

**Oral Testimony**

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**Before the**

**Oregon House Committee on Water**

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**Regarding**

**Initial Findings of The Oregon Business Council Water Project**

SLIDE 1: TITLE SLIDE; HYDROLOGIC MAP OF OREGON

Good afternoon, and thank you for inviting me to present the initial findings of an important project launched by the Oregon Business Council. For the record, my name is Martin Doyle, and I am a professor at Duke University's Nicholas School of Environment, and the Director of the Water Policy Program at Duke's Nicholas Institute for Environmental Policy Solutions, whose mission is to directly engage in environmental policy development, particularly in serving communities and states around the nation to find solutions to critical issues related to water management. I should also note that I spent some of my early career as a water engineer here in Hood River, and have worked on water issues in Oregon in various contexts for the past two decades.

Since 2012, the Oregon Business Council (OBC) has made water management one of its highest natural resource priorities.

MOVE TO SLIDE 2: IMAGE OF BOBBY COCHRAN

For OBC, water is the basis for our economy, our communities, natural systems, and our very lives. And the OBC has sustained a focus on water in Oregon for many years.

MOVE TO SLIDE 3: IMAGES OF WATER CRISES IN PAST DECADE

While in the past, few Oregonians gave water availability and quality much thought, the state has seen a seeming relentless sequence of water crises: the ongoing ravages of wildfire, toxic algal blooms in Salem's water supply, flooding in Pendleton, severe droughts in many years of the past decade, aging infrastructure throughout the state, and severe water crises in basins like the Klamath and Harney. All of these, often with one coming on the heels of another,

illustrate the importance of making water management in Oregon a top priority for our leaders. Governor Brown acknowledged this challenge when she launched the Water Vision project in 2019, and I believe this committee was created in part to consider her water priorities. One of the primary purposes of this Project is to keep the focus on water alive in Oregon – meeting this challenge is fundamental to the state’s future.

The purpose of my testimony today is to share with you our initial findings, offer a thesis that we believe is central to finding a solution to Oregon’s water management challenges, then seek your input on how we balance critical components of that solution to meet social, environmental, and political realities.

My findings today and the trajectory of our work for the future are based on nearly sixty individual interviews, and repeated meetings with Oregon scientists at several of your state universities.

MOVE TO SLIDE 4: THREE PERSPECTIVES ON OREGON’S LONG-TERM WATER HORIZON  
HEADING; POPULATION & DEMOGRAPHY SUB-HEADING

To start, there are three trends affecting Oregon’s long-term water future. The first of these is demography. Over the coming four decades, the population in Oregon will increase from about 4 million to nearly 6 million residents. Equally important is the distribution of population, which will continue to concentrate in some counties, while other counties and communities shrink.

MOVE TO SLIDE 5: THREE PERSPECTIVES ON OREGON’S LONG-TERM WATER HORIZON:  
CLIMATE

Climate change is hard to communicate, and so instead of using changes in degrees or inches of precipitation, I find it easier to envision climate change by our current sister cities. Using a simulation tool developed at the University of Maryland, we can identify what the climate sister cities are: The Portland of 2060 will be like Sacramento today; Medford will be like Chico today, and Pendleton will be like Reno. Clearly there are all manner of implications of these types of changes, whether for recreation or agriculture; the Oregon of the future is going to look very different from the Oregon of today.

MOVE TO SLIDE 6: THREE PERSPECTIVES ON OREGON’S LONG-TERM WATER HORIZON:  
HYDROLOGY OF OREGON IS *COMPARATIVE* ADVANTAGE

The final long-term trend that sets the context for Oregon’s water future is its hydrology, and here the news is actually good. In comparison to other western states, Oregon’s future need not be entirely constrained by water. While basins will continue to wrestle with water shortages, the state is in fact blessed with a great deal of rain in western Oregon, aquifers which are large and stable, and let’s not lose sight of the fact that the Columbia River is one of

the largest rivers on the entire continent. To be blunt, the hydrologic situation in Oregon is a strong comparative advantage in the west.

Those are the long-term contexts; we have to keep these in mind for the constraints or large opportunities we might face. But we need to now pivot to the more near-term trends, which really set the stage for what our more immediate challenges or opportunities might be.

MOVE TO SLIDE 7: TEN TRENDS FOR THE NEXT 10 YEARS.

To frame this, we identified 10- trends for the next ten years.

- Rain not snow: while precipitation isn't expected to change, it will come more as rain and not snow.
- Growing demand for over-allocated waters: with a growing population and associated business activities, there will be increasing pressures on already oversubscribed water resources.
- Aging infrastructure: From dams and levees, to irrigation canals, pumps, and treatment plants, Oregon's infrastructure continues to age beyond its expected or intended design life. We are living in an era characterized by geriatric infrastructure which will inevitably create both challenges, as well as crises.
- Affordability and equity: across the US, water rates are growing faster than inflation, and this affects the poor most severely; a preliminary study from Texas A&M shows that nationwide, those in the lowest 20% income bracket spend almost 10% of their monthly wages on water services.
- Federalism and shrinking budgets: while there will likely be infrastructure funding through occasional, short-term appropriations, over the long-term, we expect there to be continued rollback of grants and funding coming from the federal government, creating further financial pressures on the state and local communities to keep up with backlogs of infrastructure and safety requirements.
- Groundwater and natural infrastructure: With oversubscribed surface waters and high costs associated with building storage systems, there will be even greater pressure to use groundwater. But there will also be a pivot toward new ways of using groundwater, and in particular a growing recognition of using aquifers for storage (and recovery), as part of a broader movement toward using natural infrastructure to replace or supplement traditional infrastructure.
- Smart water and open water data: New technologies are making water monitoring easier and less costly – just when we need to know more about how, when, and why we use water. Along with this capability, we are increasingly demanding more information about most every aspect of our lives, including water.
- Novel compliance approaches: High regulatory compliance costs combined with the inability to, or uncertainty in, recovery of rare species or improved water quality will undermine reliance on traditional regulatory approaches. Across the US we are seeing agencies shift to performance-based outcome evaluations, whether they have the tools to do so or not.

- Impact investing: these new compliance approaches create unusual opportunities, one of which is enhanced by a new form of capital; those people willing to invest for both profit and social benefit -- this is one of the fastest growing sectors of investors, and shows no sign of slowing.
- Growing cost of capital: it is important to note that the current costs of capital are at historic lows. Inevitably, the cost of capital will rise, and when it does, the costs of water-resource infrastructure will rise as well.

To sum up, and to put it bluntly, Oregon's water challenges will grow dramatically in pace and scale while the public funds available to meet these challenges will continue to shrink. These contrasting trends create tremendous demands on water management; the ability to do more with less. This then raises the question of whether or not Oregon's water management system can rise to this challenge?

#### SLIDE 8: OVER-ARCHING CONCLUSIONS

Based on our review of Oregon's approach to water management, given these short and long-term challenges we drew the following conclusions:

1. Oregon's biggest challenge is water management -- not scarcity. This does not mean that basins do not, and will not struggle with seasonal water shortages -- they do now, and they will in the future. And we acknowledge that there are certain basins -- like Harney and Klamath, whose water levels will likely never be restored. What we do mean is that the long-term challenge for Oregon should focus on management as its highest priority. Management for people, for nature, for communities and the economy -- but management.
2. Unfortunately, we do not feel that the State's water management system is up to the task of meeting these challenges. Oregon's water management system was designed to meet Oregon's first hundred and fifty years, and has been adapted incrementally, but it is poorly positioned to meet the pace and scale of the challenges we shared with you.

#### SLIDE 9: SHARING THE RESPONSIBILITY: FOUR PILLARS FOR WATER MANAGEMENT BEING EXPLORED

To truly prepare for future generations of sustainable water, we are exploring recommendations designed to move Oregon towards new approach for water management. Old approaches must be redesigned, adopting a new model for water management that rewards innovation, reduces regulatory costs, all while increasing accountability, and is more inclusive of voices traditionally not part of water management decisions. To move forward, water stakeholders must accept the shared responsibility of finding a balance among four key pillars to water management:

- Regional approaches to water management that allow local stakeholders greater creativity, and responsibility, in implementing water management programs designed to meet multiple benefits most relevant to the region itself
- Greater transparency in water management decisions by increasing the use of shared, integrated water data
- A careful yet needed reform of Oregon's water permitting process which must occur if new approaches or innovations of any kind are to be possible
- Ensure that a wider range of voices are part of ongoing water management

Finding common ground among these four pillars will not be easy, and I am not prepared to offer you specific recommendations at this time; we do feel, however, that these four themes are necessary elements to a significant change in water management in Oregon. In follow-up meetings with key stakeholder groups, we are exploring how to frame these four pillars in ways that enable groups to move towards compromise and consensus. We invited water and legal experts from across the state and nation to meet with us to describe in detail 1) the nature of Oregon's challenges in these four areas and 2) how other states have approached similar challenges. We are making progress towards a set of steps we believe can help stakeholders find common ground, and our goal is to complete this exercise by November.

The water challenges that Oregon faces, and will continue to face, are truly incredible. But this committee must remember that water can be a strategic advantage for Oregon, if it is managed carefully and appropriately in the decades to come.