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COUNCIL



CALIFORNIA
*natural
resources*
AGENCY

Ocean and Coastal Acidification Legislation, Policy, and Action in California

Dr. Justine Kimball

March 19, 2020

Ocean Protection Council's Role

State of California
**EXECUTIVE
BRANCH**

GOVERNOR
Gavin Newsom

Transportation Agency

Dept. of Corrections and
Rehabilitation

Environmental Protection
Agency

Dept. of Finance

Health and Human Services

Dept. of Food and Agriculture

Labor and Workforce
Development Agency

Natural Resources Agency
Secretary, Wade Crowfoot

Dept. of Veterans Affairs

Government Operations Agency

Business, Consumer Services,
and Housing Agency



Dr. Mark Gold, Executive Director
Deputy Secretary for Ocean and
Coastal Policy



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Council Members



Wade Crowfoot
Secretary for
Natural
Resources,
Council Chair



State Controller
Betty T. Yee



Jared Blumenfeld
Secretary for
Environmental
Protection



Ben Allen, State
Senate



Mark Stone, State
Assembly



Michael Brown
Public Member



Jordan Diamond
Public Member



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Our Mission and How We Work

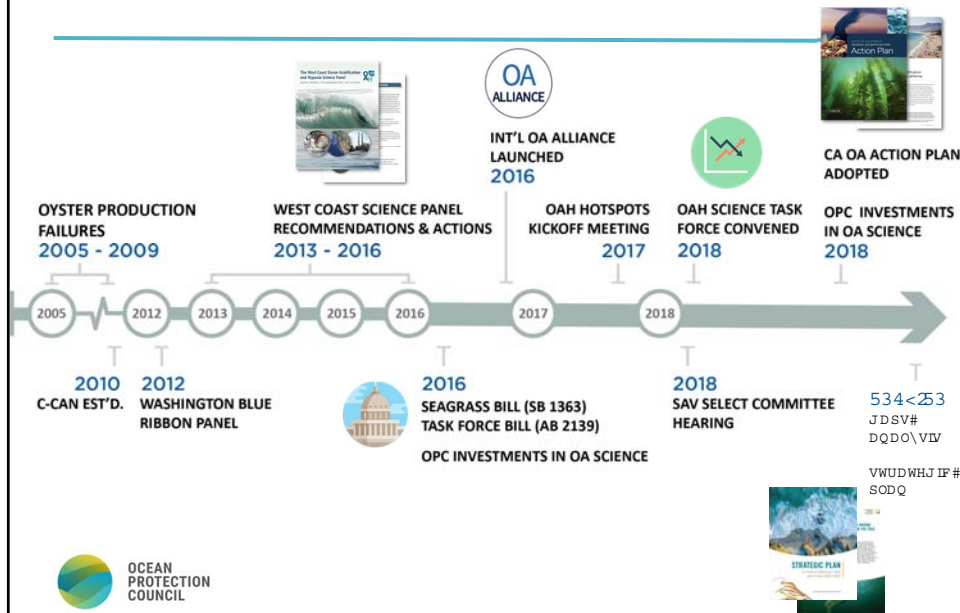
California Ocean Protection Act, 2004:

Ensuring healthy, resilient, and productive ocean and coastal ecosystems for the benefit of current and future generations. Committed to basing decisions and actions on best available science, and promoting the use of science among all entities involved in the management of ocean resources.

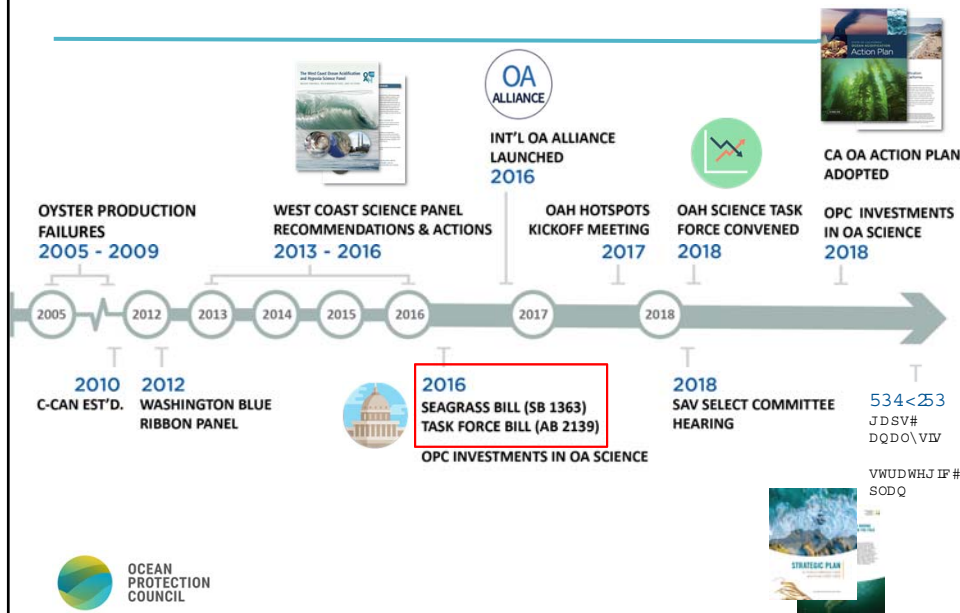


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California OA Milestones



California OA Milestones



Legislation

SB 32 (Pavley, 2016) and
AB 32 (Nunez, 2006)
Statewide limit on GHG
emissions

- Landmark legislation requiring California to reduce its overall greenhouse gas emissions to 1990 levels by 2020 and 40% below 1990 levels by 2030.
- By reducing emissions, we can better protect our marine ecosystems from the impacts of warming and OA.



Gov. Jerry Brown signs SB 32 on Sept 8, 2016



Legislation

SB 1363 (Monning, 2016)
Ocean Protection Council: Ocean
Acidification and Hypoxia
Reduction Program

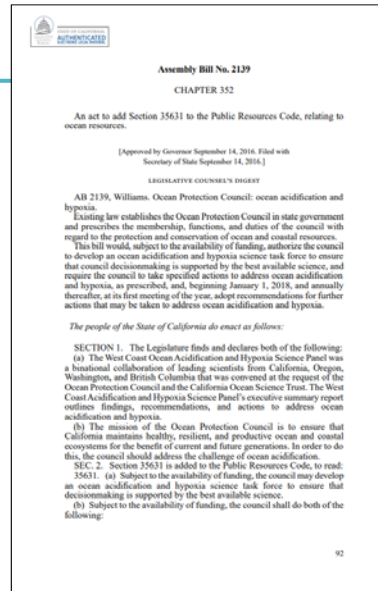
1. **Research** how eelgrass functions for carbon dioxide removal and OA mitigation
2. **Identify** where conservation or restoration of aquatic vegetation can be applied to mitigate OA
3. **Consider** this benefit, among many others when restoring and conserving this habitat
4. **Support** science,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



Legislation

AB 2139 (Williams, 2016) Ocean Protection Council: Ocean Acidification and Hypoxia Task Force

- Directs the OPC to establish an OAH science task force to ensure that Council decision-making is supported by the best available science
- Requires the Council to annually adopt recommendations for further actions that may be taken to address OAH



Task Force Members



Steve Weisberg
Co-chair
Southern California Coastal Water
Research Project



Francis Chan
Co-chair
Oregon State University



Jim Barry
Monterey Bay Aquarium Research
Institute



Alexandria Boehm
Stanford University



Shalhin Busch
NOAA Northwest Fisheries Science Center



Sarah Cooley
Ocean Conservancy

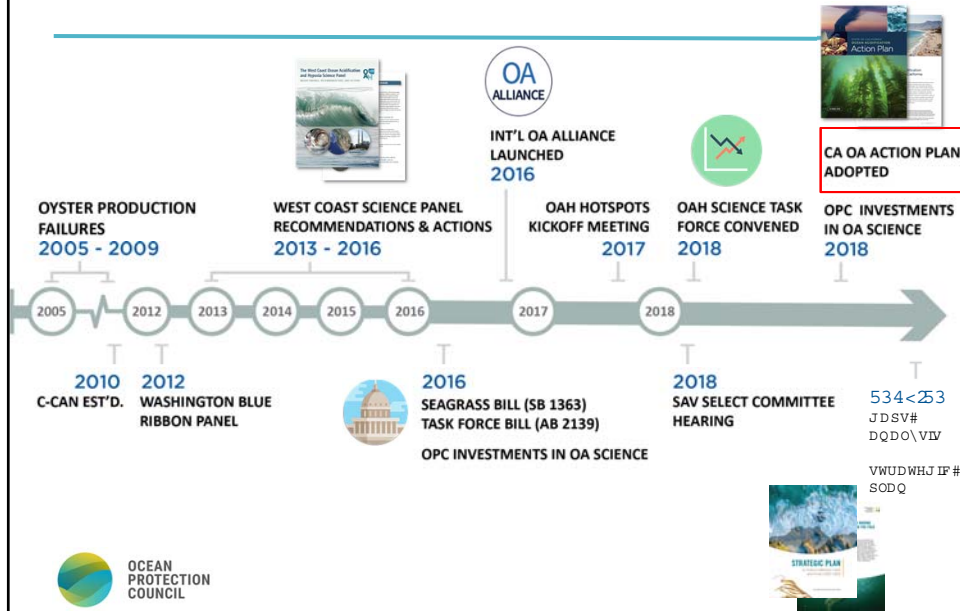


Richard Feely
NOAA Pacific Marine Environmental
Laboratory



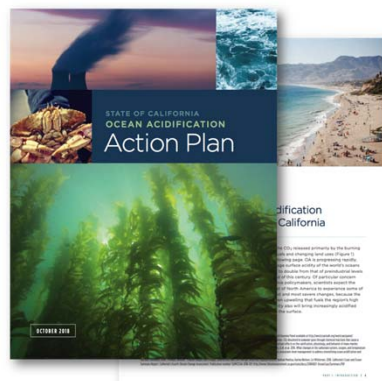
Lisa Levin
University of California, San Diego

California OA Milestones



State of California Ocean Acidification Action Plan

10-year vision designed for integration into public agency operations



- **Developed with input from 60+ experts across landscape**
 - Ocean-use industries, state & fed gov, conservation community, science, and philanthropy
- **OAH Science Task Force input**
 - Input & development of science implementation appendix
- **Applied learning from other regions**
 - WA, OR, ME, BC, Monaco, Latin America & the Caribbean, and the *OA Alliance Toolkit*



October 2018

OA Action Plan

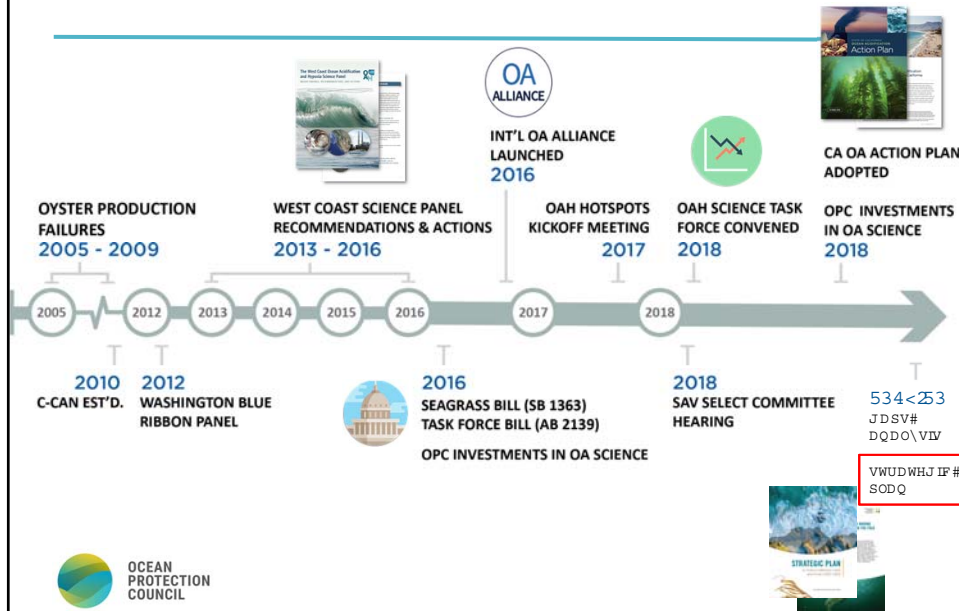
1. Prepare for the Full Range of OA Risks and Impacts
2. Activate Responsible Elements of State Government
3. Reduce the Pollution that Causes OA
4. Deploy Living Systems to Slow OA and Store Carbon
5. Build Resilience of Affected Communities, Industries, & Interests
6. Engage Beyond State Boundaries



Google!

<http://www.opc.ca.gov/oa-action-plan/>

California OA Milestones



Strategic Plan

Goal 1: Safeguard Coastal and Marine Ecosystems and Communities in the Face of Climate Change

Objective: Minimize Causes and Impacts of Ocean Acidification and Hypoxia

Targets..



Target 1.2.1:

Based on the latest scientific research, advance adoption of regulations, as needed, establishing WQ criteria for OAH by 2025, with scientific analysis of the relationship between nutrients and OAH impacts completed by 2022.

- Coupled physical-biochemical model and scenarios
- Biological thresholds
- Next steps: continue to refine model scenarios and biological impact linkage



Target 1.2.4:

Work with partners and make targeted investments to support the development of an OAH monitoring and observation system optimized to deliver decision-relevant information that serves user needs by 2023

- OAH monitoring inventory
<https://oceanmonitoring.cnra.ca.gov/Analytics>
- OAH Science Task Force - monitoring gaps analysis
- Next steps: coordinate with partners to fill gaps and streamline information delivery



Target 1.2.4:

Advance the science on OAH vulnerability and identify risks to California's biological resources, communities, and economies, within the context of other ongoing environmental changes

- Biological vulnerability and thresholds
- Raise awareness
- Options for adaptation and mitigation



Target 3.1.4:

Work with partners to preserve the existing, known 15,000 acres of seagrass beds and create an additional 1,000 acres by 2025

- Role of SAV in ameliorating OA
- Blue carbon
- Multi-benefit



Target 3.6.1:

Create an annual California State of the Coast and Ocean Report starting in 2021 and a Report Card by 2025 (utilizing a scientific, indicator-based approach to grading the State of California's Coast and Ocean)

- OAH monitoring and observation system
- Analysis, synthesis, indicator development



International Alliance to Combat Ocean Acidification

Officially launched in December 2016, the Alliance brings together jurisdictions across the globe to highlight ocean acidification as an immediate threat to coastal economies and ocean ecosystems in their region, and consider solutions.



Photo: Lincoln Chu



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Thank you!

www.opc.ca.gov

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