PR3 13-030996

PETITION TO DELIST
Coho Salmon (Oncorhynchus kisutch)
Nomination for Delisting of a Taxon of Flora or Fauna
(Endangered Species Act 1973)

Presented By
Siskiyou County Water Users Association

2013 JUN -3 PM 3:14
U.S. EXECUTIVE SECRETARIAT

June 3, 2013

Petition to be forwarded to the following:

U.S. Department of the Interior
U.S. Fish and Wildlife Service
1849 C Street, N.W.
Washington, D.C. 20240
Attention: Secretary Ken Salazar

U.S. Department of Commerce
Attention: Secretary Rebecca Blank
1401 Constitution Ave. NW
Washington, D.C. 20230

Calif. Fish & Game Commission
1416 9th. St. Suite 1320
Sacramento, CA. 95814

Assistant Regional Administrator,
Protected Resources Division,
Attn: Rosalie del Rosario,
NMFS
501 West Ocean Blvd., Suite 4200
Long Beach, CA 90802-4213.

Statement identifying the taxon

Coho Salmon, Silver Salmon, Oncorhynchus kisutch...a salmonid which is a vertebrate fish. Based on historical evidence Coho Salmon located within the Klamath River are as a result of plantings in 1895, 1895, multiple plantings in the 1960's and 1980's **from multiple sources.** According to the **Expert Science Panel 4-25-2011** "it is to be noted that upon genetic analysis of the Coho Salmon in the Klamath Basin appears to be from plantings from Cascadia, Oregon."
FINAL Report Coho Salmon-Steelhead Klamath Expert Panels 04 25 11 Therefore, no single subspecies of Coho Salmon can be identified as being exclusive to the Klamath River.

Known distribution of the taxon.

Occupies the entire Pacific Coastal region at this time. This petition specifically refers to Northern California and the present listing of Coho Salmon as endangered under the California Endangered Species Act on the Klamath River and the Federal ESA listing of Coho Salmon as threatened and consideration to list them as endangered. This petition specifically is regarding the Southern Oregon-Northern California ESU units.

Known threats which may affect the taxa.

Nature--Estuarine destruction--predation--over fishing--by catch--Ocean temperature, climatic changes.

Reasons for nominating the taxon for delisting including any reference in any scientific journal or other literature dealing with the taxon.

Based on the following research performed by Dr. Nathan Mantua, working for NOAA, it is clear that the basis for listing Coho Salmon in the Pacific Northwest was based on declining numbers of Coho Salmon that was perceived as being caused by human activities such as dams, agriculture and various other human factors. This research paper, published in 1997 was ignored

by NOAA, NMFS and the Department of the Interior when Coho Salmon were listed as Threatened under the ESA. The listing was unlawful, arbitrary and capricious and should be removed immediately.

Research paper published by Dr. Nathan Mantua while working as a research scientist at the *NOAA's* Climate Program Office

http://www.nwfsc.noaa.gov/research/divisions/fed/oeip/ca-pdo.cfm

The Pacific Decadal Oscillation is a climate index based upon patterns of variation in sea surface temperature of the North Pacific from 1900 to the present (Mantua et al. 1997). While derived from sea surface temperature data, the PDO index is well correlated with many records of North Pacific and Pacific Northwest climate and ecology, including sea level pressure, winter land–surface temperature and precipitation, and stream flow. The index is also correlated with salmon landings from Alaska, Washington, Oregon, and California.

The PDO is highly correlated with sea surface temperature in the northern California Current (CC) area; thus we often speak of the PDO as being in one of two phases, a "warm phase" and a "cool phase," according to the sign of sea–surface temperature anomalies along the Pacific Coast of North America. These phases result from the direction of winter winds in the North Pacific: winter winds blowing chiefly from the southwest result in warmer conditions in the northern CC. The CC warms at such times due to onshore transport of warm waters that normally lie offshore. Conversely, when winds blow chiefly from the north, upwelling occurs both in the open ocean and at the coast, leading to cooler conditions in the northern

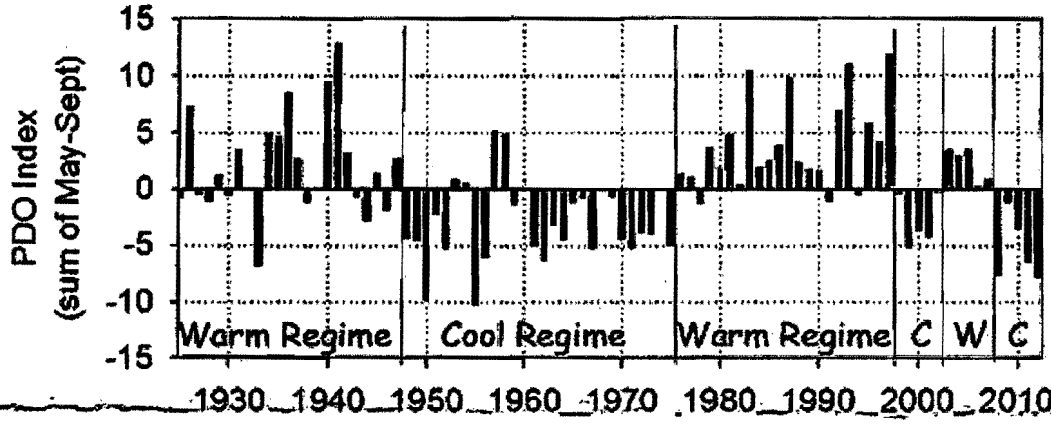

Figure 2. Time series of shifts in sign of the Pacific Decadal Oscillation (PDO), 1925 to present. Values are averaged over the months of May through September. Red bars indicate positive (warm) years; blue bars negative (cool) years. Note that 2008 was the most negative since 1956.

Warm and cold phases can persist for decades. For example, a warm phase continued from 1925 to 1946 (red bars in Figure 2), and a cool phase from 1947 to 1976 (blue bars). From 1977 to 1998, another 21–year warm phase occurred. However, these decadal cycles have recently broken down: in late 1998, the PDO entered a cold phase that lasted only 4 years followed by a warm phase of 3 years, from 2002 to 2005. The PDO was in a relatively neutral phase through August 2007, but abruptly changed in September 2007 to a negative phase that lasted nearly 2 years, through July 2009. The PDO then reverted to a positive phase in August 2009 (Figure 5) because of a moderate El Niño event that developed at the equator during fall/winter 2009–2010. This positive signal continued for 10 months (August 2009–May 2010)

until June 2010, when persistently negative values of the PDO initiated and have remained strongly negative through autumn 2012.

Dr. Nathan Mantua and his colleagues were the first to show that adult salmon catches in the Northeast Pacific were correlated with the Pacific Decadal Oscillation (Mantua et al. 1997). They noted that in the Pacific Northwest, the cool PDO years of 1947–1976 coincided with high returns of Chinook and coho salmon to Oregon rivers. Conversely, during the warm PDO cycle that followed (1977–1998), salmon numbers declined steadily.

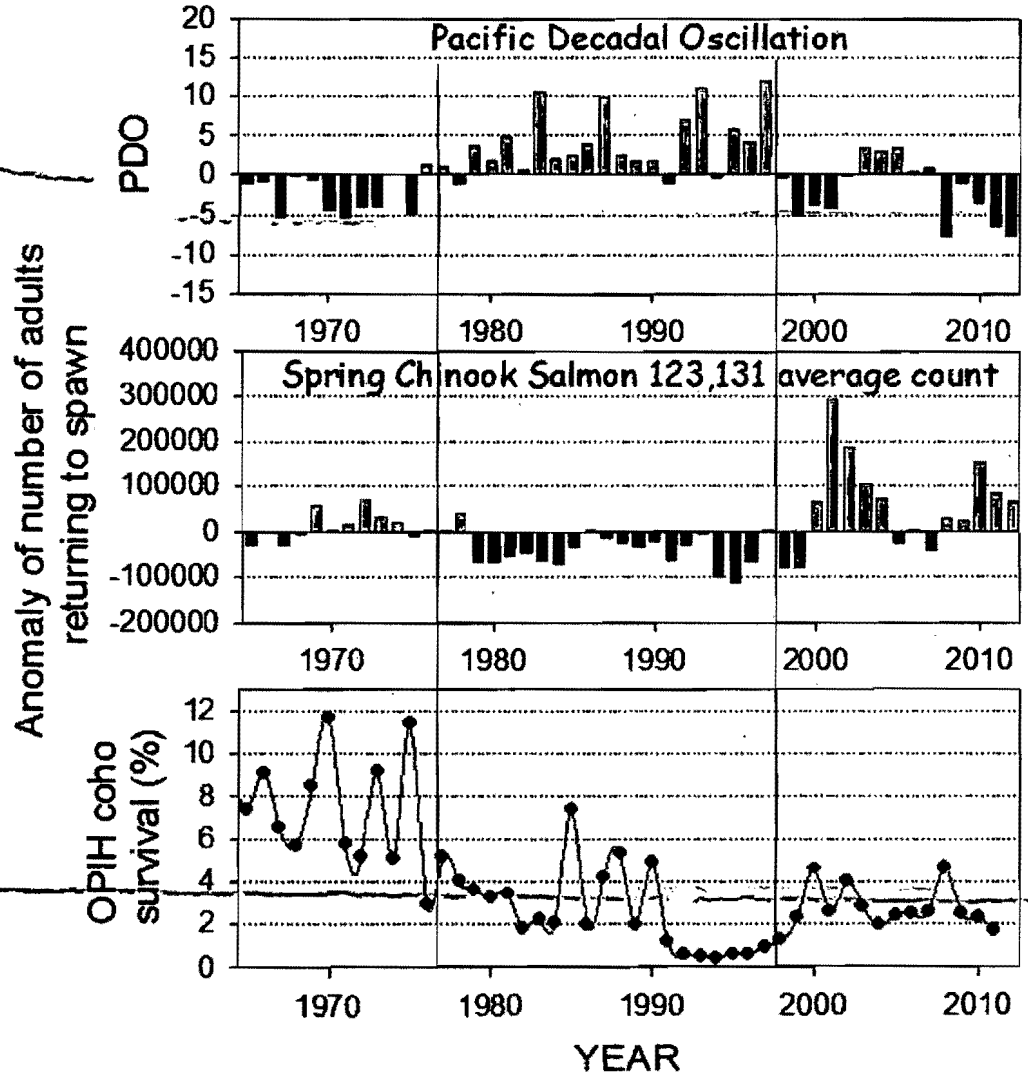

Figure 3. Upper panel shows summer average PDO, 1965–present; middle panel shows anomalies in counts of adult spring Chinook passing Bonneville Dam for the same period; lower panel shows survival of hatchery coho salmon from 1965–present. Vertical lines indicate climate–shift points in 1977 and 1998.

The listing of several salmon stocks as threatened or endangered under the U.S. Endangered Species Act coincides with a prolonged period of poor ocean conditions that began in the early 1990s. This is illustrated in Figure 3, which shows average PDO values in summer

vs. anomalies in counts of adult spring Chinook at Bonneville Dam. Also shown are percentages of hatchery juvenile coho salmon that returned as adults to hatcheries in SW Washington and NE Oregon during this period. These percentages have been recorded since 1961 as the Oregon Production Index, Hatchery (OPIH).
The OPIH includes fish taken in the fishery as well as those that returned to hatcheries. Figure 3 shows a clear visual correlation between the PDO, adult spring Chinook counts and hatchery coho adult returns. Note that during the 22–year cool phase of the PDO (1955 to 1977), below–average counts of spring Chinook at Bonneville Dam were seen in only 5 years (1956, 1958-60, and 1965).

In contrast, below–average counts were common from 1977 to 1998, when the PDO was in warm phase: below–average counts were observed in 16 of these 21 years. The dramatic increase in counts from 2000 to 2004 coincided with the return to a cool–phase PDO in late 1998. Note also from Figure 3 that a time lag of up to 2 years exists between PDO phase changes and spring Chinook returns: Chinook runs remained above average in 1977 and 1978, 2 years after the 1976 PDO shift. Similarly, increased returns of spring Chinook adults in 2000 lagged 2 years behind the PDO shift of 1998.
Adult spring Chinook runs declined again, beginning with fish that had entered the sea in 2003 and had experienced poor conditions associated with the positive PDO signal in that year. This decline continued for 3 years, until 2008 and 2009, when returns began to increase, as we predicted based on ocean conditions during 2006–2007. With the strongly negative PDO in effect for juvenile Chinook that entered the ocean in spring 2008, we predicted high adult returns of these fish in 2010. In fact, the third highest returns on record were recorded in 2010.

Conclusion

The listing was unlawful, arbitrary and capricious and should be removed immediately as the primary causative factor in reduced Coho in California and Oregon waters was due to Pacific Ocean conditions and not human activities.
Respectfully submitted;

Richard Marshall, President Siskiyou County Water Users Association

Dr. Richard Gierak, Science Officer SCWUA

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