

# STAFF REPORT

Date: January 9, 2024  
To: Planning Commission  
From: Erika Smith-Erickson, Land Use and Housing Planner, and Brad Medrud,  
Planning Manager



## Ordinance No. O2023-017 – TMC 18.38 FP – Floodplain Overlay

---

On November 8, 2023, the Federal Emergency Management Agency (FEMA) notified staff of the final flood determinations for Thurston County, Washington, and Incorporated Areas, which includes the City of Tumwater. The FEMA flood hazard determinations for the City are considered final. The Flood Insurance Study (FIS) report and Flood Insurance Rate Maps (FIRM) will be effective May 8, 2024.

Prior to the May 8, 2024 effective date of the FIS and FIRM, the City must amend its existing floodplain regulations to be more consistent with the Model Ordinance for Floodplain Management under the National Flood Insurance Program (NFIP), the Endangered Species Act, and to maintain its eligibility in the NFIP.

### Contents

Summary .....	2
Background .....	2
Floodplain Overlay Amendments .....	3
1. Definitions .....	3
2. Special Flood Hazard Areas .....	7
3. Flood Hazard Data .....	8
4. Floodplain Development Permit Required .....	8
5. Floodplain Development Permit .....	9
6. Duties of the Floodplain Administrator .....	10
7. Records .....	11
8. Development and Subdivisions .....	12
9. Flood Protection Standards .....	14

10. Nonresidential construction .....	15
11. Manufactured Homes .....	17
12. Detached Accessory Structures .....	17
13. Storage of Materials and Equipment.....	18
14. Floodway Standards.....	19
15. Penalties.....	20
Public Approval Process.....	21
Public Notification.....	21
Staff Conclusions.....	21
Staff Recommendation .....	23
Effects of the Proposed Amendments.....	23
Staff Contacts .....	23

## **Summary**

The proposed amendments are intended to make alterations to the City’s floodplain ordinance to bring it into compliance with NFIP and Washington state standards.

## **Background**

Close to three hundred towns, cities, counties, and tribes within the State of Washington participate in the NFIP. Continued enforcement of the floodplain management ordinance allows FEMA to make federally backed flood insurance available to property owners within the City of Tumwater.

As a condition of participation in the NFIP, communities are required to adopt and enforce a flood hazard reduction ordinance that meets the minimum requirements of the NFIP.

The purpose of TMC 18.38 FP Floodplain Overlay is to:

*“...promote the public health, safety, and general welfare by managing development in order to:*

- A. Protect human life, health and property from the dangers of flooding;*
- B. Minimize the need for publicly funded and hazardous rescue efforts to save those who are isolated by flood waters;*
- C. Minimize expenditure of public money for costly flood damage repair and flood control projects;*

- D. Minimize disruption of commerce and governmental services;*
- E. Minimize damage to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines, streets, and bridges located in the floodplain;*
- F. Maintain a stable tax base by providing for the sound use of floodprone areas so as to minimize future flood blight areas;*
- G. Encourage those who occupy areas subject to flooding and channel migration to assume responsibility for their actions;*
- H. Qualify the city of Tumwater for participation in the National Flood Insurance Program, thereby giving citizens and businesses the opportunity to purchase flood insurance;*
- I. Maintain the quality of water in rivers, streams, lakes, estuaries, and marine areas and their floodplains so as to protect public water supplies, areas of the public trust, and wildlife habitat protected by the Endangered Species Act;*
- J. 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;*
- K. Prevent or minimize loss of hydraulic, geomorphic, and ecological functions of floodplains and stream channels.”<sup>1</sup>*

In May 2023, City staff completed a FEMA floodplain community assistance visit (CAV) with State Department of Ecology staff to review the City’s participation in the National Flood Insurance Program. It was determined that TMC 18.38 *FP Floodplain Overlay* should be updated to reflect current standards.

To maintain eligibility in the NFIP, the City must update its ordinance to meet minimum Federal and State Standards by the time the updated FIS and FIRM become effective on May 8, 2024.

The amendments are a part of the approved 2023 Long Range Planning work program.

## **Floodplain Overlay Amendments**

The following is a summary of the proposed amendments that make up the floodplain overlay code.

### **1. Definitions**

Clarify and add definitions as needed for enhanced interpretation of floodplain regulations.

Code Section to be amended:

---

<sup>1</sup> TMC 18.38.010 *Purpose*.

- TMC 18.38.070 – Definitions.

Proposed amendment language:

**18.38.070 Definitions.**

[...]

“Alteration of watercourse” means any action that will change the location of the channel occupied by water within the banks of any portion of a riverine waterbody.

[...]

“Area of special flood hazard” means the land in the floodplain within a community subject to a 1 percent or greater chance of flooding in any given year. It is shown on the flood insurance rate map (FIRM) as zone A, AO, AH, A1-30, AE, A99, AR (V, VO, V1-30, VE).

“Special flood hazard area” is synonymous in meaning with the phrase “area of special flood hazard”.

[...]

“Development” means any manmade change to improved or unimproved real estate in the special flood hazard area (SFHA), including but not limited to buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations, storage of equipment or materials, subdivision of land, removal of more than five percent of the native vegetation on the property, ~~or~~ alteration of natural site characteristics, or storage of equipment or materials.

[...]

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

- A. The overflow of inland or tidal waters; and/or
- B. The unusual and rapid accumulation of runoff of surface waters from any source.
- C. The collapse or subsidence of land along the shore of a lake or other body of water as a result of erosion or undermining caused by waves or currents of water exceeding anticipated cyclical levels or suddenly caused by an unusually high water level in a natural body of water, accompanied by a severe storm, or by an unanticipated force of nature, such as flash flood or an abnormal tidal surge, or by some similarly unusual and unforeseeable event which results in flooding as defined in paragraph (A) of this definition.

“Flood elevation study (FES)” means an examination, evaluation and determination of flood hazards and, if appropriate, corresponding water surface elevations, or an examination, evaluation and determination of mudslide (i.e., mudflow) and/or flood-related erosion hazards. Also known as a flood insurance study (FIS).

“Flood insurance rate map (FIRM)” means the official map on which the Federal Emergency Management Agency (FEMA) has delineated both the special flood hazard areas and the risk premium zones applicable to the city of Tumwater.

*“Flood insurance study (FIS)” means the official report provided by the Federal Emergency Management Agency that includes flood profiles, the flood insurance rate map (FIRM), and the water surface elevation of the base flood.*

[...]

*“Floodplain administrator” means the community official designated by title to administer and enforce the floodplain management regulations.*

*“Flood proofing” means any combination of structural and nonstructural additions, changes, or adjustments to structures which reduce or eliminate risk of flood damage to real estate or improved real property, water and sanitary facilities, structures, and their contents. Flood proofed structures are those that have the structural integrity and design to be impervious to floodwater below the base flood elevation.*

*“Floodway” means the channel of a stream 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 at any point. Also referred to as “regulatory floodway”.*

*“Functionally dependent use” means a use that must be located or carried out close to water, e.g., docking or port facilities necessary for the unloading of cargo or passengers or shipbuilding and ship repair, and does not include long term storage or related manufacturing facilities.*

*“Highest adjacent grade” means the highest natural elevation of the ground surface prior to construction next to the proposed walls of a structure.*

[...]

*“Mean sea level” means for the purposes of the National Flood Insurance Program, the vertical datum to which base flood elevations shown on a community's flood insurance rate map are referenced.*

[...]

*“New construction” means structures for which the “start of construction” commenced on or after the effective date of this chapter and includes any subsequent improvements to such structures. For floodplain management purposes, “new construction” means structures for which the “start of construction” commenced on or after the effective date of a floodplain management regulation adopted by a community and includes any subsequent improvements to such structures.*

[...]

*“Special flood hazard area (SFHA)” means the land subject to inundation by the base flood. Special flood hazard areas are designated on flood insurance rate maps (FIRMs) with the letters “A” or “V” including AE, AO, AH, A1-99 and VE. The special flood hazard area is also referred to as the area of special flood hazard or SFHA.*

[...}

---

*“Structure” means a walled and roofed building, including a gas or liquid storage tank that is principally above ground, as well as a manufactured home.*

*[...]*

*“Substantial improvement” means any repair, reconstruction, rehabilitation, addition, replacement, or other improvement of a structure, the cost of which equals or exceeds fifty percent of the market value of the structure before the “start of construction” of the improvement. This term includes structures which have incurred “substantial damage,” regardless of the actual repair work performed. The term does not include any project for improvement of a structure to correct existing violations of state or local health, sanitary, or safety code specifications which have been identified by the local code enforcement official and which are the minimum necessary to assure safe living conditions, any alteration of a “historic structure”, provided that the alteration will not preclude the structure’s continued designation as a “historic structure.”*

*[...]*

*“Zone” means one or more areas delineated on the FIRM. The following zones may be used on the adopted FIRM. The special flood hazard area (SFHA) is comprised of the A and V zones.*

*“A” means SFHA where no base flood elevation (BFE) is provided.*

*“A#” means numbered A zones (e.g., A7 or A14), SFHA with a ~~base flood elevation~~ BFE.*

*“AE” means SFHA with a ~~base flood elevation~~ BFE.*

*“AO” means SFHA subject to inundation by shallow flooding usually resulting from sheet flow on sloping terrain, with average depths between one and three feet. Average flood depths are shown.*

*“AH” means SFHA subject to inundation by shallow flooding (usually areas of ponding) with average depths between one and three feet. ~~Base flood elevations~~ BFEs are shown.*

*“B” means the area between the SFHA and the five-hundred-year flood of the primary source of flooding. It may also be an area with a local, shallow flooding problem or an area protected by a levee.*

*“C” means an area of minimal flood hazard, as above the five-hundred-year flood level of the primary source of flooding. B and C zones may have flooding that does not meet the criteria to be mapped as a special flood hazard area, especially ponding and local drainage problems.*

*“D” means area of undetermined but possible flood hazard.*

*“V” means the SFHA subject to coastal high hazard flooding including waves of three feet or greater in height. There are three types of V zones: V, V#, and VE, and they correspond to the A zone designations.*

*“X” means the area outside the mapped SFHA.*

*“Shaded X” means the same as a zone B, above.*

---

## 2. Special Flood Hazard Areas

The intent of this amendment is to update the FIS areas and FIRM identified by FEMA to the most current versions effective May 8, 2024.

Code Section to be amended:

- 18.38.090 – Special flood hazard areas.

Proposed amendment language:

**18.38.090 Special flood hazard area.**

A. *The special flood hazard area (SFHA) is the area subject to flooding by the base flood and subject to the provisions of this chapter. It is identified by the Federal Emergency Management Agency in a scientific and engineering report entitled, "Flood Insurance Study for Thurston County, Washington and Incorporated Areas," dated ~~October 16, 2012~~ May 8, 2024 and any revisions thereto, with an accompanying Flood Insurance Rate Map (FIRM) for Thurston County, Washington and Incorporated Areas, dated ~~October 16, 2012~~ May 8, 2024, and any revisions thereto, which 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 Tumwater City Hall, 555 Israel Road SW, Tumwater, Washington 98501.*

B. *Upon receipt of a floodplain development permit application, the floodplain administrator shall compare the elevation of the site to the base flood elevation. A development project is not subject to the requirements of this chapter if it is located on land that can be shown to be:*

- 1. Outside the protected area; and*
- 2. Higher than the ~~base flood elevation~~ BFE as demonstrated by an elevation certificate.*

*The floodplain administrator shall inform the applicant that the project will still be subject to the flood insurance purchase requirements unless the owner receives a letter of map amendment from FEMA.*

C. *The floodplain administrator shall make interpretations where needed, as to the exact location of the boundaries of the SFHA and the protected area (e.g., where there appears to be a conflict between the mapped SFHA boundary and actual field conditions as determined by the ~~base flood elevation~~ BFE and ground elevations). The applicant may appeal the floodplain administrator's interpretation of the location of the boundary to the hearing examiner.*

### 3. Flood Hazard Data

This code section amendment is intended to clarify the source of the most current flood data and maps.

Code Sections to be amended:

- TMC 18.38.100 – Flood hazard data.

Proposed amendment language:

**18.38.100 Flood hazard data.**

A. The base flood elevation (BFE) for the SFHAs of the city of Tumwater shall be as delineated on the one-hundred-year flood profiles in the Flood Insurance Study for Thurston County, Washington and Incorporated Areas.

B. The ~~base flood elevation~~ BFE for each SFHA delineated as a “zone AH” or “zone AO” shall be that elevation (or depth) delineated on the flood insurance rate map (FIRM). Where base flood depths are not available in zone AO, the base flood elevation shall be considered to be two feet above the highest grade adjacent to the structure.

C. The ~~base flood elevation~~ BFE for all other SFHAs shall be as defined in subsection F of this section and 18.38.120(C).

D. The flood protection elevation (FPE) shall be the base flood elevation plus one foot.

E. The floodway shall be as delineated on the ~~flood insurance rate map~~ FIRM or in accordance with subsection F of this section and TMC 18.38.120(D).

F. Where ~~base flood elevation~~ BFE and floodway data have not been provided in special flood hazard areas in accordance with 18.38.090, the floodplain administrator shall obtain, review, and reasonably utilize any ~~base flood elevation~~ BFE and floodway data available from a federal, state, or other source.

### 4. Floodplain Development Permit Required

This code section amendment is intended to clarify when and where a floodplain development permit is required.

Code Sections to be amended:

- TMC 18.38.130 – Floodplain development permit required.

Proposed amendment language:

**18.38.130 ~~Establishment of~~ Floodplain development permit required.**



*A floodplain development permit ~~shall be obtained~~ is required before construction or development begins within the special flood hazard area (SFHA) established in TMC 18.38.090. The permit shall be for all development as set forth in TMC 18.38.070, Definitions.*

## 5. Floodplain Development Permit

This code section amendment is intended to add new permit application requirements such as elevation certificate information requirements, elevations related to mean sea level, and engineering analysis requirements.

Code Sections to be amended:

- TMC 18.38.140 – Floodplain development permit application.

Proposed amendment language:

***18.38.140 Floodplain development permit application.***

*Application for a floodplain development permit shall be made on forms furnished by the floodplain administrator and shall include, but are not limited to:*

*[...]*

*C. If the proposed project includes a new structure, substantial improvement, or repairs to a substantially damaged structure that will be elevated, the application shall include the flood protection elevation (FPE) for the building site and the proposed elevations of the following:*

- 1. The top of bottom floor (including basement, crawlspace, or enclosure floor).*
- 2. The top of the next higher floor.*
- 3. The bottom of the lowest horizontal structural member (in V zones only).*
- 4. The top of the slab of an attached garage.*
- 5. The lowest elevation of machinery or equipment servicing the structure.*
- 6. The lowest adjacent (finished) grade next to structure.*
- 7. The highest adjacent (finished) grade next to structure.*
- 8. The lowest adjacent grade at the lowest elevation of a deck or stairs, including structural support.*

*[...]*

*E. If a project will alter the base flood elevation data (BFE) or boundaries of the SFHA, the project applicant shall provide the floodplain administrator with engineering documentation*

and analysis regarding the proposed change. If the change to the BFE or boundaries of the SFHA would normally require a Letter of Map Change, the project approval shall be conditioned accordingly.

FE. The proposed project must be designed and located so that new structural flood protection is not needed.

GF. The application shall include a description of the extent to which a stream, lake, or other water body, including its shoreline, will be altered or relocated as a result of the proposed development.

1. Bank stabilization measures along salmonid-bearing streams, channel migration zones, and along estuarine and marine shorelines must be minimized to the maximum extent possible. If bank stabilization measures are necessary, bioengineered armoring of streambanks and shorelines must be used.
2. Channel Migration. No activity is allowed that limits the natural meandering pattern of the channel migration zone; however, natural channel migration patterns may be enhanced or restored.

HG. The application shall include documentation that the applicant will apply for all necessary permits required by federal, state, or local law. The application shall include written acknowledgment that the applicant understands that the final certification of use or certificate of occupancy will be issued only if the applicant provides copies of the required federal, state, and local permits or letters stating that a permit is not required. The floodplain permit is not valid if those other permits and approvals are not obtained prior to any ground disturbing work or structural improvements.

IH. The application shall include acknowledgment by the applicant that representatives of any federal, state or local unit of government with regulatory authority over the project are authorized to enter upon the property to inspect the development.

J. The application shall include the elevation in relation to mean sea level, of the lowest floor (including basement) of all structures recorded on a current elevation certificate with section B completed by the floodplain administrator.

K. The application shall include the elevation relation to mean sea level to which any structure has been flood proofed.

L. The application shall include, where development is proposed in a floodway, an engineering analysis indicating no rise of the base flood elevation (BFE).

M. The application shall include any other such information that may be reasonably required by the floodplain administrator in order to review the application.

## 6. Duties of the Floodplain Administrator

This code section amendment is intended to update language from protected area to floodway and add an additional role to the duties of the floodplain administrator.

Code Sections to be amended:

- TMC 18.38.170 – Duties of the floodplain administrator.

Proposed amendment language:

***18.38.170 Duties of the floodplain administrator.***

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

*[...]*

*C. Review all floodplain development permits to determine if the proposed development is located in the ~~protected area~~ floodway. If located in the ~~protected area~~ floodway, ensure that the provisions of TMC 18.38.320 through 18.38.400 are met.*

*D. Ensure that all development activities within the special flood hazard area (SFHA) of the jurisdiction of the city of Tumwater meet the requirements of this chapter.*

*[...]*

*G. Submit reports to include the projects for which they issue floodplain development permits, including effects to flood storage, fish habitat, and all indirect effects of development and mitigation provided to FEMA as required for the National Flood Insurance Program (NFIP).*

*[...]*

*J. Interpretations as to exact location of the boundaries of the areas of special flood hazards where needed (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 44 CFR 60.6 of the Rules and Regulations of the NFIP.*

## 7. Records

This code section amendment is intended clarify what information is to be retained and what specific elevations are required for records.

Code Sections to be amended:

- TMC 18.38.180 – Records.

Proposed amendment language:

---

### **18.38.180 Records.**

A. Where base flood elevation data (BFE) have been obtained pursuant to TMC 18.38.100 and 18.38.120, the floodplain administrator shall obtain, record, and maintain the actual “finished construction” elevations (in relation to mean sea level) of the lowest floor (including basement) of all new or substantially improved structures, for the locations listed in TMC 18.38.140(C), and whether or not the structure contains a basement. This information shall be recorded on a current FEMA Elevation Certificate ~~(FEMA Form 81-31)~~, signed and sealed by a professional land surveyor, currently licensed in the state of Washington.

B. For all new or substantially improved dry floodproofed nonresidential structures, where ~~base flood elevation~~ BFE data has been obtained pursuant to TMC 18.38.100 and 18.38.120, the floodplain administrator shall: ~~obtain~~

1. Obtain, record and maintain the elevation (in relation to the datum of the effective FIRM mean sea level) to which the structure was floodproofed.

2. This information shall be recorded on a current FEMA floodproofing certificate ~~(FEMA FORM 81-65)~~ by a professional engineer currently licensed in the state of Washington.

C. Where elevation data is not available, either through the FIS, FIRM, or from another authoritative source (as required by TMC 18.38.100(F)), the floodplain administrator shall review applications for floodplain development to assure that proposed construction will be reasonably safe from flooding based on the use of historical data, high water marks, photographs of past flooding, etc., where available.

Failure to elevate habitable buildings at least two feet above the highest adjacent grade in these zones may result in higher insurance rates.

D. The floodplain administrator shall obtain, record, and maintain the records for public inspection of the following:

1. Certification required by TMC 18.38.360(1).

2. Records of all variance actions, including justification for their issuance.

3. Improvement and damage calculations.

4. All records pertaining to the provisions of this ordinance.

## **8. Development and Subdivisions**

The proposed amendments clarify which types of land division proposals are subject to the requirements of this section and add requirements for projects over a certain size.

Code Section to be amended:

- TMC 18.38.210 – Development and subdivisions.

Proposed amendment language:

**18.38.210 Development and subdivisions.**

*This section applies to all development and subdivision proposals, Subdivision proposals include short subdivisions, short plats, binding site plans, planned developments, and new and expansions to manufactured housing parks.*

- A. *All proposals shall be consistent with the need to minimize flood damage.*
- B. *~~The A~~ proposed subdivision must have one or more new lots in the special flood hazard area (SFHA) set aside for open space use through deed restriction, easement, subdivision covenant, or donation to a public agency.*
- 1. In the ~~special flood hazard area~~ (SFHA) outside the protected area, zoning must maintain a low density of floodplain development.*
  - 2. In the ~~special flood hazard area~~ (SFHA) outside the protected area in which the current zoning is less than five acres must maintain the current zoning.*
  - 3. The density of the development in the portion of the development outside the ~~special flood hazard area~~ (SFHA) may be increased to compensate for the amount of land in the ~~special flood hazard area~~ (SFHA) preserved as open space in accordance with TMC Title 18.*
- C. *If a parcel has a buildable site outside the special flood hazard area, it shall not be subdivided to create a new lot, tract, or parcel within a binding site plan that does not have a buildable site outside the special flood hazard area. This provision does not apply to lots set aside from development and preserved as open space.*
- D. *All proposals shall have utilities and facilities, such as sewer, gas, electrical, and water systems located and constructed to minimize or eliminate flood damage.*
- E. *All subdivision proposals shall ensure that ~~all subdivisions have~~ there is at least one access road connected to land outside the ~~special flood hazard area~~ (SFHA) with the surface of the road at or above the FPE wherever possible.*
- F. *All proposals shall have adequate drainage provided to avoid exposure to water damage.*
- G. *~~The A~~ final recorded subdivision ~~plat~~ shall include a notice that part of the property is in the SFHA, riparian habitat zone and/or channel migration area, as appropriate.*
- H. *Where subdivision proposals and other proposed developments contain greater than fifty lots or five acres (whichever is the lesser) base flood elevation data (BFE) shall be included as part of the application.*

## 9. Flood Protection Standards

An amendment to clarify standards for construction within specific flood zones.

Code Section to be amended:

- TMC 18.38.184 – Flood protection standards.

Proposed amendment language:

***18.38.260 Flood protection standards.***

*A. In AE and A1-30 zones or other A zoned areas where the base flood elevation data (BFE) has been determined or can be reasonably obtained, all new structures and substantial improvements of any structure shall have the lowest floor, including basement, elevated at least one foot above the ~~FPE~~ BFE.*

*B. The structure shall be aligned parallel with the direction of flood flows where practicable.*

*C. All new construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage.*

*D. All new construction and substantial improvements shall be constructed using methods and practices that minimize flood damage.*

*E. ~~The structure~~ All new construction and substantial improvements, including those related to manufactured homes, shall be anchored to prevent flotation, collapse, or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads including the effects of buoyancy.*

*~~FD.~~ All materials below the FPE shall be resistant to flood damage and firmly anchored to prevent flotation. Materials harmful to aquatic wildlife, such as creosote, are prohibited below the FPE.*

*~~GE.~~ Electrical, heating, ventilation, duct work, plumbing, and air-conditioning equipment and other service facilities shall be elevated above the FPE. Water, sewage, electrical, and other utility lines below the FPE shall be constructed so as to prevent water from entering or accumulating within them during conditions of flooding.*

*~~HF.~~ Fully enclosed areas below the lowest floor that are subject to flooding shall be used only for parking, storage, or building access and 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 shall either be certified by a registered professional engineer or licensed architect and/or 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.*

*I. In zones V, V1-30 and VE, new structures and substantial improvements shall be elevated on pilings or columns so that:*

1. *The bottom of the lowest horizontal structural member of the lowest floor (excluding the pilings or columns) is elevated above the FPE.*
2. *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 chance of being equaled or exceeded in any given year (one-hundred-year mean recurrence interval).*
3. *The areas below the lowest floor that are subject to flooding shall be free of obstruction.*
4. *The structure or improvement shall be located landward of the reach of mean high tide.*
5. *The use of fill for structural support of a structure or addition is prohibited.*
6. *A registered professional engineer or architect shall develop or review the structural design, specifications and plans for the construction, and shall certify that the design and methods of construction to be used are in accordance with accepted standards of practice for meeting these provisions.*

*J. New construction and substantial improvement of any residential structure in an Unnumbered A zone for which a BFE is not available and cannot be reasonably obtained shall be reasonably safe from flooding, but in all cases the lowest floor shall be at least two feet above the highest adjacent grade.*

*K. A garage attached to a residential structure, constructed with the garage floor slab below the BFE, must be designed to allow for the automatic entry and exit of floodwaters.*

## 10. Nonresidential construction

The amendment to this section is to make clear the nonresidential development and standards within certain flood zones.

Code Section to be amended:

- TMC 18.38.270- Nonresidential construction.

Proposed amendment language:



**18.38.270 Nonresidential construction.**

~~New construction and substantial improvement of any commercial, industrial or other nonresidential structure shall be elevated in accordance with TMC 18.38.260. As an alternative to elevation, a new or substantial improvement to a nonresidential structure and its attendant utility and sanitary facilities may be dry floodproofed in A zones. The project must meet the following:~~

- ~~A. The structure is not located in zones V, V1-30, or VE; and~~
- ~~B. Below the FFE the structure is watertight with walls substantially impermeable to the passage of water; and~~
- ~~C. The structural components are capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy; and~~
- ~~D. The plans are certified by a registered professional engineer or licensed 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 floodplain administrator as set forth in TMC 18.38.180(B) and 18.38.190(A)(1).~~

New construction and substantial improvement of any commercial, industrial or other nonresidential structure shall meet the requirements of TMC 18.38.270(A) or (B), below.

A. New construction and substantial improvement of any commercial, industrial or other nonresidential structure shall meet all of the following requirements:

1. In AE and A1-30 zones or other A zoned areas where the base flood elevation data (BFE) has been determined or can be reasonably obtained:

New construction and substantial improvement of any commercial, industrial, or other nonresidential structure shall have the lowest floor, including basement, elevated one foot or more above the BFE, or elevated as required by ASCE 24, whichever is greater. Mechanical equipment and utilities shall be waterproofed or elevated at least one foot above the BFE, or as required by ASCE 24, whichever is greater.

2. If located in an unnumbered A zone for which a BFE is not available and cannot be reasonably obtained, the lowest floor shall be at least two feet above the highest adjacent grade.

3. Fully enclosed areas below the lowest floor that are subject to flooding are prohibited or shall meet the requirements of TMC 18.38.210.

B. If the requirements of TMC 18.38.272(A) are not met, new construction and substantial improvement of any commercial, industrial or other nonresidential structure shall meet all of the following requirements:

1. Be dry 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 or dry flood proofed to the elevation required by ASCE 24, whichever is greater;



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 of practice 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 TMC 18.38.180.

## 11. Manufactured Homes

The amendments proposed specify methods and practices to minimize flood damage.

Code Section to be amended:

- TMC 18.38.280- Manufactured homes.

Proposed amendment language:

***18.38.280 Manufactured homes.***

*All manufactured homes to be placed or substantially improved on sites shall be:*

- Elevated on a permanent foundation in accordance with TMC 18.38.260; and*
- Securely anchored to an adequately anchored foundation system to resist flotation, collapse and lateral movement. Methods of anchoring may include, but are not to be limited to, use of over-the-top or frame ties to ground anchors, and shall be installed using methods and practices that minimize flood damage. This requirement is in addition to other applicable anchoring requirements for resisting wind forces.*

## 12. Detached Accessory Structures

A new section specific to detached accessory structures and standards for developing in the floodway.

Code Section to be added:

- TMC 18.38.285- Detached accessory structures.

Proposed amendment language:

***18.38.285 Detached accessory structures.***

*A. Detached accessory structures used solely for parking of vehicles or limited storage may be constructed such that the floor is below the base flood elevation data (BFE), provided the structure is designed and constructed in accordance with the following requirements:*

- 1. In special flood hazard areas other than coastal high hazard areas (Zones A, AE, AH, AO, and A1-30), the structure is not larger than a one-story two-car garage;*
- 2. In coastal high hazard areas (Zones V, VE, V1 30, and VO), the structure is not larger than 100 sq. ft. in area;*
- 3. The portions of the structure located below the BFE must be built using flood resistant materials;*
- 4. The structure must be adequately anchored to prevent flotation, collapse, and lateral movement;*
- 5. Any machinery or equipment servicing the structure must be elevated or floodproofed to or above the BFE;*
- 6. The structure must comply with floodway encroachment provisions in TMC 18.38.360(1);*
- 7. The structure must be designed to allow for the automatic entry and exit of flood waters in accordance with TMC 18.38.240(F);*
- 8. The structure shall have low damage potential;*
- 9. If the structure is converted to another use, it must be brought into full compliance with the standards governing such use; and*
- 10. The structure shall not be used for human habitation.*

## 13. Storage of Materials and Equipment

A new section proposed for the storage of certain materials in the floodway.

Code Section to be added:

- TMC 18.38.325- Storage of materials and equipment.

Proposed amendment language:

### **18.38.325 Storage of materials and equipment.**

*A. The storage or processing of materials that could be injurious to human, animal, or plant life if released due to damage from flooding is prohibited in special flood hazard areas.*

*B. Storage of other material or equipment may be allowed if not subject to damage by floods and if firmly anchored to prevent flotation, or if readily removable from the area within the time available after flood warning.*

## 14. Floodway Standards

An amendment to clarify standards for projects within the floodway and state all construction shall comply with all flood hazard reduction provisions of TMC 18.38.

Code Section to be amended:

- TMC 18.38.360 – Floodway standards.

Proposed amendment language:

**18.38.360 Floodway standards.**

*A. In addition to the other requirements of this chapter, a project to develop in the floodway as delineated pursuant to TMC 18.38.100(E) and (F) or 18.38.120(D) shall meet the following criteria:*

- 1. Encroachments, including fill, new construction, substantial improvements, and other development is prohibited unless the applicant shall provides a certification by a registered professional engineer demonstrating through hydrologic and hydraulic analyses performed in accordance with standard engineering practice that the proposed development 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 the following repairs, reconstruction, or improvements to a residential structure which do not increase the ground floor area. The following exceptions must still meet all other requirements in the chapter, including subsection (A)(1) of this section:*
  - a. Repairs, reconstruction, or improvements to a residential structure that do not increase the ground floor area, providing the cost of which 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. Any project for improvement of a structure to correct existing violations of state or local health, sanitary, or safety code specifications that have been identified by a local code enforcement official, and which are the minimum necessary to assure safe living conditions, or to an historic structure, may be excluded from the fifty percent calculations;*
  - b. Repairs, replacement, reconstruction, or improvements to existing farmhouses located in designated floodways and located on designated agricultural lands that do*

*not increase the building's total square footage of encroachment and are consistent with all requirements of WAC 173-158-075;*

*c. Repairs, replacement, reconstruction, or improvements to substantially damaged residential dwellings other than farmhouses that do not increase the building's total square footage of encroachment and are consistent with all requirements of WAC 173-158-076; or*

*d. Repairs, reconstruction, or improvements to residential structures identified as historic structures that do not increase the building's dimensions.*

*B. In riverine special flood hazard areas where a floodway has not been delineated pursuant to TMC 18.38.100(E) and (F) or 18.38.120(D), the applicant for a project to develop in the SFHA shall provide a certification by a registered professional engineer demonstrating through hydrologic and hydraulic analyses performed in accordance with standard engineering practice that the proposed development and all other past or future similar developments would not cumulatively result in an increase of flood levels during the occurrence of the base flood discharge by more than one foot.*

*C. If TMC 18.38.360(A)(1) is satisfied or construction is allowed pursuant to TMC 18.38.360(A)(2), all new construction and substantial improvements in the floodway shall comply with all applicable flood hazard reduction provisions of this chapter.*

## 15. Penalties

A new section establishing penalties for noncompliance with TMC 18.38. This section establishes a fine for violations.

Code Section to be added

- TMC 18.38.450- Penalties for noncompliance.

Proposed amendment language:

### **18.38.450 Penalties for noncompliance.**

*A. No structure or land shall hereafter be constructed, located, extended, converted, or altered without full compliance with the terms of this ordinance and other applicable regulations. Violations of the provisions of this ordinance by failure to comply with any of its requirements (including violations of conditions and safeguards established in connection with conditions), shall constitute a misdemeanor. Any person who violates this ordinance or fails to comply with any of its requirements shall upon conviction thereof be fined not more than one thousand dollars (\$1,000.00) or imprisoned for not more than ninety (90) days, or both for each violation, and in addition shall pay all costs and expenses involved in the case. Nothing herein contained shall prevent the city of Tumwater from taking such other lawful action as is necessary to prevent or remedy any violation.*

*B. Enforcement under this section is in addition to and does not preclude or limit any other forms of enforcement available to the city including, but not limited to, enforcement under any provision of TMC Chapter 1.10, nuisance actions, actions for injunctions, or any other civil or equitable actions to abate, discontinue, or correct, acts in violation of this code.*

## **Public Approval Process**

An Environmental Checklist for a non-project action was prepared on December 13, 2023 under the State Environmental Policy Act (Chapter 43.21C RCW), pursuant to Chapter 197-11 WAC, and a Determination of Non-Significance was issued in December 29, 2023.

The ordinance was sent to the Washington State Department of Commerce on December 14, 2023 for their required 60-day review before the proposed text amendments are adopted, in accordance with RCW 36.70A.106.

The Planning Commission will receive a briefing on proposed code amendments on January 9, 2024 and is expected to hold a work session on January 23, 2024. A Notice of Public Hearing for the Planning Commission is expected to be issued on February 2, 2024, ten days prior to a public hearing. The notice will be posted, published as a press release, distributed to interested individuals and entities that have requested such notices, and published in *The Olympian*.

The Planning Commission is expected to hold a public hearing on the final proposed amendments on February 13, 2024. Following the public hearing and deliberations, the Planning Commission is expected to recommend that the City Council consider the proposed amendments.

The City Council is scheduled to review the final proposed amendments at a work session on March 12, 2024. The City Council is scheduled to consider final proposed amendments on March 19, 2024.

## **Public Notification**

A Notice of Public Hearing for the expected February 13, 2024 Planning Commission public hearing is expected to be issued, posted, mailed to interested parties, and published in *The Olympian* ten days prior to the public hearing on February 2, 2024, after the Planning Commission is expected to set the public hearing date on January 23, 2024.

## **Staff Conclusions**

1. The proposed text amendments will need to be consistent with the goals of the Washington State Growth Management Act.
  - a. The ordinance will need to be consistent with Goal 7 of the Growth Management Act which states:

*Permits. Applications for both state and local government permits should be processed in a timely and fair manner to ensure predictability.*

The ordinance will establish concise requirements for developments and allowed uses in the floodway. It will establish clear permitting application requirements.

- b. This ordinance will need to be consistent with Goal 10 of the Growth Management Act which states:

*Protect and enhance the environment and enhance the state's high quality of life, including air and water quality, and the availability of water.*

The ordinance will establish concise requirements and protections in the floodway.

- c. This ordinance will need to be consistent with Goal 14 of the Growth Management Act which states:

*Ensure that comprehensive plans, development regulations, and regional policies, plans, and strategies under RCW 36.70A.210 and chapter 47.80 RCW adapt to and mitigate the effects of a changing climate; support reductions in greenhouse gas emissions and per capita vehicle miles traveled; prepare for climate impact scenarios; foster resiliency to climate impacts and natural hazards; protect and enhance environmental, economic, and human health and safety; and advance environmental justice.*

The ordinance will establish concise development regulations to protect development and people from natural flood hazards and protect and enhance the environment.

- 2. The proposed amendments will need to be consistent with the Conservation Element of the Comprehensive Plan because the proposed amendments address permitting, development regulations, allowable uses, and critical areas.

- a. Goal 2 of the Conservation Element states:

*Designate and protect critical areas including wetlands, critical aquifer recharge areas, frequently flooded areas, geologically hazardous areas, and fish and wildlife habitat conservation areas in accordance with the Growth Management Act to protect the functions and values of these areas as well as to protect against threats to health, safety, and property.*

- b. Action item C-2.1 of the Conservation Element states:

*Include best available science in developing policies and development regulations to protect the functions and values of critical areas and consider conservation or protection measures necessary to preserve or enhance anadromous fisheries, consistent with the Growth Management Act.*

- 3. The proposed amendments will need to be consistent with the Land Use Element by improving and updating the existing regulations for floodways, permitted uses in flood zones, and update the review and approval of applications for development in floodways.

- a. Goal LU-2 of the Land Use Element states:

*Ensure development takes place in an orderly and cost-efficient manner in order to best utilize available land and public services, conserve natural resources, protect critical areas, preserve open space, and reduce sprawl.*

- b. Goal LU-8 of the Land Use Element states:

*Ensure physical limitations of the land are observed during the development process.*

4. Based on the above review and analysis, staff will need to conclude that the proposed text amendments are consistent with the requirements of the Washington State Growth Management Act and the Tumwater Comprehensive Plan.

### **Staff Recommendation**

Staff recommend that the Planning Commission review the proposed amendments and provide comments to staff.

### **Effects of the Proposed Amendments**

The proposed text amendments would necessitate changes to the Tumwater Municipal Code.

### **Staff Contacts**

Erika Smith-Erickson, Land Use and Housing Planner  
City of Tumwater Community Development Department  
360-754-4180  
[esmith-erickson@ci.tumwater.wa.us](mailto:esmith-erickson@ci.tumwater.wa.us)

Brad Medrud, Planning Manager  
City of Tumwater Community Development Department  
360-754-4180  
[bmedrud@ci.tumwater.wa.us](mailto:bmedrud@ci.tumwater.wa.us)