

City of Langley
Langley, Washington

Ordinance No. XXX

An Ordinance Of The City Council Of The City Of Langley, Washington, Amending The City's Development Regulations As Set Forth In Title 15 Of The Langley Municipal Code By Amending Chapter 15.24 Relating To Flood Damage Prevention; Floodplain, Drainage And Erosion

WHEREAS, the City of Langley has the authority to regulate the development of property within the City; and

WHEREAS, the City of Langley has adopted floodplain regulations to promote the public health, safety, and general welfare, reduce the annual cost of flood insurance; and minimize public and private losses due to flood conditions in specific areas; and

WHEREAS, certain areas within the City of Langley's corporate boundaries are subject to periodic flooding with the potential to cause damage to property; and

WHEREAS, such areas are designated Special Flood Hazards Areas (SPHA) and mapped by the Federal Emergency Management Agency (FEMA); and

WHEREAS, financial relief from property loss in the form of federally-subsidized flood insurance is available to property owners as authorized by the National Flood Insurance Program (NFIP); and

WHEREAS, adopting, implementing and enforcing regulations to prevent or minimize property damage caused by floods is mandatory for participation in the National Flood Insurance Program; and

WHEREAS, areas designated as SPHA may also be critical habitat for endangered species in the Puget Sound region; and

WHEREAS, the Endangered Species Act (ESA) requires that listed species and their critical habitat must be protected; and

WHEREAS, in 2008 the National Marine Fisheries Service (NMFS) issued a Biological Opinion that provides guidance to protect listed species and their critical habitat as part of any development approval in the floodplain; and

WHEREAS, FEMA has issued a revised Flood Insurance Rate Study for Island County, Washington and Incorporated Areas, and revised Flood Insurance Rate Maps for areas within the City's corporate boundaries, all with the revision date of March 7, 2017; and

WHEREAS, the City is required to adopt an ordinance that meets ordinance that meets or exceeds the minimum National Flood Insurance Program requirements by March 7, 2017, to remain eligible for participation in the National Flood Insurance Program ; and

WHEREAS, pursuant to RCW 36.70A.106, the City has notified the Washington State Department of Commerce of the City's intent to adopt the proposed amendments to the flood hazard regulations in Chapter 15 of the Langley Municipal Code; and

WHEREAS, the Director of Community Planning, acting as the City's Responsible Official under the State Environmental Policy Act (SEPA), reviewed the proposed legislation and, on January 25, 2017, issued a determination of non-significance within a 15-day comment period; and

WHEREAS, in a public meeting on XXXX, the Advisory Planning Commission evaluated issues related to the proposed amendments to the flood hazard regulations, and after deliberation, recommended XXXX to the City Council, as reflected in the minutes of the meeting; and

Commented [CP1]: The highlighted clauses are place holders pending completion of the process and final review.

WHEREAS, on XXX, 2017 a public hearing on the proposed amendments was held before the City Council and all persons wishing to be heard were heard; and

WHEREAS, public notices of the SEPA threshold determination and the public hearing for the legislation contained herein were provided as required by law; and

WHEREAS, following the close of the public hearing, the City Council reviewed the recommendations of the Planning Commission, public comments, and other documents and information in the public record relevant to the proposal; and

WHEREAS, the City Council finds that the amendments to the Flood Hazard Prevention regulations in Chapter 15.24 Langley Municipal Code are/are not consistent with the Comprehensive Plan and in the interest of the public health, safety and welfare of Langley residents and property owners;

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

Section 1. Chapter 15.24 LMC entitled "Flood Hazard Areas" is amended as follows:

Chapter 15.24 - FLOOD HAZARD AREAS

Sections:

- 15.24.010 Statement of purpose.**
- 15.24.020 Methods of reducing flood losses.**
- 15.24.030 Definitions.**
- 15.24.040 General provisions.**
- 15.24.050 Development permit required (44 CFR Part 60.3(b)(1)).**
- 15.24.060 Application for development permit.**
- 15.24.070 Designation of the local administrator (44 CFR Part 59.22(b)(1)).**

15.24.080 Duties and responsibilities of the local administrator.

15.24.090 Conditions for variances.

15.24.100 Provisions for flood hazard reduction.

15.24.110 Specific standards (44 CFR Part 60.3(c)(1)).

15.24.111 AE and A1-30 Zones With Base Flood Elevations But No Floodways (44 CFR 60.3(c)(10)

15.24.112 Floodways 44 CFR 60.3(d). WAC 173-158-070

15.24.112 Critical Facility

15.24.113 Coastal High Hazard Areas 44 CFR 60.3

15.24.010 Statement of purpose.

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

- A. To protect human life and health;
- B. To minimize expenditure of public money and costly flood control projects;
- C. To minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;
- D. To minimize prolonged business interruptions;
- E. To minimize damage to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines, streets, and bridges located in areas of special flood hazard;
- F. To help maintain a stable tax base by providing for the sound use and development of areas of special flood hazard so as to minimize future flood blight areas;
- G. To ensure that potential buyers are notified that property is in an area of special flood hazard;
- H. To ensure that those who occupy the areas of special flood hazard assume responsibility for their actions. (Ord. 880, 2006)
- I. Qualify the city of Langley for participation in the National Flood Insurance Program, thereby giving citizens and businesses the opportunity to purchase flood insurance.

Commented [CP2]: Removing floodway reference and related regulations

J. Maintain the quality of water in streams, and marine areas and their floodplains so as to protect public water supplies, areas of Public Trust, and wildlife habitat protected by the Endangered Species Act.

Commented [CP3]: Clauses J, K and L are added as per ESA model ordinance to protect species and their habitat.

K. Retain the natural channel, shoreline, and floodplain creation processes and other natural floodplain functions that protect, create, and maintain habitat for threatened and endangered species.

L. Prevent or minimize loss of hydraulic, geomorphic, and ecological functions of floodplains and stream channels.

15.24.020 Methods of reducing flood losses.

In order to accomplish its purposes, this chapter includes methods and provisions for:

- A. 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;
- B. Requiring that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction;
- C. Controlling the alteration of natural floodplains, stream channels, and natural protective barriers, which help accommodate or channel floodwaters;
- D. Controlling filling, grading, dredging, and other development which may increase flood damage; and
- E. Preventing or regulating the construction of flood barriers that unnaturally divert floodwaters or may increase flood hazards in other areas. (Ord. 880, 2006)

15.24.030 Definitions.

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

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

“Area of Special Flood Hazard” or Special Flood Hazard Area (SFHA) means the land in the floodplain within a community subject to a one percent or greater chance of flooding in any given year. Designation on maps always includes the letter A or V.

Commented [CP4]: Added for clarification as new ordinance uses the SFHA reference.

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

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

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

“Coastal high hazard area” means an area of Special Flood Hazard (SFHA) extending from offshore to the inland limit of a primary frontal dune along an open coast and any other area subject to damages caused by wave action and/or high velocity water during the 1 percent annual chance flood wave action from storms or seismic sources. The area is designated on the FIRM as zone V1-30, VE or V.

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

“Development” means any man-made 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, subdivision of land, removal of more than five percent of native vegetation, or alteration of natural site characteristics, located within the area of special flood hazard.

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

“Elevation certificate” means the official form (FEMA Form 84-34 086-0-33) used to track development, provide elevation information necessary to ensure compliance with community floodplain management ordinances, and determine the proper insurance premium rate with Section B completed by community officials.

“Flood” or “flooding” means a general and temporary condition of partial or complete inundation of normally dry land areas from:

1. The overflow of inland or tidal waters; and/or
2. The unusual and rapid accumulation of runoff of surface waters from any source.

“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.

Commented [CP5]: Reflects revised designation from Jan 7, 2017 FIS.

Commented [CP6]: Added to meet requirements of the Endangered Species Act (ESA) as per FEMA Regional Guide for Habitat Assessment and Mitigation, FEMA, January 2010.

Commented [CP7]: New form reference

“Flood insurance study (FIS)” means 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.

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

“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 this chapter found at Sections [15.24.110](#)(A) and (B) (i.e., provided there are adequate flood ventilation openings).

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

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

“New construction” means structures for which the “start of construction” commenced on or after the effective date of this chapter.

“New manufactured home park or subdivision” means a manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) is completed on or after the effective date of adopted floodplain management regulations.

“Recreational vehicle” means a vehicle:

1. Built on a single chassis;
2. Four hundred square feet or less when measured at the largest horizontal projection;
3. Designed to be self-propelled or permanently towable by a light duty truck; and
4. Designed primarily not for use as a permanent dwelling but as temporary living quarters for recreational, camping, travel, or seasonal use.

“Start of construction” includes substantial improvement, and means the date the building permit was issued, provided the actual start of construction, repair, reconstruction, placement or other improvement was within 180 days of the permit date. The “actual start” means either the first placement of permanent construction of a structure on a site, such as the pouring of slab or footings, the installation of piles, the construction of columns, or any work beyond the stage of excavation; or the placement of a manufactured home on a foundation. Permanent construction does not include land preparation, such as clearing, grading and filling; nor does it include the installation of streets and/or walkways; nor does it include excavation for a basement, footings, piers, or foundations or the erection of temporary forms; nor does it include the installation on the property of accessory buildings, such as garages or sheds not occupied as dwelling units or not part of the main structure. For a substantial improvement, the “actual start of construction” means the first alteration of any wall, ceiling, floor, or other structural part of a building, whether or not that alteration affects the external dimensions of the building.

“Structure” means a walled and roofed building, including a gas or liquid storage tank 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.

“Substantial improvement” means any repair, reconstruction, or improvement of a structure, the cost of which equals or exceeds 50 percent of the market value of the structure either:

1. Before the improvement or repair is started; or
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 that alteration affects the external dimensions of the structure.

The term can exclude:

1. 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
2. Any alteration of a structure listed on the National Register of Historic Places or a State Inventory of Historic Places.

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

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

15.24.040 General provisions.

A. Lands to Which This Chapter Applies ([44 CFR Part 59.22\(a\)](#)). This chapter shall apply to all areas of special flood hazards within the jurisdiction of the city of Langley.

B. Basis for Establishing the Areas of Special Flood Hazard ([44 CFR Part 60.3\(c\)\(1\)\(d\)\(2\)](#)). The areas of special flood hazard identified by the Federal Insurance Administration in a scientific and engineering report entitled the "Flood Insurance Study for Island County, Washington, and Incorporated Areas," dated ~~March 7, 2017~~ February 2, 2007, and any revisions thereto, with an accompanying flood insurance rate map (FIRM), and any revisions thereto, are hereby adopted by reference and declared to be a part of this chapter. The flood insurance study and the FIRM are on file at City Hall, Langley, Washington. The best available information for flood hazard area identification as outlined in Section [15.24.080\(B\)](#) shall be the basis for regulation until a new FIRM is issued that incorporates data utilized under Section [15.24.080\(B\)](#).

C. Warning and Disclaimer of Liability. The degree of flood protection required by this chapter is considered reasonable for regulatory purposes and is based on scientific and engineering considerations. Larger floods can and will occur on rare occasions. Flood heights may be increased by manmade or natural causes. This chapter does not imply that land outside the areas of special flood hazards or uses permitted within such areas will be free from flooding or flood damages. This chapter shall not create liability on the part of the city of Langley, any officer, employee or agent thereof, or the Federal Insurance Administration, for any flood damages that result from reliance on this chapter or any administrative decision lawfully made hereunder. (Amended during 2013 reformat; Ord. 880, 2006)

15.24.050 Development permit required ([44 CFR Part 60.3\(b\)\(1\)](#)).

A development permit shall be obtained before construction or development begins within any area of special flood hazard established in Section [15.24.040\(B\)](#). The permit shall be for all structures including manufactured homes, as set forth in Section [15.24.030](#), Definitions, and for all development including fill and other activities, also as set forth in Section [15.24.030](#). (Ord. 880, 2006)

15.24.060 Application for development permit.

In addition to the standard information required with a permit application (Chapter 18.36 Administration) the following information is also required for any permit proposing development within a floodway or floodplain:

Commented [CP8]: Added cross reference with existing application requirements.

Application for a development permit shall be made on forms furnished by the city of Langley and may include, but not be limited to, plans in duplicate drawn to scale showing the nature, location, dimensions, and elevations of the area in question; existing or proposed structures, fill, storage of materials, drainage facilities, and the location of the foregoing. Specifically, the following information is required:

- A. Elevation in relation to mean sea level of the lowest floor (including basement) of all structures recorded on a current elevation certificate (FF 81-31) with Section B completed by the local official.
- B. Elevation in relation to mean sea level to which any structure has been flood-proofed.
- C. Certification by a registered professional engineer or architect that the flood-proofing methods for any nonresidential structure meet flood-proofing criteria in Section [15.24.110\(C\)](#).
- D. Description of the extent to which a watercourse will be altered or relocated as a result of proposed development. (Ord. 880, 2006)

E. A habitat assessment that demonstrates that the proposed project will not cause any adverse effects to ESA-listed species, nor cause any adverse modification to designated critical habitat. 44 CFR 60.3(a)(2)

15.24.061 Conformance with Chapter 16 (Environmental Policy)

Wherever this section allows uses within a floodplain, that use must also be consistent with Chapter 16 (Environmentally Policy, including Shoreline Management) in terms of both allowable use and location of use. In any case, wherever the regulations in these two Chapters conflict, the more restrictive shall prevail. The explicit intent of this section is to not allow development that is inconsistent with Chapter 16 (Environmental Policy) to occur in the restricted areas or buffers required by that chapter, even though it may seem permissible according to the regulations of this chapter.

15.24.070 Designation of the local administrator ([44 CFR Part 59.22\(b\)\(1\)](#)).

The building official and/or planning official is hereby appointed to administer and implement this chapter by granting or denying development permit applications in accordance with its provisions. (Ord. 880, 2006)

15.24.080 Duties and responsibilities of the local administrator.

Duties of the local administrator shall include, but not be limited to:

A. Permit Review.

1. Review all development permits to determine that the permit requirements of this chapter have been satisfied.

Commented [CP9]: To comply with the National Marine Fisheries Service Puget Sound Biological Opinion's (BO) Reasonable and Prudent Alternative (RPA #3)

Commented [CP10]: Cross reference

2. Review all development permits to determine that all necessary permits have been obtained from those federal, state, or local governmental agencies from which prior approval is required ([44 CFR Part 60.3\(a\)\(2\)](#)).

B. Use of Other Base Flood Data (In A and V Zones) ([44 CFR Part 60.3\(b\)\(4\)](#)). When base flood elevation data has not been provided (in A or V zones) in accordance with Section [15.24.040\(B\)](#), Basis for Establishing the Areas of Special Flood Hazard, the local administrator 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 Section [15.24.110](#). Specific standards –

C. Information to Be Obtained and Maintained.

1. Where base flood elevation data is provided through the flood insurance study, FIRM, or required as in subsection (B) of this section, obtain and record the actual (as-built) elevation (in relation to mean sea level) of the lowest floor (including basement) of all new or substantially improved structures, and whether or not the structure contains a basement ([44 CFR Part 60.3\(b\)\(5\)\(i\)](#)). Record the elevation on a current elevation certificate with Section B of the certificate completed by the local official.

2. For all new or substantially improved flood-proofed nonresidential structures where base flood elevation data is provided through the FIS, FIRM, or as required in subsection (B) of this section:

a. Obtain and record the elevation (in relation to mean sea level) to which the structure was flood-proofed ([44 CFR Part 60.3\(b\)\(5\)\(ii\)](#)).

b. Maintain the flood-proofing certifications required in Section [15.24.060\(C\)](#) ([44 CFR Part 60.3\(b\)\(5\)\(iii\)](#)).

3. Maintain for public inspection all records pertaining to the provisions of this chapter. ([44 CFR Part 60.3\(b\)\(5\)\(iii\)](#)).

D. Alteration of Watercourses ([44 CFR Part 60.3\(b\)\(6\)](#)).

1. Notify adjacent communities and the Department of Ecology prior to any alteration or relocation of a watercourse, and submit evidence of such notification to the Federal Insurance Administration.

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

E. Interpretation of FIRM Boundaries. Make interpretations where needed, as to exact location of the boundaries of the areas of special flood hazards (e.g., where there appears to be a conflict between a mapped boundary and actual field conditions). The person contesting the location of the boundary shall be given a reasonable opportunity to appeal the interpretation. Such appeals shall be granted consistent with the standards of Section 60.6 of the Rules and Regulations of the National Flood Insurance Program ([44 CFR Part 59-76](#)). (Amended during 2013 reformat; Ord. 880, 2006)

15.24.090 Conditions for variances.

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

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

C. Variances shall only be issued upon:

1. A showing of good and sufficient cause;
2. The submittal, review and approval of a Habitat Assessment;
3. ~~2~~ A determination that failure to grant the variance would result in exceptional hardship to the applicant;
4. ~~3~~ A determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, create nuisances, cause fraud on or victimization of the public, or conflict with existing local laws or ordinances.

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

E. Variances may be issued for nonresidential buildings in very limited circumstances to allow a lesser degree of flood-proofing than watertight or dry-flood-proofing, where it can be determined that such action will have low damage potential, complies with all other variance criteria except subsection (B) of this section, and otherwise complies with Sections [15.24.100](#)(A), (C), and (D).

Commented [CP11]: To comply with NMFS's Biological Opinion

F. Any applicant to whom a variance is granted shall be given written notice that the permitted structure will be built with its lowest floor below the base flood elevation and that the cost of flood insurance will be commensurate with the increased risk. (Ord. 880, 2006)

15.24.100 Provisions for flood hazard reduction.

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

A. Anchoring ([44 CFR Part 60.3\(a\)\(3\)\(i\)](#)) ~~(b)~~.

Commented [CP12]: Revised reference

1. All new construction and substantial improvements shall be anchored to prevent flotation, collapse, or lateral movement of the structure ([44 CFR Part 60.3\(a\)\(3\)\(i\)](#)).
2. All manufactured homes shall be placed on and anchored to a permanent foundation in a manner that prevents flotation, collapse, or lateral movement, and shall be installed using methods and practices that minimize flood damage. Anchoring methods may include, but are not limited to, use of over-the-top or frame ties to ground anchors. ([44 CFR Part 60.3\(b\)\(8\)](#)).

B. Construction Materials and Methods ([44 CFR Part 60.3\(a\)\(3\)\(ii-iv\)](#)).

1. All new construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage.
2. All new construction and substantial improvements shall be constructed using methods, materials, and practices that minimize flood damage.
3. Electrical, heating, ventilation, plumbing, and air-conditioning equipment and other service facilities shall be designed and/or otherwise elevated or located so as to prevent water from entering or accumulating within the components during conditions of flooding. Locating such equipment below the base flood elevation may cause annual flood insurance premiums to be increased.

C. Utilities ([44 CFR Part 60.3\(a\)\(5\)](#) and [\(6\)](#)).

1. All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of floodwaters into the systems;
2. Water wells shall be located on high ground that is not in the floodway;
3. 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;

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

D. Subdivision Proposals ([44 CFR Part 60.3\(a\)\(4\)\(b\)\(3\)](#), [\(4\)\(i\)\(iii\)](#), [\(b\)\(3\)](#)).

Commented [CP13]: Additional references added

1. All subdivision proposals shall be consistent with the need to minimize flood damage;
2. All subdivision proposals shall have public utilities and facilities, such as sewer, gas, electrical, and water systems, located and constructed to minimize or eliminate flood damage;
3. All subdivision proposals shall have adequate drainage provided to reduce exposure to flood damage;
4. Where base flood elevation data has not been provided or is not available from another authoritative source, it shall be generated for subdivision proposals and other proposed developments which contain at least 50 lots or five acres (whichever is less).

E. Review of Building Permits ([44 CFR Part 60.3\(a\)\(3\)](#)). Where elevation data is not available either through the flood insurance study, FIRM, or from another authoritative source (Section [15.24.080\(B\)](#)), applications for building permits shall be reviewed to assure that proposed construction will be reasonably safe from flooding. The test of reasonableness is a local judgment and includes use of historical data, high water marks, photographs of past flooding, etc., where available. Failure to elevate at least two feet above the highest adjacent grade in these zones may result in higher insurance rates. (Amended during 2013 reformat; Ord. 880, 2006)

15.24.110 Specific standards ([44 CFR Part 60.3\(c\)\(1\)](#)).

In all areas of special flood hazards where base flood elevation data has been provided as set forth in Section [15.24.040\(B\)](#), Basis for Establishing the Areas of Special Flood Hazard, or Section [15.24.080\(B\)](#), Use of Other Base Flood Data, the following provisions are required:

A. Residential Construction ([44 CFR Part 60.3\(c\)\(2\)\(5\)](#)). New construction and substantial improvement of any residential structure shall have the lowest floor, including basement, elevated one foot or more above the base flood elevation (BFE).

B. Fully enclosed areas below the lowest floor that are subject to flooding are prohibited, or shall be designed to automatically equalize hydrostatic flood forces on 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.

C. Nonresidential Construction ([44 CFR Part 60.3\(c\)\(3\)\(4\)\(5\)](#)). New construction and substantial improvement of any commercial, industrial or other nonresidential structure shall either have the lowest floor, including basement, elevated one foot or more above the base flood elevation; or, together with attendant utility and sanitary facilities, shall:

Commented [CP14]: Added new reference

1. Be flood-proofed so that below one foot or more above the base flood level the structure is watertight with walls substantially impermeable to the passage of water;

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

3. Be certified by a registered professional engineer or architect that the design and methods of construction are in accordance with accepted standards of practice for meeting provisions of this subsection based on their development and/or review of the structural design, specifications and plans. Such certifications shall be provided to the official as set forth in Section [15.24.060\(C\)](#);

4. Nonresidential structures that are elevated, not flood-proofed, must meet the same standards for space below the lowest floor as described in subsections (A) and (B) of this section.

5. Applicants who are floodproofing non-residential buildings shall be notified that flood insurance premiums will be based on rate that are one foot below the floodproofed level (e.g. a building floodproofed to the base flood level will be rated as one foot below).

D. Manufactured Homes ([44 CFR Part 60.3\(c\)\(6\)\(12\)](#)). All manufactured homes in the floodplain to be placed or substantially improved on sites shall be elevated on a permanent foundation such that the lowest floor of the manufactured home is elevated one foot or more above the base flood elevation and be securely anchored to an adequately anchored foundation system to resist flotation, collapse and lateral movement. (Amended during 2013 reformat; Ord. 880, 2006)

E. Recreational Vehicles ([44 CFR Part 60.3\(c\)\(14\)\(i-iii\)](#)). Recreational vehicles placed on sites are required to either:

1. Be on the site for fewer than 180 consecutive days. (or)

2. 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 have no permanently attached additions; or

3. Meet the requirements of 15.22.110(D) above and the elevation and anchoring requirements for manufactured homes.

15.24.111 AE AND A1-30 Zones With Base Flood Elevations But No Floodways (44 CFR 60.3(c)(10))

In areas with base flood elevations (but a regulatory floodway has not been designated), no new construction, substantial improvements, or other development (including fill) shall be permitted within Zones A1-30 on the community's FIRM, unless it is demonstrated, when combined with all other existing and anticipated development, will not increase the water surface elevation of the base flood more than one foot at any point within the community.

15.24.112 Floodways 44 CFR 60.3(d). WAC 173-158-070

Located within areas of special flood hazard established in 15.24.040(B) are areas designated as floodways. Since the floodway is an extremely hazardous area due to the velocity of floodwaters that can carry debris, and increase erosion potential, the following provisions apply:

1. 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. Construction or reconstruction of residential structures is prohibited within designated floodways, except for (i) repairs, reconstruction, or improvements to a structure which do not increase the ground floor area; and (ii) repairs, reconstruction, or improvements to a structure, the cost of which does not exceed 50 percent of the market value of the structure either, (A) before the repair, or reconstruction is started, or (B) if the structure has been damaged, and is being restored, before the damage occurred. Any project for improvement of a structure to correct existing violations of state or local health, sanitary, or local code enforcement official and which are the minimum necessary to assure safe living conditions, or to structures identified as historic places, may be excluded in the 50 percent.
3. If Section 15.24.112 (1) is satisfied, all new construction and substantial improvements shall comply with all applicable flood hazard reduction provisions of Section 15.24.100, Provisions for Flood Hazard Reduction.

15.24.112 Critical Facility

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

Commented [CP15]: Included in the model ordinance but Langley does not have floodways therefore this will not be included in the amendment.

Commented [CP16]: Option provision)

15.24.113 Coastal High Hazard Areas 44 CFR 60.3

Located within areas of special flood hazard (SFHA) established in Section 15.24.040 B are Coastal High Hazard Areas, designated as Zones V1-30, VE and/or V. These areas have special flood hazards associated with high velocity waters from surveys and, therefore, in addition to meeting all the provisions of this ordinance, the following provisions shall also apply:

1. All new construction and substantial improvements in Zones V1-30, VE and V on the community's FIRM shall be elevated on pilings and columns so that:
 - a. The bottom of the lowest horizontal structural member of the lowest floor (excluding the pilings or columns) is elevated one foot or more above the base flood level; and
 - b. The pile or column foundation and structure attached thereto is anchored to resist flotation, collapse, and lateral movement due to the effects of wind and water loads acting simultaneously on all building components. Wind and water loading values shall each have a one-percent change of being equaled or exceeded in any given year (100-year mean recurrence interval). A registered professional engineer or architect shall develop or review the structural design, specifications and plans for the construction to be used are in accordance with accepted standards of practice for meeting the provisions of Section 15.24.114 1(a)(b).
2. Obtain the elevation (in relation to mean sea level) of the bottom of the lowest structural member of the lowest floor (excluding pilings and columns) of all new and substantially improved structures in Zones V1-30, VE, and V on the community's FIRM and whether or not such structures contain a basement. The Local Administrator shall maintain a record of such information.
3. All new construction within Zones V1-30, VE, and V on the community's FIRM shall be located landward of the reach of mean high tide.
4. Provide that all new construction and substantial improvements within Zones V1-30, VE and V on the community's FIRM have space below the lowest floor either free of obstruction or constructed with non-supporting breakaway walls, open wood lattice-work, or insect screening intended to collapse under wind and water loads without causing collapse, displacement, or other structural damage to the elevated portion of the building or supporting foundation system. For the purposes of this section, a breakaway wall shall have a design safe loading resistance of not less than 10 and no more than 20 pounds per square foot. Use of breakaway walls which exceed a design safe loading resistance of 20 pounds per square foot (either by design or when so required by local or state codes) may be permitted only if a registered professional engineer or architect certifies that the design proposed meets the following conditions:
 - a. Breakaway walls are utilized, such enclosed space shall result from water load less than that which would occur during the base flood; and
 - b. The elevated portion of the building and supporting foundation system shall not be subject to collapse, displacement or other structure damage due to the effects of wind and water loads acting simultaneously on all building components (structural and non-structural). Maximum wind and water loading values to be used in this determination shall each have a one percent change of being equaled or exceeded in any given year (100-year mean recurrence interval).
5. Prohibit the use of fill for structural support of buildings within Zones V1-30, V and VE on the community's FIRM.
6. Prohibit man-made alterations of sand dunes within Zones V1-30, V and VE on the community's FIRM which would increase potential flood damage.

7. All manufactured homes to be placed or substantially improved within Zones V1-30, V, and VE on the community's FIRM:
 - a. Outside of a manufactured home park or subdivisions.
 - b. In a new manufactured home park or subdivision.
 - c. In an expansion to an existing manufactured home park or subdivision, or
 - d. In an existing manufactured home park or subdivision on which a manufactured home has incurred "substantial damage" as the result of a flood; shall meet the standards of paragraphs 15.24.144 1 through 6 of this section and manufactured homes placed or substantially improved on other sites in an existing manufactured home park or subdivision within Zones V1-30, V and VE on the FIRM shall meet the requirements of Section 15.24.110 D.

8. Recreational vehicles placed on sites within Zones V1-30, V, and VE on the community's FIRM 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 jacking system, attached to the site only by quick disconnect type utilities and security devices, and have no permanently attached additions; or
 - c. Meet the requirements of Section 15.24.060 (development permit required) and paragraphs 15.24.144 1 through 6 of this section.