

Developing California's Ocean Acidification Action Plan

*Oregon Coordinating Council on Ocean Acidification and Hypoxia
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The West Coast Ocean Acidification & Hypoxia Science Panel



- 20 scientific experts
- Charge of Panel:
 - Advance understanding of OAH
 - Develop management options
- Convened in 2013 by the Ocean Science Trust at the request of the California Ocean Protection Council, released Executive Summary in April 2016



Senate Bill 1363: Ocean Acidification and Hypoxia Reduction Program

1. **Research** how eelgrass functions for carbon dioxide removal and OA mitigation
2. **Identify** where conservation or restoration of aquatic vegetation can be applied to mitigate OA
3. **Consider** this benefit, among many others when restoring and conserving this habitat
4. **Support** science, monitoring and coordination to ensure management reflects best available science



AB 2139 (Williams)

- Signed September 2016
- Stemmed from recommendations of West Coast OAH Panel

Directives to OPC

(subject to funding availability)

1. Develop an ocean acidification and hypoxia (OAH) science task force
2. Take actions to address OAH
3. Adopt recommendations for further actions at the first meeting of each year, starting 2018



1. OAH Science Task Force

Mission: The Task Force will serve as a responsive advisory body that will provide scientific guidance to the OPC in an ongoing manner to inform continued actions on ocean acidification and hypoxia in California and along the West Coast.

Task Force Members

1. **Stephen Weisberg**, Southern California Coastal Water Research Project Authority, *Co-Chair*
2. **Francis Chan**, Oregon State University, *Co-Chair*
3. **Sarah Cooley**, Ocean Conservancy
4. **Jim Barry**, Monterey Bay Aquarium Research Institute
5. **Lisa Levin**, Scripps Institution of Oceanography, UC San Diego
6. **Richard Feely**, NOAA - Pacific Marine Environmental Laboratory
7. **Shallin Busch**, NOAA - Ocean Acidification Program
8. **Alexandria Boehm**, Stanford University

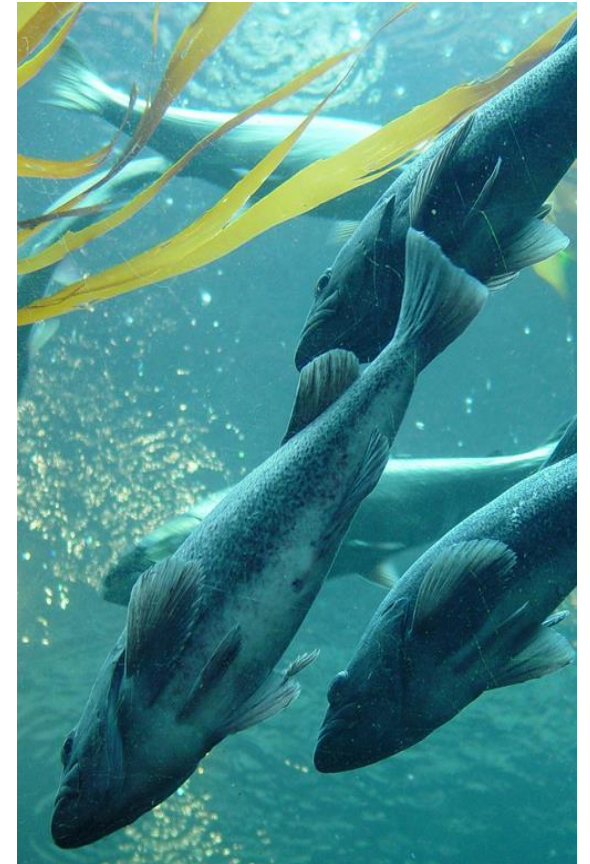


2. Take Actions to Address OAH

1. Develop, refine, and integrate predictive models
2. Ensure that criteria and standards for coastal water health address ocean acidification and hypoxia are informed by the best available science
3. Identify areas in CA vulnerable to ocean acidification and hypoxia
4. Advance joint priorities for ocean acidification and hypoxia research with diverse state, regional, national and international partners
5. Identify gaps between the monitoring of OAH and management needs, and the actions necessary to address these gaps

Why an OA Action Plan for California?

1. Advance goals of the International Alliance to Combat Ocean Acidification
2. Provide framework to spur & guide state efforts to anticipate, mitigate, and adapt to intensifying OA along the CA coast
3. Coordinate & leverage state actions along the West Coast and internationally to speed progress, gain efficiencies, and address problems at scale



What type of Plan?

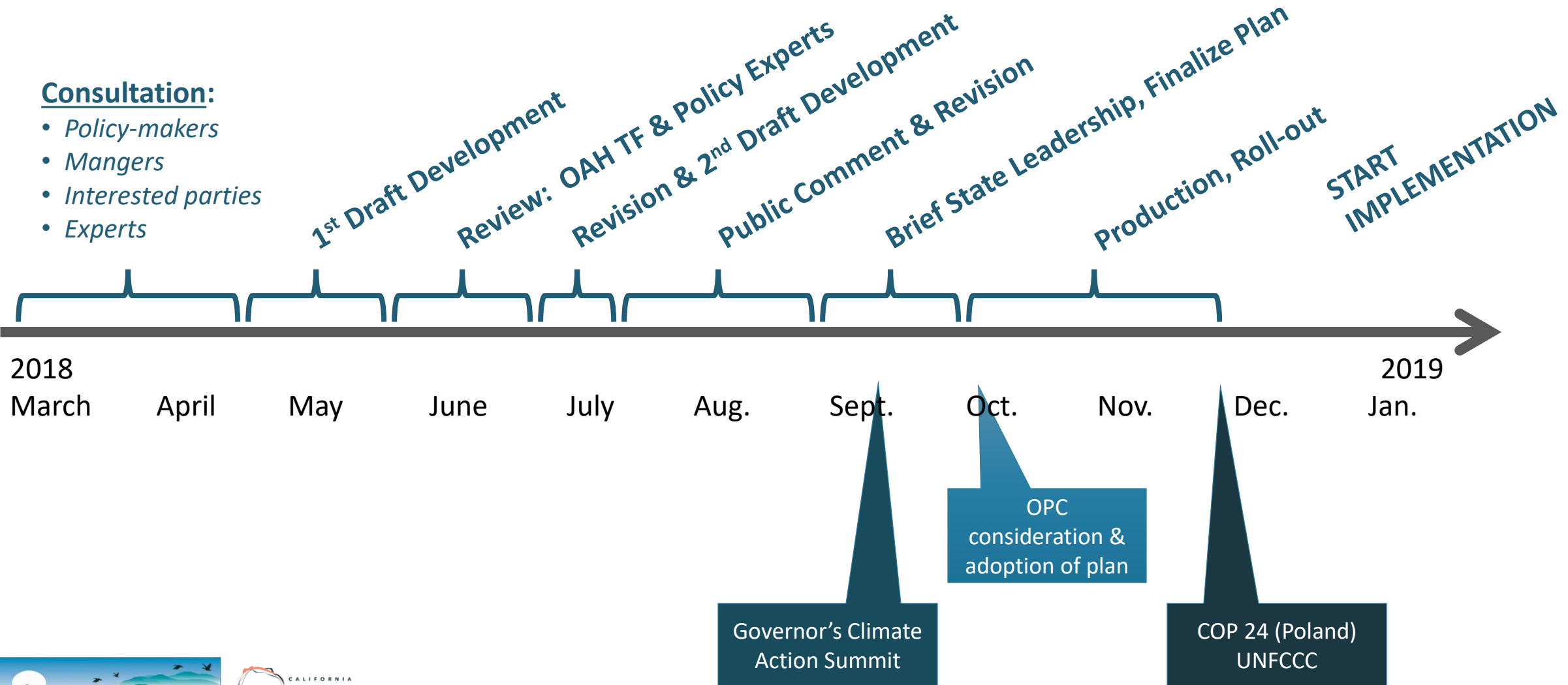


- Policy & management focus
- Science to enable or implement P&M
- Provides 10-year vision
- Identifies explicit tractable actions
- Primary audience = policy-makers & agencies
- “Living document,” future updates expected
- CA-centric, but within broader contexts

Process and Working Timeline

Consultation:

- Policy-makers
- Mangers
- Interested parties
- Experts



OAH Science Task Force Potential Roles

1. Input on vision and potential actions during initial consultation phase
 - *Interviews – Chan, Weisberg, Busch*
 - *This meeting*
1. Inter-session work to provide input to draft on critical science needs to advance policy & management in key areas
 - *Plan drafting team to ID key P&M areas for TF by April 23*
 - *TF to provide ideas on critical needs to plan drafting team by May 9*
 - *Input to include: need, why important, payoff, delivery timeline*
2. Review of 1st draft of the plan & discussion at June 18 meeting to ensure scientific feasibility
3. Participation in roll-out to help get the word out



Preliminary Ideas: Shape of the plan?

- Tells the California OA story well:
 - *Aspirations*
 - *Accomplishments*
 - *Biophysical & socioeconomic setting*
 - *Unique policy context (e.g., climate mitigation & adaptation)*
 - *Opportunities for bold and practical action*
- Accessible and useful to:
 - *Policy-makers & managers*
 - *Interested parties & the public*
 - *Members of the scientific community*



Preliminary Ideas: Types of action items?

- Mainstreaming OA into state policies

- *Greenhouse gas emissions reduction*
- *Climate change adaptation*
- *Fisheries management*
- *Marine protected areas*

- Buying time

- *Reducing land-based inputs*
- *Local OA mitigation with SAV*

- Enabling policy & management improvements

- *Engaging affected constituencies*
- *Public education & communication*
- *Monitoring & observations*
- *Targeted model development & applied science*

- Leveraging & partnering

- *Federal/state cooperation*
- *Regional approaches*
- *International cooperative efforts*

Discussion – and thank you!

1. Over the next 5 years – what should be the state's highest priorities for science investments that will directly enable or support implementation of actions to mitigate or adapt to OA?
2. What will the scientific community need in order to build the knowledge required to enable or implement policies or management actions to address OA?
3. What other issues should be considered in crafting California's OA Action Plan?