

Part I Background, Application, Evaluation, and Recording

Background

The City of Seattle participates in the National Flood Insurance Program (NFIP). The City's participation in the NFIP requires the City to adopt and enforce floodplain management ordinances to reduce future flood damage. In 2020, the Federal Emergency Management Agency (FEMA) issued new floodplain maps for the City of Seattle that included for the first-time coastal flood zones, including VE and coastal AE zones. These new maps expanded the property in the City mapped in the riverine floodplain (e.g., AE, A1-30, and AO), and newly mapped many areas on the City's waterfront into the coastal zone. To remain in compliance with NFIP, the City adopted new floodplain maps and updated the floodplain regulations at Chapter 25.06 SMC on an interim basis in August 2020. The City adopted permanent floodplain regulations in XX of 2024. These new maps include parcels identified in prior mapping as A or AE flood zones and now as VE zones, FEMA's most restrictive flood zone regarding development. In general, the floodplain maps and regulations restrict development in areas subject to flooding. Relief from the floodplain regulations can be granted rarely in the form of a variance.

SDCI recognizes continued operation of overwater facilities is critical to the vitality of the region's maritime economy and that full compliance with Seattle floodplain regulations may be impractical. The City's floodplain regulations provide the opportunity to seek a variance to provide relief from these floodplain regulations in certain limited circumstances. The purpose of this guidance document is to help explain how SDCI interprets the floodplain variance standards and how they apply to certain types of development particularly within the coastal flood zones.

Is my property located in a flood zone?

Floodplains in Seattle include: (1) "special flood hazard areas" per SMC 25.06.030 which are areas within Seattle subject to a one percent or greater chance of flooding in any given year, and (2) "floodprone areas" per SMC 25.09.012.B which are areas mapped by Seattle Public Utilities as floodprone. These areas are shown on the Flood Insurance Rate Map (FIRM) as zone A, AO, AE, VE and on the City's ArcGIS, which can be found here: [GIS](#).

What is development?

Chapter SMC 25.06.030 defines "development" as 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.

This guidance document does not identify all codes that are applicable to development in a flood zone. It focuses exclusively on the requirements set forth in SMC 25.06 and the process and criteria for requesting a variance from those regulations. Projects that require a variance from the City's floodplain standards may also require variances or modifications from other City codes, such as the floodplain requirements of the Seattle Building Code (SBC) or the Seattle Residential Code (SRC), or the City's shoreline code. Modification to the floodplain requirements of the SBC and/or SRC must also meet the requirements of Seattle Building Code Section 104.6 and/or the Seattle Residential Code Section R104.6.

Additional information can be found in TIP 111.

What is a variance?

A variance is a departure or waiver from meeting one or more of the requirements of the City's floodplain development standards set forth in 25.06. As an NFIP- participating community, SDCI has adopted local floodplain regulations that include variance criteria consistent with those established by FEMA in the Code of Federal Regulations (CFR) 44 §CFR 60.6(a) *Variations and exceptions*. Although the criteria for granting variances are established by FEMA in the CFR, SDCI is responsible for reviewing and granting applications for variances from provisions of SMC 25.06. The requirements for requesting and granting a variance can be found in SMC Section 25.06.136 *Floodplain variances*.

Applicants should also consult FEMA's guidance that help explain the requirements for variances. See Floodplain Management Bulletin entitled "Variances and the National Flood Insurance Program", FEMA Document P-993, dated July 2014. Link here: [FEMA P-993 FPM-Bulletin Variance.pdf](#). This guidance document sets forth SDCI's interpretation of the variance criteria, particularly as they apply to functionally dependent uses as defined by FEMA and those uses that require an overwater location to function as defined by SDCI in VE and A coastal flood zones.

Why do I need a variance?

A "special flood hazard area" per SMC 25.06.030 and "floodprone areas" per SMC 25.09.012.B are areas in the floodplain within Seattle that are subject to a one percent or greater chance of flooding in any given year and areas mapped by Seattle Public Utilities as flood prone, respectively. These areas are shown on the Flood Insurance Rate Map (FIRM) as zone A, AO, AE, VE and on the City's ArcGIS, which can be found here: [GIS](#). The floodplain regulations contain requirements that limit development in these areas to minimize damage if/when flooding occurs. These requirements are identified in the SMC standards for each zone. If you want to request relief from compliance with any development standard of SMC 25.06, you must request a variance. For example, both the location and elevation of any new construction or substantial improvements to existing structures is restricted if within a special flood hazard area or flood prone areas. An applicant may request a departure from meeting these requirements through a variance request.

Application

How do I apply for a variance?

If you are seeking a variance, please apply for a pre-submittal conference prior to submitting your building permit. All variance requests must be submitted to the building official with your permit application for SDCI review. The request should include a completed code modification request form and supporting documentation demonstrating how the variance meets all requirements of SMC 25.06.136. SDCI may also require a hold harmless agreement.

Evaluation

How will SDCI evaluate whether to grant a variance?

The Code identifies three different types of floodplain variances: variances for historic structures, variances for functionally dependent uses, structures and other development, and variances for other development. The criteria that apply to each type of variance are set forth in the SMC 25.06.136 and include:

- Floodplain variances shall not be issued within any floodway if any increase in flood levels during the base flood discharge would result.
- Variances shall only be issued upon a determination that the floodplain variance is the minimum necessary, considering the flood hazard, to afford relief.
- Variances shall only be issued upon the following:
 - A showing of good and sufficient cause;
 - A determination that failure to grant the floodplain variance would result in exceptional hardship to the applicant;

A determination that the granting of a floodplain variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, create nuisances, cause fraud on or victimization of the public, or conflict with existing local laws or ordinances.

In general, SDCI will evaluate a variance request based on all the criteria set out at SMC 25.06.136. SDCI's review will evaluate whether denying the variance would result in hardship, and whether granting the variance would result in increased flood-related impact risks, and whether the development proposing a variance would reasonably minimize its degree of impact in the flood zone. To help to determine whether a proposed variance meets these criteria, the types of questions that SDCI will ask include but are not limited to the following:

- Is there an alternative location for the proposed development?
- For what reason(s) is the project unable to comply with the regulations?
- Does issuing the variance increase the risk of flooding or flood damage to the adjacent properties or neighborhood?
- Is the variance detrimental to public health, welfare, or safety?
- Does the development only deviate from flood code compliance to the extent necessary?

The variance application must also demonstrate that the structure or other development is protected by methods that minimize flood damages during the base flood event, create no additional threats to public safety, and that materials at the site are secured in a manner that prevents them from being swept away into the water or onto land to the detriment of aquatic environment, existing structures, or humans.

For example, a variance request for construction on top of existing piers that do not meet the FEMA elevation standard must demonstrate, among other things, that the existing pier will withstand the expected wind and wave conditions for a 100-year flood event. Any new construction or substantial improvement above the existing pier must meet the construction requirements of ASCE-24 and/or demonstrate that the elevation of the proposed development is wholly constructed above the design flood elevation.

Recording

SDCI Record Keeping In Compliance with 44 CFR 60.6(a)(6). For all variances issued: SDCI shall (i) maintain a record of all variance actions, including justification for their issuance; and (ii) report such variances issued in its annual or biennial report submitted to the Federal Insurance Administrator

Part II Variances for Functionally Dependent Uses Located Overwater and Structures that Require an Overwater Location to Operate.

The following includes guidance and the code sections that apply to variance applications for Functionally Dependent Uses and structures that require an overwater location to operate.

Functionally Dependent Uses Overwater - Guidance for how SDCI will apply the floodplain variance criteria and standards of 44 CFR 60.6(a)(7) to structures associated with functionally dependent uses over water and to structures that require an overwater location to operate. Standards for these variances are located in 25.06.136.A.2 and 25.06.136.A.3 and are included below and include discussions on how SDCI will analyze these provisions under a variance application.

Pursuant to SMC 25.06.136.A.2, the use must be functionally dependent::

25.06.136.A.2

“Functionally dependent uses. Floodplain variances may be issued for new construction and substantial improvements and for other development necessary for the conduct of a functionally dependent use defined as a “functionally dependent use” under Section 25.06.030, provided that the requirements in Section 25.06.136.A.3 and 25.06.136.B.1, 25.06.136.B.2, 25.06.136.B.3, are met and the structure or other development is protected by methods that minimize flood damages during the base flood and create no additional threats to public safety.”

Consistent with FEMA’s regulations (44 CFR §59.1), SDCI defines a “functionally dependent use” (FDU) as a use that cannot perform its intended purpose unless it is located or carried out in close proximity to water.

FEMA’s definition limits functionally dependent uses to::

- docking facilities;
- port facilities that are necessary for the loading and unloading of cargo or passengers; and
- ship building and ship repair facilities.

Structures that Require an Overwater Location for the Operation of the Use

SDCI has determined that other types of development also rely on a location over or near the water to operate. Below are examples of structures (defined by [Seattle’s building code](#)), and development including accessory attendant utilities and equipment, that can be considered by SDCI as requiring an overwater location.

1. Equipment used for boat launching and landing;
2. Structures used to operate or control water-borne equipment or vessels;

3. Marine service stations if fuel is sold to boats in the water;
4. Pipes used to convey water or stormwater;
5. Waste pump-out equipment;
6. Spill clean-up equipment;
7. Bathrooms and break rooms on piers; with an over-water length extending waterward greater than ¼ mile;
8. Restoration and enhancement projects.

The applicant will need to provide information that demonstrates why an overwater location is required for the operation of the business.

Variance criteria for both functionally dependent uses and for structures that require an overwater location to operate

Lot size criteria in SMC 25.06.136.A

3. Other Development. Generally, floodplain variances may be issued on a lot of one-half acre or less in size contiguous to and surrounded by lots with existing structures constructed below the BFE, provided that the requirements in subsections 25.06.136.B and 25.06.136.C are met and the procedures and standards of this Chapter 25.06 have been fully considered. As the lot size increases beyond one-half acre, the technical justification required for issuing the floodplain variance increases.

This criterion regarding lot size generally does not apply to functionally dependent uses and for uses that require an overwater location to operate because Port and other properties can be large and still need a variance to locate a functionally dependent use or a uses that require an overwater location to operate overwater and maritime businesses may have small or large lots and need a variance to locate a functionally dependent use overwater.

Variances are generally limited to smaller lots of ½-acre or less, contiguous to and surrounded by lots with existing structures constructed below the base flood elevation. However, it is not the intent that the small lot size inherently justifies the granting of variances for small, infill lots. On the other hand, where lot size exceeds ½-acre, it is often assumed such larger lots include areas where the risk of flooding is lower. In the case of many Seattle waterfront industrial properties exceeding ½-acre, there may not be areas that are not flood-prone, such as those lots occupied entirely by overwater piers, or the distance from the edge of the pier to a less hazardous location may be at too great for a functionally dependent use to occur.

25.06.136.B

B. General requirements for floodplain variances

1. Floodplain variances shall not be issued within any floodway if any increase in flood levels during the base flood discharge would result.

A floodway is a designated area within a riverine floodplain. Examples include Thornton and Longfellow creeks, which have designated floodways along their length. A variance request in a floodway must demonstrate there is no increase in flood levels during the base flood discharge. Puget Sound, Elliott Bay, and Duwamish Waterway within the City of Seattle do not have floodways present. To determine if your property is in a floodway please see this link [King](#)

County's Imap to enter your property address and see the FEMA designation. If property is in a floodway, a no rise hydrologic and hydraulic analysis from a qualified engineer is required.

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

Proposed development shall comply with the flood standards to the greatest extent possible. SDCI will allow a variance that deviates from the flood standards only to the degree minimally necessary to afford relief and allow the intended functionally dependent use or use that requires an overwater location to operate.

Individual variance applications must demonstrate that the required variance criteria are met.

Example: Variance Request for a Functionally Dependent Use in a VE Zone

An existing water-dependent facility in a VE zone that has significant repair work proposed, which results in a substantial improvement determination. A variance request could be submitted to SDCI requesting a reduction for the elevation for this functionally dependent use.

3. Variances shall only be issued upon the following:

a. A showing of good and sufficient cause;

According to FEMA's guidance on variances (FEMA publication 993), the intent of this requirement (a showing of good and sufficient cause) is that a variance addresses the unique characteristics of a parcel of land. If the applicant demonstrates that an overwater location is necessary for the operation of the proposed use or structure then the criterion regarding the unique characteristic of a parcel of land does not apply because it is not the characteristic of the land that is creating the need for a variance, but rather the characteristic of the use. SDCI acknowledges that the characteristic of the use that requires a location overwater can be used to show good and sufficient cause and meet this variance criteria.

b. A determination that failure to grant the floodplain variance would result in exceptional hardship to the applicant;

According to FEMA's guidance on variances (FEMA publication 993), the hardship that would result from the failure to grant the requested variance must be exceptional, unusual, and specific to the property involved, not the personal circumstances of the applicant. An exceptional hardship is related to the property such as physical and topographical attributes or conditions of the property. The hardship related to the property is not caused by the applicant. A variance would be needed for the applicant to make reasonable use of the property.

In Seattle the nature of existing overwater piers in the marine and freshwater environments in relation to the adjacent existing infrastructure can result in an exceptional hardship for functionally dependent uses and for uses that require an overwater location to operate if there is an requirement to elevate the pier. For example, elevating an existing pier that has existing structures built on top of the pier to comply with floodplain regulations (or flood zone elevation standards) may conflict with the elevation of roadways and railways serving the adjacent properties. While sea level rise is likely to necessitate an increase in the elevation of overwater structures and adjacent upland streets and structures in the future, variances are

anticipated to be justifiable for the time being to accommodate continuation of functionally dependent uses and uses that require an overwater location to operate without unduly impairing their functions and operations.

c. A determination that the granting of a floodplain variance will not result in (i) increased flood heights, (ii) additional threats to public safety, (iii) extraordinary public expense, (ii) create nuisances, (iv) cause fraud on or victimization of the public, or (v) conflict with existing local laws or ordinances.

(i) Increased Flood Height

Flood heights for coastal flood zones are largely dependent on the conditions at the shoreline that affect wave runup. Flood heights in riverine flood zones are largely dependent on restricted channels and reduced flood storage. Reduced flood storage and drainage issues can also create areas of shallow flooding or ponding. Projects which entail near-shore dredging, armoring of the shoreline, fill or similar work will need to demonstrate that there will be no increase in flood heights for the subject or adjacent properties.

The greater safety hazard of developing in locations or at elevations not otherwise allowed will need to be mitigated. Applications for substantial improvements to existing structures must demonstrate the ability of the structure to withstand expected wind and wave conditions created by expected flood conditions; therefore, construction with greater exposure to flood damage must be designed to minimize such damage.

For example, new structures constructed on existing piers that do not meet current flood zone elevation standards in the coastal zone will need to be elevated so that the lowest floor of the new structure on the pier will be above the design flood elevation. In such cases, the lowest floor will be measured at the deck of the pier (not the top of the pile cap) or above the pier deck if the structure is further elevated on top of the pier.

(ii) Public Safety and Nuisances

An application for a variance must demonstrate that granting the variance would not create an additional threat to public safety or create nuisances. A variance that creates a high risk for loss of life to the occupants and emergency response personnel (e.g., requires emergency personnel to enter a high hazard flood zone during floods) may be considered an additional threat to public safety. A variance that results in significant debris in flooded areas may be considered an additional threat to public safety due to the pollution it creates and the potential to cause damage to existing structures. A structure abandoned as a result of flood damage may be considered a public nuisance.

(iii) Public Expense

An application for a variance must demonstrate that granting the variance would not create an extraordinary public expense. Extraordinary public expenses may include significant additional costs for protection, repairs, or ongoing maintenance to structures and utilities, time and materials expended by emergency service personnel, the significant additional expense involved in operating disaster assistance programs as well as other significant additional costs to the community.

(iv) Fraud and Victimization

An application for a variance should not subject tenants or future owners to risks they would otherwise be unaware of, such as the increased likelihood to experience flood conditions, higher than normal flood insurance premiums or, in certain cases, the inability to obtain flood insurance at all.

(v) Existing Local Laws or Ordinances

An application for a variance from floodplain regulations does not override the regulations contained in other codes or for the requirements to obtain other permits. A floodplain variance cannot be granted where it would conflict with other local, state, or federal laws; provided that an applicant may also apply for modifications, variance or deviations from those other codes and standards as applicable and available. Examples of local laws that may conflict with a variance include State and local building codes, health and safety regulations, and laws protecting environmental and other natural resources, including but not limited to threatened or endangered species and historic or cultural resources. Any variance must comply with the provisions of State zoning legislation and case law.

Additional General Guidance Regarding Piers and Other Structures Overwater

If SDCI grants a variance for the location of new construction or a substantial improvement in a VE Zone, an application must conform to the flood protection elevation requirement or seek a variance from it. The floodplain regulations also require meeting ASCE 24 construction requirements. ASCE 24 does not permit wet floodproofing in a VE Zone. Given that the top of the pier is above the flood protection elevation, wet floodproofing is not required because the elevation where wet floodproofing would be provided is below the top of the pier which is already designed to withstand flood loading. A variance to elevation would still need to be justified.

Under certain conditions, SDCI does not consider an existing boatshed or existing building relocated on the same site as new construction or a substantial improvement. The base flood elevation must be the same at the current and new location, and there must be no increase in any nonconformities or increase in hazard. SDCI would consider this an equivalent level of exposure to floodplain hazard and therefore a variance would not be required. This example assumes there are no additional alterations/modification to the existing structure. If there is additional alterations/ modifications, those features may need a variance.