

CODE

**CITY OF REDMOND
ORDINANCE NO. 2737**

AN ORDINANCE OF THE CITY OF REDMOND, WASHINGTON, AMENDING RMC 15.04, FLOOD MANAGEMENT, TO ENABLE THE CITY TO ENTER THE FEDERAL EMERGENCY MANAGEMENT ADMINISTRATIONS ("FEMA") COMMUNITY RATING SYSTEM, MAKING POSSIBLE LOWER FLOOD INSURANCE PREMIUMS FOR THE CITY, ITS RESIDENTS, AND BUSINESSES

WHEREAS, the city has floodplains within its limits that have the potential to flood during large storm events; and

WHEREAS, buildings and other property are located within the floodplains and typically have flood insurance; and

WHEREAS, the city has worked with FEMA through the Community Assistance Visit ("CAV") process to identify code changes necessary to become eligible for the Community Rating System ("CRS"); and

WHEREAS, acceptance of the city into the FEMA CRS will make flood insurance holders, including the City, eligible for lower flood insurance premiums.

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

Section 1. Classification. This ordinance is of a general and permanent nature and shall become a part of the City Code.

Section 2. Amendment of RMC 15.04, Flood Control, is hereby amended to read as follows:

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 Manufactured homes.

15.04.010 Purpose.

(A) 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.

15.04.020 Definitions.

(A) 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.

- "Base Flood Elevation" means the elevation flood waters would reach during the 100-year flood event.

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

- [~~4~~] "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 (including gas or liquid storage tanks principally above ground) and located within the area of special flood hazard.

- ~~[(5)]~~ "Flood" or "flooding" means a general and temporary condition of partial or complete inundation of normally dry land areas from:

- ~~[(A)]~~ (1) The overflow of inland waters; and/or

- ~~[(B)]~~ (2) The unusual and rapid accumulation of runoff of surface waters from any source.

- ~~[(6)]~~ "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.

- ~~[(7)]~~ "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.

- "Floodproofing elevation" means the elevation one foot above the base flood elevation. Floodproofing shall conform with Federal Emergency Management Agency standards in effect at project vesting.

- [~~8~~] "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.

- [~~9~~] "Floodway fringe" means that portion of the area of special flood hazard exclusive of the floodway.

- [~~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 nonelevation design requirements of RMC 15.04.130.

- [~~11~~] "Manufactured home" means a structure which is transportable in one or more sections, is built on a permanent chassis, and is designed for use with or without a permanent foundation when attached to the required utilities. The term does not include a recreational vehicle.

- [~~12~~] "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~~] (1) Built on a single chassis;

- [~~B~~] (2) Four hundred square feet or less when measured at the largest horizontal projection;

- [~~C~~] (3) Designed to be self-propelled or permanently towable by a light duty truck; and

- [~~D~~] (4) Designed primarily not for use as a permanent dwelling, but as a temporary living

quarters for recreational, camping, travel, or seasonal use.

- "Special Flood Hazard Area" means the area inundated with water during the 100-year flood event.

- [~~14~~] "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 part of the main structure.

- [~~15~~] "Structure" means a walled and roofed building or mobile home that is principally above ground.

- "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.

- [~~16~~] "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~~] (1) Before the improvement or repair is started; or

[~~B~~] (2) 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.

Substantial Improvement excludes:

(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 structure listed on the National or State Register of Historic Places.

15.04.030 Lands to which this chapter applies.

(A) This chapter shall apply to all areas of special flood hazards within the jurisdiction of the city.

15.04.040 Basis for establishing the areas of special flood hazard.

(A) 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 May 16, 1995, [~~AS AMENDED~~] and any revision thereto, and by the Flood Insurance Rate Map entitled "FIRM (Flood Insurance Rate Map) for King County, Washington and Incorporated Areas," dated May 16, 1995, [~~AS AMENDED~~] and any revision thereto, as the same relate to land within the current 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.

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

(A) 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]~~ **Special Flood Hazard Area**, 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.

15.04.050 Compliance.

(A) 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.

15.04.060 Administration and enforcement.

(A) 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.

(B) If non-structural development is proposed in the Special Flood Hazard Area, Development Engineering shall issue a Clearing and Grading permit and inspect work to assure conformance with this chapter.

15.04.070 Duties and responsibilities of the Building Official.

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

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

~~[(C)]~~ (c) If the proposed development is located in the floodway, to assure that the provisions of RMC 15.04.160 are met.

(2) Information to be Obtained and Maintained.

~~[(A)]~~ (a) 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. Documentation of the actual elevation will be documented in the form of a FEMA Elevation Certificate.

~~[(B)]~~ (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 elevation (in relation to mean sea level) to which the structure was floodproofed, and

(ii) Maintain the floodproofing certifications required in RMC 15.04.080 through 15.04.160

~~[(C)]~~ (c) Maintain for public inspection all records pertaining to the provisions of this chapter forever.

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

~~[(A)]~~ (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)]~~ (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 RMC 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.

15.04.080 General standards.

(A) In all areas of special flood hazards, the standards set forth in RMC 15.04.090 through 15.04.150

are required.

15.04.090 Anchoring.

[~~(a)~~] **(A)** All new construction and substantial improvements shall be anchored to prevent flotation, collapse or lateral movement of the structure. **Small structures not triggering a building permit also require anchoring.**

[~~(b)~~] **(B)** All manufactured and mobile homes shall be anchored to 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.

~~[(e)]~~ **(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.

15.04.100 Construction materials and methods.

~~[(a)]~~ **(A)** All new construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage.

~~[(b)]~~ **(B)** All new construction and substantial improvements shall be constructed using methods and practices that minimize flood damage.

~~[(c)]~~ **(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.

15.04.110 Utilities.

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

[~~(b)~~] **(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)~~] **(C)** On-site waste disposal systems are prohibited.

15.04.120 Subdivision proposals.

[~~(a)~~] **(A)** All subdivision proposals shall be consistent with the need to minimize flood damage;

[~~(b)~~] **(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)~~] **(C)** All subdivision proposals shall have

adequate drainage provided to reduce exposure to flood damage; and

~~[(d)]~~ (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).

15.04.130 Residential construction.

(A) 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]~~ all 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. Openings shall be installed in exterior and interior walls.

(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.

15.04.140 Nonresidential construction.

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

(1) Be floodproofed [~~SO THAT BELOW ONE FOOT ABOVE~~] to the [~~BASE~~] flood [~~LEVEL~~] proofing elevation.
Floodproofing shall conform with Federal Emergency Management Agency (FEMA) standards in effect at project vesting. [~~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 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.

15.04.150 Manufactured homes.

[+a+] **(A)** 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)~~] **(B)** 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) The lowest floor of the manufactured home is elevated one foot or more above the base flood elevation, or

(2) 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.

15.04.155 Recreational vehicles.

Recreational vehicles placed on sites are required to either:

[~~(a)~~] **(A)** Be on the site for fewer than 180 consecutive days;

[~~(b)~~] **(B)** Be fully licensed and ready for highway use, on their 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)~~] **(C)** Meet the requirements of RMC 15.04.150 and the elevation and anchoring requirements for manufactured homes.

15.04.160 Floodway/floodway fringe.

(A) 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 RMC 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)]~~ **(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

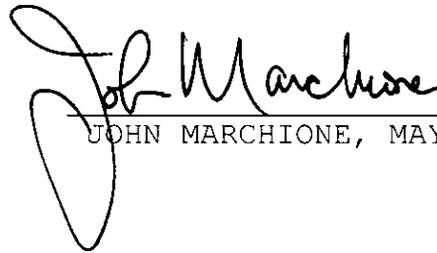
[~~(B)~~] **(b)** Any residential structure which is not fully protected from water damage at the base flood [STAGE] elevation by having the lowest floor [~~USABLE HABITABLE OR STORAGE FLOOR OR LEVEL~~] raised at least one foot above the base flood elevation. [~~STAGE LEVEL, AND BY~~] Non-residential structures shall meet this standard or provide floodproofing to the floodproofing elevation defined in this chapter. [~~IN A MANNER COMPLYING WITH THE REQUIREMENTS OF THIS CHAPTER.~~]

Section 3. Severability. If any section, sentence, clause or phrase of this ordinance should be held to be invalid or unconstitutional by a court of competent jurisdiction, such invalidity or unconstitutionality shall not affect the validity or constitutionality of any other section, sentence, clause or phrase of this ordinance.

Section 4. Effective date. This ordinance shall become effective five days after its publication, or publication of a summary thereof, in the city's official newspaper, or as otherwise provided by law.

ADOPTED by the Redmond City Council this 15th day of April, 2014.

CITY OF REDMOND



JOHN MARCHIONE, MAYOR

ATTEST:



MICHELLE M. HART, MMC, CITY CLERK

(SEAL)

APPROVED AS TO FORM:



JAMES HANEY, CITY ATTORNEY

FILED WITH THE CITY CLERK: April 1, 2014
PASSED BY THE CITY COUNCIL: April 15, 2014
SIGNED BY THE MAYOR: April 18, 2014
PUBLISHED: April 21, 2014
EFFECTIVE DATE: April 26, 2014
ORDINANCE NO. 2737

Yes: Carson, Flynn, Margeson, Myers, Shutz, Stilin