

Oregon Department of Fish and Wildlife
Report to Governor Kate Brown as Required by E.O. 20-04

The Earth's climate and oceans are changing because of activities that emit greenhouse gases into the atmosphere. 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. These changes result in impacts such as increased frequency and intensity of drought and wildfire, reduced and protracted base stream flows, extreme air and water temperatures, and disrupted ocean currents and species distributions. These changing climate and ocean conditions are undermining the ability of lands and waters to support Oregon's native fish and wildlife and the cultural and economic benefits they provide. This is hindering the Department's ability to achieve its mission and meet its statutory mandates to manage the public trust resources in its care.

The mission of the Department of Fish and Wildlife is to protect and enhance Oregon's fish and wildlife and their habitats for use and enjoyment by present and future generations. Reducing Oregon's greenhouse gas emissions is a critical step in safeguarding our future, but we must also prepare for the impacts to Oregon's lands and waters that are already occurring and are certain to occur in the near future, especially ocean acidification and hypoxia, more frequent and intense wildfires, warming water temperatures, and reductions in summer or fall water supplies.

This report summarizes ODFW's draft Climate & Ocean Change Policy, which, once adopted, will be the framework under which the Department will evaluate the impacts of climate change on the resources under ODFW's stewardship, adopt management practices to safeguard those resources, and minimize the impacts to communities that depend on these resources. The Policy also includes an ambitious goal for Department's operations reaching carbon neutrality. I have prioritized development of this policy and believe it will help ODFW meet E.O. 20-04's directive for agencies, "to consider and integrate climate change, climate change impacts, and the state's GHG emissions reduction goals into their planning, budgets, investments, and policy making decisions."

Some of the specific actions by which the Department will pursue greenhouse gas reductions are included in this report as well as recommendations for other opportunities to reduce GHG emissions and mitigate climate change impacts across the state.

[Section 1. ODFW's Policy Approach to Ensuring Use and Enjoyment of Oregon's Fish, Wildlife, and Their Habitats for All Oregonians](#)

The Department of Fish and Wildlife has developed a draft Climate and Ocean Change Policy. The intent of the Policy is to provide overarching guidance on a coordinated, effective, and efficient response to the changing climate and ocean conditions by:

- Coordinating the Department's response to the impacts of the changing climate and ocean with other state, federal, local, & tribal entities;
- Incorporating information related to climate and ocean change into the Department's science and resource management;
- Preparing the Department's assets and infrastructure for the impacts of a changing climate and ocean; and

- Reducing the Department’s contribution to the underlying causes of climate and ocean change by pursuing carbon neutrality.

The Fish and Wildlife Commission reviewed a draft of the policy and heard public testimony on January 17, 2020. Adoption of the revised policy was scheduled for April 17, but was delayed until July 10 in response to the COVID-19 situation. The Department has pursued robust public engagement on the need for and the provisions of this policy and anticipates that this rulemaking can happen in 2020.

The Policy is designed to integrate with all other decisions that will be made by the Department, rather than as a stand-alone plan or strategy. It defines Key Principles for coordination, science, resource management, and operations. Once adopted, these Key Principles will guide how climate change, climate change impacts, and GHG emissions reduction goals will be considered and integrated in planning, budgets, investments, consultation, and policy making decisions. The Department is currently incorporating the Key Principles of the Policy into numerous ongoing planning processes.

As written, this Policy can be implemented with existing financial resources and can be scaled up if new resources become available.

Example: Safeguarding instream flows for fish and wildlife

One Key Principle of the draft Policy is to give priority to protecting, restoring and enhancing habitats that will be resilient and/or help buffer the impacts of climate and ocean change. ODFW is currently incorporating this Key principle into our planning and implementation by conducting stream flow and temperature studies to identify species’ needs and by mapping current and future stream flow and temperature regimes across the state. This information allows for the identification of priority areas for protection and restoration of stream flow and temperature (among other actions). This assessment will guide how ODFW implements authority to protect instream flows as well as building partnerships with water communities for restoration of cold, clean water in these priority areas. Such a strategic, science-based approach is intended to minimize the impacts of climate change to both fish and wildlife and to the cultural and economic benefits they provide.

Communication

Another important component of the draft Policy is direction to staff to engage in conversations with Oregonians about how climate and ocean change affects the fish, wildlife, and their habitats that Oregonians care about to build support for adaptive actions the state must take including future greenhouse gas reduction efforts. Fish, wildlife, and Oregon’s outdoors are a key way that Oregonians connect with nature and may be able to observe and understand the impacts of climate change.

Example: ODFW Climate Communications Plan

The draft Policy directs the Department to develop a communications plan that will guide how and when the Department shares information with the public about the impacts of the changing climate and ocean on Oregon’s fish and wildlife. The Department has used social media channels to tell the story of climate change in a variety of ways. The communications plan will identify strategic opportunities for these types of communications in the future and ensure that consistent information about climate change is readily available to ODFW staff to empower them to tell the story.

Connection to Environmental Justice and underserved communities

The Department can support underrepresented and impacted communities in three ways:

1. Equitable access to fishing, hunting, and wildlife watching opportunities;
2. Ensuring opportunities to engage in public policy making processes; and
3. Taking actions that protect or restore ecosystems and their processes, which enhance habitat for fish and wildlife and benefit Oregonians, including underserved or disadvantaged communities. For example, many vulnerable Oregonians in coastal communities are employed by the seafood industry. Maintaining profitable commercial fisheries in light of ocean acidification and other climate-driven risks will rely on sound, science-based assessments and a management approach that supports these jobs in to the future.

Planned Actions: The Department is currently participating in development of the new statewide Climate Change Adaptation Framework. Part of the Framework will include a Diversity Equity and Inclusion Blueprint for all state agencies to use as Oregon implements climate adaptation planning. The Department is committed to following the guidance by incorporating it through the three pathways identified above during implementation of the Climate and Ocean Change policy.

Promoting low-carbon, wildlife-associated recreation

Outdoor recreation carries a greenhouse gas emissions cost associated with travel to and from recreation sites. To minimize this, the Department has been working with Oregon State Marine Board (OSMB) to increase investment in the development of fishing access for non-motorized boating. Additionally, the Department has developed a range of communications materials that highlight local opportunities to engage in wildlife-associated recreation such as, “50 places to fish within 50 miles of Portland”. These communications highlight local opportunities that do not require extensive travel and the associated emissions.

Potential Actions: The Department, along with the OSMB could look for additional opportunities to incentivize low carbon fishing from canoes, kayaks, stand-up paddle boards, rafts, drift boats, float tubes, and catarafts, including future joint projects to create more non-motorized river access points. The Department could also pursue opportunities to encourage the use of electric vehicle and boats over gas-powered equipment.

Supporting a Coordinated, Statewide Approach to Preparing for the Impacts of Climate Change

The primary impacts to Oregon’s fish and wildlife from excess greenhouse gases in the atmosphere will manifest through changes and impacts on their habitat, which exists throughout Oregon’s lands and waters—all impacted by the actions of a variety of state agencies. One of the primary principles of the draft Policy is that ODFW should pursue a coordinated, statewide approach to climate adaptation, particularly with other agencies in the executive branch. The best outcomes for Oregon will be achieved if all agencies commit to shared priorities and identify and get ahead of areas of potential conflict. The draft Policy provides direction to ODFW staff to pursue this approach. Similar guidance to all agencies from the Governor’s office could ensure a balanced and coordinated response from the state across all sectors, maximizing state resources, minimizing conflicts, and being the most efficient that we can be as a state enterprise.

Example: Smart-Siting of Renewable Energy Development

Continued renewable energy development is anticipated and necessary in Oregon in the coming decades and will likely include solar energy, wind energy, wave energy, off-shore wind, and associated transmission line development. Developing these energy resources is a perfect example of the need to balance issues related to natural resources, land use, environmental impacts, noise concerns, current economic activity and cultural and archeological artifacts. ODFW is currently participating in ODOE's "Oregon Renewable Energy Siting Assessment" that will raise awareness of renewable energy compatibility needs and provide educational tools to identify potential project areas that have less conflict with wildlife habitat and high renewable energy development potential. Processes like these are valuable opportunities for state agencies to work together to find win-win scenarios, but would benefit from coordination across all issues and sectors to ensure decisions in one venue are not counteracted by those in another planning effort (e.g., coordinating between energy siting planning, place based planning for water, and outdoor recreation planning).

Box #1 – Recommendations on Preparing for the Impacts of Climate Change

Achieving a coordinated, statewide approach to preparing for the impacts of climate change will be challenging and could benefit from direction from the Governor's Office. Because State agencies are often fragmented by law, statutory authority, mission, and programs, it will be difficult to coordinate and optimize the adaptation response. Without a system of leadership and coordination, we may have:

- An unbalanced adaptation response that favors certain sectors or communities;
- An inefficient, potentially maladaptive, response that wastes implementation resources;
- Multiple agencies working towards different—and possibly conflicting—outcomes; and
- Delay in implementing critical adaptation measures resulting in increased impacts, increased costs and leaving Oregon's economy and environment unprepared for the impacts of climate change.

The ongoing statewide Climate Change Adaptation Framework effort has developed draft recommendations for a leadership structure and associated roles and responsibilities within the Natural Resource Cabinet. Prioritizing the formation of a Climate Adaptation Core team within that leadership structure will be key to managing the impacts of climate change in a balanced and meaningful way across the state. Even in the absence of new funding or reduced funding because of COVID-19, state agencies can do a great deal within existing authorities to incorporate adaptation and move the state forward. **The Department recommends that the Governor consider a companion Executive Order to E.O. 20-04 that directs state agencies to coordinate on a balanced, statewide response to the impacts of climate change across all sectors, maximizing state resources, minimizing conflicts, and being the most efficient that we can be as a state enterprise.**

To support this coordinated effort, the statewide Climate Change Adaptation Framework will recommend that **the state invest in the development of consistent, shared resources to guide agency's climate change responses** including sharing data, joint vulnerability assessments, and tools for collective decision-making.

Finally, the Department recommends that the **Governor create a limited duration or special assignment position to act as a facilitator for the Climate Adaptation Core Team.** Coordination on this scale

requires having a person who can maintain and shepherd the Governor’s vision for a climate-ready Oregon. This could be achieved with a new position or by rotating a current state employee in to that leadership role for a limited duration.

Section 2. Reducing Greenhouse Gas Emissions from Agency Operations

The draft Climate & Ocean Change Policy directs the Department to assess its current carbon footprint—accounting for greenhouse gas emissions from agency operations and sequestration on ODFW managed lands, then develop a plan that puts the Department on a pathway to carbon neutral by mid-century. For the purposes of this report, we are providing examples of steps the Department has already taken to reduce emissions, examples of actions we will consider during development of the carbon reduction plan, and recommendations the Governor may consider to support more rapid progress on the greenhouse gas emissions reduction goals established in E.O. 20-04.

Energy Efficiency & Renewable Energy Use

The Department is geographically dispersed with approximately 100 physical locations across the state, including district offices, research centers, fish hatcheries, maintenance shops, and wildlife areas. This diversity of physical locations requires a range of approaches to reducing emissions at the local level.

The Department of Fish and Wildlife’s headquarters in Salem generates energy with solar panels. The Department’s Hatchery and Engineering programs are leading the pursuit of efficient improvements to Department facilities. Recently upgraded hatchery facilities have included the installation of inline hydroelectric generators, where water that moves through the facility is used to generate power. One hatchery has this technology and another is under construction. The Department is also researching costs associated with installing solar panels at many Department facilities and has increased the use of solar and hydro generators to power remote fish and wildlife monitoring stations.

Procurement & Materials Handling

The Department will follow DAS’s *2019 Efficient Building Equipment Procurement Requirements* for procurement of appliances, electronics, food service, HVAC, lighting, water and plumbing. Additionally, ODFW’s Administrative Services Division is reducing emissions and costs associated with the printing and shipping of multiple products. Our recently adopted Electronic Licensing System eliminated the need for printing and shipping of specialty paper licenses and tags. This System is a great opportunity to move as many customers as possible to fully paperless sales and virtual interactions such as emails to customers instead of the traditional paper mailings. The Department also prints many paper copies of annual hunting and fishing regulations and has made efforts to reduce the number of pages (shipping weight) in recent years. This is another opportunity to encourage customers to switch to the online version to reduce emissions associated with the paper itself and shipping it around the state. In recent years, the number of printed copies has been reduced by 50% and the Department will continue to encourage customer transition.

Fleet Management

The Department will work with the DAS to meet the mandates of the Governor’s Executive Order 17-21 *Accelerating zero emission vehicle adoption in Oregon to reduce greenhouse gas emissions and address climate change*. There are two barriers to facilitating a transition to a zero emission fleet within ODFW. First is lack of charging capacity at ODFW offices and outside of major travel corridors in Oregon and second is the lack of electric versions of the heavy duty vehicles which form the bulk of ODFW’s fleet.

Addressing both of these will require support from DAS and the Governor's office. The Department presents a great opportunity for the state to pilot the use of electric trucks. Acquisition of these trucks would require support from an additional fund source. In the interim, the Department will explore other options to reduce driving such as promotion of virtual meetings (see below).

Greenhouse Gas Emissions Associated with Organizational Management

The current COVID-19 crisis is providing a valuable case study in the effectiveness and efficiency of the State of Oregon's workforce while telecommuting and provides a unique opportunity to assess the GHG impact of such a transition. If the State has substantively reduced emissions associated with commuting to and from work and in the course of work as well as those associated with heating, cooling, and lighting of buildings, we recommend developing regular opportunities, protocols, and technology to permanently expand teleworking and virtual meetings as an emissions reduction strategy consistent with continued delivery of State Services.

Potential actions: The COVID-19 crisis has highlighted the need to expand the Department's ability to hold public meetings or otherwise gather input virtually. The Department's recent Strategic Plan includes tactics on improving ways for people to engage with ODFW and to hold more efficient public meetings. This could include seeking to hold at least 1-2 Commission meetings per year virtually, expanding the use of online surveys or chat rooms to gather public feedback, and encouraging ODFW's variety of other boards and committees to hold a portion of all normally scheduled meetings virtually. As with promotion of teleworking, a shift towards online public engagement will require more consistent use of virtual meeting technology across state agencies to maintain security and compatibility. Staff and board members may benefit from training in running effective online meetings.

Box #2 – Recommendations on Reducing Greenhouse Gas Emissions from Agency Operations

While the Department is committed to reducing greenhouse gas emissions from agency operations through increased energy efficiency, adoption of renewable energy, procurement, fleet management, and organizational management, there are several actions that could be taken at the state level to advance the emissions reduction goals of Executive Order 20-04 and make more efficient use of available funds.

- **Revise existing OARs to include other green energy sources.** OAR 330-135-0010 directs agencies to spend 1% of any project over \$5 Million (previously \$1M) on green energy associated with solar, geothermal, or woody biomass. We recommend adding other green energy sources to this list (wind, wave, and inline hydro) and reducing the project cost threshold to a lower level to encourage more projects to participate.
- **Combine energy efficiency projects.** We recommend that the State review the current project-by-project approach to green energy installation and upgrades and identify opportunities for cost savings and improved green energy outcomes by combining project funds to complete larger energy projects.
- **Pair green energy with water conservation upgrades and other sustainability goals.** One of the key impacts of climate change will be water shortages at some locations and times. We recommend the State look for opportunities to pair green energy upgrades with water conservation technology to address both issues as well as considering other statewide sustainability metrics in combination with greenhouse gas emissions goals.

- ***Develop guidelines for low carbon building materials.*** We recommend the State conduct an evaluation of the greenhouse gas emissions of various common building materials and develop purchasing guidelines to assist agencies in choosing the most appropriate and lowest carbon material. The State could consider leveraging its purchasing power to incentivize use of lower carbon materials
- ***Establish a capital fund to upgrade existing facilities.*** ODFW and many other agencies have aging buildings that are highly inefficient. We recommend DAS coordinate an assessment of these facilities and develop a prioritized list of needed efficiency upgrades. This effort would ideally be coupled with a new way to fund these improvements.
- ***Support a transition to zero emissions heavy vehicles.*** Much of ODFW’s fleet is composed of large trucks such as fish-liberation trucks and field vehicles capable of operation on unpaved roads. Electric versions of these trucks are either not yet available or are too costly under current budget scenarios. The Department recommends consideration of a new fund to offset the higher cost of these vehicles or other methods to support a transition.
- ***Ensure the technological infrastructure exists to allow secure video conferencing and data sharing among and within agencies.*** The COVID-19 crisis is making clear that Oregon’s agencies have adopted a variety of virtual meeting software, creating some barriers to collaboration. A consistent approach to hosting interagency meetings as well as public meetings will streamline those processes. It will also be easier for members of the public to engage with the state if all agencies use the same platform.