

# Sea Level Rise in King County

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King County is proposing several changes to the King County Comprehensive Plan and development regulations in the King County Code to address the risks and impacts associated with sea level rise. This Frequently Asked Questions (FAQ) document provides more information on sea level rise and updated information on the proposed changes to County code.

## What are the proposed changes?

*In summary:* New policies and code are proposed for coastal areas on Vashon-Maury Island to establish a sea level rise risk area around the existing coastal high hazard flood areas. The proposed regulations intersect with other critical areas, and address building elevation standards, setbacks on bluffs, and wells for potable water. Policies require a review of sea level rise information every eight years.

## What causes sea level rise?

Several factors contribute to sea level rise globally and locally. Major factors at the global scale include warming ocean temperatures, which cause thermal expansion of the ocean, and ice melt from glaciers, Greenland, and Antarctica. An important local factor is long-term changes in vertical land elevation (i.e., uplift or subsidence) associated with plate tectonics.

## How much has sea level changed in our area?

Sea level has risen more than nine inches in Seattle since 1899, as measured at NOAA's tide gage at Coleman Dock.

## How much sea level rise is projected for Vashon-Maury Island?

Sea level on Vashon-Maury Island is projected to rise approximately one to two feet by mid-century and two to five feet by 2100, under a high greenhouse gas scenario.<sup>1</sup>

## What are the impacts of sea level rise?

Sea level rise impacts include the following:

- Increased coastal flooding and storm surge, including permanent inundation of low-lying areas;
- Increased shoreline and bluff erosion in areas that experience more wave action;
- Increased saltwater corrosion; and
- Habitat loss where bulkheads prevent shoreward movement of coastal habitat in response to sea level rise (a problem known as “coastal squeeze”).

The extent to which these impacts affect a specific location will vary depending on site-specific factors, including topography, wave energy, and proximity of infrastructure to the shoreline. The rate of sea level rise will also affect how quickly we experience these impacts.

## Why is King County concerned about sea level rise?

Sea level rise can cause damage to public and private buildings and infrastructure, create public health and safety hazards, reduce public access to beaches, and negatively impact our shoreline ecosystem in ways that reduce the likelihood of recovering salmon. Taking steps to reduce the impacts of sea level rise will produce a more climate-resilient shoreline, and ensure that development and infrastructure in these areas, which will be in place for decades, is properly sited and constructed.

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<sup>1</sup> From Washington Coastal Resilience Project online data tool, <http://www.wacoastalnetwork.com/washington-coastal-resilience-project.html>.

## What is the proposed Sea Level Rise Risk Area?

As part of the 2020 update to the King County Comprehensive Plan (Proposed Ordinance 2019-0413), King County is proposing a new Sea Level Rise Risk Area adjacent to the coastal high hazard area (*also known as the 100-year coastal floodplain*) on Vashon-Maury Island. Many shoreline parcels on Vashon-Maury Island already sit at least partially within the coastal high hazard area. The Sea Level Rise Risk Area applies to areas that are landward of the existing coastal high hazard area to an elevation of three feet above “base flood elevation” (BFE), as shown on the preliminary Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps. BFE is the water level associated with a one percent annual chance flood event, inclusive of wave run-up (in the case of coastal floodplains). Coastal high hazard area mapping does not take projected sea level rise into account.

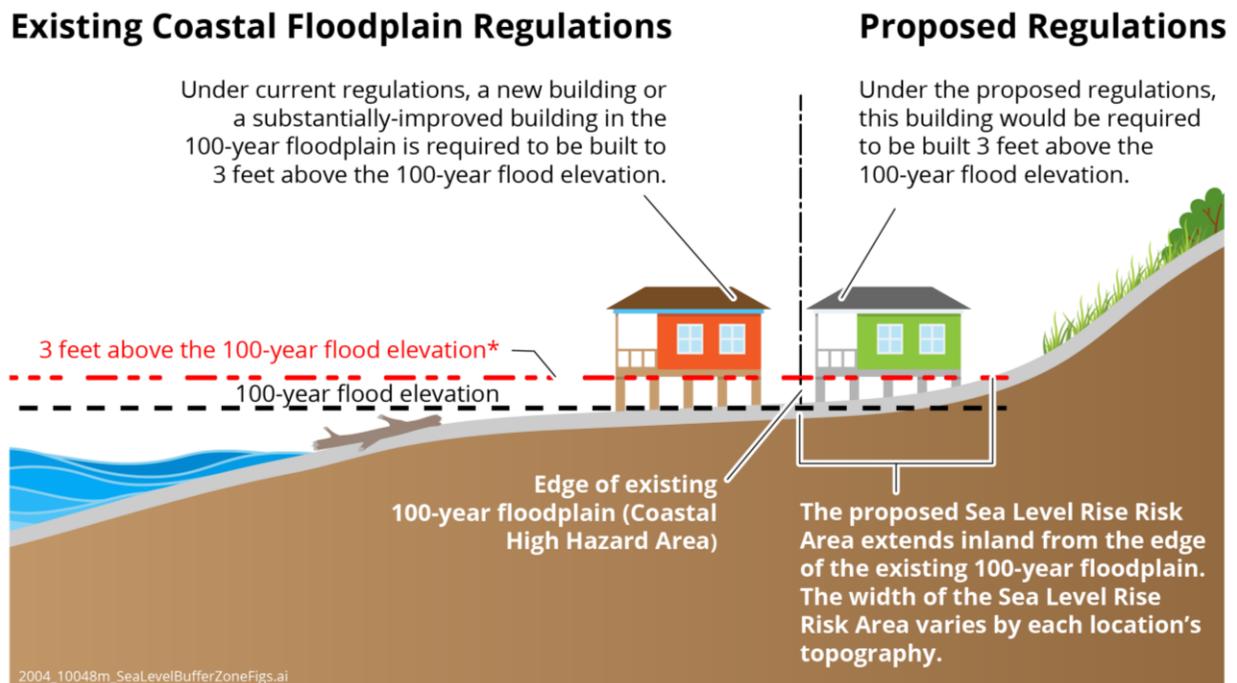
## What is required in the Sea Level Rise Risk Area (if adopted)?

As with the existing requirements in the coastal high hazard area, new construction or substantial improvement of existing buildings in the new Sea Level Rise Risk Area would need to be built to at least three feet above BFE (see Figure 1). Additionally, new wells in the Sea Level Rise Risk Area must include a surface seal to prevent saltwater contamination from sea level rise conditions anticipated to occur over the next 50 years. Owners of new wells in the Sea Level Rise Risk Area must also test for chloride levels in accordance with Washington state Department of Health protocols.

## Why three feet above Base Flood Elevation for the Sea Level Rise Risk Area?

The County currently requires building at least three feet above BFE in the coastal high hazard area. The Sea Level Rise Risk Area simply extends this requirement until the land elevation is equivalent to three feet above BFE of the adjacent flood zone. This is roughly equivalent to preparing for two to three feet of sea level rise.

Figure 1. Proposed Sea Level Rise Risk Area



\* The 100-year flood elevation varies by location and specific coastal hazard zone. For maps on King County's coastal high hazard areas, visit: <https://www.kingcounty.gov/services/environment/water-and-land/flooding/maps/flood-insurance-rate-maps.aspx>.

### **Is federal flood insurance required if my property is in the Sea Level Rise Risk Area?**

Flood insurance is required for any buildings that are fully or partially in the floodplain as shown on the Flood Insurance Rate Maps. Flood insurance will *not* be required for buildings solely within the Sea Level Rise Risk Area.

### **What other regulatory changes related to sea level rise are proposed?**

The following changes are also proposed. As with other regulations, reasonable use exemptions may be allowed in certain circumstances.

- Geotechnical studies for determining setbacks on bluff sites must account for sea level rise conditions anticipated to occur over the next 50 years when the bluff is both in the steep slope hazard zone *and* the toe of the bluff extends into the coastal high hazard area or the sea level rise buffer. In the absence of a geotechnical study, the bluff setback requirement for any type of development or site alteration on these sites will be increased to 75 feet.
- New wells in the coastal high hazard area will not be allowed.
- Policies require a review of sea level rise information every eight years.

### **Where can I find a map of the proposed Sea Level Rise Risk Area?**

Draft maps of the proposed Sea Level Rise Risk Area are available on King County's Department of Natural Resources web page for Vashon-Maury Island ([here](#)). The draft maps are based on updated FEMA flood maps. Final Risk Area maps will be produced after final Council action on the 2020 Comprehensive Plan update, if the proposed sea level rise regulations are adopted. We anticipate minor adjustments to the Sea Level Rise Risk Area maps as they are finalized.

### **When would the new provisions go into effect, if adopted?**

If adopted, these regulations would go into effect approximately four weeks after the County Council takes final action on the 2020 Comprehensive Plan update. The Council is currently scheduled to adopt the 2020 Comprehensive Plan update in June or July 2020, subject to change.

### **Questions?**

Contact Lara Whitely Binder, King County Climate Preparedness Specialist (206-263-0825; [lwbinder@kingcounty.gov](mailto:lwbinder@kingcounty.gov)).

### **For more information about the 2020 Comprehensive Plan update, please visit:**

<https://www.kingcounty.gov/council/CompPlan/2020compplan.aspx>