

SEA LEVEL RISE AND BLUFF EROSION



The sea level is rising, presenting growing risks to our bluffs, infrastructure, and critical habitats.

Climate change is leading to rising seas. The warming temperatures melt ice and cause thermal expansion of water around the globe.

Communities around Washington State will see different amounts of sea level rise due to variations in seasonal wind patterns, vertical land movement resulting from plate tectonics, and other factors. We can look to the records and projections for Seattle to get a sense of what might happen at the Port Gamble S'Klallam reservation as the climate changes: studies project an increase of up to 19 inches by 2050 and 4.6 feet by 2100. However, these estimates do not fully account for the possibility of more drastic ice melt in Antarctica and Greenland, which may make the sea level rise even faster; some studies say that 6 feet of global sea level rise by 2100 is possible.

What climate change impacts do we expect?



Flooding at Point Julia and other low-lying areas.

A king tide in the winter of 2015 inundated nearly all of the Point Julia boat launching area. We expect to see this happen more often as the sea level rises.

With increased water coverage due to rising sea levels, we will also have less time when we are able to access the intertidal areas for shellfish harvesting.



Increased bluff erosion.

Bluff erosion on the reservation is an existing problem that will become more serious. Sea level rise, waves, and increased heavy rainfall events are expected to speed up erosion as the climate changes.



Changes or losses of habitat for birds and shellfish.

More than half of beach land in the upper Hood Canal and Kitsap Peninsula is predicted to be lost and converted to tidal flats by 2050 because of sea level rise.

Ducks, geese, and seabirds rely on marshes, beaches, and tidal flats, and on the forage fish that have historically been found in those areas. Sea level rise will reduce their habitat and food availability.

What are we doing about it?

The Tribe has been studying bluff erosion risks and monitoring changes in our bluffs over time. We are also working with the University of Washington to better understand potential sea level rise impacts on local estuaries and shellfish habitat.

The Tribe is planning to install floating boat launch ramps on the south side of Point Julia; this may help account for some change in sea level, but further study is needed.

Want more info?

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