



May 15, 2020

RE: Oregon Water Resources Department May 15, 2020 Executive Order No. 20-04 Report

Governor Brown –

Per Executive Order (EO) 20-04, the Oregon Water Resources Department (OWRD) is required to comply with General Directives to State Agencies contained in section (3). This includes the submission of a report to the Governor on current and proposed actions within agency statutory authority to reduce GHG emissions and mitigate climate change impacts through agency decisions, especially for vulnerable communities. This letter serves as the required report.

The mission of OWRD is to serve the public by practicing and promoting responsible water management through two key goals:

- To directly address Oregon's water supply needs
- To restore and protect streamflows and watersheds in order to ensure the long-term sustainability of Oregon's ecosystems, economy, and quality of life.

OWRD currently carries out its mission through the statewide Integrated Water Resources Strategy; processing water rights and other transactions; protecting public health and safety through well construction and dam safety programs; scientifically characterizing surface water and groundwater supplies; distributing water rights according to water rights of record; and supporting local communities and individuals through local water planning, feasibility, and project funding and coordination.

As outlined below, OWRD currently supports the reduction of greenhouse gases and adaptation to climate change with its existing authorities. Much of the Department's work related to climate change is through the lens of the impacts on water supply, and the need to mitigate and adapt to those impacts. Climate change is anticipated to increase the likelihood of floods and droughts, reduce snowpack reservoirs, and increase the demand for water.

There are two general requirements of agencies described in EO 20-04:

- 1) Prioritize and implement actions that reduce GHG emissions, and
- 2) Integrate climate change, climate change impacts, and GHG reductions goals into planning, budget, investment, and policy making decisions.

Additionally, agencies are asked to prioritize approaches that are cost effective, that will help vulnerable populations and impacted communities, and that build processes which consult the EJ task force.

As requested, here we describe ongoing or future work that could be pursued to implement EO 20-04. In some instances, additional resources will be required to fully implement these actions.

### **Reduction of Greenhouse Gas (GHG) Emissions**

OWRD impacts GHG emissions through its own operations and through incentivizing water use and cropping efficiency. Operationally, OWRD has authority to determine travel priorities and to allow telecommuting. Water transport, treatment, and use frequently require the use of energy. Through programs, including water right transactions and grant programs, OWRD has the statutory authority to incentivize conserving water in agricultural and municipal water use settings.

- **Reduce carbon output of OWRD's fleet.**

For many OWRD employees, travel is an integral part of their work. Water distribution, regulation, and field studies related to water management require travel to remote locations, often in settings that require heavy-duty vehicles. When possible, the Department utilizes more fuel-efficient vehicles. OWRD rents its vehicles from DAS. OWRD will continue to evaluate options for replacing fleet vehicles with lower GHG emitting options and exploring options for more fuel-efficient heavy-duty vehicles.

- **Reduce Travel.**

OWRD has historically only had a small percentage of its workforce telecommute. Historically, barriers to reducing travel have included inadequate telework and video conferencing tools, a lack of experience regarding ways to make telecommuting effective, work procedures not adequately setup for offsite work, and a need for associated training. COVID-19 has created a unique experiment for OWRD and the rest of the state workforce, demanding that working through barriers become a priority. OWRD may encourage some continued telecommuting in the future, though some of the barriers described here still exist and will need to be addressed. The State can also reduce GHG and travel by investing in information technology systems and databases to allow for more work to be done electronically within and among agencies. In addition, given OWRD's work in rural areas, work done by the State and other entities to increase broadband and internet access in rural Oregon will help OWRD and other agencies conduct more virtual meetings with staff, partners, and the public.

- **Increase focus and support for programs that incentivize water use conservation.**

Water use is directly tied to energy use – this relationship is often called the water-energy nexus. Water use also contributes to GHG emissions through other processes related the use of the water. OWRD supports several programs that incentivize the reduction in the amount of energy it takes to collect, clean, move, re-use, and dispose of water in agricultural and municipal water use settings. These include programs such as:

- Water Project Grant and Loans – A funding opportunity that includes, but is not limited to, providing an incentive for projects to improve water conservation or increase water use efficiency;
- Water Management and Conservation Plans – A tool that helps cities and irrigation districts to identify actions to conserve water; and
- Allocations of Conserved Water – A water right transaction tool, which rewards voluntary conservation actions by allowing the use of some conserved water on additional land and dedicating a portion of conserved water instream.

### **Programs to Promote Climate Change Mitigation and Adaptation.**

Approaches OWRD currently uses to mitigate or promote adaptation to climate change are included in several statutes governing OWRD's work around planning and investment. Specifically, the Integrated

Water Resources Strategy, Place-Based Planning, and the Water Supply Development grant and loan fund require inclusion of or promote climate change mitigation actions. Additionally, OWRD participates in the Statewide Climate Change Mitigation Framework effort. This work includes both identifying strategies OWRD and other agencies can use for climate change mitigation, as well as the development of Diversity Equity and Inclusion Blueprint for all state agencies to use while engaging vulnerable communities disproportionately affected by the impacts of climate change. OWRD implements several water rights programs that can be used to mitigate climate change impacts to ecosystems and communities. Additional details, programs and actions are outlined below.

- **Implement Recommended Actions of the Integrated Water Resources Strategy, Governor’s Water Vision, and 2019-2024 OWRD Strategic Plan.**

Oregon’s 2017 [Integrated Water Resources Strategy](#) (IWRS) identifies a number of recommended actions for addressing the critical issue of climate change:

- Recommended Action 5.A – Support Continued Basin-Scale Climate Change Research Efforts
- Recommended Action 5.B – Assist with Climate Change Adaptation Resiliency Strategies

Given that climate change will impact our water supplies, much, if not all, of the Department’s activities are implicated in preparing, responding, mitigating, and adapting to climate change impacts. As a result, the Department looks at climate change and its operations holistically – through the lens of the four objectives of the Integrated Water Resources Strategy – understanding our water resources, understanding our water needs, understanding coming pressures, and meeting our instream and out of stream needs.

Consequently, numerous other recommended actions of the IWRS address steps the state and others can take to address climate impacts including: identifying basins susceptible to changing flow regimes, establishing gages to quantify the rate of change in the magnitude, frequency, duration, and timing of streamflow; identifying groundwater systems with areas of recharge within the rain-snow transition zone; monitoring groundwater level responses to climatic impacts; analyzing how instream and out-of-stream water rights would fare with significant hydrologic changes; and working with the U.S. Geological Survey and other partners to support long-term, natural streamflow monitoring stations that have previously been used to assess climate impacts on water supplies. In addition, the state will need to invest in planning to develop adaptation and resiliency strategies, invest in monitoring to assess changing needs and demands, and invest in water efficiency, conservation, storage, reuse and other innovative efforts and projects. The state will also need to consider actions to anticipate and mitigate the impacts of extreme flood events on the safety of dams and wells.

OWRD already invests in some of these actions, including place-based integrated water resources planning, funding water resources development projects and studies of potential projects, and engaging in data collection and monitoring. Our staff regularly participate in groups and coordinated responses related to drought monitoring, drought declarations and permits, and flood prediction and warning.

The guiding principles of the 2017 Integrated Water Resources Strategy encourages OWRD and others working on water to promote open and transparent processes that foster public participation and support social equity, fairness, and environmental justice. When planning for water, the Water Resources Commission’s vision directs the Department to bring various sectors

and interests together to work toward the common purpose of maintaining healthy water resources to meet the needs of Oregonians and Oregon's environment for generations to come.

In 2018, OWRD developed a strategic plan that called for the agency to work to secure Oregon's instream and out-of-stream water future in the face of increasing water scarcity. Three actions were specifically named:

- Understand Oregon's expected future water supply
- Equip basins to plan for their water future
- Invest in Oregon's built and natural water infrastructure

The Strategic Plan also called for OWRD to foster a forward-looking team dedicated to serving Oregonians with integrity and excellence. OWRD is currently working on prioritizing actions that can help the agency implement these goals. Much of the work under the Governor's Water Vision is supportive of these efforts and if funded, could further implementation.

Several of the actions identified above are described in more detail in the following bullets.

- **Integration of Climate into Department Work and Coordination with Other Agencies.**  
OWRD does not currently have staff dedicated to addressing or coordinating actions related to climate change, and more specifically impacts associated with droughts and floods. This means that the Department is only able to address actions in an ad-hoc manner, and that its participation in statewide efforts pulls staff off of other work. The Department needs staff to guide a more coordinated approach for integrating climate change, droughts, and floods into Department work. The Department is developing a budget package that would help address this gap. This package proposes one additional staff, a Resiliency and Outreach Coordinator, who would provide coordination, planning and outreach on climate change, earthquakes, drought, floods, and dam failures to better prepare for these risks, protect public safety, and improve the resiliency of our water resources. This position would both help respond during events as well work to prepare Oregonians for these hazards that threaten our water future. This position would address the issues identified in this paragraph, as well as under drought below.
- **Drought Response, Mitigation, and Adaptation.**  
As droughts are expected to occur more frequently in the future due to climate change, this will likely pose a challenge for Department workloads. During drought, Department workloads increase. Field staff receive more calls for water by senior water right holders and fewer instream water rights are met. Workloads for the Water Rights Services Division and the Groundwater Section increase as staff process requests for drought transfers and drought-related permits. The Groundwater Section also responds to increased dry well complaints and assertions of interference. The Technical Services Division chairs the Drought Readiness Council and Water Supply Availability Committee, which are integral to monitoring drought conditions, assessing drought declaration requests, and coordinating between agencies. The Director's Office shifts from policy, planning, and other work towards drought response efforts, including responding to public and press inquiries about drought. Due to the scope and severity of the drought in 2015, the Department in coordination with the Governor's office and legislature, took a number of actions to respond to the 2015 drought, and also to identify actions that would improve the state's response and adaptation to drought in the future. Specifically, House Bill 4113 (2016) established the Task Force on Drought Emergency Response. In November

2016, the Task Force released [a full report](#), detailing their efforts and highlighting several recommendations for addressing drought emergencies. The Department has undertaken some of the recommendations but has not had resources to further implementation of all of this work. The Department is developing a budget package, described in the above section that would fund a Resiliency and Outreach Coordinator to assist. In addition, other budget packages would support the Department's efforts to ensure the Department has adequate field staff to distribute and manage water under increasing drought conditions, and to understand groundwater supplies.

- **Pursue Water Resources Planning.**

OWRD is currently undergoing an assessment of its role in water resources planning, including a review of the place-based integrated water resources planning program. Place-based planning, a community-led water planning program funded and supported by OWRD, requires participants to include climate change risks in their water planning work. OWRD is piloting a set of guidelines to implement place-based integrated water resources planning in partnership with four places across the state. Challenges have included a lack of quantification of site-specific climate change impacts, and the ability by staff, partners, and participants to apply those impacts to water planning. OWRD has limited capacity to assist with climate change adaptation planning, consequently OWRD has partnered with the Climate Impacts Research Consortium (CIRC) to provide technical assistance in this arena, although further work is needed.

- **Improve the Resiliency of Water Infrastructure through the Safety of Dams.**

Water storage is one component of many solutions and approaches to meeting our water challenges and water supply needs. At the same time, our dams are aging, and many were designed under different conditions. Of emerging concern is the need to develop a flood assessment protocol for evaluating dams across the state for their ability to pass floods under the current and changing climate. In addition, many dams have only had visual inspections of their condition and need more detailed assessments or analyses to assess potential deficiencies in order to protect public safety and water supplies. These efforts were included in a budget proposal brought forward by the Governor during the 2020 legislative session and will be included in a budget package in the Agency Request Budget. The Department will continue to look for other avenues to assess dams, including federal funding to evaluate and increase the resiliency of dams in the state.

- **Improve our Understanding of the Impacts of Climate Change on Water Resources.**

Data will be the underlying driver for Oregon to plan, mitigate, and adapt to climate change impacts on our water resources. The agency continues to invest in efforts to improve our water resources data collection and analysis, access to this data, and identification of solutions based on this information. The Department continues to seek investments in its data and information technology systems, as well as investments in basin studies to characterize water supplies, including groundwater, in a changing climate.

- **Implement Water Supply Solutions.**

OWRD needs to continue to support efforts to implement solutions to current and future water supply challenges. This includes investments in projects through the Department's Feasibility Study Grants and Water Projects Grants and Loans funding opportunities, as well as coordinating with other funders. In addition, OWRD needs to continue to dedicate staff resources to resolve water policy challenges and facilitate water resources solutions. OWRD

seeks to support both local solutions and statewide efforts. OWRD has developed budget packages focused on addressing local and regional water challenges and continues to find ways to support local efforts with existing staff. In addition, OWRD continues to look for ways to support water management and distribution efforts, including watermaster staff, as climate impacts exacerbate water management challenges

- **Engage with other agencies, including the EJ Task Force, on climate change adaptation strategies.**

The Oregon Climate Change Adaptation Framework offers OWRD the opportunity to work with other state agencies to identify gaps in OWRD’s response capacity, coordinate policy and resource requests with sister agencies, and connect to funding for climate change mitigation actions through the Natural Hazard Mitigation Plan. Though this collaborative work has produced valuable products, its development has been challenged by a need to have more web-based, collaborative tools that all contributing agencies can access.

Notable efforts aligned with EO 20-04 that are occurring under the current framework include:

- Formation of an adaptation leadership structure to guide prioritization and implementation of framework actions;
- Survey and training of some agency staff on the appropriate engagement of communities vulnerable to climate change who might not participate in standard engagement opportunities; and
- Development of a Diversity Equity and Inclusion Blueprint guidance document to assist agencies as they develop their public participation processes around climate change.

Combining or coordinating this work with the “Interagency Workgroup on Climate Impacts to Impacted Communities” identified in EO 20-04 (3)(E) may benefit this work and its implementation.

OWRD looks forward to working with the Governor’s Office and other state agencies on the implementation of actions to support EO 20-04. Please do not hesitate to contact us if you have questions, or if we can be of assistance.

Best regards,



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Director