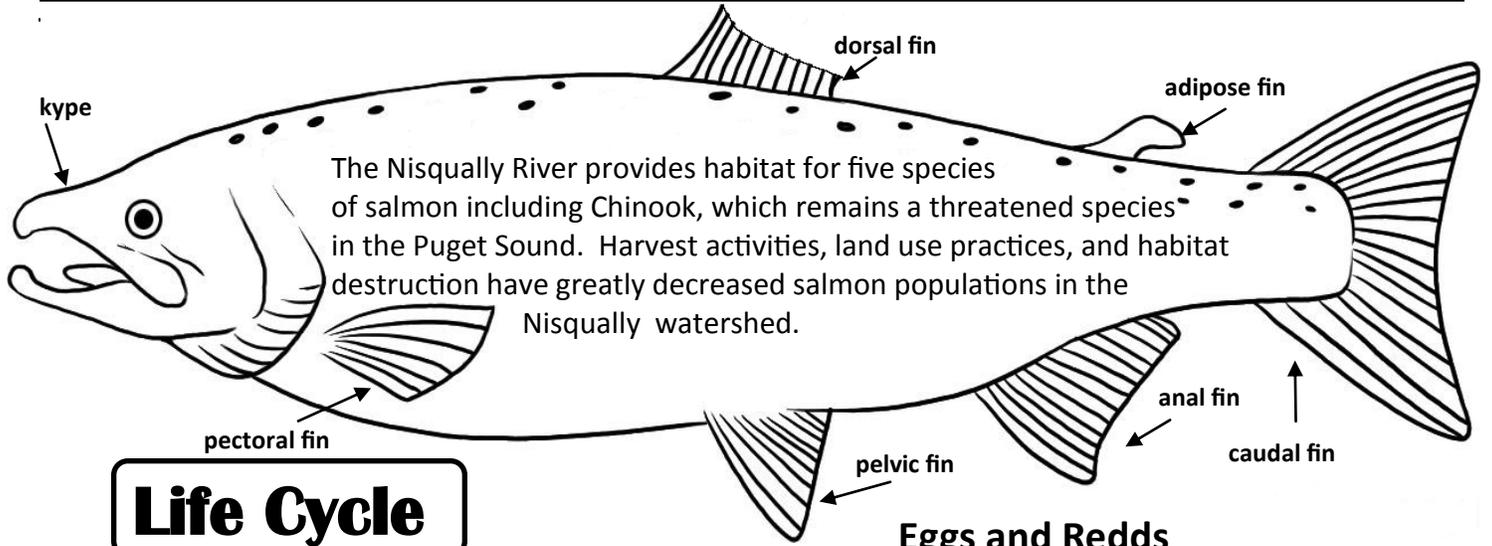


Nisqually River Salmon



Life Cycle

Within the **Nisqually watershed**, Pacific salmon can be found from the high elevation streams near Mt. Rainier to the estuarine marshlands of the Nisqually delta.

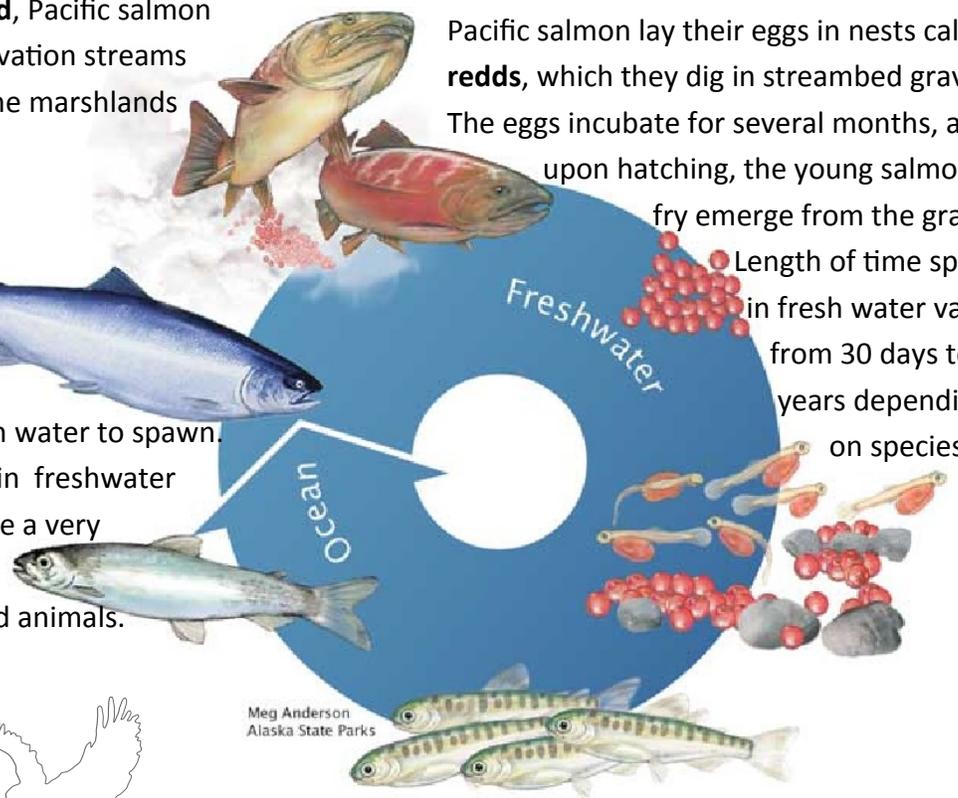
Adult

Anadromous salmon experience the majority of their growth in the ocean before returning to fresh water to spawn. When they die after spawning in freshwater streams, their carcasses provide a very important source of marine derived nutrients for plants and animals.

Eggs and Redds

Pacific salmon lay their eggs in nests called **redds**, which they dig in streambed gravels. The eggs incubate for several months, and upon hatching, the young salmon fry emerge from the gravel.

Length of time spent in fresh water varies, from 30 days to 3 years depending on species.



Food web



Over 137 species depend on salmon and they nourish ecosystems from the Nisqually watershed to Alaska. (source: National Oceanic Atmospheric Association)

From Fresh to Salt Water

Salmon are **anadromous** fish, meaning that they spawn in fresh water, go to sea to feed and grow, and then return to fresh water to spawn.



5 Salmon Species of the Nisqually River



Chinook

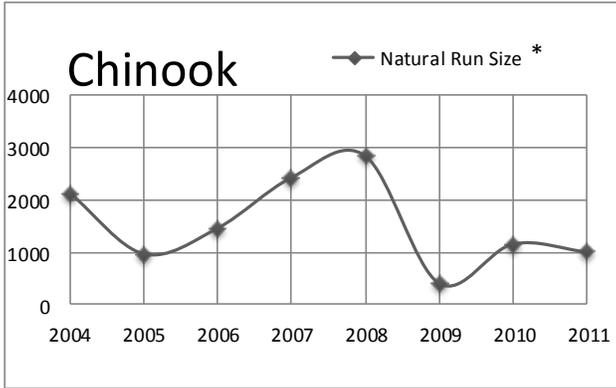
Nisqually name: sa'ceb

Scientific name: *Oncorhynchus tshawytscha*

The largest salmon species, averaging 12-15 pounds.

Chinook, also known as king salmon, prefer larger streams. They spawn in the fall, throughout the Nisqually River's accessible length and in portions of the Mashel River, Ohop, and other tributaries.

Chinook spend several months in fresh water and the estuary before migrating out to the ocean, returning as adults in 2-5 years. They are listed as a threatened species in the Nisqually.



*Wild population of Chinook (not from hatchery)

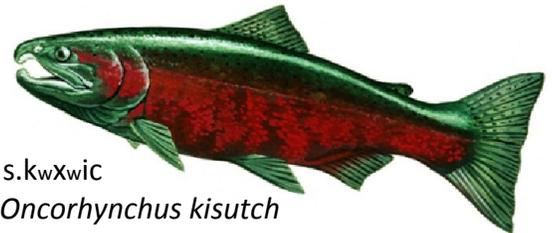
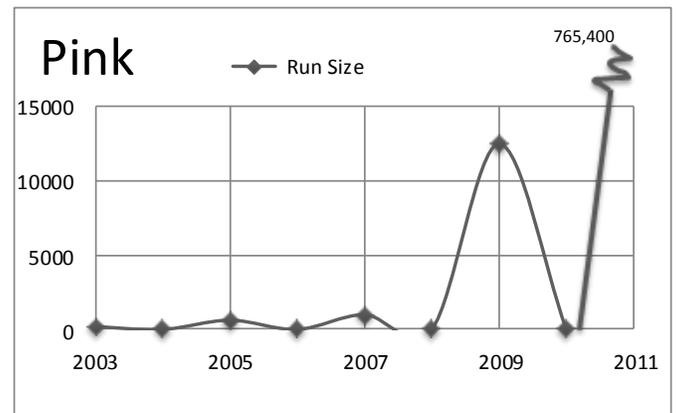


Pink

Nisqually name: hedu

Scientific name: *Oncorhynchus gorbuscha*

Pink salmon, also known as humpies, spawn primarily in the mainstem Nisqually River and its larger tributaries, and have an average weight of 2-5 pounds. The juveniles leave fresh water almost immediately after emerging from the gravel, heading out to the open ocean. They return at 2 years of age in odd numbered years to spawn during fall months.

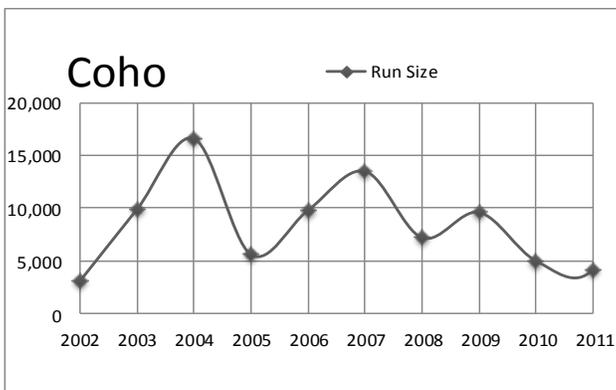


Coho

Nisqually name: s.kwxwic

Scientific name: *Oncorhynchus kisutch*

Also known as *silver salmon*, coho weigh an average of 3-8 pounds. Coho spawn in the Nisqually River and its accessible tributaries during the fall months, preferring mid-velocity water with small to medium-sized gravels to deposit their eggs. Juveniles reside in fresh water for 1 to 2 years before migrating out to the marine environment, then return to their home streams at approximately 3 years of age.





5 Salmon Species of the Nisqually River

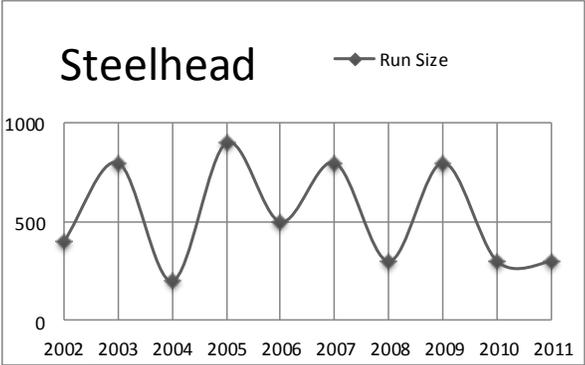


Steelhead

Nisqually name: s.kwawel

Scientific name: *Oncorhynchus mykiss*

Steelhead, which are anadromous rainbow trout, spawn in the Nisqually throughout the mainstem and its tributaries. In spring, the juveniles reside in fresh water for 1-3 years before heading out to the ocean, then return in the spring 2-3 years later, averaging 8-10 pounds. Rainbow trout can produce ocean-going steelhead trout offspring and vice versa. Steelhead trout are capable of spawning multiple times, while the other salmon species die after spawning.

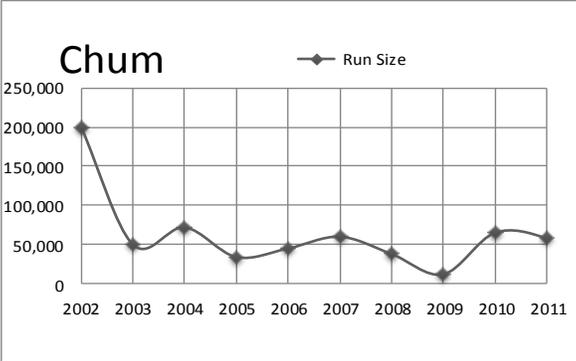


Chum

Nisqually name: λ'xway

Scientific name: *Oncorhynchus keta*

Chum, also known as dog salmon, spawn primarily in the mainstem Nisqually and in Muck, Yelm, McAllister, and Red Salmon Creeks. Juveniles head to saltwater soon after emerging from the egg stage. Being the second largest salmon, chum spend 3-5 years in the marine environment and can weigh an average of 8-15 pounds when they return to their home streams to spawn during the winter months.

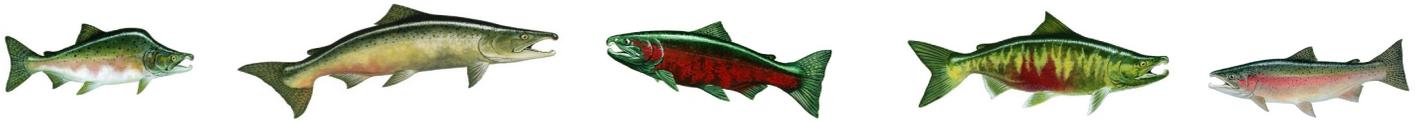


Salmon and the Nisqually Indian Tribe



The Nisqually Indian Tribe has depended upon salmon for at least 5,000 years. Tribal culture has often centered around the natural life cycles of salmon returning to the river. Also, there are two hatcheries in Nisqually operated by the Nisqually Indian Tribe, Clear Creek hatchery (Chinook) and Kalama Creek hatchery (coho). These hatcheries support tribal harvest of coho and Chinook and provide opportunities for recreational sport fishing in fresh water and marine environments. The Clear Creek hatchery (Chinook) and Kalama Creek hatchery (coho) provide opportunities for recreational sport fishing in fresh water and marine environments.

Protecting Salmon



Habitat Recovery

Pacific salmon evolved to utilize the forested streams of the Pacific Northwest which had abundant cold water, clean spawning gravels and diverse habitat. The loss of forests, prairies and wetlands to human development has limited the quality and quantity of this essential salmon habitat. Salmon habitat restoration seeks to counteract this historical degradation using a variety of techniques like re-establishing vegetated corridors along rivers and streams, increasing habitat diversity in streams by building log jams and other structures, removing barriers to salmon migration and, as in the case of Ohop Creek, moving a stream from a straight ditch into a new fish friendly stream channel and re-planting over 100 acres in the riparian zone.

Frequently Asked Questions



Q: What is the difference between hatchery and wild?

A: One spawns in nature and one in a hatchery laboratory facility. Fish biologists or hatchery technicians clip the adipose fin of hatchery juvenile salmon so that wild and hatchery fish can be distinguished.

Q: If salmon are listed as endangered species why do we still fish for them?

A: Anglers (sport fisherman) are allowed to catch only specific species that are not listed as endangered. The Washington State Department of Fish and Wildlife and Tribes closely regulate the harvesting season. Also, anglers must release wild, listed species and annually report species caught on a Catch Record Card.

Q: How can I help salmon and who do I contact for more information?

A: Take action by joining restoration activities in the Nisqually watershed hosted by organizations who aim to help salmon through planting trees, invasive plant removal, and monitoring water quality.

Visit the following sites to discover more ways to help protect salmon and the Nisqually watershed:

Nisqually Stream Stewards

www.nisquallyriver.org/stream-stewards

Pierce County Stream Team

www.piercecountycd.org

Nisqually Land Trust

www.nisquallylandtrust.org

Nisqually River Foundation

www.nisquallyriver.org

Thurston County Stream Team

www.streamteam.info

Nisqually River Education Project

www.nisquallyriver.org/nisqually-river-education-project