

MANAGING OREGON'S WATER FUTURE: SOLUTIONS AT HAND

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Clean, reliable, and affordable fresh water is essential to our quality of life. It is vital for the health of our farms, cities, and ecosystems, which in turn fosters a growing competitive advantage for our businesses. Though Oregon has a reputation for plentiful water resources, many regions in Oregon are now near or at full appropriation and live year-round with water shortages. Over a third of Oregon is considered high desert. Additionally, in Oregon, as in many Western states, historical water allocations, growth, aging infrastructure, urbanization, and new regulatory frameworks, all mix with changing climate conditions to create new water demands.

Together, these factors also present unique opportunities for large-scale, long-term regional water supply initiatives. While Oregon has done a good job identifying immediate and potential water supply issues and problems,¹ we struggle to create an equitable framework to better coordinate and implement regional solutions in a timely and long-lasting manner.

According to the U.S. Department of Agriculture, irrigated agriculture accounts for at least 80 percent of all water consumption in the West. This water use is spread across more than 18,000 square miles of farmland utilizing surface water resources (rivers and streams) for irrigation.² This enormous quantity of water use represents both a challenge and an opportunity. In many cases, modern technologies, such as piping, are proven to provide enhanced water delivery for farmers and ranchers while conserving water, enhancing the environment and in some cases generating renewable energy. However, many of our state's irrigation districts have yet to modernize their systems due to costs and other constraints.

Modernizing irrigation infrastructure not only has the potential to decrease the cost of operations and maintenance for farmers and ranchers, but it can also create a pathway to solve environmental problems through communities working together. Additionally, regions (i.e. multiple watersheds or watersheds with shared "main-stems") are starting to voluntarily work together on ways to leverage resources and make multiple use benefits (e.g. economic and environmental) of the same water molecule a reality.

Unfortunately, state and federal policies afford little access or opportunity to implement the ideas that regions come up with, or they add regulatory hurdles that make it more difficult to implement solutions. For example, despite the heightened interest in assisting Eastern Oregon with access to mitigated Columbia River water for irrigation and groundwater aquifer recovery, we have not yet deployed state support for large-scale water storage and mitigation as proposed under Senate Bill 839. Similar situations exist around the state in the Deschutes, Rogue, Klamath, and Willamette basins, each with its own unique circumstances and stakeholders.

Oregon Business Plan Strategy

Each area of the state faces a unique set of water management challenges. The Oregon Business Plan is calling for a new focus on water. Improving water productivity means obtaining more value, and multiple values, from each drop of water—whether used first by farmers, communities, business or ecosystems. In Oregon, improvement of water productivity means using our finite but renewable water supply as efficiently as possible to produce more food, enhance economic opportunities, secure our quality of life, and restore ecosystems for recreational benefits and general quality of life. This vision is not unique to the West but

¹See *Integrated Water Resources Strategy*, Oregon Water Resources Department.
https://www.oregon.gov/owrd/Pages/law/integrated_water_supply_strategy.aspx

² United States Department of Agriculture Economic Research Service, <http://www.ers.usda.gov/topics/farm-practices-management/irrigation-water-use.aspx>

Oregon is in a position to truly realize it due to our values in conservation, and our commitment to working together to find equitable solutions. This vision relies on the following guiding principles:

- Local communities must be empowered to lead efforts to find solutions that balance the public's water needs, respectful of existing water rights and management systems.
- Solutions need to include planning for and adapting to Oregon's changing climate patterns, specifically addressing changing precipitation patterns where we see less natural storage in snowpack and a change in the volume and timing of Oregon's rain events.
- Water management goals – both conservation goals and economic goals – must be clear, and they must allow for flexible and adaptable approaches to allow communities to find solutions that work for both humans and nature.
- Participation, discussion, and debate must be encouraged to foster new ideas and improve effective implementation of short and long-term solutions.
- Regional, cross-scale issues must be understood, recognized, and addressed.
- New, cost-effective technologies should be deployed where possible to maximize water measurement and the conservation, re-purpose, reuse, and storage of water.
- Oregon must get past planning to aggressive implementation of solutions that are critical to making solid gains.

Implementing the vision will rely on six key strategies (the six "I"s of water management):

- **Information.** Provide access to data and information essential to adaptive management, measuring progress in achieving economic and conservation goals, and maintaining informed public and user dialogue.
- **Innovation.** Facilitate development of and access to practices and technology as the basis for successful adaptive management of water.
- **Investment.** Generate, integrate and deploy in a timely manner all resources to implement necessary policy changes, technological innovation, and development projects.
- **Incentives.** Encourage and facilitate use of policies that support water productivity, including but not limited to reuse, conservation, groundwater storage, surface water storage, demand management, and water banking tools.
- **Institutions.** Coordinate management of water at and across the federal, state, and local levels, as well as across user sectors at the basin and regional scale. Ensure resources are available at the state level or secured to generate and maintain regional institutional capacity to see long-term multi-biennial projects and plans to fruition.
- **Integration.** Oregon's investments in water management are compartmentalized and segmented, creating obstacles to coordinating our attempts to identify and achieve our water use, storage, and conservation goals. Additionally, given the high cost of building modern water storage and delivery infrastructure, Oregon is simply not in a position to fund many of the projects we need without outside assistance from private and federal funding sources. As envisioned under Oregon's Integrated Water Resources Strategy, opportunities to integrate such existing resources, primarily data and project funding, can result in better return on investment and identify opportunities to achieve measurable outcomes in Oregon's water supply future.

Priority Action Items

As advocated for nearly six years, the Business Plan's top near-term priority is to achieve Northeast Oregon's plan to access water from the Columbia River for irrigation, while benefiting the aquatic environment and promoting recovery of deep groundwater aquifers. A widely supported plan was outlined in 2013, and program funding was granted by the legislature in 2015. Despite years of planning and investments made by

local water users, the Northeast Oregon region has still not secured state support for large-scale water storage and groundwater recharge projects.

The State of Oregon should support a process by which comprehensive water supply plans can be adopted at the local level. Local planning will enable a more resilient water management approach that can be responsive to a variety of water supply scenarios, including climate change and future drought conditions. We will need to secure funds to support a framework governance model that can bring stakeholders together at the basin or sub-basin level, identify local needs, and deliver a strategic plan and targeted investment strategy that can more efficiently respond to situational challenges. Such challenges include new and changing demands, water supply shortages and varying stream-flow conditions that may result from warmer temperatures, a decline in snowpack, or other climate-related factors.

For the long term, the priority is to get the necessary component pieces and players in place to allow regional innovation and coordination. Specifically:

1. Promote and fund development of regional governance frameworks and partnerships for convening and managing long term, integrated water resource management and supply plans, with appropriate integrated water basin authorities, while maintaining the state-led regulatory framework.
2. Establish a system to provide access to Oregon water-related information, and identify sponsors and leadership, stable long-term funding, and authority for management, measurement, maintenance, and operations of such data and information.
3. Plan for and prioritize water innovation and infrastructure investments. The backlog of upgrades needed for water infrastructure (built, renovated, and natural) to provide valued services under current conditions is substantial. We face a transition period during which public and/or private seed capital is required to conduct research, planning, development, and proof-of-concept pilot projects so upgrades will support sustainable water management into the future.
4. Pool and prioritize strategic investments in irrigation modernization projects (such as piping, storage, reuse, and conservation) in priority regions to meet the economic, community development and environmental goals of communities and the in-stream flow needs for native aquatic freshwater species.
5. Allow for appropriate flexibility to work at the region-wide level to make targeted investments by encouraging partnerships, leveraged co-investment, and collaborative solutions across relevant business, conservation, agriculture, municipal, and regulatory agencies.
6. Optimize energy projects, such as on-farm energy efficiency, storage, and community renewable energy projects (such as solar and small-scale hydropower), to significantly reduce irrigation operating expenses and to free up capital for the purpose of investing in water conservation projects.