005; Ord. 1999 FC-1 § 1 (part), 1999; Ord. 1994 FC-2 (part), 1994; Ord. 1988 FC-2 Art. 10 (B), 1988)

**16.08.440**

**Levee.**

"Levee" means a manmade structure, usually an earthen embankment, designed and constructed in accordance with sound engineering practices for the purpose of controlling, or diverting the flow of water so as to provide protection from temporary flooding. (Ord. 1999 FC-1 § 1 (part), 1999; Ord. 1988 FC-2 Art. 4 (part), 1988)

**16.08.450**

**Lowest floor.**

"Lowest floor" means the floor of the lowest enclosed area of any structure. This includes any part of the structure having a basement, a floor sub-grade below ground level and crawl spaces under manufactured housing, which are considered to be the lowest finished floor if they are not vented and constructed of flood resistant materials to the regulatory flood elevation. (Ord. 2010 FC-1; Ord. 2005 FC-2 § 2 (part), 2005; Ord. 1999 FC-1 § 1 (part), 1999; Ord. 1988 FC-2 Art. 4 (part), 1988)

**16.08.460**

**Manufactured home.**

"Manufactured home" means a structure transportable in one or more sections, which is built on a permanent chassis and designed to be used with or without a permanent foundation when connected to the required utilities. Manufactured home construction, installment standards, and placement within floodplains are regulated under A.R.S. in Title 41, Chapter 21, Article 2, Office of Manufactured Housing. For floodplain management purposes, the term manufactured home also includes mobile homes, park trailers, travel trailers, recreational vehicles, and other similar vehicles placed on a site for more than 180 consecutive days. (Ord. 2010 FC-1; Ord. 2005 FC-2 § 2 (part), 2005; Ord. 1999 FC-1 § 1 (part), 1999; Ord. 1988 FC-2 Art. 4 (part), 1988)

**16.08.470**

**Manufactured home park or subdivision.**

"Manufactured home park or subdivision" means a parcel or contiguous parcels of land divided into four or more manufactured home lots for sale or rent. (Ord. 1999 FC-1 § 1 (part), 1999; Ord. 1988FC-2 Art. 4 (part), 1988)

**16.08.480**

**Market value.**

"Market value" means the determination of the estimated cost to replace the structure in new condition and adjusting that cost figure by the amount of depreciation that has accrued since the structure was constructed. The cost of replacement of the structure shall be based on a square foot cost factor determined by reference to a building cost estimating guide recognized by the building construction industry. The amount of depreciation shall be determined by taking into account the age and physical deterioration of the structure and functional obsolescence as approved by the floodplain administrator, but shall not include economic or other forms of external obsolescence. Use of replacement costs or accrued depreciation factors different from those contained in recognized building cost estimating guides may be considered only if such factors are included in a report prepared by an independent professional appraiser and supported by a written explanation of the differences. (Ord. 2005-FC2 § 2 (part), 2005)

**16.08.490**

**Mean sea level.**

"Mean sea level," for purposes of the NFIP, means the National Geodetic Vertical Datum (NGVD) of 1929 or other datum to which base flood elevations are referenced, as shown on a community's FIRM. (Ord. 1999 FC-1 § 1 (part), 1999; Ord. 1988 FC-2 Art. 4 (part), 1988)

**16.08.500**

**Mesoriparian.**

"Mesoriparian" for purposes of this title, means riparian habitat designated as mesoriparian on maps adopted by the Board. These riparian habitats generally are associated with perennial or intermittent watercourses or shallow groundwater. Plant communities may be dominated by species that are also found in drier habitats (e.g., mesquite), but contain some preferential riparian plant species such as ash or netleaf hackberry. (Ord. 2005 FC-2 § 2 (part), 2005)

**16.08.510**

**Mining reclamation plan.**

"Mining reclamation plan" means a plan for sand and gravel operations that defines hydrologic and hydraulic constraints; outlines methods of extraction, operation and site development; and provides procedures for final site reclamation pursuant to the Arizona Aggregate Mined Land Reclamation Act in Title 27 of the Arizona Revised Statutes (A.R.S. §27-1201, et seq.). (Ord. 2005 FC-2 § 2 (part), 2005)

**16.08.520**

**New construction.**

"New construction" means structures and any subsequent improvements to such structures for which the "start of construction" commenced on or after the effective date of adoption of:

- A. An initial FIRM or after December 31, 1974, whichever is later, within federally regulated flood hazard zones.
- B. This title for floodplain management regulations including regulation of erosion and riparian habitat as provided herein. (Ord. 2010 FC-1)

**16.08.530**

**Nonconforming use.**

"Nonconforming use" means an existing legal use that does not comply with this Title and was either:

- A. Constructed prior to December 16, 1974, which predates the requirement for written authorization for development within a floodplain, or
- B. Constructed on or after December 16, 1974, in compliance with the terms and conditions of the written authorization in effect at the time of construction. (Ord. 2010 FC-1)

**16.08.540**

**Obstruction.**

"Obstruction" means any physical alteration within, to, along, across or projecting into any watercourse that may impede, retard, or change the direction of the flow of water, either in itself or by catching or collecting debris carried by such water, or that is placed where a flow of water might carry the same downstream. Examples include, but are not limited to, the following: Any dam, wall, embankment, levee, dike, pile, abutment, projection, excavation, channel rectification, bridge, conduit, culvert, building, wire, fence, rock, gravel, refuse, fill, structure or vegetation. (Ord. 1999 FC-1 § 1 (part), 1999; Ord. 1988 FC-2 Art. 4 (part), 1988)

**16.08.550**

**Person.**

"Person" means any individual, the individual's agent, a firm, partnership, association, or corporation or an agent of the aforementioned groups, this state or its political subdivision thereof. (Ord. 2005 FC-2 § 2 (part), 2005; Ord. 1999 FC-1 § 1 (part), 1999; Ord. 1988 FC-2 Art. 4 (part), 1988)

**16.08.560**

**Pima County.**

"Pima County" means the political subdivision established by Title 11, Chapter 1 of the A.R.S. and from this point forward is referred to as the County. (Ord. 2005 FC-2 § 2 (part), 2005)

**16.08.570**

**Reach.**

"Reach" is a hydraulic engineering term used to describe longitudinal segments of a stream or watercourse. In an urban area, an example of a reach would be the segment of a watercourse located between two consecutive bridge crossings. (Ord. 1999 FC-1 § 1 (part), 1999; Ord. 1988 FC-2 Art. 4 (part), 1988)

**16.08.580**

**Reasonable repair.**

"Reasonable repair" means those activities necessary in order to facilitate continuation or improvement of an existing legal use. Reasonable repair is considered to occur when the first alteration commences for any wall, ceiling, floor or other structural part of the building whether or not that alteration affects the exterior dimensions of the structure. (Ord. 2005 FC-2 § 2 (part), 2005)

**16.08.590**

**Regulatory flood elevation.**

"Regulatory flood elevation" means the elevation that is 1 foot above the calculated water-surface elevation of the base flood. (Ord. 1999 FC-1 § 1 (part), 1999; Ord. 1988 FC-2 Art. 4 (part), 1988)

**16.08.600**

**Regulatory floodplain or floodprone area.**

"Regulatory floodplain or floodprone area" means that portion of the geologic floodplain associated with a watercourse, including its channel, or any other floodplain or floodprone area that would be inundated by the base flood, including all base floods where the base flood peak discharge is 100 cfs or greater, those areas that are subject to sheet flooding except when the maximum potential contributing watershed area is less than 20 acres, those areas identified on subdivision plats or development plans, those areas designated by FEMA, including areas designated as Shaded Zone X as well as those areas that the Chief Engineer, using the best available data, has determined is subject to a flood hazard during the base flood. (Ord. 2010 FC-1; Ord. 2005 FC-2 § 2 (part), 2005; Ord. 1999 FC-1 § 1 (part), 1999; Ord. 1988 FC-2 Art. 4 (part), 1988)

**16.08.610**

**Retention system.**

"Retention system" means a type of flood control system that stops the downstream progress of flood waters by employing methods of total containment. (Ord. 2005 FC-2 § 2 (part), 2005; Ord. 1999 FC-1 § 1 (part), 1999; Ord. 1988 FC2 Art. 4 (part), 1988)

**16.08.620**

**Riparian habitat.**

"Riparian habitat," for purposes of this title, means riparian habitat designated as riparian on maps adopted by the Board. These habitats are generally characterized by vegetation that is different in plant species composition or an increase in the size and/or density of vegetation as compared to upland areas occurring in association with any regulatory floodplain and stream

channel where waters flow at least periodically in a channel or as dispersed flow, or other features associated with a floodplain such as a spring, cienega, lake, watercourse, river, stream, creek, wash, arroyo, or other surface body of water. (Ord. 2005 FC-2 § 2 (part), 2005)

#### **16.08.630**

##### **Setback.**

"Setback" means the minimum horizontal distance between a structure and a watercourse. On each side of a watercourse, the setback is measured from the top edge of the channel bank, the top edge of the closest channel or braid when multiple channels or braids exist, or the edge of the regulatory floodway, whichever is most representative of the erosion hazard. (Ord. 2010 FC-1; Ord. 2005 FC-2 § 2 (part), 2005; Ord. 1999 FC-1 § 1 (part), 1999; Ord. 1988 FC-2 Art. 4 (part), 1988)

#### **16.08.640**

##### **Sheet flooding area.**

"Sheet flooding area" means the area which may be subject to flooding with depths of one foot or less during the base flood even though a clearly defined channel does not exist and the path of the flooding is often unpredictable and indeterminate. Sheet flooding areas include:

- A. FEMA designated Shaded Zone X when the designation refers to areas subject to a depth of flow of 1 foot or less during the base flood; and
- B. Areas that the Chief Engineer, using the best available data, has determined are subject to sheet flooding during the base flood. (Ord. 2010 FC-1; Ord. 2005 FC-2 § 2 (part), 2005; Ord. 1999 FC-1 § 1 (part), 1999; Ord. 1988 FC-2 Art. 4 (part), 1988)

#### **16.08.650**

##### **Special Flood Hazard Area.**

"Special Flood Hazard Area" means an area designated by FEMA as having a special flood hazard, and that is land subject to a 1 percent or greater chance of flooding in any given year, and from this point forward abbreviated as SFHA. An SFHA may be designated as a Zone A, AO, AH, AE, A 1-30, A99.

- A. Zone A, no base flood elevation has been determined;
- B. Zone AE, the base flood elevation has been determined;
- C. Zone AH, flood depths of 1 to 3 feet in areas that are usually areas of ponding with the base flood elevations determined;
- D. Zone AO, flood depths of 1 to 3 feet in areas usually subject to sheet flow with the average depths determined. (Ord. 2010 FC-1; Ord. 2005 FC-2 § 2 (part), 2005)

#### **16.08.660**

##### **Start of construction.**

"Start of construction" means the date the building permit was issued, for purposes of determining exemptions to Title 16 under Section 16.12.010, provided the actual commencement of physical construction activities occurs within 180 calendar days of the permit date. This applies to building permits for a new building or the substantial improvement of an existing building, including the actual commencement of construction, repair, reconstruction, rehabilitation, addition, placement or other improvement. The actual start means the first placement of permanent construction of a structure on a site, such as the pouring of slab or

footings, the installation of piles, the construction of columns or any work beyond the stage of excavation including those improvements intended for the placement of a manufactured home. For a substantial improvement, the actual start of construction means the first alteration of any wall, ceiling, floor or other structural part of a building, whether or not that alteration affects the external dimensions of the building. (Ord. 2010 FC-1; Ord. 2005 FC-2 § 2 (part), 2005)

**16.08.670**

**Structure.**

"Structure" means any walled and roofed building that is principally above ground; this includes a gas or liquid storage tank or a manufactured home. Habitable structures are those structures intended for human occupation, whether utilized on a full or part-time basis, as defined under County Code, Title 15, Building Codes. For purposes of this title, a private drainage improvement is considered a structure. (Ord. 2010 FC-1; Ord. 2005 FC-2 § 2 (part), 2005; Ord. 1999 FC-1 § 1 (part), 1999; Ord. 1988 FC-2 Art. 4 (part), 1988)

**16.08.680**

**Substantial damage.**

"Substantial damage" means damage of any origin sustained by a structure whereby the cost of restoring the structure to its before damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred. This term also applies to structures which have incurred repetitive loss or damage where the cumulative total of the loss or damage equals or exceeds 50 percent of the structure's market value regardless of the actual repair work performed. (Ord. 2010 FC-1; Ord. 2005 FC-2 § 2 (part), 2005)

**16.08.690**

**Substantial improvement.**

"Substantial improvement" means any reconstruction, rehabilitation, addition or other improvement of a structure, the cost of which equals or exceeds 50 percent of the market value of the structure before the "start of construction" of the improvement as determined by:

- A. The latest assessment rolls of the County Assessor before the improvement or repair is started, or
- B. The market value as determined by estimating the cost to replace the structure in new condition and adjusting that cost figure by the amount of depreciation that has accrued since the structure was constructed. The cost of replacement of the structure shall be based on a square foot cost factor determined by reference to a building cost estimating guide recognized by the building construction industry. The amount of depreciation shall be determined by taking into account the age and physical deterioration of the structure and functional obsolescence as approved by the floodplain administrator, but shall not include economic or other forms of external obsolescence. Use of replacement costs or accrued depreciation factors different from those contained in recognized building cost estimating guides may be considered only if such factors are included in a report prepared by an independent professional appraiser and supported by a written explanation of the differences.
- C. This term includes structures which have incurred Substantial damage regardless of the actual repair work performed.
- D. The term does not, however, include either:

1. Any project for improvement of a structure to correct existing violations of state or local health, sanitary or safety code specifications which have been identified by the local code enforcement official and which are the minimum necessary to assure safe living conditions; or,
2. Any alteration of a "historic structure," provided that the alteration would not preclude the structure's continued designation as a "historic structure." (Ord. 2010 FC-1; Ord. 2005 FC-2 § 2 (part), 2005)

**16.08.700**

**Technical Review Committee.**

"Technical Review Committee" means the Flood Control District Advisory Committee that, when requested by the Board, provides review of technical matters concerning interpretation and enforcement of this title. (Ord. 2005 FC-2 § 2 (part), 2005)

**16.08.710**

**Variance.**

"Variance" means to have the Board grant relief from the requirements of this title that would allow construction in a manner that would otherwise be prohibited by this title including:

- A. Variances of adopted Special Flood Hazard Areas as designated by FEMA. Such variances shall conform to the variance requirements of the National Flood Insurance Program as provided for within 44 CFR 66 and A.R.S. 48-3609 and as provided for in Chapter 16.56 of this Title.
- B. Variances to adopted District regulations as provided by this title. Such variances shall conform to the variance requirements provided in Chapter 16.56 of this title. (Ord. 2010 FC-1; Ord. 2005 FC-2 § 2 (part), 2005; Ord. 1999 FC-1 § 1 (part), 1999; Ord. 1988 FC-2 Art. 4 (part), 1988)

**16.08.720**

**Violation.**

"Violation" means the failure of a structure or other development to be fully compliant with the District's floodplain management regulations. A structure or other development without the elevation certificate, other certifications or other evidence of compliance required in this ordinance is presumed to be in violation until such time as that documentation is provided. (Ord. 1999 FC-1 § 1 (part), 1999; Ord. 1988 FC-2 Art. 4 (part), 1988)

**16.08.730**

**Waiver by the Chief Engineer.**

"Waiver by the Chief Engineer" means to modify or substitute one technical requirements or standard for another where provisions in this title allow the Chief Engineer to exercise technical judgment in establishing permit requirements, for example, waiving erosion setback requirements based on geotechnical evidence. (Ord. 2005-FC2 § 2 (part), 2005)

**16.08.740**

**Watercourse.**

"Watercourse" means any lake, river, stream, creek, wash, arroyo, or other body of water or channel having banks and a bed through which waters flow at least periodically. The watercourse



includes the streambed, channel banks, floodway and floodway fringe areas, and areas subject to sheet flooding. (Ord. 2010 FC-1; Ord. 2005 FC-2 § 2 (part), 2005); Ord. 1999 FC-1 § 1 (part), 1999; Ord. 1988 FC-2 Art. 4 (part), 1988)

**16.08.750**

**Watercourse master plan.**

"Watercourse master plan" means a master plan adopted by the District Board that provides uniform but separate rules for watercourses where a higher level of protection is warranted for public safety or to preserve the integrity of the watercourse as provided for in A. R. S. Section 48-3609-01. (Ord. 2005 FC-2 § 2 (part), 2005)

**16.08.760**

**Watershed.**

"Watershed" means the contributing drainage area located upstream of a specific point along a watercourse. (Ord. 1999 FC-1 § 1 (part), 1999; Ord. 1988 FC-2 Art.4 (part), 1988)

**16.08.770**

**Written Finding by the Chief Engineer.**

"Written Finding by the Chief Engineer" means a written determination issued by the Chief Engineer after consideration of technical facts and the provisions of this Title concerning the conditions or denial of a floodplain use permit or a boundary determination of a regulatory floodplain, floodway, erosion hazard area or riparian habitat. (Ord. 2010 FC-1)

**16.08.780**

**Xeroriparian.**

"Xeroriparian" for purposes of this title, means riparian habitat designated as xeroriparian on maps adopted by the Board. These riparian habitats are generally associated with an ephemeral water supply. These communities typically contain plant species also found in upland habitats; however, these plants are typically larger and/or occur at higher densities than adjacent uplands. (Ord. 2005 FC-2 § 2 (part), 2005)

## Chapter 16.12

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### EXEMPTIONS AND NONCONFORMING USES

#### Sections:

**16.12.010 Exemptions from Title 16 regulations.**

**16.12.020 Review of plans-Uses authorized without permit.**

**16.12.030 Use permit required when.**

**16.12.040 Liability for increasing flood hazards.**

**16.12.050 Improvements to nonconforming uses.**

**16.12.060 Discontinuance of nonconforming use.**

#### 16.12.010

##### **Exemptions from Title 16 regulations.**

As specified in A.R.S. Section 48-3609, the provisions of this Title shall not affect or prohibit:

- A. Existing legal uses of property or the right to continuation of such legal uses. However, if nonconforming use of land, building or structure is discontinued for 12 consecutive months; or is destroyed to the extent of 50 percent or more of its value, as determined by a competent appraiser, any further use shall comply with this title;
- B. Reasonable repair or alteration of property for the purposes for which the property was legally used on December 16, 1974, except that any alteration, addition, or repair to a nonconforming building or structure which would result in increasing its flood damage potential by 50 percent or more shall be either flood-proofed or elevated to, at, or above the regulatory flood elevation with written authorization required pursuant to A.R.S. § 49-3613 and Section 16.12.050 of this chapter;
- C. Reasonable repair of structures constructed with the written authorization required by A.R.S. Section 48-3613; and
- D. Facilities constructed or installed pursuant to a certificate of environmental compatibility issued pursuant to Title 40, Chapter 2, Article 6.2, of A.R.S. Section 40-360, et seq. (Ord. 2010 FC-1; Ord. 2005 FC-2 § 2 (part), 2005; Ord. 1999 FC-1 § 1 (part), 1999; Ord. 1988 FC-2 Art. 5 (A), 1988)

#### 16.12.020

##### **Review of plans-Uses authorized without permit.**

As specified in A.R.S. Section 48-3613, before construction of the following, plans are to be presented to the Board for review and comment; however, the following shall not be prohibited and shall not require a floodplain use permit or other written authorization from the Board. Prior to construction, the following may be subject to conditions under the NFIP and the Federal Clean Water Act, sections 401 and 404:

- A. The construction of bridges, culverts, dikes and other structures necessary for the construction of public highways, roads, and streets intersecting or crossing a watercourse;
- B. The construction of storage dams for watering livestock or wildlife; structures on banks of a watercourse to prevent erosion of, or damage to, adjoining land, provided that the structure will not divert, retard, or obstruct the natural channel of the watercourse; or dams for the conservation of flood waters as permitted by Title 45, Chapter 6, of A.R.S. Section 45-1201, et seq.;

- C. Construction of tailing dams and waste-disposal areas used in connection with mining and metallurgical operations. This subsection does not exempt those sand and gravel operations that will divert, retard or obstruct the flow of waters in a watercourse from complying with and acquiring authorization from the Board pursuant to the regulations adopted by the Board under this title;
- D. Other construction, if the Board determines that written authorization is unnecessary;
- E. Construction by any District, County, city, town, or other political subdivision exercising powers granted to it under Title 48, Chapter 21, Article 1 of A.R.S. Section 48-3601, et seq.;
- F. The construction by a public agency or political subdivision of streams, waterways, lakes, and other auxiliary facilities in conjunction with development of public parks and recreation facilities;
- G. The construction and erection of poles, towers, foundations, support structures, guy wires, and other facilities related to power transmission, constructed by any utility, whether a public service corporation or a political subdivision. (Ord. 2005 FC-2 § 2 (part), 2005; Ord. 1999 FC-1 § 1 (part), 1999; Ord. 1988 FC-2 Art. 5 (B), 1988)

#### **16.12.030**

##### **Use permit required when.**

This chapter shall not exempt any person from obtaining a floodplain use permit as set forth in this title for any use that diverts retards or obstructs the flow of water and creates a danger or hazard to life or property in the affected area. (Ord. 1999-FC-1 §§ 1 (part) 1999; Ord. 1988-FC2 Art. 5 (C), 1988)

#### **16.12.040**

##### **Liability for increasing flood hazards.**

These exemptions do not preclude any person from liability if that person's actions increase flood hazards to any other person or property. (Ord. 1999 FC-1 § 1 (part), 1999; Ord. 1988 FC-2 Art. 5 (D), 1988)

#### **16.12.050**

##### **Improvements to nonconforming uses.**

- A. Repairs, reconstruction, or improvements to existing nonconforming uses may only be permitted provided that:
  - 1. The cumulative cost of improvements, repairs, or reconstruction is less than 50 percent of the value of the original structure as determined by:
    - a. The latest assessment rolls of the County Assessor before the improvement or repair is started, or
    - b. The market value as determined by estimating the cost to replace the structure in new condition and adjusting that cost figure by the amount of depreciation that has accrued since the structure was constructed. The cost of replacement of the structure shall be based on a square foot cost factor determined by reference to a building cost estimating guide recognized by the building construction industry. The amount of depreciation shall be determined by taking into account the age and physical deterioration of the structure and functional obsolescence as approved by the floodplain administrator, but shall not include economic or other forms of external obsolescence. Use of replacement costs or accrued depreciation factors different from

those contained in recognized building cost estimating guides may be considered only if such factors are included in a report prepared by an independent professional appraiser and supported by a written explanation of the differences.

2. The improvements, repairs, or reconstruction conform to all other provisions of this Title; and the improvements do not:
  - a. Increase water surface elevations if located in floodway areas,
  - b. Encroach greater than the limits provided in Section 16.20.040.A if located in floodway fringe areas,
  - c. Encroach further into an erosion hazard area, or
  - d. Increase the flood damage risk to the structure by either:
    - i. Lowering the finished floor below that of the existing structure, including conversion of non-habitable space into habitable space,
    - ii. Failing to maintain the height of the structure relative to natural grade if on sloped terrain, or
    - iii. Failing to provide an equal level of erosion protection of the existing structure.
- B. Substantial repairs, reconstruction, or improvements that exceed 50 percent of the value of the existing nonconforming use shall only be permitted when the entire structure is brought into compliance with all of the provisions of this Title, including those conditions listed in Section 16.12.050.A;
- C. Any improvements, repairs, or reconstruction including substantial improvements to existing historic structures are permitted provided the improvement or the alteration would not preclude the structure's continued designation as a historic structure.
- D. No person shall repair or alter property in a piecemeal manner so as to avoid the provisions of this section.
- E. For the purpose of this chapter, improvement is considered to occur when the first alteration of any wall, ceiling, floor, or other structural part of the building commences, whether or not that alteration affects the external dimension of the structure.
- F. This section does not apply to any project for improvement of a structure to comply with existing state or local health, sanitary, or safety-code specifications which are solely necessary to assure safe living conditions. (Ord. 2010 FC-1; Ord. 2005 FC-2 § 2 (part), 2005)

#### **16.12.060**

##### **Discontinuance of nonconforming use.**

In the event that a nonconforming use is discontinued for a period of 12 consecutive months, or the structure is deemed non-habitable by an authorized building official, as defined under Title 15.04.040 of the County code, any further use thereof shall be in conformity with the provisions of this title. (Ord. 2005 FC-2 § 2 (part), 2005; Ord. 1999 FC-1 § 1 (part), 1999; Ord. 1988 FC-2 Art. 5 (E), 1988)

## Chapter 16.16

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### FLOODPLAIN MAPS AND BOUNDARIES

#### Sections:

**16.16.010 Boundaries shown on maps.**

**16.16.020 Studies and maps adopted by reference.**

**16.16.030 Areas subject to revision.**

**16.16.040 Engineering studies and map preparation.**

**16.16.050 Undelineated areas - Landowner responsibility.**

**16.16.060 Floodplains - Basic delineation of areas.**

**16.16.070 Floodplains - New delineations required when.**

**16.16.080 Boundary determination questions.**

#### **16.16.010**

##### **Boundaries shown on maps.**

The boundaries of the regulatory floodplains and the floodways for which adequate hydrologic and hydraulic data are available for their delineation on maps shall be shown on maps maintained by the Chief Engineer. (Ord. 2005 FC-2 § 2 (part), 2005; Ord. 1999 FC-1 § 1 (part), 1999; Ord. 1988 FC-2 Art. 6 (A) (part), 1988)

#### **16.16.020**

##### **Studies and maps adopted by reference.**

- A. The federal government through the NFIP has identified certain flood hazard areas in an engineering report entitled, "The Flood Insurance Study for the Unincorporated Areas of Pima County, Arizona," dated February 15, 1983, with accompanying FIRMs and flood boundary and floodway maps. This flood insurance study includes its accompanying maps along with all subsequent amendments and revisions by the federal government to the flood insurance study, including all new flood insurance studies, FIRMs, and flood hazard boundary maps adopted under the NFIP for the unincorporated areas and incorporated cities within the County, all of which are hereby incorporated by reference and declared to be a part of this title.
- B. The delineations of the regulatory floodplains and the floodways shown on these maps shall be the regulatory floodplains and floodways governed by this title for those watercourses studied. The flood insurance study and the accompanying maps are on file in the offices of the District. Amendments and revisions to the flood insurance study and its accompanying maps shall be incorporated in the floodplain maps maintained by the Chief Engineer. (Ord. 2005 FC-2 § 2 (part), 2005; Ord. 1999 FC-1 § 1 (part), 1999; Ord. 1988 FC-2 Art. 6 (A) (1), 1988)

#### **16.16.030**

##### **Areas subject to revision.**

Due to the episodic nature of natural flood events and the resulting changes to hydrologic and hydraulic conditions along the watercourses within the County, base flood peak discharges, flow volumes, and associated regulatory floodplain and erosion hazard areas are subject to continuous revision. At a minimum, base flood values and base flood elevations will meet or exceed the

current values established by the NFIP and reflect historic flood information and general, current, watershed conditions. When flood events occur that alter floodplain and erosion hazard conditions, the Chief Engineer may recommend modifications of floodplain management regulations for adoption by the Board and by FEMA.

The Chief Engineer will maintain current regulatory floodplain and erosion hazard area maps for the Santa Cruz River, Rillito Creek, and other major watercourses as necessary.

- A. The regulatory floodplains and floodways for the Santa Cruz River, Canada del Oro Wash, Tanque Verde Creek, Agua Caliente Wash, Pantano Wash, San Pedro River, Rincon Creek, Cienega Creek, Lee Moore Wash, Brawley Wash, Black Wash, Rillito Creek, and all other major watercourses, shall be based upon flood insurance study flood hazard boundary maps or, where such maps are not available, the best available technical data and floodplain maps, as prepared by the District or by an Arizona registered civil engineer, and approved by the Chief Engineer. As flood repair and flood control improvements are constructed, the Chief Engineer will prepare revised floodplain maps for the purpose of regulation.
- B. All watersheds that generate flood peak discharges exceeding 5,000 cfs for the base flood discharge shall have their flood peak discharges listed by the Chief Engineer. These discharges will be amended, if necessary, as revised base flood discharge estimates become available. (Ord. 2010 FC-1; Ord. 2005 FC-2 § 2 (part), 2005; Ord. 1999 FC-1 § 1 (part), 1999; Ord. 1988 FC-2 Art. 6 (A) (2), 1988)

#### **16.16.040**

##### **Engineering studies and map preparation.**

Engineering studies showing the regulatory floodplain and erosion hazard areas may be prepared under the direction of the Chief Engineer. Upon approval by the Chief Engineer, these maps shall represent the regulatory floodplain and erosion hazard areas governed by this title. (Ord. 2005 FC-2 § 2 (part), 2005; Ord. 1999 FC-1 § 1 (part), 1999; Ord. 1988 FC-2 Art. 6 (A) (6), 1988)

#### **16.16.050**

##### **Undelineated areas - Landowner responsibility.**

In those areas where the regulatory floodplain and erosion hazard areas are not delineated pursuant to sections 16.16.020 and 16.16.030 of this chapter, and upon request for a County permit, the property owner is responsible for:

- A. Obtaining and providing accurate information on site conditions including but not limited to topography, drainage features and floodplain conditions as part of the permit process.
- B. As part of the permit process, additional information and engineering data may be required of the property owner.
- C. The Chief Engineer may require the land owner to establish the regulatory floodplain and floodway limits through a hydrologic and hydraulic study prepared and sealed by an Arizona registered civil engineer.
- D. For the regulatory flood in approximate A Zones, as designated on FIRMs, delineation and certification by an Arizona registered civil engineer of the base flood elevation shall be required for all new subdivisions and other proposed developments greater in size than 50 lots or 5 acres, whichever is less, as required under Title 44 of the Code of Federal Regulations (44CFR 60.3(b)). (Ord. 2010 FC-1; Ord. 2005 FC-2 § 2 (part), 2005; Ord. 1999 FC-1 § 1 (part), 1999; Ord. 1988 FC-2 Art. 6 (A) (3), 1988)

**16.16.060**

**Floodplains - Basic delineation of areas.**

In those areas where a hydrologic and hydraulic study has been prepared by an Arizona registered civil engineer that delineates the regulatory floodplains, floodway, and erosion hazard areas, and has been approved by the Chief Engineer, then the delineation of those boundaries shown within the study shall be the regulatory floodplain, floodway, and erosion hazard areas governed by this title. The new delineations and reports shall be prepared in conformance with the requirements of FEMA, the Director of Water Resources, and this title. (Ord. 2010 FC-1; Ord. 2005 FC-2 § 2 (part), 2005; Ord. 1999 FC-1 § 1 (part), 1999; Ord. 1988 FC-2 Art. 6 (A) (4), 1988)

**16.16.070**

**Floodplains - New delineations required when.**

- A. Any person or agency responsible for the construction of any improvement, public or private, which changes the configuration of the delineated floodplain, flow conditions, or base flood elevations, shall provide to the District, and all governing jurisdictions affected by the project, new delineations of floodplain conditions within 120 calendar days after completion of construction.
- B. Where FEMA has adopted floodplain delineations, base flood elevations, floodways and other regulatory data as contained in the NFIP flood insurance study, the property owner or agency responsible for the construction of improvements that may modify the floodplain information or flow conditions shall provide to the District for review and approval:
  1. A Conditional Letter of Map Revision (CLOMR) prior to construction unless waived by the Chief Engineer. The proposed floodplain delineations, or modifications to existing delineations, shall be in accordance with the criteria adopted by FEMA, the Director of ADWR and this title. The CLOMR shall contain all reports and documentation as required by the NFIP including:
    - a. A hydraulic analysis and proposed delineation of all regulatory floodplains and water surface elevations for the proposed improvement.
    - b. Improvement plans and specifications as necessary for construction.
    - c. For subdivisions, the CLOMR must be approved by the District and submitted to FEMA prior to recording of the final plat, or in the case of development plans, prior to approval.
  2. A Letter of Map Revision (LOMR) including all required documents and associated new technical data within 120 calendar days after construction is complete. The LOMR information shall contain all reports and documentation as required by the NFIP including:
    - a. A new delineation of all regulatory floodplains affected by the improvements.
    - b. As-built plans.
    - c. All documents, plans, and reports shall be prepared in conformance with the requirements of FEMA, the Director of ADWR, and this title.
    - d. For privately constructed improvements for subdivisions or development plans, the property owner shall provide to the District the LOMR documents, with as-built plans of the drainage improvements, and the LOMR must be approved by the District and

- submitted to FEMA prior to the release of assurances for subdivisions or the release of the certificate of occupancy for development plans.
3. All technical data, floodplain delineations, reports, maps, and documents shall be prepared in accordance with criteria establish by the Director of ADWR and in conformance with the requirements of the NFIP. (Ord. 2010 FC-1; Ord. 2005 FC-2 § 2 (part), 2005; Ord. 1999 FC-1 § 1 (part), 1999; Ord. 1988 FC-2 Art. 6 (A) (5), 1988)

**16.16.080**

**Boundary determination questions.**

- A. Where a question arises as to the location of any regulatory floodplain, floodway or erosion hazard area, the question shall be decided by the Chief Engineer, whose decision shall be final, except as provided for in Chapter 16.54 of this title. Any person contesting the location of any boundary shall be given a reasonable opportunity to present technical evidence prepared by an Arizona registered civil engineer, if so desired.
- B. Where presently platted or mapped regulatory floodplain and erosion hazard areas differ from previously approved regulatory floodplain and erosion hazard areas, the most recent information shall be used. However, at no time shall the base floodplain limits and elevations be less than those adopted by NFIP. (Ord. 2005 FC-2 § 2 (part), 2005; Ord. 1999 FC-1 § 1 (part), 1999; Ord. 1988 FC-2 Art. 6 (A) (7), (8), 1988)



## Chapter 16.20

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### USE PERMITS-GENERAL PROVISIONS

#### Sections:

- 16.20.010 Floodplain use permit-Required when.**
- 16.20.015 Floodplain use permit – Exemptions.**
- 16.20.020 Permit-Information requirements.**
- 16.20.030 Permit-Issuance conditions-Notices of development.**
- 16.20.040 Permit-Specific conditions authorized.**
- 16.20.050 Permit-Denial conditions.**
- 16.20.060 Permit-Revocation.**
- 16.20.070 Certification of elevation.**

#### **16.20.010**

##### **Floodplain use permit - Required when.**

- A. A floodplain use permit shall be obtained for any new structure, new manufactured home, replacement of an existing manufactured home or travel trailer, a change of use of any portion of an existing structure, substantial improvements or other improvements to a structure or manufactured home where the value of material and labor exceeds \$7,500, or any other development upon any land located within:
  - 1. FEMA designated Special Flood Hazard Areas;
  - 2. All other regulatory floodplains as described in chapters 16.08, 16.24 and 16.26;
  - 3. Riparian habitat areas as described in Chapter 16.30;
  - 4. Erosion hazard areas as described in Chapter 16.28 of this title.
- B. It shall be unlawful for such activities to take place without first applying for and obtaining a floodplain use permit from the Chief Engineer and thereafter complying with all conditions of the floodplain use permit and all provisions of this Title. (Ord. 2010 FC-1)

#### **16.20.015 Floodplain use permit - Exemptions.**

- A. A floodplain use permit shall not be required for any structure that is less than 200 square feet, or for the repair or alteration of an existing structure for which the value of the materials and labor thereon does not exceed \$7,500 provided that the improvements:
  - 1. Do not obstruct, divert, or retard the flow of flood water,
  - 2. Do not disturb or remove riparian habitat as regulated under this Title, and
  - 3. Comply with all other provisions of this Title including requirements for flood venting and for anchoring to prevent lateral movement.
- B. Exempt structures that are found to be constructed in violation of this Title may require a permit in order to bring the structure into compliance.
- C. For the purpose of determining the value of any such repairs or alterations, the normal retail value of materials and the reasonable value of the labor performed shall be used. Repairs or alterations shall not be done in a piecemeal fashion for the purpose of avoiding applying for a permit when the total cost of said work is in excess of \$7,500. (Ord. 2010 FC-1; Ord. 2005 FC-2 § 2 (part), 2005; Ord. 1999 FC-1 §§ 1 (part) 1999; Ord. 1988 FC-2 Art. 7 (A) (1), 1988)

#### **16.20.020**

**Permit - Information requirements.**

- A. Upon receiving an application for a floodplain use permit, the Chief Engineer may require, where applicable, the applicant to submit plans, drawn to a standard engineering scale, providing the following information at a minimum:
1. The property location, dimensions, and elevation of the lot,
  2. Existing or proposed structure(s), manufactured home(s), or improvements,
  3. Area to be graded, fill pads and elevations of same,
  4. Any fill, storage of materials, walls, fences, or other development that may obstruct, divert or retard flow,
  5. Any flood proofing measures and specifications,
  6. The relationship of all the above improvements and developments to the location of the watercourse, regulatory floodplain, floodway, riparian habitat, and erosion hazard area boundaries, and
  7. The base flood elevation and proposed elevation of the lowest floor and the method of elevation. All elevations must reference an established datum or base elevation.
- B. For a floodplain use permit associated with a subdivision plat or development plan, the following must be provided with the permit application:
1. A copy of the approved grading plan, or
  2. Lot and building sketch including:
    - a. The existing and finished grade of the area to be graded based on spot elevations or 2-foot contour interval maps. It is also a requirement that the finished pad grade be surveyed and the results of the survey be sealed by an Arizona registered land surveyor;
    - b. The extent of graded areas, shaded and labeled "graded area," and, a depiction of where structures are to be constructed;
    - c. The existing grade at the primary building corners, and the proposed finished floor elevations;
    - d. The location of proposed erosion or drainage mitigation measures, such as rock armoring a building pad or retaining walls to support steep-sloping soils;
    - e. The exterior boundaries of the site; and
    - f. Where applicable, any structural measures for flood protection, bank stabilization, erosion and drainage control measures.
- C. Where special circumstances necessitate more detailed information, the applicant shall furnish any or all of the following, as is deemed necessary by the Chief Engineer, for the evaluation of the effects of the proposed use upon flood flows, riparian habitat, erosion, and other factors necessary in order to render a decision on the suitability of the proposed use:
1. One or more cross-sections showing the existing watercourse, elevation of land areas adjoining each side of the channel, cross-sectional areas to be occupied by the proposed development, and high-water information (if available);
  2. Plan (surface view) showing elevations or contours of the ground; pertinent structures, fill, or storage elevations; size, location and spatial arrangement of all proposed and existing structures and channel banks on the site; location and elevation of streets, water supply, sanitary facilities; photographs showing existing land-uses and upstream and downstream vegetation types, and other pertinent information;
  3. Profile showing the elevation and slope of the bottom of the channel or flow line of the stream or watercourse;

4. Specifications for building construction and materials, flood proofing, filling, erosion protection, excavating, channel improvements, storage of materials, water supply, and sanitary and waste facilities;
  5. An engineering study prepared by an Arizona registered civil engineer outlining the effects the development will have on the flow of water through the area being developed and the surrounding areas. This study will be for the purpose of evaluating possible flood hazards and shall, where necessary, include consideration of the effects of the development on flood heights, water velocities, direction of flow, sedimentation and/or erosion, volume of flows, channel shape and size, type of channel banks and other items that may be pertinent, and the resultant effects on structures, land, banks, etc., for the adjacent regulatory floodplain and the surrounding area;
  6. Riparian habitat information as required under Chapter 16.30 of this Title; and
  7. Any other information deemed necessary for review of public safety and floodplain management requirements by the Chief Engineer.
- D. The Chief Engineer shall review the proposed development to verify that the applicant has requested permits from any other governmental agencies which are required by federal or state law to review or approve the proposed development including any permits required by the Federal Water Pollution Control Act, Amendments of 1972, 33 U.S.C. 1134. (Ord. 2010 FC-1; Ord. 2005 FC-2 § 2 (part), 2005; Ord. 1999 FC-1 § 1 (part), 1999; Ord. 1988 FC-2 Art. 7 (C), 1988)

#### **16.20.030**

##### **Permit Issuance conditions - Notices of development.**

- A. It shall be the duty of the Chief Engineer, through the Floodplain Administrator, to issue any floodplain use permit required by this chapter. The Chief Engineer may request and shall receive the assistance and cooperation of all departments, agencies, officials, and public employees of the County in the enforcement of this Title. No license, permit or other similar approval for any development that would be in conflict with the provisions of this Title shall be issued by any department, official, or employee of the County; and any such license, permit, or approval, if issued in conflict with the provisions of this title, shall be null and void.
- B. In accordance with A.R.S. Section 48-3610, the District shall advise any city or town that has assumed, in writing, jurisdiction over the District's regulatory floodplains, and provide a copy of any development plan or any application that has been filed with the District for a floodplain use permit or a variance to develop land in a regulatory floodplain, floodway, or erosion hazard area within one mile of the boundary between the District's area of jurisdiction and the jurisdiction of that city or town. The District shall also advise any city or town in writing and provide a copy of any development plan of any major development proposed within a regulatory floodplain, floodway, or erosion hazard area within the County that could affect regulatory floodplains, floodways, erosion hazard areas or watercourses within that city's or town's area of jurisdiction. Written notice and a copy of the plan of development shall be sent to any adjacent jurisdiction no later than 3 working days after having been received by the District.
- C. Whenever a watercourse, which is regulated by FEMA and ADWR, is to be altered or relocated the Chief Engineer shall:

1. Notify adjacent communities and ADWR prior to such alteration or relocation of a watercourse, and submit evidence of such notification to FEMA; and
2. Require as a condition of the floodplain use permit that the flood carrying capacity of the altered or relocated portion of said watercourse be maintained. (Ord. 2010 FC-1; Ord. 2005 FC-2 § 2 (part), 2005; Ord. 1999 FC-1 § 1 (part), 1999; Ord. 1988 FC-2 Art. 7 (B), 1988)

#### **16.20.040**

##### **Permit-Specific conditions authorized.**

- A. Any floodplain use permit may be subject to conditions or restrictions designed to reduce or mitigate the potential danger or hazard to life or property resulting from development within the regulatory floodplain, floodway, or erosion hazard areas. The applicant may be required to execute deed restrictions running with the land or be required to post performance bonds, assurances or such other security as may be appropriate and necessary to assure that performance of the conditions or restrictions of the permit are satisfied and to ensure that the requirements of this Title and the NFIP have been satisfied, including the following:
  1. All other required state and federal permits have been, or will be, obtained;
  2. The site is reasonably safe from flooding; and
  3. The proposed development does not adversely affect the flow carrying capacity of the watercourse and floodplain by demonstrating that:
    - a. The individual development will not increase the flow depth by more than 0.1 foot at any property line,
    - b. The individual development will not increase the flow velocity by more than 1 fps or 10%, whichever is less, as measured at any property line, except when it can be demonstrated that the post-development velocity is not an erosive velocity. The velocity subject to this standard may be the overbank velocity, the channel velocity, or both, as appropriate based on the type of development and its location within the floodplain.
    - c. Encroachments that exceed these limits may be approved by the Chief Engineer on a case-by-case basis based on engineering analyses and a determination that the encroachment will not cause any adverse impact to adjacent properties, and
    - d. The cumulative effect of the proposed development, when combined with all other existing and anticipated development, will not increase the water surface elevation of the base flood more than one foot at any point.
- B. Examples of conditions that may be imposed include, but are not limited to, the following:
  1. Relocation of development and structures to areas subject to no or less severe flooding or erosion hazards;
  2. Elevation of structures and associated service facilities to the regulatory flood elevation;
  3. Erosion protection;
  4. Use of flood resistant materials;
  5. The delineation of maximum encroachment limits;
  6. The submittal of "As-Built" plans, prepared by an Arizona registered civil engineer, that demonstrate that improvements were constructed in conformance with this Title;
  7. Modification of waste disposal and water supply-facilities;
  8. Limitations on periods of use and hours of operation;
  9. Institution of operational controls;

10. Requirements for construction of channel modifications, dikes, levees, or other protective measures;
11. Indemnification agreements whereby the applicant agrees to hold the County, the District and the Board, as well as their officers, employees, and agents, harmless; and defend them from any and all claims for damages now and in the future relating to the use of the property sought to be developed by reason of flooding, flowage, erosion, or damage caused by water, whether surface flow, flood, or rainfall;
12. Flood proofing measures for nonresidential structures, such as the following, which shall be designed to be consistent with the regulatory flood elevation for the particular area, flood velocities, durations, rate of rise, hydrostatic and hydrodynamic forces, and other factors associated with the base flood. The Chief Engineer may require that the applicant submit a plan or document, sealed by an Arizona registered civil engineer, structural engineer, or architect, that the flood proofing measures are consistent with the regulatory flood elevation and associated flood factors for the particular area. Examples of flood proofing measures that may be required include, but are not limited to:
  - a. Anchorage to resist flotation and lateral movement;
  - b. Installation of watertight doors, bulkheads, and shutters;
  - c. Reinforcement of walls to resist water pressures;
  - d. Use of paints, membranes or mortars to reduce seepage of water through walls;
  - e. Addition of mass or weight to structures to resist flotation;
  - f. Installation of pumps to lower water levels in structures;
  - g. Construction of water supply and waste treatment systems so as to prevent the entrance of flood waters;
  - h. Pumping facilities to relieve subsurface external foundation wall and basement floor pressures;
  - i. Construction designed to resist rupture or collapse caused by water pressure or floating debris;
  - j. Cutoff valves on sewer lines, or the elimination of gravity flow basement drains;
  - k. Elevation of structures or service facilities to the regulatory flood elevation;
  - l. Bank protection, armor plating or other erosion control measures on any proposed fill; and
  - m. Electrical, heating, ventilation, plumbing, air conditioning equipment, and other service facilities designed and/or located to prevent water entry or accumulation.
- C. An applicant appealing any permitting conditions, interpretation or administration of this title, permit denial or requesting a waiver to specific permit conditions or to engineering standards shall first appeal in writing to the Chief Engineer as provided in 16.56.010. (Ord. 2010 FC-1; Ord. 2005 FC-2 § 2 (part), 2005; Ord. 1999 FC-1 § 1 (part), 1999; Ord. 1988 FC-2 Art. 7 (E), 1988)

#### **16.20.050**

##### **Permit - Denial conditions.**

- A. No permit shall be issued for any development that is not in conformance with this title, or any other provision of law relating to such development. A floodplain use permit shall be denied if the proposed development constitutes a danger or hazard to life or property.
- B. In making such a determination, the Chief Engineer shall consider the following factors:

1. The danger to life, person, or property due to flood heights, velocities, or redirection of flow caused by the development;
  2. The danger that materials may be swept onto other lands;
  3. The proposed water supply and sanitation systems of any development and the ability of these systems to prevent disease, contamination, and unsanitary conditions, if they should become flooded or eroded;
  4. The susceptibility of the proposed development or its contents to flood or erosion damage, and the effect of such damage on the individual owners;
  5. The availability of alternative locations for the proposed use on the same property, which are in areas least likely to be subject to flooding or erosion;
  6. The compatibility of the proposed use with existing regulatory floodplain uses and with floodplain management programs anticipated in the foreseeable future;
  7. The relationship of the proposed use to any comprehensive plan and floodplain management program for the area;
  8. The ability of conventional and emergency vehicles to access the property in times of flooding;
  9. The expected heights, velocity, duration, rate of rise, and sediment transport of the flood waters expected at the site under both existing and proposed conditions;
  10. Where disturbance to riparian habitat can be avoided, by the availability of alternative locations for the proposed use on the same property, as required under Chapter 16.30 of this Title; and
  11. Such other factors that may be relevant to the purposes of this Title.
- C. Any applicant aggrieved by the written finding of the Chief Engineer to deny a permit may appeal that decision pursuant to Chapter 16.56 of this Title. (Ord. 2010 FC-1; Ord. 2005 FC-2 § 2 (part), 2005; Ord. 1999 FC-1 § 1 (part), 1999; Ord. 1988 FC-2 Art. 7 (D), 1988)

#### **16.20.060**

##### **Permit - Revocation.**

Failure to comply with any term or condition of a floodplain use permit or provision of this Title shall be grounds for revoking the floodplain use permit.

- A. When the Chief Engineer determines the permittee has not complied with any term or condition of a floodplain use permit, the Chief Engineer may issue a written stop work order provisionally revoking the floodplain use permit pending a hearing. The written stop work order shall be delivered by registered mail or personal delivery to the permittee citing the reasons for revocation.
- B. The person holding the floodplain use permit may request a hearing before the Chief Engineer where the merits of and reasons for revoking the permit are heard within 10 working days from the receipt of notice or personal delivery.
- C. If no request for a hearing is made within 15 working days from the receipt of notice or personal delivery, the permit shall be considered revoked and the Chief Engineer shall issue a written finding to revoke the permit.
- D. If a hearing is held, after considering the issues and facts presented during the hearing, the Chief Engineer shall issue a written finding to either reinstate or revoke the permit.
- E. The applicant may appeal the written finding of the Chief Engineer to revoke a permit by requesting a hearing before the Board in accordance with Chapter 16.56 of this Title. (Ord.

2010 FC-1; Ord. 2005 FC-2 § 2 (part), 2005; Ord. 1999 FC-1 § 1 (part), 1999; Ord. 1988 FC-2 Art. 7 (G), 1988)

**16.20.070**

**Certification of elevation.**

Certification of elevation shall be required to demonstrate compliance with regulatory flood elevation requirements for structures, manufactured homes, service facilities, or other improvements.

- A. Prior to the pouring of the first slab for the finished floor, a certification of elevation of the form representing the top of slab shall be provided to the Chief Engineer.
- B. Prior to final inspection, the applicant shall submit to the Chief Engineer a certification of elevation on a form approved by the District including but not limited to:
  1. Elevation of the finished floor, and in the case of manufactured housing, elevation of the lowest structural member,
  2. Elevation of the highest and lowest finished and natural grades adjacent to the structure,
  3. Elevation of service facilities,
  4. Flood venting information, if applicable, and
  5. Other information as required on the certification of elevation and to demonstrate compliance with the provisions of the floodplain use permit.
- C. Certifications of elevation shall be prepared and sealed by an Arizona registered land surveyor or Arizona registered civil engineer.
- D. Such certifications of elevation shall be maintained by the Floodplain Administrator, as required by the Arizona Secretary of State, in the Floodplain Management Division of the District. (Ord. 2010 FC-1; Ord. 2005 FC-2 § 2 (part), 2005; Ord. 1999 FC-1 § 1 (part), 1999; Ord. 1988 FC-2 Art. 7 (J), 1988)

## Chapter 16.24

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### FLOODWAY REQUIREMENTS

#### Sections:

**16.24.010 Uses allowed in the floodway.**

**16.24.020 Prohibited uses in a floodway.**

**16.24.030 Flood control structures.**

**16.24.040 Public right-of-way.**

**16.24.050 Floodway appeals and variances.**

#### **16.24.010**

##### **Uses allowed in the floodway.**

Except as provided for in this chapter, no other use shall be allowed in any floodway. The following open space uses shall be permitted within a floodway to the extent that they are not prohibited by any provision of this title or any other title, law, or regulation; and provided they do not require fill, excavation, structures, or the storage of materials or equipment:

- A. Agricultural uses including general farming, pasture, grazing, outdoor plant nurseries, horticulture, truck farming, sod farming, and wild crop harvesting;
- B. Industrial-commercial uses such as loading areas, airport landing strips, parking areas;
- C. Private and public recreational uses including golf courses, tennis courts, driving ranges, archery ranges, picnic grounds, parks, wildlife and nature preserves, game farms, shooting preserves, target ranges, trap and skeet ranges, hunting and fishing areas, hiking and horseback riding trails; and
- D. Accessory residential uses, including lawns, gardens, parking areas and play areas. (Ord. 2005 FC-2 § 2 (part), 2005; Ord. 1999 FC-1 § 1 (part), 1999; Ord. 1988 FC-2 Art. 8 (A) 1988)

#### **16.24.020**

##### **Prohibited uses in a floodway.**

No use shall be allowed which:

- A. Acting alone or in combination with existing or future uses creates a danger or hazard to life or property. In determining whether a use creates a danger or hazard to life or property, the Chief Engineer may consider the hazard of the proposed use and impacts to adjacent structures.
- B. Diverts, retards, or obstructs the flow of regulatory flood waters;
- C. Increases the base flood elevations, as certified by an Arizona registered civil engineer;
- D. Increases erosion potential upstream and/or downstream;
- E. Places a waste disposal-system wholly or partially in a floodway; or
- F. Requires the use of fill, excavation, structures or storage of materials or equipment for a period greater than 180 calendar days. (Ord. 2010 FC-1; Ord. 2005 FC-2 § 2 (part), 2005; Ord. 1999 FC-1 § 1 (part), 1999; Ord. 1988 FC-2 Art. 8 (C), 1988)

#### **16.24.030**

##### **Flood control structures.**



Flood control structures designed to protect life or property from the dangers or hazards of flood waters are permitted provided all other provisions of this title are met. (Ord. 1999 FC-1 § 1 (part), 1999; Ord. 1988 FC-2 Art. 8 (D), 1988)

#### **16.24.040**

##### **Public right-of-way.**

Any proposed development, disturbance, or grading within public right-of-way that is located in the floodway shall require a floodplain use permit pursuant to this title, except as exempted under Chapter 16.12. All provisions of this title shall apply to such activities. No uses shall be permitted that the Chief Engineer determines would adversely affect the function of the public right-of-way, floodplain, or riparian habitat. (Ord. 2005 FC-2 § 2 (part), 2005)

#### **16.24.050**

##### **Floodway appeals and variances.**

- A. Appeals. Any applicant requesting an appeal of a written finding by the Chief Engineer to deny a permit based on a floodway delineation may appeal to the Board as provided in Chapter 16.56 of this Title.
- B. Variances. The Chief Engineer shall schedule a hearing before the Board on the request for a variance as provided in Chapter 16.56 of this Title.
  1. Variances within federally mapped floodways will be in accordance with NFIP and Title 44, Part 60, Section 60 of the Code of Federal Regulations.
  2. In accordance with A.R.S. Section 48-3610, whenever a development plan or application has been filed with the District that requires a variance to this Title and is within 1 mile of the boundary between the District's area of jurisdiction and the jurisdiction of a city or town, then the District shall advise the jurisdiction in writing. (Ord. 2010 FC-1; Ord. 2005 FC-2 § 2 (part), 2005)

## Chapter 16.26

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### FLOODWAY FRINGE AREA REQUIREMENTS

#### Sections:

- 16.26.010 Uses allowed.**
- 16.26.020 Conditions applicable to all uses.**
- 16.26.030 Elevations and flood proofing.**
- 16.26.040 Fill and fill materials.**
- 16.26.050 Structures-Construction restrictions.**
- 16.26.055 Critical facilities.**
- 16.26.060 Storage of materials and equipment.**
- 16.26.070 Utilities and sanitary facilities.**
- 16.26.080 Public right-of-way.**
- 16.26.090 Floodway fringe appeals and variances.**

#### **16.26.010**

##### **Uses allowed.**

Any use, to the extent not prohibited by this title or any other title or law, is allowed within the floodway fringe area, (Ord. 1999 FC-1 § 1 (part), 1999; Ord. 1988 FC-2 Art. 9 (A), 1988)

#### **16.26.020**

##### **Conditions applicable to all uses.**

- A. The following general conditions, as set out in Sections 16.26.030 through 16.26.070, shall apply to all uses within the floodway fringe area and, for purposes of this chapter, other regulatory floodplain areas where a floodway has not been defined or delineated including but not limited to A, AO, AE, AH, A1-30 and Shaded X Zones as provided on adopted FIRMs, or those regulatory floodplain areas defined by this title.
- B. No development, storage of materials or equipment, or other uses shall be permitted which, acting alone or in combination with existing or future uses, create a danger or hazard to life or property.
- C. No encroachment may increase the base flood level more than one tenth (0.1) of a foot or increase flood velocities more than 10% or 1 fps, whichever is less, at any property line, except when it can be demonstrated that the post-development velocity is not an erosive velocity. The velocity subject to this standard may be the overbank velocity, the channel velocity, or both, as appropriate based on the type of development and its location within the floodplain.
- D. Consideration of the effects of a proposed use or development shall be based on the assumption that there will be an equal degree of encroachment extending for a significant reach on both sides of the watercourse. (Ord. 2010 FC-1; Ord. 2005 FC-2 § 2 (part), 2005; Ord. 1999 FC-1 § 1 (part), 1999; Ord. 1988 FC-2 Art. 9 (B) (part), 1988)

#### **16.26.030**

##### **Elevation and flood proofing.**

- A. New construction and substantial improvement of any habitable structure, either residential or nonresidential, shall have the lowest floor, including the basement, or in the case of

manufactured housing the lowest structural member, elevated at or above the regulatory flood elevation, which is one foot above the base flood elevation. Certification of elevation shall be required pursuant to Section 16.20.070.

- B. New construction and substantial improvement of any habitable structure, either residential or nonresidential, in a numbered AO Zone (AO1, AO2, AO3, etc.) shall have the lowest floor, including basement, or in the case of manufactured housing the lowest structural member, elevated above highest adjacent natural grade at least one foot higher than the depth designated by the numbered zone on the FIRM, or at least two feet above highest adjacent natural grade if no depth number is specified. Certification of elevation shall be required pursuant to 16.20.070.
- C. In sheet flooding or ponding areas, such as Zones AO and AH, require drainage paths around structures on slopes to guide water away from structures.
- D. Non-residential, non-habitable structures shall either be elevated in conformance with subsections A. and B., or together with attendant utility and sanitary facilities:
  - 1. Be flood proofed so that below the regulatory flood elevation the structure is watertight with walls substantially impermeable to the passage of water;
  - 2. Have structural components capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy; and
  - 3. Be certified by an Arizona registered engineer or architect that the standards of this subsection are satisfied. Such certifications shall be provided to the Floodplain Administrator on a form approved by the District.
- E. All new construction and substantial improvements with fully enclosed areas below the regulatory flood elevation that are useable solely for parking of vehicles, building access or limited storage in an area other than a basement and which are subject to flooding shall be constructed of flood resistant materials to the regulatory flood elevation, have all service facilities elevated at or above the regulatory flood elevation, and be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of flood waters. Designs for meeting this requirement must either be certified by an Arizona registered civil engineer or architect or meet or exceed the following minimum criteria:
  - 1. A minimum of two openings on different sides of each enclosed area that have a total net area of not less than one square inch for every square foot of enclosed area subject to flooding shall be provided;
  - 2. The bottom of all openings shall be no higher than one foot above grade; and
  - 3. Openings may be equipped with screens, louvers, valves or other coverings or devices provided that they permit the automatic entry and exit of flood waters.
- F. Manufactured homes shall meet the above standards and also the standards in 16.34. (Ord. 2010 FC-1; Ord. 2005 FC-2 § 2 (part), 2005)

#### **16.26.040**

##### **Fill and fill materials.**

- A. Any fill proposed to be deposited in the floodway fringe area must be shown to have some beneficial purpose, and the amount thereof shall not be greater than is needed to achieve that purpose, as demonstrated by a plan submitted by the owner showing the uses to which the filled land will be put and the final dimensions of the proposed fill or other materials.
- B. Such fill or other materials shall be protected against erosion by a method approved by the District including riprap, vegetative cover, bulk-heading, or other approved methods, unless a

study, prepared by an Arizona registered civil engineer, demonstrates that erosion protection is not required.

- C. If the permittee proposes to remove a structure or a portion of the property from a FEMA floodplain through the LOMR-F process, the permittee shall provide evidence the fill was adequately compacted by submitting the results of compaction testing certified by an Arizona registered engineer. (Ord. 2010 FC-1; Ord. 2005 FC-2 § 2 (part), 2005; Ord. 1999 FC-1 § 1 (part), 1999; Ord. 1988 FC-2 Art. 9 (B) (1), 1988)

#### **16.26.050**

##### **Structures - Construction restrictions.**

- A. Structures, residential and nonresidential, shall be constructed so as to offer the minimum obstruction to the flow of flood waters. Wherever possible, structures shall be constructed with the same alignment as the direction of flood flow; and so far as practicable, shall be placed approximately on the same alignment as those of adjoining structures.
- B. All structures, residential and nonresidential, shall be firmly anchored to prevent flotation, collapse or lateral movement which might otherwise result in damage to other structures or restriction of bridge openings and other narrow sections of the watercourse. Anchoring for manufactured housing will be in conformance with state standards as established by the Office of Manufactured Housing under A. R. S. Title 41, Chapter 16, Article 2.
- C. Service facilities such as electrical and heating equipment shall be constructed at or above the regulatory flood elevation for the particular area, or, in the case of nonresidential structures, be adequately flood proofed.
- D. Any structure designed or utilized for human habitation, whether residential or nonresidential, that is used on a full-time or part-time basis shall have the lowest floor elevated at or above the regulatory flood elevation. Certification of elevation is required pursuant to Section 16.20.070.
- E. Non-habitable, enclosed areas within the regulatory floodplain and below the regulatory flood elevation shall be designed in accordance with 16.26.030.E.
- F. If fill is used to elevate any structure, the minimum elevation of the fill shall be at or above the base flood elevation, shall extend at such elevation for a distance of at least 10 feet beyond the outside limit of the structure, and shall be adequately protected from erosion pursuant to Section 16.26.040.B unless a study or analysis prepared by an Arizona registered civil engineer demonstrates that a lesser distance or the absence of erosion protection is acceptable.
- G. Structures, residential or nonresidential, designed or utilized for human habitation, whether on a full-time or part-time basis, and which will be completely surrounded by floodwaters during the base flood shall only be permitted when:
  - 1. The product of the flow depth (d), in feet, times the square of the flow velocity (v), in feet per second, of the flood waters of the base flood does not exceed the numerical value of 18 for a period in excess of 30 minutes at any point adjacent to the structure and associated improvements, including fill, and
  - 2. The flood waters of the base flood do not exceed 3 feet in depth at any point adjacent to the structure and associated improvements, including fill.
  - 3. For purposes of this section, depth and velocity shall be post development values and shall be calculated as follows:

- a. When flow distribution information is available, it shall be used to provide the most representative values for flood depth and velocity.
- b. When approximate information is available, average depths and velocities may be used. (Ord. 2010 FC-1; Ord. 2005 FC-2 § 2 (part), 2005; 1998 FC-1 Section 2, 1998; Ord.1988 FC-2 Art. 9 (B) (2), 1988)

#### **16.26.055**

##### **Critical facilities.**

- A. Critical facility means any of the following:
  1. A structure or facility that produces, uses or stores highly volatile, flammable, explosive, toxic, and/or water reactive materials;
  2. Hospitals, emergency medical facilities, nursing homes and/or housing facilities likely to have occupants who may not be sufficiently mobile to avoid injury or death during a flood;
  3. Essential emergency response facilities, such as police stations, fire stations, emergency shelters and/or operation centers that are needed for public safety and/or flood response activities before, during and after a flood; and
  4. Public and private utilities facilities, such as, but not limited to power, water and wastewater treatment, and/or communications, that are vital to maintaining or restoring normal services to flooded areas before, during and after a flood.
- B. Applicability. The critical facility requirements shall only apply along watercourses which have FEMA designated floodplains. Where the 0.2 percent chance floodplain has not been established, the Chief Engineer may require that this floodplain be delineated by the applicant.
- C. Critical facilities shall be located outside of the 0.2 percent annual chance (500-year) floodplain, if possible. If a critical facility must be located in a 0.2 percent annual chance (500-year) floodplain, it must be demonstrated that there is either a critical need to locate it within the floodplain, or that there is not a suitable alternative site, as justified by an Arizona registered civil engineer. Any critical facility located within a 0.2 percent annual chance (500-year) floodplain shall be protected from that event. Protection includes, but is not limited to, elevating the lowest floor and all utilities and mechanical services to a minimum of one foot above the base flood or to the 0.2 percent annual chance (500-year) floodplain water surface elevation, whichever is greater, providing elevated access ramps, if appropriate, adequately protecting the facility from both lateral and vertical erosion associated with the 0.2 percent annual chance (500-year) floodplain, providing all weather access during the base flood and developing an emergency response plan.
- D. Existing critical facilities within the 0.2 percent annual chance (500-year) floodplain that propose substantial improvements and/or repairs shall be protected from the 0.2 percent annual chance (500-year) flood event. Protection includes, but is not limited to, elevating or flood proofing the lowest floor and all utilities and mechanical services to a minimum of one foot above the base flood or to the 0.2 percent annual chance (500-year) floodplain water surface elevation, whichever is greater, providing elevated access ramps, if appropriate, adequately protecting the facility from both lateral and vertical erosion associated with the 0.2 percent annual chance (500-year) floodplain, providing all weather access to the base flood and developing an emergency response plan.

**16.26.060**

**Storage of materials and equipment.**

- A. The storage and/or processing of materials that are buoyant, flammable, explosive, hazardous, or that could be injurious to human, animal, or plant life in times of flooding is prohibited.
- B. Storage of other material or equipment may be allowed if it is not subject to major damage by floods and is firmly anchored to prevent flotation or is readily removable from the area within the limited time available after flood warning. (Ord. 2005 FC-2 § 2 (part), 2005; Ord. 1999-FC-1 §§ 1 (part) 1999; Ord. 1988-FC2 Art. 9 (B) (3), 1988)

**16.26.070**

**Utilities and sanitary facilities.**

- A. Water supply, water treatment, and sewage collection and disposal systems built in a regulatory floodplain or erosion hazard area shall be designed to prevent or minimize infiltration of flood waters into these systems and to prevent the discharge of materials from these systems into flood waters.
- B. On-site sanitary waste disposal systems shall be located or designed to avoid impairment to them or contamination from them during flooding.
- C. Other utilities, such as gas pipelines, fuel pipelines, and non-potable waterlines shall be designed and constructed to ensure they are not impaired during the base flood, including the potential for long term scour. (Ord. 2010 FC-1; Ord. 2005 FC-2 § 2 (part), 2005; Ord. 1999 FC-1 § 1 (part), 1999; Ord. 1988 FC-2 Art. 9 (B) (4), 1988)

**16.26.080**

**Public right-of-way.**

Any proposed development, disturbance, or grading within public right-of-way that is located in a floodway fringe shall require a floodplain use permit pursuant to this title. All provisions of this title shall apply to such activities. No uses shall be permitted which the Chief Engineer determines would adversely affect the function of the public right-of-way, floodplain, or riparian habitat. (Ord. 2010 FC-1; Ord. 2005 FC-2 § 2 (part), 2005)

**16.26.090**

**Floodway fringe appeals and variances.**

- A. Appeals. Any applicant requesting an appeal of a written finding of the Chief Engineer regarding the conditions of or denial of a permit or to delineate a floodplain may appeal to the Board as provided for in Chapter 16.56 of this title.
- B. Variance. Any property owner requesting a variance shall request a variance of the Board through the Chief Engineer as provided for in Chapter 16.56 of this title. (Ord. 2010 FC-1; Ord. 2005 FC-2 § 2 (part), 2005)

## Chapter 16.28

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### **EROSION HAZARD AREAS AND BUILDING SETBACKS**

#### **Sections:**

**16.28.010 Building setback requirements.**

**16.28.020 Setbacks near major watercourses.**

**16.28.030 Setbacks from minor washes.**

**16.28.040 Appeals and variances.**

#### **16.28.010**

##### **Building setback requirements.**

In erosion hazard areas where watercourses are subject to flow-related erosion hazards, building setbacks are required from the primary channel or channels as set forth in Sections 16.28.020 and 16.28.030. (Ord. 2005 FC-2 § 2 (part), 2005; Ord. 1999 FC-1 § 1 (part), 1999; Ord. 1988 FC-2 Art. 12 (part), 1988)

#### **16.28.020**

##### **Setbacks near major watercourses.**

For major watercourses with base flood peak discharges of 2,000 cfs or greater, the following building setbacks shall be required where approved bank protection is not provided:

- A. Along the following major natural watercourses, where no unusual conditions exist, a minimum (default) building setback shall be provided at the time of the development, unless an alternative setback is determined by an engineering analysis, prepared by an Arizona registered civil engineer, based on ADWR standards or other applicable engineering methods, which establishes acceptable safe limits for the development and is approved by the Chief Engineer.
- B. Along natural channels where no unusual conditions exist (such as a pronounced channel curvature), the default building setback for erosion hazard protection shall be:
  1. A distance of 500 feet along the Santa Cruz River, Rillito Creek, Pantano Wash, Tanque Verde Creek, San Pedro River, and the Canada del Oro Wash;
  2. A distance of 250 feet along major watercourses with base flood peak discharges greater than 10,000 cfs;
  3. A distance of 100 feet along all major watercourses with base flood peak discharges of 10,000 cfs or less, but more than 5,000 cfs; and
  4. A distance of 75 feet along all other major watercourses with base flood peak discharges of 5,000 cfs or less, but more than or equal to 2,000 cfs.
- C. Along major natural watercourses where unusual conditions do exist that may increase or decrease the required erosion hazard setback, building setbacks shall be established on a case-by-case basis by the Chief Engineer using the standard adopted by the ADWR or other applicable engineering methods which establish safe limits for the development. Unusual conditions include but are not limited to historical meandering of the watercourse, large excavation pits, poorly defined or poorly consolidated banks, natural channel armoring, proximity to stabilized structures such as bridges or rock outcrops, and changes in the direction, amount and velocity of the flow of waters within the watercourse.

- D. When determining building setback requirements, the Chief Engineer shall consider the danger to life and property due to existing flood heights or velocities and historical channel meandering.
- E. For constructed channels, structural bank protection to prevent erosion is required for major watercourses with base flood peak discharges of more than 2,000 cfs unless a written waiver of the requirement is granted by the Chief Engineer. A waiver of the requirement for structural bank protection may be granted based on an acceptable engineering study, which has been prepared and sealed by an Arizona registered civil engineer, demonstrating an appropriate building setback for an earthen channel, based on soil and natural flow conditions. (Ord. 2010 FC-1; Ord. 2005 FC-2 § 2 (part), 2005; Ord. 1999 FC-1 § 1 (part), 1999; Ord. 1988 FC-2 Art. 12 (A), 1988).

### **16.28.030**

#### **Setbacks from minor washes.**

- A. For minor natural washes with a base flood peak discharge of less than 2,000 cfs, the following building setbacks shall be required:
  - 1. A distance of 50 feet for watercourses with base flood peak discharges of less than 2,000 cfs, but more than 500 cfs;
  - 2. A distance of 25 feet for watercourses with base flood peak discharges of 500 cfs to 100 cfs;
  - 3. Alternative safe limits for erosion setbacks approved in writing by the Chief Engineer based on an acceptable engineering study prepared and sealed by an Arizona registered civil engineer. However, at no time shall a setback of less than 25 feet from the top of channel bank be permitted in order to provide for reasonable access and stability of nearby structure foundations, except as allowed pursuant to subpart B of this provision.
- B. Along minor natural washes where unusual conditions exist, building setbacks shall be established on a case-by-case basis by the Chief Engineer, using ADWR standards or other applicable engineering methods or an acceptable engineering study is prepared and sealed by an Arizona registered civil engineer and approved by the Chief Engineer. When determining building setback requirements, the Chief Engineer shall consider danger to life and property due to existing flood heights or velocities and historical channel meandering. Unusual conditions include but are not limited to historical meandering of the watercourse, large excavation pits, poorly defined or poorly consolidated banks, natural channel armoring, proximity to stabilized structures such as bridges or rock outcrops, and changes in the direction, amount, and velocity of flow of the waters in the watercourse.
- C. For constructed channels, channel banks are required to be stabilized to prevent erosion along minor watercourses with base flood peak discharges of less than 2,000 cfs, but greater than 500 cfs. Stabilization is required unless a waiver to the requirement is granted by the Chief Engineer based on an engineering study prepared and sealed by an Arizona registered civil engineer which demonstrates an appropriate building setback for an earthen channel, based on soil and natural flow conditions. For constructed channels with a base flood peak discharge of less than 500 cfs, channel stabilization may be required based on engineering analysis and assessment of soil conditions and flow velocities. (Ord. 2010 FC-1; Ord. 2005 FC-2 § 2 (part), 2005; Ord. 1999-FC-1 §§ 1 (part) 1999; Ord. 1988-FC2 Art. 12 (B), 1988)

### **16.28.040**



**Appeals and variances.**

- A. Appeals. Any applicant disputing a written finding of the Chief Engineer denying a permit or delineating an erosion hazard setback may appeal to the Board as provided in Chapter 16.56 of this title.
- B. Variances. Any property owner requesting a variance from the requirements of this Title shall submit a request for a variance to the Board through the Chief Engineer as provided in Chapter 16.56 of this title. (Ord. 2010 FC-1; Ord. 2005 FC-2 § 2 (part), 2005)

## Chapter 16.30

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### WATERCOURSE AND RIPARIAN HABITAT PROTECTION AND MITIGATION REQUIREMENTS

#### Sections:

**16.30.010 Purpose.**

**16.30.020 Description.**

**16.30.030 Applicability.**

**16.30.040 Permits.**

**16.30.050 Mitigation.**

**16.30.060 Review process.**

**16.30.070 Appeals and variances.**

**16.30.080 Riparian habitat maps.**

#### **16.30.010**

##### **Purpose.**

The purpose of this chapter is to promote stable flow and sediment transport conditions, preserve natural floodplain functions, and provide watercourse management by preserving and/or enhancing riparian vegetation and habitat along watercourses and floodplains and to:

- A. Promote benefits provided by riparian habitat resources, including but not limited to, groundwater recharge, natural erosion control and protection of surface-water quality.
- B. Ensure the long-term stability of natural floodplains and survival of the full spectrum of plants and animals that are indigenous to the County by:
  1. Assuring riparian habitat acreage and existing or natural functional values are not diminishing during development;
  2. Promoting continuity of riparian habitat along watercourses;
  3. Providing land-use guidance for avoiding, minimizing and mitigating damage to important riparian areas; and
  4. Providing ecological sound transmission between riparian habitat and developed areas.
- C. Promote an economic benefit to the County by providing aesthetic, recreation and wildlife values of riparian habitat for the enjoyment of residents and visitors. (Ord. 2005 FC-2 § 2 (part), 2005; Ord. 1999 FC-1 § 1 (part), 1999; Ord. 1994 FC-2 (part), 1994; Ord. 1988 FC-2 Art. 10 (A), 1988)

#### **16.30.020**

##### **Description.**

For purposes of this chapter, "a regulated riparian habitat" is defined by the riparian classification maps adopted by the Board. These habitats are generally characterized by vegetation that is different in plant species composition or an increase in the size and/or density of vegetation as compared to upland areas and occur in association with regulatory floodplains through which waters flow at least periodically, as well as any spring, cienega, lake, watercourse, river, stream, creek, wash, arroyo, or other body of water. These communities represent a continuum of plant species' response to available moisture, and can be subdivided into hydroriparian, mesoriparian, and xeroriparian classifications as well as identification as Important Riparian Areas providing ecological connectivity and biological corridors.

- A. Hydroriparian. Riparian habitats generally associated with perennial watercourses and/or springs. Plant communities are dominated by obligate or preferential wetland plant species such as willow and cottonwood.
- B. Mesoriparian. Riparian habitats generally associated with perennial or intermittent watercourses or shallow groundwater. Plant communities may be dominated by species that are also found in drier habitats (e.g., mesquite); but contain some preferential riparian plant species such as ash or netleaf hackberry.
- C. Xeroriparian. Riparian habitats generally associated with an ephemeral water supply. These communities typically contain plant species also found in upland habitats; however, these plants are typically larger and/or occur at higher densities than adjacent uplands. Xeroriparian habitat is further divided into four subclasses for Class A, B, C, and D habitat as defined in the mitigation standards approved by the Board as maintained by the Floodplain Administrator. Mitigation in xeroriparian habitat is to be determined based at least on total vegetative volume (TVV) as provided within the mitigation standards as adopted by the Board as well as replacement of other lost riparian habitat functions necessary to sustain riparian habitat.
- D. Important Riparian Areas. Important Riparian Areas occur along the major river systems and provide critical watershed and water resources management functions as well as providing a framework for landscape linkages and biological corridors. Important Riparian Areas are valued for their higher water availability, vegetation density, and biological productivity, compared to adjacent uplands. Important Riparian Areas are essential for floodplain management and every effort should be made to protect, restore, and enhance the structure and functions of these areas including hydrological, geomorphological, and biological functions. (Ord. 2005 FC-2 § 2 (part), 2005; Ord. 1999 FC-1 § 1 (part), 1999; Ord. 1994 FC-2 (part), 1994; Ord. 1988 FC-2 Art. 10 (B), 1988)

### **16.30.030**

#### **Applicability.**

This chapter shall apply to all properties within unincorporated Pima County that contain riparian habitat, as delineated on riparian habitat maps adopted by the Board. This chapter shall apply to the County, the District, and to all parties acting on behalf of the District and County. This chapter shall apply to individual building permits, including grading permits issued by the County, and land development permits associated with subdivisions and development plans. All requirements of this chapter shall apply to regulated hydroriparian, mesoriparian, Important Riparian Areas, and, xeroriparian Classes A, B, C, and D habitat. (Ord. 2005 FC-2 § 2 (part), 2005; Ord. 1999 FC-1 § 1 (part), 1999; Ord. 1998 FC-1 Section 3, 1998; Ord. 1994 FC-2 (part), 1994; Ord. 1988 FC-2 Art. 10 (C), 1988)

### **16.30.040**

#### **Permits.**

As part of the floodplain use permit process for property subject to provisions of this chapter, the proposed development will be reviewed for impacts to mapped riparian habitat whenever more than 1/3 of an acre of a property's regulated riparian habitat is disturbed. In order to avoid such alteration of the riparian habitat or to mitigate disturbance on the subject property, an applicant may apply to the County for a modification of the development standards under Section

18.07.080 of the County Zoning Code. Such modifications may include reduction in building setbacks or approval to provide onsite mitigation and enhancement in natural areas.

A. Submittals. Permit applications shall include:

1. Evidence that no reasonably practicable alternative exists to the proposed impact on mapped habitat and evidence that the impact has been minimized to the maximum extent practicable.
2. A map delineating riparian habitat boundaries and clearly delineating areas of proposed disturbance to mapped riparian habitat;
3. A description of the vegetation that will be disturbed;
4. A habitat mitigation plan for disturbance to mapped riparian habitat areas as provided in 16.30.050 when required by the District; and
5. Such additional supporting information as the District determines to be necessary to carry out review under this chapter.

B. Permit Conditions. Conditions may be placed on the permit that, to the extent reasonably practicable, require preservation of, or mitigate the impact on, riparian habitat. If mitigation is required, compliance with an approved habitat mitigation plan shall be made a condition of the permit. (Ord. 2005 FC-2 § 2 (part), 2005; Ord. 1999 FC-1 § 1 (part), 1999; Ord. 1998 FC-1, Section 3, 1998; Ord. 1994 FC-2 (part), 1994; Ord. 1988 FC-2 Art. 10 (D), 1988)

### **16.30.050**

#### **Mitigation.**

A. Mitigation Plan. If an applicant demonstrates to the satisfaction of the District that alteration of regulated riparian habitat areas cannot reasonably be avoided, a mitigation plan shall be submitted to the District for approval when more than 1/3 of an acre of regulated riparian habitat is disturbed.

B. Mitigation plans shall be approved by the Board for disturbance of hydroriparian, mesoriparian and/or Important Riparian Areas whenever more than 5% of a property's regulated riparian habitat is disturbed, except for those disturbances that are less than 1/3 acre.

C. Mitigation Plan Requirement. The mitigation plan shall delineate all mitigation measures to be taken by the owner and shall include a schedule of completion. The mitigation plan shall be consistent with any riparian habitat mitigation standards adopted by the Board, and shall be prepared in accordance with best available scientific or management practices. Mitigation may be incorporated into measures taken to satisfy other requirements of the District and County. Where appropriate, the mitigation plan shall at a minimum provide for:

1. Construction methods that identify and protect riparian habitat that is to be left unaltered;
2. Selective clearing or other habitat manipulation;
3. Replacement of affected vegetation with appropriate plant species in ratios that will result in simulation of the pre-alteration vegetation within 5 years;
4. Irrigation with passive water harvesting, where possible, or installation and maintenance of irrigation methods until plantings are established;
5. Periodic monitoring of mitigation features;
6. Maintenance and replacement of damaged plantings; and
7. Posting a performance bond or financial assurances.

D. Mitigation Banking, or other alternative mitigation measures as approved by the Board. At the request of the property owner, and with Board approval, the mitigation plan requirement

under this chapter may be waived by contributing funds to an account established and administered by the District for the purpose of offsetting damage to riparian habitat. (Ord. 2005 FC-2 § 2 (part), 2005)

### **16.30.060**

#### **Review process.**

The application and any proposed mitigation plan shall be evaluated by their effectiveness in:

- A. Avoiding the impact;
- B. Minimizing the impact;
- C. Rectifying the impact;
- D. Reducing or eliminating the impact over time; and
- E. Compensating for the impact. (Ord. 2005 FC-2 § 2 (part), 2005; Ord. 1999-FC-1 § 1 (part) 1999; Ord. 1994 FC-2 (part), 1994: Ord. 1988 FC-2 Art. 10 (F), 1988)

### **16.30.070**

#### **Appeals and variances.**

- A. Appeals: Any applicant disputing a written finding of the Chief Engineer may appeal to the Board as provided in Chapter 16.56 of this Title.
- B. Variance. Any property owner requesting a variance from the requirements of this Title shall submit a request for a variance to the Board through the Chief Engineer as provided in Chapter 16.56 of this Title. (Ord. 2010 FC-1; Ord. 2005 FC-2 § 2 (part), 2005; Ord. 1999 FC-1 § 1 (part), 1999; Ord. 1994 FC-2 (part), 1994: Ord. 1988 FC-2 Art. 10 (G), 1988)

### **16.30.080**

#### **Riparian classification maps.**

- A. Riparian classification maps shall be adopted by resolution of the Board and shall detail on a parcel level, the general location of riparian habitat and Important Riparian Areas subject to the requirements of this chapter.
- B. Where a question arises as to the location of any regulated riparian habitat or Important Riparian Area, the question shall be decided by the Chief Engineer consistent with riparian habitat standards adopted by the Board. The Chief Engineer's decision shall be final, except as provided for in Chapter 16.56 of this title. Any person contesting the location of any boundary shall be given a reasonable opportunity to present technical evidence, if so desired.
- C. The riparian classification maps shall be kept on file and made available to the public in the offices of the District. (Ord. 2005 FC-2 § 2 (part), 2005; Ord. 1999 FC-1 § 1 (part), 1999; Ord. 1995 FC-1 §§ 1, 2, 1995)

## Chapter 16.34

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### MANUFACTURED HOMES AND MANUFACTURED HOME PARKS AND SUBDIVISIONS

#### Sections:

**16.34.010 Permit requirements and exemptions.**

**16.34.020 Anchoring requirements.**

**16.34.030 Location and placement conditions.**

**16.34.040 Certification requirements.**

#### 16.34.010

##### **Permit requirements and exemptions.**

- A. From the effective date of this ordinance codified in this title, it shall be unlawful to place a manufactured home, install utility improvements to place a manufactured home, or make substantial improvements to existing manufactured homes within a regulatory floodplain, as described in Chapters 16.08, 16.24 and 16.26 of this title, or within erosion hazard areas, as described in Chapter 16.28 of this title, for more than 180 consecutive days without first applying for and obtaining a floodplain use permit from the Chief Engineer, and thereafter complying with each and every written term of the permit, as well as with state regulations for manufactured homes as established by the Office of Manufactured Housing under A. R. S. Title 41, Chapter 16, Article 2.
- B. In addition to the provisions of this chapter, manufactured homes, recreational vehicles, and travel trailers shall comply with all applicable provisions in chapters 16.20, 16.24, 16.26, 16.28, and 16.30 of this title.
- C. Exemptions:
  1. No such floodplain use permit shall be required for any repairs or alterations to existing manufactured homes for which the value of the materials and labor thereon does not exceed \$7,500, except for those improvements that obstruct the flow of flood waters. For the purpose of determining the value of any such repairs or alterations, the normal retail value of materials and the reasonable value of labor performed shall be used. Although no floodplain use permit is required, all other provisions of this title shall be observed in the performance of said repairs or alterations. Repairs or alterations shall not be done in a piecemeal fashion for the purpose of avoiding applying for a permit when the total cost of said work is in excess of \$7,500.
  2. Temporary placement of a manufactured home, recreational vehicle or travel trailer without a utility hook up for fewer than 180 consecutive days , and
  3. Recreational vehicles that are on site for fewer than 180 consecutive days, or those that are fully licensed and ready for highway use. A recreational vehicle is ready for highway use if it is on its wheels or jacking system, is attached to the site only by quick disconnect type utilities and security devices, and has no permanently attached additions. (Ord. 2010 FC-1; Ord. 2005 FC-2 § 2 (part), 2005; Ord. 1999 FC-1 § 1 (part), 1999; Ord. 1988 FC-2 Art. 10 (A), 1988)

#### 16.34.020

##### **Anchoring requirements.**

Anchoring for manufactured housing will be in conformance with state standards as established by the Office of Manufactured Housing under A. R. S. Title 41, Chapter 16, Article 2. All manufactured homes and additions to manufactured homes located within a regulatory floodplain or SFHA shall be anchored to resist flotation, collapse, or lateral movement by one of the following methods:

- A. Flotation: Elevate bottom of structural frame, and lowest point of all service equipment, above RFE and therefore remove all hydrostatic and hydrodynamic loads from the MH.
- B. Collapse: Proportion the foundation footer area to resist vertical dead and live loads of MH based on allowable soil bearing pressure, as required by Office of Manufactured Housing under A. R. S. Title 41, Chapter 16, Article 2; extend foundation footers to maximum anticipated scour depth below grade; design all foundation elements to resist lateral hydrostatic and hydrodynamic loads on the foundation.
- C. Lateral movement: Design soil anchors or individual foundation members to transfer lateral wind loads on MH to the soil, as required by Office of Manufactured Housing under A. R. S. Title 41, Chapter 16, Article 2. Lateral wind loads are to be assumed to come from any direction. (Ord. 2010 FC-1; Ord. 2005 FC-2 § 2 (part), 2005; Ord. 1999 FC-1 § 1 (part), 1999; Ord. 1988 FC-2 Art. 10 (B), 1988)

#### **16.34.030**

##### **Location and placement conditions.**

- A. For manufactured homes located in a regulatory floodplain or erosion hazard area on or before August 3, 1984, replacement of the manufactured home will be allowed if:
  - 1. The manufactured home to be replaced was not damaged by a flood to more than 50% of its value before the flood, and
  - 2. The replacement manufactured home is elevated so that the bottom of the structural frame and the lowest point of any attached appliances or service facilities are at or above the regulatory flood elevation.
- B. For new manufactured homes, new manufactured home parks or subdivisions, expansions to existing manufactured home parks or subdivisions, and repairs, reconstruction, or improvements to existing manufactured homes located within a regulatory floodplain or erosion hazard area, the following standards shall apply:
  - 1. An adequate surface for the pad or lot to meet the minimum drainage standards and access for a hauler shall be provided;
  - 2. All manufactured homes placed on pads or lots elevated on compacted fill in accordance with 16.26.050.F; or elevated on a stem wall, on piers or on pilings, shall be elevated so that the bottom of the structural frame and the lowest point of any attached appliance(s) are at or above the regulatory flood elevation.
  - 3. For manufactured homes placed on pilings, piers or stem walls:
    - a. The lots shall be large enough to permit steps;
    - b. The pilings, piers or stem walls shall be placed in stable soil to a depth sufficient to address erosion concerns, and constructed to address lateral flood forces using methods approved by the Chief Engineer, and
    - c. If pilings or piers are used, then their placement shall be no more than ten feet apart.

- C. Structures designed or utilized for human habitation, whether on a full-time or part-time basis, and which will be completely surrounded by floodwaters during the base flood shall only be permitted when:
1. The product of the flow depth (d), in feet, times the square of the flow velocity (v), in feet per second, of the flood waters of the base flood does not exceed the numerical value of 18 for a period in excess of 30 minutes at any point adjacent to the structure and associated improvements, including fill, and
  2. The flood waters of the base flood do not exceed 3 feet in depth at any point adjacent to the structure and associated improvements, including fill.
  3. For purposes of this section, depth and velocity shall be post development values and shall be calculated as follows:
    - a. When flow distribution information is available, it shall be used to provide the most representative values for flood depth and velocity.
    - b. When approximate information is available, average depths and velocities may be used. (Ord. 2010 FC-1; Ord. 2005 FC-2 § 2 (part), 2005; Ord. 1999 FC-1 § 1 (part), 1999; Ord. 1998 FC-1 Sec. 2, 1998; Ord. 1988)

**16.34.040**

**Certification requirements.**

- A. Certification that the installation of a manufactured home meets all of the requirements of this chapter is required including that the location, orientation, and method of installation and elevation were constructed in accordance with the conditions of the floodplain use permit. Such certification shall be provided by the person installing the manufactured home, the owner, the developer of the manufactured home park or subdivision, or any agency regulating manufactured home placement, whichever is deemed appropriate by the Chief Engineer.
- B. Certification of elevations listed on the floodplain use permit shall be prepared and sealed by an Arizona registered land surveyor or civil engineer, and provided to the Chief Engineer prior to habitation of the structure in accordance with Section 16.20.070. (Ord. 2010 FC-1; Ord. 2005 FC-2 § 2 (part), 2005; Ord. 1999 FC-1 § 1 (part), 1999; Ord. 1988 FC-2 Art. 10 (D), 1988)



## Chapter 16.36

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### SUBDIVISIONS AND DEVELOPMENT

#### Sections:

**16.36.010 Application.**

**16.36.020 Plan information.**

**16.36.030 Grading, storm water, and drainage improvement.**

**16.36.040 Floodplain and floodway boundaries - Drainage areas.**

**16.36.050 Development plan - Advisories to other jurisdictions.**

**16.36.060 Street elevation requirements.**

**16.36.070 Building site location restrictions.**

**16.36.080 Setbacks from channels.**

**16.36.090 Rights-of-way for drainage.**

**16.36.100 Detention systems.**

**16.36.110 Cost recovery for drainage or flood control improvements.**

**16.36.120 Drainage channels.**

**16.36.130 Maintenance of drainage improvements.**

**16.36.140 Appeals and waivers of subdivisions and development floodplain requirements.**

#### **16.36.010**

##### **Application.**

- A. Land may not be parceled or subdivided in such a manner as to create lots unsuitable for development because of flood or erosion hazards.
- B. All subdivision plats, development plans and associated building plans and improvement plans are subject to the design requirements for regulatory floodplains as specified under A. R. S. Section 48-3609 and this chapter. (Ord. 2005 FC-2 § 2 (part), 2005; Ord. 1999 FC-1 § 1 (part), 1999; Ord. 1988 FC-2 Art. 11 (A), 1988)

#### **16.36.020**

##### **Plan information.**

All tentative plats and development plans submitted to the County shall show location, by survey or photographic methods, of streams, watercourses, canals, irrigation laterals, private ditches, culverts, lakes and other water features, including those areas subject to flooding or erosion, or that contain riparian habitat. The plats/plans shall also include the direction of any flow and drainage area, as well as water-surface elevations and the limits of inundation for the base flood, if such a flood has a peak flow rate equal to or greater than 100 cfs, or is a FEMA regulatory discharge with applicable FEMA information depicted on the adopted NFIP maps. (Ord. 2005 FC-2 § 2 (part), 2005; Ord. 1999 FC-1 § 1 (part), 1999; Ord. 1988 FC-2 Art. 11 (B) (1), 1988)

#### **16.36.030**

##### **Grading, storm water, and drainage improvement.**

- A. All tentative plats and development plans shall show proposed grading and improvements for areas that are subject to flooding or which have drainage problems, and shall also show a description and location of all facilities proposed to alleviate flooding or drainage problems within or outside the boundaries of the subdivision or development.

- B. All development plans and tentative plats shall be accompanied by conceptual grading plans and conceptual drainage improvement plans, as needed, to demonstrate:
  - 1. The methods for flood proofing and/or drainage control for the development, including sufficient lot grading information to demonstrate adequate finished pad elevations and/or drainage slopes and paths to guide water away from structures and protect building foundations including all structures within Zones, A, AE, AO, AH and Shaded X;
  - 2. That improvements are compatible with the existing upstream and downstream drainage conditions and that any proposed grading and/or grade change will not have an adverse impact on surrounding properties;
  - 3. When development is proposed to encroach into a regulatory floodplain or is completely surrounded by floodwaters, maximum encroachment limits shall be shown;
  - 4. The methods of erosion and sediment control during construction and post construction; and
  - 5. The methods of mitigating increased urban peak and volumetric flood water runoff or discharge on downstream properties created as a result of the development.
- C. A floodplain use permit is required prior to commencement of any site improvements or grading associated with a subdivision development as a whole or for individual lot(s) within the subdivision. A grading plan must be submitted to the District for review and approval. Detailed improvement plans for storm drains or channel improvements must also be submitted to the same department for review and approval. Where a grading plan or detailed drainage improvement plans are not provided, the Chief Engineer may require additional information and engineering plans prior to issuing a floodplain use permit. Certifications of elevation shall be required pursuant to 16.20.070, until the LOMR is approved by FEMA.
- D. Drainage and grading improvements that are required to mitigate off-site adverse impacts of the proposed development shall be constructed, and as-built plans prepared and submitted to the District. The as-built plans require the District's approval prior to the issuance of any building permits, except for model home permits and any permits necessary to build the drainage infrastructure.
- E. Drainage and grading improvements that are required to mitigate on-site impacts shall be constructed, and as-built plans prepared and submitted to the District. The as-built plans require the District's approval prior to the final Release of Assurances for subdivisions, and prior to the issuance of the Certificate of Occupancy for development plans.
- F. All on-site and off-site grading and construction shall comply with the federal Clean Water Act including providing construction and post-construction controls for storm water quality. (Ord. 2010 FC-1; Ord. 2005 FC-2 § 2 (part), 2005, Ord. 1999 FC-1 § 1 (part), 1999; Ord. 1988 FC-2 Art. 11 (B) (2), (3), (4), 1988)

### **16.36.040**

#### **Floodplain and floodway boundaries - Drainage areas.**

- A. All final plats and development plans shall indicate the limits of the regulatory floodplains, erosion hazard boundaries, maximum encroachment limits, when applicable, and the limits of the federally established regulatory floodplains and floodways (if applicable), and be delineated in a surveyable manner and sealed by an Arizona registered land surveyor.
- B. All final plats shall indicate both drainage areas and their respective base flood peak discharges, with a note contained on the final plat that the drainage areas and base flood peak discharges are provided by the owner for information purposes only.

- C. Where subdivision or development plan improvements modify or remove the SFHA or Shaded Zone X that is designated on the federal FIRM, a hydraulic analysis of the impact and the engineering plans for the modifications must be approved by the District and a CLOMR submitted to FEMA prior to the recording of the final plat, or final approval of the development plan. Floodplain use permits for structures may be issued as long as their finished floor elevations are at least equal to 1 foot above the existing base flood elevation as shown on the current FIRM, or on the CLOMR, whichever is more restrictive.
- D. Where modification of a federally defined floodway is proposed, approval of a LOMR by FEMA amending the floodway boundary is required prior to issuance of building permits in the floodway area.
- E. For subdivisions or for development plans for any improvement which changes the configuration of the regulatory floodplain, including Shaded Zone X, as delineated on the FIRM, the owner shall provide to the District a new delineation of all regulatory floodplains affected by the improvement and as-built plans of the drainage improvements. The new delineations and reports shall be prepared in conformance with the requirements of FEMA for a LOMR, the state Director of Water Resources, and this Title.
- F. Prior to the Release of Assurances for subdivisions or Certificate of Occupancy for development plans, the LOMR must be approved by the District and submitted to FEMA for review and approval. (Ord. 2010 FC-1; Ord. 2005 FC-2 § 2 (part), 2005; Ord. 1999 FC-1 § 1 (part), 1999; Ord. 1988 FC-2 Art. 11 (B) (5), (6) 1988).

#### **16.36.050**

##### **Development plan - Advisories to other jurisdictions.**

- A. In accordance with A.R.S. Section 48-3610, the District shall advise, in writing, any city or town that has assumed jurisdiction over its regulatory floodplains, and provide a copy of any development plan or any application that has been filed with the County for a floodplain use permit or variance to develop land in a regulatory floodplain or floodway, whenever development within the County will occur within one mile of the boundary between the District's area of jurisdiction and the jurisdiction of that city or town.
- B. The District shall also advise any city or town in writing and provide a copy of any development plan of any major development proposed within a regulatory floodplain or floodway whenever development within the County could affect floodprone areas or watercourses within that city's or town's area of jurisdiction.
- C. Written notice of a copy of the plan of development shall be sent to any adjacent jurisdiction no later than 3 working days after having been received by the District. (Ord. 1999 FC-1 § 1 (part), 1999; Ord. 1988 FC-2 Art. 11 (B) (7), 1988)

#### **16.36.060**

##### **Street elevation requirements.**

Streets required for paved permanent access shall be designed and constructed so that the flow depths over them do not exceed 1 foot in depth during the base flood. At least one paved permanent access shall be provided to each lot over terrain that can be traversed by conventional motor vehicles in times of flooding. In specific instances at drainage crossings where it can be demonstrated that this requirement is either impractical, based upon low hazard to life and property, or where construction of a drainage crossing may create problems that override the corresponding benefits, this requirement may be waived by the Chief Engineer. Fill may be used

for streets in areas subject to flooding, provided such fill does not unduly increase flood heights. The developers may be required to provide profiles and elevations of streets for areas subject to flooding. (Ord. 2005 FC-2 § 2 (part), 2005; Ord. 1999 FC-1 § 1 (part), 1999; Ord. 1988 FC-2 Art. 11 (C), 1988)

#### **16.36.070**

##### **Building site location restrictions.**

- A. Land which contains areas within a regulatory floodplain or erosion hazard area shall not be platted for residential occupancy or building sites unless each lot contains a building site, either natural or manmade, which is not subject to flooding or erosion by the base flood.
- B. Lots shall be configured so that encroachment into the regulatory floodplain and erosion hazard area is minimized. It is preferred that building sites and other development be located outside of the regulatory floodplain and erosion hazard area.
- C. In regulatory floodplain areas where fill is to be used to raise the elevation of the building site, the building shall be located not less than 10 feet landward from any edge of the fill, and protected from erosion in accordance with 16.26.040, unless a study/analysis prepared and sealed by an Arizona registered civil engineer demonstrates a lesser distance or the absence of erosion protection is acceptable. No fill shall be placed in any regulatory floodplain or floodway, nor shall any fill be placed where it diverts, retards or obstructs the flow of water to such an extent that it creates a danger or hazard to life or property.
- D. Any Dwelling Unit built within a regulatory floodplain shall be constructed so as to place the elevation of the lowest floor of the Dwelling Unit at or above the regulatory flood elevation.
- E. All building sites shall be graded and compacted to comply with FEMA regulations for fill and to comply with foundation elevation requirements under the international uniform building code, and shall be graded and compacted so that the top of any exterior foundation shall extend above the elevation of the street gutter at the point of discharge, or above the inlet of an approved drainage device, a minimum of 12 inches plus 2 percent for a minimum of 25 feet away from the foundation, but in no case should the finished floor elevation of habitable structures be below the regulatory flood elevation. (Ord. 2010 FC-1; Ord. 2005 FC-2 § 2 (part), 2005; Ord. 1999 FC-1 § 1 (part), 1999; Ord. 1988 FC-2 Art. 11 (D), 1988)

#### **16.36.080**

##### **Setbacks from channels.**

Along reaches of watercourses where hazards from eroding banks or channel meandering are considered by the Chief Engineer to be severe, special engineering studies, prepared and sealed by an Arizona registered civil engineer shall be required of the property owner or developer; and requirements for setbacks from banks of watercourses and/or other protection measures shall be established in accordance with the approved studies. Also, see Chapter 16.28 of this title. (Ord. 2010 FC-1; Ord. 2005 FC-2 § 2 (part), 2005; Ord. 1999 FC-1 § 1 (part), 1999; Ord. 1988 FC-2 Art. 11 (E), 1988)

#### **16.36.090**

##### **Rights-of-way for drainage.**

- A. Whenever a subdivision plat or development plan contains a watercourse that is regulated by this title, all rights-of-way, easements, and floodplains associated with the watercourse shall be clearly labeled and designated as "drainageway," and/or floodplain.

- B. If the watercourse is an improved major watercourse with a base flood of 10,000 cfs or more, the drainageway right-of-way shall include the channel, the channel improvements; and for County or District use, a 50-foot wide area measured outward from the front face of the top of the bank protection on both sides of the channel.
- C. If the watercourse is an improved, minor watercourse, the drainageway shall include the channel, the channel improvements, and access easements and ingress/egress points as necessary for maintenance access to assure the flood carrying capacity of the improved watercourse be maintained.
- D. If the watercourse is to remain natural, the drainageway shall be the boundaries of the regulatory floodplain, the maximum encroachment limits, when applicable, or the erosion hazard area, whichever is greater.
- E. Along any major watercourses where the peak discharge of a base flood is 10,000 cfs, or greater, the improved drainageway and/or floodway shall be dedicated in fee simple, or as an easement, to the District.
- F. Along any minor watercourses where the peak discharge of a base flood is greater than 2,000 cfs, constructed drainageways, channels, and associated flood control structures, as required to flood proof and protect property, shall be dedicated in fee simple, or as an easement, to the County; or, if acceptable to the Chief Engineer a private maintenance easement will be allowed in accordance with Chapter 16.38.
- G. Along other watercourses, the Chief Engineer shall determine whether it is necessary for the County or the District to have control of the drainageway. If the Chief Engineer determines that public control is necessary, the owner shall dedicate the drainageway in fee simple or grant an easement. (Ord. 2010 FC-1; Ord. 2005 FC-2 § 2 (part), 2005; Ord.1999 FC-1 §§ 1 (part) 1999; Ord. 1988 FC-2 Art. 11 (F), 1988)

#### **16.36.100**

##### **Detention systems.**

All development shall provide some method of peak or volumetric runoff reduction, unless fees in lieu of detention are proposed pursuant to 16.48.040 and approved by the Chief Engineer. See Chapter 16.48 of this title. (Ord. 2010 FC-1; Ord. 2005 FC-2 § 2 (part), 2005; Ord. 1999 FC-1 § 1 (part), 1999; Ord. 1988 FC-2 Art. 11 (G), 1988)

#### **16.36.110**

##### **Cost recovery for drainage or flood control improvements.**

The Board may establish a cost-recovery system or fee system for the improvement or installation of public flood control systems. The purpose of the fee is to provide a method for offsite improvements necessary in order to mitigate the effect of urbanization and to provide a systematic approach for the construction of public flood control improvements. Whenever such a system is adopted, it shall demonstrate that the fee will in some manner benefit the property owned by the person or entity from which the fee is collected, and that it will be applied equitably to all property in proportion to flood waters generated by urban use of the property. The fees will also be restricted to providing flood control improvements necessary for the allowed use of the properties owned by the person or entity from which the fee is collected, and the fees shall be reasonably related to the actual cost of providing flood control improvements beneficial to the site or surrounding area. The fees will be reviewed by the Flood Control District

Advisory Committee, prior to action by the Board. (Ord. 2005 FC-2 § 2 (part), 2005; Ord. 1999 FC-1 § 1 (part), 1999; Ord. 1988 FC-2 Art. 11 (H), 1988)

### **16.36.120**

#### **Drainage Channels.**

Channel design standards for constructed drainage channels and other flood control structures shall be established by the Chief Engineer. The requirements as specified in this title are minimum standards and address general floodplain management requirements. Specific projects may warrant additional requirements that may be imposed by the Chief Engineer. In unusual conditions and on a case-by-case basis, permitting and construction of perimeter channels, flood walls, levees or unlined constructed channels may be allowed with approval of the engineering and construction specifications by the Chief Engineer.

- A. Drainage channels shall be designed to provide containment of the regulatory flood and to minimize erosion, but shall not be fully lined so that the improved channel bottoms shall remain natural.
- B. Perimeter channels that route flow around the outer edge of the development are prohibited in all areas where there is an established natural channel. Where used, perimeter channels shall be adequately armored against erosion from flow intercepted by the channel, as well as from flow within the channel.
- C. Flood walls or levees for flood proofing shall only be allowed under special circumstances with approval of the Chief Engineer, and shall be designed to meet FEMA's levee design requirements when located within a regulatory floodplain. Where approved for use, the levee or flood wall shall be constructed with a minimum of 3 feet of freeboard above the base flood elevation. Adjacent finished floor elevations shall be 1 foot above the base flood elevation until the levee construction has been approved by the District, and a LOMR has been issued by FEMA, if necessary.
- D. For regulatory flows greater than 500 cfs, the construction of earthen, unlined channels shall require written approval by the Chief Engineer as well as an engineering analysis prepared and sealed by an Arizona registered civil engineer. (Ord. 2010 FC-1; Ord. 2005 FC-2 § 2 (part), 2005; Ord. 1999 FC-1 § 1 (part), 1999; Ord. 1998 FC-1 Section 5, 1998)

### **16.36.130**

#### **Maintenance access to drainage improvements.**

Any and all drainage improvements shall be designed with adequate access to the drainage improvements to allow for maintenance of the intended design conveyance and/or storage capacity, maintenance of erosion control, and maintenance of flood control function. Such drainage improvements may include, but are not limited to, channels, culverts, storm water detention/retention basins, storm drains, streets, or other permanent conveyances or storage facilities designed to meet the requirements of this title. (Ord. 2005 FC-2 § 2 (part), 2005)

### **16.36.140**

#### **Appeals of subdivisions and development floodplain requirements.**

- A. Appeals: Any applicant requesting an appeal of a written finding by the Chief Engineer may appeal to the Board as provided in Chapter 16.56 of this title.
- B. Any property owner requesting a variance to this chapter shall request a variance through the Chief Engineer. The Chief Engineer shall schedule a hearing before the Board on the request

for a variance pursuant to Chapter 16.56 of this title. (Ord. 2010 FC-1; Ord. 2005 FC-2 § 2 (part), 2005)

## Chapter 16.38

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### **MAINTENANCE OF PRIVATE DRAINAGE IMPROVEMENTS**

- A. When drainage improvements are associated with an approved development plan, subdivision plat or approved engineering report, and are constructed to provide flood protection to remove or reduce flood hazards, including those identified by FEMA or for storm water quality control, and where those improvements are privately owned, then it shall be the responsibility of the property owner(s) to perform maintenance as necessary to ensure the integrity of said drainage improvements and maintenance of the flood carrying capacity to the designed discharge.
1. Covenants and restrictions shall be required for private drainage improvements, prior to the construction of the improvements. The covenants and restrictions must outline maintenance responsibilities of the property owners and must be reviewed and approved by the Chief Engineer, prior to the construction of the drainage improvements.
  2. The failure to maintain private drainage improvements shall be considered a violation of this title.
  3. For purposes of this title, a private drainage improvement is considered a structure. (Ord. 2010 FC-1; Ord. 2005 FC-2 § 2 (part), 2005)



## Chapter 16.42

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### SEDIMENT AND EROSION CONTROL

#### Sections:

**16.42.010 Application of chapter provisions.**

**16.42.020 Soil investigations.**

**16.42.030 Grading or alteration of watercourses.**

**16.42.040 Grading or alteration of sheet flow areas.**

#### **16.42.010**

##### **Application of chapter provisions.**

- A. Within a regulatory floodplain or sheet flood zone, any activity that may have an effect on the flow of storm water runoff, flood water, storm water quality, or that may effect the erosion or the sediment carrying capacity of a watercourse, is subject to this title and to the provisions of this chapter.
- B. Prior to receiving a floodplain use permit, both temporary and permanent measures for sediment and erosion control must be clearly delineated on plans or other written documents. The Grading Design Manual, prepared pursuant to Chapter 18.81 of the zoning code, and other design standards, as approved by the Chief Engineer, shall be used to prepare these plans or documents. (Ord. 2010 FC-1; Ord. 2005 FC-2 § 2 (part), 2005)

#### **16.42.020**

##### **Soil investigations.**

The Chief Engineer may require appropriate soil investigation reports for the purpose of determining the erosive properties of areas or lands to be graded or disturbed, and which may create sediment deposition or erosion in any floodplain or floodprone area regulated by this title. (Ord. 2005 FC-2 § 2 (part), 2005)

#### **16.42.030**

##### **Grading or alteration of watercourses.**

- A. Any grading or the alteration of any watercourse regulated by this title shall be performed in a controlled manner in order to minimize the loss of soil through erosion from rainfall or storm water flow. Prior to granting a floodplain use permit for work in any floodplain, methods to control erosion and sedimentation during construction and post-construction must be demonstrated to be appropriate to the satisfaction of the Chief Engineer.
- B. Due to the rapidly changing hydraulic characteristics of watercourses within the County, and the effects that sand and gravel mining and other excavations have on these hydraulic characteristics, floodplain use permits for grading and construction shall only be issued for a limited time period, not to exceed one year, subject to annual renewal and upon review by the Chief Engineer.
- C. In addition to those conditions provided for elsewhere, floodplain use permits for excavations may impose conditions regarding the area and location in which excavations are allowed, the maximum amount of material to be excavated, mining mitigation plans and other reasonable restraints on the methods of operating including time restraints.

- D. The Chief Engineer may require hydrologic, hydraulic, geomorphic, and riparian habitat analyses that address both existing and future conditions, as well as the impacts that could potentially occur during grading and construction. (Ord. 2010 FC-1; Ord. 2005 FC-2 § 2 (part), 2005)

**16.42.040**

**Grading or alterations in sheet flooding areas.**

- A. Grading or any alteration that diverts, obstructs, or retards the flow of flood waters is subject to the provision of this title and shall require permits as specified within this title.
- B. Slope protection and terracing to control surface drainage, erosion, and debris on cut or fill slopes may be required in accordance with the floodplain use permit and the adopted Grading Design Manual.
- C. In accordance with the Grading Design Manual, erosion control shall be implemented and maintained in order to prevent erosion of slopes and cleared, brushed, grubbed, or graded areas. (Ord. 2005 FC-2 § 2 (part), 2005)

## Chapter 16.44

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### VEHICULAR ACCESS

#### Sections:

**16.44.010 Purpose of provisions-Allocation of responsibility.**

**16.44.020 Areas of applicability.**

**16.44.030 Access requirements-Property owner duties.**

**16.44.040 Permit requirements.**

#### **16.44.010**

##### **Purpose of provisions-Allocation of responsibility.**

It is recognized that private vehicular access may become impassable to ordinary and emergency vehicles during times of flooding. It is the intent of this chapter to allocate the responsibility for private vehicular access, whenever said access crosses a regulatory floodplain. (Ord. 2010 FC-1; Ord. 2005 FC-2 § 2 (part), 2005; Ord. 1999 FC-1 § 1 (part), 1999; Ord. 1988 FC-2 Art. 13 (A), 1988)

#### **16.44.020**

##### **Areas of applicability.**

This chapter shall apply in all situations where private vehicular access crosses any regulatory floodplain located between the points where the private access leaves a, publicly maintained roadway and the end of the private access at the property line. (Ord. 2010 FC-1; Ord. 1999 FC-1 § 1 (part), 1999; Ord. 1988 FC-2 Art. 13 (B), 1988)

#### **16.44.030**

##### **Access requirements-Property owner duties.**

In all situations where private vehicular access crosses a regulatory floodplain located between the points where the private access leaves a paved, publicly maintained roadway and the end of the private access, the owner of the property requiring the private vehicular access shall:

- A. Construct the private vehicular access in such a manner that it is permanent and is over terrain that can be traversed by conventional motor vehicles during a base flood; or
- B. Execute and record a covenant, running with the land and enforceable by the County and the District, which contains the following:
  1. An acknowledgment that the private vehicular access may be impassable to conventional motor vehicles and emergency vehicles in times of flooding,
  2. A hold-harmless provision, holding the County and the District harmless from and against all injuries and damages resulting from traversing or attempting to traverse the private vehicular access during times of flooding, and
  3. A provision which either:
    - a. Requires the covenantor successors and assigns to erect and maintain a sign(s) in a location(s) and size(s) acceptable to the County the District stating "DO NOT ENTER WHEN FLOODED," or
    - b. Causes the covenantor or successors and assigns to assume responsibility to notify users of the private vehicular access that it may be impassable in times of flooding, and agree to indemnify and defend the County, the District, their officers, employees,

servants and agents, against all claims for injuries to persons or damages to property due to the construction, installation, location, operation, safeguarding, maintenance, repair, and condition of the private vehicular access. (Ord. 2010 FC-1; Ord. 2005 FC-2 § 2 (part), 2005; Ord. 1999 FC-1 § 1 (part), 1999; Ord. 1988 FC-2 Art. 13 (C), 1988)

**16.44.040**

**Permit requirements.**

When the construction of a private vehicular access road is within a regulatory floodplain or sheet flooding area and disturbs more than 14,000 square feet, then a floodplain use permit and grading plan are required to assure that flood waters are not diverted, retarded, or obstructed. (Ord. 2010 FC-1; Ord. 2005 FC-2 § 2 (part), 2005)

## Chapter 16.48

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### **RUNOFF DETENTION SYSTEMS**

#### **Sections:**

**16.48.010 Runoff reduction required when-Specifications adopted.**

**16.48.020 Balanced and critical basins-Development conditions.**

**16.48.030 Structural flood control measures.**

**16.48.040 Fee in lieu of detention requirements.**

**16.48.050 Maps of balanced and critical basins.**

#### **16.48.010**

##### **Runoff reduction required when-Specifications adopted.**

Any new development shall provide some method of peak or volumetric runoff reduction, unless fees in lieu of detention are proposed pursuant to 16.48.040 and approved by the Chief Engineer. The amount of reduction is stipulated within the Storm Water Detention/Retention Manual. The peak runoff reduction should be provided through detention of storm water and storm water harvesting for supplemental irrigation, where possible. The Storm Water Detention/Retention Manual, approved for use by the Board, or other applicable engineering standards for storm water control and/or storm water harvesting that is approved by the Chief Engineer shall be used for design. Any revisions to the Storm Water Retention/Detention Manual will be reviewed by the Flood Control District Advisory Committee, prior to adoption by the Board as updated design standards for detention/retention. (Ord. 2010 FC-1; Ord. 2005 FC-2 § 2 (part), 2005; Ord. 1999 FC-1 § 1 (part), 1999; Ord. 1988 FC-2 Art. 14 (part), 1988)

#### **16.48.020**

##### **Balanced and critical basins-Development conditions.**

- A. Balanced and critical drainage basins are watersheds that have been identified by the Chief Engineer as unsuitable for increased development because of the high probability of increased flooding with development and the potential for flooding of existing improvements or property. Critical and balanced basins may be developed further only upon the incorporation of adequate detention systems or flood control facilities, as reviewed and approved by the Chief Engineer. Drainage basins that have not previously been identified as unsuitable for additional urban development, shall be considered to be balanced basins, but upon study by the Chief Engineer, may be subject to the critical basin provisions of this chapter. These detention systems or flood control facilities shall be incorporated into any and all future basin-development proposals, regardless of size or land-use density, unless fees in lieu of detention are proposed pursuant to 16.48.040 and approved by the Chief Engineer.
- B. Retention of storm water is not allowed without demonstrating that, over the long-term, the ponded waters will not cause a nuisance or a vector problem. In lieu of threshold retention, County requirements will be based upon additional detention requirements based on the guidance provided in the Storm water Detention/Retention Manual. (Ord. 2010 FC-1; Ord. 2005 FC-2 § 2 (part), 2005; Ord. 1999 FC-1 § 1 (part), 1999; Ord. 1988 FC-2 Art. 14 (A), 1988).

**16.48.030**

**Structural flood control measures.**

- A. Structural flood control measures may be proposed in conjunction with, or in place of, detention/retention systems if it can be clearly demonstrated that such measures will not alter the water and sediment equilibrium and storm water quality of the affected watercourse, and will mitigate environmental impacts.
- B. Appropriate structural flood control measures, such as channelization to a logical conclusion downstream of the proposed development and/or improvements to existing offsite flood control systems within the applicable drainage or stream reach, shall be completed in accordance with plans reviewed and approved by the Chief Engineer. (Ord. 2010 FC-1; Ord. 1999 FC-1 § 1 (part), 1999; Ord. 1988 FC-2 Art. 14 (B), 1988)

**16.48.040**

**Fee in lieu of detention/retention requirements.**

A fee may be collected by the County in lieu of a detention/retention system when it can be clearly demonstrated that detention at the site does not provide offsite flood relief due to the parcel size, location within the drainage basin, or other factors. The fees collected will be used to construct public flood control improvements that will mitigate the potential damage of flood waters originating from the property contributing the fees. In balanced and critical drainage basins, and where development is less than 2 units to the acre, use of a fee system will be encouraged in lieu of a detention system in order to preserve the natural drainage patterns. As appropriate, alternate post-construction best management practices for storm water quality will be required. The fee shall be equivalent to the cost of a detention system that would otherwise be constructed for the development to mitigate increased storm water runoff created by the proposed development. (Ord. 2010 FC-1; Ord. 2005 FC-2 § 2 (part), 2005; Ord. 1999 FC-1 § 1 (part), 1999; Ord. 1988 FC-2 Art. 14 (C), 1988)

**16.48.050**

**Maps of balanced and critical basins.**

The Chief Engineer shall prepare, and retain for public inspection and use, an official map designating balanced and critical drainage basins within the County. (Ord. 2005 FC-2 § 2 (part), 2005; Ord. 1999 FC-1 § 1 (part), 1999; Ord. 1988 FC-2 Art. 14 (D), 1988)

## Chapter 16.52

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### **SAND, GRAVEL AND OTHER EXCAVATION OPERATIONS**

Sand and gravel excavations in a regulatory floodway, floodway fringe area, floodplains and erosion hazard areas including proposed operations and existing operations subject to permit renewal are subject to A.R.S. § 11-830 and A.R.S. §27-1201, et. seq., and are subject to the following provisions to the extent not inconsistent therewith A.R.S. § 11-830 and A.R.S. §27-1201, et. seq.:

- A. Extraction of sand, gravel and other materials is allowed provided that excavations are not located nor of such depth, or width, or length, or combination of depth-width-length as to present a hazard to structures including, but not limited to, roads, bridges, culverts, and utilities, the banks of watercourses, other property, or adversely affect groundwater recharge.
- B. Within a floodway area, there shall be no stockpiling of materials or tailings that may obstruct, divert, or retard the flow of flood waters except as reviewed and approved by the Chief Engineer on an individual floodplain use permit basis.
- C. Excavations within a floodway area may be allowed only in those reaches of watercourses which have, at a minimum, a balanced sediment system, i.e., the sediment coming into the reach is equal to or greater than the sediment leaving the reach and the long-term sediment balance for the entire river system indicates that the stream channel will aggrade; or unless a reclamation plan is prepared and sealed by an Arizona registered civil engineer, approved by the Chief Engineer, and adopted by the Board.
- D. Due to the rapidly changing hydraulic characteristics of watercourses within the County, and the effects excavations have on these characteristics, floodplain use permits for excavations shall only be issued for a limited time period, not to exceed one year, subject to annual renewal and review by the Chief Engineer. Renewals will only be granted after receipt of a written statement, by the property owner or owner's representative, confirming that the sand and gravel excavations remain in compliance with the conditions of the previous floodplain use permit, current floodplain conditions and all current related floodplain management regulations.
- E. In addition to those conditions provided for elsewhere, floodplain use permits for excavations may impose sites specific conditions based on a technical analysis of a flood hydraulic and sediment transport regarding the area and location in which excavations are allowed, the maximum amount of material to be excavated, and other reasonable restraints on the methods of operating in relationship to Floodplain conditions.
- F. Any extraction of sand and gravel, or related materials within a floodway area, floodway fringe area, floodplain, and associated flood erosion hazard area shall be allowed after the effective date of the ordinance codified in this title only if a mining reclamation plan is also provided for the extraction operation. The mining reclamation plan shall show in sufficient detail the actions that are proposed for the excavated areas so that all adverse effects of extraction are mitigated. The plan shall also contain a timetable for accomplishing reclamation as appropriate to the overall lateral extent and depth of the excavation, floodplain and channel conditions, adjacent land-uses, and associated flooding and erosion hazards.
- G. The County may charge permit and inspection fees, as appropriate, to recover costs associated with monitoring the sand and gravel extraction operation, plus a reasonable estimate of administrative costs and expenses that would be incurred by the County in doing

so. Fees shall be adopted by resolution of the Board as provided within A.R.S. 48-3603. E. The Chief Engineer may require a hydrologic, hydraulic, and geomorphic analyses that address the existing conditions, as well as the impacts that would occur under the proposed method of operation.

H. The Board may grant appeals and variances as provided by Chapter 16.56 of this title. (Ord. 2005 FC-2 § 2 (part), 2005)



## Chapter 16.54

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### ADMINISTRATION, AND COMPLIANCE

#### Sections:

#### 16.54.010 Purpose and scope.

#### 16.54.020 Administration.

#### 16.54.030 Compliance.

#### 16.54.010

##### Purpose and scope.

A. Purpose: This chapter provides for:

1. The orderly administration of regulations and provisions of this title;
2. The process for applying the provisions of this title to individual floodplain development or uses prior to the initiation of such development or uses. The evaluation of any proposed development or uses shall be provided by County staff for conformance with this title;
3. The administrative appeal process to the Chief Engineer to request a technical interpretation or waiver from technical standards and guidance manuals; and
4. A variance process to request relief from provisions of this title from the Board.

B. Scope:

1. The Administration Section describes the method by which permits, appeals, variances and enforcement are processed to meet the provisions of this title.
2. The Compliance Section describes the methods by which the provisions of this title are met when a particular use of a property is intended. (Ord. 2010 FC-1, Ord. 2005 FC-2 § 2 (part), 2005)

#### 16.54.020

##### Administration.

A. The Floodplain Administrator, as designated by the Chief Engineer, is authorized to:

1. Conduct the general day-to-day operation and process by which permits are issued;
2. Investigate complaints of suspected violations in accordance with Chapter 16.64, and
3. Enforce Federal and state floodplain management administrative requirements for compliance with the NFIP including record keeping and reporting. Duties of the Floodplain Administrator may include, but are not limited to:
  - a. Review all development permits to determine that the permit requirements of this ordinance have been satisfied.
  - b. Obtain and maintain required records for public inspection and make available the following as required in Chapter 16.20:
    - i. The certified regulatory flood elevation required in Chapter 16.20;
    - ii. The flood proofing certification required in Chapter 16.20;
    - iii. The flood vent certification required in Chapter 16.20;
    - iv. The floodway encroachment certification required in Chapter 16.24;
    - v. The certifications of elevation required for additional development standards, including subdivisions required in Chapter 16.36;

- vi. A record of all variance actions, including justification for their issuance, and report such variances in the biennial report submitted to FEMA; and
  - vii. All improvement calculations used to determine substantial improvement.
  - c. Whenever a federally regulated watercourse is to be altered or relocated, provide notification as required by this title.
- B. The Chief Engineer is authorized to:
- 1. Interpret this title and associated technical flood and watercourse documents including floodplain maps and riparian habitat maps identified within this title;
  - 2. Establish engineering standards and guidance manuals, as necessary for activities regulated by this title;
  - 3. Administer appeals requesting waivers or modifications to engineering standards and guidance manuals and administrative interpretation as provided within provisions of this title. Appeals to the Chief Engineer shall follow the requirements of 16.56.010;
  - 4. Make technical interpretations including base flood data and elevations consistent with federal and state floodplain management requirements;
  - 5. Render final decisions and orders on violations of this ordinance as required in Chapter 16.64 herein.
- C. The Board is authorized to:
- 1. Adopt of rules and bylaws for enforcement of regulation of floodplains, erosion hazards and riparian habitats,
  - 2. Hear requests for variances from the regulations to the extent permitted by A.R.S. Section 48-3609,
  - 3. Hear requests for appeals of written findings of the Chief Engineer; and
  - 4. Exercise all powers and duties to carry out regulatory functions, as required by A.R.S. Section 48-3603, including establishment of a fee schedule for the review of applications for permits and variances from, or interpretations of, the provision of this title.
- D. The Technical Review Committee may be requested by the Chief Engineer, or the Board, to provide technical review and recommendations on complex technical issues for administration, compliance and enforcement of this title.  
(Ord. 2010 FC-1; Ord. 2005 FC-2 § 2 (part), 2005)

### **16.54.030**

#### **Compliance.**

- A. Compliance mechanisms: Title compliance is sought through:
- 1. A review procedure for floodplain use permits, subdivision plats, development plans and other plans;
  - 2. A permitting system that will deny the issuance of a permit if the proposed activity conflicts with title requirements;
  - 3. An enforcement system that will provide for compliance and enforcement of the title; and
  - 4. An organizational structure that identifies specific officers and employees empowered to administer the above methods of compliance. (Ord. 2005 FC-2 § 2 (part), 2005)
- B. It shall be the duty of the Chief Engineer, Floodplain Administrator, County Engineer, Zoning Inspector and all other departments, officials and public employees vested with the duty or authority to issue permits to determine compliance with the provisions of this title and to issue no permit in conflict with the provisions of this title.
- C. Validity of permit:

1. The issuance or granting of a floodplain use permit, a building permit, or approval of plans or specifications under the authority of this title shall not be deemed or construed to be a permit for, or an approval of, any violation of any of the provisions of this title or the amendments thereto, or of any other title or law;
2. No permit presuming to give authority to violate or cancel any of the provisions of this title or any existing law shall be issued, and if issued, then the permit shall not be valid and shall be revoked as provided in 16.20.060 of this title;
3. Any permit issued in conflict with the provisions of this title shall be null and void; and
4. A floodplain use permit shall be valid:
  - a. For one year after the date of issuance for permanent structures and flood control improvements, or
  - b. Upon completion of permanent structures and flood control improvements associated with the permit provided that all permit requirements are met including certifications of elevation when required, or
  - c. For one year after the date of issuance for any excavation activity or any other activity-based permits issued under this title. Such activity-based permits shall be reviewed for compliance annually, and be re-permitted, if appropriate, based on conditions current at the time of permit renewal. (Ord. 2010 FC-1, Ord. 2005 FC-2 § 2 (part), 2005)

## Chapter 16.56

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### APPEALS AND VARIANCES

#### Sections:

**16.56.010 Appeals to the Chief Engineer.**

**16.56.020 Variances.**

**16.56.030 Authority to issue variances.**

**16.56.040 Issuance of variances-Required findings.**

**16.56.050 Hearing procedures for the Board.**

**16.56.060 Covenants.**

**16.56.070 Notice to adjacent jurisdictions.**

#### **16.56.010**

##### **Appeals to the Chief Engineer.**

- A. Any applicant contesting permit conditions, a written notice of permit denial by the Floodplain Administrator, or a boundary determination of a regulatory floodplain, floodway, erosion hazard area, or riparian habitat shall first request a formal review by the Chief Engineer on a form approved by the District within 30 business days from receipt of the written notice.
- B. Within 10 business days of receipt of the written review request form, the Chief Engineer may:
  1. Meet with the applicant; or
  2. Request, in writing, such additional information as is deemed necessary in order to render a written finding.
- C. The Chief Engineer shall issue a written finding not more than 45 business days following the receipt of all required information.
- D. Any applicant aggrieved by the written finding of the Chief Engineer may appeal to the Board by submitting an appeal petition with the Chief Engineer and the Clerk of the Board within 30 business days from receipt of the written finding of the Chief Engineer.
  1. The appeal petition shall be on a form approved by the District and shall contain a detailed explanation of all matters in dispute;
  2. When an appeal is scientific or technical in nature, technical evidence shall be prepared and sealed by an Arizona registered civil engineer or, for riparian habitat mitigation appeals, by an Arizona registered landscape architect or other qualified professional, and
  3. Hearing procedures shall be pursuant to 16.56.050. (Ord. 2010 FC-1; Ord. 2005 FC-2 § 2 (part), 2005)

#### **16.56.020**

##### **Variances.**

- A. Variances within adopted Special Flood Hazard Areas as designated by FEMA shall conform to the variance requirements of the Federal Flood Insurance Program as provided within 44 CFR 60.6.
- B. Variances for relief to regulations under this Title for locally regulated floodplains, erosion hazard zones and/or riparian habitat shall conform to variance requirements of this Title. See 16.56.040.

- C. A property owner may request a variance hearing by filing a variance request petition with the Chief Engineer and the Clerk of the Board on a form approved by the District.
  - 1. The petitioner shall state the section of the code from which the variance is being sought and shall contain a detailed explanation of the variance request.
  - 2. The Clerk of the Board shall schedule a hearing before the Board on the request for a variance pursuant to 16.56.050.
- D. In accordance with A.R.S. Section 48-3610, whenever a development plan or application has been filed with the District that requires a variance under 44 CFR 60.6 and is within 1 mile of the boundary between the District's area of jurisdiction and the jurisdiction of a city or town, then the District shall advise, the jurisdiction in writing. (Ord. 2010 FC-1; Ord. 2005 FC-2 § 2 (part), 2005)

### **16.56.030**

#### **Authority to issue variances.**

To the extent permitted by A.R.S. Section 48-3609, the Board shall hear and decide all requests for variances from the requirements of this title. A variance is subject to conditions to ensure that the variance does not constitute a grant of special privileges inconsistent with the limitations on similar property in a regulatory floodplain or erosion hazard area. (Ord. 2005 FC-2 § 2 (part), 2005; Ord. 1999 FC-1 § 1 (part), 1999; Ord. 1988 FC-2 Art. 17 (A), 1988)

### **16.56.040**

#### **Issuance of variances-Required findings.**

Variances may only be issued if the Board makes the following five determinations:

- A. A determination that the variance is the minimum necessary to afford relief, considering the flood hazards;
- B. A determination of good and sufficient cause;
- C. A determination that failure to grant the variance would result in exceptional hardship to the applicant;
- D. A determination that the granting of the variance will not create a danger or hazard to persons or property in a regulatory floodplain or erosion hazard area in the area of jurisdiction or result in increased flood heights, additional threats to public safety, the creation of a nuisance, the victimization of or fraud on the public, or that the variance is not in conflict with other local laws or titles; and
- E. Special circumstances, such as size, shape, topography, location, or surroundings of the property, would cause strict application of the regulations to deprive the property of the privileges enjoyed by similar property in a regulatory floodplain or erosion hazard area. A variance is subject to conditions to ensure that the variance does not constitute a grant of special privileges inconsistent with the limitations on similar property in the regulatory floodplain.
- F. Variances within Special Flood Hazard Areas as designated by FEMA shall conform to the variance requirements of the Federal Flood Insurance Program as provided within 44 CFR, 60.6. (Ord. 2010 FC-1; Ord. 2005 FC-2 § 2 (part), 2005; Ord. 1999-FC-1 §§ 1 (part) 1999; Ord. 1988-FC2 Art. 17 (B), 1988)

### **16.56.050**

#### **Hearing procedures for the Board.**

- A. Petitions: The following petition procedures apply to an appeal of a written finding of the Chief Engineer, or to a variance request:
1. An appeal petition may require technical evidence that demonstrates why the appeal should be granted, that contains a concise explanation of all matters in dispute, and that includes any pertinent maps, drawings, data, or other information in support of the appeal. If required, technical evidence shall be prepared and sealed by an Arizona registered civil engineer or, for riparian habitat mitigation appeals, by an Arizona registered landscape architect or other qualified professional.
  2. A variance request petition shall state the code section from which the variance is sought, provide technical evidence, if necessary, that demonstrates why the variance request should be granted and shall include any pertinent maps, drawings, data, or other information as to why the variance should be granted. If required, technical evidence shall be prepared and sealed by an Arizona registered civil engineer or, for riparian habitat mitigation appeals, by an Arizona registered landscape architect or other qualified professional.
  3. Incomplete petitions shall not be accepted.
    - a. The Chief Engineer shall notify the applicant within 5 working days of receipt whether or not the application is deemed complete.
    - b. If the application is determined to be incomplete, the applicant shall submit additional materials and information as may be determined to be reasonably necessary by the Chief Engineer.
- B. Report from the Chief Engineer: The Chief Engineer shall prepare a final report and present the findings to the applicant and the Board through the Clerk of the Board within 60 business days of receipt of the petition. The applicant shall have 30 business days to respond to the findings of the Chief Engineer. If the response includes new technical information, the Chief Engineer shall prepare a revised report, and present these findings to the applicant and the Board through the Clerk of the Board within 30 business days of receipt of the new technical information.
- C. Hearing: The Clerk of the Board will schedule a public hearing at the next available Board meeting after the response period. Once the hearing is scheduled, no new technical information can be submitted. The Board may meet monthly, or at such times as it deems necessary for the transaction of business, including the hearing of appeal and variance petitions.
1. A mailed notification of the hearing to property owners and residents within a minimum distance of 300 feet of the boundaries of the property shall be provided in order to allow an opportunity to make comments on the appeal or variance request petitions, and
  2. The Chief Engineer may refer appeal or variance requests of a technical nature to the Technical Review Committee. The Technical Review Committee shall hold a hearing to make findings and recommendations to the Board within 30 days of receipt of the petition from the Chief Engineer.
  3. The Board shall render its decision within 30 business days of the close of the hearing. (Ord. 2010 FC-1; Ord. 2005 FC-2 § 2 (part), 2005; Ord. 1999-FC-1 §§ 1 (part) 1999; Ord. 1988-FC2 Art. 16 (B), 1988)

**16.56.060**  
**Covenants.**

Upon granting of a variance, permit or waiver for the construction of a Dwelling Unit or commercial or industrial structure, where the construction of such unit or structure is otherwise contrary to the floodplain and erosion hazard requirements of this title the Board shall provide written notice to the grantees of such a variance, permit, or waiver that, if the structure is a Dwelling Unit or business as defined by A.R.S. Section 26-321, the land upon which the structure is located is ineligible for acquisition under the County Floodprone Land Acquisition Program, and notice that the structure increase risks to life and property and will result in increased flood insurance premium rates A copy of the notice shall be recorded by the Board in the office of the County Recorder and shall be recorded in a manner so that it appears in the chain of title of the affected parcel of land. (Ord. 2005 FC-2 § 2 (part), 2005)

**16.56.070**

**Notice to adjacent jurisdictions.**

In accordance with A.R.S. Section 48-3610, whenever a variance to federal and/or state floodplain requirements contained in this title and is within 1 mile of the boundary between the District's area of jurisdiction and the jurisdiction of a city or town, then the District shall advise, in writing, the city or town and provide a copy of any development plan or any application that has been filed with the District for a floodplain use permit or variance. The District shall also advise any city or town in writing and provide a copy of any development plan of any major development proposed within a regulatory floodplain, or floodway which could affect regulatory floodplains, floodway, erosion hazard area, or watercourses within that city's or town's area of jurisdiction. Written notice and a copy of the plan of development shall be sent to any adjacent jurisdiction no later than 3 working days after having been received by the District. (Ord. 2005 FC-2 § 2 (part), 2005; Ord. 1999 FC-1 § 1 (part), 1999; Ord. 1988 FC-2 Art. 17 (D), 1988)

## Chapter 16.60

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### AMENDMENTS

#### Sections:

**16.60.010 Amendments require public hearing process.**

**16.60.020 Petition, study and determination procedures.**

#### **16.60.010**

**Amendments require public hearing process.**

This title may be amended only after a public hearing at which parties-in-interest and other citizens have an opportunity to be heard. (Ord. 1999 FC-1 § 1 (part), 1999; Ord. 1988 FC-2 Art. 18 (A), 1988)

#### **16.60.020**

**Petition, study and determination procedures.**

The Chief Engineer or any affected person may petition for an amendment to this title, and shall initiate such a proceeding by filing with the Board a proper and complete petition for such change on the form or forms provided by the Board.

- A. Staff Report. Upon receipt of such petitions, the Chief Engineer, with the assistance, advice and counsel of the Flood Control District Advisory Committee shall make a study and report the findings to the Board. The report shall be made available to the applicant and other interested parties at least 30 days before the date of any public hearing for the respective petition.
- B. Board Action. Upon receipt of the Chief Engineer report and recommendation, the Board shall hold a public hearing thereon at which the petitioner and other parties in interest have an opportunity to be heard. At least 30 days prior to the hearing, a notice of the time and place of hearing shall be published in a newspaper of general circulation within the area of jurisdiction of the Board; or, if no newspaper of general circulation is regularly published within the area of jurisdiction, a newspaper of general circulation regularly published nearest the area of jurisdiction.
- C. A notice of any hearing, accompanied by a copy of each of the proposed amendments, shall be furnished to the director of the ADWR at least 30 days prior to the date of such hearing. A copy of any amendment adopted by the Board shall, within 5 days thereafter, be file with the director of the ADWR. (Ord. 2005 FC-2 § 2 (part), 2005; Ord. 1999 FC-1 § 1 (part), 1999; Ord. 1988 FC-2 A18 (B), 1988)



## Chapter 16.64

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### ENFORCEMENT

#### Sections:

#### 16.64.005 Definitions

#### 16.64.010 Unlawful activities designated-Penalty.

#### 16.64.020 Abatement of violations - Procedures.

#### 16.64.030 Structures deemed nuisance-Remedies.

#### 16.64.040 Remedies for damages-Actions authorized.

#### 16.64.050 Removal of violation authorized when.

#### 16.64.060 Recovery of administrative and other costs.

#### 16.64.070 Appeal of the Final Decision and Order of Chief Engineer

#### 16.64.005 Definitions

For purposes of this Chapter, the following definitions shall apply:

- A. Board of Hearing Review – Board of Hearing Review means a board which consists of one member from each Board of Directors’ district and may be the same member appointed to the Flood Control District Advisory Committee who is responsible for reviewing final decisions and orders of the Chief Engineer for violations of this Title.
- B. Final Decision and Order – Final Decision and Order means the determination made by the Chief Engineer of a violation of this Title after considering the written findings and recommendations of the Hearing Officer.
- C. Hearing Officer - Hearing Officer means an individual who is appointed by the Board and is responsible for hearing and deciding all civil proceedings established by ordinance, regulation, rule or provision established by the Board.

#### **16.64.010**

#### **Unlawful activities designated-Penalty.**

- A. It is unlawful for any person or entity to engage in development which will divert, retard, or obstruct the flow of waters in a watercourse if it creates a hazard to life or property without first securing written authorization from the District. Where the watercourse is a delineated floodplain, it is unlawful to excavate or build any structure affecting the flow of waters without securing written authorization required by A.R.S. 48-3613.
- B. It is unlawful for any person or entity to grade or disturb more than 1/3 acre of regulated hydroriparian and/or mesoriparian and/or xeroriparian habitat and/or important riparian habitat, which are subject to permits under provisions of this chapter without first securing the permit.
- C. It is unlawful for any person or entity to neglect maintenance responsibilities on private drainage improvements as outlined in 16.38.
- D. It is unlawful for any person to fail to obtain a permit required by this title or to fail to comply with all the terms and conditions of a permit issued pursuant to this title.
- E. It is unlawful for any person to damage or interfere with a facility that is owned, operated or otherwise under the jurisdiction of the Flood Control District.

- F. Any person or entity violating the provisions of this title or any terms and conditions of a permit issued pursuant to this title and A.R.S. 48-3615 shall be guilty of a Class 2 misdemeanor.
- G. Any person or entity violating the provisions of this Title or any terms and conditions of a permit issued pursuant to this Title may be subject to a penalty in the amount not to exceed seven hundred and fifty dollars (\$750) for an individual, or ten thousand dollars (\$10,000) for an enterprise. Each day of continued violation constitutes a separate violation. (Ord. 2010 FC-1; Ord. 2005 FC-2 § 2 (part), 2005; Ord. 1999 FC-1 § 1 (part) 1999; Ord. 1988 FC-2 Art. 19, 1988)

#### **16.64.020**

##### **Abatement of violations - Procedures.**

- A. Pursuant to A.R.S. 48-3615.01, violators of this Title are subject to civil penalties or other legal action for failure to comply with any provision of this Title.
- B. The Floodplain Administrator is authorized to investigate all complaints of suspected violations of this Title.
  - 1. Inspection. The Floodplain Administrator may conduct inspections to determine if violations exist.
    - a. During regular business hours, the District and its agents may have reasonable access for inspection pursuant as provided by written authorization issued pursuant to A.R.S. 48-3613, the terms or conditions of a permit, or to investigate a concern of non-compliance if no written authorization has been issued. In the case of an emergency, the District may enter at any time.
    - b. If the District and its agents are denied access for inspection, the Chief Engineer of the District may apply for an administrative search warrant from a local court of general jurisdiction and shall be served by a certified peace officer.
  - 2. Notice of Violation. Upon finding a violation, the Floodplain Administrator shall provide a written notice of violation to the property owner:
    - a. Identifying the applicable statutes, regulations, ordinances, or permit terms that have been violated.
    - b. Identifying the nature of the violation and any actions required to achieve compliance required by this title, including any additional information or engineering analyses required to show compliance.
    - c. Establishing that the notice is an order to cease and desist, effective on the date served.
    - d. Providing a time schedule for corrective actions for compliance, or to request a hearing.
    - e. Identifying the consequences for failure to take corrective action, including the imposition of monetary penalties.
  - 3. Upon request for a hearing, the Floodplain Administrator shall present evidence of the violation to the hearing officer.
- C. The Board shall appoint a Hearing Officer, who may be an employee of the District. The Board shall adopt written rules of procedure for the hearing and review of hearings. These rules of procedures shall be adopted in the same manner as the Ordinance.
- D. The Hearing Officer shall hear evidence from the alleged violator and from the District regarding the alleged violation and prepare and submit a written finding of facts and

summary of violations, including any recommendations to abate or ameliorate the violation and any harm or damage arising from the violation and the imposition of any civil penalties. The written finding shall be submitted to the Chief Engineer and the owner or alleged violator within 30 calendar days of the hearing.

- E. The Chief Engineer is responsible for implementing procedures for an administrative hearing, and ensuring that a Hearing Officer is made available, if required.
  - 1. Upon receipt of the Hearing Officer's written findings and recommendation, the Chief Engineer shall render a final decision and order in writing. The final order and decision may include:
    - a. A determination of violation;
    - b. Actions necessary to mitigate the violation and any damage resulting from the violation; and
    - c. The imposition of a civil penalty pursuant to ARS 48-3615.01, if appropriate.
  - 2. Any party found in violation may request review of the final decision and order of the Chief Engineer by the board of hearing review pursuant to 16.64.070;
- F. The Board is responsible for adopting rules and procedures for hearings and review of decisions prescribed by this chapter, adopting and enforcing a civil penalty policy for violations of Title, appointing hearing officers to hear and determine actions, and establishing a board of hearing review.
- G. The final decision of the board of hearing review is subject to judicial review pursuant to Arizona Revised Statutes Title 12, Chapter 7, Article 6.
- H. Establishment of civil penalties for violations of this Title or interference with the District's facilities does not preclude the District from pursuing other remedies as provided by law. (Ord. 2010 FC-1, Ord. 2005 FC-2 § 2 (part), 2005)
- I. If deemed appropriate by the Board, the Chief Engineer shall submit to the Administrator of the Federal Insurance Administration a declaration for denial of insurance stating that the property is in violation of a cited state or local law, regulation, or title, pursuant to Section 1316 of National Flood Insurance Act 1968, and as amended.
- J. The County and the District shall be entitled to recover all costs including administrative, engineering, and legal costs, as well as actual costs, pursuant to 16.20.100. (Ord. 2010 FC-1, Ord. 2005 FC-2 § 2 (part), 2005).

### **16.64.030**

#### **Structures deemed nuisances-Remedies.**

To remedy a violation means to bring the structure or other development into compliance with state or local floodplain management regulations or, if this is not possible, to reduce the impacts of its noncompliance. Ways in which impacts may be reduced include protecting the structure or other affected development from flood damages, implementing the enforcement provisions of the ordinance or otherwise deterring future similar violations, or reducing federal financial exposure with regard to the structure or other development.

- A. Every new structure, building, fill, excavation, or development located or maintained within any regulatory floodplain, riparian habitat, or erosion hazard area in violation of this title and without written authorization from the Board is a public nuisance per se and may be abated, prevented, or restrained by action of the state or any political subdivision of the state.
- B. As a further remedy, the County and the District may withhold the issuance of building permits or floodplain use permits for any development or improvement on the same parcel,

or on a contiguous parcel of land under the same ownership, where any improvement or development on the property is not in compliance with this title or any other provision of law relating to that development.

- C. In order to ensure that subsequent property owners are informed of existing violations on a property, the District may record written notifications of violations with the Office of the County Recorder. This notification shall run with the land. Upon mitigation of the violation, the District will record an additional notification indicating that compliance has been achieved. The District shall record this notice within 30 days of verifying that compliance has been achieved. (Ord 2010 FC-1, Ord. 2005 FC-2 § 2 (part), 2005; Ord. 1999 FC-1 § 1 (part), 1999; Ord. 1988 FC-2 Art. 7 (A) (2), (4)1988)

#### **16.64.040**

##### **Remedies for damages-Actions authorized.**

- A. In addition to other penalties or remedies otherwise provided by law, the state of Arizona, any political subdivision thereof, or any person who may be damaged as a result of the diversion, retardation or obstruction of water within the regulatory floodplain, shall have the right to commence, maintain, and prosecute any appropriate action or pursue any remedy to enjoin, abate, or otherwise prevent any person from violating or continuing to violate any provision of this title.
- B. If any person is found to be in violation of any provision of this title, the court may require the violator to comply with this title or remove the obstruction and restore the floodplain to its original condition. (Ord. 2005 FC-2 § 2 (part), 2005; Ord. 1999 FC-1 § 1 (part), 1999; Ord. 1988 FC-2 Art. 7 (A) (3), 1988)

#### **16.64.050**

##### **Removal of violation authorized when.**

Upon written notice, the Chief Engineer may cause any structure, encroachment, obstruction diversion, hazard or work constructed without a floodplain use permit, or which is in violation with the terms of a permit, to be removed immediately at the expense of the person who caused the structure, encroachment, or work; if said structure, encroachment, or work will cause an immediate danger to life and/or property. (Ord. 2005 FC-2 § 2 (part), 2005; Ord. 1999 FC-1 § 1 (part), 1999; Ord. 1988 FC-2 Art. 7 (H), 1988)

#### **16.64.060**

##### **Recovery of administrative and other costs.**

The County and the District shall be entitled to recover all costs, administrative, engineering and legal, as well as actual costs to remove or modify the structure, encroachment, and/or any other work in violation of this title. (Ord. 2005 FC-2 § 2 (part), 2005; Ord. 1999 FC-1 § 1 (part), 1999; Ord. 1988 FC-2 Art. 7 (I), 1988)

#### **16.64.070 Appeal of the Final Decision and Order of Chief Engineer**

- A. The following hearing procedures apply to an appeal of a final decision and order of the Chief Engineer to the board of hearing review:
1. The violator may appeal the final decision and order of the Chief Engineer to the board of hearing review by providing a written request on forms approved by the District to the

- Chief Engineer and the Clerk of the Board within 15 business days following receipt of the Chief Engineer's decision.
2. The written request may require technical evidence that disputes the findings of the Chief Engineer, and contains a concise explanation of all matters in dispute including any pertinent maps, drawings, data, or other information in support of the appeal petition. If required, the technical evidence must be prepared and sealed by an Arizona registered civil engineer, or for mitigation plans, by an Arizona registered landscape architect or other qualified professional.
  3. Incomplete petitions shall not be accepted.
    - a. The Chief Engineer shall notify the applicant within 5 working days of receipt whether or not the application is complete.
    - b. If the application is determined to be incomplete, the applicant shall submit additional materials and information as may be determined to be reasonably necessary by the Chief Engineer.
  4. The Chief Engineer shall prepare a final report and present the findings to the applicant and the Clerk of the Board within 15 days of receipt of the petition. The applicant shall have 30 calendar days to respond to the findings of the Chief Engineer. If the response includes new technical evidence, the Chief Engineer shall prepare a revised report, and present these findings to the applicant and the Clerk of the Board within 30 days of receipt of the new technical information.
  5. The board of hearing review meeting scheduled within 30 days after the Chief Engineers final report. After the meeting has been scheduled, no new technical information can be submitted. The board of hearing review shall meet at such times as it considers necessary for the transaction of appeals of any final decisions and orders of the Chief Engineer.
  6. The board of hearing review's public hearing process shall include the following:
    - a. A mailed notification to all parties who received the final decision and order, as well as all other parties who attended the violation hearing at which the Chief Engineer took action,
    - b. An opportunity for property owners and residents that are impacted by the violation to make comments on the appeal, and
    - c. Review by the Chief Engineer of the appeal by the appellant, the final staff report, and the circumstances and testimony presented at the hearing when such hearings are held.
  7. The board of hearing review shall render its decision within 30 calendar days of the close of the hearing.
- B. If a person alleged to be in violation continues the violation after the Chief Engineer has issued a final decision and order or after the board of hearing review has completed its review, the Chief Engineer may apply for a temporary restraining order or preliminary or permanent injunction from the superior court in accordance with the rules of civil procedure. (Ord. 2010 FC-1)

**SECTION 2.** The various Pima County and Pima County Flood Control District officers and employees are hereby authorized and directed to perform all acts necessary or desirable to give effect to this ordinance.

PASSED AND ADOPTED this \_\_\_\_ day of \_\_\_\_\_, 2010 by the Pima County Flood Control District Board of Directors, Pima County, Arizona.

ATTEST:

BOARD OF DIRECTORS OF THE PIMA COUNTY  
FLOOD CONTROL DISTRICT

\_\_\_\_\_  
Lori Godoshian  
Clerk of the Board

\_\_\_\_\_  
Richard Elias, Chair

Recommended to the Board:

\_\_\_\_\_  
Suzanne Shields, Director  
Pima County Flood Control District

Approved as to form:

\_\_\_\_\_  
Deputy County Attorney for the District