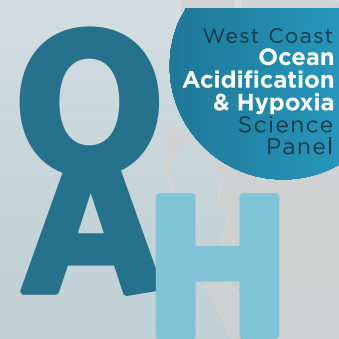


January 2016

The West Coast Ocean Acidification and Hypoxia Science Panel



Major Findings and Recommendations



CALIFORNIA
OCEAN SCIENCE TRUST



Although OA is a global phenomenon, the U.S.-Canadian West Coast will face some of the earliest, most severe changes in ocean carbon chemistry.



About the Panel

- 20 scientific experts from CA, OR, WA, BC
- Convened in 2013 by the Ocean Science Trust at the request of the California Ocean Protection Council
- Charged with summarizing the current state of knowledge and developing management options



Panelists



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Stanford University



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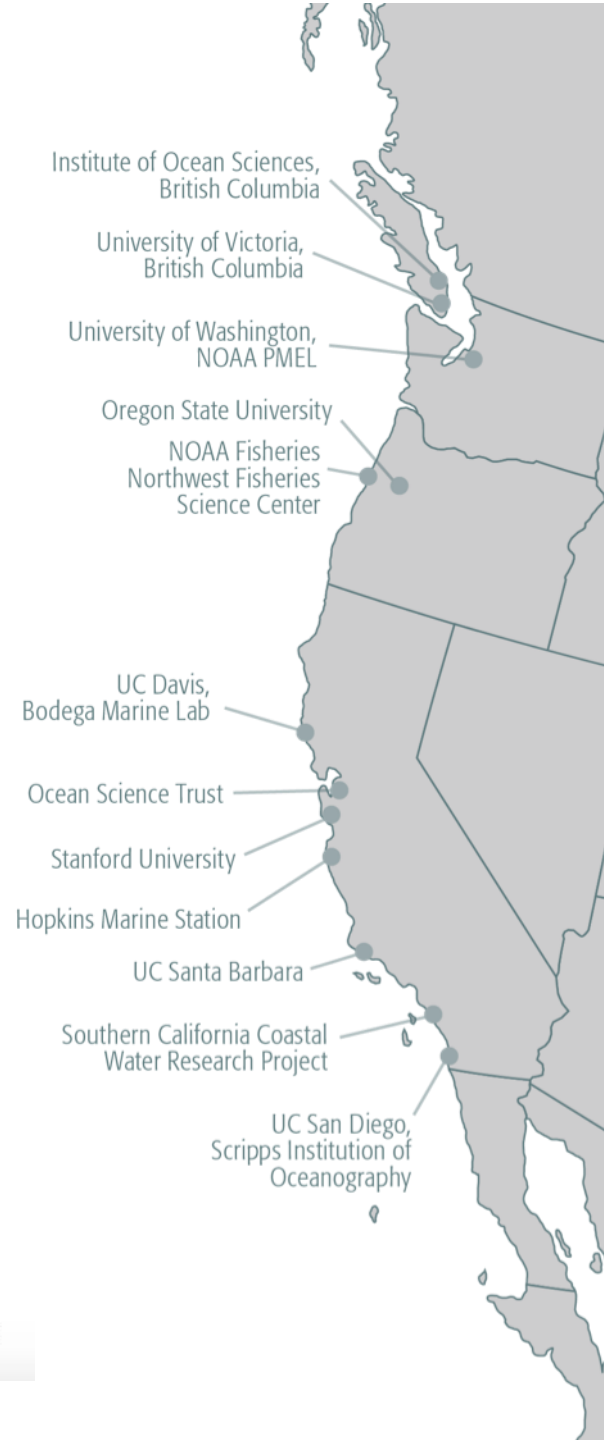
George Waldbusser
Oregon State University



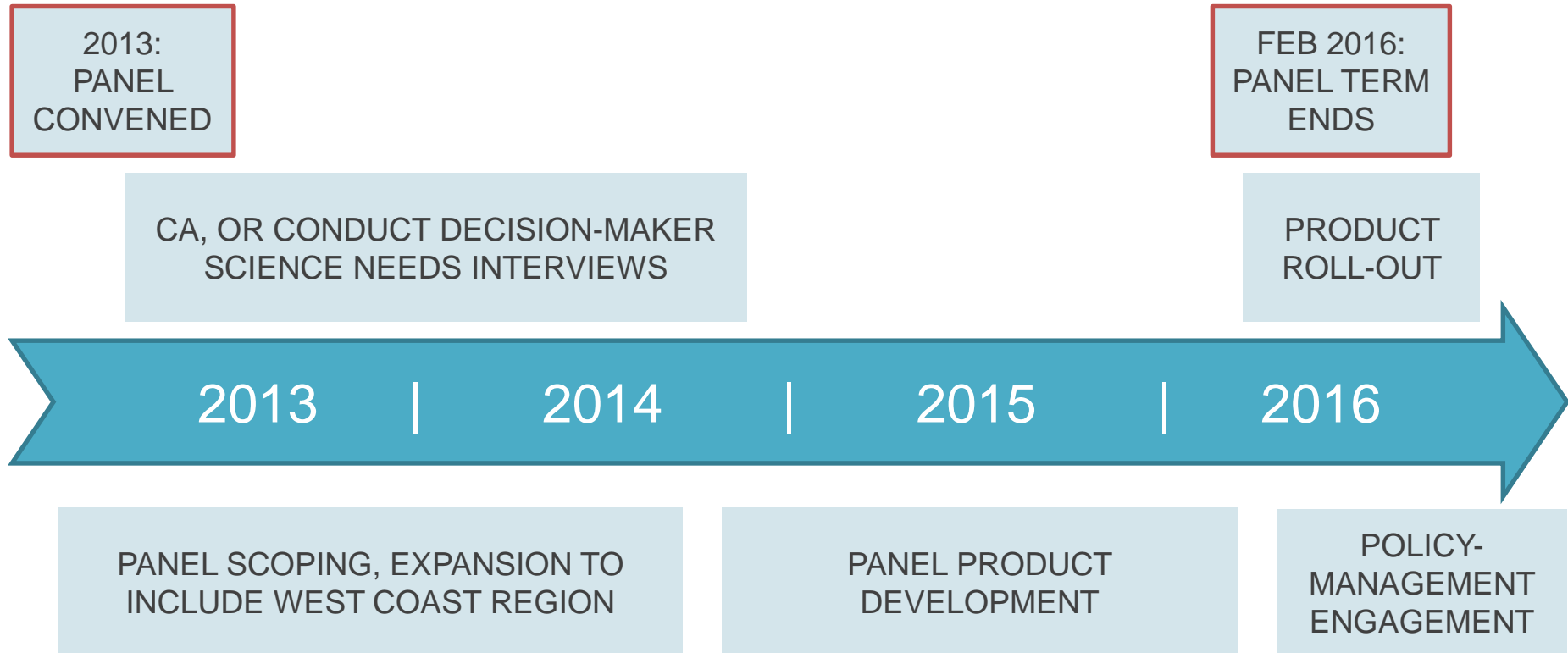
Steve Weisberg
Southern California Coastal
Water Research Project



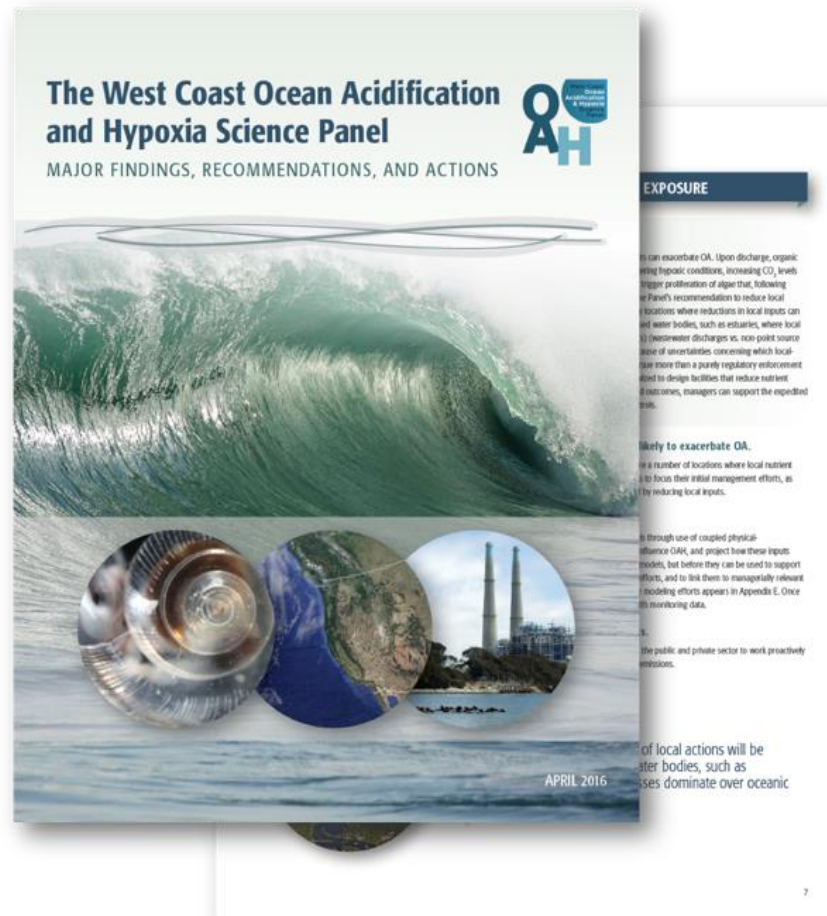
Liz Whiteman
California Ocean Science Trust



The Panel: A Brief History

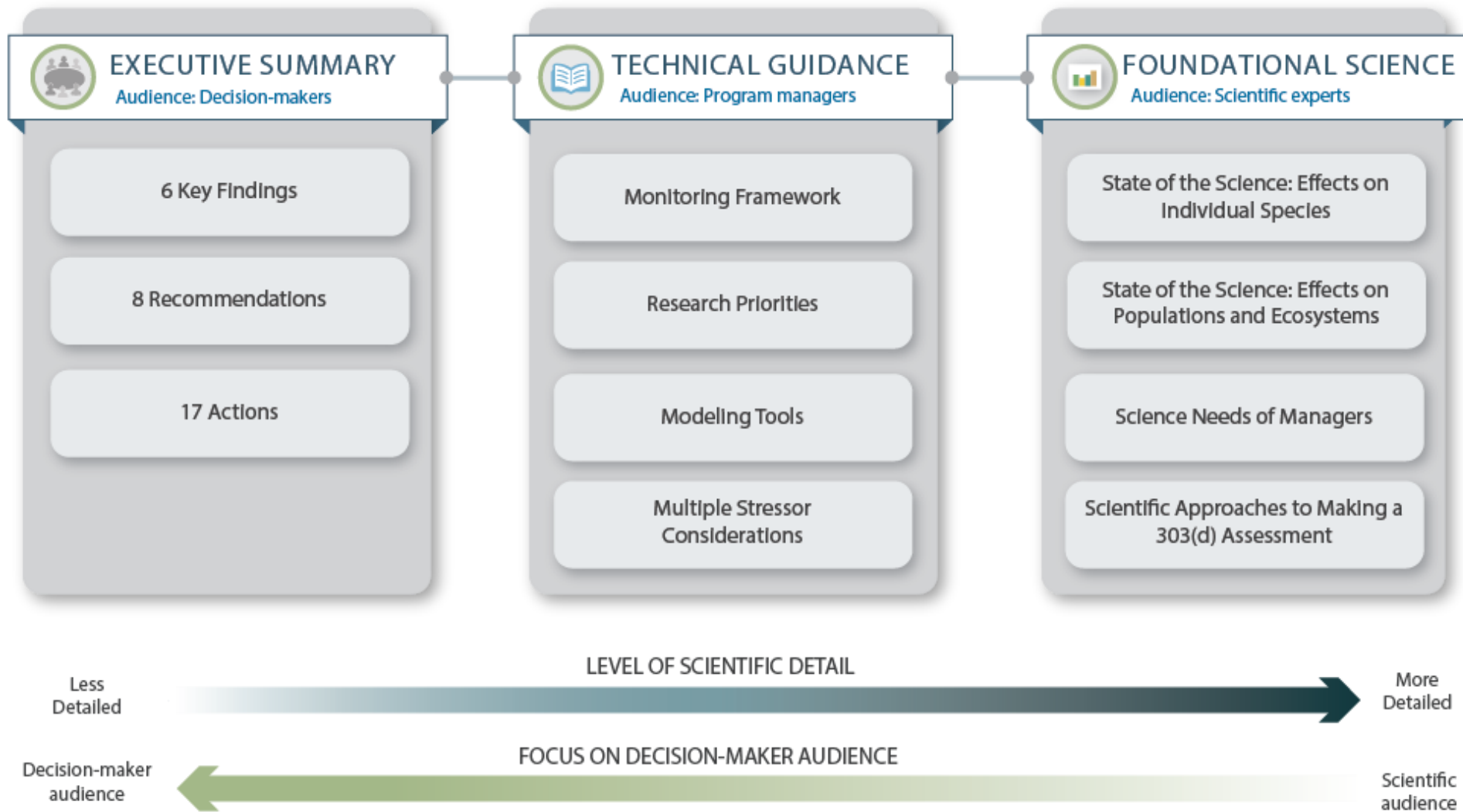


Final Report released April 2016 “Major Findings, Recommendations, and Actions”



Full suite of products available at www.westcoastOAH.org

Panel Products Overview



6 Major Findings

1. OAH will have severe ecological and economic consequences for the West Coast, and requires a concerted regional management focus
2. Global carbon emissions are the root cause of OAH
3. There are actions we can take to lessen exposure to OAH
4. We can also enhance the ability of ecosystems and organisms to cope with OAH
5. Accelerating OA science will expand the number of management options available
6. Inaction now will reduce options and impose higher costs later



Panel Recommendations and Actions



Roadmap of Local Management Options to Address Acidification and Hypoxia

REDUCE EXPOSURE

ENHANCE ABILITY OF BIOTA TO COPE

Reduce
nutrient and
carbon inputs



Advance
carbon removal
strategies



Reduce
other
stressors



Advance
adaptive
capacity



RESEARCH

MONITORING

More information on the Panel and available products, visit
www.westcoastoah.org

Recommendation 1

Theme: Address local factors that can reduce OAH exposure



Reduce local pollutant inputs that exacerbate OAH

Actions:

- Generate an inventory of areas where local pollutant inputs are likely to exacerbate OAH
- Develop robust predictive models of OAH
- Develop an incentive-based strategy for reducing pollutant inputs

Recommendation 2

Theme: Address local factors that can reduce OAH exposure



Promote approaches that remove CO₂ from seawater

Actions:

- Use pilot projects to evaluate which locations are optimal for implementing CO₂ removal strategies
- Make CO₂ removal strategies part of the cost-benefit analysis for habitat creation

Recommendation 3

Theme: Address local factors that can reduce OAH exposure



Revise water quality criteria

Actions:

- Agree on parameters that will be part of OAH criteria

Recommendation 4

Theme: Enhance the ability of biota to cope with OAH stress



Reduce co-occurring stressors on ecosystems

Actions:

- Integrate OAH effects into ecosystem-based fisheries management

Recommendation 5

Theme: Enhance the ability of biota to cope with OAH stress



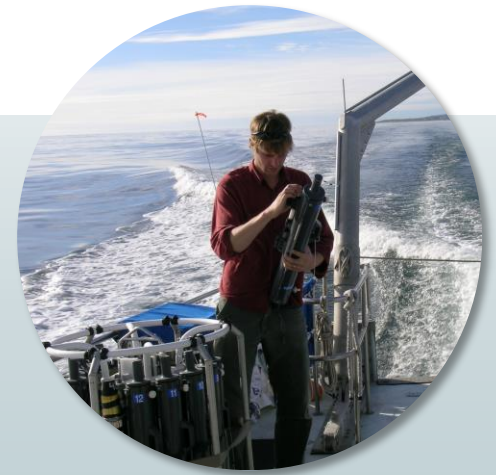
Promote the adaptive capacity of marine species and ecosystems

Actions:

- Inventory protected areas for potential use as OAH refugia
- Evaluate the benefits and risks to active enhancement of adaptive capacity

Recommendation 6

Theme: Expand knowledge about OAH



Establish a coordinated research strategy

Actions:

- Create a cooperative agreement among the multiple organizations that fund OAH research to establish research priorities

Recommendation 7

Theme: Expand knowledge about OAH



Build out a West Coast monitoring program that meets management needs

Actions:

- Define gaps between monitoring efforts and management needs
- Enhance comparability and access of OAH data

Recommendation 8

Theme: Expand knowledge about OAH



Expand scientific engagement to meet evolving management needs

Actions:

- Create a science task force

Roadmap of Local Management Options to Address Acidification and Hypoxia

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