


Planning Commission Public Hearing  
Amendment to Flood Damage Prevention



## CITY OF FEDERAL WAY M E M O R A N D U M

**DATE:** June 17, 2018

**TO:** Lawson Bronson, Chair  
Planning Commission

**FROM:** Brian Davis, Community Development Director  
Robert "Doc" Hansen, Planning Manager 

**SUBJECT:** Amendments to Chapter FWRC 19.142 Regarding Flood Damage Prevention

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### **I. FINANCIAL IMPACT**

The approval of the following proposed code amendment will not cost the city any additional funds, and will require no transfer of general funds for the action.

### **II. BACKGROUND**

In February, new digital maps designating the City of Federal Way's coastal area and determining the floodplains location were adopted by Federal Emergency Management Agency (FEMA) and the State of Washington. On February 19, 2020, the city was sent a letter from FEMA regarding amendments that need to be made to *Federal Way Revised Code* (FWRC) 19.142 to meet to the new federal floodplain standards. The amendments are necessary for the city to keep its floodplain insurance provided by the federal government.

Most lands considered "floodplains," or special flood hazard area (SFHA), are located on the city's coastline according to past Floodplain Insurance Rate Maps (FIRM). The new digitized maps to be adopted and go into effect as of August 19<sup>th</sup> will not significantly change these previous maps.

### **III. PROPOSED CHANGES TO CODE**

The draft proposed code amendments are attached as Exhibit A at the end of this brief. The amendments will mainly place more responsibility on the city for implementation, and place greater limitation on developments in areas that have more environmental significance. In summary, the proposed amendments will:

1. Amend and add a number of definitions to the code, many of which are designed to provide clarity to intentions of the regulation relating to substantial improvement, meaning of new construction, and reference to measuring water level. Manufactured homes are identified more specifically in a number of definitions; as are historic structures for their protection.
2. Reference the effective date that new maps will be used.
3. Place more responsibility upon local agencies in approving permits and variances.

4. Require the director to notify the Federal Insurance Administrator whenever development may change the mean sea level on the property.
5. Provide greater distinction between the “AE” zone and the more environmental sensitive “VE” zone as identified on the new maps by placing greater restrictions on development proposed in the “VE” zone.

#### **IV. PLANNING COMMISSION ACTION**

Per code, the Planning Commission is required to hold a public hearing and make a recommendation to the City Council on proposed code amendments after adequate public notification has been made. Public Notice was made in the official newspaper on May 15, 2020, and was posted on line. No comments have been received regarding the proposal. The Planning Commission has option to:

1. Recommend approval of the proposed amendments to the Council.
2. Recommend approval of the proposed amendments with modification to the Council.
3. Recommend denial of the proposed amendments to the Council.

#### **V. TIMELINE**

The planned actions to amend FWRC 19.142 are planned as shown below:

1. Notice of Planning Commission Public Hearing – May 29, 2020
2. SEPA DNS Notice Issued – May 15, 2020
3. Planning Commission Public Hearing – June 17, 2020
4. Land Use/Transportation Committee Public Meeting – July 6, 2020
5. City Council Public Meeting 1<sup>st</sup> Reading of Ordinance – July 15, 2020
6. City Council Public Meeting 2<sup>nd</sup> Reading of Ordinance – August 4, 2020
7. Ordinance Effective – August 7, 2020

#### **VI. MAYOR’S RECOMMENDATION**

After consideration of the review of the staff analysis and options available for action (approval, approval with modification, or denial), the Mayor recommends that the proposed amendments be approved as presented to the Planning Commission.

# Exhibit A

## Amendments to FWRC 19.142

### Chapter 19.142

### FLOOD DAMAGE PREVENTION

#### Sections:

#### Article I. Generally

- 19.142.010 Purpose.
- 19.142.020 Adoption of state and federal statutes and regulations.
- 19.142.030 Methods of reducing flood losses.
- 19.142.040 Definitions.

#### Article II. Provisions

- 19.142.050 General provisions.
- 19.142.060 Development activities subject to floodplain development permits.
- 19.142.070 Use of other base flood data (in A and V zones).
- 19.142.080 Information to be obtained and maintained.
- 19.142.090 Alteration of watercourses.
- [19.142.095 Notification to Other Entities Changes to Floodplain Maps](#)
- 19.142.100 Conditions for variances.
- 19.142.110 Provisions for flood hazard reduction.
- 19.142.120 Subdivision proposals.
- 19.142.130 Review of building permits.
- 19.142.140 Specific standards.
- 19.142.150 AE and A1-30 zones with base flood elevations but no floodways.
- 19.142.160 Floodways.
- 19.142.170 Critical facility.

#### Article I. Generally

#### **19.142.010 Purpose.**

It is the purpose of this chapter to promote the public health, safety, and general welfare and minimize public and private losses due to flood conditions in specific areas by provisions designed:

- (1) To protect human life and health;
- (2) To minimize expenditure of public money and costly flood control projects;
- (3) To minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;

- (4) To minimize prolonged business interruptions;
- (5) To minimize damage to public facilities and utilities such as water and gas mains; electric, telephone and sewer lines; streets; and bridges located in areas of special flood hazard;
- (6) To help maintain a stable tax base by providing for the sound use and development of areas of special flood hazard so as to minimize future flood blight areas;
- (7) To ensure that potential buyers are notified that property is in an area of special flood hazard;
- (8) To ensure that those who occupy the areas of special flood hazard assume responsibility for their actions.

#### **19.142.020 Adoption of state and federal statutes and regulations.**

The following state statutes and administrative regulations as currently existing and hereafter amended are hereby adopted by this reference as if set forth in full:

- (1) Chapter 86.16 RCW, Floodplain Management.
  - (2) 44 CFR 59.22(a).
  - (3) 44 CFR 60.3(c)(1)(d)(2).
  - (4) 44 CFR 60.3(b)(1).
  - (5) 44 CFR 59.22(b)(1).
  - (6) 44 CFR 60.3(a)(2).
- (Ord. No. 06-536, § 2(Exh. A), 11-7-06. Code 2001 § 21-101. Formerly 16.40.020.)

#### **19.142.030 Methods of reducing flood losses.**

In order to accomplish its purposes, this chapter 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 damaging increases in erosion or in flood heights or velocities;
- (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 floodwaters;
- (4) Controlling filling, grading, dredging, and other development which may increase flood damage; and
- (5) Preventing or regulating the construction of flood barriers that unnaturally divert floodwaters or may increase flood hazards in other areas.

#### **19.142.040 Definitions.**

The definitions in this section apply throughout this chapter unless the context clearly requires otherwise. Terms not defined here are defined according to Chapter 19.05 or 16.05 FWRC or FWRC 1.05.020, in that order.

*“Actual start of construction”* 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, 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, or 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. *“Actual start of construction,”* for a substantial improvement, 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.

*“Alteration of watercourse” means any action that will change the location of the channel occupied by water within the banks of any portion of a riverine waterbody.*

*“Appeal”* means a request for a review of the interpretation of any provision of this chapter or a request for a variance.

*“Area of shallow flooding”* means designated as AO or AH zone on the flood insurance rate map (FIRM). AO zones have base flood depths that range from one to three feet above the natural ground; a clearly defined channel does not exist; the path of flooding is unpredictable and indeterminate; and velocity flow may be evident. AO is characterized as sheet flow; AH indicates ponding, and is shown with standard base flood elevations.

*“Area of special flood hazard”* means the land in the floodplain within a community subject to a one percent or greater chance of flooding in any given year. ~~Designation on maps always includes the letter A or V.~~

*“Base flood”* means the flood having a one percent chance of being equaled or exceeded in any given year (also referred to as the “100-year flood”). ~~Designated on flood insurance rate maps by the letter A or V.~~

*“Base flood elevation (BFE)” means the elevation to which floodwater is anticipated to rise during the base flood.*

*“Basement”* means any area of the building having its floor sub-grade (below ground level) on all sides.

*“Breakaway wall”* means a wall that is not part of the structural support of the building and is intended through its design and construction to collapse under specific lateral loading forces, without causing damage to the elevated portion of the building or supporting foundation system.

*“Coastal high hazard area”* means an area of special flood hazard extending from offshore to the inland limit of a primary frontal dune along an open coast and any other area subject to high velocity wave action from storms or seismic sources. The area is designated on the FIRM as zone V1-30, VE or V.

*“Critical facility”* means a facility for which even a slight chance of flooding might be too great. Critical facilities include (but are not limited to) schools, nursing homes, hospitals, police, fire and emergency response installations, and installations which produce, use, or store hazardous materials or hazardous waste.

*“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, excavations, drilling operations, or storage of equipment or materials located within the area of special flood hazard.

“Director” means the director of the city of Federal Way community development department or his or her designee.

“Elevated building” means, for insurance purposes, a nonbasement building that has its lowest elevated floor raised above ground level by foundation walls, shear walls, posts, piers, pilings, or columns.

“Elevation certificate” means ~~the official form (FEMA Form 81-31)~~ an administrative tool of the National Flood Insurance Program that can be used to track development, provide elevation information ~~necessary to ensure compliance with community floodplain management ordinances, and to~~ determine the proper insurance premium rate, with Section B completed by Federal Way, and to support a request for a Letter of Map Amendment (LOMA), or Letter of Map Revision – Based on Fill (LOMR-F).

“Existing manufactured home park or subdivision” means 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 adopted floodplain management regulations.

“Expansion to an existing manufactured home park or subdivision” means 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” or “flooding” means a general and temporary condition of partial or complete inundation of normally dry land areas from:

(1) The overflow of inland or tidal waters; and/or

(2) The unusual and rapid accumulation of runoff of surface waters from any source.

(3) Mudslides (i.e., mudflows) which are proximately caused by flooding as defined in (a)(2) of this definition and are akin to a river of liquid and flowing mud on the surfaces of normally dry land areas, as when earth is carried by a current of water and deposited along the path of the current.

(b) 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 (a)(1) of this definition.

“Flood insurance rate map (FIRM)” means the official map on which the Federal Insurance Administration ~~or~~ has delineated both the areas of special flood hazards and the risk premium zones applicable to the community.

“Flood insurance study (FIS)” means ~~the official report provided by the Federal Insurance Administration that includes flood profiles, the flood boundary-floodway map, and the water surface elevation of the base flood.~~ an examination, evaluation, and determination of flood hazards and, if appropriate, corresponding water surface elevations, or an examination, evaluation, and determination of mudslide (i.e., mudflow) and/or flood-related erosion hazards. Also known as a Flood Elevation Study.

“Floodplain or flood-prone area” means any land area susceptible to being inundated by water from any source. See “Flood or flooding.”

“Floodplain management regulations” means zoning ordinances, subdivision regulations, building codes, health regulations, special purposes ordinances (such as floodplain ordinance, grading ordinance, and erosion control ordinance), and other applications of police power. The term describes such state or local regulations, in any combination thereof, which provide standards for the purpose of flood damage prevention and reduction.

“Flood proofing” means any combination of structural and nonstructural additions, changes, or adjustments to structures which reduce or eliminate risk of flood damage to real estate or improved real property, water and sanitary facilities, structures, and their contents. Flood proofed structures are those that have the structural integrity and design to be impervious to floodwater below the Base Flood Elevation.

“Floodway” means the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than ~~one foot~~ a designated height. Also known as a Regulatory Floodway.”

“Functionally dependent use” means a use which cannot perform its intended purpose unless it is located or carried out in close proximity to 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.

“Highest adjacent grade” means the highest natural elevation of the ground surface prior to construction next to the proposed walls of a structure.

“Historic structure” means 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;
- 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;
- 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.

“Lowest floor” means the lowest enclosed area (including basement), except that where 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 built in compliance with the applicable non-elevation design requirements of FWRC 19.142.140(1)(b), the next lowest enclosed area is the lowest floor.

“Manufactured home” means 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, but does not include a recreational vehicle.

“Manufactured home park or subdivision” means a parcel (or contiguous parcels) of land divided into two or more manufactured home lots for rent or sale.



“Mean Sea Level” means for purposes of the National Flood Insurance Program, the vertical datum to which Base Flood Elevations shown on a community's Flood Insurance Rate Map are referenced.

“New construction” means ~~for which the start of construction commenced on or after the effective date of the ordinance codified in this chapter 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” means 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 adopted floodplain management regulations.

“Recreational vehicle” means a vehicle:

- (1) Built on a single chassis;
- (2) Four hundred square feet or less when measured at the largest horizontal projection;
- (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.

“Start of construction” includes substantial improvement, and means the date the building permit was issued, where the actual start of construction, repair, reconstruction, placement or other improvement occurs within 180 days of the permit date. See also “actual start of construction.”

“Structure” means a walled and roofed building, including a gas or liquid storage tank that is principally above ground, as well as a manufactured home.

“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.

“Substantial improvement” means any improvement of a structure, including ~~any repair or reconstruction, rehabilitation, addition, or other improvement of a structure where~~ the cost of which the improvement equals or exceeds 50 percent of the market value of the structure ~~either before the improvement is started or, if the structure has been damaged and is being restored, before the damage occurred.~~

Substantial improvement does not include: “Start of Construction” means the improvement of structures which have incurred “substantial damage,” regardless of the actual repair work performed. The term does not, however, include either:

- (a) any project for improvement of a structure to correct pre-cited existing violations of state or local health, sanitary, or safety code specifications which have been previously identified by the local code enforcement official and which are the minimum necessary to assure safe living conditions; or

- (b) any alteration of a “historic structure” that precludes the structure’s continued designation as a “historic structure” listed on the National Register of Historic Places or a State Inventory of Historic Places.

~~Substantial improvement begins 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 dimensions of the structure.~~

“Variance” means a grant of relief from the requirements of this chapter that permits construction in a manner that would otherwise be prohibited by this chapter.

“Violation” means the failure of a structure or other development to be fully compliant with the community’s flood plain 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.

“Water-dependent” means a structure for commerce or industry that cannot exist in any other location and is dependent on the water by reason of the intrinsic nature of its operations.

## Article II. Provisions

### 19.142.050 General provisions.

(1) *Application of chapter.* This chapter shall apply to all areas of special flood hazards within the jurisdiction of Federal Way. The areas of special flood hazard identified by the Federal Insurance-Administration ~~in~~ in a scientific and engineering report entitled “The Flood Insurance Study for King County, Washington and Incorporated Areas” dated ~~May 16, 1995~~ August 19, 2020, and any revisions thereto, with an accompanying flood insurance rate map (FIRM), and any revisions thereto, are hereby adopted by reference and declared to be a part of this chapter. The flood insurance study and the FIRM are on file at Federal Way City Hall. The best available information for flood hazard area identification as outlined in FWRC 19.142.070 shall be the basis for regulation until a new FIRM is issued that incorporates data utilized under FWRC 19.142.070.

(2) *Penalties for noncompliance.* ~~No structure or land shall hereafter be constructed, located, extended, converted, or altered~~ Any person responsible for constructing, locating, extending, converting, or altering a structure or land without full compliance with the terms of this chapter and other applicable regulations shall be subject to civil enforcement penalties under FWRC 1.15.

(3) *Summary abatement.* Whenever any violation of this chapter causes or creates a condition which constitutes or contributes to an immediate and emergent threat to the public health, safety or welfare or to the environment, the director may summarily and without prior notice abate the condition. Notice of such abatement, including the reason for it, shall be given to the person responsible for the violation as soon as reasonably possible after abatement. The costs of such summary abatement shall be recoverable via procedures for recovery of abatement costs as set forth in Chapter 1.15 FWRC, Civil Enforcement of Code.

(4) *Abrogation and greater restrictions.* This chapter is not intended to repeal, abrogate, or impair any existing easements, covenants, or deed restrictions. However, where this chapter and another ordinance, easement, covenant, or deed restriction conflict or overlap, whichever imposes the more stringent restrictions shall prevail.

(5) *Interpretation.* In the interpretation and application of this chapter, 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.

(6) *Warning and disclaimer of liability.* The degree of flood protection required by this chapter 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 manmade or natural causes. This chapter does not imply that land outside the areas of special flood hazards or uses permitted within such areas will be free from flooding or flood damages. This chapter shall not create liability on the part of Federal Way, any officer or employee thereof, or the Federal Insurance Administration, for any flood damages that result from reliance on this chapter or any administrative decision lawfully made hereunder.

### **19.142.060 Development activities subject to floodplain development permits.**

(1) *Floodplain development permit required.* A floodplain development permit shall be obtained before construction or development begins within any area of special flood hazard established in FWRC 19.142.050(1). The permit shall be for all structures including manufactured homes, as set forth in FWRC 19.142.040, and for all development including fill and other activities, also as set forth in FWRC 19.142.040.

(2) *Nondevelopment activities.* ~~The following activities that do not meet the definition of “development” in this chapter~~ are allowed in the regulatory floodplain without the need for a floodplain development permit under this chapter, provided all other federal, state, and local requirements are met. The following are examples of activities not considered development or manmade changes to improved or unimproved real estate:

(a) Routine maintenance of landscaping that does not involve grading, excavation, or filling;

(b) Removal of noxious weeds and hazard trees and replacement of nonnative vegetation with native vegetation;

(c) Normal maintenance of structures, such as reroofing and replacing siding, as long as such work does not qualify as a substantial improvement;

(d) Normal maintenance of above ground public utilities and facilities, such as replacing downed power lines;

(e) Normal street and road maintenance, including filling potholes, repaving, and installing signs and traffic signals, but not including expansion of paved areas; and

(f) Normal maintenance of a levee or other flood control facility prescribed in the operations and maintenance plan for the levee or flood control facility.

(3) *Other activities.* All other activities not described in subsection (2) of this section are allowed, as long as a floodplain development permit is approved, and, if required, as long as such activities meet all the other requirements of this chapter and the other provisions of the FWRC.

(4) *Application for floodplain development permit in the AE zone.* Application for a floodplain development permit shall be made and will include, but not be limited to, plans in duplicate drawn to scale showing the nature, location, dimensions, and elevations 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 recorded on a current elevation certificate (FEMA Form 81-31) with Section B completed by the city of Federal Way building official;
- (b) Proposed Elevation in relation to mean sea level to which any structure ~~has been~~ will be floodproofed;
- (c) Certification by a registered professional engineer or architect that the floodproofing methods for any nonresidential structure meet floodproofing criteria in FWRC 19.142.140(2);
- (d) Description of the extent to which a watercourse will be altered or relocated as a result of proposed development.

(5) Application for development permit for Zone VE. Application for a floodplain development permit shall be made and will include, but not be limited to, plans in duplicate drawn to scale showing the nature, location, dimensions, and elevations 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 bottom of the lowest structural member of the lowest floor (excluding pilings and columns) of all structures, and whether such structures contain a basement;
- (b) Base Flood Elevation data for subdivision proposals or other development, including manufactured home parks or subdivisions, greater than 50 lots or 5 acres, whichever is the lesser; and
- (c) Description of the extent to which any watercourse will be altered or relocated as a result of proposed development.

(56) Designation of the *local* administrator. The director or designee is hereby appointed to administer, ~~and~~ implement and enforce this chapter by granting or denying development permit applications in accordance with its provisions. The director shall:

- (a) Review all development applications to determine that the requirements of this chapter have been satisfied;
- (b) Review all development applications to determine that all necessary permits have been obtained from those federal, state, or local governmental agencies from which prior approval is required; and
- (c) Review all development applications to determine if the proposed development is located in the floodway. If located in the floodway, assure that the encroachment provisions of FWRC 19.142.160(1) are met.

(67) Project requirements. If the project is located in the regulatory floodplain and includes activities not listed in subsection (2) of this section, the application shall include a habitat impact assessment completed by a professional biologist. If that assessment determines that impacts upon the habitat would result from the project, the application shall also include a habitat mitigation plan. The habitat assessment and the habitat mitigation plan shall be performed as described in FEMA's Regional Guidance for Floodplain Habitat Assessment and Mitigation in the Puget Sound Basin, 2013, and any revisions thereto.

(78) Third-party review. For any habitat impact assessment or habitat mitigation plan, the city may require a third-party review. Third-party review requires the applicant's habitat impact assessment, habitat mitigation plan, and/or additional technical studies to be reviewed by an

independent third party, paid for by the applicant, but hired by the city. Third-party review shall be conducted by a qualified consultant as defined in the Floodplain Habitat Assessment and Mitigation Regional Guidance, FEMA Region X, 2010, and any revisions thereto.

#### **19.142.070 Use of other base flood data (in A and V zones).**

When base flood elevation data has not been provided (in A or V zones) in accordance with FWRC 19.142.050(1), the director shall obtain, review, and reasonably utilize any base flood elevation and floodway data available from a federal, state or other source, in order to administer FWRC 19.142.140, Specific standards, and FWRC 19.142.160, Floodways.

#### **19.142.080 Information to be obtained and maintained.**

(1) Where base flood elevation data is provided through the FIS, FIRM, or required as in FWRC 19.142.070, the applicant shall obtain and record the actual (as-built) elevation (in relation to mean sea level) of the lowest floor (including basement) of all new or substantially improved structures, and whether or not the structure contains a basement and provide such information to the director or designee on a current FEMA elevation certificate (FEMA Form 81-31). Section B will be completed by the city.

(2) For all new or substantially improved floodproofed nonresidential structures where base flood elevation data is provided through the FIS, FIRM, or as required in FWRC 19.142.070, the applicant shall obtain and record the elevation (in relation to mean sea level) to which the structure was floodproofed and provide such information to the city. The city shall maintain the floodproofing certifications required in FWRC 19.142.060(2)(c).

(3) The city shall maintain for public inspection all records pertaining to the provisions of this chapter.

#### **19.142.090 Alteration of watercourses.**

The city shall notify adjacent communities and the Department of Ecology prior to any alteration or relocation of a watercourse, and submit evidence of such notification to the Federal Insurance-Administration ~~and~~ and shall ~~require assure~~ that ~~maintenance is provided within the altered or relocated portion of said watercourse so that the flood carrying capacity is not diminished~~ the carrying-capacity of the altered or relocated portion of said watercourse is maintained.

#### **19.142.095. Notification to Other Entities Changes to Floodplain Maps**

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 director shall notify the Federal Insurance Administrator 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.

The director shall notify the Federal Insurance Administrator in writing of acquisition by means of annexation, incorporation, or otherwise, of additional areas of jurisdiction.

### 19.142.100 Conditions for variances.

(1) Generally, the only condition under which a variance from the elevation standard may be issued is for new construction and substantial improvements to be erected on a ~~small or irregularly shaped~~ lot one-half acre or less in size contiguous to and surrounded by lots with existing structures constructed below the base flood level. As the lot size increases the technical justification required for issuing the variance increases.

(2) Variances shall not be issued within a designated floodway if any increase in flood levels during the base flood discharge would result.

(3) Variances shall only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief.

(4) Variances shall only be issued upon:

(a) A showing of good and sufficient cause;

(b) A determination that failure to grant the variance would result in exceptional hardship to the applicant; and

(c) 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 or victimization of the public, or conflict with other existing laws or ordinances.

(5) Variances as interpreted in the National Flood Insurance Program are based on the general zoning law principle that they pertain to a physical piece of property; they are not personal in nature and do not pertain to the structure, its inhabitants, economic or financial circumstances. They primarily address small lots in densely populated residential neighborhoods. As such, variances from flood elevations should be quite rare.

(6) Variances may be issued for nonresidential buildings in very limited circumstances to allow a lesser degree of floodproofing than watertight or dry floodproofing, where it can be determined that such action will have low damage potential, complies with all other variance criteria except subsection (1) of this section and otherwise complies with FWRC 19.142.110(1) and (3), and 19.142.120.

(7) Any applicant to whom a variance is granted shall be given written notice over the signature of the director that the ~~permitted issuance of a variance to construct a~~ structure will be built with its lowest floor below the base flood elevation ~~and that the cost of flood insurance will be commensurate with the increased risk will result in increased premium rates for flood insurance up to amounts as high as \$25 for every \$100 of insurance coverage and that such construction below the BFE increases risks to life and property.~~

(8) The director shall maintain a record of all variance actions, including justification for their issuance.

(9) The director shall condition the variance as needed to ensure that the requirements and criteria of this chapter are met.

### 19.142.110 Provisions for flood hazard reduction.

In all areas of special flood hazards, the following standards are required:

(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 or hydrostatic loads, including the effects of buoyancy;

(b) All manufactured homes shall be anchored to prevent flotation, collapse, or lateral movement, and shall be installed using methods and practices that minimize flood damage. Anchoring methods may include, but are not limited to, use of over-the-top or frame ties to ground anchors.

(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) Electrical, heating, ventilation, plumbing, and air-conditioning equipment and other service facilities shall be designed and/or otherwise elevated or located so as to prevent water from entering or accumulating within the components during conditions of flooding. Locating such equipment below the base flood elevation may cause annual flood insurance premiums to be increased.

(3) *Utilities.*

(a) All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of floodwaters into the systems;

(b) Water wells shall be located on high ground that is not in the floodway;

(c) New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of floodwaters into the systems and discharges from the systems into floodwaters;

(d) On-site waste disposal systems shall be located to avoid impairment to them or contamination from them during flooding.

(4) 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.

**19.142.120 Development proposals, including manufactured home parks and Ssubdivision proposals.**

All development proposals, including manufactured home park or subdivision proposals, shall:

(1) ~~All subdivision proposals shall bBe~~ consistent with the need to minimize flood damage;

(2) ~~All subdivision proposals shall hHave~~ public utilities and facilities, such as sewer, gas, electrical, and water systems located and constructed to minimize or eliminate flood damage;

(3) ~~All subdivision proposals shall hHave~~ adequate drainage provided to reduce exposure to flood damage;

(4) Where base flood elevation data has not been provided or is not available from another authoritative source, it shall be generated for ~~subdivision proposals and other proposed developments which contain at least~~ all development proposals greater than 50 lots or five acres (whichever is less).

### **19.142.130 Review of building permits.**

Where elevation data is not available either through the FIS, FIRM, or from another authoritative source (FWRC 19.142.070), applications for building permits shall be reviewed to assure that proposed construction will be reasonably safe from flooding as determined by the director. The test of reasonableness is a local judgment and includes use of historical data, high water marks, photographs of past flooding, etc., where available.

### **19.142.140 Specific standards.**

The following provisions are required in all areas of special flood hazards where base flood elevation data has been provided as set forth in FWRC 19.142.050(1) or 19.142.070.

#### *(1) Residential construction in Zone AE.*

- (a) New construction and substantial improvement of any residential structure shall have the lowest floor, including basement, elevated one foot or more above the base flood elevation (BFE).
- (b) Fully enclosed areas below the lowest floor that are subject to flooding are prohibited, or if used solely for parking, access, or storage, shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters. Designs for meeting this requirement must either be certified by a registered professional engineer or architect or must meet or exceed the following minimum criteria:
  - (i) A minimum of two openings having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding shall be provided.
  - (ii) The bottom of all openings shall be no higher than one foot above grade.
  - (iii) Openings may be equipped with screens, louvers, or other coverings or devices; provided, that they permit the automatic entry and exit of floodwaters.

Foundation vent standards required by the IBC/IRC outside the floodplain do not meet this standard and are often inadvertently permitted. Insurance rates reflect an “all or nothing” standard. Partially ventilated crawlspaces may be subject to an additional loading fee of 20 to 25 percent attached to the annual insurance premium.

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 director for verification.

#### *(2) Residential construction in Zone VE:*

- (a) Be located landward of the reach of mean high tide;
- (b) Have the bottom of the lowest structural member of the lowest floor (excluding pilings and columns), elevated to or above the Base Flood Elevation;



(c) Have the pile or column foundation and structure attached thereto be anchored to resist flotation, collapse, and lateral movement due to the effects of wind and water loads acting simultaneously on all building components. Water loading values used shall be those associated with the base flood. Wind loading values used shall be those required by applicable state or local building standards;

(d) Have the space below the lowest floor, usable solely for parking of vehicles, building access, or storage, either free of obstruction or constructed with non-supporting breakaway walls, open wood lattice-work, or insect screening intended to collapse under wind and water loads without causing collapse, displacement, or other structural damage to the elevated portion of the building or supporting foundation system. For the purposes of this section, a breakaway wall shall have a design safe loading resistance of not less than 10 and no more than 20 pounds per square foot;

(e) Prohibit the use of fill for structural support of buildings; and

(f) Prohibit man-made alteration of sand dunes and mangrove stands.

A registered professional engineer or architect shall develop or review the structural design, specifications and plans for the construction, and shall certify that the design and methods of construction to be used are in accordance with accepted standards of practice for meeting the provisions of this section.

Upon completion of construction, certification by a registered professional engineer or architect that these design standards have been satisfied, and certification by a registered professional engineer or surveyor that the elevation requirements of the bottom of the lowest structural member of the lowest floor, excluding pilings and columns, of this section have been satisfied shall be provided to the director for verification.

**(23) Nonresidential construction *in an AE zone*.** New construction and substantial improvement of any commercial, industrial or other nonresidential structure shall either have the lowest floor, including basement, elevated one foot or more above the base flood elevation; or, together with attendant utility and sanitary facilities, shall:

(a) Be floodproofed so that below one foot or more above the base flood level the structure is watertight with walls substantially impermeable to the passage of water;

(b) Have structural components capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy;

(c) Be certified by a registered professional engineer or architect that the design and methods of construction are in accordance with accepted standards of practice for meeting provisions of this subsection based on their development and/or review of the structural design, specifications and plans. Such certifications shall be provided to the official as set forth in FWRC 19.142.060(2);

(d) Nonresidential structures that are elevated, not floodproofed, must meet the same standards for space below the lowest floor as described in subsection (1)(b) of this section.

Applicants who are floodproofing nonresidential buildings should beware that flood insurance premiums will be based on rates that are one foot below the floodproofed level (e.g., a building floodproofed to the base flood level will be rated as one foot below). Floodproofing the building an additional foot will reduce insurance premiums significantly.

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 director for verification; or certification by a registered professional engineer or architect that the floodproofing design of this section is satisfied, including the specific elevation in relation to mean sea level to which such structures are floodproofed, shall be provided to the director for verification.

(4) Non-residential construction in Zone VE. Floodproofing of non-residential structures is prohibited. All structures must be elevated and constructed according to the requirements set forth in FWRC 19.142.140(1).

~~(35)~~ *Manufactured homes.* All manufactured homes ~~in the floodplain~~ to be placed or substantially improved on sites shall be elevated on a permanent foundation such that the lowest floor of the manufactured home is elevated one foot or more above the base flood elevation and be securely anchored to an adequately anchored foundation system to resist flotation, collapse and lateral movement.

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 director for verification.

(6) Manufactured homes in Zone VE. All manufactured homes to be placed or substantially improved on sites shall meet the standards of residential construction in VE Zones in FWRC 19.142.140(1).

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 director for verification.

~~(47)~~ *Recreational vehicles.* Recreational vehicles placed on sites are required to either:

- (a) Be on the site for fewer than 180 consecutive days; or
- (b) Be fully licensed and ready for highway use, on wheels or jacking system, attached to the site only by quick disconnect type utilities and security devices, and have no permanently attached additions; or
- (c) Meet the requirements of subsection (3) of this section and the elevation and anchoring requirements for manufactured homes.

#### **19.142.150 AE and A1-30 zones with base flood elevations but no floodways.**

In areas with base flood elevations (but a regulatory floodway has not been designated), no new construction, substantial improvements, or other development (including fill) shall be permitted within ~~zones A1-30 and Zone~~ AE on the community's FIRM, unless it is demonstrated 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 within the community.

#### **19.142.160 Floodways.**

Located within areas of special flood hazard established in FWRC 19.142.050(1) are areas designated as floodways. Chapter 86.16 RCW will need to be consulted in addition to this Code. The more restrictive provisions shall apply. Since the floodway is an extremely hazardous area due to the velocity of floodwaters that can carry debris, and increase erosion potential, the following provisions apply:

(1) Encroachments, including fill, new construction, substantial improvements, and other development shall be prohibited unless certification by a registered professional engineer is provided demonstrating through hydrologic and hydraulic analyses performed in accordance with standard engineering practice that the proposed encroachment would not result in any increase in flood levels during the occurrence of the base flood discharge.

(2) Construction or reconstruction of residential structures is prohibited within designated floodways, except for (a) repairs, reconstruction, or improvements to a structure which do not increase the ground floor area; and (b) repairs, reconstruction or improvements to a structure, the cost of which does not exceed 50 percent of the market value of the structure either (i) before the repair, or reconstruction is started, or (ii) if the structure has been damaged, and is being restored, before the damage occurred. 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 to structures identified as historic places, may be excluded in the 50 percent.

(3) If subsection (1) of this section is satisfied, all new construction and substantial improvements shall comply with all applicable flood hazard reduction provisions of FWRC 19.142.110, Provisions for flood hazard reduction.

#### **19.142.170 Critical facility.**

Construction of new critical facilities shall be, to the extent possible, located outside the limits of the special flood hazard area (SFHA) (100-year floodplain). Construction of new critical facilities shall be permissible within the SFHA if no feasible alternative site is available. Critical facilities constructed within the SFHA shall have the lowest floor elevated three feet above BFE or to the height of the 500-year flood, whichever is higher. Access to and from the critical facility should also be protected to the height utilized above. Floodproofing and sealing measures must be taken to ensure that toxic substances will not be displaced by or released into floodwaters. Access routes elevated to or above the level of the base flood elevation shall be provided to all critical facilities to the extent possible.