OAH Council update to OOST
January 27, 2021

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For more information on the Council: OregonOcean.Info
Ocean Change

**Increasing Rates and Intensities**

- **1.4°F** increase in atmospheric temperature
- **0.5°F** increase in sea surface temperature
- 142% increase in atmospheric CO₂
- 25% of atmospheric CO₂ absorbed by ocean (8.5 lbs of CO₂ per day per person)
- 30% increase in ocean acidity (pH change from 8.21 to 8.1)
- 40% decrease in nearshore O₂ (since 1960, depth ~200 ft)
- 5% decrease in deep ocean O₂ (since 1960, depth ~700 ft)
Ocean Acidification

Trending \( \text{CO}_2 \), \( \text{CO}_2 \), acidity (low pH)
(Average ocean pH 8.1)

Hypoxia

Seasonal depression of \( \text{O}_2 \) - deoxygenation
(Hypoxia 1.4 mL/L)
Oregon Seafood Value

Aquaculture

Values (2016)

Pacific Oyster $12M

Commercial Fisheries

Ex-Vessel Values (2018)

Pink Shrimp $27M

Dungeness Crab $74M

Salmon $2M

Groundfish $21M
Oregon Coordinating Council on OAH

- 13 member council to advise the State on OAH Actions
- Reports to the Oregon Legislature each biennium (2018, 2020)

https://www.oregonocean.info/index.php/oah-council-info
Dear fellow members of the International Alliance to Combat Ocean Acidification:

With this letter, Oregon hereby presents the Ocean Acidification and Hypoxia Action Plan, as developed by the Oregon Ocean Acidification Coordination Council. Oregon endorses the Alliance’s Global Call to Action, and commits to advance key goals that:

- Advance scientific understanding of ocean acidification
- Reduce the causes of acidification
- Protect the environment and its constituents
- Expand public awareness and understanding
- Build sustained support for transition to a more sustainable ocean

This action plan is intended to provide governments on the frontlines of combating ocean acidification and hypoxia with a road map to address the challenges they face. The Ocean Acidification and Hypoxia Action Plan includes:

- Evaluating potential management strategies
- Incorporating funding needs into state and federal budgeting, and
- Promoting intra-agency communication and coordination

Oregon is proud to submit our Ocean Acidification and Hypoxia Action Plan as a component of the International Alliance to Combat Ocean Acidification, and to leverage current and future partnerships with other states, provinces, and nations to protect our oceans and the people who depend on them.

Sincerely,
Governor Kate Brown

OAH Action Plan p. 3

- 13 member council to advise the State on OAH Actions
- Reports to the Oregon Legislature each biennium (2018, 2020)
- Governor’s request for OAH Action Plan (2019)
OAH Action Areas

**THEME 1**
Strengthen OAH science, monitoring, and research

**THEME 2**
Reduce causes of OAH

**THEME 3**
Promote OAH adaptation and resilience

**THEME 4**
Raise awareness of OAH science, impacts, and solutions

**THEME 5**
Commit resources to OAH actions
Highlights of OAH Actions in 2018 - 2020

**Theme 1: OAH monitoring in Tillamook Bay**
Establish a long-term OAH monitoring site in Tillamook Bay
Highlights of OAH Actions in 2018 - 2020

**Theme 1: OAH monitoring in Yaquina Bay**

Re-establish long-term OAH monitoring in Yaquina Bay

**Working Group consisting of 14 regional experts and stakeholders**

**Goals include:**

- Identify spatial, temporal, and technology gaps in monitoring data
- Pursue collaborations and resources to deploy new and maintain current monitoring
- Create pathways for real time accessibility of monitoring data
- Communicate findings in formats that inform community planning and state resource management
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Commit resources to OAH actions
Theme 4: Outreach Materials and Communications Plan

Working Group on Education, Outreach, Communications

Consists of 11 members, representing a diversity of perspectives and professional backgrounds.
Theme 4: Outreach Materials

Research Needs

- Oregon Coast Acidification and Hypoxia (OAH) Action Plan
- Oregon will take action to reduce the impacts of OAH on coastal ecosystems and human communities.

Take Action

- Oregon will take action to reduce the impacts of OAH on coastal ecosystems and human communities.

Toma medidas

- El Plan de Acción de Oregon sobre Acidificación Oceánica e Hipoxia (AHO) describe medidas que Oregon apoyará para adaptarse y mitigar los impactos de la AHO.
- Necesitamos la ayuda de todos los residentes de Oregon para marcar una diferencia con este problema global.

Aqui es como puedes marcar una diferencia:

- Ayudar en el monitoreo de los cambios océanos.
- Participar en actividades de voluntariado y promover la ciencia sobre la AHO.
- Aprender más sobre la ciencia y los impactos de la AHO.
- Fomentar y participar en los procesos públicos.
OAH Action Areas

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**OAH Action Areas: Theme 5**

**Step 1**  Governor issues a 2019 policy, urges relevant state agencies to consider work they are doing and their plans to address OAH priorities in the context of this Action Plan.

- Agencies document both existing and needed programs and regulations (including compliance), that address OAH impacts, adaptation, and mitigation. Agencies report plans to address the gaps to the Legislature and Governor in February 2021. *(Start: 2019 and continuing)*

  - now

- Agencies propose anticipated needs in biennial agency budget development process, starting with agency budget proposals for the 2021-2023 biennium. *(Start: July-December 2019 and continuing)*

  - Fall

- The OAH Council incorporates agencies’ reports into ongoing development of recommendations to the State on programs within and across agencies. *(Start: 2021 and continuing)*
OAH Actions

Theme 5: Developing a multi-agency assessment for anticipated OAH needs
Creating a combined 8 agency report to the Oregon Legislature (Feb 2021)

Report to describe:

• Current management strategies for each agency
• Future needs and strategies to improve climate/ocean change management

Exemplifies the intent and implementation of Executive Order 20-04 (2020) and the Climate Adaptation Framework (2021)
Senate Bill 260

Sponsored by Senator ROBLAN, Representatives GOMBERG, SMITH DB; Senators BURDICK, DEMBROW, FREDERICK, GOLDEN, MANNING JR, MONNES ANDERSON, RILEY, TAYLOR, WAGNER, Representatives MCKEOWN, WITT (Presentation filed.)

The following summary was prepared by the sponsors of the measure as introduced:

Requires State to adopt measures in initiatives related to ocean and coastal emergency.

Declarers emergency, effective on passage.

Senate Bill 1554

Sponsored by Senator ROBLAN, Representatives MITCHELL, SMITH DB; Senators Beyer, DEMBROW, FREDERICK, GELSER, GOLDEN, HEARD, MANNING JR, MONNES ANDERSON, TAYLOR, WAGNER, Representatives CLEM, GOMBERG, HELM, PILUSO, SOLLMAN, WITT (Presentation filed.)

SUMMARY

The following summary was prepared by the sponsors of the measure and is not a part of the body thereof subject to consideration by the Legislative Assembly. It is an editor's brief statement of the essential features of the measure as introduced.

Appropriates moneys from General Fund to Oregon Ocean Science Fund, State Department of Fish and Wildlife, Higher Education Coordinating Commission and Oregon Department of Administrative Services for certain ocean program purposes.

Declares emergency, effective on passage.

A BILL FOR AN ACT

Relating to oceans; and declaring an emergency.

Whereas Oregon is an epicenter for the global manifestation of ocean acidification and hypoxia; and

Whereas the natural seasonal process of upwelling transports corrosive waters into the nearshore and estuaries, causing marine waters within this state’s jurisdiction to be especially vulnerable to ocean acidification; and

Whereas ocean acidification, hypoxia and changes in ocean temperature are intensifying; and
Theme 1

Support and maintain monitoring of OAH and biological response

SB1554: 6 Monitoring Projects

OAH Instrumentation
(Bill Section 3.3.)

Newport Hydrographic Line
(Bill Section 3.2.)

Yaquina Bay Monitoring
(Bill Section 1.3.)

Estuary Assessments
(Bill Section 2.1.)

Intertidal monitoring at Marine Reserves
(Bill Section 1.1.)

Subtidal monitoring at Marine Reserves
(Bill Section 1.2.)

OAH Report Actions: 1.1.a/c
SB1554: 6 Economic & Ecosystem Resilience Projects

- Ecosystem modeling of submerged aquatic vegetation  
  *(Bill Section 1.4.)*

- Workshop to promote shellfish and aquatic vegetation  
  *(Bill Section 1.5.)*

- Life cycle research for wild and cultivated stocks  
  *(Bill Section 1.7.)*

- Estuary mapping of native Olympia oysters  
  *(Bill Section 2.2.)*

- Best Management Practices for Shellfish Cultivation  
  *(Bill Section 1.6.)*

- Molluscan Broodstock Program restore and promote native oysters  
  *(Bill Section 3.1.)*

OAH Report Actions: 3.2a/b
Communications Plan

OAH Report Action: 4.2.a

SB1554: 1 communications project

Communications and outreach planning

(Bill Section 1.8.)

OAH Report Action: 4.2.a