

## **Director's Report and Recommendation Permanent Floodplain Development Regulations Amendments**

**December 2, 2025**

### **Policy Background and Directives**

Seattle's floodplain regulations have been in place for several decades and vary by specific flood zone designations and the type of development proposed. Generally, the regulations require raising the first floor of a new building above the anticipated flood levels and require buildings to be engineered to withstand flooding in special flood hazard areas.

In February of 2020, the Federal Emergency Management Agency (FEMA) required Seattle to update our floodplain regulations to include FEMA's new Flood Insurance Rate Maps (FIRM) and the Flood Insurance Study (FIS). FEMA's adoption of the new map and study also included an audit of Seattle's floodplain regulations. Through the audit, FEMA identified several places in Seattle's code that needed to be amended in order to comply with the minimum standards in the Code of Federal Regulations (CFR) and to meet the state standards in RCW 86.16 and WAC 173-158. FEMA included the following required amendments in their audit:

- New definitions and updates to existing definitions to meet minimum standards;
- Updates to the regulatory floodway development standards; and
- The inclusion of newly mapped coastal high hazard flood zone (VE Zone) and required regulations for this zone.

FEMA's maps identify properties that are at risk of flooding and are used to determine which properties are required to have flood insurance, if the property is backed by a federal mortgage. Prior to the 2020 map updates, citywide, approximately 2,886 acres of land and water were located in regulated floodplains<sup>1</sup>. The 2020 FIRM map includes 873 additional acres subject to the floodplain regulations: 89 acres on land and 784 acres in the water.

The FEMA designations in the 2020 map include mapped land and water areas. These FIRM mapped zones are either VE Zone (coastal high hazard flood zone), or A Zone types (generally, areas with 1 percent annual chance of flooding).<sup>2</sup> The 2020 FIRM mapped areas include areas within the Duwamish River, in industrial properties along the Duwamish Waterway and River, new areas under the piers along the Central Waterfront and at Smith Cove, and certain parcels along Thornton and Longfellow creeks where there were adjustments in the boundaries of the mapped floodplain resulting in some new area being included and some formerly designated area being excluded. Exhibit 2 to Ordinance (FEMA FIRM maps, August 19, 2020). The City also created a map to identify additional city-based flood-prone areas. Exhibit 3 to Ordinance (City flood-prone maps). In order determine if your property is in a FEMA mapped floodplain and

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<sup>1</sup> For reference, the area within the City limits is approximately 92 square miles, of which 88 square miles is land area and 3 square miles is water area. [Quick Information - CityArchives | seattle.gov](https://www.seattle.gov/quick-information-city-archives) (last accessed August 13, 2025). If this information is converted to acres, it would be approximately 58,880 acres total area within the city limits, of which 56,320 acres is of land area and 1,920 acres is of water.

<sup>2</sup> AE is a newer version of flood zone A that takes into consideration the base flood elevation (BFE). For discussion of the FEMA Flood Zone Designations, see Exhibit B to Director's Report.

the associated flood zone designation, see both FIRM MAPS and City-specific floodplain maps (Exhibits 2 and 3 to the Permanent Floodplain Regulation Ordinance, respectively). Exhibits 2 and 3 must be looked at cumulatively to determine all properties in the City that are considered flood-prone and that contain a flood zone designation.

Another way to view the FEMA mapped floodplain and the relevant flood zone designation based on FEMA FIRM maps is to use King County's iMap. See Appendix A to Director's Report for instructions on how to use King County iMap. And another way to view the City's GIS database to determine what property has been identified as flood-prone through the City, use SDCI's GIS map. By selecting the flood-prone area layer, look at areas identified as "Flood-prone- other sources". The SDCI GIS map can be found here: [SDCI GIS](#).

As part of environmental review of the permanent regulations and for ease of looking at citywide maps that were based on both the FEMA FIRM maps and City flood-prone maps, SDCI created a small-scale view of all parcels within the city that are subject to the floodplain regulations. See Appendix B to Director's Report (Figure 3 series thru Figure 6 series of maps).

In order to comply with the FEMA compliance timeline, City Council adopted interim Floodplain Development Regulations on July 20, 2020, as Ordinance 126113<sup>3</sup> and the Council extended the interim regulations ten times through the following Ordinances:

1. Ordinance 126271 in January 2021,<sup>4</sup> effective February 22, 2021, through February 22, 2022;
2. Ordinance 126536 in February 2022,<sup>5</sup> effective February 18, 2022, through August 18, 2022;
3. Ordinance 126651 in August 2022,<sup>6</sup> which included amendments to Section 25.06.110 of the Seattle Municipal Code and effective August 17, 2022, through February 17, 2023;
4. Ordinance 126763 in February 2023,<sup>7</sup> effective February 15, 2023, through August 15, 2023;
5. Ordinance 126885 in August 2023,<sup>8</sup> effective August 15, 2023, through February 15, 2024;
6. Ordinance 126994 in February 2024,<sup>9</sup> effective February 13, 2024, through August 13, 2024;
7. Ordinance 127064 in August 2024,<sup>10</sup> effective August 7, 2024, through February 7, 2025;
8. Ordinance 127179 in February 2025,<sup>11</sup> effective February 4, 2025, through August 4, 2025; and

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<sup>3</sup> <http://clerk.seattle.gov/search/ordinances/126113>.

<sup>4</sup> <http://clerk.seattle.gov/search/ordinances/126271>.

<sup>5</sup> <http://clerk.seattle.gov/search/ordinances/126536>.

<sup>6</sup> <http://clerk.seattle.gov/search/ordinances/126651>.

<sup>7</sup> <http://clerk.seattle.gov/search/ordinances/126763>.

<sup>8</sup> <http://clerk.seattle.gov/search/ordinances/126885>.

<sup>9</sup> <http://clerk.seattle.gov/search/ordinances/126994>.

<sup>10</sup> <http://clerk.seattle.gov/search/ordinances/127064>.

<sup>11</sup> <http://clerk.seattle.gov/search/ordinances/127179>.

9. Ordinance 127258 in August 2025,<sup>12</sup> effective August 4, 2025, through February 4, 2026.
10. An ordinance in 2026 that will extend the interim regulations into the summer of 2026.

The adoption of interim regulations was to ensure the City was in compliance with FEMA's requirements while also providing additional time for SDCI to develop permanent regulations. Seattle is required to have permanent Floodplain Development regulations prior to the expiration of the ninth extension of the interim regulations. Without permanent regulations, property owners in floodplains may not be able to purchase new flood insurance, renew existing policies or obtain federally backed loans. The permanent floodplain regulations will include a repeal to the interim regulations if adopted prior to the expiration of the interim regulations.

This Director's Report describes the full range of regulatory changes that have been adopted through interim Floodplain Development Regulations (adopted in July 2020) and that are proposed to be part of the permanent regulations, as well as some additional changes proposed for the first time as part of the permanent Floodplain Development Regulations proposal. The additional changes proposed for the permanent regulations are listed in Table 1 and include SDCI's proposal to increase the minimum elevation for construction by one foot, from 2-ft to 3-ft above the base flood elevation in the A Zones (with some exceptions provided). This is to account for sea level rise and there are new sections that include standards for the storage of materials and equipment, and standards for accessory structures. The Port of Seattle's recommended change regarding removing "installations which produce, use or store hazardous materials or hazardous waste" from the "Critical Facilities" definition is also included.

### **Purpose of National Flood Insurance Program and Roles of Federal, State, and Local Government**

The purpose of the National Flood Insurance Program (NFIP) is to

- Reduce the emphasis on flood control
- Increase emphasis on floodplain management
- Reduce Federal disaster costs
- Shift burden from general taxpayers to floodplain occupants
- Provide insurance coverage not generally available on the private market
- Promote sound floodplain management practice

A local jurisdiction can participate in the NFIP if they adopt and enforce a floodplain management ordinance that meets or exceeds federal standards in 44 CFR 60.3 and complies with the state standards in RCW 86.16 and WAC 173-158. Continued eligibility in the program is based on maintaining compliance, which is based on implementation and enforcement of their Floodplain management ordinance.

The federal government through the Federal Emergency Management Agency (FEMA) identifies and maps areas at risk of flooding, establishes development standards, and oversees implementation of the NFIP. Additionally, the federal government provides affordable insurance coverage and disaster response and recovery for communities in the NFIP.

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<sup>12</sup> <http://clerk.seattle.gov/search/ordinances/127258>.

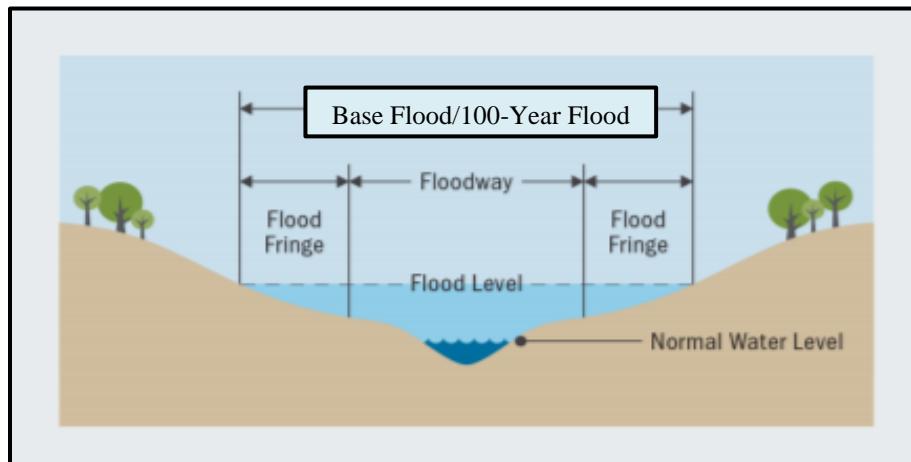
The state through the Department of Ecology (Ecology) is contracted by FEMA to help document floodplain management activities and establish state development codes. Ecology also provides technical assistance and disaster and mitigation assistance; and manages the hazard mitigation grant programs.

The local government through Seattle Department of Construction and Inspections (SDCI) is responsible for developing, implementing, and enforcing floodplain regulations including reviewing permit applications and determining compliance of the regulations through issuing or denying permits. Additionally, SDCI is required to conduct inspections, take enforcement actions for non-compliance, coordinate map appeals and revisions, maintain floodplain maps and flood data, and disseminate floodplain management information.

### **What are special flood hazard areas and flood-prone environmentally critical areas?**

Flood hazard areas identified on the Flood Insurance Rate Map are identified as a Special Flood Hazard Area (SFHA). SFHA are defined as the area that will be inundated by the flood event having a 1-percent chance of being equaled or exceeded in any given year. The 1-percent annual chance flood is also referred to as the base flood or 100-year flood. FEMA uses letters and numbers to indicate the type of flood hazard. See Appendix C to Director's Report for definitions of FEMA's flood zone designations including the V zone (which have additional hazard associated with storm waves) and see Figure 1 below for an illustration of the different components of SFHAs.

**Figure 1. Components of a Special Flood Hazard Area.**



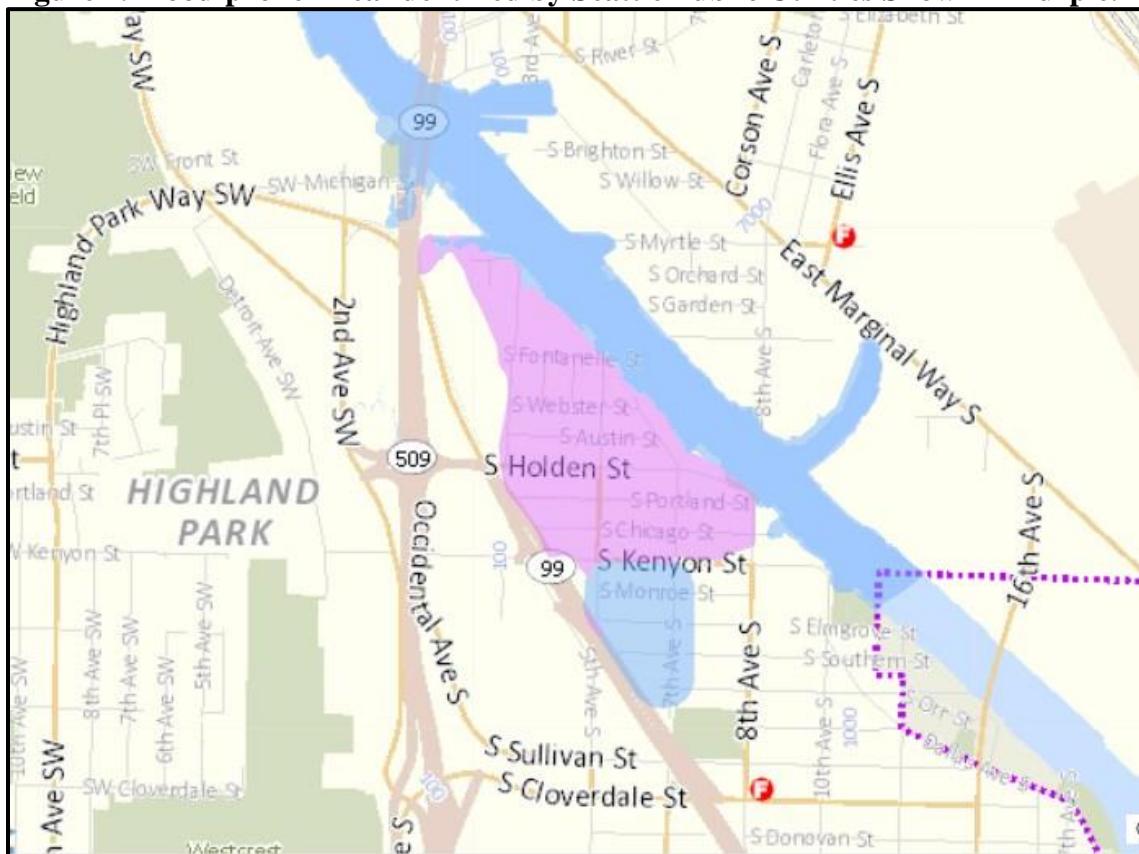
SFHAs are labeled as Zone A, Zone AO, Zone AH, Zones A1-A30, Zone AE, Zone A99, Zone AR, Zone AR/AE, Zone AR/AO, Zone AR/A1-A30, Zone AR/A, Zone V, Zone VE, and Zones V1-V30.

Moderate flood hazard areas, labeled Zone B or Zone X (shaded) are also shown on the FIRM, and are the areas between the limits of the base flood and the 0.2-percent-annual-chance (or 500-year) flood.

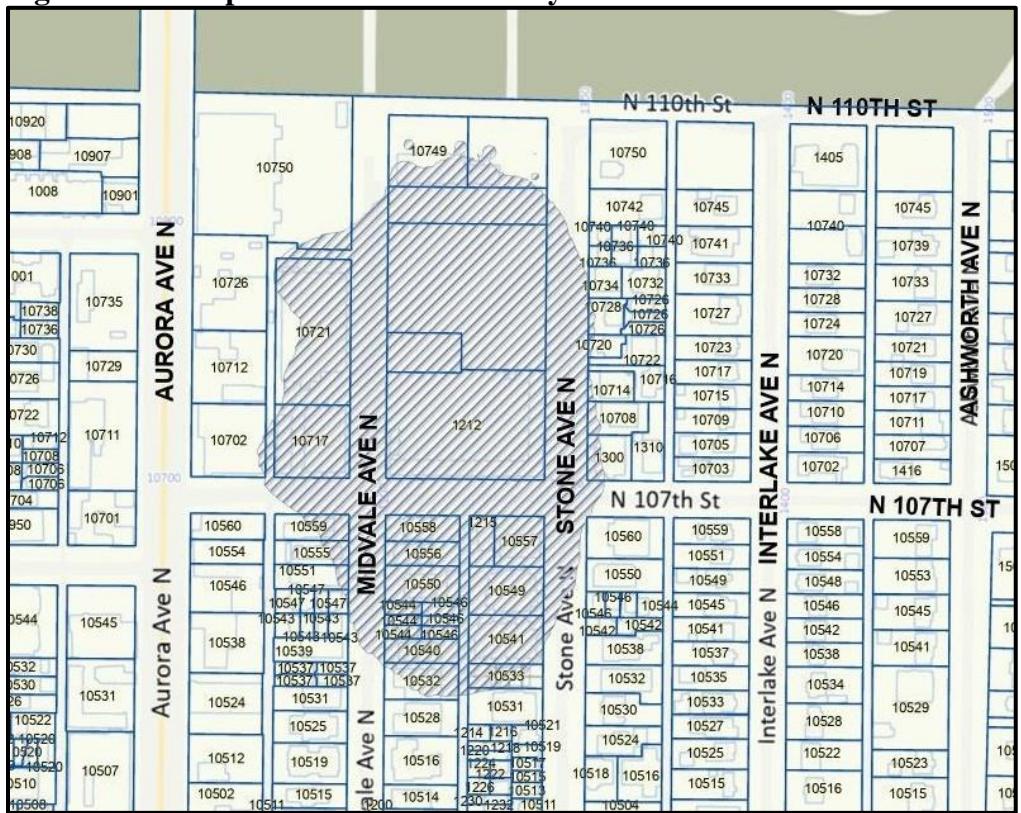
The areas of minimal flood hazard, which are the areas outside the SFHA and higher than the elevation of the 0.2-percent-annual-chance flood, are labeled Zone C or Zone X (unshaded).

Additionally, in 1990 the Washington State Legislature passed the Growth Management Act (GMA) requiring local governments to manage growth by designating urban growth areas, preparing comprehensive plans, and adopting development regulations, including regulations to protect environmentally critical areas (ECA). One of these defined critical areas is frequently flooded areas also known as flood-prone areas. Flood-prone areas are required to be identified and have the minimum standards that FEMA requires for special flood hazard areas. These flood-prone areas can include sea-level rise, impacts of tsunamis, wave-run up, surface run-off, and future flow conditions. Seattle's flood-prone areas include the FEMA mapped areas and areas identified by Seattle Public Utilities as having a risk of flooding based on known flooding in these identified areas. Below are maps that show areas that have been identified by Seattle Public Utilities as flood-prone. In Figures 2 and 3 below, it shows in Figure 2 that the area in purple is designated as Zone AO (areas of shallow flooding) and it shows in Figure 3 that the area in gray is designated as Zone A.

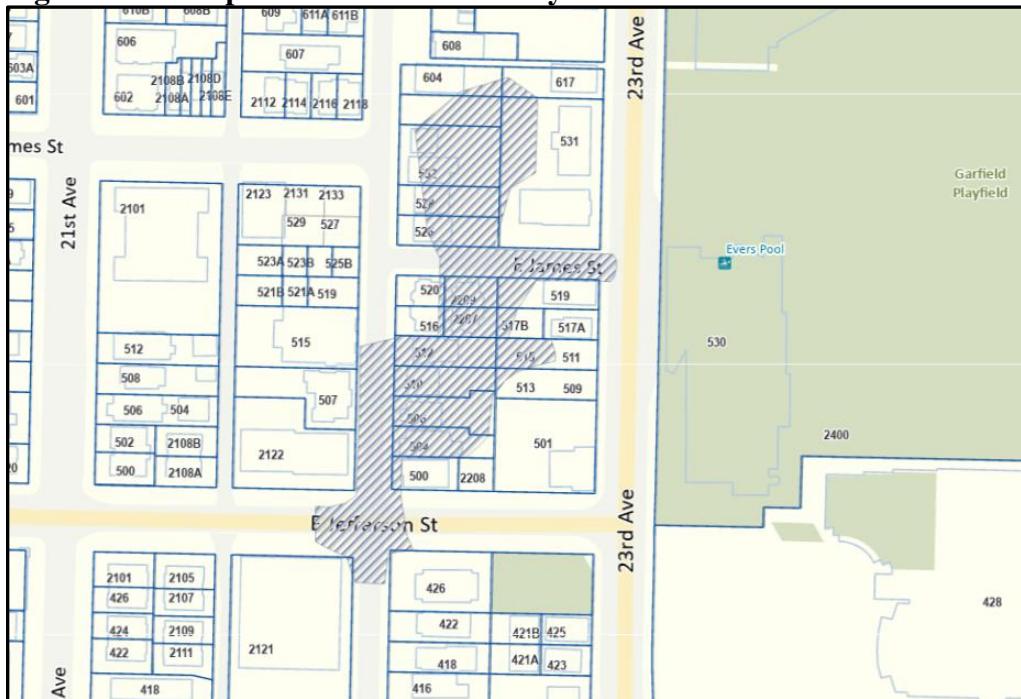
**Figure 2. Flood-prone Area Identified by Seattle Public Utilities Shown in Purple.**



**Figure 3. Flood-prone Area Identified by Seattle Public Utilities Shown in Gray Hatch.**



**Figure 4. Flood-prone Area Identified by Seattle Public Utilities Shown in Gray Hatch.**



In general, the Floodplain Development Regulations apply to any development carried out on a public or private parcel containing a FEMA floodplain or ECA flood-prone area. As defined in

Section 25.06.020, “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 equipment or materials.

### **Summary of public participation**

The public outreach conducted by SDCI includes the following:

- A floodplain development update website that includes information from FEMA with the required changes
- Mailed post cards to property owners located in the FEMA mapped floodplain (2,400 mailed) in 2020
- Ongoing updates to over 2,000 subscribers to e-mail list
- Meetings with Port of Seattle and industrial/maritime property owners
- Responded to e-mail questions regarding the updates to the regulations
- An on-line public meeting on April 27, 2021, video posted on the website
- Met with Port staff approximately 60 times between August 2021 – May 2025
- Met with Waterfront Pier owners November 7, 2024; February 11 and June 11, 2025

### **Analysis**

Local FEMA officials completed an audit of Seattle’s floodplain regulations and issued a report in the form of a table that directed the minimum updates to Seattle’s Floodplain Development Regulations in order for Seattle to remain in compliance with the NFIP (see Appendix D to Director’s Report). This Appendix D includes a column that identifies where in the SMC the FEMA requirements are located.

- For the permanent regulations, Seattle made all of FEMA’s required changes and some of FEMA’s optional and recommended changes, SDCI staff changes and a recommended change from the Port of Seattle see Tables 1 – 3 below.
- Additionally, as for elevation standards in the permanent regulations, Seattle is proposing to (1) modify the elevation standards in the A Zones from 2 feet above BFE to 3 feet above BFE and (2) adopt FEMA’s minimum requirement for the elevation of structures above the base flood elevation in Zone VE. The modified standards in A Zones account for climate change while balancing the impacts on a property owner’s ability to substantially improve existing structures. Seattle is expecting increasing flood risk through (1) more “extreme rainfall events” caused by a warmer atmosphere holding more water vapor and changes in regional precipitation patterns; and (2) sea-level rise. See Rob Bailey, Claudio Saffiotti, and Sumer Drall, Sunk Costs: The Socioeconomic Impacts of Flooding 3 and 8, Marsh McLennan (2021).

Below are SDCI summary tables on the proposed changes with information regarding the reason for the proposed change and indicating whether the proposal was included in the interim regulations or is a new proposal for the permanent regulations.

Table 1 lists the proposed changes included in the permanent floodplain regulations.

**Table 1. New Amendments Proposed for the Permanent Floodplain Development Regulations SMC Chapter 25.06 (not proposed as part of the interim regulations)**

**Amendments to address sea level rise – proposed by SDCI**

Increase the required elevation of new construction and replacement of structures in flood risk areas. The FEMA standards require new or substantially improved buildings to be at or above the base flood elevation (BFE), which is the expected water level during a 100-year flood event. Historically, Seattle has had higher standards than FEMA, requiring all new buildings and substantially improved structures to be elevated 2 feet above BFE. SDCI recommends increasing the minimum elevation for all new buildings to 3 feet above the base flood elevation in A Zones, to better account for sea level rise unless it qualifies for a variance. This same higher elevation standard is included in King County's newest iteration of its floodplain regulations, which apply to the area along the Duwamish River just south of Seattle.

**Amendments – suggested or optional FEMA provisions**

**FEMA's suggested additions**

Statutory authorization

Findings of fact

Methods of reducing flood losses

Storage of materials and equipment

Accessory (Appurtenant) Structures

**FEMA's Optional addition** - Allow residential buildings in the floodway some flexibility to be replaced in very limited instances, with review and approval from the Department of Ecology. SDCI has identified approximately 15 residential buildings in the floodway, the area with the very highest flood risk. Currently SDCI only allows repair and maintenance of these structures. This change would allow the homeowner to get a permit from SDCI to replace the structure only if Ecology reviewed the application and determined the replacement to be safe. King County adopted this standard in its floodplain regulations.

**Section 25.06.030 Amended definitions – recommended by the Port of Seattle**

"Critical facility" means a facility for which even a slight chance of flooding might be too great a threat. Critical facilities include((,)) but are not limited to schools, nursing homes, hospitals, ((police, fire and emergency response installations, nonresidential installations which produce, use or store hazardous materials or hazardous waste.)) emergency response installations, and non-Port of Seattle police and fire stations, and similar facilities.

Tables 2 below includes the amendments that are required by FEMA and the Code of Federal Regulations (CFR) and are proposed to be included in the permanent regulations and were part of the interim regulations.

**Table 2. Required by FEMA and Code of Federal Regulations (CFR) SMC Chapter 25.06**

### Section 25.06.030 New definitions - required by 44 CFR 59.1

**The following are highlights of the definitions that were added. See the proposed permanent regulations for the full content.**

**Basement:** Any area of the building having its floor sub-grade (below ground level) on all sides.

**Coastal high hazard area:** 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.

**Flood elevation study:** 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).

**Floodplain or flood-prone area:** Any land area susceptible to being inundated by water from any source. See "Flood or flooding."

**Floodplain administrator:** The official or officials designated by the Seattle Municipal Code to administer and enforce Seattle's floodplain development 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 flood protection 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, hotels, office buildings, schools, and restaurants.

**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.

### Section 25.06.030 Amended definitions - required by 44 CFR 59.1

**Area of shallow flooding:** A designated zone AO on a community's Flood Insurance Rate Map (FIRM) with a one percent or greater annual chance of flooding to an average depth of 1 to 3 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 or "special flood hazard area":** The land in the floodplain within Seattle subject to a one percent or greater chance of flooding in any given year. It is shown on the Flood Insurance Rate Map (FIRM) as zone A, AO, AE, and VE.

**Base flood elevation (BFE) or "base flood level":** The level or elevation above mean sea level, as calculated by reference to the vertical datum of NAVD88, to which floodwater is anticipated to rise during the base flood.

**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:** Structures for which the start of construction commenced on or after the effective date of floodplain management regulations adopted by a community and includes any subsequent improvements to the 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 of the permit issuance date. "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, "actual start" 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:** 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. "Substantial damage" does not 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.

#### **25.06.132 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.

**Note: This is an administrative decision by the Director similar to a Type I decision**

### **Amended standards - 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.

#### **25.06.100 General standards**

Include examples of anchoring methods that can be used and clearly states that wells cannot be located in floodways.

#### **25.06.110 Standards involving base flood elevations**

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;

Include standards for changes to the base flood elevation or boundaries to a special flood hazard area; and

Include provisions on what is allowed in enclosed areas below the lowest floor of structures.

#### **Amend Floodplain Insurance Rate Maps (FIRM) and Flood Insurance Study (FIS) - required by FEMA's adoption of new FIRM and FIS on August 19, 2020**

Replace floodplain maps and flood insurance study based on FEMA's 1995 FIRM and FIS with FEMA's August 19, 2020, FIRM and FIS.

Approximately 873 additional land and water acres would be regulated with the majority of the new area near Harbor Island and the Duwamish River.

Table 3 lists the amendments that were not required but were recommended by FEMA, or by SDCI staff for clarity and to better align with the building and residential codes. and were included as part of the interim regulations.

#### **Table 3. Amendments Recommended by FEMA, the Port of Seattle, or SDCI SMC Chapter 25.06**

##### **New definitions added to Section 25.06.030 for clarification as recommended by FEMA or SDCI**

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

**Attendant utilities and equipment:** means mechanical, electrical, fuel gas, plumbing, HVAC, and related equipment, as well as services associated with new construction and substantial improvements and includes equipment cabinets that are not occupiable and not habitable.

**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.

**Cabinet:** means a weather protection and floodproofed container or enclosure that is used for storage and not occupiable and not habitable.

**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.

**Flood damage:** means harmful inundation, harmful water erosion of soil, stream banks and beds, stream channel shifting and changes, harmful deposition by water of eroded and shifting soils and material and debris upon property or in the beds of streams or other bodies of water; damages by high water, to public roads, highways, bridges, utilities and to works built for protection against floods or inundation; the interruption by floods of travel, communication and commerce; and all other high water influences and results which injuriously affect the public health and the safety of property.

**Flood proofing, dry:** means a combination of measures that results in a structure, including the attendant utilities and equipment, being watertight with all elements substantially impermeable to the passage of water and with structural components having the sufficient strength to resist hydrostatic and hydrodynamic loads including buoyance.

**Flood proofing, wet:** means a floodproofing method that relies on the use of flood damage-resistant materials and construction techniques in areas of a structure that are below the flood protection elevation, by intentionally allowing those areas to flood.

**Flood protection elevation:** means the following unless otherwise permitted by code:

1. Base flood elevation in the VE zone; and
2. For A zones
  - a. Three feet above the base flood elevation for new and replacement construction except for floating structures;
  - b. Base flood elevation for floating structures;
  - c. For substantial improvement except for floating structures, if the elevation of the existing structure is:
    1. At or above base flood elevation, the elevation of the existing structure; or
    2. Below base flood elevation, base flood elevation plus three feet.

**Lowest horizontal structural member** means the lowest horizontal member that resists loads or load combinations required by the Seattle Building Code or the Seattle Residential Code excluding piles, pile caps, columns, grade beams at or below grade, and bracing.

**Principally above ground** means that at least 51 percent of the actual cash value of the structure, less land value, is above ground.

**Reasonably safe from flooding:**

1. For the purpose of evaluating a Letter of Map Revision (LOMR), "reasonably safe from flooding" means base flood waters will not inundate the land or damage structures to be removed from the floodplain/SFHA and that any subsurface waters related to the base flood will not damage existing or proposed buildings.
2. For the purpose of evaluating development, "reasonably safe from flooding" means development that is designed and built to be safe from flooding based on consideration of current flood elevation studies, estimated base flood elevation, flood hazard and

flood prone designation, historical data, high water marks and other reliable data known to the community.

**Recreational vehicle ready for highway use** means a recreational vehicle that is on its wheels or a jacking system, is attached to the site only by quick disconnect type utilities and security devices and has no permanently attached additions.

**Storage** means a space or place for putting things for future use or safekeeping and does not include facilities in regular use as a conveyance (e.g., pipeline).

### Standards to be amended for clarification recommended by SDCI

#### **25.06.080 Designation of administrators**

Clearly state that the Directors of SDCI and SDOT are the flood plain administrators.

#### **25.06.120 Standards for floodways**

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.

### Amendment to align with Seattle Building and Residential Codes recommended by SDCI

#### **25.06.140 Penalties for noncompliance**

Increase the civil penalty amount for violations from \$50/day to \$500/day.

### Consistency with the Comprehensive Plans

The permanent Floodplain Development Regulations are consistent with Seattle's Comprehensive Plan. Specifically:

- Consistent with Land Use Goal 17, which includes the goal to “*protect public health, safety, and welfare in areas subject to landslides, liquefaction, floods, or peat settlement, while permitting reasonable development;*” and
- Consistent with Land Use Policy 17.25 “*Regulate development in flood-prone areas in order to protect public health and safety, and aquatic habitat, and to prevent damage to private property caused by hazardous flooding conditions.*”

See the August 1, 2024, SEPA Checklist and DNS for additional discussion regarding consistency with Seattle's Comprehensive Plan, which includes additional policies spelled out in more detail.

The permanent floodplain regulations are also consistent with the proposed One Seattle Major Update to the Comprehensive Plan currently being considered by the City Council.

- See Land Use Policy LU 17.11 which provides: *Regulate development in flood-prone areas in order to protect public health and safety, and aquatic habitat and to prevent damage to private property caused by hazardous flooding conditions.*
- See also Climate and Environment Goal CE G10 and CE policies 10.1-10.5.

### Recommendations

FEMA requires jurisdictions to meet 44 CFR 60.3 and to update Flood Insurance Rate Maps and Flood Insurance Rate Studies to remain in the NFIP Program. The proposed amendments

accomplish these required changes and include FEMA's suggested changes, some optional provisions and SDCI's proposal for a higher construction elevation in A Zones to account for sea level rise.

The Director recommends adoption of the proposed amendments to comply with the National Flood Insurance Program so that Seattle remains in compliance so that property owners in the floodplain can acquire federal flood insurance and federally backed loans. Additionally, these regulations reflect sound floodplain management practices, which in turn provide life-safety protection and protection of the ecological functions of the floodplain that contribute to Seattle's high quality of life.

Appendices to the Director Report:

Appendix A – Instructions for using King County's IMap for FEMA floodplain mapping information

Appendix B – Small-scale view of all parcels within the city that are subject to the floodplain regulations (Figure 3 series through Figure 6 series of maps).

Appendix C – Definitions of FEMA Flood Zone Designations

Appendix D – FEMA Review of Seattle's Floodplain Development Regulations based on the Washington State Model Ordinance and Code of Federal Regulations