



Oregon Department of Environmental Quality

Oregon Water Data Portal Project

Status Report (per 2023 HB 5018 Budget Note)

January 2024

Summary

The 2021 Oregon Legislature directed the Department of Environmental Quality (DEQ) and state water agencies to begin initial scoping and design of a “water database framework”, envisioned to be a single point of access for public water and infrastructure data to inform water resource decisions in Oregon. In response, DEQ, in collaboration with other state water agencies, initiated the Oregon Water Data Portal (OWDP) project. The OWDP will inform water resource decisions by streamlining data discovery, integration, and analysis for decision-makers and the public.

The OWDP will address challenges and recommendations identified in the 2017 Integrated Water Resources Strategy, the 2020 100-Year Water Vision, and the Secretary of State’s 2023 Water Security Advisory Report. It will achieve this by aggregating data currently fragmented across many different agencies and providing limited processing functions to assist in answering critical water management questions. The OWDP pilot, currently in development, will integrate state agency data with federal and/or local government data. Volunteer data will be added at later phases of development. The project takes advantage of existing Oregon information technology infrastructure to maximize resources and interoperability. It will also integrate with other modern data projects, such as the Oregon Open Data Standards and the Oregon Environmental Justice Portal.

Phase One of the OWDP project ran from 2021 to 2023. It defined the project’s scope and methodology. In June 2023, it produced the Phase One final legislative report. The report documented all work completed over the two years and made recommendations for next steps.

Phase Two of the OWDP project is currently underway based on limited-duration funding for the 2023-25 biennium. Phase Two will include the following key deliverables:

- A pilot-level portal with enough state tabular and geospatial data to demonstrate its value.
- A plan to govern and maintain the OWDP and uplift state agency business processes to enable consistent and automated management of interoperable data and improve the effectiveness of OWDP data for water decision-making.
- Support for participating agencies as they modernize their data and organizational processes and prioritize data for inclusion in the portal in the short and long term.
- An assessment of the pilot portal’s performance with interested parties drawing from insights gained during initial scoping from 2021 to 2023 (phase one).

Phase Two of the OWDP project includes the development and implementation of a pilot portal that is projected to be available in early 2025. The portal will have enough data sets and features to attract early users and validate technology assumptions and processes for data integration. State data inventory and assessments of data sets will inform sub-projects to improve state agency data infrastructure. These data infrastructure improvements will be necessary to build and expand the data available in the portal.

Resources and project costs

Translation or other formats

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Recommended project investments for the 2023/25 biennium were approximately \$2.5 million. The 2023 Legislature allocated \$1.2 million. These funds will primarily be used to cover contractor services supplied by Oregon State University's Center for Applied Systems and Software, Oregon State University's Institute for Natural Resources, the Internet of Water Coalition at Duke University, and Dr. Alida Cantor, Portland State University Professor and published author of several papers on Water Data Portals. The legislative action also included two limited duration positions to coordinate and execute several data sub-projects and to assist agencies in data preparation.

Interagency governance structures, collaborations, and operating procedures

The Project Steering Committee provides interagency coordination. It currently includes seven of the 17 Oregon agencies managing water-related data. Two additional agencies will join the Steering Committee members in Phase Two. The Steering Committee may be further expanded to include additional agencies or to work directly with other interagency water teams, such as the Oregon Water Core Team. The OWDP project team will develop a governance structure. It will include 1) the designation of a lead agency, 2) clear decision-making processes and procedures for taking in feedback, and 3) a detailed plan for the ongoing maintenance and governance of the OWDP through agreements between participating agencies. The Department of Administrative Services Enterprise Information Service (DAS EIS) office is part of the Steering Committee and will be involved in data coordination as needed.

Tribal and interested party engagement

During the previous biennium, members of the Steering Committee and Subject Matter Expert (SME) teams conducted a series of listening sessions with Tribal Government representatives and other interested parties. Following these sessions, the SME team distributed a survey to gather additional information. Survey data will inform the design and development of the OWDP to best fit data and user needs. In Phase Two, the project team will issue another request for consultation to Oregon Tribes to inform the pilot. In addition, the team will conduct targeted outreach to underserved and underrepresented communities following environmental justice and diversity, equity, and inclusion principles.

Analysis of the inventory of existing state agency water data

The OWDP teams will analyze the inventory of existing state agency water data. They will identify state data needs, tools, and efforts necessary to acquire additional data to support water-related decision-making. The SME team is assessing state agency data to determine its accessibility and usability and identify data gaps related to water decision-making. These factors will vary by agency and data type. Priority data sets are determined, in part, by the Oregon Water Core Team, legislature needs, and Tribal and interested party feedback.

Engagement with the Department of Administrative Services

The project team is collaborating with Kathryn Helms, Oregon's Chief Data Officer, and her staff at the Oregon Department of Administrative Services (DAS). This partnership will leverage the state's existing infrastructure to support the OWDP. The OWDP will utilize the state's Socrata (now "Data and Insights" from Tyler Technologies) and ESRI platforms and comply with all state data standards.

While the OWDP project is a data project, it will identify several agency-specific information technology sub-projects that are necessary to realize the full value of OWDP. The project team may be able to organize and execute some of the smaller sub-projects. Individual agencies will need to lead implementation for many of them. These sub-projects will be subject to Oregon Stage Gate procedures on a case-by-case basis.

Project risks, impacts, and mitigation strategies

The following are actively managed considerations for the OWDP project team and participating Oregon agencies:

- **Risk:** Some data sets necessary for water decision-making do not currently exist in a usable form. If these data sets are not made available within a reasonable timeframe, the portal could be ineffective for some water decision-makers.

Mitigation Measure: The project teams have planned an assessment of the state data set inventory to determine what state data sets are in this situation. The project team will recommend projects to correct each missing or unusable data set.
- **Risk:** Common data structures and methodologies necessary to best integrate disparate data sets may not currently be available to Oregon state agencies.

Mitigation Measure: The OWDP project has included the development of such structures and methodologies in the Scope of Work for the project contractor Internet of Water. DAS data staff will be joining to project to assist with this issue.
- **Risk:** Some Oregon water agencies may not possess sufficiently mature information technology and data management processes to successfully complete necessary business process and infrastructure updates and changes. Oregon state agencies have a very wide variety of business process maturity levels. A potential lack of mature, critical processes could delay or prevent OWDP progress toward a successful data portal.

Mitigation Measure: The project team can identify agencies that currently lack mature procedures and work with DAS to help agencies plan and execute projects to result in more mature information management.
- **Risk:** Some agencies may be unable, unwilling, or lack the necessary resources to participate in the portal project. The OWDP team recognizes that not all agencies are in a position at this time to participate and that lack of agency participation could lead to missing data that are important for decision-making.

Mitigation Measure: The project team plans to continue its work to solicit all 17 agencies to participate early in the pilot portal development. They will also identify existing staff within agencies that can assist with the project. The team recognizes that involvement may vary according to resources and information technology maturity. In cases where participation is not possible, the project team will document the situation and its likely consequence and seek collaborative relationships and the resources to complete the necessary tasks.

Through engagement with agency leaders comprising the OWDP Steering Committee, and ongoing collaboration with DAS, the project team will report on Phase Two progress, including the considerations noted above. Solutions will be developed to maintain progress toward the release of the OWDP pilot by early 2025. The results from Phase Two will be used to inform the future full development of the OWDP.

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