

# SHELLFISH



**For thousands of years, the Port Gamble S'Klallam Tribe has depended upon shellfish as a source of food and as a resource for income, trade, and ceremonial purposes.**

The population of some wild species in the region has been reduced through stressors such as pollution, habitat loss from development, and overfishing. Climate change now poses additional impacts that the Tribe will need to be ready to address.

## Which species are impacted?

In 2014, there were 192 tribal members engaged in shellfish harvesting, most of whom harvested multiple species.

**Oysters<sup>^\*</sup>**  
**Butter clams<sup>\*</sup>**

\*Most important species for food  
^Most important species for generating income

**Manila clams<sup>^^</sup>**  
**Cockles<sup>\*</sup>**

**Dungeness crab<sup>^</sup>**  
**Geoduck<sup>^</sup>**

## What climate change impacts do we expect?



**More toxins affecting shellfish consumption.**

In June 2015, nearly all of the recreational shellfish beaches along Hood Canal were closed or under advisory because of toxins produced by harmful algal blooms. These toxins accumulate in shellfish, making them dangerous to eat. The most common health risk is paralytic shellfish poisoning.

This may happen more often as climate change impacts like warmer water and air may favor the development of more harmful algal blooms.



**Shells may not form as readily.**

Shellfish like clams and oysters will be affected by ocean acidification, which makes calcium carbonate less available for young shellfish and larvae to form their shells.

This can ultimately affect the survival of some shellfish.



**Sea level rise leading to reduced habitat.**

Intertidal zones will be covered with more water, and the shellfish habitat can't move inland if the shoreline is armored.

Higher sea levels and more water coverage will also reduce the amount of time when we are able to access beaches for harvesting.

## What are we doing about it?

The Tribe is working to better understand these changes and how they could affect shellfish in our area. We will be discussing adaptation actions that tribal members and staff can take to help ensure sustainable shellfish harvesting for future generations, despite a changing climate.

## Want more info?

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