

ORDINANCE NO. 2647

AN ORDINANCE amending Chapter 16.57 of the Camas Municipal Code by revising the regulations for frequently flooded areas, and repealing Chapter 15.28 of the Camas Municipal Code.

The Council of the City of Camas do ordain as follows:

Section I

Chapter 16.57 of the Camas Municipal Code is hereby amended to provide as set forth in Exhibit "A" attached hereto and by this reference incorporated herein.

Section II

Chapter 15.28 of the Camas Municipal Code, relating to flood hazard regulations, is hereby repealed.

Section III

This Ordinance shall take force and be in effect five (5) days from and after its publication according to law.

PASSED BY the Council and APPROVED by the Mayor this 21 day of May, 2012.

SIGNED: [Signature]  
Mayor

ATTEST: [Signature]  
Clerk

APPROVED as to form:  
[Signature]  
City Attorney

**Chapter 16.57 FREQUENTLY FLOODED AREAS**

Sections:

- 16.57.010 Applicability
- 16.57.020 Uses and activities prohibited
- 16.57. 030 Critical area report--Additional requirements
- 16.57. 040 Warning and disclaimer of liability.
- 16.57. 050 Performance standards--General requirements
- 16.57. 060 Performance standards--Specific uses.
- 16.57. 070 Recreational Vehicles
- 16.57.080 Variations--Additional considerations for frequently flooded areas

**16.57.010 Applicability**

A. Frequently Flooded Areas. Frequently flooded areas include: The areas of special flood hazard identified by the Federal Insurance Administration in a scientific and engineering report entitled "The Flood Insurance Study for Clark County, Washington, and incorporated areas" dated September 5, 2012, and any revisions thereto, with accompanying Flood Insurance Rate Maps (FIRM). The study is the official report provided by the Federal Insurance Administration that includes flood profiles, the Flood Insurance Rate Maps, and the water surface elevation of the base flood. The study and FIRM are on file at the City of Camas. The best available information for flood hazard area identification as outline in Section 16.57.050(C) shall be the basis for regulation until a new FIRM is issued that incorporates data utilized. The flood insurance study and accompanying rate maps are hereby adopted by reference, and declared part of this chapter. These are minimum designations; the director may identify additional areas.

B. Use of Additional Information. The director may use additional flood information that is more restrictive or detailed than that provided in the flood insurance study conducted by the Federal Emergency Management Agency (FEMA) to designate frequently flooded areas, including data on channel migration, historical data, high water marks, photographs of past flooding, location of restrictive floodways, maps showing future build-out conditions, maps that show riparian habitat areas, or similar information.

C. Flood Elevation Data. When base flood elevation data is not available (Zone A), 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 this chapter.

D. For the purposes of this chapter, definitions are generally found in CMC Section 18.03.

**16.57.020 Uses and activities prohibited**

A. Critical Facilities. Construction of new critical facilities shall be permissible within frequently flooded areas if no feasible alternative site is available. Critical facilities constructed within frequently flooded areas shall have the lowest floor elevated three feet or more above the level of the base flood elevation (one hundred year flood), or to the height of the 500-year flood, whichever is higher. 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. Certification by a registered professional engineer is required.

B. Wells.

C. On-site sewage or waste disposal systems.

D. Lots (Includes residential and non-residential). There shall be no increase in lots within frequently flooded areas. No additional lots shall be created within a frequently flooded area. Divisions of land shall have the frequently flooded areas designated as separate tract(s) and not included within any additional lot.

E. Development in Floodways.

1. New Development Requires Certification by an Engineer. Encroachments, including new construction, substantial improvements, fill, and other development, are prohibited within designated floodways unless certified by a registered professional engineer. Such certification shall demonstrate through hydrologic and hydraulic analyses, performed in accordance with standard engineering practice that the proposed encroachment will not result in any increase in flood levels during the occurrence of the base flood discharge. Small projects that are solely to protect or create fish habitat, and designed by a qualified professional, may be allowed without certification if the director determines that the project will not obstruct flood flows. Fish protection projects shall be reviewed on behalf of the City by a qualified professional in the field of hydraulics.

2. Residential Construction and Reconstruction Prohibited. Construction and reconstruction of residential structures is prohibited within floodways, except for:

- a. Maintenance or repairs to a structure that do not increase the ground floor area; and
- b. Repairs, reconstruction, or improvements to a structure for which the cost does not exceed fifty 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.
- c. Improvement to a building to correct existing violations of state or local health, sanitary, or safety code specifications that have been identified by the City, and that are the minimum necessary to assure safe living conditions, or to structures identified as historic places shall not be included in the fifty percent.

3. If Section E(1) above is satisfied, all new construction and substantial improvements must also comply with all applicable flood hazard reduction provisions.

#### **16.57.030 Critical area report--Additional requirements**

In addition to the items listed in CMC 16.51.140 Critical Area Reporting, the following is required:

A. Prepared by a Qualified Professional. A frequently flooded areas report shall be prepared by a qualified professional who is a hydrologist, or engineer, who is licensed in the state of Washington, with experience in preparing flood hazard assessments.

B. Area Addressed in Critical Area Report. The following areas shall be addressed in a critical area report for frequently flooded areas:

1. The site area of the proposed activity;
2. All areas of a special flood hazard area, as indicated on the flood insurance rate map(s), within three hundred feet of the project area; and
3. All other flood areas indicated on the flood insurance rate map(s) within three hundred feet of the project area.

C. Flood Hazard Assessment Required. A critical area report for a proposed activity within a frequently flooded area shall contain a flood hazard assessment, including the following site- and proposal-related information at a minimum:

1. Site and Construction Plans. A copy of the site and construction plans for the development proposal showing:
  - a. Floodplain (one hundred year flood elevation), ten- and fifty-year flood elevations, floodway, other critical areas, management zones, and shoreline areas;
  - b. Proposed development, including the location of existing and proposed structures, fill, storage of materials, and drainage facilities, with dimensions indicating distances to the floodplain;
  - c. Clearing limits; and
  - d. Elevation of the lowest floor (including basement) of all buildings, and the level to which any building has been floodproofed;
2. Floodproofing Certificate (FEMA form 81-65, most current edition). When floodproofing is proposed for a non-residential building, a certification by a registered professional engineer or architect that the floodproofing methods meet the requirements in CMC Section 16.57.050(F); and
3. Watercourse Alteration. When watercourse alteration is proposed, the critical area report shall include:
  - a. Extent of Watercourse Alteration. A description of and plan showing the extent to which a watercourse will be altered or relocated as a result of proposal, and
  - b. Maintenance Program Required for Watercourse Alterations. A maintenance program that provides maintenance practices for the altered or relocated portion of the watercourse to ensure that the flood carrying capacity is not diminished.

D. Information Regarding Other Critical Areas. Potential impacts to wetlands, fish and wildlife habitat, and other critical areas shall be addressed in accordance with the applicable sections of these provisions.

#### **16.57.040 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 human or natural causes. This chapter does not imply that land outside frequently flooded areas, or uses permitted within such areas will be free from flooding or flood damages. This chapter shall not create liability on the part of City of Camas, 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.

#### **16.57.050 Performance standards--General requirements**

All Elevation Certificates (FEMA Form 81-31), Floodproofing Certificates for non-residential structures (FEMA Form 81-65), documents, and records pertaining to the provisions of this ordinance shall be maintained by the City for public inspection.

A. All Necessary Permits Shall be Obtained. The applicant shall provide verification to the City that all necessary permits have been obtained from those governmental agencies from which prior approval is required by federal, state or local law including Section 404 of the Federal Water Pollution Control Act Amendment of 1972, and the Endangered Species Act of 1973, as amended.

B. Area of Special Flood Hazards with Base Flood Elevation. When the base flood elevation is provided, but a regulatory floodway has not been designated, new construction, substantial improvements, or other development, including fill, shall not be permitted within frequently flooded areas, 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 inch at any point within the City limits.

C. Areas Without Base Flood Elevation Data. Where base flood elevation data is not available (Zone A), and there is insufficient data then a report shall be submitted by a qualified professional that includes analysis of historical data and field surveys. The reports shall include reasonable mapping to ensure proposed buildings are safe from flooding and to demonstrate 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 inch at any point within the City limits

D. Construction Materials and Methods.

1. Methods that Minimize Flood Damage. All new construction and substantial improvements shall be constructed using flood resistant materials and utility equipment, and with methods and practices that minimize flood damage.

2. Buildings shall be located outside the floodplain. For sites with no buildable area out of the floodplain, buildings may be allowed provided they are placed on the highest land on the site, oriented parallel to flow rather than perpendicular, and sited as far from the watercourse and other critical areas as possible. If the City detects any evidence of active hyporheic exchange on a site, the development shall be located to minimize disruption of such exchange.

3. Utilities Shall be Protected. 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.

E. Elevation Certificate Required Following Construction. Following construction of a building within the floodplain where the base flood elevation is provided, the applicant shall obtain a "finished construction" elevation certificate (FEMA Form 81-31, most current edition) from a registered professional engineer or architect that records the elevation of the lowest floor.

F. Floodproofing (Non-residential only).

1. When a building is to be floodproofed, it shall be designed and constructed using methods that meet the following requirements:

a. Watertight Building. The building shall be watertight with walls substantially impermeable to the passage of water below one foot above the base flood level;

b. Hydrostatic and Hydrodynamic Resistance. Structural components shall be capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy;

c. Certified by a Registered Professional Engineer or Architect. The building shall 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.

2. Floodproofing Certificate Required Following Construction. Following construction of the building, the applicant shall obtain a floodproofing certificate (FEMA Form 81-65, most current edition) from a registered professional engineer or architect that records the actual (as-built) elevation to which the building was floodproofed.

G. Anchoring. All new construction and substantial improvements within the floodplain shall be anchored to prevent flotation, collapse, or lateral movement of the building. 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 frames tied to ground anchors.

H. Fill and Grading. Fill and grading within the floodplain shall only occur upon a determination from a registered professional engineer that the fill or grading will not block side channels, inhibit channel migration, increase flood hazards to others, or be placed within a channel migration zone, whether or not the City has delineated such zones as of the time of the application. If fill or grading is located in a floodway, CMC Section 16.57.020 applies.

#### **16.57.060 Performance standards--Specific uses**

In all special flood hazard areas the following provisions are required:

##### A. Residential Units.

1. Must be Above Base Flood Elevation. New construction or placement of residential units and substantial improvement of any residential building shall have the lowest floor, including basement, elevated one foot or more above the base flood elevation.
2. Areas Below the Lowest Floor. Fully enclosed areas below the lowest floor that are subject to flooding 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:
  - a. 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;
  - b. The bottom of all openings shall be no higher than one foot above grade; and
  - c. Openings may be equipped with screens, louvers, or other coverings or devices provided that they permit the automatic entry and exit of floodwaters.

##### 3. Manufactured Homes.

All manufactured homes to be placed or substantially improved on sites shall be elevated on a permanent foundation such that the lowest floor of the manufactured homes 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. All manufactured homes 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 frames ties to ground anchors. If the manufactured home is placed on a permanent footing/foundation with stem walls, CMC Section 16.57.060 (A)(2) applies.

##### B. Nonresidential Construction.

1. Must be Above Base Flood Elevation. New construction and substantial improvement of any commercial, industrial, or other nonresidential building 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 be floodproofed in accordance with floodproofing (Section 16.57.050(F)). Unavoidable impacts to flooded areas (from fill) need to be mitigated.
2. Areas Below the Lowest Floor. If floodproofed, areas shall be in accordance with floodproofing (Section 16.57.050 (F)). If elevated and not floodproofed, fully enclosed areas below the lowest floor 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:

- a. A minimum of three openings having a total net area of no less than one square inch for every square foot of enclosed area subject to flooding shall be provided;
- b. The bottom of all openings shall be no higher than one foot above grade; and
- c. Openings may be equipped with screens, louvers, or other coverings or devices, provided that they permit the automatic entry and exit of floodwaters.

C. Utilities.

1. Shall be Designed to Minimize Infiltration of Floodwaters. All new and replacement water supply systems shall be designed to preclude infiltration of floodwaters into the systems.
2. Sanitary Sewage Systems. 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.
3. On-site Waste Disposal Systems. On-site waste disposal systems shall be located to avoid impairment to them or contamination from them during flooding. New on-site sewage disposal systems are prohibited for uses and activities prohibited from frequently flooded areas.

D. Subdivision/Land Division Proposals.

1. All land division proposals shall:
  - a. Minimize Flood Damage. Subdivisions, short subdivisions, planned developments, and binding site plans shall be designed to minimize or eliminate flood damage to proposed buildings; and public utilities and facilities that are installed as part of such subdivisions. Sewer, gas, electrical, and water systems shall be located and constructed to minimize flood damage. Subdivisions should be designed using natural features of the landscape, and should not incorporate "flood protection" changes.
  - b. Have Adequate Drainage. Subdivisions, short subdivisions, planned developments, and binding site plans shall have adequate natural surface water drainage in accordance with City requirements to reduce exposure to flood hazards; and
  - c. Show Flood Areas on Plat Maps. Subdivisions, short subdivisions, planned developments, and binding site plans shall show the one hundred year floodplain, floodway, and channel migration zone on the preliminary and final plat maps.
2. Lots. No lot or portion of lot after the effective date of the ordinance codified in this title shall be established within the boundaries of a frequently flooded area.

E. Alteration of Watercourses.

1. Shall be in Accordance with Habitat Regulations. Watercourse alterations shall only be allowed in accordance with the fish and wildlife habitat conservation areas (Chapter 16.61).
2. Shall Not Result in Blockage. Watercourse alteration projects shall not result in blockage of side channels.
3. Notification Required. The City shall notify adjacent communities, the Washington State Department of Ecology, and the Federal Insurance Administration of a proposed watercourse alteration at least fifteen days prior to permit issuance.

4. Maintenance of Alterations. The applicant shall maintain the altered or relocated portion of the watercourse to ensure that the flood carrying capacity is not diminished. Maintenance shall be bonded for a period of five years, and be in accordance with an approved maintenance program.

#### **16.57.070 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 its wheels, or the jacking system is attached to the site only by quick disconnect type utilities and securities devices, and has no permanently attached additions; or
- C. Meet the requirements of CMC Section 16.57.060(A)(3) and the elevation and anchoring requirements for manufactured homes.

#### **16.57.080 Variations--Additional considerations for frequently flooded areas**

A. Additional Variation Considerations. In review of variation requests for activities within frequently flooded areas, the City shall consider all technical evaluations, relevant factors, standards specified in this chapter, and:

1. The danger to life and property due to flooding, erosion damage, or materials swept onto other lands during flood events;
2. The susceptibility of the proposed facility and its contents to flood damage, and the effect of such damage on the proposed use;
3. The importance of the services provided by the proposed use to the community;
4. The necessity of a waterfront location and the availability of alternative locations for the proposed use that are not subject to flooding or erosion damage;
5. The safety of access to the property for ordinary and emergency vehicles;
6. The expected heights, velocity, duration, rate of rise, and sediment transport of the floodwaters, and the effects of wave action, if applicable, expected at the site; and
7. The costs of providing governmental services during and after flood conditions, including maintenance and repair of public utilities and facilities such as sewer, gas, electrical, and water systems, and streets and bridges.

B. Variations shall only be issued upon a determination that the granting of a variation 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 existing laws or ordinances.

C. Variations shall not be issued within a designated floodway if any increase in flood levels during the base flood discharge would result.