

30 YEARS OF THE ENDANGERED SPECIES ACT

CHINOOK SALMON

Chinook salmon are a symbol of the Pacific Northwest. Like most Pacific salmon, many populations of Puget Sound chinook remain unhealthy. However, recent efforts on the Skagit River have helped reduce the harmful impacts caused by the operation of Seattle City Light hydroelectric dams in Washington state's second largest salmon producing river.

HISTORY OF ENDANGERMENT

Puget Sound chinook, an evolutionarily significant unit (ESU) of salmon, were listed as threatened under the Endangered Species Act in 1999. An ESU is a subpopulation of fish reproductively isolated from other populations. ESUs are usually genetically distinct or distinguished by the timing and location of their migration.

The decline of Puget Sound chinook salmon can be attributed to many factors. Logging and mining on public lands have significantly degraded chinook habitat. As the region grows and urbanizes, suburban sprawl consumes habitat, and streams are piped underground or polluted by runoff. Hatchery fish also contribute to wild salmon declines by interbreeding with native fish.

In some Puget Sound rivers, dams are the biggest threat to salmon runs. Dams destroy habitat, block salmon from reaching historic spawning grounds, and alter the natural rhythm of river flows essential for healthy ecosystem function. Dams can also impair water quality by increasing temperature and decreasing dissolved oxygen.

ROAD TO RECOVERY

Even with these threats, it is still possible to rebuild healthy salmon runs.

Puget Sound chinook have begun rebounding in the Puget Sound area's largest river, the Skagit. This success is thanks to the efforts of the utility company, Seattle City Light, to minimize river fluctuations caused by peaking operations of its hydropower dams. Last year saw the greatest return of fall chinook since 1974, while populations in other Puget Sound rivers simultaneously continued to decline. According to the utility, these flow modifications cost only 20 cents per customer.

The Endangered Species Act is responsible for improvements along the Skagit. Changes to dam operations, forest practices, and habitat restoration have helped to curb the decline of chinook. Further implementation of the law in the Skagit estuary is critical to fully recover these amazing fish to abundance.

CONSERVATION TODAY

Chinook salmon throughout the West remain on the Endangered Species list. Clearly more work is needed, but efforts like those on the Skagit River are catching on. Other dam owners and operators are beginning to improve dam operations and even remove some dams. Improved flow regimes, habitat restoration, access to spawning grounds, and improved water quality are all going to be necessary if we are to improve the plight of this icon of the Northwest.

ECOLOGICAL & ECONOMIC VALUE

A natural indicator of the health of the Puget Sound environment and its communities, chinook salmon have long been tied to the fate of the Pacific Northwest. They are highly prized by commercial fishermen despite other more populous species of Pacific salmon, and anglers pay tens of millions of dollars annually to fish for salmon.

Generations of Native American tribes in the Puget Sound area continue to depend on chinook salmon both as a cultural necessity and as a food source.

OUTLOOK FOR THE FUTURE

Salmon are the keystone species for the region. The Endangered Species Act is not only critical to the protection and restoration of those fish, but everything else that depends upon them.

The Northwest must strike a balance between its thirst for cheap hydroelectric power and its love and respect for wild Pacific salmon. Hydropower dams continue to imperil several populations of chinook salmon.

Two ESUs of chinook salmon are at perilously low levels in the Snake River in eastern Washington. Four dams along the river keep juvenile salmon from migrating out to the ocean; each dam is responsible for the mortality of five to fifteen percent of each generation of young salmon. Providing ample water flow over the dams or removing the dams altogether will help to solve the problem of the chinook's decline.



FWS



Ice Harbor Dam. U.S. Army Corps of Engineers



Skagit River Estuary. USGS

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