

Oregon Department of Fish and Wildlife

July 10, 2020

Exhibit C

Climate and Ocean Change Policy

Attachment 3

Addendum 1

Note: Additional Proposed Text in Red

ATTACHMENT 3

ADDENDUM 1

Division 900

Climate and Ocean Change Policy

635-900-0001

Purpose of the Climate and Ocean Change Policy

The Earth's climate and oceans are changing. The Fish and Wildlife Commission concurs with the *Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* that the current warming trend is of particular significance because most of it is extremely likely (greater than 95 percent probability) to be the result of human activity since the mid-20th century and proceeding at a rate that is unprecedented over decades to millennia.

Oregon is already experiencing changes that are consistent with changes observed and projected globally, such as increased average air and water temperatures, disrupted precipitation patterns, and increased ocean acidification and hypoxia. The purpose of this policy is to ensure that the Department prepares for and responds appropriately to the impacts of a changing climate and ocean on fish, wildlife, their habitats, and their use and enjoyment by current and future Oregonians.

Stat Authority: ORS 496.012, 496.138, 506.036 and 506.109

Stats Implemented: ORS 496.012, 506.036 and 506.109.

635-900-0003

Key ~~Expectations~~ Assumptions of Underpinning the Climate and Ocean Change Policy

(1) Based on current science, we ~~assume~~ expect that air temperatures will continue to increase and Oregon's coastal waters will continue to acidify and become more hypoxic.

These changes will result in cascading impacts that, in general, include:

(a) Changing precipitation patterns, including a decreasing trend for snowpack volume, resulting in changes in streamflow characterized by increased frequency and severity of flooding, increased flows in winter, and decreased flows in late summer and fall;

(b) An increasing trend in fresh- and marine- water temperatures;

1 (c) A change in wildfire patterns, including an increase in the frequency and
2 magnitude of intense wildfires;

3 (d) Changing ocean currents and stratification, including changes in the frequency
4 and magnitude of coastal upwelling; and

5 (e) Rising average ocean levels.

6 (2) We expect that these changes will not occur evenly in all habitats and that some species,
7 biological communities, and habitats will have characteristics that make them more
8 resistant to these changes. We also expect that these changes will not occur evenly through
9 time. The frequency of years in which Oregon's fish and wildlife experience good
10 conditions will diminish and the frequency and magnitude of poor environmental
11 conditions will increase. As a result of these changes, we expect a number of impacts,
12 including but not limited to:

13 (a) Changes in the distribution and range of many fish and wildlife populations;

14 (b) Changes in food-webs resulting in negative effects on some key species and long
15 term shifts of key ecosystems;

16 (c) Conditions in some areas will become unsuitable to support self-sustaining
17 populations of vulnerable native species; and

18 (d) These changes will favor many non-native or invasive species, as well as bacteria,
19 viruses, and parasites, and that this will negatively impact native species.

20 (3) While we are already observing some of these changes and expect this to continue for
21 many decades, even if greenhouse gas reduction efforts are successful, we recognize that
22 there is uncertainty in the timing and extent of impacts to habitat, in the ability of fish and
23 wildlife to adapt to changes, and in how changes in one part of a food web may impact the
24 balance of ecosystems.

25 Stat Authority: ORS 496.012, 496.138, 506.036 and 506.109

26 Stats Implemented: ORS 496.012, 506.036 and 506.109.

27
28 635-900-0005

29 Goals of the Climate and Ocean Change Policy

30 (1) Ensure the Department understands the risks and opportunities associated with
31 changing climate and ocean conditions and incorporates that understanding into all of the

1 Department's actions to maximize the conservation, use, and enjoyment of fish, wildlife,
2 and their habitats for present and future generations.

3 (2) Provide leadership toward a coordinated statewide and regional response that
4 minimizes the impacts of changing climate and ocean conditions on Oregon's natural
5 resources and the communities, culture and economies reliant on them, and allows for
6 sustainable use of natural resources in the future.

7 (3) Increase public awareness about the current and future impacts of climate and ocean
8 change on fish, wildlife, and their habitats and the value of resilient habitats for fish and
9 wildlife, clean air and water, flood attenuation, recreational opportunities, and the natural
10 resources economy.

11 (4) Provide leadership towards achieving the reductions in global greenhouse gases
12 emissions that will be needed to prevent worsening of the impacts by reducing the
13 Department's carbon footprint to the extent practicable, with the goal of reaching carbon
14 neutrality.

15 Stat Authority: ORS 496.012, 496.138, 506.036 and 506.109

16 Stats Implemented: ORS 496.012, 506.036 and 506.109.

17
18 635-900-0007

19 Implementation of the Climate and Ocean Change Policy

20 (1) The Department should, as appropriate, lead a coordinated, long term state-wide
21 response consistent with direction in 635-900-0010 (Statewide Coordination of a Climate
22 and Ocean Change Response) of this rule.

23 (2) The Department will integrate relevant climate and ocean change monitoring and
24 research needs into the planning, prioritization, and implementation of the Department's
25 science in accordance with the Key Principles in 635-900-0015 (Key Science Principles).

26 (3) The Department will incorporate the relevant Key Principles in 635-900-0013 through
27 635-900-0017 (all Key Principles) into any new Department plans or policies and will revise
28 any existing plans or policies to incorporate these principles as needed.

29 (4) The Department will apply the Key Principles in 635-900-0013 through 635-900-0017
30 (all Key Principles) when ~~the~~ acting in a consultation, regulatory, or advisory role and
31 when prioritizing the use of department resources.

1 (5) The Department will develop a carbon reduction plan by 2022 that outlines how the
2 Department will reduce its own net carbon emissions, with the goal of being carbon neutral
3 by mid-century, through the construction, purchasing, and use of energy-efficient facilities,
4 structures, vehicles, and equipment and by managing Department owned lands to
5 sequester carbon. As a precursor to the development of a plan, the Department should
6 assess its carbon footprint within a year from adoption of this policy and thereafter on a
7 recurring basis not longer than 5 years.

8 (67) The Department will develop a communications strategy and coordinate with local and
9 regional partners to raise awareness of the impacts of climate and ocean change, the steps
10 the Department is taking to counteract and adapt to the impacts on fish, wildlife and their
11 habitats, and the value of resilient natural areas for both fish and wildlife, clean air and
12 water, recreational opportunities, and the natural resource economy.

13 Stat Authority: ORS 496.012, 496.138, 506.036 and 506.109

14 Stats Implemented: ORS 496.012, 506.036 and 506.109.

15
16 635-900-0010

17 Statewide Coordination of a Climate and Ocean Change Response

18 (1) The Department should exhibit leadership in facilitating a coordinated statewide
19 response to minimizing the impacts of the changing climate and ocean conditions on
20 Oregon's natural resources and the people who depend on those resources.

21 (2) The Department should work with other executive branch natural resource agencies
22 and appropriate federal, tribal, and local partners to complete inventories of the State's
23 natural resource assets. The inventories should also evaluate the vulnerability of our assets
24 and/or their utility in improving preparedness to changing climate and ocean conditions,
25 and identify areas for priority investment of resources.

26 (3) The Department should work with other state, federal, and tribal natural resource
27 agencies, academic institutions, and non-governmental organizations to ensure research
28 and monitoring related to changing climate and ocean conditions is conducted efficiently
29 by:

30 (a) Identifying existing and new foundational data that are needed by multiple
31 agencies to adequately monitor and project the impacts of changing climate and ocean
32 conditions;

1 (b) Coordinating the collection, storage, and analysis of this data; and

2 (c) Ensuring there is appropriate consistency in the use of climate models and
3 emissions scenarios.

4 (4) The Department should work with other executive branch agencies, to the extent
5 possible, to determine clear priorities for vulnerable natural resources within and across
6 geographical areas of the state then coordinate implementation of regulatory and non-
7 regulatory authorities consistent with these priorities. This collective effort should ~~strive~~
8 for a balanced response across sectors seek to address legacy impacts to fish and wildlife in
9 priority areas and avoiding or minimizing further negative outcomes and avoid or
10 minimize negative outcomes for fish and wildlife populations statewide. This collective
11 effort should include collaboration with local, regional and tribal jurisdictions.

12 (5) The Department should work with other state and federal agencies and local
13 governments, to the extent possible, to review incentives and regulations that relate to the
14 protection, enhancement, and management of fish and wildlife habitat with the goal of
15 ensuring that the appropriate mechanisms exist to:

16 (a) Achieve protections and enhancement in priority areas for fish and wildlife,
17 water supply, and mitigation of natural hazards;

18 (b) Encourage economic development that sustains essential ecosystems while
19 providing preparedness for the impacts of the changing climate and ocean; and

20 (c) Ensure that voluntary and regulatory actions are coordinated among agencies.

21 (6) The Department should work with the public and landowners to encourage or
22 incentivize habitat management that protects and enhances priority areas for fish and
23 wildlife as well as increasing carbon sequestration. This effort should strive for outcomes
24 that provide multiple benefits.

25 Stat Authority: ORS 496.012, 496.138, 506.036 and 506.109

26 Stats Implemented: ORS 496.012, 506.036 and 506.109.

27
28 635-900-0013

29 Climate and Ocean Change Key ~~Coordination~~ Principles for Coordination

30 (1) The Department should collaborate and partner with other agencies, tribes,
31 stakeholders, and academics to achieve successful implementation of this policy.

1 **(2) Collaborations and partnerships should span scientific expertise, stakeholder interests**
2 **and regulatory authorities.**

3 **Stat Authority:** ORS 496.012, 496.138, 506.036 and 506.109

4 **Stats Implemented:** ORS 496.012, 506.036 and 506.109.

5
6 **635-900-0015**

7 **Climate and Ocean Change Key ~~Science~~ Principles for Science.**

8 **(1) The Department should ensure that it is monitoring the appropriate metrics to**
9 **document the changing climate and ocean conditions (e.g., flow, temperature, dissolved**
10 **oxygen, ocean pH) and the impacts of those changes on fish, wildlife, and their habitats**
11 **(e.g., distribution, survival, disease).**

12 **(2) The Department should use appropriate analytic approaches to determine how species,**
13 **biological communities, and habitats may respond to the changes in climate and ocean**
14 **conditions on a time horizon that is relevant to a specific species' life history.**

15 **(3) The Department should conduct ongoing research to reduce key uncertainties related to**
16 **the response of fish, wildlife, or their habitats to climate and ocean change.**

17 **(4) The Department should communicate clearly about the uncertainty involved in**
18 **predicting both the likely changes in climate and ocean conditions and the impacts on fish**
19 **and wildlife to allow decision makers to take action in an informed way.**

20 **(5) The Department should consider modifying the timing and location of research and**
21 **monitoring during periods of adverse environmental conditions that are stressful to**
22 **individuals. Handling of live animals should balance the benefits of the research and**
23 **monitoring against the additional impacts to the animal, as well as risks to the population.**

24 **Stat Authority:** ORS 496.012, 496.138, 506.036 and 506.109

25 **Stats Implemented:** ORS 496.012, 506.036 and 506.109.

26
27 **635-900-0017**

28 **Climate and Ocean Change Key Principles for Species and Habitat Management Principles**

29 **(1) The ~~Department's principle obligation is the~~ conservation of naturally produced native**
30 **species in the geographic areas to which they are indigenous is a primary obligation of the**
31 **Department. It is on this platform of conservation that the social and economic benefits of**
32 **harvest and viewing are realized. As such, the ability to utilize fish and wildlife for harvest**

1 or viewing is dependent on the health of wild populations. Conservation and use are not
2 mutually exclusive, and can be fully integrated through risk management that scales use
3 appropriately to avoid undermining conservation.

4 (2) The Department should, to the extent predictions are available, incorporate **into all of**
5 **its actions** an understanding of predicted future conditions and how species may respond to
6 these conditions on a time horizon that is relevant to specific species' life history. These
7 responses may include range shifts, local extirpations, altered species compositions, and
8 elevated life-stage vulnerabilities. Management goals, ~~and~~ strategies, **and actions** will
9 consider this long view, but allow for near term conservation, utilization, or transition in an
10 adaptive management approach.

11 (3) The Department may manage a species whose range naturally expands into or within
12 Oregon as a result of the changing climate and ocean for conservation or utilization
13 purposes in the new area, provided this management does not conflict with the
14 conservation of naturally produced native species in the new area. When a species range
15 shift or expansion is likely to have a negative effect on native species conservation in the
16 new area, the Department will strive to limit these expansions to the extent practicable,
17 unless otherwise directed in a Commission adopted plan.

18 (4) The Department should proceed with a precautionary approach that is most likely to
19 result in conservation of native species across as broad a range of future conditions as
20 possible, including when faced with scientific and management uncertainty.

21 (5) The Department should prioritize conservation actions for native species and their
22 habitats to be most efficient **and effective** in achieving conservation outcomes. In some
23 instances, naturally-produced, native species will be unable to persist in an area because
24 the impacts of changing climate and ocean conditions are practicably irreversible. In these
25 instances, the Department, only through the Commission, may consider modification of the
26 conservation approach as long as healthy populations of the species exist elsewhere in the
27 range and the modification is in compliance with other state and federal laws.

28 (6) The Department should plan for real time adaptive management of hatcheries, wildlife
29 areas, and harvest to account for potential impacts to fish and wildlife populations during
30 periods of adverse environmental conditions, such as high water temperature, low river
31 flows, low oxygen water, or fire.

1 **(7) The Department should generally use the following approach when implementing**
2 **management actions that relate to fish and wildlife habitat, unless directed otherwise**
3 **through a Commission adopted plan:**

4 **(a) Give priority to protecting habitat for native fish and wildlife that is currently**
5 **high functioning and projected to remain or become high functioning despite the**
6 **impacts of changing climate and ocean conditions;**

7 **(b) Give priority to restoration and enhancement actions in areas where such**
8 **actions would result in creation of high functioning habitat despite the impacts of**
9 **changing climate and ocean conditions; and**

10 **(c) Assign lower priority to actions in areas where projected habitat changes caused**
11 **by climate and/or ocean change are likely to exceed native species' ability to persist.**

12 **(d) Support actions that maximize carbon sequestration as long as such actions do**
13 **not result in loss of habitat to fish and wildlife.**

14 **Stat Authority:** ORS 496.012, 496.138, 506.036 and 506.109

15 **Stats Implemented:** ORS 496.012, 506.036 and 506.109.

16
17 **635-900-0020**

18 **Climate and Ocean Change Key ~~Principles for Department Operations~~ Principles**

19 **(1) The Department will consider the risk from the impacts of climate and ocean change in**
20 **the design of new facilities or structures and identify existing facilities or structures at high**
21 **risk of failure due to the impacts of a changing climate and mitigate those risks over time.**

22 **(2) The Department will, to the extent practicable, operate equipment and facilities in such**
23 **a way that they do not exacerbate the impacts of climate and ocean change on fish, wildlife**
24 **and their habitats.**

25 **(3) The Department will operate its own equipment and facilities in such a way as to reduce**
26 **carbon outputs and/or sequester carbon as directed in a carbon reduction plan.**

27
28 **Stat Authority:** ORS 496.012, 496.138, 506.036 and 506.109

29 **Stats Implemented:** ORS 496.012, 506.036 and 506.109.