



WASHINGTON SEA GRANT



February 2018

Washington Sea Grant is one of 33 Sea Grant college programs and is based at the University of Washington.



Researcher Chase Williams checks the pH in exposure tanks used for researching the effects of elevated carbon dioxide on Puget Sound fish species. Credit: Washington Sea Grant

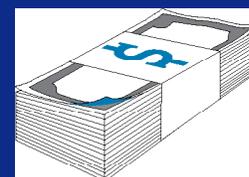
Washington Sea Grant documents effects of ocean acidification on salmon

As greenhouse gas emissions increase, so does the amount of carbon dioxide in the oceans. This leads to a process known as ocean acidification, which has been shown to harm marine organisms native to the Pacific Northwest such as shellfish. The potential effects of ocean acidification on local fish species, however, have largely gone unstudied. Washington Sea Grant scientists found that highly acidic conditions like those found in parts of Puget Sound can alter the coho salmon's sense of smell, making it harder for the fish to navigate, hunt and avoid predators. This research has important implications for management of Pacific salmon populations.

wsg.washington.edu

\$8.8 M

Economic benefit



11,500

K-12 students reached

9,000

Fishermen and seafood professionals adopt safe and sustainable fishing and harvest practices



Metrics reported to National Sea Grant Office in June 2017 for work completed February 2016 to January 2017



RESEARCH

EXTENSION

EDUCATION

Sea Grant bycatch reduction techniques help save endangered albatross



Bird-repelling streamer lines keep seabirds from getting caught in fishing gear.
 Credit: Washington Sea Grant



Incidental capture (bycatch) in fisheries is a major threat to seabirds, especially the endangered short-tailed albatross. Washington Sea Grant developed a variety of techniques for reducing seabird bycatch in the Alaska longline fisheries, such as strategically deploying bird-repelling streamer lines. In 2016, Washington Sea Grant's seabird bycatch program analyzed 23 years of longline observer data to identify trends in Alaska albatross bycatch. Results suggest that fishermen reduced costs and saved roughly 9,400 albatross and 141,000 other seabird species since streamer lines were first implemented.

wsg.washington.edu/community-outreach/fisheries

“The Freezer Longline Coalition partnered with Washington Sea Grant on the development of bird avoidance measures to successfully reduce bird take by our fleet in the North Pacific. Today these measures are a model for longline fleets across the globe.”

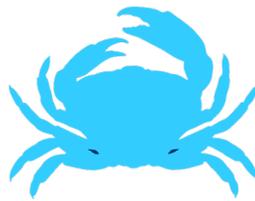
- Chad I. See, Executive Director, Freezer Longline Coalition

Keeping Boat Sewage out of Lakes and Rivers



Boat sewage in Washington's waters can contribute to costly closures of swimming beaches and commercial shellfish beds. Thanks to Pumpout Washington, an educational outreach partnership between Washington Sea Grant and Washington State Parks, recreational boaters have increased their use of vessel sewage pumpouts and prevented 10 million gallons of sewage from entering Washington waters in 2016.

Preventing the Spread of Invasive European Green Crab



The European green crab, considered one of the world's worst invasive species, recently entered the inland waters of Washington. Washington Sea Grant's Crab Team trained and mobilized over 200 volunteers to survey for green crabs in the Salish Sea. Over the course of two years, the Crab Team successfully detected the first green crab and caught and removed 105 more.

Building Tomorrow's Maritime Workforce



A Washington Sea Grant-supported initiative connected Port Townsend School District teachers with maritime industries to build a comprehensive maritime curriculum. Known as Maritime Discovery Schools, the initiative is preparing 1,000 K-12 students to enter the maritime workforce through teaching them maritime skills ranging from boat building to navigation.