



MARINE RESOURCES ADVISORY COUNCIL

April 28, 2014

Agenda

Time	Topic
9:00 a.m.	Welcome and Introductions
9:10 a.m.	Recent Happenings on Ocean Acidification
9:30 a.m.	Local Land-Based Contributions ad hoc committee update
11:00 a.m.	Monitoring and Investigations ad hoc committee update
11:15 a.m.	Science Moment
11:45 a.m.	Working Lunch <i>Update on Puget Sound Partnership Action Agenda</i>
12:30 p.m.	Adaptation and Remediation ad hoc committee update
2:15 p.m.	Education and Outreach ad hoc committee update
3:45 p.m.	Public Comment
4:00 p.m.	Next Steps and Adjourn

9:00

Welcome and Introductions



9:15

Recent Happenings on Ocean Acidification



9:30

Local Land-Based Contributions
ad hoc committee update



Committee members

Chair Paul Dye, The Nature Conservancy

- Teena Reichgott, Environmental Protection Agency
- Jim Simmonds, King County
- Tom Davis, Farm Bureau
- Ben Rau, Ecology
- Ron Schultz, Conservation Commission
- Key McMurry, Coast
- Dick Sheldon, Coastal grower
- Mike Cassinelli, Coast
- Kelly Wood, Business
- Julie Morgan, Agriculture
- Kelly McLain, Agriculture
- Terry Williams, Tulalip Tribes
- Brad Warren, Global Ocean Health

BRP Recommendations on Local Land-Based Contributions

02 Strategies

- *Strengthen existing pollution reduction actions to reduce nutrients and organic carbon*
- *Impose controls to reduce nutrients and organic carbon from sources that are contributing significantly to acidification*

06 Recommendations

26 Activities Underway

Things are happening

Working with communities on water quality & reducing pollution

Monitoring local contaminant levels

Improving water quality infrastructure

More county water quality inspectors

Stormwater retrofits

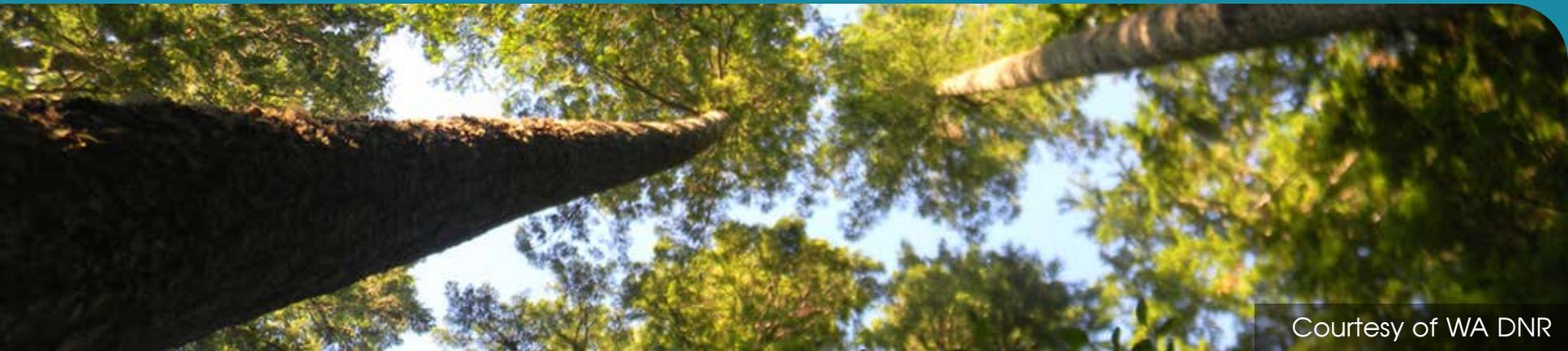
Various activities around agricultural practices

Organizations Involved:

- State Conservation Commission
- Department of Fish and Wildlife
- Marine Resource Committees
- Ecology
- Department of Natural Resources
- Puget Sound Partnership
- Sea Grant
- Department of Health

Local Land-Based Contributions Gaps—Initial thoughts

- Several actions contingent on science to quantify key natural and human-influenced processes that contribute to acidification



Next Steps

- Continue to track current status
- Discuss gaps in moving actions forward
- Identify strategies to advance actions



Discussion



11:00

Monitoring and Investigations
ad hoc committee update



Committee Members

Chair Libby Jewett, NOAA

- Mike Cox, Environmental Protection Agency
- Cinde Donoghue, Department of Natural Resources
- Micah Horwith, Department of Natural Resources
- Mindy Roberts, Ecology
- Rich Childers, Department of Fish and Wildlife
- Tina Echeverria, Department of Health
- Brad Warren, Global Ocean Health
- Terry Williams, Tulalip Tribe
- Richard Feely, NOAA
- Jan Newton, WA OA Center
- Terrie Klinger, WA OA Center

11:15

Science Moment



11:45

Working Lunch

*Update on Puget Sound Partnership Action
Agenda*



12:30

Adaptation and Remediation
ad hoc committee update



Committee members

Chair Bill Dewey, Taylor Shellfish

- Mike Cox, Environmental Protection Agency
- Michal Rechner, Department of Natural Resources
- Larry Seaquist, State Representative
- Rich Childers, Department of Fish and Wildlife
- Brad Warren, Global Ocean Health
- Alan Barton, Whiskey Creek
- Benoit Eudeline, Taylor Shellfish
- Joth Davis, Taylor Shellfish
- Spencer Reeder, Vulcan
- Betsy Peabody, Puget Sound Restoration Fund
- Phil Rockefeller, Northwest Council

BRP Recommendations on Adaptation and Remediation

03 Strategies

- *Remediate seawater chemistry*
- *Increase the capacity to adapt to ocean acidification*
- *Enhance resilience of native and cultivated shellfish populations*

12 Recommendations

23 Activities Underway

Things are happening

Experiments on
adaptation
strategies

Studying carbon
sequestration
potential

Restoration of
shellfish habitat

Improving
monitoring at
shellfish hatcheries
& other facilities

Developing a
marine vegetation
atlas

Various activities
around genetic
diversity and
acidification
tolerance

Organizations Involved:

- Shellfish Farmers
- Department of Natural Resources
- NOAA
- Puget Sound Restoration Fund
- WA OA Center
- Puget Sound Partnership
- Department of Fish and Wildlife
- WA Sea Grant

Adaptation and Remediation Gaps—Initial thoughts

Understanding permit issues with harvesting kelp and other macroalgae

Identifying tools that reduce carbon that can be a best management practice

Addressing disease and pest concern to make shell recycling program feasible

Potential New Action

- Test multiple remediation strategies at trial locations and create refuges



Next Steps

- Continue to track current status
- Discuss gaps in moving actions forward
- Identify strategies to advance existing actions
- Identify potential new actions for consideration



Discussion



2:15

Education and Outreach ad
hoc committee update



Committee Members

Chair Betsy Peabody, Puget Sound Restoration Fund

- Ginny Broadhurst, Northwest Straits
- Steve Hollenhorst, Western Washington University
- Meg Chadsey, Washington Sea Grant
- Eric Swenson, Global Ocean Health
- Shallin Busch, NOAA
- Paul Williams, Suquamish Tribe
- Amy Sprenger, NANOOS
- Amy Grondin, Fishing & OA Outreach
- Julia Roberson, Ocean Conservancy
- Penny Dalton, Washington Sea Grant
- Mark Plunkett, Seattle Aquarium
- Jim Wharton, Seattle Aquarium

BRP Recommendations on Education and Outreach

02 Strategies

- *Share information through outreach*
- *Increase literacy through education*

07 Recommendations

22 Activities Underway

BRP Recommendations

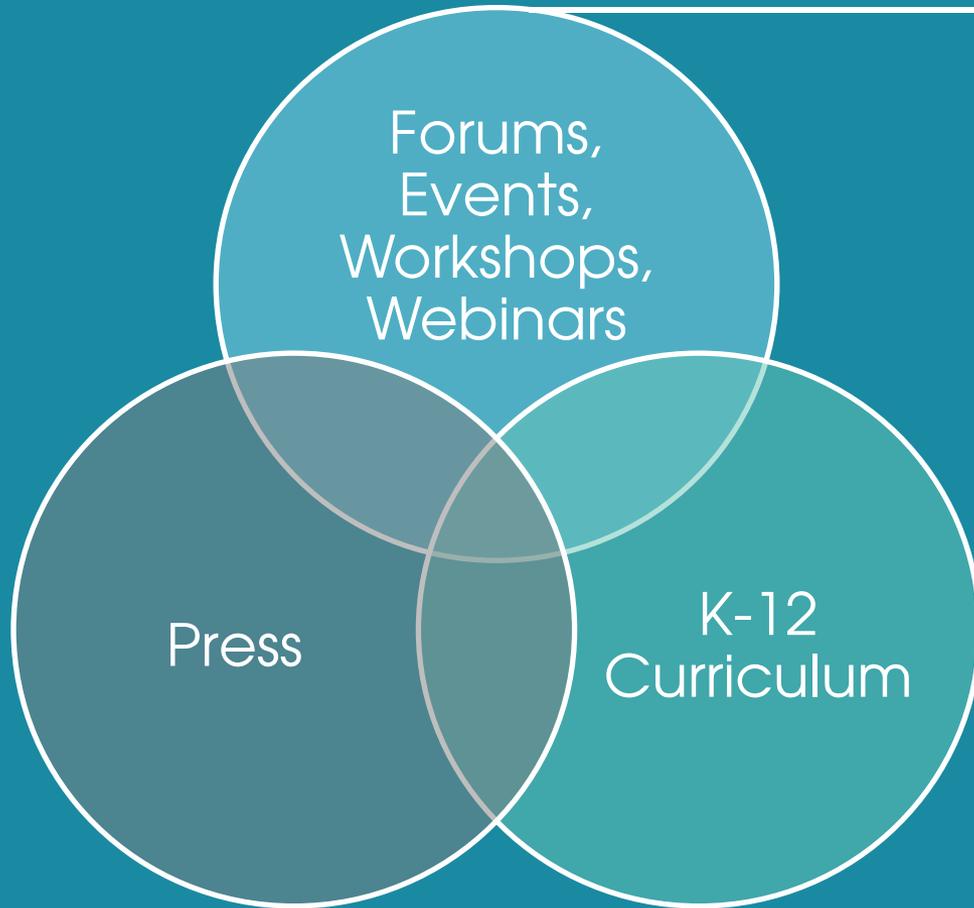
Outreach

1. Identify key findings for use by the Governor, Panel members, and others who will act as ambassadors on ocean acidification
2. Increase understanding of ocean acidification among key stakeholders
3. Build a network of engaged shellfish growers, tribes, and fishermen
4. Provide a forum for stakeholders to engage with coastal resource users and managers in developing and implementing solutions

Education

1. Develop, adapt, and use curricula on ocean acidification in k-12, and higher education
2. Leverage existing education and outreach networks to disseminate key messages
3. Share knowledge on ocean acidification causes, consequences, and responses at state and regional events.

Things are happening



Organizations Involved:

- NW Straits Commission
- NOAA
- Washington Sea Grant
- Suquamish Tribe
- Seattle Aquarium
- Global Ocean Health
- Puget Sound Restoration Fund
- University of Washington

Potential Priorities for Outreach

What should we focus on moving forward?

Target new audiences
for outreach

Poll and evaluate OA
literacy

Develop toolkit on
what individuals &
communities can do
to take action

Develop and make
available materials to
use at workshops,
events, etc

Community OA
website

Political briefing
materials

Cultivate and build a
bigger group of
speakers for forums &
events

Actively gathering and
disseminating new
stories that we can
pitch to TV, radio, and
newspapers

Potential Priorities for Education

What should we focus on moving forward?

Adapt and compile
existing curricula
materials

Develop new
materials where
needed

Develop
clearinghouse of
existing and new
curricula/materials

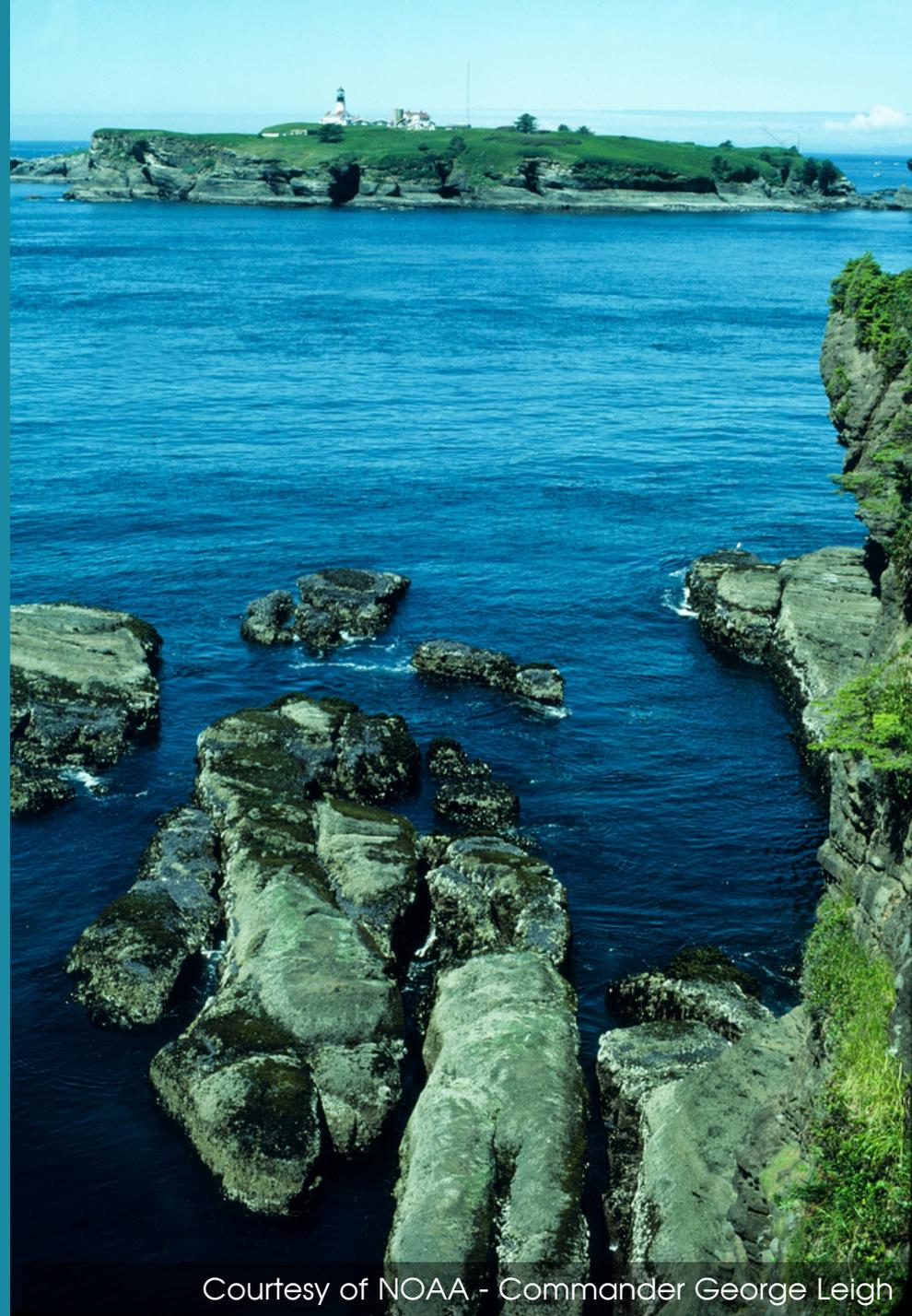
Offer training
workshops for
teachers at both
the K-12 and higher
education levels

Identify & support
ways to get
students in the field

Connect IOOS data
to teachers

Next Steps

- Continue to track current status
- Start preparing proposals (including costs) to move identified actions forward
- Continue ad hoc committee discussion through additional meetings



Discussion



Courtesy of WA Department of Ecology – Olympic National Park

3:45

Public Comment



4:00

Next Steps and Adjourn

