



**Date:** July 8, 2020  
**To:** Councilmember Dan Strauss, Chair, Land Use and Neighborhoods Committee  
**From:** Mike Podowski, Manager; Maggie Glowacki, Senior Planner  
**Subject:** FEMA Floodplain Interim Legislation

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### **Proposal Summary**

SDCI recommends that the City Council adopt the Federal Emergency Management Agency (FEMA) required map and development standard updates as interim regulations as allowed by the Washington State Growth Management Act. These provisions allow for regulations to be in place for six months, while SDCI develops recommendations for permanent regulations. Environmental review would not be conducted for the interim regulations, as allowed by SEPA, due to FEMA's required deadline and penalties, and would be conducted for the permanent regulations.

A second phase is required to prepare permanent regulations. This second phase would also be an opportunity to address additional measures including social justice, equity, and likely sea level rise and other impacts of climate change. As part of this process SDCI would provide notice to all impacted properties and conduct public outreach in preparing its recommendations to the Mayor and City Council. Recommendations are anticipated in six months.

### **Background**

On February 19, 2020, FEMA published a Flood Hazard Determination finalizing the adoption of new Flood Insurance Rate Maps (FIRMs) and a Flood Insurance Study (FIS) for all jurisdictions in King County, including Seattle. FEMA's adoption of the new FIRM and FIS requires that each jurisdiction must update their regulations within six months with this new information in order to comply with the National Flood Insurance Program (NFIP). August 19, 2020 is the required date for all jurisdictions within King County to adopt the new FIRM and FIS.

Local FEMA officials also completed an audit of Seattle's floodplain regulations and issued a 32-page report in mid-March that directs the minimum updates for Seattle by their deadline. This June, FEMA provided final direction to the City on the content for legislation to update Seattle's floodplain regulations for compliance with their requirements.

In addition to adopting the new FIRM and FIS, the City of Seattle must have floodplain regulations that apply to the new maps that did not apply to the existing 1995 FIRM and FIS. These requirements come from the NFIP regulations in Title 44 of the Code of Federal Regulations (CFR). Specifically, 44 CFR 60.3 (d & e) contains regulations for coastal high hazard flood zones, which were not identified on the 1995 maps. These coastal flood zones are designated as VE\* zones on the new FIRM.

\*Definitions of FEMA Flood Zone Designations: <https://snmapmod.snco.us/fmm/document/fema-flood-zone-definitions.pdf>

### **What this Means for Seattle Property Owners**

**Flood Insurance.** Flood Insurance for FEMA mapped property is required by lenders for mortgages that are backed by the federal government and for mortgages that are issued by federally insured lending institutions for residential property owners and for commercial property owners, respectively. Flood insurance is available from insurance companies for; 1) policies that are backed by FEMA; 2) policies that are not; and 3) an option from Washington state. Coverage and rates vary; however, industry provided information states that FEMA backed coverage is generally less expensive and more comprehensive than

other options. The average cost of a FEMA backed floor insurance policy for residential property owners in Washington state is reported as an average of \$699 per year nationally in 2019.

If Seattle is deemed by FEMA to be out of compliance with their requirements FEMA would consider the City on probation or suspended. Communities under probation could be suspended from participation in the National Flood Insurance Program as described in 44 CFR 59.24 with the following implications:

- The penalty for not adopting the 2020 FIRM and FIS by August 19, 2020 is that the City would be considered by FEMA to be on probation and could be suspended from participation in the National Flood Insurance Program as described in 44CFR 59.24.
- While on probation, existing flood insurance policies still in effect will be subject to an additional premium of \$50 per year for residential property.
- Properties in flood hazard areas not being eligible for new grants, loans, mortgage insurance or other services provided through HUD, SBA, FHA, VA, and other Federal programs.

**Development Standards.** Requirements for New Development. Properties within areas mapped as special flood hazard areas are required to meet standards intended to protect the lives of occupants and mitigate damage to property and buildings. The standards vary by the specific flood zone designations, characteristics of the property, and the nature of the development proposed. Generally, the requirements include:

1. The elevation that the first floor of a new structure must be built at to keep the first story above anticipated flood levels;
2. Structures must be engineered to withstand wind from anticipated storms; and
3. Structures must be engineered to withstand flood waters should anticipated flood levels be exceeded.

The flood plain development standards can lead to higher construction costs than would be encountered if developing in areas not considered flood zones.

**Summary of the proposed amendments.**

<p><b>Summary of Amendments to SMC Chapter 25.06, Floodplain Regulations</b></p>
<p><b>New Definitions to Add to Section 25.06.030 as Required by 44 CFR 59.1</b></p>
<p><b>The following are highlights of the definitions (see the ordinance for the full content):</b>  <b>Basement:</b> Any area of the building having its floor sub-grade (below ground level) on all sides.  <b>Coastal High Hazard Area:</b> An area of special flood hazard extending from offshore to the inland limit of a primary frontal dune along an open coast and any other area subject to high velocity wave action from storms or seismic sources. The area is designated on the FIRM as zone V1-30, VE or V.  <b>Flood elevation study:</b> 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).  <b>Floodplain or flood-prone area:</b> Any land area susceptible to being inundated by water from any source. See "Flood or flooding."</p>

**Floodplain administrator:** The community official designated by title to administer and enforce the floodplain management regulations.

**Floodplain Variance:** A grant of relief by a community from the terms of a floodplain management regulation.

**Flood proofing:** 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.

**Functionally dependent use:** A use which cannot perform its intended purpose unless it is located or carried out in close proximity to water. The term includes only docking facilities, port facilities that are necessary for the loading and unloading of cargo or passengers, and ship building and ship repair facilities, and does not include long-term storage or related manufacturing facilities.

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

**Historic structure:** Any structure that is:

- 1) Listed individually in the National Register of Historic Places (a listing maintained by the Department of Interior) or preliminarily determined by the Secretary of the Interior as meeting the requirements for individual listing on the National Register;
- 2) Certified or preliminarily determined by the Secretary of the Interior as contributing to the historical significance of a registered historic district or a district preliminarily determined by the Secretary to qualify as a registered historic district;
- 3) Individually listed on a state inventory of historic places in states with historic preservation programs which have been approved by the Secretary of Interior; or
- 4) Individually listed on a local inventory of historic places in communities with historic preservation programs that have been certified either:
  - a) By an approved state program as determined by the Secretary of the Interior, or
  - b) Directly by the Secretary of the Interior in states without approved programs.

**Mean Sea Level:** For 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.

**Substantial Damage:** 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.

**New Definitions to Add to Section 25.06.030 for Clarification as Recommended by FEMA and City of Seattle**

**ASCE 24:** The most recently published version of ASCE 24, Flood Resistant Design and Construction, published by the American Society of Civil Engineers.

**Breakaway wall:** 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.

**Community** means any state, or area or political subdivision thereof, or any Indian tribe or authorized tribal organization or Alaska Native village or authorized native organization, that has authority to adopt and enforce floodplain management regulations for the areas within its jurisdiction.

**Definitions to Amend in Section 25.06.030 as Required by 44 CFR 59.1**

**Area of shallow flooding:** A designated zone AO, AH, AR/AO or AR/AH (or VO) on a community's Flood Insurance Rate Map (FIRM) with a one percent or greater annual chance of flooding to an average depth of one to three feet where a clearly defined channel does not exist, where the path of flooding is

unpredictable, and where velocity flow may be evident. Such flooding is characterized by ponding or sheet flow. Also referred to as the sheet flow area.

**Area of special flood hazard:** 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".

**Base Flood Elevation (BFE):** The elevation to which floodwater is anticipated to rise during the base flood. **Critical Facility:** 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.

**Flood or Flooding:**

- 1) A general and temporary condition of partial or complete inundation of normally dry land areas from:
  - a) The overflow of inland or tidal waters.
  - b) The unusual and rapid accumulation or runoff of surface waters from any source.
  - c) Mudslides (i.e., mudflows) which are proximately caused by flooding as defined in paragraph (1)(b) of this definition and are akin to a river of liquid and flowing mud on the surfaces of normally dry land areas, as when earth is carried by a current of water and deposited along the path of the current.
- 2) 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 (1)(a) of this definition.

**Flood Insurance Rate Map (FIRM):** The official map of a community, on which the Federal Insurance Administrator has delineated both the special hazard areas and the risk premium zones applicable to the community. A FIRM that has been made available digitally is called a Digital Flood Insurance Rate Map (DFIRM).

**Floodway:** 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 a designated height. Also referred to as "Regulatory Floodway."

**New construction:** For the purposes of determining insurance rates, structures for which the "start of construction" commenced on or after the effective date of an initial Flood Insurance Rate Map or after December 31, 1974, whichever is later, 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.

**Start of construction:** Includes substantial improvement and means the date the building permit was issued, provided the actual start of construction, repair, reconstruction, rehabilitation, addition, placement, or other improvement was within 180 days from the date of the permit. 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:** For floodplain management purposes, 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:** Any reconstruction, rehabilitation, addition, or other improvement of a structure, the cost of which equals or exceeds 50 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, however, include either:

- 1) Any project for improvement of a structure to correct previously identified existing violations of state or local health, sanitary, or safety code specifications that have been identified by the local code enforcement official and that are the minimum necessary to assure safe living conditions; or
- 2) Any alteration of a "historic structure," provided that the alteration will not preclude the structure's continued designation as a "historic structure."

#### **New Development Standards Required by 44 CFR 60.3**

##### **25.06.044 Abrogation and greater restrictions**

This Chapter 25.06 is not intended to repeal, abrogate, or impair any existing easements, covenants, or deed restrictions. However, where this Chapter 25.06 and another ordinance, easement, covenant, or deed restriction conflict or overlap, whichever imposes the more stringent restrictions shall prevail.

##### **25.06.045 Interpretation**

In the interpretation and application of this Chapter 25.06, all provisions shall be:

- A. Considered as minimum requirements;
- B. Liberally construed to provide the maximum flood protection; and
- C. Deemed neither to limit nor repeal any other powers granted under state statutes.

##### **25.06.135 AE and A1-30 zones with base flood elevations but no floodways**

In AE and A1-30 FIRM designated zones with identified base flood elevations but no identified floodways, new construction, substantial improvements, or other development (including fill) is prohibited unless the applicant can demonstrate that the cumulative effect of the proposed development, when combined with all other existing and anticipated development, will not increase the water surface elevation of the base flood more than 1 foot at any point within the community.

##### **25.06.136 Floodplain variances**

Includes the allowance and criteria for a variance from the floodplain regulations.

#### **Standards to Amend Required by 44 CFR 60.3**

##### **25.06.050 Identification of special flood hazard areas**

Replaces the 1995 Flood Insurance Rate Map and Flood Insurance Study reference in 25.06. with the 2020 Flood Insurance Rate Map and Flood Insurance Study.

##### **25.06.070 Application for floodplain development approval or license**

Includes requirement for the new VE (coastal flood hazard areas).

##### **25.06.090 Functions of the administrators**

Clearly state the responsibilities of floodplain administrator functions including not allowing development in the floodway, requiring development is safe from flooding, notifying when annexations occur in special flood hazard areas and obtain and maintain records for floodplain development permits.

<p><b>25.06.100 General standards</b>  Include examples of anchoring methods that can be used and clearly states that wells cannot be located in floodways.</p>
<p><b>25.06.110 Standards involving base flood elevations</b>  Clearly state the development standards for residential structures and for non-residential structures in all flood zones (AE, A, AO, and VE);  Clearly state that the building code provisions for flood protection apply to residential and non-residential development;  Include specific standards for garages constructed below the base flood elevation allowing automatic entry and exit of floodwaters; and  Include provisions on what is allowed in enclosed areas below the lowest floor of structures  Include standards for changes to the base flood elevation or boundaries to a special flood hazard area,  Include livestock sanctuary areas.</p>
<p><b>Standards to Amend for Clarification</b></p>
<p><b>25.06.080 Designation of administrators</b>  Clearly state that the Directors' of SDCI and SDOT are the flood plain administrators.</p>
<p><b>25.06.120 Standards for floodways</b>  Clearly state that development in the floodway is extremely hazardous and that any improvement to existing structures is the minimum necessary to assure safe living conditions.</p>
<p><b>Amendment to Align with Seattle Building and Residential Codes</b></p>
<p><b>25.06.140 Penalties for noncompliance</b>  Increase the civil penalty amount for violations from \$50/day to \$500/day.</p>
<p><b>Amend Floodplain Maps as Required by FEMA</b></p>
<p>Current floodplain maps that are based on FEMA's 1995 maps would be updated with FEMA's 2020 maps.</p>
<p>185 new parcels would be regulated with the majority of the new parcels near Harbor Island and the Duwamish River.</p>

**Property Impacted by the Required Changes to Coastal Flood Zone Designations**

Currently, flood zones are the mapped areas identified in the 1995 FEMA maps and those Environmentally Critical Areas identified by Seattle Public Utilities with flooding conditions. Properties within the flood zones mapped by FEMA are subject to the flood insurance and both of these areas are subject to the development standards as mentioned in the previous section of this report. Currently the applicable development standards are contained in the Floodplain Regulations, Chapter 25.06 of the Seattle Municipal Code (SMC) as well as in the Seattle Building and Residential codes, Title 22, SMC and the ASCE 24, Flood Resistant Design and Construction, published by the American Society of Civil Engineers. The FEMA required updates to the development standards would be in the Floodplain Regulations.

The FEMA required updates to floodplain maps are shown on Exhibit 2 of the Council Bill in comparison to the areas currently mapped. The maps show the location of newly included properties located throughout the city with the majority of newly designated properties along the Duwamish River from Harbor Island to the southern boundaries of the City. The Duwamish is newly designated as both the VE, coastal flood zone areas and AE areas where the base flood elevation is provided by FEMA, as part of this update.

The potential impacts regarding the need for floodplain standards on the new parcels outlined in purple on the maps shown on Exhibit 2 of the Council Bill along Harbor Island and the Duwamish will generally be limited to the newly mapped green areas as well as the areas with an elevation of 12-ft or lower. Therefore, a relatively small area within these parcels will be impacted.

**Parcels Impacted by the Current and Updated maps**

The legislation would apply to approximately 2,190 properties along the Puget Sound coast, the Duwamish River, and certain streams. The current floodplain regulations apply to approximately 2,005 properties. The updated mapping would include approximately 185 additional properties beyond those properties covered by the existing floodplain regulations.

**Closing**

Thank you for considering this legislation. We are available to answer any questions you may have.