#### Ocean Acidification Planning and Action in Washington, the West Coast, and Beyond



Julie Horowitz, Senior Policy Advisor to Governor Inslee on Ocean Acidification

#### Ocean Acidification – Washington policy approaches

#### **Presentation Outline**

- 1. Local leadership in identifying the problem and forging solutions
- 2. Establishing a regional partnership- from science and monitoring to actions
- 3. West Coast leadership on the international stage



Washington leads the nation in production of farmed clams, oysters, and mussels WA shellfish growers employ ~2,700 people (direct +indirect)

Estimated total economic contribution of ~\$184 million annually
 Large employer in rural western Washington counties Photo: PCSGA



Shellfish is a critical subsistence, ceremonial, and commercial resource for Washington Tribes



Approximately 100,000 shellfish harvesting trips made to Puget Sound beaches

## 300,000 digger trips for razor clam harvests on the Washington coast annually



Photo: WDFW

## Developing WA's Response: The Blue Ribbon Panel on Ocean Acidification

- Convened by Governor Christine Gregoire in February 2012.
- A first-of-a-kind comprehensive statelevel 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.

### Washington State Blue Ribbon Panel Reports



 Richard A. Feely
 NOAA Pacific Marine Environmental Laboratory

 Terrie Klinger
 University of Washington School of Marine & Environmental Affairs

 Jan A. Newton
 University of Washington Applied Physics Laboratory

 Meg Chadsey
 Washington Sea Grant

Advance Copy - November 2012

Washington State Blue Ribbon Panel on Ocean Acidification



#### Ocean Acidification: From Knowledge to Action

Washington State's Strategic Response



November 2012

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

### **Panel Recommendations**

42 recommendations, including 18 Key Early Actions, that will:

- Monitor OA conditions over time
- Reduce greenhouse gas emissions
- Research impacts to ecologically and economically important species
- Increase human adaptation to OA impacts
- Investigate contributions from local sources
- Educate and raise awareness about OA





Photos: Governor's Office

#### Governor and Legislative Response

#### Created:

- Marine Resources
   Advisory Council
- Washington Ocean Acidification Center

Appropriated: 2013: \$3.31 million 2015: \$1.7 million 2017:\$1.95 million



Shucked Pacific oyster

#### Marine Resource Advisory Council



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- Maintaining a coordinated focus on ocean acidification
- Advising and working with the WA OA Center on OA effects and sources
- Making recommendations to the Governor and Legislature on OA
- Seeking public and private funding
- Assisting in conducting public education

#### Washington Ocean Acidification Center



- Sustaining an integrated OA monitoring network
- Supporting real time water quality monitoring at 6 shellfish hatcheries
- Developing short-term forecasts of corrosive conditions
- Conducting lab studies of OA impacts on key species in Washington
- Coordinating state-resourced efforts with federal and other research and monitoring
- Supporting information needs

#### Maintaining momentum on implementation

#### 2016:

- Governor Inslee launched Phase II of the WA Shellfish Initiative in
- West Coast OA Hypoxia Science Panel Report

#### 2017: Blue Ribbon Panel Five Year "Refresh"



Governor's Office

## The Pacific Coast Collaborative

**2013:** Pacific Coast Action Plan on Climate and Energy

*"Enlist support for research on ocean acidification and take action to combat it."* 

2016: Pacific Coast Climate Leadership Action Plan

"Increase awareness, understanding, and action...

- 1. Design and implement coordinated, effective West Coast ocean acidification monitoring and research...
- 2. Initiate the development of an international network of countries, states, provinces and cities that will work together to address the threat..."



#### West Coast OA and Hypoxia Monitoring Inventory

- Identify the backbone of OAH monitoring assets that can be built upon to create an integrated monitoring network.
  - First by state, then integrated regionally
- Assess the OAH monitoring landscape
  - Physical/Bio-geochemical
  - ◆ Biological
  - Financial/Operational Security

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# International Alliance to Combat Ocean Acidification



OA Action Plans v Join Us v FAQs News About v 🔎

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Join the International Alliance to Combat Ocean Acidification, an international network of governments and organizations that together will address ocean acidification and other threats from changing ocean conditions.



#### OA ALLIANCE Combat Ocean Acidification

Objectives	
Build Coalition	<ul> <li>Collaborate with other ocean groups (Under 2 MOU, others)</li> <li>Attend international ocean conferences</li> <li>Recruitment of new members and affiliates</li> </ul>
<i>Advance</i> OA Action Plans	<ul> <li>Action Toolkit</li> <li>Webinars and Additional Support/ Resources</li> <li>Letter of Commitment</li> <li>OA Action Plan</li> </ul>
<i>Elevate</i> OA in Climate Agreements	<ul> <li>Attend International ocean conferences (COP 23, others)</li> <li>Collaborative with partner efforts and initiatives</li> <li>Engage OA Alliance members</li> </ul>

#### West Coast Leadership on the International Stage

- 1. International Alliance to Combat Ocean Acidification Launch
- 2. The Global Ocean Forum
- 3. 2017 UN Oceans Conference to Implement SDG 14



- 4. Our Ocean Conference
  - 1. 2016 US State Department hosted
  - 2. 2017 European Union hosted
- 5. Upcoming COP 23



## Science to Action

- Locally, regionally, globally need to be deepening the science and not waiting to respond.
- We need to reduce carbon emissions and need to do it now.
- Governments and communities need to identify solutions to mitigate and adapt.
- We need to work together to share solutions and momentum.