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ORDINANCE NO. 2202

AN ORDINANCE OF THE CITY OF REDMOND, WASHINGTON, AMENDING CHAPTER 15.04 OF THE REDMOND MUNICIPAL CODE REGARDING FLOOD CONTROL IN ORDER TO BRING THE SAME INTO COMPLIANCE WITH THE REQUIREMENTS OF THE NATIONAL FLOOD INSURANCE PROGRAM AND THE WASHINGTON FLOODPLAIN MANAGEMENT ACT; PROVIDING FOR SEVERABILITY AND ESTABLISHING AN IMMEDIATE EFFECTIVE DATE.

WHEREAS, the Washington Floodplain Management Act, Chapter 86.16 RCW, provides for administration of national flood insurance program (NFIP) regulation requirements by local governments and for the enactment of local ordinances providing for such administration; and

WHEREAS, pursuant to Chapter 86.16 RCW, Chapter 15.04 of the Redmond Municipal Code establishes standards for construction within certain areas of the city that are vulnerable to floods and flood damage; and

WHEREAS, the City has been notified by the Washington State Department of Ecology (DOE) that Chapter 15.04 must be updated in order to meet the requirements of the NFIP and the Washington Floodplain Management Act; and

WHEREAS, DOE has given the City until May 5, 2004 to amend Chapter 15.04 has advised the City that if the regulations are not amended by that date, DOE will be unable to certify that the City is in good standing with the NFIP and that the City will not be eligible to apply for any of the mitigation grant programs established by the Federal Emergency Management Agency (FEMA); and

WHEREAS, the eligibility of Redmond property owners to obtain flood insurance under the NFIP could also be jeopardized by such noncompliance; and

WHEREAS, the City Council has therefore determined to amend the regulations as provided in this ordinance; now, therefore,

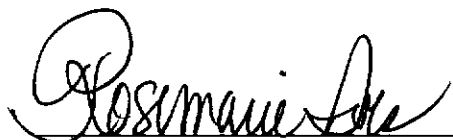
THE CITY COUNCIL OF THE CITY OF REDMOND, WASHINGTON, DO
ORDAIN AS FOLLOWS:

Section 1. **Chapter 15.04 Amended.** Chapter 15.04 of the Redmond Municipal Code entitled, "Flood Control," is hereby amended to read as set forth on Exhibit A attached hereto and incorporated herein by this reference as if set forth in full.

Section 2. **Severability.** If any section, sentence, clause or phrase of this ordinance or the amended Chapter 15.04 adopted hereby should be held to be invalid or unconstitutional by a court of competent jurisdiction, such invalidity or unconstitutionality shall not affect the validity of any other section, sentence, clause or phrase of this ordinance or the amended Chapter 15.04.

Section 3. **Effective Date.** This ordinance, being an administrative action, is not subject to referendum, and shall take effect and be in full force five (5) days after publication of a summary thereof consisting of the title.

APPROVED:

A handwritten signature in black ink, appearing to read "Rosemarie Ives", is written over a horizontal line.

MAYOR ROSEMARIE M. IVES

Ordinance No. 2202

ATTEST/AUTHENTICATED:



CITY CLERK BONNIE MATTSON

APPROVED AS TO FORM:



CITY ATTORNEY JAMES E. HANEY

FILED WITH THE CITY CLERK:	March 31, 2004
PASSED BY THE CITY COUNCIL:	April 6, 2004
PUBLISHED:	April 12, 2004
EFFECTIVE DATE:	April 17, 2004
ORDINANCE NO. <u>2202</u>	

Chapter 15.04 FLOOD CONTROL

Sections:

- 15.04.010 Purpose.
- 15.04.020 Definitions.
- 15.04.030 Lands to which this chapter applies.
- 15.04.040 Basis for establishing the areas of special flood hazard.
- 15.04.045 Compliance with state Flood Control Zone Permit Program required – Administration by city.
- 15.04.050 Compliance.
- 15.04.060 Administration and enforcement.
- 15.04.070 Duties and responsibilities of the Building Official.
- 15.04.080 General standards.
- 15.04.090 Anchoring.
- 15.04.100 Construction materials and methods.
- 15.04.110 Utilities.
- 15.04.120 Subdivision proposals.
- 15.04.130 Residential construction.
- 15.04.140 Nonresidential construction.
- 15.04.150 Mobile homes.
- 15.04.160 Floodway/floodway fringe.

15.04.010 Purpose.

It is the purpose of this chapter to promote the public health, safety, and general welfare, and to minimize public and private losses due to flood conditions in specific areas by methods and provisions designed 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, which will unnaturally divert floodwaters or which may increase flood hazards in other areas. (Ord. 863 § 1, 1979).

15.04.020 Definitions.

The following words and phrases shall be defined and given the meaning set forth below for the purpose of this chapter. Other words or phrases used in this chapter shall be interpreted so as to give them the meaning they have in common usage and all interpretations shall be made as to give this chapter its most reasonable application.

- (1) "Area of special flood hazard" means the land in the floodplain within a community subject to a base flood.

(2) "Base flood" means a flood having a one percent chance of being equaled or exceeded in any given year.

(3) "Basement" means any area of the building having its floor subgrade (below ground level) on all sides.

(34) "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, excavation or drilling operations or storage of equipment or materials located within the area of special flood hazard.

(45) "Flood" or "flooding" means a general and temporary condition or partial or complete inundation of normally dry land areas from:

(A) The overflow of inland waters; and/or

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

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

(67) "Flood insurance study" 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.

(78) "Floodway" means the channel or portion of a watercourse and the adjacent land areas that must be reserved in order to discharge a base flood without cumulatively increasing the water surface elevation more than one foot.

(89) "Floodway fringe" means that portion of the area of special flood hazard exclusive of the floodway.

(9) "Habitable floor" means any floor usable for living purposes, which includes working, sleeping, eating, cooking or recreation, or a combination thereof. A floor used only for storage purposes is not a habitable floor, so long as such sole use continues.

(10) "Lowest Floor" means the lowest floor of the lowest enclosed area (including 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 so as to render the structure in violation of the applicable non-elevation design requirements of 15.04.130.

(4011) "MobileManufactured home" means a structure, that-which is transportable in one or more sections, is built on a permanent chassis, and is designed to-be-for used with or without a permanent foundation when connected-attached to the required utilities. It-The term does not include a recreational vehicles-or travel trailers.

(4412) "New construction" means structures for which the "start of construction" commenced on or after the effective date of the ordinance codified in this chapter.

(13) "Recreational Vehicle" means a vehicle which is:

(A) Built on a single chassis;

(B) Four hundred square feet or less when measured at the largest horizontal projection;

- (C) Designed to be self-propelled or permanently towable by a light duty truck; and
- (D) Designed primarily not for use as a permanent dwelling, but as a temporary living quarters for recreational, camping, travel, or seasonal use.

(~~4214~~) "Start of construction" means the first placement of permanent construction of a structure on a site, such as the pouring of slabs or footings or any work beyond the grading, and filling; 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 as part of the main structure.

(~~4315~~) "Structure" means a walled and roofed building or mobile home that is principally above ground.

(~~4416~~) "Substantial improvement" means any repair, reconstruction, or improvement of a structure, the cost of which equals or exceeds fifty percent of the market value of the structure either:

(A) Before the improvement or repair is started; or

(B) If the structure has been damaged and is being restored, before the damage occurred. For the purposes of this definition, "substantial improvement" is considered to occur when the first alteration of any wall, ceiling, floor, or other structural part of the building commences, whether or not the alteration affects the external dimensions of the structure. (Ord. 863 § 2, 1979).

15.04.030 Lands to which this chapter applies.

This chapter shall apply to all areas of special flood hazards within the jurisdiction of the city. (Ord. 863 § 3, 1979).

15.04.040 Basis for establishing the areas of special flood hazard.

The areas of special flood hazard identified by the Federal Insurance Administration and the Federal Emergency Management Agency in a scientific and engineering report entitled, "The Flood Insurance Study for King County, Washington and Incorporated Areas," dated ~~September 29, 1989~~May 16, 1995, as amended, and by the Flood Insurance Rate Map entitled, "FIRM (Flood Insurance Rate Map) for King County, Washington and Incorporated Areas," dated ~~September 29, 1989~~May 16, 1995, as amended, as the same relate to land within the currently or future boundaries of the city, are adopted by this reference as if set forth in full and declared to be a part of this chapter. The Flood Insurance Study and Flood Insurance Rate Map are on file at the office of the Public Works Department, City Hall, Redmond, Washington. (Ord. 1519 § 1 (part), 1989; Ord. 863 § 4, 1979).

15.04.045 Compliance with state Flood Control Zone Permit Program required – Administration by city.

Pursuant to delegation of authority by the Washington State Department of Ecology, the city is charged with the responsibility of administering the Washington State Flood Control Zone Permit Program within the city. All development within the boundaries of Sammamish Flood Control Zone No. 4, the boundaries of which are set forth in the

official division of hydraulics map maintained within the Public Works Department of the city, shall comply with RCW Chapter 86.16, the state Flood Control Zone Act, and Chapter 508-60 of the Washington Administrative Code, the Permit Program Regulations. (Ord. 1127 § 1, 1983).

15.04.050 Compliance.

No building permit or other development or land use permit or approval shall be granted that is not in compliance with the requirements of this chapter. (Ord. 863 § 5, 1979).

15.04.060 Administration and enforcement.

The Building Official shall administer and implement this chapter by granting, granting with conditions, or denying building permit applications in accordance with its provisions. Administration and enforcement of the provisions of this chapter shall be the same as provided in the Uniform Building Code. (Ord. 863 § 6, 1979).

15.04.070 Duties and responsibilities of the Building Official.

Duties of the Building Official shall include, but not be limited to:

(1) Permit review, which shall involve the review of all applications for building permits to determine:

(A) That the permit requirements of this chapter have been satisfied;

(B) That all necessary permits have been obtained from those federal, state or local governmental agencies from which prior approval is required; and

(C) If the proposed development is located in the floodway, to assure that the provisions of Section 15.04.160 are met.

~~(2) Obtaining and maintaining information consisting of the following:~~
Information to be Obtained and Maintained:

~~(A) The actual elevation (in relation to mean sea level) of the lowest habitable floor or storage floor (including basement) of all new or substantially improved structures, and whether or not the structure contains a basement; and~~
Where base flood elevation data is provided through the Flood Insurance Study, FIRM, or required in this Chapter, obtain and record the actual 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.

~~(B) For all new or substantially improved floodproofed structures~~
where base flood elevation data is provided through the Flood Insurance Study, Firm, or as required in this Chapter:

~~(i) Obtain and record the actual elevation (in relation to mean sea level) which shall be verified and recorded to which the structure was floodproofed, and~~

~~(ii) The certifications required in Sections 15.04.080 through 15.04.160 shall be maintained on file~~
Maintain the floodproofing certifications required in Sections 15.04.080 through 15.04.160

~~(C) Maintain for public inspection all records pertaining to the provisions of this Chapter.~~

(3) Notification of the alteration of watercourses and maintenance of flood carrying capacity, consisting of the following:

(A) Notify adjacent communities and the State Departments of Ecology and Fisheries, prior to any alteration or relocation of the Sammamish River, Bear Creek, Evans Creek and Lake Sammamish, and submit evidence of such notification to the Federal Insurance Administration; and

(B) Require that maintenance is provided within the altered or relocated portion of said watercourse so that the flood-carrying capacity is not diminished.

(4) Interpretation of FIRM Boundaries. Together with the technical committee, make interpretation where needed, as to exact location of the boundaries of the areas of special flood hazards (for example, where there appears to be a conflict between a mapped boundary and actual field conditions). The technical committee shall obtain, review, and reasonably utilize any base flood elevation and floodway data available from a federal, state or other source, in making such interpretations in order to administer Sections 15.04.130 through 15.04.160. Any person contesting the location of the boundary shall be given thirty days to appeal the interpretation in writing to the board of adjustment or its successor. (Ord. 1519 § 1 (part), 1989; Ord. 863 § 7, 1979).

15.04.080 General standards.

In all areas of special flood hazards, the standards set forth in Sections 15.04.090 through 15.04.150 are required. (Ord. 863 § 8 (part), 1979).

15.04.090 Anchoring.

(a) All new construction and substantial improvements shall be anchored to prevent flotation, collapse or lateral movement of the structure.

(b) All manufactured and mobile homes shall be anchored to resist prevent flotation, collapse or lateral movement of the structure by providing over-the-top and frame ties to ground anchors. Specific requirements shall be that:

(1) Over-the-top ties be provided at each of the four corners of the mobile home, with two additional ties per side at intermediate locations, with mobile homes less than fifty feet long requiring one additional tie per side;

(2) Frame ties be provided at each corner of the home with five additional ties per side; at intermediate points, with mobile homes less than fifty feet long requiring four additional ties per side;

(3) All components of the anchoring system be capable of carrying a force of four thousand eight hundred pounds; and

(4) Any additions to the mobile home be similarly anchored.

(c) An alternative method of anchoring involving a system designed to withstand a wind force of ninety miles per hour or greater may be permitted. Certification must be provided to the Building Official that this standard has been met. (Ord. 863 § 8(1), 1979).

15.04.100 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. (Ord. 1519 § 1 (part), 1989; Ord. 863 § 8(2), 1979).

15.04.110 Utilities.

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

(b) New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of floodwaters into the systems and discharge from the systems into floodwaters.

(c) On-site waste disposal systems are prohibited. (Ord. 863 § 8(3), 1979).

15.04.120 Subdivision proposals.

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

(b) All subdivision proposals shall have public utilities and facilities such as sewer, gas, electrical, and water systems located and constructed to minimize flood damage;

(c) All subdivision proposals shall have adequate drainage provided to reduce exposure to flood damage; and

(d) Base flood elevation data shall be provided by the applicant for subdivision and short subdivision proposals and other proposed development which contain at least fifty lots or five acres (whichever is less). (Ord. 863 § 8(4), 1979).

15.04.130 Residential construction.

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 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:

(1) 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.

(2) The bottom of all openings shall be no higher than one foot above grade.

(3) Openings may be equipped with screens, louvers, or other coverings or devices provided that they permit the automatic entry and exit of floodwaters. (Ord. 1519 § 1 (part), 1989; Ord. 863 § 8(5), 1979).

15.04.140 Nonresidential construction.

Nonresidential structures that are elevated, not floodproofed, must meet the same standards for space below the lowest floor as described in Section 15.04.130.

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

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

(3) Be certified by a registered professional engineer or architect that the ~~standards of this section are satisfied. Design and methods of construction are in accordance with accepted standards or practice for meeting provisions of this subsection based on their development and/or review of the structural design, specifications and plans. Such certificates shall be provided to the Building Official.~~ (Ord. 1519 § 1 (part), 1989; Ord. 863 § 8(6), 1979).

15.04.150 Mobile Manufactured homes.

(a) ~~Mobile homes shall be anchored in accordance with Section 15.04.090~~ All manufactured homes to be placed or substantially improved on sites:

(1) Outside of a manufactured home park or subdivision.

(2) In a new manufactured home park or subdivision.

(3) In an expansion to an existing manufactured home park or subdivision, or

(4) In an existing manufactured home park or subdivision on which a manufactured home has incurred "substantial damage" as the result of a flood;

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 designed foundation system to resist flotation, collapse and lateral movement.

(b) ~~For new mobile home parks and mobile home subdivisions; for expansions to existing mobile home parks and mobile home subdivisions; for existing mobile home parks and mobile home subdivisions where the repair, reconstruction or improvement of the streets, utilities and pads equals or exceeds fifty percent of value of the streets, utilities and pads before the repair, construction or improvement has commenced; and for mobile homes not placed in a mobile home park or mobile home subdivision, it shall be required that:~~ Manufactured homes to be placed or substantially improved on sites in an existing manufactured home park or subdivision that are not subject to the above manufactured home provisions be elevated so that either:

(1) Stands or lots are elevated on compacted fill or on pilings so that the lowest floor of the mobile home will be one foot above the base flood level; and The lowest floor of the manufactured home is elevated one foot or more above the base flood elevation, or

(2) In the instance of elevation on pilings, that: The manufactured home chassis is supported by reinforced piers or other foundation elements of at least equivalent strength that are not less than 36 inches in height above grade and be securely anchored to an adequately designed foundation system to resist flotation, collapse, and lateral movement.

- ~~(A) Lots are large enough to permit steps,~~
- ~~(B) Piling foundations are placed in stable soil no more than ten feet apart, and~~
- ~~(C) Reinforcement is provided for pilings more than six feet above the ground level.~~
- ~~(c) No new mobile homes shall be placed in a floodway. (Ord. 863 § 8(7), 1979).~~

15.04.155 Recreational Vehicles

Recreational vehicles placed on sites are required to either:

- (a) Be on the site for fewer than 180 consecutive days;
- (b) Be fully licensed and ready for highway use, 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 requirements of 15.04.150 above and the elevation and anchoring requirements for manufactured homes.

15.04.160 Floodway/floodway fringe.

Special restrictions with respect to floodways and floodway fringe areas shall be as follows:

(1) Floodway. Located within areas of special flood hazard established in Section 15.04.040 are areas designated as floodways. Since the floodway is an extremely hazardous area due to the velocity of floodwaters which carry debris, potential projectiles, and erosion potential, the following are not permitted in the floodway: structures, developments, or landfills, other than for shoreline protective structures, bridges, roads, trails, and railroads. Prohibit encroachments, including fill, new construction, substantial improvements, and other development 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) Floodway Fringe Restrictions. The following are not permitted in a floodway fringe:

(A) Except in areas designated "urban environment," in the Redmond shoreline master program, any structure, development or landfill which would: reduce the natural floodwater storage capacity of the area of special flood hazard; pollute or contribute materially to the turbidity of floodwater at the base flood stage; significantly change the existing base flood hydraulic characteristics, or alter the temperature characteristics of the water body unless an improvement in fish habitats would result; and

(B) Any structure which is not fully protected from water damage at the base flood stage by having the lowest usable habitable or storage floor or level raised at least one foot above the base flood stage level, and by floodproofing in a manner complying with the requirements of this chapter. (Ord. 863 § 9, 1979).

EXHIBIT A

Ordinance No. 2202

Chapter 15.04 FLOOD CONTROL

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- 15.04.020 Definitions.
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It is the purpose of this chapter to promote the public health, safety, and general welfare, and to minimize public and private losses due to flood conditions in specific areas by methods and provisions designed 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, which will unnaturally divert floodwaters or which may increase flood hazards in other areas. (Ord. 863 § 1, 1979).

15.04.020 Definitions.

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(3) "Basement" means any area of the building having its floor subgrade (below ground level) on all sides.

(34) "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, excavation or drilling operations or storage of equipment or materials located within the area of special flood hazard.

(45) "Flood" or "flooding" means a general and temporary condition or partial or complete inundation of normally dry land areas from:

(A) The overflow of inland waters; and/or

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

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(67) "Flood insurance study" 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.

(78) "Floodway" means the channel or portion of a watercourse and the adjacent land areas that must be reserved in order to discharge a base flood without cumulatively increasing the water surface elevation more than one foot.

(89) "Floodway fringe" means that portion of the area of special flood hazard exclusive of the floodway.

(9) ~~"Habitable floor" means any floor usable for living purposes, which includes working, sleeping, eating, cooking or recreation, or a combination thereof. A floor used only for storage purposes is not a habitable floor, so long as such sole use continues.~~

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~~(1011) "Mobile Manufactured home" means a structure, that which is transportable in one or more sections, is built on a permanent chassis, and is designed to be for used with or without a permanent foundation when connected-attached to the required utilities. It-The term does not include a recreational vehicles or travel trailers.~~

(1412) "New construction" means structures for which the "start of construction" commenced on or after the effective date of the ordinance codified in this chapter.

(13) "Recreational Vehicle" means a vehicle which is:

(A) Built on a single chassis;

(B) Four hundred square feet or less when measured at the largest horizontal projection;

(C) Designed to be self-propelled or permanently towable by a light duty truck; and

(D) Designed primarily not for use as a permanent dwelling, but as a temporary living quarters for recreational, camping, travel, or seasonal use.

(1214) "Start of construction" means the first placement of permanent construction of a structure on a site, such as the pouring of slabs or footings or any work beyond the grading, and filling; 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 as part of the main structure.

(1315) "Structure" means a walled and roofed building or mobile home that is principally above ground.

(1416) "Substantial improvement" means any repair, reconstruction, or improvement of a structure, the cost of which equals or exceeds fifty percent of the market value of the structure either:

(A) Before the improvement or repair is started; or

(B) If the structure has been damaged and is being restored, before the damage occurred. For the purposes of this definition, "substantial improvement" is considered to occur when the first alteration of any wall, ceiling, floor, or other structural part of the building commences, whether or not the alteration affects the external dimensions of the structure. (Ord. 863 § 2, 1979).

15.04.030 Lands to which this chapter applies.

This chapter shall apply to all areas of special flood hazards within the jurisdiction of the city. (Ord. 863 § 3, 1979).

15.04.040 Basis for establishing the areas of special flood hazard.

The areas of special flood hazard identified by the Federal Insurance Administration and the Federal Emergency Management Agency in a scientific and engineering report entitled, "The Flood Insurance Study for King County, Washington and Incorporated Areas," dated ~~September 29, 1989~~ May 16, 1995, as amended, and by the Flood Insurance Rate Map entitled, "FIRM (Flood Insurance Rate Map) for King County, Washington and Incorporated Areas," dated ~~September 29, 1989~~ May 16, 1995, as amended, as the same relate to land within the currently or future boundaries of the city, are adopted by this reference as if set forth in full and declared to be a part of this chapter. The Flood Insurance Study and Flood Insurance Rate Map are on file at the office of the Public Works Department, City Hall, Redmond, Washington. (Ord. 1519 § 1 (part), 1989; Ord. 863 § 4, 1979).

15.04.045 Compliance with state Flood Control Zone Permit Program required – Administration by city.

Pursuant to delegation of authority by the Washington State Department of Ecology, the city is charged with the responsibility of administering the Washington State Flood Control Zone Permit Program within the city. All development within the boundaries of Sammamish Flood Control Zone No. 4, the boundaries of which are set forth in the

official division of hydraulics map maintained within the Public Works Department of the city, shall comply with RCW Chapter 86.16, the state Flood Control Zone Act, and Chapter 508-60 of the Washington Administrative Code, the Permit Program Regulations. (Ord. 1127 § 1, 1983).

15.04.050 Compliance.

No building permit or other development or land use permit or approval shall be granted that is not in compliance with the requirements of this chapter. (Ord. 863 § 5, 1979).

15.04.060 Administration and enforcement.

The Building Official shall administer and implement this chapter by granting, granting with conditions, or denying building permit applications in accordance with its provisions. Administration and enforcement of the provisions of this chapter shall be the same as provided in the Uniform Building Code. (Ord. 863 § 6, 1979).

15.04.070 Duties and responsibilities of the Building Official.

Duties of the Building Official shall include, but not be limited to:

(1) Permit review, which shall involve the review of all applications for building permits to determine:

(A) That the permit requirements of this chapter have been satisfied;

(B) That all necessary permits have been obtained from those federal, state or local governmental agencies from which prior approval is required; and

(C) If the proposed development is located in the floodway, to assure that the provisions of Section 15.04.160 are met.

~~(2) Obtaining and maintaining information consisting of the following:~~
Information to be Obtained and Maintained:

~~(A) The actual elevation (in relation to mean sea level) of the lowest habitable floor or storage floor (including basement) of all new or substantially improved structures, and whether or not the structure contains a basement; and~~
Where base flood elevation data is provided through the Flood Insurance Study, FIRM, or required in this Chapter, obtain and record the actual 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.

~~(B) For all new or substantially improved floodproofed structures where base flood elevation data is provided through the Flood Insurance Study, Firm, or as required in this Chapter:~~

~~(i) Obtain and record the actual elevation (in relation to mean sea level) which shall be verified and recorded to which the structure was floodproofed, and~~

~~(ii) The certifications required in Sections 15.04.080 through 15.04.160 shall be maintained on file~~
Maintain the floodproofing certifications required in Sections 15.04.080 through 15.04.160

~~(C) Maintaining for public inspection all records pertaining to the provisions of this Chapter.~~

(3) Notification of the alteration of watercourses and maintenance of flood carrying capacity, consisting of the following:

(A) Notify adjacent communities and the State Departments of Ecology and Fisheries, prior to any alteration or relocation of the Sammamish River, Bear Creek, Evans Creek and Lake Sammamish, and submit evidence of such notification to the Federal Insurance Administration; and

(B) Require that maintenance is provided within the altered or relocated portion of said watercourse so that the flood-carrying capacity is not diminished.

(4) Interpretation of FIRM Boundaries. Together with the technical committee, make interpretation where needed, as to exact location of the boundaries of the areas of special flood hazards (for example, where there appears to be a conflict between a mapped boundary and actual field conditions). The technical committee shall obtain, review, and reasonably utilize any base flood elevation and floodway data available from a federal, state or other source, in making such interpretations in order to administer Sections 15.04.130 through 15.04.160. Any person contesting the location of the boundary shall be given thirty days to appeal the interpretation in writing to the board of adjustment or its successor. (Ord. 1519 § 1 (part), 1989; Ord. 863 § 7, 1979).

15.04.080 General standards.

In all areas of special flood hazards, the standards set forth in Sections 15.04.090 through 15.04.150 are required. (Ord. 863 § 8 (part), 1979).

15.04.090 Anchoring.

(a) All new construction and substantial improvements shall be anchored to prevent flotation, collapse or lateral movement of the structure.

(b) All manufactured and mobile homes shall be anchored to resist prevent flotation, collapse or lateral movement of the structure by providing over-the-top and frame ties to ground anchors. Specific requirements shall be that:

(1) Over-the-top ties be provided at each of the four corners of the mobile home, with two additional ties per side at intermediate locations, with mobile homes less than fifty feet long requiring one additional tie per side;

(2) Frame ties be provided at each corner of the home with five additional ties per side; at intermediate points, with mobile homes less than fifty feet long requiring four additional ties per side;

(3) All components of the anchoring system be capable of carrying a force of four thousand eight hundred pounds; and

(4) Any additions to the mobile home be similarly anchored.

(c) An alternative method of anchoring involving a system designed to withstand a wind force of ninety miles per hour or greater may be permitted. Certification must be provided to the Building Official that this standard has been met. (Ord. 863 § 8(1), 1979).

15.04.100 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. (Ord. 1519 § 1 (part), 1989; Ord. 863 § 8(2), 1979).

15.04.110 Utilities.

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

(b) New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of floodwaters into the systems and discharge from the systems into floodwaters.

(c) On-site waste disposal systems are prohibited. (Ord. 863 § 8(3), 1979).

15.04.120 Subdivision proposals.

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

(b) All subdivision proposals shall have public utilities and facilities such as sewer, gas, electrical, and water systems located and constructed to minimize flood damage;

(c) All subdivision proposals shall have adequate drainage provided to reduce exposure to flood damage; and

(d) Base flood elevation data shall be provided by the applicant for subdivision and short subdivision proposals and other proposed development which contain at least fifty lots or five acres (whichever is less). (Ord. 863 § 8(4), 1979).

15.04.130 Residential construction.

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 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:

(1) 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.

(2) The bottom of all openings shall be no higher than one foot above grade.

(3) Openings may be equipped with screens, louvers, or other coverings or devices provided that they permit the automatic entry and exit of floodwaters. (Ord. 1519 § 1 (part), 1989; Ord. 863 § 8(5), 1979).

15.04.140 Nonresidential construction.

Nonresidential structures that are elevated, not floodproofed, must meet the same standards for space below the lowest floor as described in Section 15.04.130.

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

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

(3) Be certified by a registered professional engineer or architect that the standards of this section are satisfied. Design and methods of construction are in accordance with accepted standards or practice for meeting provisions of this subsection based on their development and/or review of the structural design, specifications and plans. Such certificates shall be provided to the Building Official. (Ord. 1519 § 1 (part), 1989; Ord. 863 § 8(6), 1979).

15.04.150 Mobile Manufactured homes.

(a) ~~Mobile homes shall be anchored in accordance with Section 15.04.090~~ All manufactured homes to be placed or substantially improved on sites;

(1) Outside of a manufactured home park or subdivision,

(2) In a new manufactured home park or subdivision,

(3) In an expansion to an existing manufactured home park or subdivision, or

(4) In an existing manufactured home park or subdivision on which a manufactured home has incurred "substantial damage" as the result of a flood;

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 designed foundation system to resist flotation, collapse and lateral movement,

(b) ~~For new mobile home parks and mobile home subdivisions; for expansions to existing mobile home parks and mobile home subdivisions; for existing mobile home parks and mobile home subdivisions where the repair, reconstruction or improvement of the streets, utilities and pads equals or exceeds fifty percent of value of the streets, utilities and pads before the repair, construction or improvement has commenced; and for mobile homes not placed in a mobile home park or mobile home subdivision, it shall be required that:~~ Manufactured homes to be placed or substantially improved on sites in an existing manufactured home park or subdivision that are not subject to the above manufactured home provisions be elevated so that either:

(1) Stands or lots are elevated on compacted fill or on pilings so that the lowest floor of the mobile home will be one foot above the base flood level; and The lowest floor of the manufactured home is elevated one foot or more above the base flood elevation, or

(2) In the instance of elevation on pilings, that: The manufactured home chassis is supported by reinforced piers or other foundation elements of at least equivalent strength that are not less than 36 inches in height above grade and be securely anchored to an adequately designed foundation system to resist flotation, collapse, and lateral movement.

- ~~(A) Lots are large enough to permit steps;~~
- ~~(B) Piling foundations are placed in stable soil no more than ten feet apart; and~~
- ~~(C) Reinforcement is provided for pilings more than six feet above the ground level.~~
- ~~(c) No new mobile homes shall be placed in a floodway. (Ord. 863 § 8(7), 1979).~~

15.04.155 Recreational Vehicles

Recreational vehicles placed on sites are required to either:

- (a) Be on the site for fewer than 180 consecutive days;
- (b) Be fully licensed and ready for highway use, 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 requirements of 15.04.150 above and the elevation and anchoring requirements for manufactured homes.

15.04.160 Floodway/floodway fringe.

Special restrictions with respect to floodways and floodway fringe areas shall be as follows:

(1) Floodway. Located within areas of special flood hazard established in Section 15.04.040 are areas designated as floodways. Since the floodway is an extremely hazardous area due to the velocity of floodwaters which carry debris, potential projectiles, and erosion potential, the following are not permitted in the floodway: structures, developments, or landfills, other than for shoreline protective structures, bridges, roads, trails, and railroads. Prohibit encroachments, including fill, new construction, substantial improvements, and other development 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) Floodway Fringe Restrictions. The following are not permitted in a floodway fringe:

(A) Except in areas designated "urban environment," in the Redmond shoreline master program, any structure, development or landfill which would: reduce the natural floodwater storage capacity of the area of special flood hazard; pollute or contribute materially to the turbidity of floodwater at the base flood stage; significantly change the existing base flood hydraulic characteristics, or alter the temperature characteristics of the water body unless an improvement in fish habitats would result; and

(B) Any structure which is not fully protected from water damage at the base flood stage by having the lowest usable habitable or storage floor or level raised at least one foot above the base flood stage level, and by floodproofing in a manner complying with the requirements of this chapter. (Ord. 863 § 9, 1979).