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 15.15.070 shall be the basis for regulation until a new FIRM is issued that incorporates data utilized under FWRC 15.15.070.

(2) **Penalties for noncompliance.** No structure or land shall hereafter be constructed, located, extended, converted, or altered without full compliance with the terms of this chapter and other applicable regulations.

(3) **Summary abatement.** Whenever any violation of this chapter causes or creates a condition, the continued existence of 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.

15.15.060 Permits.

(1) **Development permit required.** A development permit shall be obtained before construction or development begins within any area of special flood hazard established in FWRC 15.15.050(1). The permit shall be for all structures including manufactured homes, as set forth in FWRC 15.15.040, and for all development including fill and other activities, also as set forth in FWRC 15.15.040.

(2) **Application for development permit.** Application for a 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:
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(a) 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) Elevation in relation to mean sea level to which any structure has been floodproofed;
(c) Certification by a registered professional engineer or architect that the floodproofing methods for any nonresidential structure meet floodproofing criteria in FWRC 15.15.140(2);
(d) Description of the extent to which a watercourse will be altered or relocated as a result of proposed development.

(3) Designation of the administrator. The director or designee is hereby appointed to administer and implement 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 15.15.160(1) are met.

15.15.070 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 15.15.050(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 15.15.140, Specific standards, and FWRC 15.15.160, Floodways.

15.15.080 Information to be obtained and maintained.
(1) Where base flood elevation data is provided through the FIS, FIRM, or required as in FWRC 15.15.070, 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 15.15.070, 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 15.15.060(2)(c).
(3) The city shall maintain for public inspection all records pertaining to the provisions of this chapter.

15.15.090 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 shall require that maintenance is provided.
within the altered or relocated portion of said watercourse so that the flood carrying capacity is not diminished.

15.15.100 Conditions for flood variances.

1. Generally, flood variance requests for proposals located within the shoreline jurisdiction shall be processed through the shoreline variance procedures in FWRC 15.05.160. 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 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. Flood variances shall not be issued within a designated floodway if any increase in flood levels during the base flood discharge would result.

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

4. Flood 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. Flood 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. Flood 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 (a) of this section and otherwise complies with FWRC 15.15.110(1) and (3), and 15.15.120.

7. Any applicant to whom a variance is granted shall be given written notice that the permitted 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.

15.15.110 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;
   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.
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(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 flood waters 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 flood waters into the systems and discharges from the systems into flood waters;

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

15.15.120 Subdivision proposals.

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

(2) All subdivision proposals shall have 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 have 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 50 lots or five acres (whichever is less).

15.15.130 Review of building permits.

Where elevation data is not available either through the FIS, FIRM, or from another authoritative source (FWRC 15.15.070), 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.

15.15.140 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 15.15.050(1) or 15.15.070.

(1) Residential construction.

(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 shall be designed to automatically equalize hydrostatic flood forces on
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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.

(2) Nonresidential construction. 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 15.15.060(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.

(3) 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.

(4) 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.
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15.15.150 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 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.

15.15.160 Floodways.
Located within areas of special flood hazard established in FWRC 15.15.050(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 (1) before the repair, or reconstruction is started, or (2) 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 15.15.110, Provisions for flood hazard reduction.

15.15.170 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.