

COCONINO COUNTY

FLOODPLAIN REGULATIONS



COCONINO
COUNTY ARIZONA

FLOOD CONTROL DISTRICT

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CONTENTS

SECTION 1.0	STATUTORY AUTHORIZATION, FINDINGS OF FACT, PURPOSE, AND METHODS	1
1.1	STATUTORY AUTHORIZATION	1
1.2	FINDINGS OF FACT	1
1.3	STATEMENT OF PURPOSE	1
1.4	METHODS OF REDUCING FLOOD LOSSES	1
SECTION 2.0	DEFINITIONS	3
2.1	DEFINITIONS	3
SECTION 3.0	GENERAL PROVISIONS	10
3.1	LANDS TO WHICH THESE REGULATIONS APPLY	10
3.2	BASIS FOR ESTABLISHING SPECIAL FLOOD HAZARD AREAS	10
3.3	COMPLIANCE	10
3.4	ABROGATION AND GREATER RESTRICTIONS	10
3.5	INTERPRETATIONS	10
3.6	DISCLAIMER OF LIABILITY	10
3.7	STATUTORY EXCEPTIONS	11
3.8	VIOLATIONS	12
3.9	ABATEMENT OF VIOLATIONS	12
3.10	DECLARATION OF PUBLIC NUISANCE	13
3.11	SEVERABILITY	13
SECTION 4.0	ADMINISTRATION	14
4.1	DESIGNATION OF THE FLOODPLAIN ADMINISTRATOR	14
4.2	DUTIES AND RESPONSIBILITIES OF THE FLOODPLAIN ADMINISTRATOR	14
4.2.1	PERMIT REVIEW	14
4.2.2	SUBSTANTIAL IMPROVEMENT AND SUBSTANTIAL DAMAGE ASSESSMENTS	14
4.2.3	USE OF OTHER BASE FLOOD DATA	14
4.2.4	OBTAIN AND MAINTAIN FOR PUBLIC INSPECTION	14
4.2.5	NOTIFICATION TO OTHER ENTITIES	15
4.2.6	MAP DETERMINATIONS	15
4.2.7	REMEDIAL ACTIONS	16
4.3	ESTABLISHMENT OF DEVELOPMENT PERMIT	16
SECTION 5.0	PROVISIONS FOR FLOOD HAZARD REDUCTION	17
5.1	STANDARDS OF CONSTRUCTION – ANCHORING, CONSTRUCTION MATERIALS AND METHODS	17
5.1.1	ANCHORING	17

5.1.2	CONSTRUCTION MATERIALS AND METHODS.....	17
5.2	STANDARDS OF CONSTRUCTION – ELEVATION AND FLOODPROOFING	17
5.2.1	RESIDENTIAL CONSTRUCTION.....	17
5.2.2	NONRESIDENTIAL CONSTRUCTION (COMMERICAL CONSTRUCTION OR INDUSTRIAL CONSTRUCTION).....	18
5.2.3	MANUFACTURED HOMES	18
5.2.4	ACCESSORY STRUCTURES (DETACHED GARAGES & STORAGE STRUCTURES).....	18
5.2.5	FLOOD OPENINGS.....	19
5.2.6	MACHINERY AND SERVICE EQUIPMENT	19
5.3	STANDARDS FOR STORAGE OF MATERIALS AND EQUIPMENT.....	19
5.4	STANDARDS FOR WATER SUPPLY AND WASTE DISPOSAL SYSTEMS	19
5.5	ADDITIONAL DEVELOPMENT STANDARDS, INCLUDING SUBDIVISIONS	20
5.6	STANDARDS FOR MANUFACTURED HOMES	20
5.7	STANDARDS FOR RECREATIONAL VEHICLES.....	20
5.8	FLOODWAYS.....	21
SECTION 6.0	VARIANCE PROCEDURE.....	22
6.1	NATURE OF VARIANCES.....	22
6.2	BOARD OF REVIEW.....	22
6.3	CONDITIONS FOR VARIANCES	23

SECTION 1.0 STATUTORY AUTHORIZATION, FINDINGS OF FACT, PURPOSE, AND METHODS

1.1 STATUTORY AUTHORIZATION

In A.R.S. §§ 48-3601 through 48-3628, the Arizona State Legislature has delegated the responsibility to each county flood control district to adopt [floodplain management](#) regulations designed to promote the public health, safety, and general welfare.

1.2 FINDINGS OF FACT

- A. The [Special Flood Hazard Areas](#) of Coconino County are subject to periodic inundation, which may result in loss of life and property, health and safety hazards, disruption of commerce and governmental services, extraordinary public expenditures for [flood](#) mitigation and relief, and impairment of the tax base, all of which adversely affect the public health, safety, and general welfare.
- B. These [flood](#) losses may be caused by the cumulative effect of [obstructions](#) in [Special Flood Hazard Areas](#), which increase [flood](#) heights and velocities and, when inadequately anchored, cause damage in other areas. Uses that are inadequately floodproofed, elevated, or otherwise protected from [flood](#) damage also contribute to [flood](#) loss.

1.3 STATEMENT OF PURPOSE

It is the purpose of these Regulations to promote public health, safety, and general welfare, and to minimize public and private losses due to [flood](#) conditions in specific areas by provisions designed to:

- A. Protect human life and health;
- B. Minimize expenditure of public money for costly flood control projects;
- C. Minimize the need for rescue and relief efforts associated with flooding generally undertaken at the expense of the public;
- D. Minimize prolonged business interruptions;
- E. Minimize damage to public facilities and utilities such as water mains, gas mains, electric lines, telephone lines, sewer lines, streets, and bridges located in Special Flood Hazard Areas;
- F. Help maintain a stable tax base by providing for the sound use and development of Special Flood Hazard Areas to minimize blight areas caused by flooding; and
- G. Participate in and maintain eligibility for flood insurance and disaster relief.

1.4 METHODS OF REDUCING FLOOD LOSSES

To accomplish its purposes, these Regulations include methods and provisions to:

- A. Restrict or prohibit uses which are dangerous to health, safety, and property due to water or [erosion](#) hazards that result in damaging increases in [erosion](#), [flood](#) heights, or velocities;
- B. Require that uses vulnerable to [floods](#), including facilities which serve such uses, be

protected against [flood](#) damage at the time of initial construction;

- C. Control the alteration of natural [floodplains](#), stream channels, and natural protective barriers, which help accommodate or channel floodwaters;
- D. Control filling, grading, dredging, and other [development](#), which may increase [flood](#) damage; and
- E. Prevent or regulate the construction of [flood](#) barriers, which will unnaturally divert floodwaters, or which may increase [flood](#) hazards in other areas.

SECTION 2.0 DEFINITIONS

2.1 DEFINITIONS

Accessory Structure: A structure on the same parcel of property as a principal structure and the use of which is incidental to the use of the principal structure. For [floodplain management](#) purposes, the term includes only accessory structures used for parking and storage.

Accessory Use: A use which is incidental and subordinate to the principal use of the parcel of land on which it is located.

Alluvial Fan: A geomorphologic feature characterized by a cone or fan-shaped deposit of boulders, gravel, and fine sediments that have been eroded from mountain slopes, transported by [flood](#) flows, and then deposited on the valley floors, and which is subject to flash [flooding](#), high velocity flows, debris flows, [erosion](#), sediment movement and deposition, and channel migration.

Appeal: A request for a review of the [Floodplain Administrator's](#) interpretation of any provision of these Regulations or a request for a [variance](#).

Apex: A point on an alluvial fan or similar landform below which the flow path of the major stream that formed the fan becomes unpredictable and alluvial fan [flooding](#) can occur.

Area of Shallow Flooding: A designated [Zone AO](#), [Zone AH](#), [Zone AR/AO](#), or Zone [AR/AH](#), on a [community's Flood Insurance Rate Map](#) with a one percent or greater annual chance of [flooding](#) to an average depth of one to three feet where a clearly defined channel does not exist, where the path of [flooding](#) is unpredictable, and where velocity flow may be evident. Such [flooding](#) is characterized by ponding or sheet flow.

Area of Special Flood-Related Erosion Hazard: The land within a [community](#) which is most likely to be subject to severe flood-related [erosion](#) losses.

Base Flood: A [flood](#) which has a one percent chance of being equaled or exceeded in any given year.

Base Flood Elevation (BFE): The computed elevation to which floodwater is anticipated to rise during the [Base Flood](#).

Basement: Any area of the [building](#) having its floor sub-grade - i.e., below ground level - on all sides.

Building: See "Structure."

Community: Any state or area or political subdivision thereof, or any Indian tribe or authorized tribal organization, or authorized native organization, which has authority to adopt and enforce [floodplain management](#) regulations for the areas within its jurisdiction.

Development: Any man-made change to improved or unimproved real estate, including but not limited to [buildings](#) or other [structures](#), mining, dredging, filling, grading, paving, excavation or drilling operations, or storage of equipment or materials.

Determining Market Value of Existing Structures: "[Market value](#)" shall be determined by estimating the cost to replace the structure in new condition and adjusting that cost figure by the amount of depreciation which 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 considering 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.

Elevation Certificate: An administrative tool of the National Flood Insurance Program (NFIP) that is used to provide elevation information necessary to ensure compliance with [community floodplain management](#) ordinance, to determine the proper insurance premium rate, and to support a request for a Letter of Map Amendment (LOMA) or Letter of Map Revision based on fill (LOMR-F).

Encroachment: The advance or infringement of uses, plant growth, fill, excavation, [buildings](#), permanent [structures](#), or [development](#) into a [floodplain](#), which may impede or alter the flow capacity of a [floodplain](#).

Erosion: The process of the gradual wearing away of landmasses. This peril is not, per se, covered under the National Flood Insurance Program.

Existing Manufactured Home Park or Subdivision: A manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including, at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) is completed before the effective date of the [floodplain management](#) regulations adopted by the [community](#).

Expansion to an Existing Manufactured Home Park or Subdivision: The preparation of additional sites by the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads).

Flood Insurance Rate Map (FIRM): The official map of a [community](#), on which the Federal Emergency Management Agency has delineated both the [Special Flood Hazard Areas](#) and the risk premium zones applicable to the [community](#).

Flood Insurance Study (FIS): The official report provided by the Federal Emergency Management Agency that includes [flood](#) profiles, [Flood Insurance Rate Maps](#), and the water surface elevation of the [base flood](#).

Flood or flooding: A general and temporary condition of partial or complete inundation of normally dry land areas from:

- The overflow of floodwaters;
- The unusual and rapid accumulation or runoff of surface waters from any source; and/or
- The collapse or subsidence of land along the shore of a lake or other body of water as a result of [erosion](#) or undermining caused by waves or currents of water exceeding anticipated cyclical levels or suddenly caused by an unusually high water level in a natural body of water, accompanied by a severe storm or by an unanticipated force of nature, such as flash flood or an abnormal tidal surge, or by some similarly unusual and unforeseeable event which results in [flooding](#) as defined in this definition.

Floodplain Administrator: The [community](#) official designated by title to administer and enforce the [floodplain management](#) regulations.

Floodplain Board: The Board of Directors of the Flood Control District of Coconino County at such times as they are engaged in the enforcement of these Regulations. (Floodplain Board as defined in A.R.S. §48-3601 for counties.)

Floodplain Management: The operation of an overall program of corrective and preventive measures for reducing [flood](#) damage and preserving and enhancing, where possible, natural resources in the [floodplain](#), including but not limited to emergency preparedness plans, [flood](#) control works, floodplain management regulations, and open space plans.

Floodplain Management Regulations: These Regulations and other zoning ordinances, subdivision regulations, building codes, health regulations, special purpose ordinances (such as grading and [erosion](#) control), and other application of police power which control [development](#) in [flood](#)-prone areas. This term describes federal, state, or local regulations in any combination thereof, which provide standards for preventing and reducing [flood](#) loss and damage.

Floodplain or Flood-Prone Area: Any land area susceptible to being inundated by water from any source. See "[Flood or flooding](#)."

Floodproofing: Any combination of structural and nonstructural additions, changes, or adjustments to nonresidential [structures](#) which reduce or eliminate risk of flood damage to real estate or improved real property, water and sanitary facilities, [structures](#), and their contents by means other than elevation.

Flood-Related Erosion Area Management: The operation of an overall program of corrective and preventive measures for reducing flood-related [erosion](#) damage, including but not limited to emergency preparedness plans, flood-related [erosion](#) control works, and [floodplain management](#) regulations.

Flood-Related Erosion Area or Flood-related Erosion Prone Area: A land area adjoining the shore of a lake or other body of water, which due to the composition of the shoreline or bank and high-water levels or wind-driven currents, is likely to suffer flood-related [erosion](#) damage.

Flood-Related Erosion: The collapse or subsidence of land along the shore of a lake or other body of water as a result of undermining caused by waves or currents of water exceeding anticipated cyclical levels or suddenly caused by an unusually high water level in a natural body of water, accompanied by a severe storm, or by an unanticipated force of nature, such as a flash flood or an abnormal tidal surge, or by some similarly unusual and unforeseeable event which results in [flooding](#).

Floodway Fringe: That area of the [floodplain](#) on either side of the "Regulatory Floodway" where [encroachment](#) may be permitted.

Floodway: The channel of a river or other [watercourse](#) and the adjacent land areas that must be reserved to discharge the [base flood](#) without cumulatively increasing the water surface elevation more than a designated height. Also referred to as "Regulatory Floodway."

Fraud and Victimization: As related to [Section 6.0](#) of these Regulations, means that the [variance](#) granted must not cause fraud on or victimization of the public. In examining this requirement, the [Floodplain Board](#) will consider the fact that every newly constructed [building](#) adds to government responsibilities and remains a part of the [community](#) for fifty to one-hundred years. [buildings](#) that are permitted to be constructed below the [Regulatory Flood Elevation](#) are subject during all those years to increased risk of damage from floods, while future owners of the property and the [community](#) are subject to all the costs, inconvenience, danger, and suffering that those increased flood damages bring. In addition, future owners may purchase the property, unaware that it is subject to potential flood damage, and can be insured only at very high flood insurance rates.

Functionally Dependent Use: A use which cannot perform its intended purpose unless it is located or carried out near water. The term includes only docking facilities, port facilities that are necessary for the loading and unloading of cargo or passengers, and ship building and ship repair facilities, and does not include long-term storage or related manufacturing facilities.

Governing Body: The local governing unit that is empowered to adopt and implement regulations to provide for the public health, safety, and general welfare of its citizenry.

Hardship: As related to [Section 6.0](#) of these Regulations. The [Floodplain Board](#) requires that the hardship be exceptional, unusual, and peculiar to the property involved. Mere economic or financial hardship alone is not exceptional. Inconvenience, aesthetic considerations, physical handicaps, personal preferences, or the disapproval of one's neighbors likewise cannot, as a rule, qualify as an exceptional hardship. All 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.

Highest Adjacent Grade (HAG): The highest natural elevation of the ground surface prior to construction next to the proposed walls of a structure.

Historic Structure: Any structure that is:

1. 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 as meeting the requirements for individual listing on the National Register; or
2. Certified or preliminarily determined by the Secretary of the Interior 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; or
3. Individually listed on a state inventory of historic places in states with historic preservation programs which have been approved by the Secretary of Interior; or
4. Individually listed on a local inventory of historic places in communities with historic preservation programs that have been certified either:
 - a. By an approved state program as determined by the Secretary of the Interior, or
 - b. Directly by the Secretary of the Interior in states without approved programs.

Levee: A man-made structure, usually an earthen embankment, designed and constructed in accordance with sound engineering practices to contain, control, or divert the flow of water to provide mitigation from temporary [flooding](#).

Levee System: A flood mitigation system which consists of a [levee](#), or [levees](#), and associated [structures](#), such as closure and drainage devices, which are constructed and operated in accordance with sound engineering practices.

Lowest floor: The lowest floor of the lowest enclosed area including the [basement](#), see "[basement](#)". An unfinished or flood resistant enclosure, usable solely for parking of vehicles, building access, or storage in an area other than a [basement](#) area is not considered a [building](#)'s lowest floor, provided that such enclosure is not built to render the structure in violation of the applicable non-elevation design requirements of these Regulations.

Manufactured Home: A structure, transportable in one or more sections, which is built on a permanent chassis and is designed for use with or without a permanent foundation when attached to the required utilities. The term "manufactured home" does not include a "[recreational vehicle](#)."

Manufactured Home Park or Subdivision: A parcel (or contiguous parcels) of land divided into two or more [manufactured home](#) lots for rent or sale.

Market Value: Replacement cost of a structure less depreciation since construction.

Mean sea level: For purposes of the National Flood Insurance Program, the National Geodetic Vertical Datum (NGVD) of 1929, North American Vertical Datum (NAVD) of 1988, or other datum, to which Base Flood Elevations shown on a [community's Flood Insurance Rate Map](#) are referenced.

New Construction: For the purposes of determining insurance rates, [structures](#) for which the “[start of construction](#)” commenced on or after the effective date of an initial [Flood Insurance Rate Map](#) or after December 31, 1974, whichever is later, and includes any subsequent improvements to such [structures](#). For [floodplain management](#) purposes, “[new construction](#)” means [structures](#) for which the “[start of construction](#)” commenced on or after the effective date of a [floodplain management](#) regulation adopted by a [community](#) and includes any subsequent improvements to such [structures](#).

New Manufactured Home Park or Subdivision: A [manufactured home park or subdivision](#) for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) is completed on or after the effective date of [floodplain management](#) regulations adopted by the [community](#).

Obstruction: Including, but not limited to, any dam, wall, wharf, embankment, levee, dike, pile, abutment, mitigation, excavation, channelization, bridge, conduit, culvert, [building](#), wire, fence, rock, gravel, refuse, fill, [structure](#), vegetation, or other material in, along, across, or projecting into any [watercourse](#) which may alter, impede, retard, or change the direction and/or velocity of the flow of water, or due to its location, its propensity to snare or collect debris carried by the flow of water, or its likelihood of being carried downstream.

One-hundred-year flood or 100-year flood: A common name for the flood having a one percent chance of being equaled or exceeded in any given year. See “[base flood](#).”

Person: An individual or the individual’s agent, a firm, partnership, association, corporation, or an agent of the groups, or this state, its agencies, or political subdivisions.

Program Deficiency: A defect in a [community](#)’s [floodplain management](#) regulations or administrative procedures that impairs effective implementation of those [floodplain management](#) regulations.

Public Safety and Nuisance: As related to [Section 6.0](#) of these Regulations, means that the granting of a [variance](#) must not result in anything which is injurious to the safety or health of an entire community or neighborhood, or any considerable number of persons, or unlawfully obstructs the free passage or use, in the customary manner, of any navigable lake, or river, bay, stream, canal, or basin.

Recreational Vehicle: A vehicle which is:

1. Built on a single chassis, and
2. 400 square feet or less when measured at the largest horizontal projection, and
3. Designed to be self-propelled or permanently towable by a light-duty truck; and
4. Designed primarily not for use as a permanent dwelling but as temporary living quarters for recreational, camping, travel, or seasonal use.

Regulatory Flood Elevation (RFE): An elevation one foot above the Base Flood Elevation.

Regulatory Floodway: The channel of a river or other [watercourse](#) and the adjacent land areas that must be reserved to discharge the [base flood](#) without cumulatively increasing the water surface elevation more than a designated height.

Remedy a Violation: To bring the [structure](#) or other [development](#) into compliance with Federal, State, or local [floodplain management](#) regulations, or if this is not possible, to reduce the impacts of its noncompliance. Ways that impact may be reduced include protecting the [structure](#) or other affected [development](#) from flood damages, implementing the enforcement provisions of these Regulations or otherwise deterring future similar violations, or reducing State or Federal financial exposure with regard to the [structure](#) or other [development](#).

Riverine: Relating to, formed by, or resembling a river (including tributaries), stream, brook, etc.

Special Flood Hazard Area (SFHA): An area in the [floodplain](#) subject to a 1 percent or greater chance of [flooding](#) in any given year. It is shown on a [Flood Insurance Rate Map](#) as [Zone A](#), [Zone AO](#), [Zone AE](#), [Zone AH](#), [Zone AR](#), or [Zone A99](#).

Start of Construction: Includes [substantial improvement](#) and other proposed new [development](#) and means the date the building permit was issued, provided the actual start of construction, repair, reconstruction, rehabilitation, addition, placement, or other improvement was within 180 days from the date of the permit. The actual start means either 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; or the placement of a [manufactured home](#) on a foundation. Permanent construction does not include land preparation such as clearing, grading, and filling; nor does it include the installation of streets and/or walkways; nor does it include excavation for a [basement](#), footings, piers, foundations, or the erection of temporary forms; nor does it include the installation on the property of accessory [buildings](#), such as garages or sheds, not occupied as dwelling units or not part of the main [structure](#). 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 that alteration affects the external dimensions of the [building](#).

Structure: A walled and roofed [building](#) that is principally above ground; this includes a gas or liquid storage tank or a manufactured home.

Substantial Damage: 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.

Substantial Improvement: Any reconstruction, rehabilitation, addition, or other improvement to a [structure](#), the total cost of which equals or exceeds 50 percent of the [market value](#) of the [structure](#) before the "[start of construction](#)" of the improvement. This term includes [structures](#) which have incurred "[substantial damage](#)", regardless of the actual repair work performed. 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 will not preclude the [structure's](#) continued designation as a "[historic structure](#)."

Variance: A grant of relief from the requirements of these Regulations which permits construction or other uses of property in a manner that would otherwise be prohibited by these Regulations.

Violation: The failure of a [structure](#) or other [development](#) to be fully compliant with the [community's floodplain management](#) regulations. A [structure](#) or other [development](#) without the [elevation certificate](#), other certifications, or other evidence of compliance required in these Regulations is presumed to be in violation until such time as that documentation is provided.

Water Surface Elevation: The height, in relation to the National Geodetic Vertical Datum (NGVD) of 1929, North American Vertical Datum (NAVD) of 1988, or other datum, of floods of various magnitudes and frequencies in the [floodplains](#) of coastal or [riverine](#) areas.

Watercourse: A lake, river, creek, stream, wash, arroyo, channel, or other topographic feature on or over which waters flow at least periodically. Watercourse includes specifically designated areas in which substantial flood damage may occur.

Zone A: No Base Flood Elevations determined.

Zone AE: Base Flood Elevations determined.

Zone AH: Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.

Zone AO: Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan [flooding](#), velocities also determined.

Zone AR: [Special Flood Hazard Area](#) formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide mitigation from the 1% annual chance or greater flood.

Zone A99: Area to be protected from 1% annual chance flood by a federal flood mitigation system under construction; no Base Flood Elevations determined.

Zone D: Areas in which flood hazards are undetermined, but possible.

Zone X (Unshaded): Areas determined to be outside the 0.2% annual chance [floodplain](#).

Zone X (Shaded): Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

SECTION 3.0 **GENERAL PROVISIONS**

3.1 LANDS TO WHICH THESE REGULATIONS APPLY

These Regulations shall apply to all [Special Flood Hazard Areas](#) within the boundaries of Coconino County except those incorporated cities and towns which have adopted a resolution that it intends to assume the powers and duties of [floodplain management](#).

3.2 BASIS FOR ESTABLISHING SPECIAL FLOOD HAZARD AREAS

The [Special Flood Hazard Areas](#) identified by the Federal Emergency Management Agency (FEMA) in a scientific and engineering report entitled The [Flood Insurance Study \(FIS\)](#) for Coconino County, Arizona and Incorporated Areas dated September 3, 2010, with accompanying [Flood Insurance Rate Maps](#) dated September 3, 2010, and all subsequent amendments and/or revisions, are hereby adopted by reference and declared to be a part of these Regulations.

This [FIS](#) and attendant mapping are the minimum area of applicability of these Regulations and may be supplemented by studies for other areas which allow implementation of these Regulations, and which are recommended to the [Floodplain Board](#) by the [Floodplain Administrator](#). The [Floodplain Board](#), within its area of jurisdiction, shall delineate (or may, by rule, require developers of land to delineate) for areas where [development](#) is ongoing or imminent, and thereafter as [development](#) becomes imminent, [floodplains](#) consistent with the criteria developed by the Federal Emergency Management Agency and the Director of the Arizona Department of Water Resources. The [Flood Insurance Study](#) and [Flood Insurance Rate Maps](#) are on file at the Community Development Department, 2500 N. Fort Valley Road, Flagstaff.

3.3 COMPLIANCE

All [development](#) of land, construction of residential, commercial, or industrial [structures](#), or future [development](#) within delineated [floodplains](#) is subject to the terms of these Regulations and other applicable regulations.

3.4 ABROGATION AND GREATER RESTRICTIONS

These Regulations are not intended to repeal, abrogate, or impair any existing easements, covenants, or deed restrictions. However, where these Regulations and another ordinance, easement, covenant, or deed restriction conflict or overlap, whichever imposes the more stringent restrictions shall prevail.

3.5 INTERPRETATIONS

In the interpretation and application of these Regulations, all provisions shall be:

- A. Considered as minimum requirements
- B. Liberally construed in favor of the governing body; and
- C. Deemed neither to limit nor repeal any other powers granted under state statutes.

3.6 DISCLAIMER OF LIABILITY

The degree of [flood](#) mitigation required by these Regulations is considered reasonable for regulatory purposes and is based on scientific and engineering considerations. Larger [floods](#) can and will occur on rare occasions. [Flood](#) heights may be increased by man-made or natural causes. These Regulations do not imply that land outside the [Special Flood Hazard Area](#) or uses permitted within such areas will be free

from [flooding](#) or [flood](#) damages. These Regulations shall not create liability on the part of the [Floodplain Board](#), any officer or employee thereof, the State of Arizona, or the Federal Emergency Management Agency, for any [flood](#) damages that result from reliance on these Regulations, or any administrative decision lawfully made hereunder.

3.7 STATUTORY EXCEPTIONS

- A. In accordance with [A.R.S. § 48-3609\(H\)](#), unless expressly provided, this and any regulation adopted pursuant to this article does not affect:
1. Existing legal uses of property or the right to continuation of such legal use. However, if a nonconforming use of land or a [building](#) or [structure](#) is discontinued for twelve months or destroyed to the extent of 50 percent of its [market value](#), as determined by a competent appraiser, any further use shall comply with this article and regulations of the [Floodplain Board](#).
 2. Reasonable repair or alteration of property for the purposes for which the property was legally used on August 3, 1984, or on the date any regulations affecting such property takes effect, 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 floodproofed or elevated to or above the [Regulatory Flood Elevation](#).
 3. Reasonable repair of [structures](#) constructed with the written authorization required by [A.R.S. § 48-3613](#).
 4. Facilities constructed or installed pursuant to a Certificate of Environmental Compatibility issued pursuant to [A.R.S. Title 40, Chapter 2, Article 6.2](#).
- B. Before the following types of construction authorized by [A.R.S. § 48-3613\(B\)](#) begin, the responsible [person](#) must submit plans for the construction to the [Floodplain Board](#) for review and comment pursuant to [A.R.S. § 48-3613\(C\)](#):
1. The construction of bridges, culverts, dikes, and other structures necessary for the construction of public highways, roads, and streets intersecting or crossing a watercourse;
 2. 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 if the structure will not divert, retard, or obstruct the natural channel of the watercourse or dams for the conservation of floodwaters as permitted by [A.R.S. Title 45, Chapter 6](#);
 3. Construction of tailing dams and waste disposal areas for use in connection with mining and metallurgical operations. This paragraph does not exempt those sand and gravel operations that will divert, retard, or obstruct the flow of waters in any watercourse from complying with and acquiring authorization from the Floodplain Board pursuant to regulations adopted by the Floodplain Board under this article;
 4. Other construction upon determination by the Floodplain Board that written authorization is unnecessary;
 5. Any flood control district, county, city, town, or other political subdivision from exercising powers granted to it under [A.R.S. Title 48, Chapter 21, Article 1](#);
 6. The construction of streams, waterways, lakes, and other auxiliary facilities in

conjunction with development of public parks and recreation facilities by a public agency or political subdivision; and

7. The construction and erection of poles, towers, foundations, support structures, guy wires, and other facilities related to power transmission as constructed by any utility whether a public service corporation or a political subdivision.
- C. In accordance with [A.R.S. § 48-3613\(D\)](#), in addition to other penalties or remedies otherwise provided by law, this state, a political subdivision or a [person](#) who may be damaged or has been damaged as a result of the unauthorized diversion, retardation, or [obstruction](#) of a [watercourse](#) has 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 this section or regulations adopted pursuant to [A.R.S. Title 48, Chapter 21, Article 1](#). If a [person](#) is found to be in violation of this Section, the court shall require the violator to either comply with this Section if authorized by the [Floodplain Board](#) or remove the [obstruction](#) and restore the [watercourse](#) to its original state. The court may also award such monetary damages as are appropriate to the injured parties resulting from the violation including reasonable costs and attorney fees.

3.8 **VIOLATIONS**

- A. It is unlawful for a [person](#) to engage in any [development](#) or to divert, retard, or obstruct the flow of waters in a [watercourse](#) if it creates a hazard to life or property without securing the written authorization required by [A.R.S. § 48-3613](#). Where the [watercourse](#) is a delineated [floodplain](#), it is unlawful to engage in any [development](#) affecting the flow of waters without securing written authorization required by [A.R.S. § 48-3613](#).
- B. A [person](#) who violates [Section 3.8.A](#) is guilty of a class 2 misdemeanor.
- C. A [person](#) who violates these Regulations may be assessed a civil penalty not to exceed the fine chargeable for a class 2 misdemeanor or, by agreement with the [person](#) in violation, a non-monetary penalty that serves the purposes of the [community](#). Each day the violation continues constitutes a separate violation.
- D. A [person](#) who without written authorization damages or interferes with a facility that is owned, operated, or otherwise under the jurisdiction of the [community](#) is liable for both of the following:
 1. Any actual damages to [persons](#) or property that is caused by the damage or interference; and
 2. Payment of costs to the [community](#) for remediating the damage or interference.

3.9 **ABATEMENT OF VIOLATIONS**

Within 30 days of discovery of a violation of these Regulations, the [Floodplain Administrator](#) shall submit a report to the [Floodplain Board](#) which shall include all information available to the [Floodplain Administrator](#) which is pertinent to said violation. Within 30 days of receipt of this report, the [Floodplain Board](#) shall either:

- A. Take any necessary action to affect the abatement of such violation; or
- B. Issue a [variance](#) to these Regulations in accordance with the provisions of [Section 6.0](#) herein; or

- C. Order the owner of the property upon which the violation exists to provide whatever additional information may be required for their determination. Such information must be provided to the [Floodplain Administrator](#) within 30 days of such order and the [Floodplain Administrator](#) shall submit an amended report to the [Floodplain Board](#) within 20 days. At the next regularly scheduled public meeting, the [Floodplain Board](#) shall either order the abatement of said violation or they shall grant a [variance](#) in accordance with the provisions of [Section 6.0](#) herein; or
- D. Submit to the Federal Emergency Management Agency a declaration for denial of insurance, stating that the property is in violation of a cited state or local law, regulation, or ordinance, pursuant to [Section 1316 of the National Flood Insurance Act of 1968](#) as amended.

3.10 DECLARATION OF PUBLIC NUISANCE

All [development](#) located or maintained within any Special Flood Hazard Area since August 8, 1973, in violation of floodplain regulations established by the Board and without written authorization from the Board is a [public nuisance](#) per se and may be abated, prevented, or restrained by action of this state or any of its political subdivisions.

3.11 SEVERABILITY

These Regulations and the various parts thereof are hereby declared to be severable. Should any Section of these Regulations be declared by the courts to be unconstitutional or invalid, such decision shall not affect the validity of these Regulations as a whole or any portion thereof other than the Section so declared to be unconstitutional or invalid.

SECTION 4.0 **ADMINISTRATION**

4.1 DESIGNATION OF THE FLOODPLAIN ADMINISTRATOR

The Director of the Public Works Department is hereby designated to administer, implement, and enforce these Regulations by granting or denying [development](#) permits in accordance with its provisions.

4.2 DUTIES AND RESPONSIBILITIES OF THE FLOODPLAIN ADMINISTRATOR

Duties of the Floodplain Administrator shall include, but not be limited to:

4.2.1 PERMIT REVIEW

Review all development permits to determine that:

- A. The permit requirements of these Regulations have been satisfied;
- B. All other required state and federal permits have been obtained;
- C. The site is reasonably safe from flooding; and
- D. In areas where a floodway has not been designated, the proposed development does not adversely affect the carrying capacity of areas where Base Flood Elevations have been determined.

For the purposes of these Regulations, "adversely affect" means that 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.

4.2.2 SUBSTANTIAL IMPROVEMENT AND SUBSTANTIAL DAMAGE ASSESSMENTS

Review all [development](#) permits for improvements and/or damages to existing [structures](#) to determine if the application of the [substantial improvement](#) rules apply, including establishing a definition of [market value](#) determination and verifying that the estimated improvement and/or repair costs are less than 50% of the [market value](#) of the [structure](#).

4.2.3 USE OF OTHER BASE FLOOD DATA

When Base Flood Elevation data has not been provided in accordance with [Section 3.2](#), the [Floodplain Administrator](#) shall obtain, review, and reasonably utilize any Base Flood Elevation data available from a federal, state, or other source, to administer [Section 5.0](#). Any such information shall be consistent with the requirements of the Federal Emergency Management Agency and the Director of the Arizona Department of Water Resources and may be submitted to the [Floodplain Board](#) for adoption.

4.2.4 OBTAIN AND MAINTAIN FOR PUBLIC INSPECTION

Obtain and maintain the following for public inspection and make available as needed:

- A. Certification required by [Section 5.1.3.1](#) and [Section 5.5](#) ([lowest floor](#) elevations, bottom of the structural frame, and utilities);
- B. Certification required by [Section 5.1.3.2](#) ([lowest floor](#) elevations or [floodproofing](#) of

nonresidential [structures](#) and utilities);

- C. Certification required by [Section 5.1.3.5](#) (flood vents);
- D. Certification of elevation required by [Section 5.4.A.2](#) (Subdivisions and other proposed [development](#) standards);
- E. Certification required by Section [5.8.A](#) ([floodway encroachments](#));
- F. Records of all [variance](#) actions, including justification for their issuance; and
- G. Obtain and maintain improvement and damage calculations required in [Section 4.2.2](#).

4.2.5 **NOTIFICATION TO OTHER ENTITIES**

A. Whenever a watercourse is to be altered or relocated:

- 1. Notify adjacent communities and the Arizona Department of Water Resources prior to such alteration or relocation of a watercourse, and submit evidence of such notification to the Federal Emergency Management Agency through appropriate notification means; and
- 2. Assure that the flood carrying capacity of the altered or relocated portion of said watercourse be maintained.

a. Base Flood Elevation and rate of flow due to physical alterations:

- i. Base Flood Elevations may increase or decrease resulting from physical changes affecting flooding conditions. As soon as practicable, but not later than six months after the date such information becomes available, the Floodplain Administrator shall notify the Federal Emergency Management Agency of the changes by submitting technical or scientific data in accordance with Volume 44 Code of Federal Regulations Section 65.3. Such a submission is necessary so that upon confirmation of those physical changes affecting flooding conditions risk premium rates and floodplain management requirements will be based upon current data.
- ii. Within one hundred twenty (120) days after completion of construction of any flood control protective works which changes the rate of flow during the base flood or the configuration of the floodplain upstream or downstream from or adjacent to the project, the person or agency responsible for installation of the project shall provide to the governing bodies of all jurisdictions affected by the project a new delineation of all floodplains affected by the project. The new delineation shall be done according to the criteria adopted by the Director of the Arizona Department of Water Resources.

B. Corporate Boundary Changes

- 1. Notify the Federal Emergency Management Agency of acquisition by means of annexation, incorporation, or otherwise of additional areas of jurisdiction.

4.2.6 **MAP DETERMINATIONS**

Make interpretations, where needed, as to the exact location of the boundaries of the [Special Flood Hazard Area](#) (e.g., where there appears to be a conflict between a mapped boundary and actual field conditions). The [person](#) contesting the location of the boundary shall be given a reasonable opportunity to [appeal](#) the interpretation as provided in [Section 6.0](#).

4.2.7 REMEDIAL ACTIONS

Take actions on violations of these Regulations as required in [Section 3.9](#).

4.3 ESTABLISHMENT OF DEVELOPMENT PERMIT

A [development](#) permit shall be obtained before construction or [development](#) begins, including placement of manufactured homes, within any [Special Flood Hazard Area](#) established in [Section 3.2](#). Application for a [development](#) permit shall be made on forms furnished by the [Floodplain Administrator](#) and may include, but not be limited to, plans in duplicate drawn to scale showing the nature, location, dimensions, and elevation of the area in question, existing or proposed [structures](#), fill, storage of materials, drainage facilities, and the location of the foregoing. Specifically, the following information is required:

- A. Proposed elevation in relation to [mean sea level](#) of the [lowest floor](#) (including [basement](#)) of all [structures](#). In [Zone AO](#), elevation of existing [highest adjacent grade](#) and proposed elevation of [lowest floor](#) of all [structures](#);
- B. Proposed elevation in relation to [mean sea level](#) to which any non-residential [structure](#) will be floodproofed;
- C. Certification by a registered professional engineer or architect that the [floodproofing](#) methods for any nonresidential [structure](#) meet the [floodproofing](#) criteria in [Section 5.2.2](#);
- D. Base Flood Elevation data for subdivision proposals or other [development](#) greater than 50 lots or 5 acres, whichever is the lesser; and
- E. Description of the extent to which any [watercourse](#) will be altered or relocated because of proposed [development](#).

SECTION 5.0 **PROVISIONS FOR FLOOD HAZARD REDUCTION**

5.1 STANDARDS OF CONSTRUCTION – ANCHORING, CONSTRUCTION MATERIALS AND METHODS

In all [Special Flood Hazard Areas](#), the following standards are required:

5.1.1 ANCHORING

- A. All [new construction](#) and [substantial improvements](#) shall be anchored to prevent flotation, collapse, or lateral movement of the [structure](#) resulting from hydrodynamic and hydrostatic loads including the effects of buoyancy; and
- B. All manufactured homes shall meet the anchoring standards of [Section 5.6.B](#).

5.1.2 CONSTRUCTION MATERIALS AND METHODS

- A. All [new construction](#) and [substantial improvements](#) shall be constructed with materials and utility equipment resistant to [flood](#) damage.
- B. All [new construction](#) and [substantial improvements](#) shall be constructed using methods and practices that minimize [flood](#) damage.
- C. Within [Zones AH](#) or [Zone AO](#), adequate drainage paths shall be constructed around [structures](#) on slopes to guide floodwaters around and away from proposed [structures](#).

5.2 STANDARDS OF CONSTRUCTION – ELEVATION AND FLOODPROOFING

5.2.1 RESIDENTIAL CONSTRUCTION

Residential construction, new, or substantial improvement, shall have the [lowest floor](#), including [basement](#), elevated to or above the [Regulatory Flood Elevation](#).

- A. In a [Zone AO](#), the Base Flood Elevation is determined from the [FIRM](#) panel. If unspecified, the required elevation is at minimum two (2) feet above highest adjacent grade.
- B. In a [Zone A](#) where the Base Flood Elevation has not been determined, the Base Flood Elevation is determined locally by the criteria set out in [Section 4.2.3](#).
- C. In [Zones AE](#) and [Zone AH](#), the Base Flood Elevation is determined from the [FIS](#) and/or [FIRM](#).
- D. A garage attached to a residential [structure](#), constructed with the garage floor slab below the [Regulatory Flood Elevation](#), must be designed to allow for the automatic entry and exit of floodwaters and must be used solely for parking, access and/or storage. See [Section 5.2.5.A](#) or [Section 5.2.5.B](#).

Upon completion of the [structure](#), certification by a registered professional engineer or surveyor that the elevation requirements of the [lowest floor](#), including [basement](#), of this section have been satisfied shall be provided to the [Floodplain Administrator](#) for verification.

5.2.2 NONRESIDENTIAL CONSTRUCTION (COMMERCIAL CONSTRUCTION OR INDUSTRIAL CONSTRUCTION)

Nonresidential construction, new, or substantial improvement, shall have the [lowest floor](#) either elevated to conform with [5.2.1.A](#), [Section 5.2.1.B](#), or [Section 5.2.1.C](#) as appropriate, or, together with attendant utility and sanitary facilities,

- A. Be floodproofed below the elevation recommended under [5.2.1.A](#), [Section 5.2.1.B](#), , or [Section 5.2.1.C](#) as appropriate so that the [structure](#) is watertight with walls substantially impermeable to the passage of water; and
- B. Have structural components capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy.

Upon completion of the [structure](#), certification by a registered professional engineer or surveyor that the elevation requirements of the [lowest floor](#), including [basement](#), of this section have been satisfied shall be provided to the [Floodplain Administrator](#) for verification; or certification by a registered professional engineer or architect that the [floodproofing](#) standards of this section are satisfied shall be provided to the [Floodplain Administrator](#) for verification.

5.2.3 MANUFACTURED HOMES

Manufactured homes shall meet the standards in [Section 5.5](#).

5.2.4 ACCESSORY STRUCTURES (DETACHED GARAGES & STORAGE STRUCTURES)

[Accessory structures](#) used solely for parking of vehicles or storage may be constructed such that the floor is below the [Regulatory Flood Elevation](#), provided the [structure](#) is designed and constructed in accordance with the following requirements:

- A. Use of the [accessory structure](#) must be limited to parking of vehicles or storage;
- B. The portions of the [accessory structure](#) located below the [Regulatory Flood Elevation](#) must be built using flood resistant materials;
- C. The [accessory structure](#) must be adequately anchored to prevent flotation, collapse, and lateral movement;
- D. Any machinery or equipment servicing the [accessory structure](#) must be elevated or floodproofed to or above the [Regulatory Flood Elevation](#);
- E. The [accessory structure](#) must comply with [floodway encroachment](#) provisions in [Section 5.8](#); and
- F. The [accessory structure](#) must be designed to allow for the automatic entry and exit of [flood](#) waters in accordance with [Section 5.2.5.A](#) or [Section 5.2.5.B1.6.B](#).

Detached garages, storage [structures](#), and other [accessory structure](#) not meeting the above standards must be constructed in accordance with all applicable standards in [5.2.1.A](#), [Section 5.2.B.A](#), or [Section 5.2.1.C](#).

Upon completion of the [structure](#), certification by a registered professional engineer or surveyor that the requirements of this section have been satisfied shall be provided to the [Floodplain Administrator](#) for verification.

5.2.5 **FLOOD OPENINGS**

All [new construction](#) and [substantial improvement](#) with fully enclosed areas below the [lowest floor](#) (excluding [basements](#)) that are usable solely for parking of vehicles, [building](#) access, or storage, and which are subject to [flooding](#), shall be designed to automatically equalize hydrostatic [flood](#) forces on exterior walls by allowing for the automatic entry and exit of floodwater. Designs for meeting this requirement must meet or exceed the following criteria:

A. For non-engineered openings:

1. Have a minimum of two openings, on different sides of each enclosed area, having a total net area of not less than one square inch for every square foot of enclosed area subject to [flooding](#).
2. The bottom of all openings shall be no higher than one foot above grade.
3. Openings may be equipped with screens, louvers, valves, or other coverings or devices if they permit the automatic entry and exit of floodwater.

B. For engineered openings:

1. Engineered openings (or covers and devices) that are specifically designed and certified by a registered engineer or architect as meeting the required performance and design requirements.
2. Engineered openings (or covers and devices) for which an Evaluation Report has been issued by the International Code Council (ICC) Evaluation Service, Inc. (ICC-ES), a subsidiary of the International Code Council, Inc.

5.2.6 **MACHINERY AND SERVICE EQUIPMENT**

All [new construction](#), substantial improvement, and other proposed new [development](#) that are constructed with electrical, heating, ventilation, plumbing, air conditioning equipment, and other service facilities shall be designed and/or located to or above the [Regulatory Flood Elevation](#) to prevent water from entering or accumulating within the components during conditions of [flooding](#).

5.3 **STANDARDS FOR STORAGE OF MATERIALS AND EQUIPMENT**

- A.** The storage or processing of materials that could be injurious to human, animal, or plant life if released due to damage from [flooding](#) is prohibited in [Special Flood Hazard Areas](#).
- B.** Storage of other material or equipment may be allowed if not subject to damage by [floods](#) and if firmly anchored to prevent flotation or if readily removable from the area within the time available after [flood](#) warning.

5.4 **STANDARDS FOR WATER SUPPLY AND WASTE DISPOSAL SYSTEMS**

- A.** All new or replacement water supply and sanitary sewage systems shall be designed to minimize or eliminate infiltration of floodwaters into the system and discharge from systems into floodwaters.
- B.** On-site waste disposal systems shall be located to avoid impairment to them or contamination from them during [flooding](#).
- C.** Waste disposal systems shall not be installed wholly or partially in a regulatory [floodway](#).

5.5 ADDITIONAL DEVELOPMENT STANDARDS, INCLUDING SUBDIVISIONS

- A. All new subdivision proposals and other proposed [development](#) (including proposals for [manufactured home](#) parks and subdivisions), greater than 50 lots or 5 acres, whichever is the lesser, shall:
 - 1. Identify the [Special Flood Hazard Area](#) and the Base Flood Elevation; and
 - 2. Identify on the final plans the elevation(s) of the proposed structure(s) and pads. If the site is filled above the Base Flood Elevation, the [lowest floor](#) and finished grade elevations shall be certified by a registered professional engineer or surveyor and provided to the [Floodplain Administrator](#).
- B. All subdivision proposals and other proposed [development](#) shall be consistent with the need to minimize [flood](#) damage.
- C. All subdivision proposals and other proposed [development](#) shall have public utilities and facilities such as sewer, gas, electrical, and water systems located and constructed to minimize [flood](#) damage.
- D. All subdivision proposals and other proposed [development](#) shall provide adequate drainage to reduce exposure to [flood](#) hazards.

5.6 STANDARDS FOR MANUFACTURED HOMES

All manufactured homes that are placed on site or substantially improved shall:

- A. Be elevated to conform with [Section 5.2.1.A](#), [Section 5.2.1.B](#), or [Section 5.2.1.C](#) as appropriate so that the bottom of the structural frame or the lowest point of any attached appliances, whichever is lower, is at or above the [Regulatory Flood Elevation](#); and
- B. Be securely anchored to an adequately anchored foundation system to resist flotation, collapse, or lateral movement. Methods of anchoring may include, but are not to be limited to, use of over-the-top or frame ties to ground anchors. This requirement is in addition to applicable state and local anchoring requirements for resisting wind forces.

Upon completion of installation of the manufactured home, certification by a registered professional engineer or surveyor that the elevation requirements of this section have been satisfied shall be provided to the [Floodplain Administrator](#) for verification.

5.7 STANDARDS FOR RECREATIONAL VEHICLES

All [Recreational Vehicles](#) placed on site shall:

- A. Be on site for fewer than 180 consecutive days,
- B. Be 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; or
- C. Meet the permit requirements of [Section 4.0](#) of these Regulations and the elevation and anchoring requirements for manufactured homes in [Section 5.5](#).

5.8 FLOODWAYS

Located within the [Special Flood Hazard Areas](#) established in [Section 3.2](#) are areas designated as [floodways](#). Since the [floodway](#) is an extremely hazardous area due to the velocity of floodwaters which carry debris and potential projectiles and can potentially cause [erosion](#), the following provisions apply:

- A. Prohibit [encroachments](#) including fill, [new construction](#), [substantial improvements](#), and other [development](#), unless certification by a registered professional engineer or architect is provided demonstrating that [encroachments](#) shall not result in any increase in [flood](#) levels during the occurrence of the [base flood](#) discharge.
- B. If [Section 5.8](#) is satisfied, all [new construction](#) and [substantial improvements](#) shall comply with all other applicable [flood](#) hazard reduction provisions of [Section 5.0](#).

SECTION 6.0

VARIANCE PROCEDURE

6.1 NATURE OF VARIANCES

The [variance](#) criteria set forth in this section are based on the general principle of zoning laws that [variances](#) pertain to a piece of property and are not personal in nature. A [variance](#) may be granted for a parcel of property with physical characteristics so unusual that complying with the requirements of these Regulations would create an exceptional [hardship](#) to the applicant or the surrounding property owners. The characteristics must be unique to the property and not be shared by adjacent parcels. The unique characteristic must pertain to the land itself, not to the [structure](#), its inhabitants, or the property owners.

It is the duty of the [Floodplain Board](#) to help protect its citizens from [flooding](#). This need is so compelling and the implications of the cost of ensuring a [structure](#) built below the [Regulatory Flood Elevation](#) are so serious that [variances](#) from the flood elevation or from other requirements in these Regulations are quite rare. The long-term goal of preventing and reducing [flood](#) loss and damage can only be met if [variances](#) are strictly limited. Therefore, the [variance](#) guidelines provided in these Regulations are more detailed and contain multiple provisions that must be met before a [variance](#) can be properly granted. The criteria are designed to screen out those situations in which alternatives other than a [variance](#) are more appropriate.

6.2 BOARD OF REVIEW

- A. The [Floodplain Board](#) shall hear and decide [appeals](#) when it is alleged there is an error in any requirement, decision, or determination made by the [Floodplain Administrator](#) in the enforcement or administration of these Regulations.
- B. In considering such applications, the [Floodplain Board](#) shall consider all technical evaluations, relevant factors, standards specified in other sections of these Regulations, and:
 1. The danger that materials may be swept onto other lands to the injury of others;
 2. The danger of life and property due to [flooding](#) or [erosion](#) damage;
 3. The susceptibility of the proposed facility and its contents to [flood](#) damage and the effect of such damage on the individual owner;
 4. The importance of the services provided by the proposed facility to the [community](#);
 5. The necessity to the facility of a waterfront location, where applicable;
 6. The availability of alternative locations for the proposed use, which are not subject to [flooding](#) or [erosion](#) damage;
 7. The compatibility of the proposed use with existing and anticipated [development](#);
 8. The relationship of the proposed use to the comprehensive plan and [floodplain management](#) program for that area;
 9. The safety of access to the property in time of [flood](#) for ordinary and emergency vehicles;
 10. The expected heights, velocity, duration, rate of rise, and sediment transport of

the floodwaters expected at the site; and

11. The costs of providing governmental services during and after [flood](#) conditions, including maintenance and repair of public utilities and facilities such as sewer, gas, electrical, water system, streets, and bridges.
- C. Upon consideration of the factors of [Section 6.2.B.](#) and the purposes of these Regulations, the [Floodplain Board](#) may attach such conditions to the granting of [variances](#) as it deems necessary to further the purposes of these Regulations.
- D. Any applicant to whom a [variance](#) is granted shall be given written notice over the signature of a [community](#) official that:
1. The issuance of a [variance](#) to construct a [structure](#) below the [Regulatory Flood Elevation](#) will result in increased premium rates for flood insurance up to amounts as high as \$25 for \$100 of insurance coverage, and
 2. Such construction below the [Regulatory Flood Elevation](#) increases risks to life and property; and
 3. The [Floodplain Administrator](#) shall maintain a record of all [variance](#) actions, including justification for their issuance.

6.3 **CONDITIONS FOR VARIANCES**

- A. [Variances](#) shall only be issued:
1. Upon a determination that the granting of a [variance](#) will not result in increased [flood](#) heights, additional threats to [public safety](#), extraordinary public expense, create [nuisances](#), cause fraud on, victimization of the public, or conflict with existing local laws or ordinances.
 2. [Variances](#) may be issued for the repair, rehabilitation, or restoration of [structures](#) listed in the National Register of Historic Places or the State Inventory of Historic Places, upon a determination that the proposed repair or rehabilitation will not preclude the [structures](#)' continued designation as a [historic structure](#) and the [variance](#) is the minimum necessary to preserve the historic character and design of the [structure](#).
 3. Upon a determination that the [variance](#) is the minimum necessary, considering the [flood](#) hazard, to afford relief.
 4. Upon a showing of good and sufficient cause.
 5. Upon a determination that failure to grant the [variance](#) would result in exceptional [hardship](#) to the applicant.
 6. Upon a showing that the use cannot perform its intended purpose unless it is located or carried out near water. This includes only facilities defined in [Section 2.0](#) of these Regulations in the definition of "[Functionally Dependent Use](#)."
- B. [Variances](#) shall not be issued within any [floodway](#) if any increase in the Base Flood Elevation would result.
- C. Generally, [variances](#) may be issued for [new construction](#) and [substantial improvements](#) to be erected on a lot of one-half acre or less in size contiguous to and surrounded by

lots with existing [structures](#) constructed below the [Regulatory Flood Elevation](#), provided the procedures of [Section 4.0](#) and [Section 5.0](#) of these Regulations have been fully considered. As the lot size increases beyond one-half acre, the technical justification required for issuing the [variance](#) increases.