

Oregon OAH Community Survey



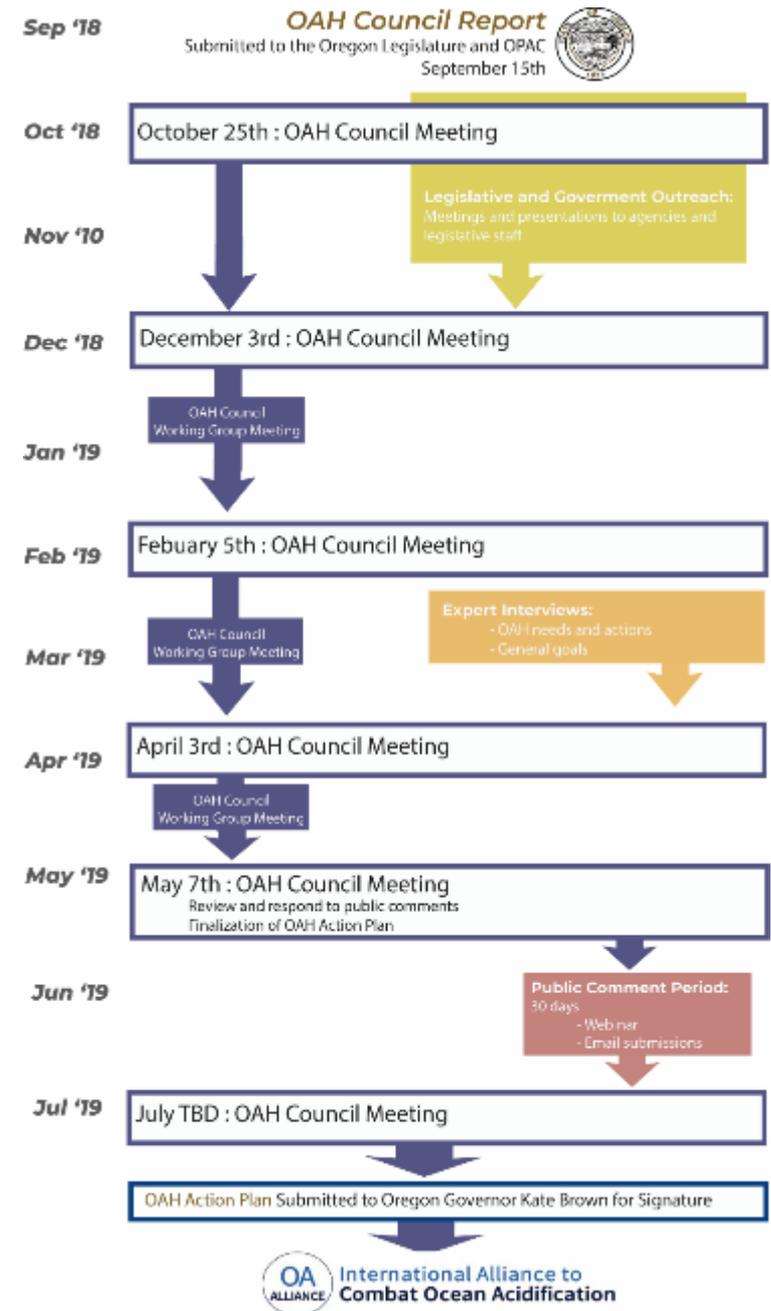
**Oregon's Coordinating Council on
Ocean Acidification and Hypoxia**

OAH Community Survey

As part of a multifaceted community outreach strategy, the OAH Council conducted the **OAH Community Survey**, an online questionnaire and one-on-one interviews.

The survey asked for participants perceptions and opinions about Oregon's best opportunities to implement OAH mitigation and adaptation strategies.

Following the online survey, the OAH Council staff conducted a series of one-on-one interviews as a way to capture more of the details about the expectations and advice on Oregon's next steps.



OAH Community Survey

OVERVIEW

70 Participants were invited to participate in the surveys

Survey invitations were emailed out February 1st

The survey remained **open for 63 days** (*closed April 3rd*)

37 respondents to the **online survey** (53% response rate)

There were 27 components to the online survey

Average survey time was about 15min

23 respondents to the **one-on-one survey** (33% response rate)

There were 9 questions to the one-on-one surveys

Average survey time was 40min

OAH Community Survey

OVERVIEW

RESPONDENT GROUPS:

State Agencies: ODFW, DLCD, DEQ, ODF, ODA,

Federal Agencies: NOAA, EPA, USFW

Tribal Governments: Oregon tribal governments/organizations

Industry: Shellfish, Crabbing, Restaurant, Trade Commissions

Academic: OSU, UO, PSU

Funding: Packard, Lazar, Meyer, Pew

OAH Community Survey Results - Online

Google forms (37 respondents)

The image shows a screenshot of a Google Form titled "Oregon Ocean Acidification and Hypoxia (OAH) Community Survey". The form is displayed in a web browser window. The background of the form is a scenic photograph of a beach with waves crashing on the shore. The form content includes a title, a thank-you message, and two required text input fields. The first field is labeled "Email address" and the second is labeled "Please provide your name". A "NEXT" button is visible at the bottom of the form, and a progress indicator shows "Page 1 of 7". The browser's address bar shows the URL: "https://docs.google.com/forms/d/e/1Ab2...". The Windows taskbar is visible at the bottom of the screen.

Oregon Ocean Acidification and Hypoxia (OAH) Community Survey

Thank you for agreeing to take part in this survey, which will help the Oregon OAH Coordinating Council understand and describe awareness of, engagement in, and priorities for OAH mitigation and adaptation strategies. Your responses will be used by the OAH Council in developing recommendations, and in finalizing the Oregon OAH Action Plan. This survey should only take 15-20 minutes to complete. Please be assured that all answers you provide will be kept confidential.

*** Required**

Email address *

Your email

Please provide your name *

Your answer

NEXT Page 1 of 7

Never submit passwords through Google Forms

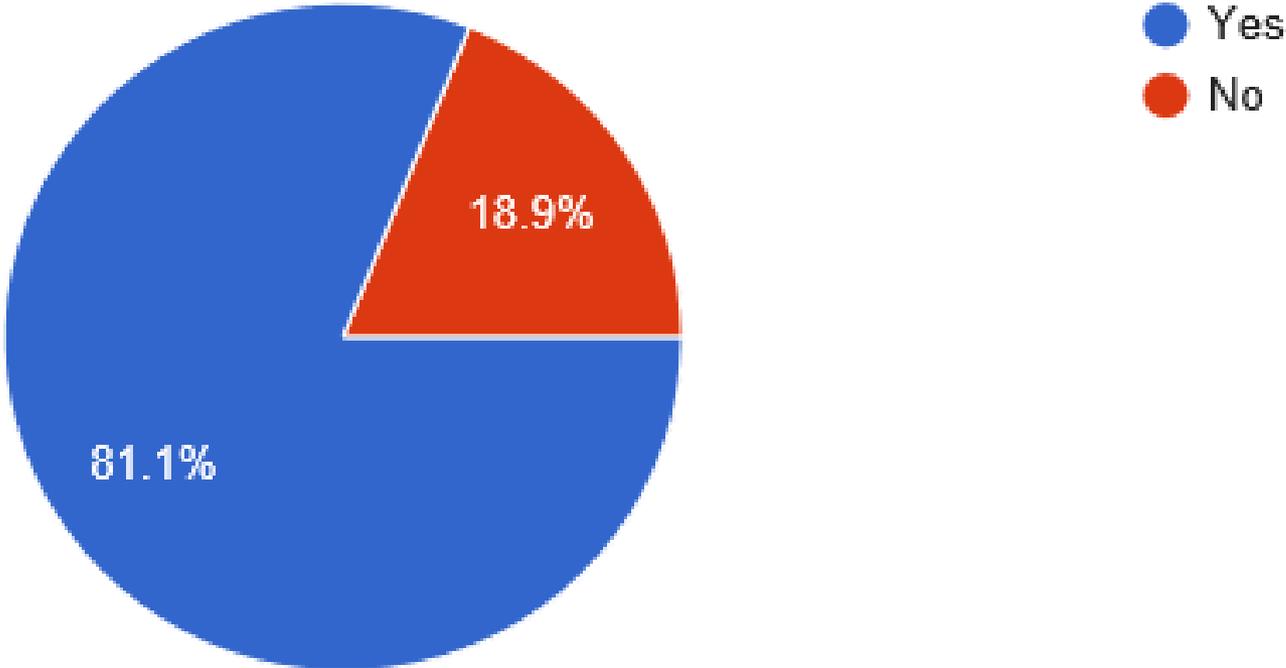
OAH Community Survey Results - Online

RESPONDENT GROUPS:

Group	Invited Participants	Respondents	Response Rate
State Agencies	14	10	71 %
Federal Agencies	5	4	80 %
Tribal Governments	13	3	23 %
Industry	13	4	40 %
Academic	13	9	69 %
Funding	4	1	25 %
Environmental/ Education	8	5	63 %
	70	37	53 %

OAH Community Survey Results - Online

Are you willing to participate in a 40 minute follow-up interview?



OAH Community Survey Results – One-on-One

One-on-one surveys – (23 respondents)
go-to-meeting software

807 minutes of recoded tape

8 interviews were in person
15 interviews were remote

OAH Community Survey: Follow-up Interviews

Introduction Text: Thank you for participating in our online [OAH Community Survey](#) and for agreeing to participate in our follow-up in-person interview. Together, the survey and interview responses will be used to capture and describe awareness of, engagement in, and priorities for OAH mitigation and adaptation strategies. Your responses will be used by the OAH Council in developing recommendations, and in finalizing the Oregon OAH Action Plan in 2019. This interview should take about 40 minutes to complete. Prior to this interview, you should have received an email containing a copy of your responses to the OAH Community Survey (online survey), as well as the OAH Council Report themes and actions.

Please be assured that all answers you provide will be kept confidential.

1. In your opinion and based on your knowledge of projected OAH changes, are there foreseeable impacts you expect to observe in the next 20-50 years? Please explain the impacts you anticipate and how it will affect the ecosystem or natural resource you monitor, manage, or use.
2. In question 10 of the online survey, you stated that your organization, agency, constituents, or industry has _____ (not considered/considered/begun/completed) _____ planning for OAH impacts (adaptation and/or mitigation). Can you briefly explain what has helped/or hindered your organization, agency, constituents, or industry planning for OAH impacts?
3. Are there obstacles preventing or making actions difficult, for your organization, agency, constituents, or industry in addressing OAH management and mitigation?
4. Which OAH action, recommendation, or topic do you think was most important in the OAH Council report, relative to the ecosystem or natural resource you monitor, manage, or use?
5. Are there any actions, recommendations, or topics that you think should have been included in the Oregon OAH Council Report, but were not?
6. What recommendations do you have, for providing the funding needed by the State to better understand OAH science, impacts and solutions? Do you have ideas on how to diversify the portfolio of funding sources?
7. What modes of communication would be most effective in reaching members of your organization, agency, constituency, or industry? For example, public meetings, brochures, websites, or educational events?
8. Is there anything else do you want to share with us, as we move forward on building Oregon's OAH Action Plan?
9. Would you be willing to be contacted to participate in a future review of the draft Action Plan?

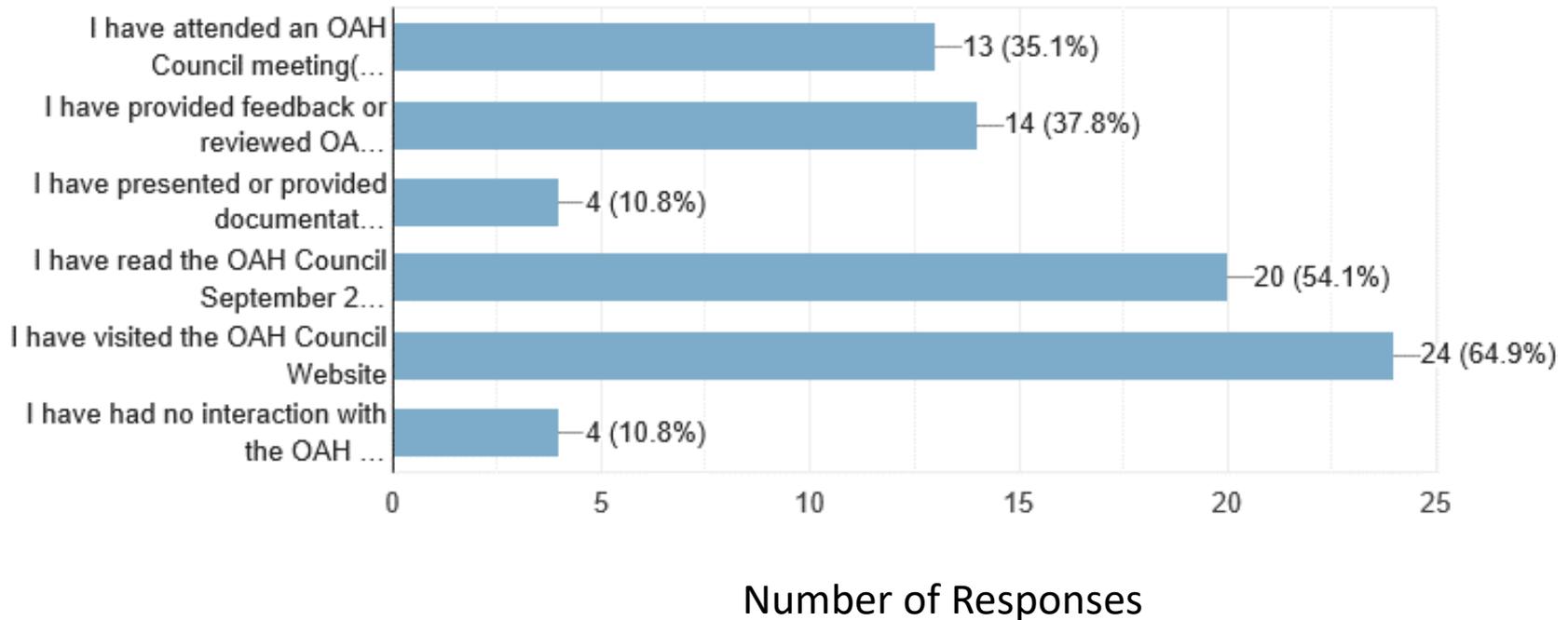
OAH Community Survey Results – One-on-One

RESPONDENT GROUPS:

Group	Invited Participants	Respondents	Response Rate
State Agencies	14	5	36 %
Federal Agencies	5	2	40 %
Tribal Governments	13	3	23 %
Industry	13	2	15 %
Academic	13	5	38 %
Funding	4	1	25 %
Environmental/ Education	8	3	37 %
	70	23	33 %

OAH Community Survey Results - Online

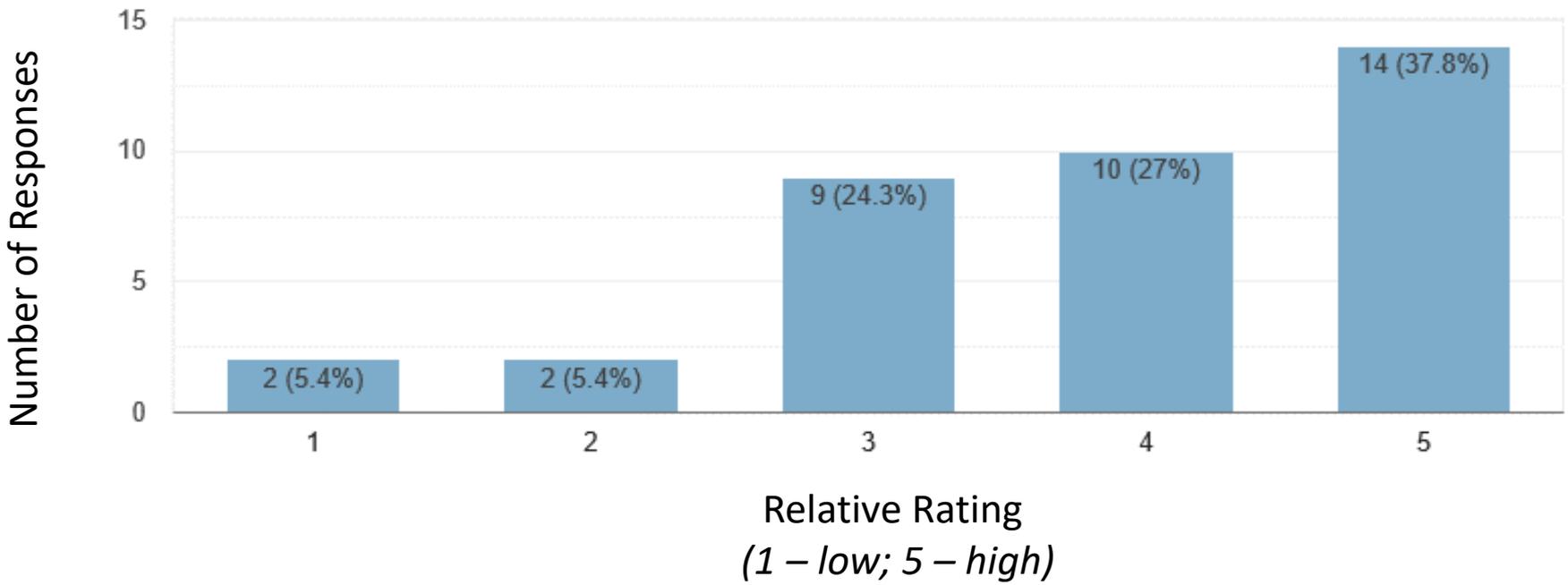
How would you classify your level of interaction with the Oregon OAH Council?
Please click all options that apply.



OAH Community Survey Results - Online

Question 1)

In your opinion, **are changing OAH conditions currently impacting the natural resources and ecosystems** that you monitor, manage, or use?



Average response rate: 3.86 ± 1.16

OAH Community Survey Results – Online

Question 2)

How concerned are you personally, about the future impacts of OAH on Oregon's natural resources and ecosystems?

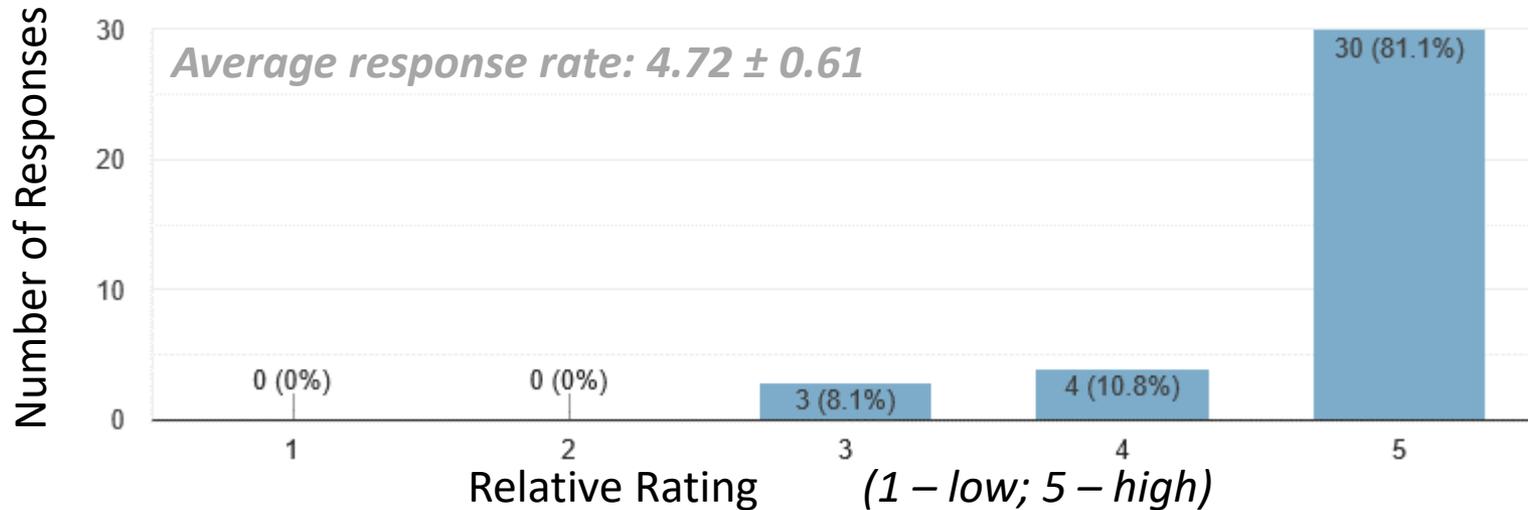
Question 3)

How concerned is your organization, agency, constituents, or industry about the future impacts of OAH on Oregon's natural resources and ecosystems?

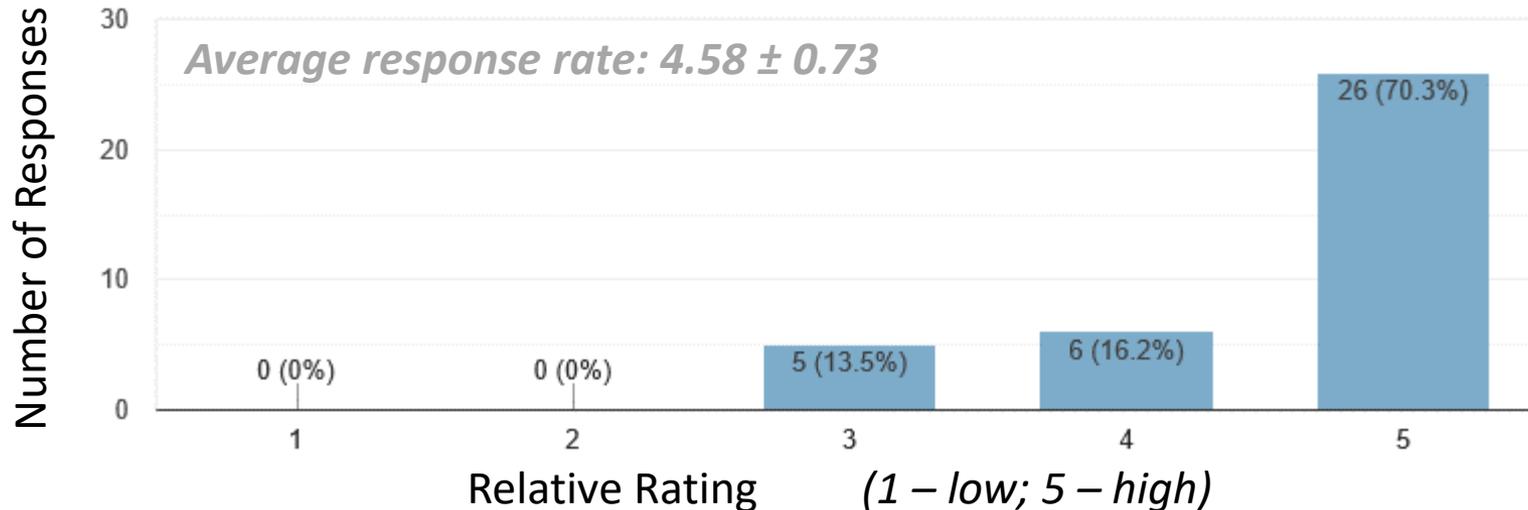
OAH Community Survey Results – Online

Question 2) How concerned are you

Paired t-test: $p=0.032$



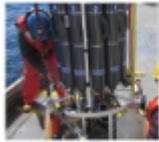
Question 3) How concerned is your organization



OAH Community Survey Results – Online

Questions 4-9)

Prioritize the following 5 theme areas identified in the OAH Council Report using a weighted rank scale in the order of importance relative to the natural resources and ecosystems that you monitor, manage, or use. You may use the same ranking for more than one theme area.



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

OAH Community Survey Results – Online

Questions 4-8)

Theme	Average Response	Grouping
Theme 1	4.46 ± 0.84	1
Theme 2	4.00 ± 1.22	1 & 2
Theme 3	4.11 ± 1.10	1 & 2
Theme 4	3.76 ± 1.14	2
Theme 5	4.08 ± 0.86	2

Repeated Measures ANOVA: p=0.037, f= 2.643

OAH Community Survey Results - Online

Questions 9) Please briefly explain why you ranked the 5 theme areas as you did.

TEXT WAS CODED:

Scale of Problem –

Global

Not Local

National

Lack of Knowledge–

Do not know

Need more data

Can not show attribution

Sense of Urgency –

Cusp

Still time

Desperate need

Too late

Lack of Control –

Too large

Too Complicated

Too many parts

Interconnection of Actions –

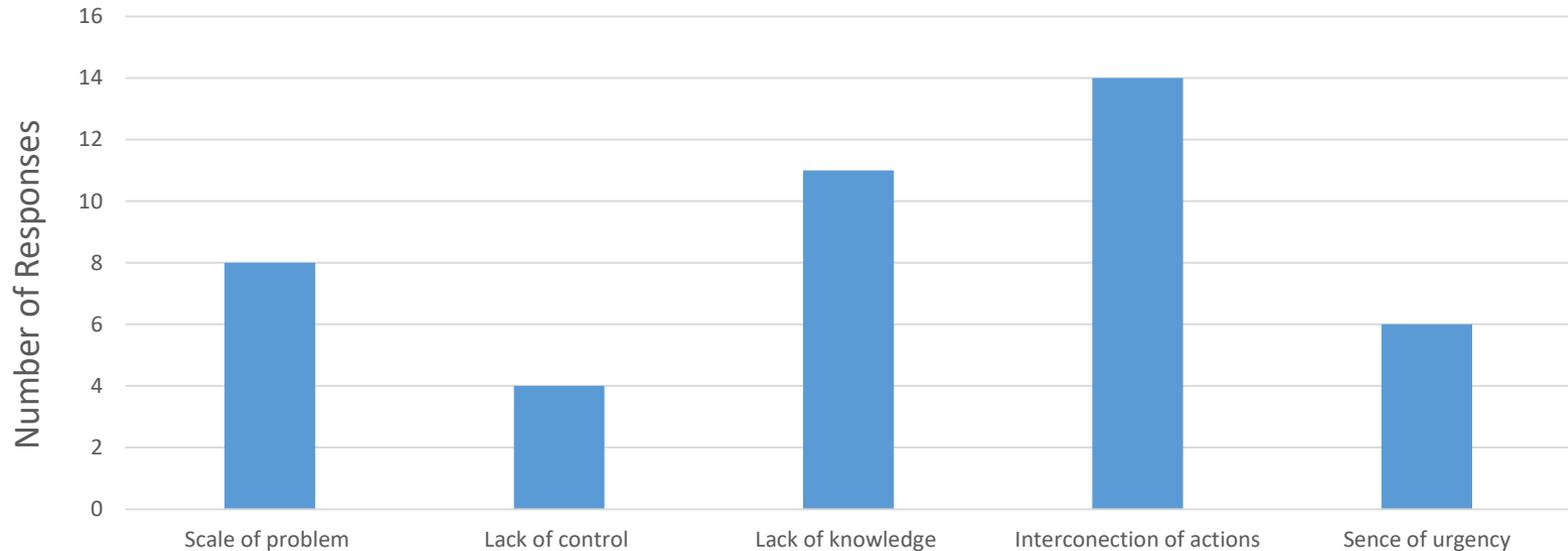
Together

Equally important

Need one for the other

OAH Community Survey Results – Online

Questions 9)



“None of these are unimportant, but working toward adaptation, resilience seems most appropriate. CO2 reduction is critical, but since there is already so much stored and to be upwelled, we are compelled to respond to coming challenge as we try to reduce new CO2.”

Interconnection of actions, Sense of urgency

Typed response to answer: 33 respondents from 37

Respondents may choose multiple responses

OAH Community Survey Results – Online

Questions 9) Please briefly explain why you ranked the 5 theme areas as you did.

TEXT WAS CODED:

Types of Impacts –

“People”

Food supply

Traditional knowledge

Communities

“Economies”

Money

Fish supply

Jobs

“Environments”

Loss of diversity

Animals moving away

Fewer animals homes

Root of Problem –

“Land”

Run off

Agriculture

“Industrial”

CO₂

Emissions

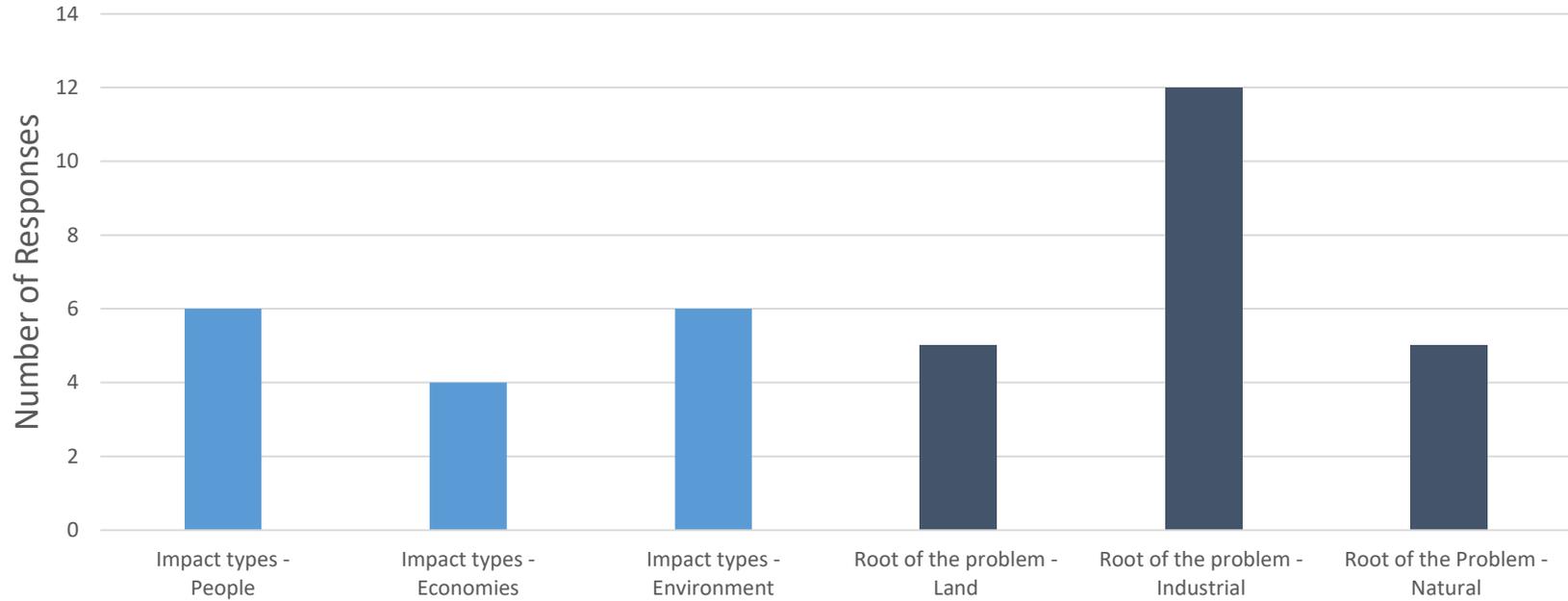
Coal

“Natural”

Upwelling

OAH Community Survey Results – Online

Questions 9)



“Because OAH is affecting not only the ocean, is affecting the coastal area, the forest, the tourism and the economy.”

Impact types

“All of the Themes are important but reducing green house gas and developing a technical response seemed primary actions that need investment. “

Root of the problem

Typed response to answer: 33 respondents from 37

Respondents may choose multiple responses

OAH Community Survey Results – One-on-One

Question 4) Which OAH action, recommendation, or topic do you think was most important in the OAH Council report, relative to the ecosystem or natural resource you monitor, manage, or use?

Common ideas included:

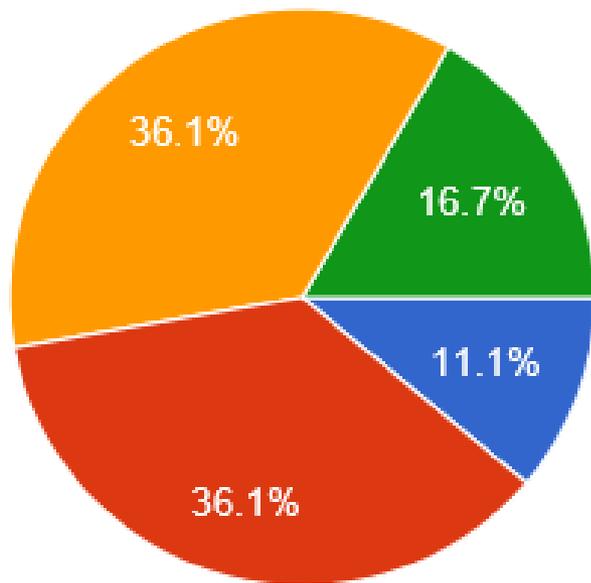
- The report was so large there are many important actions
- It has been so long since I had time to read the report
- The report was not easy to read, and it was hard to see myself in the actions
- **We need to know more before we can act, but we need to act before it is too late**

This question was one of the most skipped questions on the survey

OAH Community Survey Results - Online

Question 10)

Has your organization, agency, constituents, or industry considered or begun to develop actions to manage or mitigate OAH?



- Have not considered taking action
- Have considered taking action but have not started
- Have begun developing an approach and actions
- Have developed a plan and are now implementing the actions and plan

OAH Community Survey Results – One-on-One

Question 3

In question 10 of the online survey, you stated that your organization, agency, constituents, or industry has _____ (not considered/considered/begun/completed) _____ planning for OAH impacts (adaptation and/or mitigation). Can you briefly explain what has helped/or hindered your organization, agency, constituents, or industry planning for OAH impacts?

Resources -

Monetary funds
Intellectual capacity

Regulatory/Mission Mandates -

Administrative guidance or structure
Regulatory mandate

Conception of Urgency -

Quantifying the costs of inaction now



THEME 5

Commit Resources to Ocean Acidification and Hypoxia Actions. Support a sustained, long-term approach to addressing OAH including a policy declaration, funding for actions that require additional capacity, and reinforcement of Oregon's intellectual capital to meet future challenges.

OAH Community Survey Results – One-on-One

Question 6

What recommendations do you have, for providing the funding needed by the State to better understand OAH science, impacts and solutions? Do you have ideas on how to diversify the portfolio of funding sources?

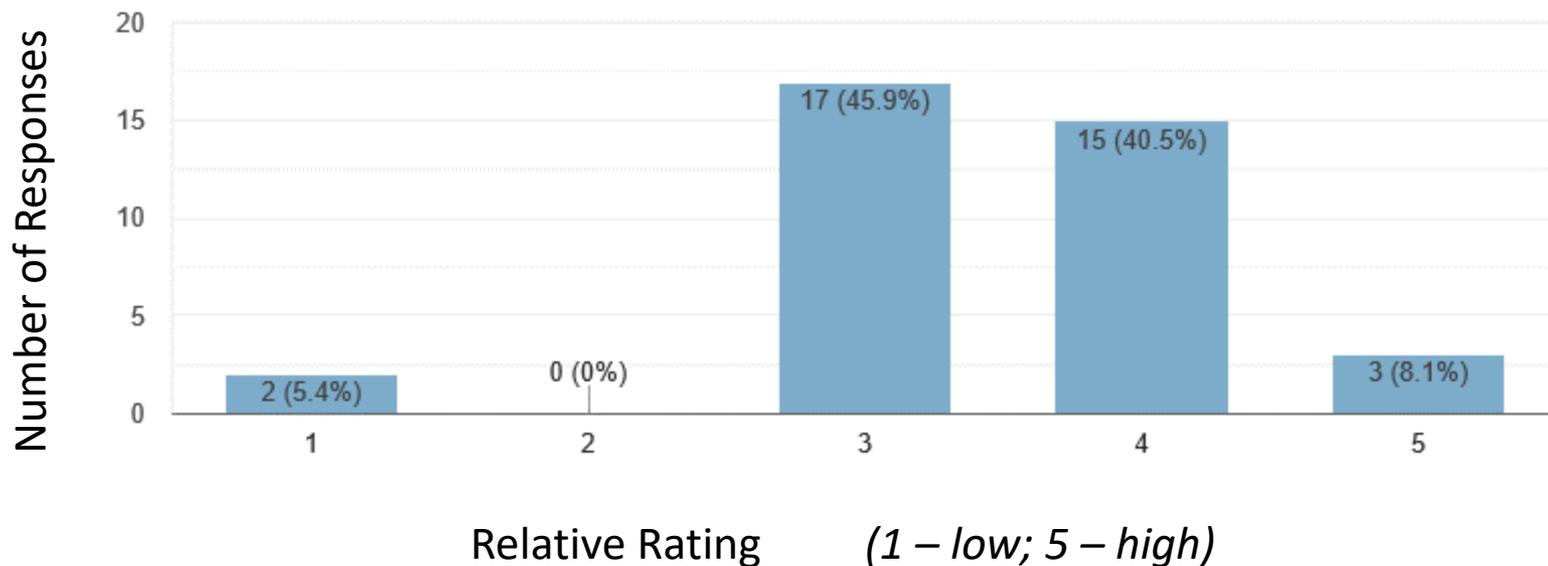
Common ideas included:

- Public / Academic / Agency partnerships are key to maximizing current resources for both science and communications - this should extend beyond state resources to tap into regional and federal resources.
- The most common response to increasing diversity of funding was through the cap-and-invest bill (HB2020)

OAH Community Survey Results - Online

Question 11)

Does your organization, agency, constituents, or industry currently have easy or convenient access to OAH-relevant data and information that you want to use in management, policy, or business decisions?



Average response rate: 3.44 ± 0.87

OAH Community Survey Results – Online

Questions 12-18)

Please prioritize the following audiences identified in the OAH Council Report using a weighted rank scale in the order of importance for keeping up-to-date on OAH science, impacts and solutions. You may use the same ranking for more than one audience.



The "So What?" Prism. Adapted from *Escape from the Ivory Tower: A Guide to Making Your Science Matter*, by Nancy Baron (Island Press, 2010).

OAH Community Survey Results – Online

Questions 12-18)

Audience	Average Response	Group
Policy Makers and legislative staff	4.68 ± 0.47	1
At risk industries and professions	4.62 ± 0.59	1
K-12 school educators and students	3.11 ± 0.88	2
Academics and researchers	3.86 ± 1.16	3
Media	3.68 ± 0.94	2, 3, 4
Local government representatives	3.97 ± 1.04	4, 3
Informal education venues	3.11 ± 0.93	4

Repeated measures ANOVA: p=0.001 f=16.49

OAH Community Survey Results – Online

Questions 19) Please briefly explain why you ranked the above audiences as you did.

TEXT WAS CODED:

Perception to Act –

Could do things

Actively move

Capable to provide impute

Magnitude of Impacts –

Directly affected

Affect constituents

Livelihoods lost

Lack of Need –

Irreverent

Find on its own

Abstract

Perception of Influence –

Respect

Lobby for change

Put into action

Amount of People –

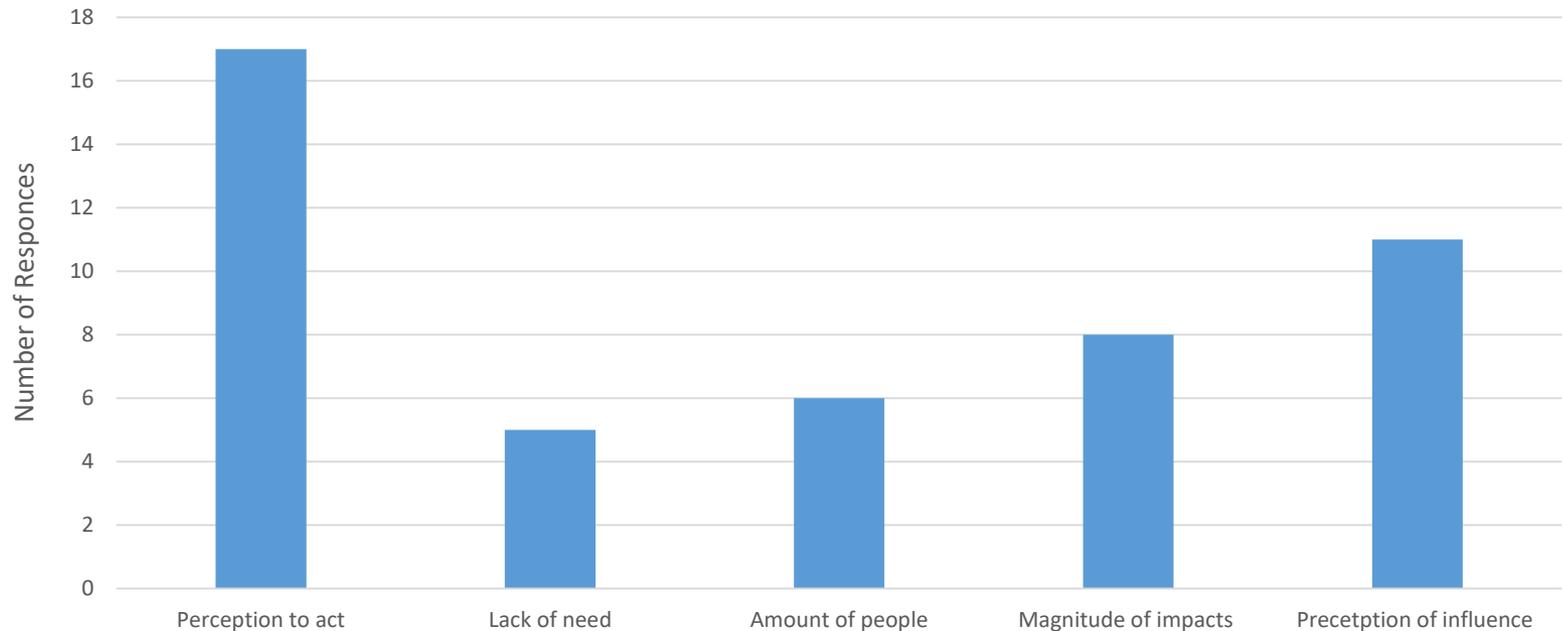
Reach Everyone

All

Large Group

OAH Community Survey Results - Online

Questions 19) Please briefly explain why you ranked the above audiences as you did.



“We need legislative action to change the current trajectory and I don't believe that we have the time to think school kids now will be able to do something 10-20 years from now when they may be in a position of power. The media will spin the findings however will get the most clicks.”

Perception to act, Lack of need

Typed response to answer: 29 respondents from 37

OAH Community Survey Results – One-on-One

Question 7)

What modes of communication would be most effective in reaching members of your organization, agency, constituency, or industry? For example, public meetings, brochures, websites, or educational events?

Format of Information –

Need both digital and in person
Visual component critical
Cartoons
Videos

Style of the materials–

Plan language
Connection to people

Accuracy of the Message –

Importance of correct information
Balance of not making the issue too “positive”
Do not make the issue too “negative”

OAH Community Survey Results - Online

Questions 20-24)

Please rank the following actions in order of importance relative to the natural resources and ecosystems that you monitor, manage, or use. You may use the same ranking for more than one action.

-  **Support and maintain Oregon's monitoring of OAH oceanographic metrics and biological response metrics**
(Actions 1.1.a/c)
-  **Incorporate OAH into CO₂ management and mitigation discussions in the state** (Action 2.1.b)
-  **Support new initiatives to promote natural ecosystem resilience** (Actions 3.2.a/b)
-  **Keep legislators and policy-makers up-to-date on the science, impacts of and solutions for OAH** (Action 4.2.a)
-  **Develop high-level policy guidance for the state's government agencies on prioritizing OAH in agency workload**
(Action 5.1.a)

OAH Community Survey Results - Online

Questions 20-24)

Audience	Average Response Rate	Group
Actions 1.1a/c	4.57 ± 0.60	1
Action 2.1.b	4.05 ± 1.02	1, 2
Action 3.2a/b	3.68 ± 1.16	2
Action 4.2a	4.13 ± 1.08	1, 2
Action 5.1a	4.30 ± 0.81	1

Repeated measures ANOVA: $p=0.002$, $f= 4.34$

OAH Community Survey Results - Online

Questions 25) Please briefly explain why you ranked the above actions as you did.

Mention of SAV – 10 responses

“I see data as the backbone for addressing OAH in a sound way, and requiring OR agencies to pay attention to OAH will help with solutions and mitigation. SAV helps ecosystems, but I'm not sure I buy the concept that it will really buffer OA.”

“Seagrass and macroalgae are not effective long-term carbon-sequestration solutions. There are many reasons to protect these ecosystems, but 'blue carbon' is not one of them.”

“Mitigation strategies for SAV may be a drop in the bucket for carbon sequestration but offer critical additional ecological benefits for marine and estuarine species habitat and ecosystem resilience. For these reasons, conservation and restoration strategies for SAV should be prioritized.”

Typed response to answer: 24 respondents from 37

OAH Community Survey Results - Online

Questions 25) Please briefly explain why you ranked the above actions as you did.

Mention of Carbon – 9 responses

“We have peoples attention with Carbon, but they are not making the ocean link. This needs to be strengthened.”

“I think understanding the issues and practical approaches to adaption or mitigation at the ecosystem level is most appropriate. Blanket CO2 management I think is too blunt an instrument. Most of Oregon would be burdened by these with a unclear benefit for few. “

Typed response to answer: 24 respondents from 37

OAH Community Survey Results – One-on-One

Question 5) Are there any actions, recommendations, or topics that you think should have been included in the Oregon OAH Council Report, but were not?

Common ideas included:

- Developing a network of knowledge “ambassadors” to aid with collection of data and the communication of information
- Engage tribal governments more in planning and decision processes
- Strengthen the importance of Social science in our action plan – understanding what will be happening to the people
- Develop a Oregon focused OAH conference which brings together select groups of policy makers, stakeholders, and researchers every 5 years to update on the status of mitigation and adaptation progress
- Access to live data and information – live data portals and citizen science

This question was one of the most skipped questions on the survey

OAH Community Survey Results

SUMMARY

Interconnection was a common idea in most responses –

- Interconnection of actions and needs, we can not address the issue without addressing all themes together.

Lack of Control was a common idea in most responses –

- OAH is a global problem was a common response to ranking theme 2 and Action 2.1b lower than other themes and actions. There was a sense of urgency without the ability to act.
- The lack of control of compounding stressors.
- Respondents felt we needed to communicate best with those who have influence and ability to act (Policy makers and industries who can lobby)

OAH Community Survey Results

SUMMARY

Lack of Knowledge was a common idea in most responses –

- Respondents feel they do not have access to information they need to address OAH – it is unclear if this data is not collected or is not accessible in a usable format.
- Theme 1 and Action 1.1a/c were both ranked highest, there was a common idea that we need more information on long term trends and attribution of OAH on biology.
- Theme 3 Action 3.2a/b were ranked low, because although most people recognized the habitat benefits of SAV there was a lack of knowledge on mitigation benefits.

OAH Community Survey Results

What are the next steps ?

