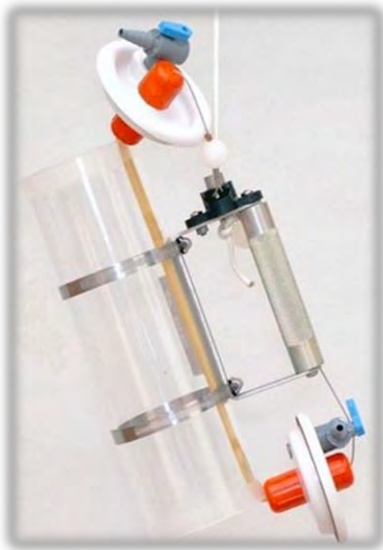


Assisting Alaska Shellfish Managers to Avoid Emergency Rainfall Closures

Main Goals: This research aims to provide data on fecal coliform levels at remote shellfish growing/harvesting sites in relation to heavy rainfall, water quality and currents. The data will assist growers and regulators toward ways to efficiently monitor and avoid contamination.

Background: Despite Alaska's 30,000 miles of scenic coastline, the state is not immune to pollution problems. In June 2016, Alaska's Department of Environmental Conservation (ADEC), Division of Environmental Health, Food Safety and Sanitation - Shellfish Program implemented an Emergency Closure Criteria when ≥ 2 inches of rain falls within a 24-hour period. The event was Alaska's first emergency criteria related to rainfall, which closed three approved shellfish areas, encompassing 120 square miles of marine waters in southeastern Alaska. This proposal seeks solutions to increasingly problematic fecal coliform levels in remote shellfish growing areas, building on continuing discussion between ADEC and U.S. Food and Drug Administration, and shellfish farmers and other stakeholders.



Project Summary: The project will create a highly-detailed dataset characterizing key water quality and microbiological conditions at remote farm and harvest sites currently subject to closures due to storm and rainfall events. Project staff will conduct baseline water profiles for currents, temperature and salinity while collecting bacteriological samples at an Alaska oyster farm site currently subject to rainfall closure conditions. A real-time instrument for bacteria indicator organisms will also be deployed at the farm, and spot samples will be collected at nearby geoduck harvest sites. These observations will be compared with the historical and current bacteriological sampling regimes. Project partners—including shellfish growers, harvesters and regulators—will then review the findings to assess current water quality monitoring and management procedures and recommend new ones.



This project aims to address a significant impediment to shellfish production in Alaska, provides critical support to ADEC, fulfills regional shellfish grower objectives, and contributes to the national need for sustainable seafood production. Efficiency of farm and wild harvest in Alaska will be increased through reduced water quality closures. The results of this project will effectively increase production of safe shellfish to meet growing domestic and international demand.

Team Leaders: The science team consists of Bobbi Hudson, Dan Cheney and Andy Suhrbier of the Pacific Shellfish Institute, Kimberly Stryker of the State of Alaska DEC, and Gary Freitag of Alaska Sea Grant's Marine Advisory Program. The work is supported by a grant (#PO520968) from the NOAA Sea Grant Aquaculture Initiative program and generous contributions from Alaska Sea Grant, the Southeast Alaska Regional Dive Fisheries Association (SARDFA), the Alaska Shellfish Growers Association (ASGA), Rocky Bay Oysters, Blue Starr Oyster Co. and Alaska DEC.



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Fostering sustainable shellfish resources & a healthy marine environment through research & education.