



# Water Reuse

House Bill 2010 (2023) – Section 22

Legislative Report

September 2024



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# Executive Summary



As directed by Section 22 of House Bill 2010 (2023) the Oregon Department of Environmental Quality (DEQ) has made significant strides in advancing beneficial water reuse within the state. This final report provides an update on accomplishments achieved thus far, pending tasks, additional work required, and recommendations for the resources necessary to fulfill the objectives established by the bill.

## The Future of Water Reuse

Expanding water reuse for municipalities and industries is crucial for Oregon's future and doing so can help address key environmental, economic, and social needs. Water reuse can enhance drought resilience and supports sustainable water management while lowering energy use, minimizing chemical needs, conserving resources, benefiting critical habitats, and reducing carbon emissions. Moreover, water reuse offers a cost-effective way to meet regulatory requirements and support industrial applications. Focusing on water reuse provides a strategic opportunity as part of a suite of tools to secure Oregon's water future and enhance its environmental and economic resilience. DEQ and our agency partners are committed to advancing these efforts in recognizing water reuse as a vital resource for the state.

## Achievements to Date

As of August 2024, DEQ has accomplished several key tasks required under HB 2010:

- Stakeholder Engagement & Agency Coordination: Collaborated with municipalities as well as interstate and intrastate agencies
- County and Irrigation District Collaboration: Gathered feedback and insights from current and proposed reuse projects
- Regulatory Insights: Developed guidance for regulatory changes based on lessons learned from programs in other states
- History Review: Analyzed historic reuse initiatives to inform potential future regulatory improvements
- Rule Review: Examined current rules and identified potential changes
- Permitting Pathway: Began to develop changes to current permitting pathway

## Critical Tasks and Planned Deliverables (June 2025)

To complete the elements of HB 2010, several critical tasks remain. First, establishing a clear permitting pathway is essential to support municipalities and industries pursuing water reuse projects. Guidance documentation must be developed, and regulatory documents need updates for consistency across state agencies. Secondly, an analysis of water reuse impacts and barriers, including cost and logistical challenges, is necessary to inform future actions.

By June 2025, DEQ plans to advance several deliverables, including continued collaboration with agency partners, both in state and nationally. A Rule Advisory Committee (RAC) will be

established to revise and update DEQ's water reuse rules and regulations. Additionally, guidance documentation will be created, and initial changes will be made to existing regulations and internal management directives.

### **Additional Work Required**

Some of the objectives identified in HB 2010 will not be achievable with available resources before the end of the 2023-25 biennium. DEQ has identified key tasks which will result in the completion of objectives outlined in HB2010. These include finalizing a permitting pathway and publishing updated regulatory documents, statutes and rules. Specific guidance for irrigation canal reuse needs to be finalized, and completed guides for municipalities and industries need to be published. Creation of GIS maps to illustrate water reuse and cost barriers will also be necessary. To support these efforts, research on environmental impacts and collaboration with partners are necessary to help address knowledge gaps.

### **Resources Needed**

Previous initiatives that aimed to address water reuse in the state have been incomplete or unrealized, primarily due to a lack of sustained resources. For example, a 2003 legislative directive led to some progress, but budget cuts halted further program development and implementation efforts. To achieve the programmatic goals and improvements identified in HB 2010, programmatic resource enhancements are necessary. DEQ and the Oregon Water Resources Department need to expand their staffing with permanent positions dedicated to reuse initiatives. Furthermore, support for partner agency engagement (OWRD and the Oregon Health Authority) and continued stakeholder involvement, including the engagement of municipalities, industries, and non-governmental organizations, are crucial for success. Although significant progress has been made, continued efforts and sustained resources are essential to fully implement the directives of HB 2010 and support the expansion of water reuse in Oregon.

### **Content Overview**

The legislation instructed DEQ to provide a final report by September 15, 2024. This document satisfies that requirement. The full report provides a detailed overview of the progress made to date, outlines the tasks planned for completion by June 2025, and identifies ongoing objectives and resource requirements necessary to address the five key elements outlined in HB 2010. This final report is intended to support interested parties in understanding the status and future direction of water reuse initiatives. To support and expand upon the contents of the report, the appendix includes more detail of the work completed.

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# Introduction

In accordance with the directives outlined in Section 22 of House Bill 2010 (2023) by the 82nd Oregon Legislative Assembly, the Oregon Department of Environmental Quality (DEQ), in collaboration with the Oregon Water Resources Department (OWRD), other relevant state agencies and interested parties, has developed recommendations and identified additional resources necessary for promoting the expansion of beneficial water reuse within the state.

**Five Directive Elements:** HB 2010 section 22 subpart 2 explicitly directs DEQ to undertake the following five activities:

- a) “Characterize water reuse and beneficial land application project types that are priorities to support water quality, water supply or use, and habitat or ecosystem needs in this state;
- b) Identify regulatory and other impediments to expanding water reuse;
- c) Identify environmentally protective approaches successfully employed by other states with robust water reuse programs that may be applicable in Oregon
- d) Identify potential regulatory changes, including but not limited to changes to internal guidance, administrative rules or statutes needed to remove impediments, and propose an implementation schedule for enacting the proposed changes; and
- e) Develop technical assistance, guidance, or other resources for local jurisdictions and industries to seek permitting and development of water reuse and other beneficial land application programs that achieve the objectives of this section”

**Report Requirements:** HB 2010 Section 22 requires that DEQ shall submit a final report by September 15, 2024. This document satisfies this requirement, and the elements listed below.

- a) “Changes that agencies can make or have completed to internal policies, guidance and processes;
- b) Recommended changes that require an agency to amend administrative rules or adopt new administrative rules;
- c) Recommended changes that would require the Legislative Assembly to create new law or amend existing law;
- d) Programmatic needs to remove impediments to water reuse and beneficial land application expansion and to support access to and acceleration of water reuse and beneficial land application projects; and
- e) Technical assistance resources and incentives that would support jurisdictions in evaluating and pursuing reuse and beneficial land application projects.”

## Benefits of Water Reuse

The fulfillment of this directive is integral in creating a sustainable future for Oregonians. Benefits of water reuse outlined by the Environmental Protection Agency (EPA) include but are not limited to social benefits, economic vitality, critical water access, ecological restoration, infrastructure resilience, improved water quality, and reliable water supply.



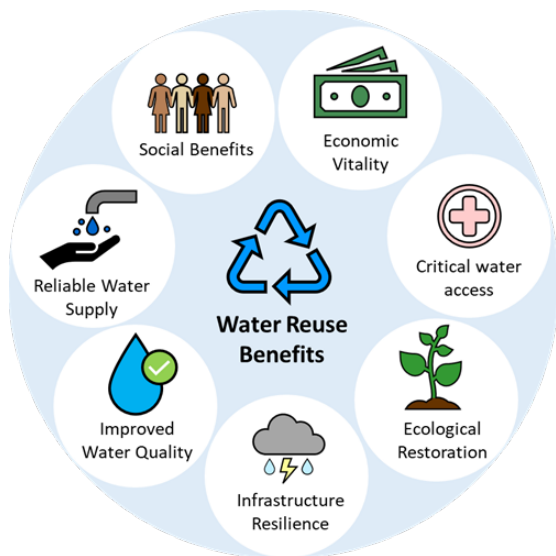


Figure 1. Benefits provided by reuse projects – [EPA Benefits Graphic](#)

## Report Organization

### Summary - Work Completed & Future Goals

Section 1 – Project Achievements & Results (*Steps accomplished August 2024*)

Section 2 – Critical Tasks to Complete HB 2010 (*Actions required to fulfill HB2010 Section 22 requirements*)

Section 3 – Planned Deliverables (*Deliverables to be completed June 2025*)

Section 4 – Additional Work Required (*Future deliverables to fulfill HB2010 Section 22 requirements*)

Section 5 – Resources Needed for Directive Achievement (*Resources required to fulfill HB2010 Section 22 requirements*)

### Appendix - Detail of HB 2010, Section 22 (2)(a-e) 5 Elements

*The appendix letters correspond directly with the respective elements*

Appendix Element A – Priority land application projects

Appendix Element B – Regulatory and other impediments to water reuse

Appendix Element C – Water reuse programs in other states

Appendix Element D – Identified regulatory challenges and potential regulatory changes

Appendix Element E – Proposed technical resources

# Section 1: Project Achievement and Results

*HB 2010 deliverables achieved, as of August 2024*

## **A. Stakeholder Engagement & Agency Coordination**

DEQ collaborated with key agencies, including the Oregon Water Resources Department, the Oregon Health Authority, and the Oregon Department of Fish and Wildlife, as well as the Oregon Association of Clean Water Agencies and the Environmental Protection Agency. This collaboration has been key in developing recommendations, identifying resources, and understanding regulatory barriers to advance water reuse initiatives in Oregon.

Agencies and Organizations:

- DEQ – Department of Environmental Quality
- ACWA – Oregon Association of Clean Water Agencies
- WRD – Oregon Water Resources Department
- OHA – Oregon Health Authority
- ODFW – Oregon Department of Fish and Wildlife
- EPA – Environmental Protection Agency
- Pacific Northwest Chapter of the Water Reuse Association

## **B. County and Irrigation District Collaboration**

DEQ learned from the successes and challenges encountered by various municipalities and irrigation districts in their water reuse projects. By analyzing these experiences, DEQ gained insights into effective practices and persistent obstacles. This knowledge will guide efforts to improve regulations and eliminate barriers, facilitating water reuse.

A more detailed summary of the case studies regarding the key municipalities and irrigation districts can be found in Appendix Element D (*Collaboration – Case Examples Highlighting Barriers & Successes*).

Key municipalities and irrigation districts:

- City of Hermiston & West Extensions Irrigation District
- City of Bend & North Canal
- City of Klamath Falls & Klamath Drainage District
- Clean Water Services & Tualatin Valley Irrigation District
- City of Medford & Rogue River Valley Irrigation District

## **C. Regulatory Insights**

DEQ gained valuable insights from other states on water reuse. Arizona's management of water reuse for irrigation canals and its "Class A+" criteria offer a useful model. California's extensive



resources and established program provide strong examples of successful reuse practices. Additionally, Washington and Idaho's experiences have been particularly relevant due to their proximity. Washington's guidance and focus on water rights, alongside Idaho's supportive framework, helped DEQ integrate lessons learned from these states to refine Oregon's approach and address issues effectively. Additional research has been conducted into international case studies where water reuse programs have been successful in locations such as Israel, Singapore and Qatar.

Findings identified through these collaboration efforts can be found in Appendix Element C (*Water reuse programs in other states*).

Collaborating states:

- Arizona
- Utah
- California
- Washington
- Idaho
- International: Israel, England, Singapore, Qatar

#### **D. History Review**

DEQ reviewed Oregon's water reuse history to better plan future endeavors. By examining past obstacles—such as regulatory complexities, budget constraints, and staff turnover—DEQ is now better positioned to address current challenges and refine the state's water reuse program. This historical insight allows DEQ and the state to build on previous knowledge and proactively overcome similar issues, ensuring more effective and efficient water reuse practices moving forward.

More information on the reuse history analysis can be found on the first page of the Appendix (*History*).

Relevant historical background and milestones involving water reuse policy development in Oregon:

- 2003 Senate Bill 820
- Governor's Executive Order 05-04
- Adoption of Oregon Administrative Rules (OAR) 340 Division 55
- Adoption of OAR 340 Division 053
- 2023 House Bill 2010 (section 22)

#### **E. Rule Review**

DEQ reviewed current rules, regulations and policies to identify challenges and limitations in the water reuse program. By examining issues such as water quality limits, wetland restoration, and

industrial reuse guidelines, DEQ aims to streamline and enhance the regulatory framework. This review is focused on creating clearer, more predictable pathways for water reuse projects and developing new resources to support effective implementation.

Additional information regarding analysis of current rules, regulations, and policies can be found in Elements B (*Reuse Barrier – Current regulations and policies*) and D (*Identified regulatory challenges and potential regulatory changes*) of the appendix.

Reviewed regulatory areas:

- DEQ's Water Reuse Internal Management Directive (IMD)
- Oregon Revised Statutes (ORS) 468, 468B and 537
- OAR 340 Division 55 and 41
- Supreme Court of the U.S. No.18-260 County of Maui, Hawaii v. Hawaii Wildlife Fund et al (Direct Nexus)
- EPA docket ID No. EPA-HQ-OW-2023-0346 (2023 Rule) defining Waters of the U.S. (WOTUS)
- Irrigation canal & water reuse

## **F. Permitting Pathway**

DEQ reviewed Oregon's permitting pathways for water reuse to pinpoint issues and enhance clarity. The analysis revealed challenges such as varied stakeholder understanding, inconsistent regulatory interpretations, and difficulties for small municipalities to access funding. To address these, DEQ aims to simplify and standardize the permitting process, drawing on successful elements from the NPDES permitting program. This includes establishing a clear framework for the WPCF permitting program and improving training to better distinguish between disposal and beneficial use.

Permitting:

- Analysis of current WPCF permitting pathways
- Identification of potential changes to the WPCF permit writing

## **Section 2: Directives of HB 2010**

To ensure the effective implementation of the directive, DEQ has developed a comprehensive plan to address the five key elements of HB 2010. The following section outlines DEQ's plan and action items for advancing reuse and beneficial land application projects throughout the state. *HB2010 Section 22 directive requirements*

### **A. Characterize water reuse and beneficial land application project types**

Analysis of the potential positive and negative effects of water reuse on the environment must be evaluated, or data must be compiled. This could include field research or the

compilation of previous impact studies. Compilation of research and data is underway, as well as investigation of partner projects within the state.

**B. Identify regulatory and other impediments**

Analysis of current barriers, regulatory impediments and permitting constraints must be conducted to understand limitations in areas throughout the state. Compilation of this analysis will provide guidance on potential solutions to expand reuse.

**C. Identify environmentally protective approaches categorized by other states**

Examine and adopt best practices from other states that have successfully implemented environmentally protective measures for reuse. This includes evaluating rules and regulations, technologies, monitoring protocols, and public health safeguards.

**D. Identify potential regulatory changes**

Changes need to be made to current regulatory documents. These changes include correcting errors in existing regulations, addressing outdated references, and development of uniform language for water reuse across all state agencies. This revision process has begun to ensure updates align with current water reuse standards and references.

**E. Develop technical assistance, guidance, and other resources**

Guidance documentation must be created for municipalities and industries. There are currently no documents available that provide options or clear steps for interested parties to develop water reuse programs. DEQ is currently drafting guidance documents to aid in water reuse efforts.

## **Section 3: Planned Deliverables – June 2025**

*Further progress anticipated to be completed by June 2025*

**A. Reuse Barriers**

*Identify reuse barriers*

- Finalize case studies of reuse projects – successes and barriers
- Evaluate cost barriers
- Highlight statutory and regulatory amendments

**B. Continued Collaboration**

*Continued collaboration with stakeholders, states, agencies*

- National reuse meetings and international case studies
- Enhanced collaboration with Oregon state agencies
- Continued collaboration with municipalities and irrigation districts
- Outreach to industries interested in reuse

**C. Committee Formation**

*Creation of committee*

- Formation of Rule Advisory Committee (RAC) to update OAR 340 Division 55 Water Reuse regulations

**D. Regulatory Documentation**

*Updates to current documents and generation of reuse guidance materials*

- Update current DEQ Water Reuse IMD
- Update DEQ Reuse website
- Develop water reuse guide for municipalities
- Begin development of water reuse guide for industries

**E. Rule Analysis**

*Continued analysis of current rules and regulations*

- Clarification of reuse as it pertains to: Waters of the United States (WOTUS), Direct Nexus, water quality standards and Use Attainability Analysis (UAA) applications

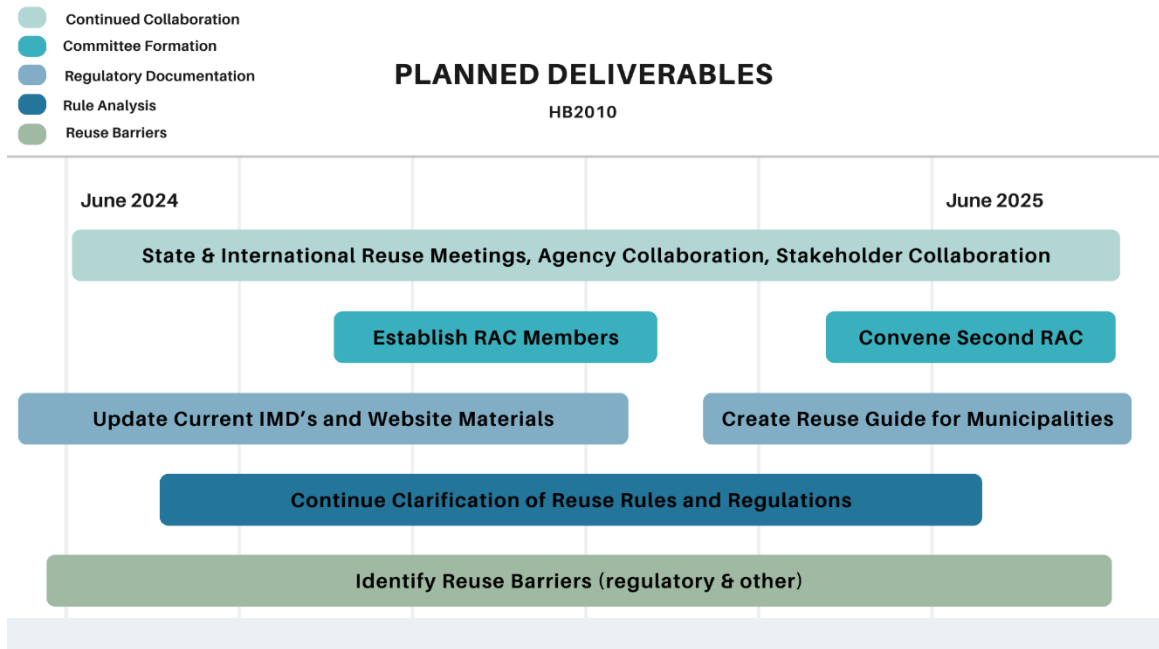


Figure 2. HB2010 Planned Deliverables (June 2025)

**Section 4: Additional Work to Meet HB2010 Objectives**

*Future deliverables to implement HB2010 Section 22 objectives*

**A. Finalize Permitting Pathway**

*Finalize clear permitting pathway for municipalities and industries*

- Finalize clear permitting pathway

- Provide resources online regarding permitting pathway to assist stakeholders in the process

## **B. Regulatory Documentation Changes**

### *Publish documentation*

- Develop regulations for industrial water reuse
- Publish changes to reuse documents
- Recommend changes to current administrative rules identified through the reuse RAC for industrial and municipal sectors

## **C. Irrigation Canal Classification**

### *Provide guidance for water reuse in irrigation canals*

- Finalize irrigation canal permitting and classification guidelines

## **D. Completed Guides**

### *Publication of completed guides*

- Publish completed water reuse guide for municipalities
- Publish completed water reuse guide for industries
- Publish irrigation canal – reuse specific guide

## **E. Maps**

### *Creation of reuse maps*

- Complete and publish water reuse GIS maps

## **F. Research**

### *Compile/conduct research*

- Conduct or compile research on water reuse and the environment
- Conduct research studies with partners such as ODFW or Oregon universities
- Compile water reuse research studies from other states to understand impacts

# **Section 5: Resources Needed**

## *Resources required to implement proposed solutions and recommendations*

### **A. Staffing**

- 1.0 FTE permanent position dedicated to water reuse at DEQ (make permanent the limited-duration position established for 2023-23) and 0.50 FTE at WRD. This resource is needed to carry out the necessary tasks of HB 2010 in order to create a successful reuse program for the state.
- Pending: Future reuse staff expansion may be necessary for program implementation and to support increased water reuse project application workload

## **B. Interagency Support**

- Dedicated staffing for water reuse project collaboration and development
- Oregon Health Authority (TBD FTE required)
- 

## **C. Stakeholder Involvement**

- Continued stakeholder involvement (municipalities, industries, NGO's)

## **Next Steps**

1. Ensure Resources for Future Reuse & Program Success
2. Develop and Publish Guidance Documents
3. Establish and Support Rulemaking Advisory Committee
4. Enhance Collaboration and Stakeholder Engagement
5. Conduct Further Research and Analysis
6. Create and Publish Reuse Maps
7. Address Barriers and Solutions
8. Finalize Permitting Pathway

## **Conclusion**

The Oregon Department of Environmental Quality is pleased to present this comprehensive final report on the progress and future steps regarding the water reuse initiatives outlined in House Bill 2010 (section 22). As of August 2024, DEQ has made significant strides in advancing the state's water reuse program. Notable achievements include successful interagency collaboration, extensive review of existing regulations, and coordination with other states and international agencies. These efforts have laid a solid foundation for further development and implementation.

To fully meet the directive set forth by HB 2010, several critical tasks remain. DEQ must establish a clear and efficient permitting pathway, develop comprehensive guidance documentation, and implement necessary changes to regulatory frameworks. An in-depth analysis of water reuse impacts and barriers will be essential to identify and address potential challenges. These tasks will be completed in collaboration with other agencies.

By June 2025, DEQ plans to complete several key deliverables, including the formation of the Rule Advisory Committee (RAC), updates to existing documentation, and the creation of new guidance materials for municipalities and industries. Enhanced collaboration with stakeholders, ongoing rule analysis, and the identification of reuse barriers will also be prioritized.

Beyond June 2025, additional work will be crucial to fully realize the goals of HB 2010. This includes finalizing the permitting pathway, publishing updated regulatory documents, and developing specialized guides for irrigation canal reuse. Further tasks, such as environmental

impact studies and the creation of GIS maps, will support the continued expansion of water reuse practices.

To achieve these objectives, DEQ and OWRD will need continued and expanded support. This includes additional staffing dedicated to water reuse initiatives, enhanced interagency collaboration, and sustained stakeholder engagement. Resources must be allocated to support ongoing efforts, including the development of guidance materials and the implementation of regulatory changes.

In conclusion, DEQ is committed to advancing Oregon's water reuse program through a strategic and collaborative approach. With the ongoing support of legislative bodies, state agencies, and stakeholders, DEQ aims to overcome existing barriers and foster innovative solutions to ensure a sustainable future for Oregon's water resources. The department remains dedicated to safeguarding public health, protecting the environment, and promoting effective and sustainable water practices.



# Appendix

The contents of this appendix covers the history and significance of water reuse and provides additional information and background on the work occurring to address the directives of HB2010.

## History

In the early 1990s, Oregon established regulations on water reuse use to ensure the protection of public health and the environment.

In 2003, Senate Bill 820 directed DEQ to collaborate with partner agencies and other interested parties to report on urban wastewater reuse opportunities and challenges. This led to the 2004 Senate report and Governor's Executive Order (EO) 05-04 in 2005, which directed state agencies to:

- Promote policies and programs to encourage and support water reuse;
- Work together to overcome institutional and regulatory barriers and funding constraints;
- Ensure protection of public health and the environment;
- Encourage public acceptance of water reuse; and
- Help this state meet its overall water needs.

EO 05-04 also required state agencies to coordinate outreach efforts and hold annual meetings to align activities with the order's goals.

In 2008, the Environmental Quality Commission (EQC) adopted the current policy for water reuse provided in OAR 340-055-0007:

"It is the policy of the Environmental Quality Commission to encourage the use of water reuse for domestic, agricultural, industrial, recreational, and other beneficial purposes in a manner which protects public health and the environment of the state. The use of water reuse for beneficial purposes will improve water quality by reducing discharge of treated effluent to surface waters, reduce the demand on drinking water sources for uses not requiring potable water and may conserve stream flows by reducing withdrawal for out-of-stream use."

Following this policy, graywater regulations were finalized (OAR 340-053) in 2011.

However, since the 2005 Executive Order and promulgation of rules, budget cuts and staff changes have halted outreach and annual meetings, making interagency coordination challenging. A lack of dedicated resources has slowed progress in addressing barriers and developing incentives, which has effectively limited implementation of water reuse projects in the state. In addition, municipal wastewater utilities have reported that the state's rules and permitting practices are costly and confusing, hindering cost-effective, environmentally beneficial projects.

In response to these issues, Section 22 of HB 2010 (originally introduced as HB 3231) highlights the need to reinvigorate the state's commitment to investing in water reuse as a multi-benefit water resource, secure funding and staff to evaluate and update Oregon's water reuse program. Funding for one limited-duration position was authorized with passage of the bill to support the evaluation of potential policy or regulatory changes to advance water reuse for municipalities and industrial users.

## Significance of Water Reuse

As noted above, the EQC established overarching policy that acknowledges the benefits and importance of water reuse, and DEQ recognizes the need for sustainable water management to ensure future water supply, water quality, and environmental protection. Strategies like recycling and beneficial land application of treated wastewater are essential for meeting community, economic, and environmental needs. Oregon's public wastewater utilities are committed to this goal, making reclaimed water assets increasingly vital for the state due to:

- 1) **Water scarcity, drought resilience and climate Trends:** Water reuse can enhance water supply reliability by providing a secondary source of water for various purposes, such as crop irrigation and environmental enhancements, during droughts when other freshwater supplies are limited. Properly managed this can also reduce the strain on surface and groundwater resources, conserving potable water for essential uses and helping to address water scarcity issues.
- 2) **Environmentally sustainable water management:** Reusing water can reduce energy consumption, chemical demands, and costs for removing nutrients and thermal load from wastewater. By recognizing treated effluent as a resource rather than a waste, facilities can use water reuse for beneficial purposes such as agricultural irrigation. The nutrients in the water are beneficial for crop growth. This in turn can decrease demand for chemical fertilizers. Reusing treated wastewater can preserve instream flows, reduce degradation of aquatic ecosystems, and avoid increased energy dependence and carbon emissions.
- 3) **Ecosystem enhancement:** Critical habitats at risk due to drought and diminishing fresh water supplies can be preserved through reuse of treated effluent. Wetlands, vernal pools, riparian zones, and oak savannas once common in Oregon have been restored in several communities. If water reuse offsets surface water diversions, then more water is left for instream ecosystem.
- 4) **Compliance with permits and administrative rules:** Reuse provides an additional compliance strategy for programs to achieve important water quality limits, such as temperature.
- 5) **Industrial applications:** Many industries can use water reuse for cooling, processing, and other non-potable applications, reducing their reliance on freshwater and lowering operational costs.
- 6) **Cost-effective:** With increasing restrictions on surface water discharges, many municipalities are struggling with meeting temperature limits and other regulatory requirements. Providing water reuse for irrigation and other uses can be more cost-effective than cooling their effluent, making it a sustainable and economical choice.

- 7) **Job creation:** Developing and maintaining water reuse infrastructure can create employment opportunities in water treatment, distribution, and related fields. Additionally, developed natural treatment systems such as the City of Prineville’s Crooked River Wetland Complex and the Clean Water Services Forest Grove facilities attract tourism to the communities because they become a destination for birders and other outdoor enthusiasts.

**Water Reuse Benefits Table**

The table below outlines the additional benefits of reuse across various areas, including water supply, water quality, energy and greenhouse gas emissions, risk and resilience, as well as social, environmental, and economic factors.

| Water Supply                   | Water Quality                    | Energy/GHG                     | Risk and Resilience   | Social/ Environmental    | Economic                       |
|--------------------------------|----------------------------------|--------------------------------|-----------------------|--------------------------|--------------------------------|
| Supply Diversification         | Nutrient/ Temperature Management | Energy Use                     | Regulatory Compliance | Supporting Working Lands | Resource Dependent Livelihoods |
| Timing/ Availability           | Enhanced Treatment Capacity      | GHG Emissions                  | Reputation            | Water for Ecosystems     | Regional Development           |
| Preserving Future Availability | Irrigation Water Quality         | Credit/ Certification Programs | Partnerships          | Community Resilience     | Economic Viability             |

Appendix Figure 1. [Water Reuse Benefits](#) (Data from: Agriculture Reuse Benefit Library)

**Element A - Priority land application projects**

*Characterize water reuse and beneficial land application project types that are priorities to support water quality, water supply or use, and habitat or ecosystem needs in this state*

DEQ, along with other key agencies, has reviewed both successful projects and those allegedly hindered by regulations. Through this process five potential project types have been identified, which could provide significant multi-objective benefits for communities and the environment. These include:

- 1) Water reuse augmentation of irrigation canals to support agricultural uses and offset surface and groundwater extraction during dry summer months.
- 2) Identify a new class of water reuse with additional treatment standards that would ensure sufficient treatment such that no additional use restrictions or requirements beyond end of pipe standards for domestic or industrial non potable use would be needed. Such a designation could result in offsetting diversion or pumping of surface or groundwater.

- 3) Water reuse provided for constructed wetlands or other environmental restoration/enhancement projects.
- 4) Create a streamlined procedure that establishes the criteria for permitting water reuse projects. This approach aims to prevent redundant efforts and foster innovation.
- 5) Identify standards and clear guidance information for industrial water reuse so businesses can make educated decisions on the potential benefits of reusing their treated effluent for land applications and offset surface and groundwater extraction.

## **Element B - Regulatory and other impediments to water reuse**

*Identify regulatory and other impediments to expanding water reuse*

DEQ, in consultation with other state agencies and interested parties, has reviewed the priority projects identified to date and created preliminary findings of regulatory and other impediments to the expansion of water reuse. Below is a summary of the main points identified through this work.

### **Reuse Barrier - Agency Staffing**

DEQ's water reuse program is staffed by less than one permanent FTE (full-time equivalency): distributed among four staff members with multiple other responsibilities (one at headquarters and one in each of the three regions of the state). These staff coordinate with representatives of the Oregon Water Resources Department (OWRD), Oregon Department of Fish and Wildlife (ODFW), and Oregon Health Authority (OHA). Each staff member at these agencies has distinct responsibilities involving water reuse, which accounts for less than 1 percent of their workload. Combined, the staffing resources of all four agencies represent about one FTE statewide.

One key lesson from the history of water reuse in Oregon is the critical role of adequate staffing. In 2008, the state's water reuse program was making significant strides, but progress stalled due to budget cuts during the economic downturn. By examining other states' programs, it became clear that those with effective and successful water reuse initiatives have significantly more staffing resources than Oregon. For example, Washington has 5.5 FTE and Idaho has 7.5 FTE.

In July of 2024, the full-time limited-duration position at DEQ associated with HB2010 was filled, doubling the state's capacity to address issues with water reuse. Through this position, DEQ will be able to accomplish certain deliverables such as the formation of a RAC, regulatory and technologic updates, and rule analysis. While these actions will be completed during this time, additional resources are needed to fulfill each of the elements outlined in the directive. Future work associated with this bill includes finalizing a permitting pathway, creating reuse guides and completing reuse maps, which are crucial for the success of this initiative. To implement the

goals established under HB2010, DEQ will need additional resources beyond the 2023-25 biennium to create a long-term robust program throughout the state. Similarly, OWRD has less than 10 percent of a position for water reuse work, which is inadequate for the agency to do more than sustain current demand for processing of registrations through the program.

DEQ is currently grappling with a significant backlog of administratively extended water quality permits. Wastewater facilities with these extended permits are unable to modify to their water reuse programs. This affects both water pollution control facility (WPCF) permits as well as the National Pollutant Discharge Elimination System (NPDES) permits. While DEQ is prioritizing resources to the NPDES permit backlog, the WPCF permit program remains understaffed and continues to face significant delays. This backlog hampers the development of new reuse projects and the expansion of existing programs. Although the NPDES permitting program has made notable improvements in consistency statewide through permitting guidance and subject matter expert reviews, the WPCF program needs a similar system to ensure consistent administration of the water reuse program.

### **Reuse Barrier - Current regulations and policies**

Regulations that govern DEQ's implementation of water reuse program are found in Oregon Administrative Rules (OAR) 340-055. DEQ staff and interested parties, including municipal wastewater utilities, have identified challenges within these regulations that hinder reuse projects. Elements of the current regulations either do not allow or lack clear pathways for utilities to develop or expand water reuse projects. Current regulations are under review, and new resources are being developed to help municipalities and industries pursue priority water reuse projects. Current efforts focus on pathways for successful project development and regulatory modification to create clear and predictable permitting processes. The following section identifies regulatory updates that have been identified to date that may improve water reuse project viability.

**Water quality limits:** Industrial and municipal water reuse provided to irrigation canals require an NPDES permit that typically includes restrictive discharge limits for parameters such as temperature and nutrients that, in most cases, may not be necessary within irrigation waters. By adjusting or removing these limits on manmade irrigation conveyance systems where they do not affect downstream waters, more municipalities could provide water reuse to augment flows in irrigation canals during dry summer months, conserving instream or groundwater aquifer resources.

**Wetland Restoration:** Current regulations have prohibitive limitations, preventing approval of projects that use water reuse for wetland restoration, or aquatic habitat development. These projects are identified as "priority project" types due to the significant environmental benefits they provide, however, these benefits cannot be recognized without regulatory changes.

**Direct Nexus:** With the Supreme Court's Maui decision, a potential direct nexus with an adjacent surface water body can complicate the permitting structure for water reuse projects.

The development of DEQ's functional equivalent internal management directive (IMD) and further guidance from EPA can reduce the uncertainty for municipalities.

**Impact Research:** The current regulations do not articulate a pathway to conduct research studies to identify appropriate new uses or sources of reuse water. A clear path that enables facilities to develop a project with sufficient analysis and demonstrated performance under state agency oversight enables the development of science-based data to expand approvable projects.

**Industrial Water Reuse:** Developing regulations for the administration of industrial water reuse would provide clarity and help industries make informed decisions around how they manage their effluent.

**Waters of the State:** There is ambiguity regarding when water reuse or reused water becomes Waters of the State and not subject to regulations pursuant to the water reuse program.

**Terminology Uniformity:** Program terminology varies across state agencies (water reuse, reclaimed water, etc.), leading to confusion among interested parties and inconsistencies in language, interpretation, and implementation both within and across different agencies. DEQ will work to create language uniformity across regulations, documents, and permits.

**Other Regulations:** WRD has noted the need to develop rules and to further evaluate its statutes for clarity as well as opportunities to expand the program in partnership with DEQ.

### **Reuse Barrier - Understanding of Oregon's water reuse program**

The level of awareness and understanding of Oregon's water reuse program and its associated regulations varies greatly among affected parties. Unclear regulatory guidance makes it difficult for local utilities to evaluate the feasibility and costs of water reuse strategies as part of their permit renewal processes and facility planning processes. Additionally, inconsistent regulatory interpretations among state agencies create uncertainty in the process, deterring efforts to develop water reuse strategies. Another significant obstacle is that facilities often face challenges in understanding how and where to access funding opportunities and lack essential resources required for applying for and managing these funds.

**DEQ 2009 IMD:** The current water reuse IMD was written as a guidance document for interpreting the rules of Division 55 for DEQ permit writers. Since its publication, some of the text has proven to be confusing resulting in the water reuse program being implemented inconsistently over time across projects, the state, and different staff. DEQ will update this document to remove some of this confusion.

**Guidance:** Municipalities commonly review the IMD to try to understand how they can implement a water reuse program, which is not the purpose of this document. DEQ plans to develop a water reuse document that provides information about processes and resources for facilities to implement an effective water reuse program.

## **Reuse Barrier- Cost**

Developing, implementing, and maintaining water reuse systems can be costly, particularly for smaller communities lacking the resources to pursue federal or state grants. These systems require skilled operators, monitoring, redundancy, maintenance, and separate infrastructure, which demand significant investment. Although long-term cost savings may result from water reuse, the initial investment is high and may take years to recover. Facilities often struggle with understanding and accessing funding opportunities and lack resources to apply for and manage these funds.

The EPA as part of their nationwide assessment of clean water infrastructure and the need for future investments to address the Clean Water Act's water quality objectives over the next 20 years identified that as of 2022 Oregon has an unmet need of \$94 million of infrastructure development to expand water reuse.

To address these challenges, DEQ intends to create additional user-friendly materials to assist interested parties in pursuing water reuse projects. Some material changes include, but are not limited to, DEQ water reuse website updates, generation of a water reuse project permitting and development guide, and changes to current regulations and associated documents such as existing water reuse regulations in OAR Division 55, DEQ's Water reuse IMD, and industrial reuse regulation. These materials would fulfill one of the key elements of HB 2010 requirements.

To better evaluate cost-associated obstacles, DEQ will conduct regional assessments to identify areas with the highest number of barriers and work with stakeholders to address these limitations. However, it must be reiterated that this work is an ongoing effort. Continued resources and support will be essential to sustain the work beyond the current fiscal biennium.

## **Element C - Water reuse programs in other states**

*Identify environmentally protective approaches successfully employed by other states*

DEQ is collaborating with states such as Arizona, California, Idaho, Utah, and Washington to enhance its water reuse practices by learning from their programs. This ongoing engagement aims to refine Oregon's approach without duplicating efforts. Additionally, DEQ is examining international water reuse practices from countries such as Israel, England, Qatar, and Singapore, and will continue to build relationships with both national and international agencies to adopt best practices from effective water reuse programs.

### **Arizona**

#### **Key Findings & Recommendations**

Arizona's Department of Environmental Quality has a small but growing water reuse program. This growth stems from increasingly frequent and severe droughts and population surge prompting higher demands for water. They have developed a clear process for water reuse to



be added to irrigation canals that has been working effectively for several years without any major issues or complications. They have also identified a “Class A+” criteria that once obtained allows for the water to be used without restrictions. While these regulations align with Oregon’s goals, it must be noted that Arizona has different environmental conditions, and their regulations are focused on protecting different aquatic species than those found in Oregon.

Current dedicated staffing level: 2 FTE

Definitions:

- Open water conveyance: Constructed open waterways, including canals and laterals, that transport reclaimed water from a water blending facility or from a sewage treatment facility to the point of land application or end use does not include waters of the United States.
- Reclaimed water: Water that has been treated or processed by a wastewater treatment plant or on-site wastewater treatment facility.
- Water reuse: Processed water that originated as a waste or discarded water, including reclaimed water and grey water.

Reuse Standards: (5) A+, A, B+, B, C

Water Quality Standards: Nitrogen criteria included for “+” class with more frequent monitoring

## Utah

### Key Findings & Recommendations

The Utah Division of Water Quality has a basic water reuse program that reviews applications and addresses them on a case-by-case basis resulting in different implementation of the regulations across the state. Recent state legislation (HB349, 2023) has limited water reuse projects by prohibiting any new water reuse project that would divert or reduce water reaching the Great Salt Lake or its tributary rivers.

Current dedicated staffing level: 1 FTE

Definitions:

- Water Reuse: Direct or indirect use of effluent for a beneficial purpose
- Water Recycling: Reuse of wastewater in the same process or for the same purpose that created wastewater
- Direct water reuse: Use of effluent with a direct link, such as a piped connection from the wastewater treatment works to the application
- Indirect water reuse: Includes an additional step such as mixing in a stream between treatment and the eventual reuse that leads to the “loss of identity” of the reclaimed water.

Reuse Standards: Type 1 (toilet flushing, fire protection), Type 2 (soil compaction, dust control)

Water Quality Standards: Allows water reuse to be provided for irrigation canals. Standards and monitoring depend on the class/category of water reuse

## **California**

### **Key Findings & Recommendations**

California has a long history of water recycling. Oregon's water reuse regulations revisions in 2008 were based on California's work and existing rules. California does not have statewide rules for industrial reuse. This work is conducted by regional water boards on a case-by-case basis. Their irrigation canals carry water quality standards but are different from adjacent water bodies. Water reuse provided to a canal ceases to be classified as water reuse the moment it enters the canal. It is considered waters of the state (Section 1211 of water code).

Current dedicated staffing level: 15+ FTE

Definitions:

- Water reuse: "Water which, as a result of treatment of waste, is suitable for direct beneficial use or a controlled use that would not otherwise occur and is therefore considered a valuable resource"
- Additional definitions fall under the nonpotable and potable reuse standards

Reuse Standards: Nonpotable reuse (disinfected tertiary, disinfected secondary – 2.2, disinfected secondary 2.3, undisinfected secondary)

Water Quality Standards: Use of Total Organic Carbon (TOC) as an indicator of presence of contaminants such as pharmaceuticals, cleaning agents, foreign materials, and bacteria.

## **Washington**

### **Key Findings & Recommendations**

Washington has a robust water reuse program that involves permitting from their Department of Ecology or the Department of Health depending on the project. They do not recognize the lower qualities of water reuse (Oregon's nondisinfected, Class D or Class C). They have an excellent guidance document for wastewater utilities wishing to pursue a water reuse program. Water reuse across the state is limited by potential effects to senior water rights. This has led to several programs that were never completed.

Current dedicated staffing level: 5.5 FTE

Definitions:

- Reclaimed water: Water derived in any part from a wastewater with a domestic wastewater component that has been adequately and reliably treated...so that it can be used for beneficial purposes. Reclaimed water is not considered a wastewater.

Reuse Standards: A+, A, B

Water Quality Standard: Includes specific emphasis on “Minimum biological oxidation performance standards” at the end of the unit process or alternative monitoring location set in the reclaimed water permit

## Idaho

### Key Findings & Recommendations

Idaho has a very similar water reuse program to Oregon’s, but they have a larger staff to administer it. They actively work with municipalities seeking to develop water reuse programs and develop separate permits for water reuse. They have several helpful guidance documents aimed at assisting municipalities in developing and implementing effective water reuse programs, including one that is currently being rewritten.

Current dedicated staffing level: 7.5 FTE

Definitions:

- Water reuse: Water that has been treated by a wastewater treatment system and is used in accordance with the rules

Reuse Standards: A (ground water recharge through surface spreading or seepage ponds), D (subsurface distribution of water reuse via a distribution system with a point of discharge beneath the earth’s surface)

Water Quality Standards: Class D water quality parameter is total coliform. No other indicators are used for this class

## Element D – Identified regulatory challenges and potential regulatory changes

*Identify potential regulatory changes, including but not limited to changes to internal guidance, administrative rules or statutes needed to remove impediments, and propose an implementation schedule for enacting the proposed changes*

Since the enactment of HB 2010, DEQ has consulted with partner agencies and wastewater utility groups to identify regulatory barriers to develop recommended changes. These changes aim to make the regulations clearer and more consistent to aid in the advancement of reuse projects. The following sections highlight, through case examples, the regulatory challenges encountered and the potential regulatory or policy changes that could address these barriers. Proposed actions and resources that would be needed for implementation are described below. With these items in mind, DEQ will ensure that any changes made to policy, regulation, or rule are protective of public health and the environment while still facilitating beneficial uses of reclaimed water.

## **Regulatory Challenge - Water reuse augmentation of irrigation canals**

Municipalities are showing growing interest in collaborating with irrigation districts to provide reused water to irrigation canals, either to enhance water flows or to reduce the diversion or pumping of other surface or groundwater sources. This practice enables farmers to have reliable and predictable flows during critical irrigation months, allowing them to plan annual crops with reduced risks related to water availability.

The irrigation season often matches the timeframes when wastewater discharge may be limited by a receiving stream's biological criteria for temperature. Municipalities often need to find ways to reduce their effluent's temperature, which can include constructed mechanical cooling facilities. Irrigation water can have a significantly higher temperature than would be necessary to protect fish when discharging to a surface waterbody (e.g. 13-18° C for salmonid spawning and rearing vs. 20° C for general crops). Irrigation using water reuse can be a good match for properly treated effluent. The crops can withstand higher temperatures of water and benefit from the residual nutrients that would otherwise need to be removed prior to discharge to a stream.

When treated to levels that are suitable for the crops, this water reuse strategy can create win-win water solutions for farmers, wastewater utilities, and ratepayers. It can reduce demand for surface, and groundwater sources while minimizing temperature and nutrient inputs to receiving streams. Offsetting canal flows with recycled water is in alignment with state and federal goals aiming to permit reuse projects without additional infrastructure, particularly DEQ's Built Environment goals and EPA's water reuse goals.

### **The challenge**

Currently, water reuse provided to an irrigation canal is considered a Water of the State and therefore, the federal Clean Water Act (CWA) programs and Oregon's water quality standards apply. Thus, recycled municipal water cannot be provided to irrigation canals without NPDES permits, which have restrictive discharge limits. Current regulations assume that irrigation canals are fish-bearing or are tributaries to fish-bearing streams, which can be a barrier for districts using water reuse in canals designed to exclude fish. In such cases, where fish are prevented from entering, temperature and nutrient restrictions may not be necessary or could be less restrictive.

Under the federal CWA, revising water quality standards requires a Use Attainability Analysis<sup>1</sup> (UAA) to demonstrate that the canal cannot support the designated beneficial uses. If the UAA confirms that fish use is not applicable, DEQ then must initiate a rulemaking process to change the beneficial use designations and water quality standards, which must be reviewed and approved by EPA. This UAA process, along with the subsequent rulemaking and EPA review, is time and labor-intensive. DEQ is exploring the different options with partnering agencies to facilitate this process as efficiently as possible.

## Collaboration – Case Examples Highlighting Barriers & Solutions

DEQ is collaborating with municipalities and irrigation districts that want to advance water reuse projects but face regulatory barriers. Some locations already have successful projects, while others are seeking to start new ones, but encounter obstacles. The examples below detail both successful projects and areas where municipalities are requesting regulatory determinations, guidance, and support to enable water reuse.

### City of Hermiston & West Extensions Irrigation District

- **Water Reuse Summary:** Driven by new permit requirements, the City of Hermiston leveraged its leadership, financial resources, and partnerships to find an alternative use for their treated effluent. By upgrading its facilities to produce Class A water reuse and collaborating with the West Extension Irrigation District (WEID), Hermiston identified a potential beneficial use for their water reuse, though they faced significant regulatory hurdles. After over two years of dedicated effort from the City, DEQ staff, and stakeholders, the project team successfully changed the designated beneficial use for part of the irrigation canal. Due to the extensive effort required, this project has not been replicated. Since 2012, Hermiston remains the only city in Oregon that provides water reuse to an irrigation canal.

### City of Bend & North Unit Canal

- **Water Reuse Summary:** The City of Bend faces regulatory challenges in advancing its water reuse program due to complex definitions and current water quality criteria. The City's current water reclamation facility produces Class C water, which is discharged to evaporation ponds. Bend is working to upgrade its system to allow Class A water reuse to augment the North Unit Main Canal (NUMC). This upgrade is intended to provide potential environmental and economic benefits, such as reducing reliance on river flows and improving water quality. Regulatory challenges include changing the canal's designated water quality criteria, addressing concerns about potential impacts on Haystack Reservoir, managing issues related to the canal's leakage to groundwater, and preventing tail water from reaching surface water. DEQ is actively working to clarify the regulatory pathway and determine the appropriate water quality criteria for the canal. These efforts aim to support the City in navigating regulatory obstacles and advancing its water reuse initiative.

### City of Klamath Falls & Klamath Drainage District

- **Water Reuse Summary:** The City of Klamath Falls is struggling to advance its water reuse program due to intricate regulatory issues and complicated definitions of beneficial use. The Spring Street Sewage Treatment Plant currently produces Class C water reuse and operates under stringent nutrient and temperature limits specified in its renewed 2020 NPDES permit. Efforts to upgrade to Class A water for irrigation are impeded by high costs and regulatory barriers, while plans for indirect aquifer recharge encounter

difficulties due to new PFAS standards recently established by EPA that affect Underground Injection Control permitting activities. The City's initiative is affected by the need for clearer regulations from DEQ and EPA on appropriate water quality standards for instate and waters crossing state lines. DEQ is working to address these regulatory challenges and facilitate the advancement of water reuse projects to make them more feasible.

#### Clean Water Services & Tualatin Valley Irrigation District

- **Water Reuse Summary:** Clean Water Services is assessing the potential for providing the Tualatin Valley Irrigation District with water to reduce the volume of surface water diverted from the Tualatin River into the irrigation canal. Current water temperature standards for the irrigation canal render this option unfeasible from a regulatory perspective, despite Clean Water Services producing Class A water reuse and its potential environmental benefits for the river system.

#### City of Medford & Rogue River Valley Irrigation District

- **Water Reuse Summary:** The Medford wastewater facility is in the early stages of developing their facilities plan. They intend to upgrade their system such that they would be able to produce Class A water. Rogue River Valley Irrigation District is assessing the option of building the infrastructure to transport the water but needs a clear regulatory permitting path to be in place prior to investing in this system. In support of these efforts, DEQ is collaborating with the involved agencies to address regulatory and cost barriers to help advance the project.

### **Regulatory Challenge - Potential direct nexus with surface water**

The Supreme Court's ruling in *County of Maui, Hawaii v. Hawaii Wildlife Fund*, commonly known as the "Maui decision," has introduced uncertainty into the permit structure for Oregon facilities, particularly for water reuse projects. The ruling establishes seven factors to determine if a discharge is functionally equivalent to a direct discharge and require an NPDES permit with the associated water quality restrictions. DEQ has developed an internal management directive to provide guidance to permitting staff in making these determinations. This document was completed in May 2024.

Since the Maui decision, there has been uncertainty about the permit structure for water reuse projects that could be categorized as Waters of the State. Previously, such projects, like habitat restoration and artificial wetlands, could operate under a WPCF permit with land application standards. Now, in some instances the projects may require an NPDES permit with stricter temperature and nutrient criteria. This could increase costs and impact cost-effectiveness despite the benefits, such as habitat enhancement and recreational opportunities. DEQ will continue to collaborate with municipalities to develop clearer guidance materials to navigate this issue.

## **Challenge - Research guidelines and approvals**

Current state regulations provide limited opportunity for authorizing research studies or pathways to test innovative approaches to advance our understanding of potential benefits or impacts associated with new uses of water reuse.

DEQ will work to advance the authorization of research studies or pathways to test these innovative approaches in a protective manner. This advancement would highlight staff's ability to evaluate potential water reuse projects from a broader perspective, extending beyond isolated water quality considerations, to assess their overall ecological effects. This approach would facilitate the advancement of projects with comprehensive environmental benefits, preventing their premature termination during the planning stages. Along with new procedures, research partnerships with agencies such as OSU and USGS are needed to provide additional clarification on the potential impacts and benefits of new uses of water reuse.

## **Regulatory Challenge - Industrial water reuse**

The existing state regulations narrowly define "water reuse" as sourced solely from domestic origins or a combination of domestic and industrial sources. Consequently, there are no specific regulations addressing industrial water reuse, despite the potential for it to provide significant water resources that could address some of the state's current water demands. Numerous industries with water reuse initiatives generate substantial amounts of water, surpassing the output of most domestic wastewater treatment facilities. Although DEQ does not regulate water reuse within industrial structures, permits are required for any usage or discharge outside their buildings, especially if there is a real or potential release to the environment.

Presently, DEQ includes monitoring and reporting requirements in the individual water quality permits for industries. However, these restrictions are not explicitly detailed in regulations, leading to inconsistencies across the state. This gap poses challenges for industries seeking to plan and implement water reuse practices at their facilities. For future planning, DEQ will focus on promoting the increased use of water reuse in the industrial sector by addressing barriers.

## **Proposed Changes - Policy, guidance, and process changes**

Element D of HB 2010 requires DEQ to review and identify needed revisions its statutes, rules, and practices, along with a schedule for implementing such revisions. DEQ has identified and is addressing errors in the water reuse IMD and creating user-friendly materials based on updated guidelines. Clearer explanations are needed for water class risks, the definition of "beneficial use," sampling intervals, and analytical methods. Additionally, explicit procedures for evaluating agronomic rates and irrigation schedules will enhance clarity and consistency. Improved guidance will ensure transparency, scientific accuracy, and uniform application by DEQ staff, ultimately encouraging stakeholders to develop their own water reuse programs.

## **Potential regulatory amendments or new rules**



In addition to potential regulatory changes that can improve the state's framework for encouraging and facilitating reuse projects, DEQ has reviewed the OAR 340 Division 55 rules for errors, typos, and outdated references and has identified inconsistencies in vocabulary used by other agencies in their rules. The use of different terms for the same concepts among various agencies can create confusion and contribute to uncertainty regarding rule allowances.

## **Element E - Proposed technical resources**

*Develop technical assistance, guidance, or other resources for local jurisdictions and industries*

DEQ staff have engaged in discussions with Oregon agencies to identify the types of resources that would be helpful to the local wastewater utilities contemplating water reuse projects. One useful resource for providing broad public access to information related to reuse, state agency contacts, and guidelines is the DEQ website. DEQ's current website is outdated and cumbersome, providing limited information that is hard to find. Although staff contacts are available on the website, their time constraints may result in delayed responses to questions or information requests. Additionally, without clear guidance and resources posted in an easily accessible location, wastewater utilities struggle to access subject matter experts and decision makers at DEQ who can provide clear and consistent responses to policy questions.

To navigate the water reuse program, many facilities resort to using DEQ's IMD, which, while effective in providing information, is geared towards DEQ staff and may not be easily digestible for entities seeking to assess their options.

Addressing these challenges includes developing an improved webpage and user-friendly guidance manuals specifically tailored for municipalities and industries. These manuals would serve as a comprehensive resource, offering a better understanding of the options associated with the water reuse program and providing a clear template for the development of a water reuse use plan.

### **Resources and incentives**

To address some of the other issues encountered by wastewater facilities, DEQ is exploring other potential incentives to encourage water reuse. Other potential incentives that are being investigated are potential water quality trading, allocated infrastructure funding, financial support for continuous monitoring and system maintenance, and reduced permit fees for water reuse programs, among others. The specific details of the implementation and the decision-making process surrounding these incentives are still under development. We anticipate completion by 2030 provided sufficient staff and resources are available.