



The Dipnetter

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A Record Spring Chinook Salmon Run for 2010 Forecast

Marketing Workshops Give Valuable Advice to Tribal Fishers

Yakama Nation's Nason Creek Wetlands Acquisition Project



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Executive Director's Message A Record Spring Chinook Salmon Run f

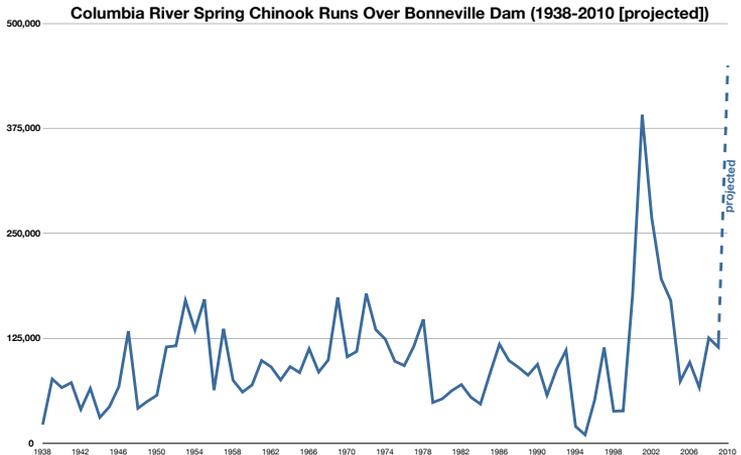
On December 9, the *U.S. v. Oregon* Technical Advisory Committee (TAC) released its pre-season forecasts for various upriver Columbia River stocks. This year, that estimate is 470,000 fish.

HISTORIC FORECAST METHODS:

Chinook salmon return at a variety of ages. Spring Chinook juveniles spend a full year rearing in freshwater before migrating to the ocean. Some male Chinook only spend one winter in the ocean before returning. These fish are known as jacks. Spring Chinook jacks are three-year-old fish. Most of each year's return are four-year-old fish. Some fish return at five years old. A few return at six years old. TAC maintains datasets of age at return of spring and summer Chinook. Historically, there have been fairly good relationships between the different ages of fish. TAC has used these relationships to make pre-season forecasts, generally by using linear regression-based models.

There is always some variation between the pre-season forecasts and actual returns. Since the late

If the 2010 return is at or near the estimate, it will mark the highest spring Chinook run since Bonneville Dam was built in 1938!



for 2010 Forecast

1970s to the present, there have been close to the same number of over forecasts as under forecasts. However in larger run size years the error has often been large (either over or under). The 2007 forecast was quite close to the actual return. In the last two years, there have been large over forecasts which greatly complicated in-season management. In the past few years, jack counts have been quite large. The relationship between jacks and adult fish appears to have changed. As a result of this, TAC has examined several possible modifications to its forecast methodology.

NEW FORECAST METHODS:

For the 2010 run forecast, TAC examined several alternative methods for forecasting including non-linear relationships, ocean conditions, and the relationship between different age groups returning. TAC members met with ocean ecologists and sought input from other scientists. Questions posed were: to what degree the record jack return is an indication of excellent survival of the four-year-old Chinook returning in 2010? and to what degree it could represent environmental changes that could be causing salmon returns to behave differently than they have before?

TAC examined more than a dozen models that produced return estimates ranging from 264,000 to 810,000 adult fish. Based on previous forecasting experiences, TAC chose seven models that ranged from 366,000 to 528,000 returning adults. TAC averaged the point estimates of those models and came to 470,000 fish—the 2010 pre-season forecast.

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TAC includes biologists from IDFG, ODFW, WDFW, NMFS, USFWS, the four Columbia River Treaty Tribes (Yakama, Umatilla, Warm Springs, and Nez Perce) and the Shoshone Bannock Tribes. Each year, the TAC uses a variety of data including harvest data, dam counts, hatchery returns, and wild return data to reconstruct the spring and summer Chinook runs. These data are in turn used to generate pre-season forecasts that are used for planning fisheries. The *U.S. v. Oregon* Management Agreement requires that fisheries are to be managed based on the actual run sizes not simply the pre-season forecasts. Both treaty and non-treaty Chinook fisheries in the mainstem and Snake River below Lower Granite are managed based on Columbia River mouth run sizes, not Bonneville Dam counts.



Salmon Marketing News

Tribal Fishers' Workshop Series

Two Salmon Marketing workshops recently helped tribal fishers with their marketing efforts. Both workshops were at The Dalles Discovery Center. Look in future issues of *The Dipnetter* for upcoming workshops as they're announced.

Salmon Marketing

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[top]: Scherri Greene and her daughter Dana take a minute to pose for the camera at the Seattle Marine Fishers Expo held at Qwest Exhibition Center November 19-21. Over 18 fishers attended this Expo that featured all aspects of fishing gear and supplies as well as speakers.



[bottom]: Roger Dick, Jr. and Senior, Jason Rau (Yakama) listen to Dr. Glen Bledsoe in a conversation regarding HACCP training for 2010 for fishers.





[top]: Rex and Sandra Zack listen to speakers explain food safety and value-added marketing of products in a workshop in The Dalles.



[bottom]: Over 40 fishers attended the food safety and value-added marketing workshop held at the Discovery Center held at the Discovery Center in The Dalles Dec. 8

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A WORD OF CAUTION:

Managers are cautiously optimistic about the 2010 spring Chinook returns. The potential for a record return has placed fishery managers in unfamiliar territory. The record high return of jacks in 2009 and indication of good ocean conditions point to a good run. We believe that the tribes will be able to meet their subsistence and ceremonial needs and that scaffold fisheries should be able to remain open for subsistence use throughout the spring. However, the number of fish available for commercial sales remains uncertain. The access to commercial fishing opportunities will not be known until later in the spring when the run returns.

Accurate in-season run size updates are critical for managing fisheries to stay within the allowed harvest rates. TAC usually updates the run size when about 50% of the run has passed Bonneville Dam. TAC will continue to examine methods to update the run size as early as possible.

Yakama Nation's Nason Creek Wetlands Acquisition Project

The Confederated Tribes and Bands of the Yakama Nation allocated PCSRF funds towards purchasing a 26-acre large beaver dam wetlands complex of the Nason Creek floodplain within the Wenatchee River Subbasin in Washington. The acquisition will allow the Yakama Nation Fisheries personnel to protect, enhance and manage the site to provide for salmon passage to spawning areas and over-winter rearing habitat for ESA listed spring Chinook and steelhead, along with coho and bull trout. Due to the development of the river corridor, the loss of off-channel habitat has been identified as a limiting factor to these ESA listed fish in the Wenatchee Subbasin Plan.

No beaver dams will be removed in the project area. Through management of the beaver dams and water levels, adult migration through the property at appropriate times will be possible. Alternative methods such as notches, culverts, fish ladders, and weirs will allow

Nason Creek was channelized by the construction of a railroad line.





upstream access. Approximately 3 miles of spawning and rearing habitat will be made accessible.

The project is not designed to fund supplementation directly but will contribute by facilitating the acclimation and release of up to 100,000 hatchery coho smolts per year and potentially hatchery steelhead and spring Chinook in the future.

In coordination with the cooperating agencies of Washington Department of Fish and Wildlife and the Chelan Public Utility District, monitoring and evaluation (M&E) will be conducted by Yakama Nation Fisheries personnel over the length of the entire site. Spawning ground surveys of returning adult salmon utilizing the new habitat started in the fall of 2005. Data collection will include snorkel surveys to estimate juvenile salmonid populations beginning in the winter of 2006. Stream channel and riparian habitat will be monitored each year. The M&E program will be included in existing monitoring programs being funded in the basin.

A beaver dam on the Nason Creek property.



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