



## Wild Fish Conservancy

N O R T H W E S T

S C I E N C E   E D U C A T I O N   A D V O C A C Y

February 4, 2011

Christine Gregoire  
Office of the Governor  
PO Box 40002  
Olympia, WA 98504-0002

Dear Governor Gregoire,

Enclosed you will find a letter we recently submitted to the Chairs of the Puget Sound Leadership Council of the Puget Sound Partnership, and the Washington State Fish and Wildlife Commission. The letter was submitted on behalf of a growing coalition of conservation organizations that are calling upon the Chairs to provide the necessary leadership to establish a network of Marine Reserves and Marine Protection Areas in Puget Sound.

Puget Sound is a biological treasure, recently recognized by Congress as a National Estuary. Restoring the health of Puget Sound is a priority for our state agencies, with the Puget Sound Partnership designated as the lead state agency for this effort. Groundfish abundance (e.g., rockfish, cabezon) in Puget Sound is in a decline that started in the early 1980's – a decline that is largely attributed to unsustainable fishing pressure (Appendix A). The science is clear: a network of Marine Reserves (MRs) and Marine Protected Areas (MPAs) is fundamental to restoring and protecting the fragile Puget Sound ecosystem. To this end, we would like the attached letter to be a wake-up call to our state agencies that the Conservation Community is serious about restoring the health of Puget Sound—including the species that reside there. We invite you and your organization to join us on this important effort; it is our hope that by demonstrating widespread support for a network of Puget Sound marine reserves, policymakers will heed and act in a timely manner.

Fisheries scientists generally recommend that at least 20% of the management area (i.e. Puget Sound) be set aside as “no take” marine reserves to ensure the ecological integrity and support fisheries in the remaining fished portion of Puget Sound. Currently only 0.5% of Puget Sound is protected within marine reserves. MRs and MPAs are based on the universal conservation ethic that species vulnerable to overfishing cannot be sustained without closing to fishing a significant portion of their habitat.

Puget Sound has two inauspicious distinctions that are directly related to decades of overfishing. First, the American Fisheries Society recognizes Puget Sound as having the most depressed fisheries in North America. Second, from rockfishes to orcas there are dozens of Puget Sound

fish and wildlife species that are listed as threatened or endangered under state or federal Acts. A science-based network of MRs and MPAs that are strategically located in areas of high quality habitat and biological diversity will benefit multiple endangered marine species and will help to restore the Puget Sound marine ecosystem and the fisheries it used to support.

Extensive peer-reviewed literature describes the benefits afforded by a science-based network of marine reserves. Inside reserves, the density of fish and other organisms has been shown to double. Total biomass within reserves may double or triple. Biodiversity can increase as much as 30%. MRs protect fish from the loss of genetic variability that is fundamental to their long-term survival in the face of climate change. Inside MRs, average fish size has been shown to increase as much as 28%. In addition large old fish within reserves produce many more eggs and larger larvae than fish outside the reserve. Consequently the export of larvae to surrounding waters restores fisheries and the edges of the reserves often provide a trophy fishery. Reserves in temperate areas, like Puget Sound, produced even better responses - biomass increased 554% and density increased 230%. In the process of getting to this point, sustainable fisheries are restored. A list relevant scientific literature that describes in detail the benefits of marine reserves is appended. Thirty six nations have now created approximately 4,800 Marine Reserves. In short, marine reserves have performed spectacularly in restoring depressed fisheries.

Marine reserves are clearly fundamental to preserving and restoring our Puget Sound ecosystems and marine fisheries. MRs and MPAs will be a significant part of marine spatial planning currently being undertaken by the Puget Sound Partnership. Marine spatial planning is also the first step toward ecosystem-based management (EBM). EBM recognizes that ecosystem connections exist amongst all living things and include human activities and habitat protection. EBM is currently being implemented by Washington Department of Fish and Wildlife through its Conservation Initiative. EBM will guide our uses of the oceans and coasts so they are used and managed sustainably, and is clearly the future for effective management of all our natural marine resources.

Because there is always considerable political contention surrounding depressed fisheries, adoption of a science-based network of MRs in Puget Sound will require strong support from the environmental community – fishers and non-fishers alike. An extensive body of literature (referenced below) demonstrates that these concerns are largely unwarranted; in time, fisheries and economies typically benefit from the implementation of MRs and MPAs.

We hope you will join us in working to restore our Puget Sound groundfish stocks. Please do not hesitate to contact me to further discuss the need for or the effectiveness of a marine reserve network in Puget Sound. Time is of the essence.

Sincerely,

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## Appendix A

Many Puget Sound groundfish stocks have been in a steep decline since shortly after the Boldt Decision in 1976. Despite sufficient WDFW data to raise concern, harvest management to date has not stopped declines, much less begun restoring many stocks.

The following figures and text originate from these data sources:

- Protection and Restoration of Marine Life in the Inland Waters of Washington State. James E. West, May 1997; Puget Sound/Georgia Basin Environmental Report Series: Number 6
- Puget Sound Groundfish Management Plan. Wayne Palsson, et al. December 1998, WA Dept of Fish and Wildlife
- The Biology and Assessment of Rockfishes in Puget Sound. Wayne Palsson, et al., FPT 09-04, WA Dept of Fish and Wildlife, September 2009.
- WDFW briefing on Cabezon to Fish and Wildlife Commission, Fall 2009

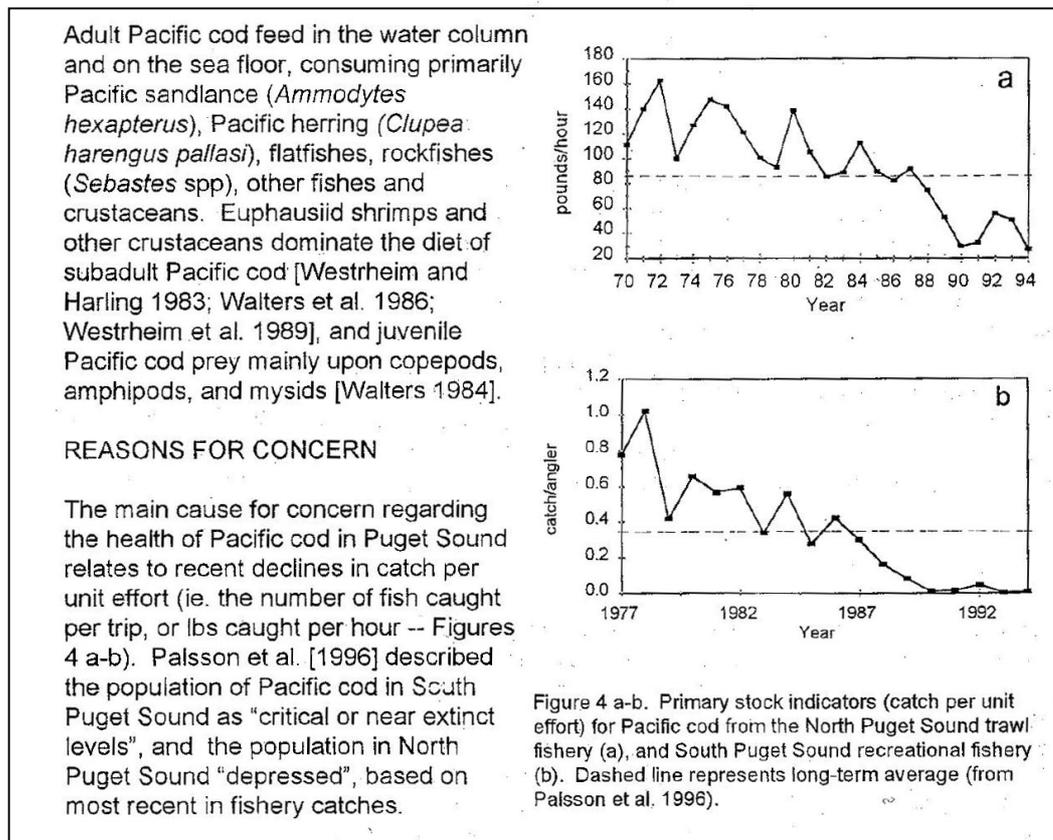


Figure 1. Pacific Cod declines in Puget Sound.

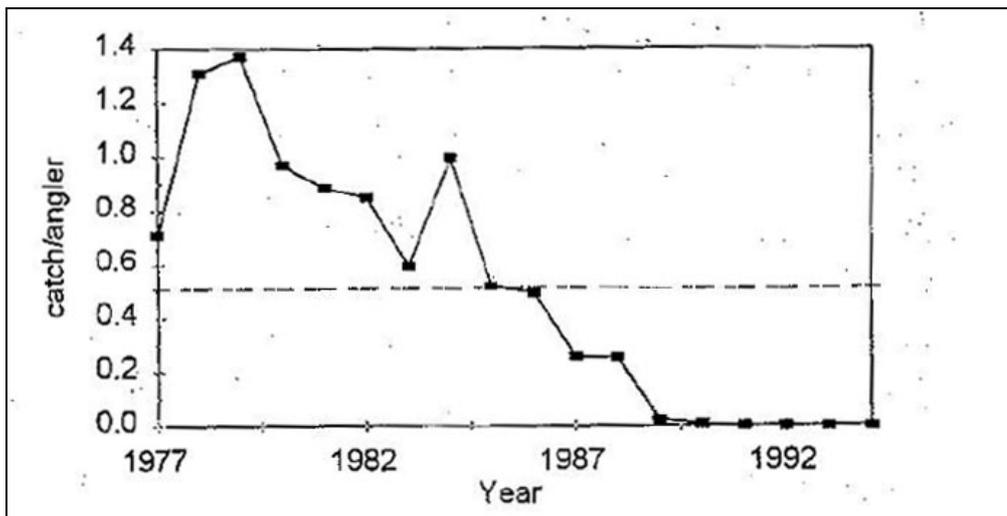


Figure 2. Catch per unit effort of walleye pollock from the South Puget Sound recreational fishery. Dashed line represents long-term average. Pollock in South Puget Sound were once the most common species taken in the recreational fishery. This population experienced a sharp decline in its abundance during the 1980s and is “at a critical status” in the area (Palsson et al. 1996).

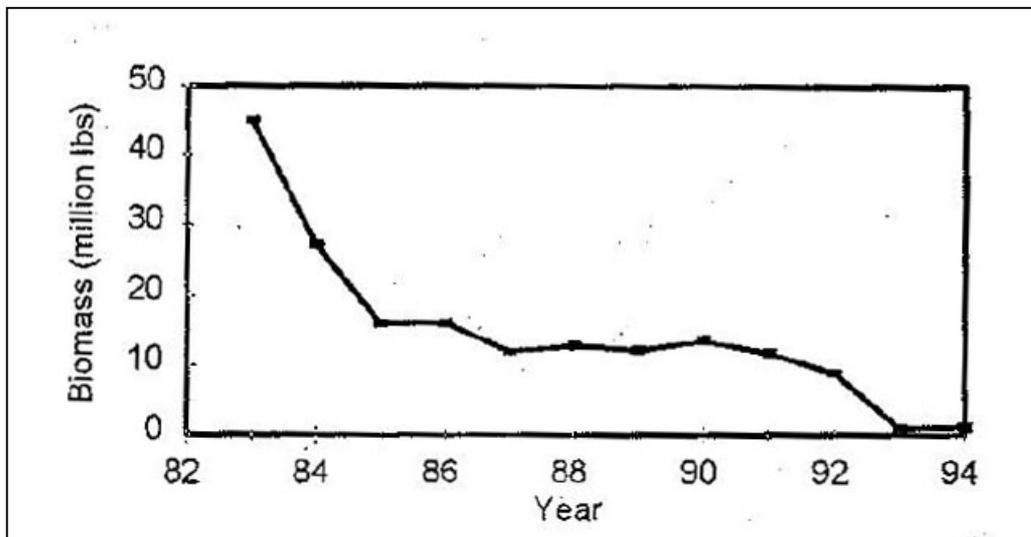


Figure 3. Biomass of Pacific hake in South Puget Sound estimated from WDFW hydro-acoustic trawl surveys, 1983-1994 (from Palsson et al. 1996). At one time, Pacific hake comprised the largest fishery (by weight) in Central Puget Sound. The commercial fishery is now closed by regulation of WDFW because of low abundance. Palsson et al (1996) described the stock status of Pacific Hake in South Puget Sound as “critical” because of the sharp decline in abundance of the species observed in the WDFW hydro-acoustic hake survey conducted annually at Port Susan.

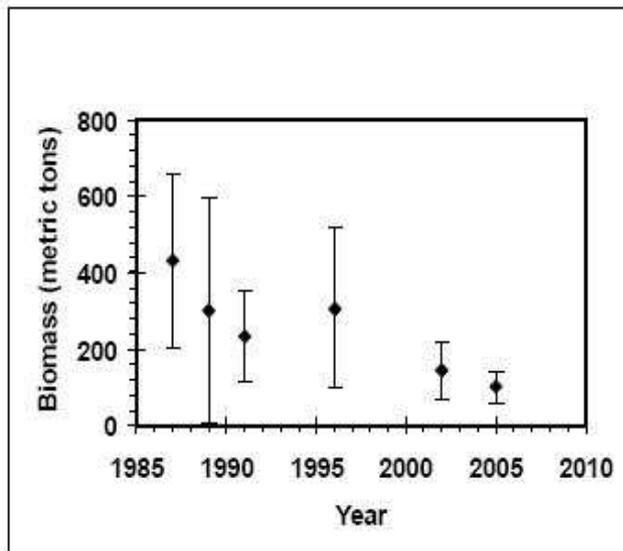


Figure 4. WDFW trawl survey estimates and 95% confidence limits for quillback rockfish in South Puget Sound.

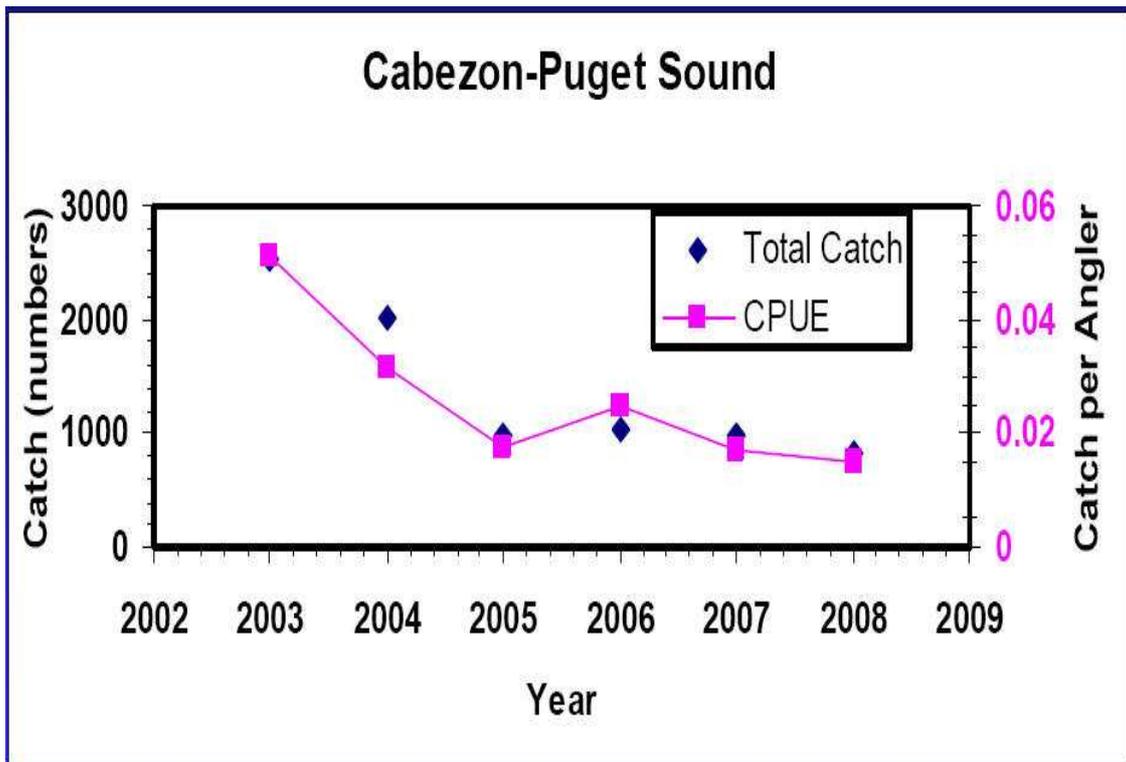


Figure 5. Recent WDFW total catch and catch per angler data for Puget Sound Cabezon. Note a 65% decline during the last six years, above and beyond steep declines experienced since the mid-1960s.

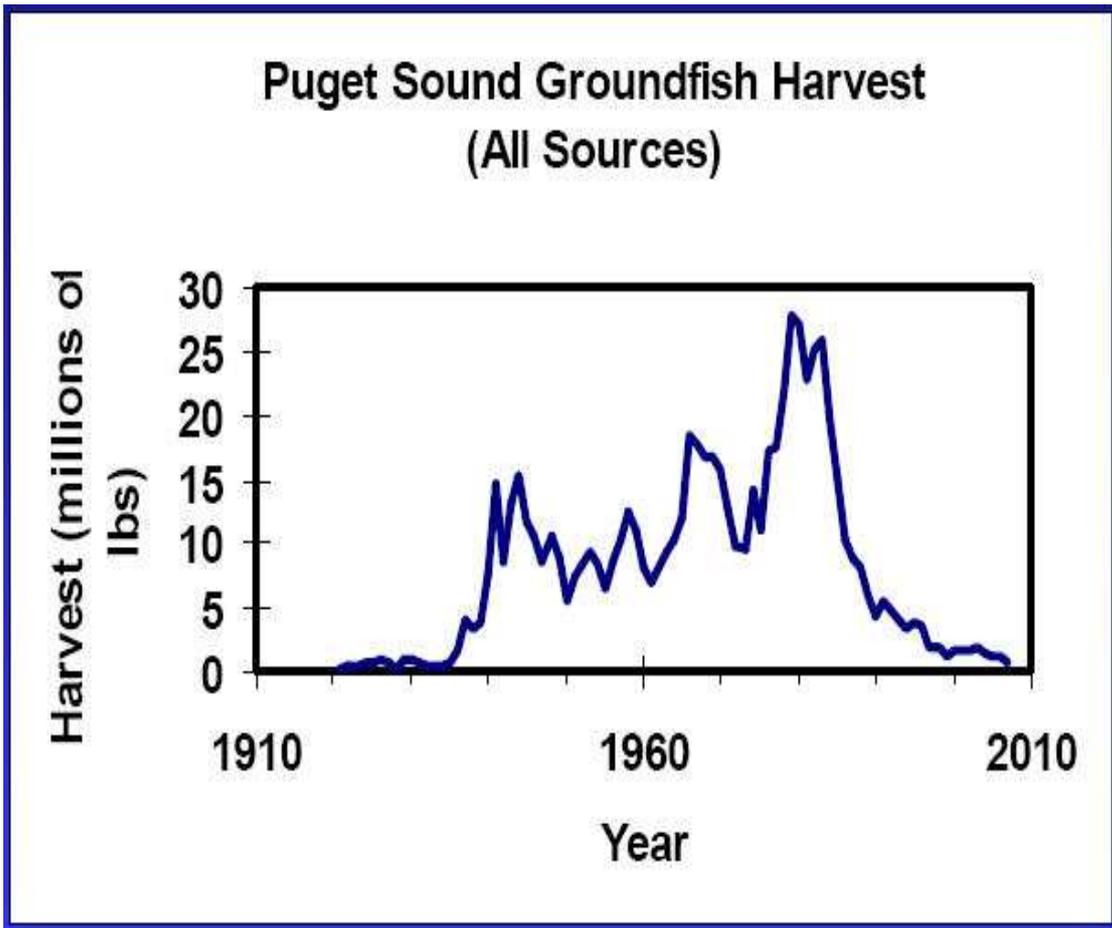


Figure 6. WDFW data on harvest of Puget Sound Groundfish. The data corroborate the documented declines in abundance of Pacific Cod, Walleye Pollock, Pacific Hake, Rockfish, and Cabezon described above.

## Background Documentation

1. <http://wdfw.wa.gov/conservation/fisheries/rockfish/>
2. Sobel, Jack and Craig Dahlgren. 2004. *Marine Reserves. A Guide to Science, Design, and Use*. Island Press, Washington. 383pp
3. Norse, Elliot and Larry B. Crowder. 2005. *Marine Conservation Biology. The Science of Maintaining the Sea's Biodiversity*. Marine Conservation Biology Institute. Island Press, Washington. 470pp.
4. Lubchenco, J. et al 2007. *The Science of Marine Reserves*. Partnership for the Interdisciplinary Studies of Coastal Oceans. PISCO. 22pp.  
[http://www.piscoweb.org/files/images/pdf/SMR\\_US\\_HighRes.pdf](http://www.piscoweb.org/files/images/pdf/SMR_US_HighRes.pdf) or  
[http://www.piscoweb.org/files/images/pdf/SMR\\_US\\_LowRes.pdf](http://www.piscoweb.org/files/images/pdf/SMR_US_LowRes.pdf)
5. <http://wdfw.wa.gov/conservation/cwcs/>
6. Samonte G., Karrer L., and Orbach M., 2010. People and Oceans. Managing marine areas for human well being. Science and Knowledge Division, Conservation International, Arlington, Virginia, USA. <http://www.science2action.org/what-we-produce/typography-mainmenu-27> .
7. Kaufman, L. and Tschirky, J. 2010. Living with the sea. Local efforts buffered effects of global change. Science and Knowledge Division, Conservation International, Arlington, VA, USA <http://www.science2action.org/what-we-produce/typography-mainmenu-27> .
8. Orbach, M. and Karrer, L. 2010. Marine managed areas: what why and where. Science and Knowledge Division. Conservation International, Arlington, Virginia, USA. These publications and others are available at <http://www.science2action.org/what-we-produce/typography-mainmenu-27>