



Dr. Libby Jewett, Director
NOAA Ocean Acidification Program
August 1, 2014

ME OA COMMISSION: NOAA IS LISTENING...





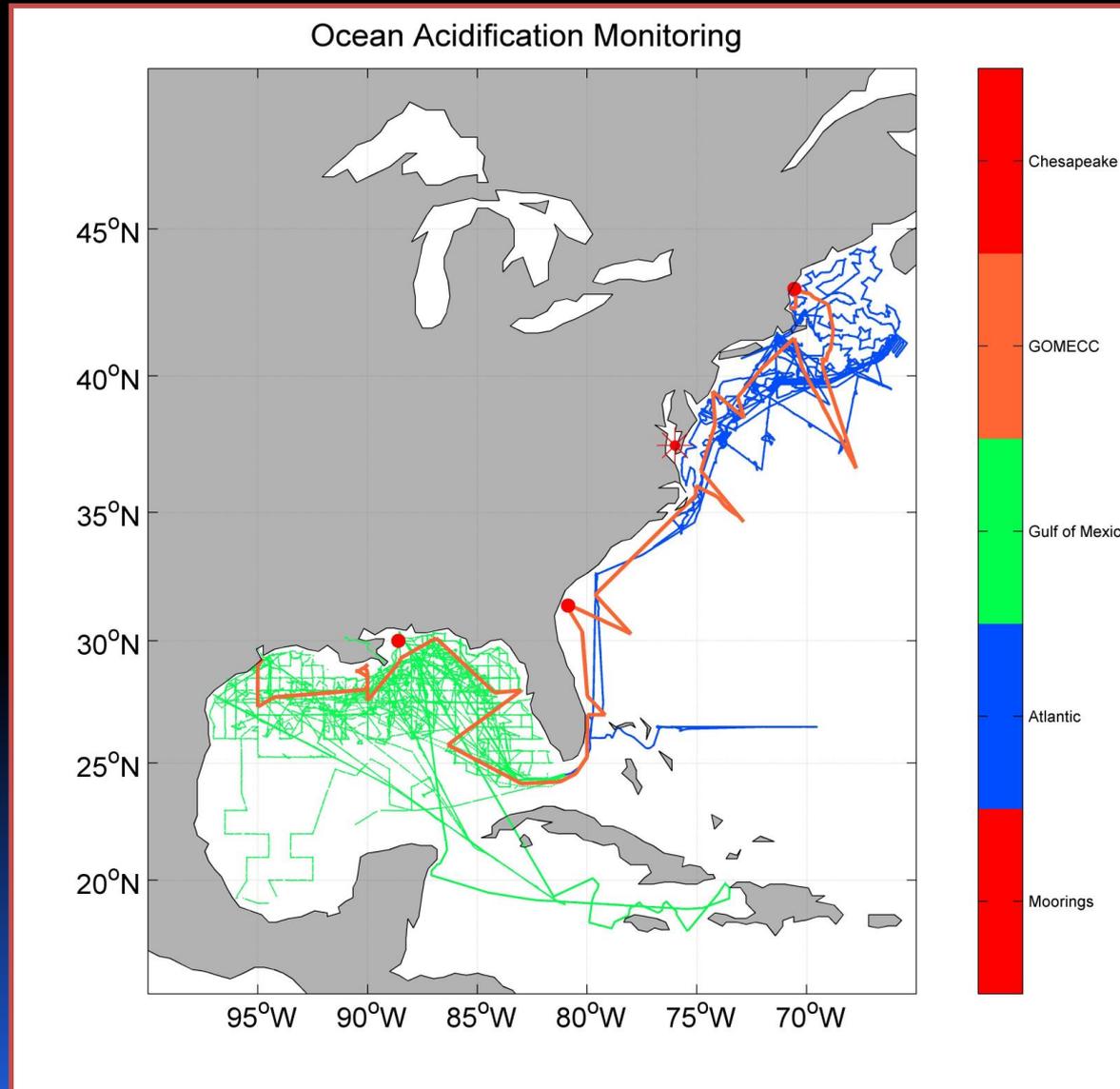
<http://www.oceanacidification.noaa.gov/>

Ocean Acidification Observing

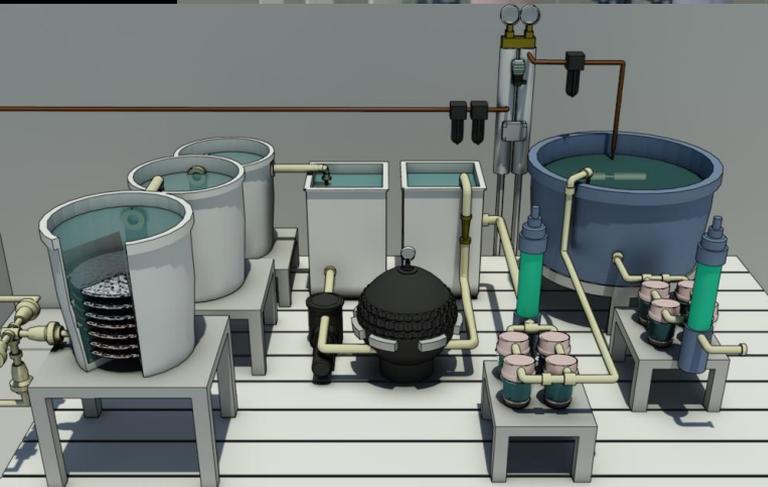
- Buoys (43.02°N, 70.54°W – Gulf of ME)
- Ships (FY 15 EC cruise)
- Wave Gliders



East Coast Observing



Northeast Fisheries Science Center Howard Laboratory: Sandy Hook



Check out OAP Research

<http://oceanacidification.noaa.gov/AboutUs/CurrentProjects.aspx>

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OAP Projects.kmz

- OAP Projects
 - OAP Zooplankton Response and Assemblage Experiments
Investigator(s): Paul McElhane (paul.mcelhane@noaa.gov), Bill Peterson, Mike M
 - OAP West Coast Algorithm Development: Ocean Acidification Monitoring Network
Investigator(s): Simone Alin (simone.r.alin@noaa.gov), Richard A. Feely, Lauren
 - OAP West Coast Ocean Acidification Monitoring Network: Volunteer Observing Ships
Investigator(s): Jeremy Mathis (jeremy.mathis@noaa.gov), Richard A. Feely http
 - OAP West Coast Ocean Acidification Monitoring Network: Mooring Operations
Investigator(s): Jeremy Mathis (jeremy.mathis@noaa.gov), Chris Sabine, Richard
 - OAP Ocean Acidification Monitoring and Prediction in the Oregon Coastal Waters
Investigator(s): Burke Hales (bhales@coas.oregonstate.edu), Laurie Juranek, Jack

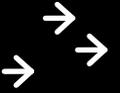
1000 mi
1000 km

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NOAA OAP's ROLE in Northeast

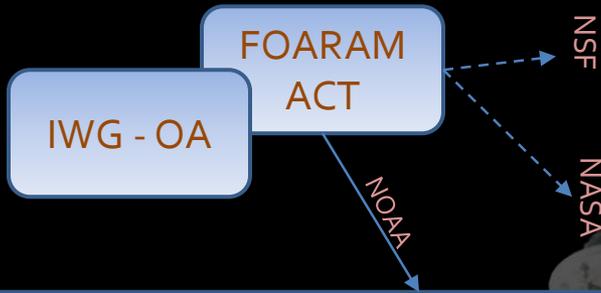
- Co-leading NECAN
- Invest in Regional Observing
- Invest in Species Impacts studies
- Invest in Models and Forecasts from ocean to economies
- Helping coordinate state responses

Your findings will inform our investments



Federal Ocean Acidification Research and Monitoring (FOARAM) Act of 2009

NOAA NSF
USGS NASA
FWS EPA
BOEM DOS



The NOAA Ocean Acidification Program (OAP) was established under SEC. 12406. of the Federal Ocean Acidification and Monitoring Act (FOARAM) to oversee and coordinate research, monitoring, and other activities consistent with the strategic research and implementation plan developed by the interagency working group on ocean acidification.

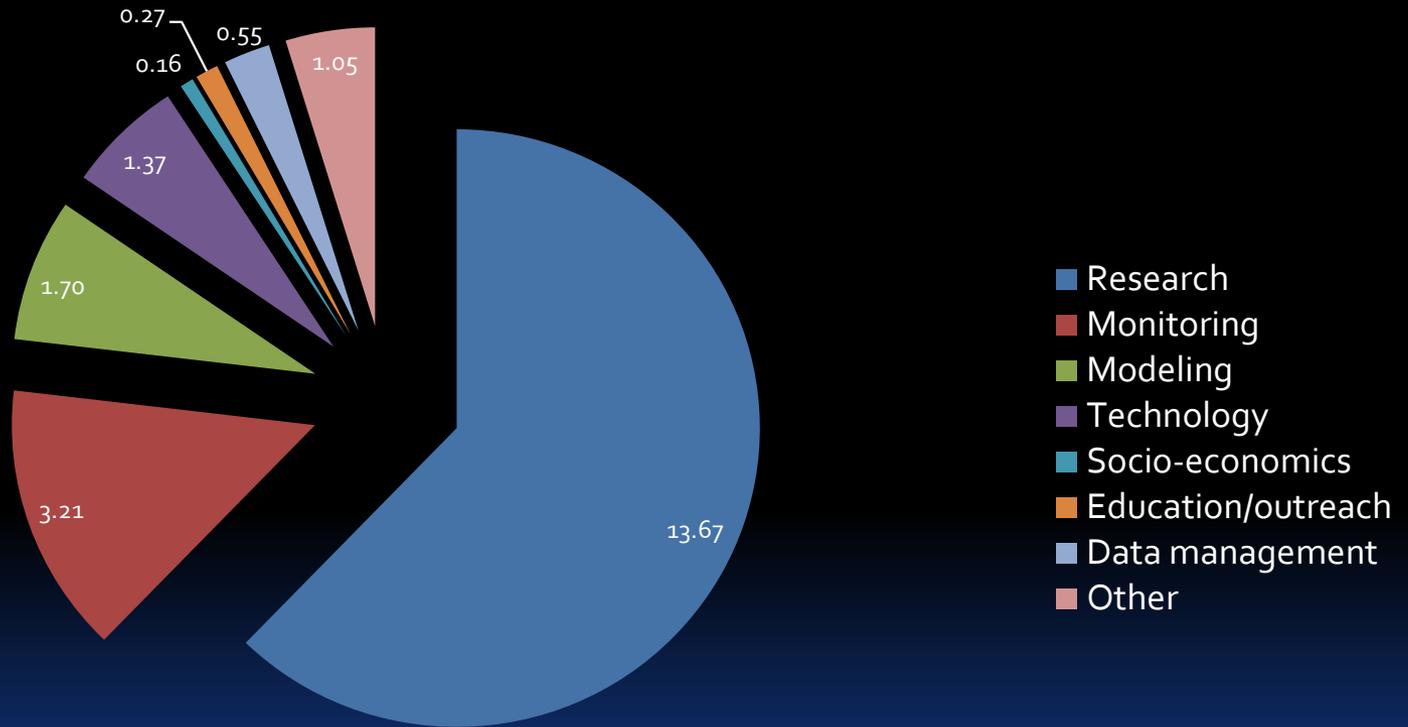
NOAA Ocean Acidification Program (SEC. 12406)



Foster, direct, coordinate:

- (A) interdisciplinary research to improve understanding of ocean acidification;
- (B) establish a long-term monitoring program for ocean acidification
- (C) research to identify and develop adaptation strategies for conservation of marine ecosystems;
- (D) educational opportunities exploring the impacts of ocean acidification;
- (E) national public outreach
- (F) coordination of ocean acidification monitoring and impacts research with other appropriate international ocean science bodies

Federal OA Investment FY 13



Blue Ribbon Panel: WA State

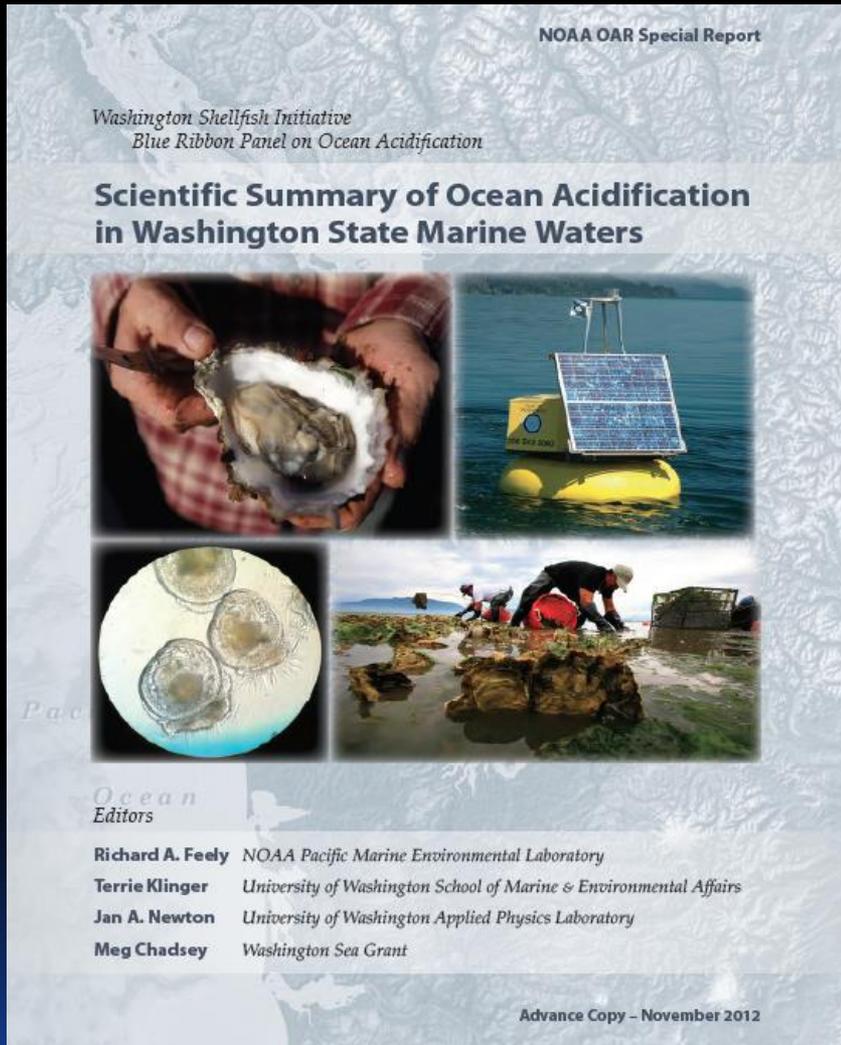
- Convened by Governor Gregoire in February 2012.
- A first-of-a-kind comprehensive state-level effort to address ocean acidification.
- Charged with reviewing the best available science, and producing a set of recommendations to guide Washington's response.
- Scientists, decision makers, industry stakeholders, tribal representatives, and conservation community representatives worked together to produce a comprehensive set of recommendations



Gov. Gregoire and Bill Dewey of Taylor Shellfish Company discuss growing and harvesting techniques for oysters in the tide flats in Samish Bay.

Photo: Puget Sound Partnership

Washington State Panel Reports



Washington State Blue Ribbon Panel on Ocean Acidification



**Ocean Acidification:
From Knowledge to Action**

Washington State's Strategic Response

42 recommendations

18 *Key Early Actions*



November 2012

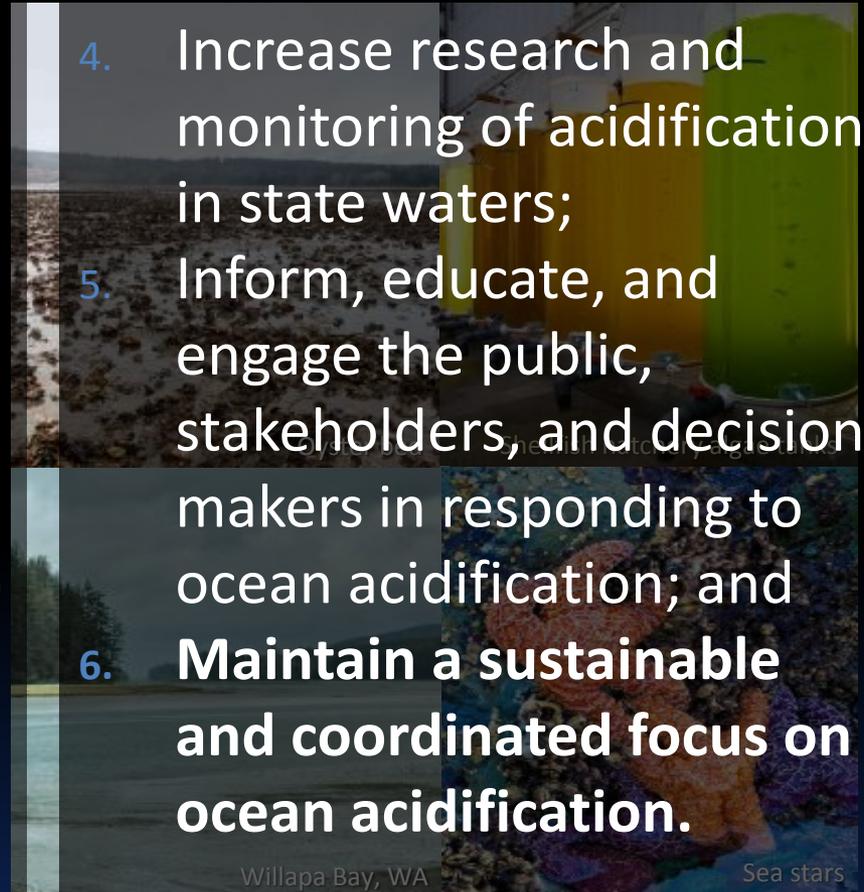
<http://www.ecy.wa.gov/water/marine/oceanacidification.html>

Slides Prepared by Lara Whitely Binder (UW)

Panel Recommendations

1. Address the root cause of acidification by reducing CO₂ emissions;
2. Reduce local land-based pollutants that worsen acidification;
3. **Foster adaptation and remediation to protect the shellfish industry and marine ecosystems;**

4. Increase research and monitoring of acidification in state waters;
5. Inform, educate, and engage the public, stakeholders, and decision makers in responding to ocean acidification; and
6. **Maintain a sustainable and coordinated focus on ocean acidification.**



Willapa Bay, WA

Sea stars

Tips to Consider for ME

- 1. Have **scientists and policy maker/managers work together** on everything but technical science documents.
- 2. Be **careful of scope**, especially committing to too much from the science side. It will take a lot longer than a few months to write an accurate and peer-reviewed state of the science document.
- 3. Focus **on setting the ground-work for the future**. Likely this panel is the start of a process, not its end, so getting a good consensus on how to work on OA in the state for the years into the future is important. For WA state, this meant establishing separate bodies to carry on political agenda AND research.
- 4. **Healthy ecosystems and food webs** are vital for maintaining wild-harvested species and most aquaculture operations. Thus, impacts of OA on important members of the food web of commercial species must be considered (e.g., zooplankton, phytoplankton, forage fish).
- 5. There is a lot of activity around commercial species that can be **leveraged** to deal with OA, so, as much as possible, emphasize how to slot OA activities into existing efforts and management frameworks .

The West Coast Ocean Acidification and Hypoxia Science Panel



- West Coast governments recognized the value of a coast-wide effort and the opportunity to build on the work of the WA Blue Ribbon Panel
- Convened in 2013 by the Ocean Science Trust at the request of the California Ocean Protection Council, a cabinet-level state body
 - Multi-state effort links governments of California, Oregon, Washington, and British Columbia
 - Panel mandated to address the science needs of decision-makers

POC: Moose O'Donnell, m.odonnell@calost.org

www.westcoastOAH.org



The West Coast Ocean Acidification and Hypoxia Science Panel



Panel working groups are identifying:

- Research and monitoring trajectories for meaningful progress 5 – 20 years out
- How to slot scientific information into existing management frameworks
- Ecosystem and food web impacts
- Interplay of open-ocean chemical dynamics vs. near-shore processes
- Impacts to physiology of key West Coast species

HB 118: Task Force to Study the Impacts of OA on MD State Waters (kicks off August 7)

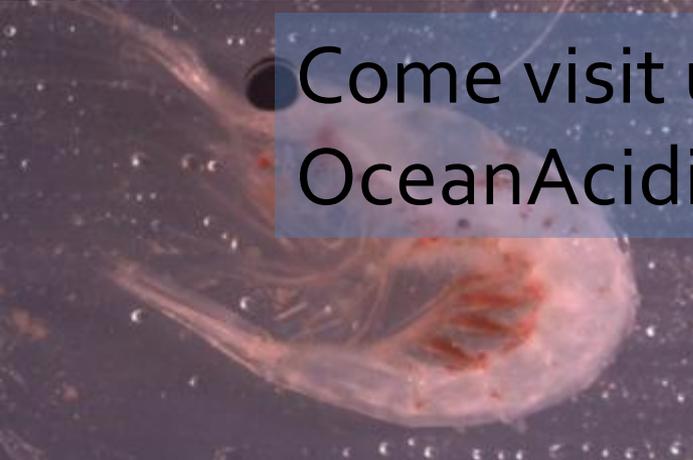
(f) The Task Force shall:

(1) analyze the best available science regarding ocean acidification and the potential effects of acidification on the ecology of State waters and on State fisheries; and

(2) make recommendations regarding potential strategies to mitigate the effects of acidification on State waters and on State fisheries.

Chair: Eric Schwaab, Director of Baltimore National Aquarium. ESchwaab@aqua.org

POC: Bruce Michael, MD DNR:
Bruce.Michael@Maryland.Gov



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OceanAcidification.NOAA.gov

