

Legal and Policy Interventions to Restore and Protect Lake Abert



A Report of University of Oregon School of Law
Environmental and Natural Resources Law Center
Oceans, Coasts, and Watersheds Project

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About this paper

This report is a collaborative effort of the Ocean Coasts and Watersheds Project an interdisciplinary research project focused on engaging the law to promote sustainability for ocean, coastal, and freshwater resources. Adell Amos is the faculty lead for the ENR Center's freshwater work. This material is based upon work supported by the U.S. Geological Survey under Grant Agreement No. G21AP10636.

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Summary

Lake Abert, located in south-central Oregon in the Chewaucan Basin, is the only hypersaline lake and one of six saline lakes in Oregon.¹ The lake's high salinity serves unique ecosystem functions—including as a critical feeding stop for migratory birds on the Pacific Flyway.² In the United States, Lake Abert's importance to shorebirds may be second only to the Great Salt Lake.

In the past few decades, water levels in Lake Abert have been declining³ and the lake was mostly dry in 2014, 2015, 2021, and 2022.⁴ Low water levels concentrate salinity, resulting in the collapse of the lake's ecologically significant food web. During desiccation events, bird abundance at the lake has declined by up to 90%.⁵

The desiccation of Lake Abert has spurred efforts at the federal, state, and local level to address water level declines and protect the lake ecosystem. This report examines policy and legal interventions that these efforts can leverage to restore and protect Lake Abert.

Water scarcity in the Chewaucan Basin is attributed to natural hydrologic variation, climate change impacts on precipitation patterns and temperature, and human interventions—including landscape modifications, surface water diversions, and groundwater pumping.⁶ Policy interventions that address the human causes of water scarcity present the greatest opportunity to restore lake levels. Importantly, thoughtful policies can increase the overall resilience of the basin to natural and human-caused hydrological changes. They can also support—and do not supplant—voluntary action, which is essential to building a sustainable relationship with water resources.

This report examines water allocation policies, administrative designations, and legal strategies that can reduce water use, reallocate water to optimize available resources, and protect water resources to meet instream and out-of-stream needs. This report assesses Oregon's unique legal context but draws from and examines strategies employed in other states to restore saline lakes; policy interventions deployed to protect the Great Salt Lake (Utah), Walker Lake (Nevada), and Mono Lake (California) are highlighted throughout.

¹ Ron Larson and Tamara Wood, *What is the status and future of Lake Abert? Responses to Primary Questions motivating the Workshop on Southcentral Oregon Saline Lakes, November 2022*, US Geological Survey, Oregon Lakes Association, 3 (2022).

² Ron Larson et al., "Recent desiccation-related ecosystem changes at Lake Abert, Oregon: A terminal alkaline salt lake," *Western North American Naturalist* 76(4): 389-404 (2016).

³ Larson and Wood, *supra* note 1 at 1-2.

⁴ NASA Earth Observatory, *Shrinking of Lake Abert*, <https://earthobservatory.nasa.gov/images/150891/shrinking-lake-abert#:~:text=But%20the%20past%20few%20decades,for%20brine%20shrimp%20and%20flies>.

⁵ Larson and Wood, *supra* note 1, at 19.

⁶ Larson et al., *supra* note 2 at 400.

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Introduction

Saline lakes, which are classified by their high salinity, principally develop in arid and terminal basins where there is no outflow of water.¹ As water evaporates from these lakes, salts and other minerals concentrate, creating unique ecosystems that have ecological, cultural, and economic importance. Saline lakes provide critical nesting and feeding habitat for migratory birds—which rely on the brine shrimp and alkali flies that are unique to saline lake ecosystems.²

Globally, saline lakes are drying due to development pressures and natural and human-induced changes in water availability.³ Saline lake ecosystems are particularly sensitive to water level changes (due to relatively high evapotranspiration rates) and desiccated saline lakes have both ecological and human impacts. Water level declines concentrate salinity, collapsing the lake's food web.⁴ When salinity levels are too high, brine shrimp—a keystone species in saline lake ecosystems—struggle to reproduce.⁵ Exposed lake beds become sources of dust that can harm human health.⁶

Lake Abert Background

Lake Abert is the largest saline lake in the Pacific Northwest⁷ and Oregon's only hypersaline lake.⁸ It is one of twenty saline lakes in the Great Basin. Located in south-central Oregon and covering 65-square miles when full, Lake Abert has an average depth of 3 feet.⁹ The majority of the lake is managed by the Bureau of Land Management (BLM).

The lake and basin are culturally important to Indigenous peoples and are within the ancestral homeland of the Northern Paiute people. Lake Abert is internationally significant as habitat for migratory birds along the Pacific flyway—a critical migration route from South America to Alaska. The lake supports over 80 species of birds and can provide habitat for tens of thousands of birds per day¹⁰—in some years, hosting the highest density of shorebirds per area.¹¹ The lake

¹ Wayne A. Wurtsbaugh et al., "Decline of the world's saline lakes," *Perspective, Nature Geoscience* (Oct. 23, 2017), doi: 10.1038/NGEO3052.

² Johnnie N. Moore, "Recent desiccation of Western Great Basin Saline Lakes: Lessons from Lake Abert, Oregon, USA," *Sci. Total Environ* 554-555:142-54 (June 2016), doi: 10.1016/j.scitotenv.2016.02.161.Epub.

³ Ron Larson and Joe Eilers, *Lake Abert, OR: A Terminal Lake Under Extreme Water Stress*, *Lakeline*, 31 (Fall 2014), <http://www.nalms.org/wp-content/uploads/LakeLine/34-3/Articles/34-3-8.pdf>.

⁴ *Id.*

⁵ Ron Larson and Tamara Wood, *What is the status and future of Lake Abert? Responses to Primary Questions motivating the Workshop on Southcentral Oregon Saline Lakes, November 2022*, *US Geological Survey, Oregon Lakes Association*, 17-18 (2022).

⁶ Wayne Wurtsbaugh et al., *supra* note 1, at 816.

⁷ Ron Larson and Tamara Wood, *supra* note 5, at 3.

⁸ *Id.*

⁹ Ron Larson et al., "Recent desiccation-related ecosystem changes at Lake Abert, Oregon: A terminal alkaline salt lake, *Western North American*," *Naturalist* 76(4):389-404 (2016).

¹⁰ Ron Larson, R., and Tamara Wood, *supra* note 5, at 14.

¹¹ Ron Larson and Joe Eilers, *supra* note 3, at 30-3.

is the breeding ground for significant percentages of several species experiencing population declines, including for the state threatened Snowy Plovers.¹²

Located in the Chewaucan Basin, Lake Abert is the basin's water terminus. The largest stream in the basin and the primary contributor of flows to Lake Abert is the Chewaucan River, which drains 650-square miles from its headwaters on Gearhart Mountain to the valley floor where it flows into Lake Abert.¹³ Three smaller streams (Poison Creek, Juniper Creek, and Coldwater Creek) and springs and seeps—primarily on the eastern edge of the lake—contribute some flow.¹⁴ At least one spring complex, the Milepost 74 Spring complex, contributes significant flow to the lake.¹⁵ In recent years, with little inflow from the Chewaucan River, seeps and springs have been a primary contributor of water.¹⁶

There is limited data on how much water is reaching the lake. Until 2024, lake levels were not continuously measured. There is one active stream gauge on the Chewaucan River, which has measured flows since 1924, but the gauge is located upstream of Lake Abert¹⁷ with significant diversions between the gauge and the lake. However, intermittent measurements, satellite data, and physical observations confirm that water levels in Lake Abert have been generally declining since 2000—almost drying completely in 2014, 2015, 2021, and 2022.

Natural variations in water availability, increased temperature, and water diversions are identified as contributing factors to water level declines.¹⁸ Permitted water rights to the Chewaucan River exceed mean natural flows.¹⁹ Groundwater levels declines have been measured in the basin around half a foot per year.²⁰

Corresponding to declining water levels, salinity levels in Lake Abert have increased, which has exacerbated water declines (through increased evaporative losses) and impaired lake ecosystems. During 2021, when lake levels were desiccated, the number of birds visiting the lake declined over 90%.²¹

Role of Policy Interventions in Addressing Lake Abert Water Declines

Water scarcity in the Chewaucan Basin is attributed to natural hydrologic variation, climate change impacts on precipitation patterns and temperature, and human interventions—

¹² Ron Larson and Tamara Wood, *supra* note 5, at 13.

¹³ *Id.* at 4

¹⁴ *Id.* at 5.

¹⁵ *Id.*

¹⁶ Ron Larson et al., *supra* note 9, at 391.

¹⁷ Water Use Measuring and Reporting, 2022 Legislative Report, Oregon Water Resources Department 40 (2022); Ron Larson et al., *supra* note 9, at 393; Goose and Summer Lakes Basin Report, Oregon Water Resources Department, 55 (May 1989).

¹⁸ Johnnie N. Moore, *supra* note 2, at 153.

¹⁹ Goose and Summer Lakes Basin Report, *supra* note 17, at 59.

²⁰ Ron Larson and Tamara Wood, *supra* note 5, at 8 (extrapolating from two well logs in the basin).

²¹ *Id.* at 19.

including landscape modifications, surface water diversions, and groundwater pumping.²² The impact of human interventions increases with reduced natural water availability.

There are limited policy options to address natural water availability, and, therefore, human causes of water scarcity present the greatest opportunity for policy interventions. Legal and policy interventions to address human causes of water scarcity provide a mechanism to make water use sustainable, protect ecosystems, and repair hydrological functioning of landscapes. Thoughtful policy interventions can improve the resilience of the communities of the Chewaucan Basin and ecosystems to more acute and frequent periods of reduced water availability.

Thoughtful policy interventions also support—and do not supplant—voluntary actions, which are essential to building a sustainable relationship with water resources. Sustainable water use is fundamentally a human challenge and is dependent on the community to modify behaviors. Policy interventions can provide positive incentives for voluntary action, such as through funding or regulatory changes that remove disincentives or barriers to action. They can also provide negative incentives for voluntary action as a mechanism to avoid regulatory intervention.

Report Overview

This report identifies water allocation policies, administrative designations, and legal strategies that can alleviate water scarcity in the Chewaucan Basin to restore and protect Lake Abert and build the resilience of human communities.²³ This report focuses on policy interventions to reduce water use, reallocate water, and protect waters for future instream and out-of-stream needs. The report assesses policies and legal tools within Oregon’s unique legal context but draws from strategies employed in other states to restore saline lakes and other vulnerable waters. Policy interventions deployed to protect the Great Salt Lake (Utah), Walker Lake (Nevada), and Mono Lake (California) are highlighted throughout.

While this report does not catalogue policies to support landscape restoration and land conservation efforts, including many that are ongoing, it is important to note that the restoration of natural lands to improve water infiltration and increase natural storage capacity is a critical component of sustainable water management and a water-resilient ecosystem.

Policy Interventions to Restore and Protect Lake Abert

The following provides an overview of policy interventions that can support the long-term sustainability of water resources to meet instream and out-of-stream needs in the Chewaucan Basin. Existing water management frameworks in the basin have created water scarcity—with attendant human and, particularly, ecological impacts. Policy interventions that reduce water

²² Larson et al. at, supra note 9, at 400.

²³ The report generally focuses on opportunities in existing policies and does not assess how new policy approaches could support lake restoration efforts.

use, reallocate water to optimize available resources, and protect water resources to meet instream and out-of-stream needs, can alleviate water scarcity and increase the basin’s resilience to natural and human-caused hydrological changes.

This report discusses three types of policy interventions: state water allocation policies, administrative designations, and legal strategies. **State water allocation policies**—which this report defines as the suite of laws, regulations, and policies that govern the use of water—provide key regulatory and incentive tools that shape water use in the basin. Within water allocation policies, this report considers both corrective policies to address existing uses and prospective policies to guide future water use.

Administrative designations identify particular lands or waters for special management. These designations guide how land is managed and constrain resource decision making to achieve management goals. This report discusses three designations— the federal Area of Critical Environmental Concern designation and the state Outstanding Resource Waters and Scenic Waterways designations.

Lastly, this report describes two distinct but related **legal strategies**—the public trust doctrine and rights of nature—which provide theoretical pathways to compel and restrict government action to protect Lake Abert.

Section overview

To provide context for the policy discussion, this section first describes the basin’s hydrology, water needs and water rights, and existing and needed data. This section then outlines the suite of water allocation policies that can reduce, reallocate, and protect basin water resources. Next this section describes administrative land and water designations that provide special management frameworks to protect the designated waters or lands. Lastly, this section describes legal strategies to compel or restrain government action to protect Lake Abert.

I. Chewaucan Basin Context

Water management challenges are driven by the unique context of the water basin. To be effective at building sustainable water management, policy interventions must be designed and implemented based on that unique context.

The following briefly describes the Chewaucan Basin’s hydrology, water needs, and water rights. It also describes existing data resources and data gaps, which are often a barrier to sustainable water management, and highlights policy tools to develop additional data.²⁴

²⁴ This information is compiled from available resources and there is a need to develop more complete and updated information and data around hydrology, water needs, and water use.

A. Hydrology

Precipitation collected in the mountains is the primary source of water for the basin.²⁵ Baseflows provide about 16% of flows in the Chewaucan River.²⁶ Located in the rain shadow of the Cascade Mountain Range, the watershed has a small (relative to its size) average annual water yield.²⁷

The basin's hydrology is dominated by higher water levels during occasional wet years, followed by longer periods of diminished water levels.²⁸ While variations in flow are typical in the basin, since 2000, flows have been more consistently reduced with diminished high flows when they do occur.²⁹ Most annual runoff has historically occurred between April and June.³⁰

The hydrology of the watershed has been heavily influenced by human interventions. Settler water use began in the late 1800s. The upper watershed has been altered, impairing hydrologic function of the landscape.³¹ Lower portions of the watershed are low-gradient and have been heavily channelized, with numerous agricultural diversions.³² Prior to human alterations, the Chewaucan River flowed through numerous channels and marsh complexes.³³

B. Water Needs

Irrigation, predominately for ranching and hay production, is the primary water use in the basin.³⁴ Almost all irrigated acres are located below Paisley. The lower basin is predominately flood irrigated with a series of canals that convey water from the Chewaucan River below Paisley through the upper and lower marshes to 30,000 acres of pastureland.³⁵ Some center-pivot irrigation is used to irrigate from groundwater sources. The irrigation seasons can extend from January 1 to September 30, which is reflective of the generally dry growing season.³⁶

Domestic water use is another important water need. Most domestic water use, including for the town of Paisley, is supplied by groundwater. Lake Abert also supports a commercial brine shrimp fishery—only three permits are available for the fishery.³⁷

Water is also necessary to support the basin's unique ecosystems. In the lower basin, key environmental uses include the Chewaucan marshes and Lake Abert. Prior to settler development, the lower basin was a large inland lake and marsh complex. While the natural

²⁵ *Id.*

²⁶ *Id.*

²⁷ Ron Larson and Joe Eilers, *supra* note 3, at 30-33.

²⁸ Johnnie N. Moore, *supra* note 2, at 145.

²⁹ Goose and Summer Lakes Basin Report, *supra* note 17, at 55.

³⁰ *Id.*

³¹ *Id.* at 58.

³² *Id.* at 55-56.

³³ *Id.* at 56.

³⁴ Goose and Summer Lakes Basin Report, *supra* note 17, at 57.

³⁵ Lake County Watershed Council, Upper Chewaucan, <https://lakecountywsc.com/upper-chewaucan>.

³⁶ Goose and Summer Lakes Basin Report, *supra* note 17, at 57.

³⁷ ODFW Bring Shrimp Fishery, https://www.dfw.state.or.us/news/2018/04_april/042018b.asp.

hydrology of the lower basin has been disrupted through channelization and water diversions, flood irrigation practices mimic seasonal flooding. Both flood irrigation and the Rivers End Reservoir provide wetland habitat. Minimum water levels to support Lake Abert are not protected through instream water rights. The basin's ecosystems support recreational opportunities.

Indigenous communities have lived in the basin since time immemorial. To date, no Tribal water rights have been recognized in the basin; however, Tribes may have reserved water rights claims. Water to meet treaty rights and cultural uses is an unmet need in the basin.

C. Water Rights

In the Chewaucan subbasin, water rights may be obtained for irrigation, stockwatering, domestic, municipal, industrial, storage, and instream uses (OAR 690-513-0050). The earliest decreed water rights date back to the 1880s.³⁸ These water rights were adjudicated in 1916.³⁹

As of 2016, there were 153 permitted surface water diversions from the Chewaucan River and 102 from its tributaries.⁴⁰ Irrigation water rights represent the largest water use in the basin.⁴¹ As of the 1990s, permitted surface water rights authorized irrigation of 19,548 acres and supplemental rights to irrigate 309 acres.⁴² Permitted surface water rights exceed the average annual flow of the Chewaucan River; the 1989 Basin Plan found that if water rights exercised their full duty, water use would double the river's average annual yield.⁴³ Currently, the Oregon Water Resources Department (OWRD) has found there is no water available in the Chewaucan River for new appropriations in June, July, and August.⁴⁴

There was limited groundwater use in the basin until the 1960s when there was a rapid increase in groundwater development.⁴⁵ Most groundwater development has been for irrigation use. As of the early 1990s, groundwater rights in the Chewaucan Basin allowed for

³⁸ Johnnie N. Moore, *supra* note 2, at 151.

³⁹ Water uses established prior to the adoption of the water code, which established the state's water permitting framework, are confirmed through a judicial process termed adjudication. Once adjudicated, OWRD issues a certificate for the water, though the decree may provide important information about water use. Goose and Summer Lakes Basin Report, *supra* note 17, at 57.

⁴⁰ Johnnie N. Moore, *supra* note 2, at 151.

⁴¹ Goose and Summer Lakes Basin Report, *supra* note 17, at 57.

⁴² *Id.* at 15.

⁴³ *Id.* at 57.

⁴⁴ In the Matter of the Application for Extension of Time for Permit S-51164, Water Right Application S-709221 in the name of Wayne Clark, Proposed Final Order, ¶ 89.

⁴⁵ Goose and Sumer Lakes Basins Agricultural Water Quality Management Area Plan, Oregon Department of Agriculture, 25 (Oct. 2020).

irrigation of 2,930 acres and supplemental rights to irrigate 349 acres.⁴⁶ OWRD has continued to issue new groundwater rights for both primary and supplemental use.⁴⁷

The state has four instream water rights certificates, all with a priority date of 1990, for the Chewaucan River from river mile 28 to 53 and Dairy Creek and Elder Creek, upper watershed tributaries to the Chewaucan River.⁴⁸ In 2022 the Oregon Department of Fish and Wildlife (ODFW) applied for instream water rights to Wagon Wheel Creek, Auger Creek, and Deadhorse Creek (tributaries to Dairy Creek), and Crooked Creek (tributary to the Chewaucan River).⁴⁹ These applications are on administrative hold.

Rivers End Ranch

Constructed in 1994, the Rivers End Ranch Reservoir is located on the Chewaucan River just above Lake Abert and impounds inflows to the lake. The dam was constructed with the support of federal and state fish and wildlife agencies to create wetland habitat for wildlife. OWRD issued a permit to store 1,839 acre-feet of water in the reservoir for wildlife habitat and irrigation in 1990 and a water rights certificate in 2019.⁵⁰

Oregon law requires a separate water right to use stored water. A permit was issued to use 24 cfs from the Rivers End Reservoir—10 cfs to maintain wildlife habitat and 14 cfs for irrigation.⁵¹ Water rights permits require the permittee to complete development of the water right within a prescribed time subject to administratively approved extensions. OWRD has authorized extensions of time to complete development of the water right, most recently in 2019.⁵² The most recent extension of time was protested and no final order has been issued.

D. Data

Significant data gaps exist in the Chewaucan Basin, including related to water needs and water use, which limit regulatory and voluntary efforts to address declining lake levels. There is limited water measurement in the lower basin, including streamflow in the Chewaucan River, groundwater levels, surface water diversions, and groundwater pumping. There are also data gaps related to water needs—including for agricultural and environmental uses. These and other data gaps impede the ability to manage the basin's limited water resources.

⁴⁶ Goose and Summer Lakes Basin Report, *supra* note 17, at 15. Supplemental rights authorize the use of an alternative source of water when the source for the primary water right is not available.

⁴⁷ Recently adopted amendments to the state's groundwater allocation rules change how the state assesses groundwater availability for new appropriations. These changes will likely limit new groundwater development in the basin.

⁴⁸ Certificates 73375, 73376, 73559, 73560, 73561.

⁴⁹ Permits IS9308, IS9307, IS9317, IS89336.

⁵⁰ Permit R-11347; Certificate 94339.

⁵¹ Permit S-51164.

⁵² In the matter of the Application for an Extension of Time for Permit S-51164, Water Right Application S-70921 in the name of Wayne Clark, Proposed Final Order (Feb. 12, 2019).

Current efforts address some of these data gaps. Congress has appropriated funding to study the hydrology of saline lakes, including Lake Abert.⁵³ U.S. Geological Survey (USGS) has installed a water elevation monitoring station at Lake Abert, which measures water level and water and air temperatures.⁵⁴ In addition, in 2023 the Oregon legislature funded the collection of data on water resources and water use in the Chewaucan River basin.⁵⁵

Water Measurement

Water measurement is a key barrier to decision making throughout the state and in the Chewaucan Basin. Oregon does not have standard water measuring requirements for all water users; however, the following regulatory controls and financial incentives can be leveraged to expand water measuring in the basin.

Control Regulations

The following policies allow OWRD to require water measuring and reporting.

Water Right Conditions: OWRD has authority to condition water right permits and some changes to water rights (e.g., water right transfers), on the installation of water meters and water use reporting.⁵⁶ For smaller water rights, OWRD has generally required installation of water measurement devices and reserved authority to require reporting.⁵⁷ As part of their water distribution authority, watermasters may require installation of water measuring devices in areas requiring frequent regulation (ORS 540.310).

Serious Water Management Problem Area: Once OWRD issues a water right, it has limited administrative authority to modify the conditions of the water right. The state's primary administrative tool to address water measurement is the Serious Water Management Problem Area (SWMPA) designation, which authorizes the state to retroactively impose water measuring and reporting requirements.

Criteria for SWMPA designation include demonstrated groundwater declines or water use that is interfering with use by other water rights users or causing shortages (ORS 540.435; OAR 690-085-0020, -0030).⁵⁸ OWRD designates the regulated area and sets water measuring and reporting requirements through a rulemaking (ORS 540.435).

⁵³ Saline Lake Ecosystems in the Great Basin States Program Act of 2022, S.1466, 117th Cong. (2022).

⁵⁴ New Monitoring Station at Lake Abert, Oregon Water Science Center, USGS (June 9, 2023), <https://www.usgs.gov/index.php/centers/oregon-water-science-center/news/new-monitoring-station-lake-abert>.

⁵⁵ House Bill (HB) 3099 (2023).

⁵⁶ See, e.g., ORS 537.211 (authorizing OWRD to condition water rights permits); ORS 537.629 (authorizing OWRD to condition groundwater permits to prevent waste or interferences with existing wells); ORS 540.530 (authorizing OWRD to condition changes to water rights).

⁵⁷ Water Use Measuring and Reporting, *supra* note 17, at 6.

⁵⁸ Specific designation criteria are groundwater declines that do not recover annually, water management disputes between water users, substantial interference between wells, groundwater use that impacts senior surface water rights or wells, or frequent water shortages exist.

Designated by the Oregon Water Resources Commission (OWRC) in 2017, the Walla Walla Basin is the state's only SWMPA (OAR 690-507-0030(4)). Basin rules require water users to install a totalizing flow meter on basalt wells and submit annual reports.

Financial Incentives

Grant programs incentivize water measuring by defraying costs and conditioning grant funding on water measurement.

Water Measurement Cost Share Program: The Water Measurement Cost Share Program, administered by OWRD, pays 75% of the cost to purchase and install a water measuring device (ORS 536.021). Costs to install measurement devices to comply with permit conditions are not eligible for the program.

Water Project Grants and Loans: A funding award from the Water Projects Grants and Loans Program⁵⁹ for a project that uses or diverts water must include a condition that the project measure water use.

Building Water Data in the Chewaucan Basin

Opportunities

- Around a quarter of water rights in the Chewaucan Basin have water metering requirements, which require installation of a water measuring device and allow OWRD to require measuring and reporting.⁶⁰
- OWRD can condition water rights permits and approval of changes to water rights on measuring and reporting.
- Water users may access state grant funds to voluntarily install measurement devices to build water use data.
- Planning efforts, including the current collaborative effort (discussed in Section II.C), may be able to leverage state funding and technical support to build data.
- Designation of the Chewaucan Basin as a SWMPA would impose water measurement requirements on existing water rights that are not conditioned on measuring and reporting.

Challenge

- It is unclear whether the basin meets the criteria for designation as a SWMPA.

II. State Water Allocation Policies

State water allocation policies are the suite of laws, regulations, and policies that govern the use of water. Water use in the Chewaucan Basin contributes to water level declines in Lake Abert. Policies that regulate water use are therefore a primary mechanism to address water

⁵⁹ This program is highlighted in more detail in Section II.A as a financial incentive to support water use reduction.

⁶⁰ Water Use Measuring and Reporting, *supra* note 17, at 8.

scarcity and build resilience. Because water resources are largely developed in the basin, policies must both be corrective—to reduce existing water use and expand the uses of water the available supply can meet—as well as prospective, to guide future water use to meet instream and out-of-stream needs.

This report categorizes water allocation policies as control regulations, which authorize the state to direct or compel action; incentive regulations, which enable or encourage voluntary actions; and financial incentives, which fund voluntary action. It is important to highlight that regulatory and incentive-based policies do not function in isolation. Regulations serve as a backstop to voluntary action, establishing minimum standards for the use of the public resource to ensure the resource is protected and providing a basis to assess the adequacy of voluntary measures. Regulations can also enable and incentivize voluntary actions, which allow communities to meet regulatory standards through alternative means.

Great Salt Lake: Leveraging Water Policies to Restore and Protect the Great Salt Lake

The Great Salt Lake is a hypersaline terminal lake in Utah, covering 1,700 square miles with a maximum depth of 25 feet.⁶¹ The lake is an important economic resource—providing over a billion dollars in economic output related to mineral extraction, brine shrimp harvesting, and recreational uses. The lake and basin are culturally important to Indigenous peoples, and the ancestral lands of several tribes. The lake ecosystem provides critical habitat for migratory birds—hosting a third of all U.S. waterfowl.

Great Salt Lake has experienced significant declines—as of 2023, the lake had lost 44% of its surface area.⁶² The decline of water levels has been attributed to human consumptive uses; one study found that water diversions reduce inflows by 39%.⁶³ Agriculture represents the largest water use in the basin. Declining lake levels have economic, cultural, public health, and environmental impacts.

The Utah Legislature is leveraging its policy making and funding authority to address lake level declines. In 2023 the legislature directed and funded the development of a strategic plan to manage the Great Salt Lake for communities and ecosystems. It has also adopted a mix of financial and regulatory incentives and regulatory controls. Examples include incentives for water conservation including funding for irrigation efficiencies and telemetry technology to measure lake inflows and diversions, and tax incentives for mineral extraction companies that reduce water use. The legislature has also removed regulatory barriers to and incentivized

⁶¹ Great Salt Lake, Utah Division of Natural Resources, available at <https://greatsaltlake.utah.gov/wp-content/uploads/GSL-One-Pager-2023.pdf>.

⁶² Great Salt Lake water levels, Utah Division of Wildlife Resources, <https://wildlife.utah.gov/gsllep/about/water-levels.html>.

⁶³ AECOM, Consequences of Drying Lake Systems around the World (Feb. 15, 2019), available at <https://documents.deq.utah.gov/water-quality/standards-technical-services/great-salt-lake-advisory-council/activities/DWQ-2019-010002.pdf>.

water conservation, including by increasing flexibility for instream leases and authorizing, and funding, the state to negotiate with and pay water rights holders to lease water instream.

The following describes Oregon water policy interventions to reduce water use, reallocate water between uses and users, and protect water.

A. Water Policies to Reduce Water Use

Policies that reduce water use help existing water supplies meet more water needs. Reductions in water use may include stopping certain water uses or using less water for the same use. These measures increase the uses that can be met within the existing supply.

The following describes control regulations, through which the state can curtail existing water uses; incentive regulations, which remove barriers to water conservation; and financial incentives that fund water conservation practices.

Control Regulations

Once OWRD issues a water right, it has limited regulatory tools to require curtailment of water use. A water right conveys a legal right to use water when physically and legally available—termed a usufructuary right. When water is not available to meet all uses, OWRD may curtail water in order of priority date (ORS 537.120).

In addition to priority date, a right to use water is constrained by conditions placed on the recognition of that right, including those in an individual water right and background legal principles, such as prohibitions against waste and forfeiture. OWRD may enforce compliance with these conditions of use.

When water is available and water users are in compliance with their water right, OWRD has only one administrative tool to curtail water use—the Critical Groundwater Area Designation, which addresses serious groundwater declines.

Enforcement

Water Right Conditions and Waste: OWRD has broad discretion to condition water rights and enforce conditions through regulation of illegal uses (ORS 540.045(1)). For example, OWRD has included decline conditions in groundwater rights, which require water users to curtail use when groundwater levels decline below a certain level. If the water user does not comply with the condition, OWRD has authority to curtail water use (OAR 690-250-0050(1)).

By statute, a water right is limited to the amount needed to accomplish the beneficial use, which includes both the type and quantity of use (ORS 540.610). Water use in excess of that amount is waste and, importantly, can be curtailed and deducted from the water right (OAR 690-250-0050(1)(d)).

Forfeiture: Oregon requires a water right owner to put water to beneficial use consistent with their water right a minimum of once every five years (ORS 540.610). Five consecutive years of non-use creates a rebuttable presumption of forfeiture of the water right. All or a portion of a water right can be forfeited. Use inconsistent with the water right may also create a presumption of forfeiture.⁶⁴ OWRD may independently initiate a forfeiture proceeding or in response to a complaint (ORS 540.631; OAR 690-017-0400 to -07000). Forfeited water rights are diminished by the amount forfeited or canceled.

Critical Groundwater Area

The administrative designation of a Critical Groundwater Area (CGWA) is the state's only regulatory authority to curtail legal water use and only addresses groundwater use (ORS 537.730).

The designation of a CGWA is reactive to already occurring overuse, including where groundwater is being overdrawn or has excessively declined, groundwater use is impacting other groundwater uses or senior surface water rights, or pumping is impairing the quality of groundwater (ORS 537.730(1)(a) to (g)).⁶⁵ OWRD designates CGWAs through a rulemaking (ORS 537.735(1)(a), (3), 537.742).

Designation allows OWRD to adopt corrective tools to address groundwater overuse. Corrective measures are unique to each CGWA, but examples include, closing the basin to further appropriation, required measuring and reporting, monitoring of groundwater levels, prioritizing certain uses, and establishing a total permissible withdrawal and curtailment of water use in order of priority (ORS 537.735(3); 537.742(2)). OWRD adopts corrective measures through a contested case proceeding (ORS 537.742).

The state has seven CGWAs—the most recent CGWA was Stage Gulch Area in the Umatilla Basin, designated in 1991. OWRD is currently undergoing a rulemaking to designate the Harney Basin as a CGWA. To date, all designations have been based on excessive declines in groundwater levels.

Incentive Regulations

As described above, OWRD has limited tools to curtail legal water use. Therefore, supporting voluntary water conservation has been a key strategy to reduce water use. To support the use of voluntary measures, the state has adopted policies that enable and encourage voluntary conservation efforts.

⁶⁴ See, e.g., *Hannigan v. Hinton*, 97 P.3d 1256, 1258-59 (Or. Ct. App. 2004).

⁶⁵ The statutory list of criteria is: (1) groundwater levels have excessively declined, (2) there is a pattern of well interference between groundwater users, (3) groundwater use is interfering with other well users or senior surface water rights, (4) groundwater is being or will be overdrawn, or (5) groundwater quality is impaired, or temperature is altered.

Excused “Nonuse”

Statutory forfeiture provisions can disincentivize water conservation by imposing a risk that nonuse will result in the loss of a water right. To remove this barrier to the voluntary conservation of water, several statutory provisions excuse nonuse in certain circumstances (ORS 540.610(2)). With respect to water conservation, excused nonuse includes using less water than permitted under a water right when the water right owner is otherwise able to use the full water right, nonuse during drought, and nonuse of a supplemental right while a primary right is leased instream (ORS 540.610(2), (3)).

Allocation of Conserved Water Program

The state’s allocation of conserved water program addresses a regulatory disincentive to improving water use efficiency by providing a pathway for water users to maintain a right to use water saved through conservation measures (ORS 537.455 to .500). Water rights are limited by the amount of water needed to achieve the beneficial use; where a water user needs less water due to increased efficiency, the water right is necessarily diminished and the water user does not have a right to the conserved water.

Under the conserved water program, a water right owner may implement water conservation measures to reduce the quantity of water needed to satisfy the authorized beneficial use. Water saved through the efficiency measures is apportioned to the user (75%) and converted to an instream water right (25%). The conserved water is exempt from transfer requirements—allowing the water right owner to change the type and place of use outside of the administrative process (ORS 540.510(2); OAR 690-380-0010(2)(a)).⁶⁶

Voluntary Groundwater Agreements

In lieu of regulatory controls, Oregon permits groundwater users from the same groundwater reservoir to voluntarily curtail water use to address groundwater declines (ORS 537.745). Voluntary agreements must be consistent with the state’s groundwater laws, including provisions that address critical groundwater areas. If voluntary actions fail to stabilize groundwater levels or address impacts from groundwater declines, OWRD may impose corrective actions.

No voluntary agreements have been implemented in Oregon and OWRD has not developed rules or guidance to define the scope of voluntary agreements. While OWRD is limited to regulatory corrective actions, conceptually, a voluntary approach allows water users to leverage non-regulatory water management strategies (such as market approaches) to achieve sustainable groundwater use.

Financial Incentives

State and federal programs remove financial barriers to and incentivize the implementation of voluntary water conservation measures.

⁶⁶ Water right owners must notify OWRD of changes to the water right.

Water Project Grants and Loans

The Water Project Grants and Loans program funds water supply projects that provide economic, environmental, and social benefits (ORS 561.651 to .696). Eligible projects include above- and below-ground storage, conservation, reuse, streamflow restoration, and water infrastructure.

In 2023 the Legislature made a one-time \$50 million appropriation for grants to improve the efficiency of irrigation systems.⁶⁷ The Legislature will need to make additional investments to continue the program.

Feasibility Study Grants

Feasibility Study Grants fund costs to evaluate the feasibility of developing water supply projects, including conservation, reuse, and storage projects (ORS 541.566).

Conservation Reserve Enhancement Program

The Conservation Reserve Enhancement Program (CREP) pays landowners to voluntarily remove marginal land from production and reintroduce native vegetation. Landowners enter a long-term contract and receive annual rent payments.⁶⁸ Landowners that lease water instream while enrolled in CREP receive higher rent payments. In the Harney Valley, the CREP is being leveraged to address unsustainable groundwater use by enrolling lands irrigated by groundwater and paying landowners to cancel the associated groundwater rights. Federal funding pays for land retirement and state funding pays for the water right cancellation.

Special Legislative Appropriations

The Legislature has also made special appropriations to support the implementation of water supply projects in individual basins or priority areas.

Reducing Water Use in the Chewaucan Basin

Water in the Chewaucan Basin is overallocated, with authorized water rights exceeding the basin's average water budget. Permitted surface water rights, if fully exercised, exceed the mean annual flow of the Chewaucan River—the 1989 Basin Plan found that if water rights exercised their full duty, water use would double the river's average annual yield.⁶⁹

Groundwater pumping may exceed annual recharge. OWRD has limited corrective tools to reduce permitted water use—generally limited to enforcement of permit conditions and illegal water use. Therefore, voluntary conservation action will likely play a critical role in rebalancing water use in the basin.

⁶⁷ House Bill (HB) 5030 (2023).

⁶⁸ Conservation Reserve Enhancement Program (CREP), Oregon Watershed Enhancement Board, <https://www.oregon.gov/oweb/grants/pages/crep.aspx>.

⁶⁹ Goose and Summer Lakes Basin Report, *supra* note 17, at 59.

Opportunities

- Leverage the suite of state and federal funding to implement voluntary water conservation measures.
- Explore the benefit of extending the Harney CREP model to the Chewaucan Basin.
- Develop resources to support water users in understanding existing flexibility in managing water rights to reduce use.

Challenges

- Enforcement requires monitoring and baseline data to understand water use and current conditions, which needs to be developed in the Chewaucan Basin. Enforcement also requires agency capacity, which remains limited in OWRD.
- It is not clear that groundwater use in the basin would meet the statutory requirements for a CGWA designation. In addition, CGWA designation only addresses groundwater overuse and would not address surface water diversions, which are a primary contributor to water scarcity in the basin.
- Some consumptive water uses may have multiple benefits, for example, flood irrigation practices can have ecological benefits by mimicking natural flood processes—supporting wetland ecosystems and groundwater recharge. Irrigation efficiencies to conserve water may reduce these co-benefits. Data driven approaches to water conservation can maximize benefits and offset weaknesses.

B. Water Policies to Reallocate Water

Policies that enable and facilitate the voluntary sharing and redistribution of water resources help to maximize water uses for the greatest public benefit and build adaptive capacity to respond to water shortage. The reallocation of water rights is principally reliant on voluntary action by water right owners.

Saline Lakes: Environmental Water Transactions

Environmental water transactions, which involve voluntary changes to existing water uses to restore streamflow, have been a foundational piece of freshwater restoration efforts, including to restore saline lakes.

Environmental water transactions can take a variety of forms. Changes to water rights may be temporary or permanent. Water rights owners may be compensated for changes to their water rights (either through state programs or by nongovernmental organizations) or water rights may be donated. Transactions may occur in a regulatory context (through state instream flow programs) or involve private contractual agreements with water users.

While voluntary, states have incentivized water users to restore streamflow through policies that provide enhanced flexibility for water transactions and funding support.

Great Salt Lake

Consumptive water uses are a principal factor in declining water levels in the Great Salt Lake. Policy makers have identified voluntary streamflow restoration as a key policy tool to reallocate water to restore the lake ecosystem. To support environmental water transactions, the legislature has passed new policies that increase flexibility for water transfers and enhance the instream flow program. Examples include expanded water leasing programs, authority and funding for state agencies and nongovernmental partners to acquire water rights for instream flow, and funding for modeling to prioritize water conservation and transaction opportunities. Over 30,000 acre-feet have been protected instream.

Walker Lake

Walker Lake is a terminal lake located in western Nevada.⁷⁰ The lake is the ancestral homelands of the Walker River Paiute Tribe and serves critical ecological functions, including as habitat for Lahontan cutthroat trout and migratory birds. Agricultural diversions from Walker River, Walker Lake's primary water source, have depleted streamflow, causing lake levels to decline almost 90%, over 150 feet over the last century, resulting in high levels of total dissolved solids that make the lake uninhabitable for fish and the food migratory birds rely on.

Efforts to restore lake levels have included a voluntary water acquisition program and public trust litigation.⁷¹ Since 2002, the federal government has provided over \$300 million in funding to restore desert terminal lakes through water acquisitions and other efforts, and in 2009 established the Walker Basin Restoration Program, which has funded over \$80 million to acquire water rights to protect lake levels.⁷²

The program is now managed by the nonprofit Walker Basin Conservancy, which is using a combination of water acquisitions, landscape restoration, and community outreach to restore the lake.⁷³ Through the water acquisition program, the Walker Basin Conservancy purchases water rights from willing sellers and manages them for instream uses to protect Walker Lake. The conservancy has restored just over half of the water needed to restore the lake.

The following describes Oregon's water rights transfer framework, which enables the movement of water—both temporarily and permanently. The framework includes incentive regulations that authorize water rights transfers and remove barriers to transfers. Financial incentives support transfers that protect water instream—these policies are discussed as part of water protection policies.

Incentive Regulations

Oregon's water policies incentivize water reallocation by authorizing a variety of changes to water rights and removing barriers to reallocation by reducing administrative burdens.

⁷⁰ History, Walker Basin Conservancy, <https://www.walkerbasin.org/history>.

⁷¹ The public trust litigation is discussed in Section IV A (Public Trust Doctrine).

⁷² Desert Terminal Lakes Act, Pub. L. No. 107-171 (May 13, 2002).

⁷³ Walker Basin Conservancy, <https://www.walkerbasin.org>.

Transfers

Oregon allows water right owners to change aspects of a perfected water right—termed transfers (ORS 540.505 to .580; OAR Ch. 690 Div. 380).⁷⁴ Transfers can change the place of use, type of use, the point of diversion, and the source of water from surface water to groundwater.

Transfers require OWRD approval, which confirms the water right has not been canceled, the transfer will not injure existing water rights (i.e., cause another water right to lose water it is legally entitled to), conflict with state planning goals, or result in enlargement of the existing right (i.e., result in more water being used than under the existing water right) (OAR 690-380-5000). If a change in a point of diversion is proposed, ODFW may require installation of a fish screen or other by-pass device (OAR 690-380-5060).

Oregon authorizes both permanent and temporary transfer options. Water right owners may temporarily change the place of use or character of use of stored water for up to five years (OAR 690-380-8000(1)(a), (b)). Lands from which water is transferred may not receive water from a supplemental water right. Temporary transfers increase flexibility in how a water right is managed, allowing a water right to support more than one use.

Several policies add flexibility—including in the types of authorized transfers and streamlined administrative processes—to facilitate the use of transfers as a water management tool to support instream uses, to address drought, and for irrigation districts:

Instream Leases: Water right owners may lease all or a portion of a water right for instream use for up to five years (OAR Ch. 690 Div. 77). There must be surface water available in the instream reach and existing instream uses, and the lease must not cause injury to other water rights or enlargement of the leased water right. Water rights protected instream are not subject to forfeiture, which incentivizes the transfer or lease of water instream to protect water rights when they are not being used. Instream leases also receive expedited processing. Expedited review is balanced with the ability to terminate a lease if injury is found after approval.

Split Season Leases: Water right owners may lease all or a portion of a water right for instream purposes for a portion of the irrigation season (OAR 690-077-0079). Split season leases receive the same expedited review as instream leases.

Drought Transfers: During drought conditions, administrative rules provide an expedited process to transfer or lease water rights (OAR 690-077-0090).

District transfers: Irrigation districts⁷⁵ may use a streamlined administrative process to transfer water, which facilitates the ability to move water on faster timelines (ORS 540.570 to 580; OAR

⁷⁴ Adjudicated and certificated water rights may be transferred. Permit holders may amend the permit to change the place of use and point of diversion (ORS 537.211).

⁷⁵ Certain other quasi-governmental districts may also qualify (OAR 690-385-0100(2)).

Ch. 690 Div. 385). A pilot program further expedites district transfers, allowing participating districts to temporarily change the place of use of a water right for an irrigation season without filing a transfer application.

Deschutes Basin Temporary Transfers: The maximum time period to transfer water in the Deschutes Basin is 25 years and allows for temporary transfers of the type of use (ORS 540.585; OAR 660-380-8000(1)(c)).

Reallocating Water in the Chewaucan Basin

Water resources are largely developed in the Chewaucan Basin; permitted water uses typically exceed available water in the Chewaucan River. Further, existing water uses are not meeting instream and out-of-stream needs. Reallocating water between uses and users will therefore be an important component of sustainable water management in the basin.

Opportunity

- Water transfers provide a pathway to reallocate water, either temporarily or permanently, to meet in-stream and consumptive uses in the basin.

Challenges

- There are no irrigation districts in the basin. Therefore, unless established, basin irrigators will not be able to utilize streamlined administrative processes for districts. There are significant administrative backlogs in processing transfer applications—in 2024 OWRD identified a backlog of 419 transfers.⁷⁶

- NGO partnerships have been critical to the implementation of voluntary water transaction strategies. Building partner capacity in the basin to support water transactions is likely important to support the use of water transactions as a tool to address water scarcity.

C. Water Policies to Protect Water Resources

Water conservation and reallocation frameworks must be paired with proactive policies to protect water resources from future appropriations that are not aligned with sustainable water management to meet the basin's instream and out-of-stream needs.

Subject to existing water rights and statutory constraints, water in Oregon is considered available for appropriation for beneficial use (ORS 537.120). Through statute and administrative rules, the state has constrained when and how water is available for appropriation. In addition to generally applicable policies, OWRD has a suite of authorities through which it can protect water resources in individual drainage basins, including through basin program rules, conditioning new water rights, and the appropriation or acquisition of instream water rights.

⁷⁶ Water Rights Transaction, Briefing Paper, 2025 Legislative and Agency Request Budget Development, Oregon Water Resources Department (2024), available at <https://www.oregon.gov/owrd/Documents/Water%20Right%20Transactions%20Briefing%20Paper.pdf>.

Financial incentives for local water resources planning and the acquisition of water rights for instream use support voluntary efforts to protect water resources.

Control Regulations

The following describes regulations which provide authority to prescribe rules for future water appropriation.

Basin Program Rules

Basin program rules establish water management priorities and the parameters for water use in the basin and provide the administrative framework to customize water allocation rules to align new water uses with a basin's unique hydrology and water needs and challenges. Adopted by OWRC, basin rules may classify the allowed water uses in a basin, set preferences for types of water uses, prescribe the manner of water use, and withdraw unappropriated waters from appropriation (OAR 690-500-0010(2)).

Oregon has 20 administrative basins and has developed basin rules for 19 of the basins. Most basin program rules were initially developed between 1960s and early 1990s and have not been substantively updated.

To support development of basin program rules, OWRD developed basin study reports, which describe the physical basin, hydrology, water uses, and existing and anticipated water needs. As with basin program rules, most study reports have not been updated. USGS has completed updated groundwater studies for a few basins, and basins participating in place-based planning have developed watershed plans, which provide updated information on basin water resources and use information. OWRC adopts basin rules through rulemaking (ORS 536.300(3)).⁷⁷

Classification: OWRD may administratively classify waters to define the allowed water uses in the basin (ORS 536.340). Oregon recognizes a wide range of beneficial uses of water; basin programs may limit or prioritize certain uses—such as for exempt uses or irrigation—for an entire basin or individual drainages, aquifers, or streams. Classification may limit water use year-round or for seasons.⁷⁸ Basin rules can also prescribe conditions on water use, for example setting maximum annual duties or minimum irrigation efficiency.⁷⁹

Withdrawal: Withdrawal removes unappropriated waters from new appropriation and may include both surface and groundwater (ORS 536.410). Withdrawal prevents new appropriations of waters, which may include both groundwater and surface water. Withdrawals can be made

⁷⁷ Oregon law provides specific authorities for administrative controls for groundwater areas, prospective actions include withdrawal and classification.

⁷⁸ For example, basin rules for the Goose Lake Basin classify water use from alluvial aquifers in the Thomas Creek drainage for domestic and stockwatering uses and from surface water for domestic, instream, stock watering, and stored water (OAR 690-513-0030(b), (c)).

⁷⁹ For example, basin rules for the Willamette Basin limit irrigation in the Amity Hills/Walnut Hill Groundwater Limited Area in the Willamette Basin to “drip or equally efficient irrigation and an annual duty of on acre-foot per year” (OAR 690-502-0210).

to ensure compliance with state water policy or to protect the public interest in conserving water for maximum beneficial use. In addition to agency rulemaking, the Oregon Legislature may withdraw waters through statute.⁸⁰

Protecting Water in the Chewaucan Basin: Basin Program Rules

Lake Abert is in the Goose Lake and Summer Lake Basin and Chewaucan Subbasin (OAR 690-513-0050). The most recent basin study report was completed in 1989; administrative rules governing water use in the basin were adopted in 1986 and last updated in 1990.

Basin rules for the Chewaucan Basin identify their objective as “avoid[ing] additional conflicts over inadequate water supply and protecting remaining instream flows” (OAR 690-513-0050)(1)). Waters in the basin are classified for agriculture, domestic, fish life, ground water recharge, industrial, instream, irrigation, mining, municipal, pollution abatement, power, recreation, and stockwatering uses. Between August 1 and October 31, water uses from certain portions of the Chewaucan River and tributaries are limited to stored water, domestic, and stockwater uses (OAR 690-513-0050(2)(a)-(c)). In approving new reservoirs, the rules require consideration of alternative reservoir sizes, opportunity for multiple beneficial uses, and impact to downstream instream and out-of-stream uses (OAR 690-513-0050(3)). Currently, OWRD identifies surface water as available in the Chewaucan River for new appropriations except in June, July, and August.

The 1989 Basin Plan identified several management tools that could address water challenges in the basin: (1) withdrawing all or some of the water in the basin from appropriation, (2) classifying basin waters for non-consumptive uses, (3) placing restrictions on future water rights to ensure maximum beneficial use, such as minimum irrigation efficiency or maximum transmission loss standards, and (3) establishing minimum streamflows.⁸¹

Opportunity

- Updating the Chewaucan basin program rules to establish parameters for new water uses in the basin provides an opportunity to proactively align water development with basin water needs and its unique hydrology. For example, a closed-loop, off-channel pumped storage facility has been proposed for the Crooked River, a tributary to the Chewaucan River. The application identifies the source of water for the facility as the Chewaucan River with a diversion point to an underground pipe upstream of Lake Abert and a 2023 progress report indicates a water rights application was filed with OWRD.

Challenge

- Updating basin program rules is a rulemaking, which requires agency capacity.

⁸⁰ See, e.g., ORS 538.280 (withdrawal of waters from McNulty Creek); ORS 538.220 (withdrawal of waters from Mill and Barr Creeks).

⁸¹ Goose and Summer Lakes Basin Report, supra note 17, at 59.

Water Right Conditions

OWRD has broad discretion to condition individual water rights to “protect the public interest” (ORS 537.170(5)). Conditions may require certain actions as part of developing a water right (e.g., installation of a measuring device) or impose ongoing obligations that require a water right holder to act consistently with the condition.⁸²

Protecting Water in the Chewaucan Basin: Conditioning Water Rights

Rivers End Ranch Reservoir, located just above Lake Abert on the Chewaucan River, impounds inflows to the lake. There are two water rights associated with the reservoir—for stored water and to use reservoir water. Currently, there are no conditions on the maintenance of downstream bypass flows.⁸³ Securing releases from the reservoir to provide minimum flows to the lake is essential to restore lake levels.

Opportunity

- Explore avenues to condition water rights for the Rivers End Ranch on the maintenance of bypass flows. The water right owner has applied for an extension of time to complete development of its permit to use stored water. OWRD has issued a proposed final order approving an extension of time, but the order was protested, so no final order has been issued. As part of approving an extension, OWRD may impose additional permit conditions to address impacts from water development (OAR 690-315-0050)).

Instream Water Rights

Instream water rights create legally protected water rights for instream uses (ORS 537.332).⁸⁴ As with other water rights, instream water rights are protected from injury by junior users, new water rights, and transfers of existing water rights.⁸⁵ They also establish a baseline of need for the protected public uses (e.g., fish and wildlife), which can support voluntary actions to improve instream habitat.

⁸² For example, OWRD has required water right holders to curtail groundwater use when aquifer levels fall below a prescribed level. *See, e.g.*, Permit G-15996 (an example of a groundwater permit in the Chewaucan Basin requiring curtailment at certain aquifer thresholds).

⁸³ Both water rights are conditioned on compliance with terms of a lease agreement with the United States Forest Service (USFS), which imposed conditions to ensure the project benefited wildlife species. Among other land management conditions, the lease set minimum reservoir levels and prohibited pumping when water levels in Lake Abert reach 4,242 feet. When project construction damaged Native American cultural resources and burial sites, the USFS terminated its agreement with the reservoir owner; however, the certificate and permit still incorporate lease provisions as conditions. The water right owner has disputed the continued applicability of those conditions following the termination of the underlying lease.

⁸⁴ Uses include, but are not limited to, fish and wildlife, water quality, and recreation.

⁸⁵ OWRD does not assess the public interest impacts of transfers and therefore where no instream water rights exist, impacts to streamflow may not be considered (OAR 690-380-4010).

Instream water rights are established through (1) conversion of minimum instream flows,⁸⁶ (2) agency request for a new instream water right,⁸⁷ and (3) transfer or lease of existing water rights. Once issued, instream water rights are held by OWRD.

As with other water rights, instream water rights are regulated according to priority—water rights with priority dates junior to an instream water right may be curtailed to protect instream flows. New instream water rights receive a priority date of the permit application date. As a result, in most circumstances, instream water rights are quite junior and in times of shortage do not protect streamflow.

Instream water rights established through the transfer process⁸⁸ maintain the priority date of the original water right—this includes instream water rights established through the conserved water program. The transfer of senior water rights instream provides greater reliability to protect streamflow than acquiring new instream flow rights.

Protecting Water in the Chewaucan Basin: Instream Flows

There are currently no instream water rights protecting streamflow in the lower Chewaucan Basin. Minimum perennial stream flows were considered for the basin, but none were established.⁸⁹ The state has existing instream water rights for the upper Chewaucan River (between mile 28 and 53) and upper tributaries.⁹⁰ In 2022 ODFW applied for instream water rights to Wagon Wheel Creek, Auger Creek, Deadhorse Creek (tributaries to Dairy Creek in the upper basin), and Crooked Creek (tributary to Chewaucan river in the lower basin).⁹¹ OWRD has put the applications on administrative hold.

Opportunities

- Applications for new instream water rights for Lake Abert would protect the lake from new consumptive uses and injury from changes to existing water rights.
- The acquisition and permanent transfer of existing water rights for instream uses provides a pathway to protect more senior water rights instream. Focusing on strategic protection of senior water rights can amplify the protection of instream uses.
- Temporary transfers and leases provide a mechanism to strategically protect water instream during ecologically important times. These tools provide flexibility to meet instream needs during critical periods while continuing to support out-of-stream needs.

⁸⁶ Prior to the passage of the Instream Water Right Act, the state established minimum monthly flows to protect fish and water quality. These minimum flows were subsequently converted to instream water rights (ORS 537.346).

⁸⁷ Three state agencies may request instream water rights—Oregon Department of Fish and Wildlife, to protect fish and wildlife; Oregon Parks and Recreation, to protect recreational values; and Oregon Department of Environmental Quality, to protect water quality.

⁸⁸ These frameworks are discussed in Section II.B.

⁸⁹ Goose and Summer Lakes Basin Report, *supra* note 17, at 19.

⁹⁰ Certificates 73375, 73376, 73559, 73560, 73561.

⁹¹ Permits IS9308, IS9307, IS9317, IS89336.

- Water users and partners have also used non-regulatory transaction frameworks to support the protection of instream flows. Examples include diversion forbearance agreements (agreements not to divert water during prescribed periods or under certain triggers, such as water temperature) and minimum flow agreements.⁹²

Challenge

- Instream water right acquisitions in Oregon have relied heavily on landowner initiative and partnerships with nongovernmental organizations.⁹³ For example, in the Deschutes Basin, the Deschutes River Conservancy has been instrumental in facilitating the transfer of water instream. Partners to support water transactions in the basin will likely be important to successful instream water rights acquisition efforts.

Financial Incentives

The state provides financial support for local water planning and the acquisition of water rights for instream flow.

Place-Based Planning

The place-based planning framework supports local communities in developing integrated water resources plans to steward water within a watershed. Planning efforts develop information about water resources and present and future water needs and identify management solutions to meet water needs. Completed plans may be recognized by OWRC. The state provides both funding and technical assistance to support planning efforts (ORS 537.872, .873).

Protecting Water in the Chewaucan Basin: Planning

In 2023 the Legislature funded a collaborative process to develop a shared understanding of water in the Chewaucan Basin and identify management actions to meet instream and out-of-stream needs. The process is ongoing and provides a forum for cooperative and place-based planning.

Water Acquisition Grant Program

Administered by the Oregon Watershed Enhancement Board, the Water Acquisition Grant Program funds projects that legally or contractually protect instream flow, either temporarily or permanently, to address habitat or species needs or improve water-quality (OAR Ch. 695 Div. 46). The program can pay the purchase costs for an interest in water and associated transactional costs.

⁹² Because these agreements do not require changes to existing water rights—just nonuse—they do not require state approval to transfer a water right.

⁹³ While the state can acquire existing water rights for instream use, state agencies do not have active acquisition programs. (OAR 635-400-0035 (ODFW rules for acquiring water rights); OAR736-060-0040(1) (Oregon Parks and Recreation Department rules for acquiring water rights)).

III. Land and Water Designations

Land and water designations classify particular areas to protect certain values or characteristics and guide resource decision making to achieve management goals. Designations can be made at the federal or state level and, depending on the designation, by legislatures or the executive branch. There are numerous types of existing land and water designations. In addition, legislatures can establish special designations for individual areas.⁹⁴ Land ownership, values to be protected, and management goals all impact which designation is best suited for a particular area.

This report discusses three designations—the federal Area of Critical Environmental Concern designation and the state Outstanding Resource Waters and Scenic Waterways designations. This is not an exhaustive survey of designations that could support restoration and protection efforts.

A. Area of Critical Environmental Concern

Areas of Critical Environmental Concern (ACEC) are unique to BLM managed lands and are its primary administrative designation for protecting lands that warrant “special management attention . . . to protect and prevent irreparable damage to important historic, cultural, or scenic values, fish and wildlife resources, or other natural systems or processes, or to protect life and safety from natural hazards” (43 U.S.C. 1702(a)). The BLM designates ACECs as part of its land use planning and management is governed by a special resource management plan. ACEC designation may only be removed if the special values are no longer present or if another legal mechanism provides equivalent protection (43 CFR 1610.7-2(k)).

BLM manages most of the land around Lake Abert and Abert Rim. In 1996 BLM designated Lake Abert and the surrounding lands as an ACEC. In designating the Lake Abert ACEC, the BLM recognized Lake Abert’s special wildlife, ecological, water resources, and scenic values.

BLM’s management plan for the ACEC sets out specific goals and management directives for the area. Key goals include maintaining a viable ecosystem in the lake and surrounding area and the current diversity of aquatic and wetland plant communities.⁹⁵ Within the ACEC, the BLM should not permit future human activities that would cause a significant change in relative species abundance. The rim is closed to mineral leasing and disposal. The lake is closed to sodium

⁹⁴ For example, Congress established the Frank and Jeanne Moore Wild Steelhead Special Management Area, which directs management of the Steamboat Creek watershed in the Umpqua Basin to protect its recreational, ecological, habitat, scenic, drinking water, and cultural values (16 USC § 539s). Oregon’s Beach Bill, which established public ownership and access rights to Oregon’s coastline, provides another example of legislative action to address a specific resource issue (HB 1601 (1967)).

⁹⁵ High Desert Management Framework Proposed Plan Amendment and Final Environmental Impact Statement for the Lake Abert Area of Critical Environmental Concern (ACEC) in Lake County, Bureau of Land Management (March 1996).

leasing but is open to mining subject to special requirements that the activity does not impact water levels.

With respect to water resources, the Management Plan recognizes that “water inflow and quality are one of the most important factors affecting lake ecology.”⁹⁶ While recognizing BLM’s limited control over state water allocation, the plan provides that BLM “will work cooperatively with [state] agencies to ensure that future water allocation proposals . . . adequately consider water inflow and quality issues.”⁹⁷

By elevating natural resource values as a primary land management goal, the ACEC designation helps ensure land uses around the lake are consistent with the protection of the special resource values. Further, while designation is not a direct constraint on the state’s management of water resources, the resource goals of the ACEC may be considered by OWRD in allocating water resources. For example, in evaluating the Rivers End Ranch’s application for an extension of time to complete development of its water use permit, OWRD considered comments from BLM on resource impacts from the proposed water development on lake resources.⁹⁸

The BLM periodically updates resource management plans and is currently developing a resource management plan amendment for the Lakeview District, which includes Lake Abert.⁹⁹

B. Outstanding Resource Waters

The Outstanding Resource Waters (ORW) designation is a component of the state’s antidegradation policy, which sets policies to protect state waters from unnecessary degradation (OAR 340-041-0004(8)). Oregon’s antidegradation policy has three tiers of protection for waters, with varying levels of protection for water quality. ORWs receive the highest level of protection from water quality degradation.

ORWs are outstanding state waters that support exceptional ecological, recreational, or cultural values (OAR 340-041-0305(4), -0345(7), -0185(6)). Importantly, ORWs are not required to be pristine or have high water quality—designation may be based on other exceptional values of the water. ORWs must be specially designated.

The Oregon Department of Environmental Quality (DEQ) administers the state antidegradation policy and may not allow pollution discharges that would result in long-term lowering of an ORW’s water quality (OAR 340-041-0040(8)(c)). DEQ may permit discharges from activities related to public health and welfare emergencies or restoration that cause a short-term

⁹⁶ *Id.* Goal 1, objective b.

⁹⁷ *Id.*

⁹⁸ In the Matter of the Application for Extension of Time for Permit S-51164, Water Right Application S-709221 in the name of Wayne Clark, Proposed Final Order (citing OAR 690-315-0040(f) directing consideration of “other factors relevant to the determination of the market and present demand for water”).

⁹⁹ Lakeview Draft RMP Amendment and Draft EIS, BLM National NEPA Register, <https://eplanning.blm.gov/eplanning-ui/project/114300/570>

lowering of water quality. The ORW designation also protects the designated water from upstream discharges that would lower an ORW's water quality. Importantly, designation does not impact existing pollutant discharges. Oregon does not apply ORW designation as a direct restriction on state water allocation policies.

Oregon has designated three ORWs: North Fork Smith, Waldo Lake, and Crater Lake. DEQ may recommend waters for designation. Citizens may also propose waters for designation. DEQ has set up a formal nomination process as part of its required periodic review of water quality standards.¹⁰⁰ Citizens may also propose waters for designation through a rulemaking petition, though DEQ has expressed a preference for citizens to submit petitions through the defined nomination process.

Lake Abert's exceptional ecological importance may qualify it for designation as an ORW. Designation would provide prospective protection for Lake Abert's water quality.

Mono Lake: Outstanding National Resource Water

In 1994 the California State Water Board designated Mono Lake¹⁰¹ as an Outstanding National Resource Water, recognizing the lake's unique and sensitive ecosystem and the close connection between the lake's ecosystem values and its water quality.¹⁰² The Board found, *"in view of the substantial evidence in the record about the unique nature of the Mono Basin ecosystem, the key role of Mono Lake in providing habitat for many species of birds dependent on the brine shrimp and brine fly, and the tremendous public interest in the protection of Mono Basin wildlife, the [Board] finds that Mono Lake constitutes an Outstanding National Resource Water having exceptional ecological significance."*¹⁰³ Designation protects the lake's water quality from degradation from pollution discharges. Recognizing the link between water quality and quantity, California applies its antidegradation policy in water allocation decisions.

C. State Scenic Waterways

Oregon's state scenic waterways designation protects free-flowing rivers and lakes with "outstanding scenic, fish, wildlife, geological, botanical, historic, archaeologic, and outdoor recreation values of present and future benefit to the public" (ORS 390.845(1)). The Oregon Parks and Recreation Department (OPRD) administers the scenic waterways program, which includes identifying and recommending candidate waterways. Scenic waterways may be designated by the Governor, the Legislature, or through citizen petition (ORS 390.855)). Most

¹⁰⁰ DEQ recently released guidance on nominating waters for ORW designations as part of the state's periodic review of its water quality standards. Oregon Department of Environmental Quality, Nomination of Outstanding Resource Waters in Oregon, Fact Sheet, <https://www.oregon.gov/deq/wq/Documents/orwNominationFS.pdf>.

¹⁰¹ Background on Mono Lake is discussed below in Section IV A (Public Trust Doctrine).

¹⁰² Mono Lake Basin, Water Right Decision 1631, State of California Water Resources Control Board 150 (Sept. 28, 1994).

¹⁰³ *Id.* at 153.

designations have been through ballot initiative. Waldo lake is currently the only lake designated as a state scenic water.

Following designation, the OPRD adopts specific rules governing the management of the waterway (OAR 736-040-0400(2)(b)). The designation prohibits the development of water impoundment or diversion structures in the waterway (ORS 390.815, .835)). Land uses within a quarter mile of the water are also restricted to ensure compatibility with scenic values. Uniquely, the scenic waterway designation is a direct constraint on water allocation decisions. While designation does not prohibit new water uses, it requires OWRD to ensure sufficient water to maintain the recreational, fish, and wildlife uses of the scenic waterway (ORS 390.385; OAR 690-310-0360).

Lake Abert's scenic, wildlife, and cultural values may qualify it for designation as a state scenic waterway.¹⁰⁴ The designation focuses on waters that are "relatively free flowing"; the Rivers End Ranch dam just upstream of the lake could impact the suitability of a state scenic waterway designation for Lake Abert. A key benefit of designation for Lake Abert would be the limitations on new water rights to protect streamflow. Designation would also call for the development of a management plan.

IV. Legal Strategies

This section provides an overview of two legal strategies—the Public Trust Doctrine and Rights of Nature—that could impose an independent obligation on the State and local governments to manage Lake Abert to protect its public values.

A. Public Trust Doctrine

The public trust doctrine provides that governments hold certain natural resources in trust for the public and imposes a duty to protect public rights in those resources.¹⁰⁵ Where the public trust doctrine applies, citizens can enforce a government's responsibility as trustee of the public trust resources. In Oregon, advocates have sought judicial recognition of public trust resources and to compel government action to restore and protect those resources.¹⁰⁶ In several other states, public trust cases have sought protection of saline lakes—these cases are discussed below.

The scope of the public trust doctrine is determined by federal and state law. Federal common law defines the minimum public trust obligations of states—to hold in trust for the public

¹⁰⁴ The Oregon Lakes Association has proposed Lake Abert for designation as a federal wild and scenic river. The petition is available at: <https://www.oregonlakes.org/resources/Documents/Projects/Lake%20Abert%20WSR%20Proposal%20OLA%20April%202020.pdf>.

¹⁰⁵ See, e.g., Joseph Sax, "The Public Trust Doctrine in Natural Resource Law: Effective Judicial Intervention," 68 Michigan Law Review 471 (1970).

¹⁰⁶ See, e.g., *Guilliams v. Beaver Lake Club*, 175 P 437 (1918); *Corvallis Sand & Gravel v. Land Board*, 439 P2d 575 (1968), *Kramer v. City of Lake Oswego*, 446 P3d 1 (2019); *Chernaik v. Brown*, 367 OR 143, 155-162 (2020).

submerged and submersible lands of navigable waters for navigation, commerce, and fishing.¹⁰⁷ Beyond this federal floor, the scope of the public trust doctrine—trust resources, public uses protected, and duties of the government—is a matter of state law, including common law and state constitutions and statutes.¹⁰⁸

In Oregon, the public trust doctrine is based on common law and partially codified in state statute.¹⁰⁹ The Oregon Supreme Court has recognized traditionally navigable waters—including the waters and submerged and submersible lands—as public trust resources.¹¹⁰ State statutes further affirm the public ownership of these resources.¹¹¹ Public rights protected by the public trust doctrine include the right to navigation, commerce, fishing, and recreation.¹¹² With respect to the duty imposed, the court has found, at a minimum, the public trust doctrine restricts the trustee from alienating or unreasonably impairing the public’s right to use the trust resource.¹¹³ The duty applies to both state and local governments.¹¹⁴

Application to Lake Abert

A case asserting public trust protections for Lake Abert would raise two key questions (1) whether Lake Abert is a public trust resource and (2) the scope of the duty to protect the lake.

With respect to the first question, Oregon’s public trust doctrine encumbers traditionally navigable waters, which the state defines as waters that were or could have been used for trade or travel.¹¹⁵ The Department of State Lands identifies “portions of Lake Abert” as having been determined as meeting the test for title navigability and as state owned.¹¹⁶

If Lake Abert is found to be a public trust resource, the attendant question is the scope of the government’s duties with respect to the lake. As currently articulated, the public trust doctrine restricts the trustee from alienating public trust resources or taking unreasonable actions that impair protected public uses. With respect to Lake Abert, this framing would require consideration of the impact of government actions on public trust uses. While Oregon courts have not addressed whether the public trust doctrine is an independent limitation on water allocation decisions, conceptually where allocation decisions would impact public trust values they would be constrained by the state’s trust responsibilities.

¹⁰⁷ *Illinois Central Railroad Co. v. Illinois*, 146 U.S. 287 (1892).

¹⁰⁸ See Robin Kundis Craig, “A Comparative Guide to the Western States’ Public Trust Doctrines: Public Values, Private Rights, and the Evolution Toward an Ecological Public Trust,” 37 *ECOLOGY L.Q.* 53, 93–197 (2010).

¹⁰⁹ *Chernaik v. Brown*, 367 OR 143, 155-162 (2020).

¹¹⁰ *Id.* at 156.

¹¹¹ ORS 274.025 (submersible lands); ORS274.430 (declaring meandered lakes to be navigable and public).

¹¹² *Id.* at 168.

¹¹³ *Id.* at 161.

¹¹⁴ *Id.*

¹¹⁵ See *Kramer v. City of Lake Oswego*, 446 P3d at 9-10.

¹¹⁶ Oregon-Owned Waterways List, Department of State Lands, <https://www.oregon.gov/dsl/waterways/Documents/OregonOwnedWaterwaysListWebsite.pdf>.

To date, Oregon courts have not directly answered whether the public trust doctrine imposes an affirmative duty on the trustee to proactively protect the public trust resource. With respect to Lake Abert, such an affirmative duty to protect the lake’s public values could require the State to take reasonable steps to restore lake levels to secure the public’s right to use the lake. A further question is the extent to which such a duty would impose a requirement on or authorize the trustee to address diminished inflows to the lake.

Even if the application of the public trust doctrine to protect lake levels required an expansion of the public trust doctrine as currently recognized, the Oregon Supreme Court has affirmed that the doctrine is not fixed and can expand to “meet society’s current needs.”¹¹⁷ To date, the court has expanded the types of protected resources and the duties imposed.¹¹⁸ Notably, while declining to extend the doctrine in its most recent case addressing the public trust doctrine, the court emphasized that cases expanding the doctrine have all occurred in cases involving “specific bod[ies] of water and furthered the primary purposes of the doctrine—protecting the public’s right to use navigable waters for fish and navigation.”¹¹⁹

Public Trust Doctrine as a Tool to Protect Saline Lakes

Threats to saline lakes have been the impetus for lawsuits in three states seeking to apply the public trust doctrine to protect lake resources. These cases provide examples of how the public trust doctrine may impact efforts to protect Lake Abert.

Mono Lake

Mono Lake is a hypersaline lake located near the California and Nevada border.¹²⁰ The 70-square-mile lake provides critical habitat for migratory birds. Over 40 years, water diversions to supply water for the City of Los Angeles reduced lake levels by 40 feet. Low lake levels increased salinity, threatening the lake’s ecosystems.

In response to declining lake levels, advocates sued the state, asserting protections for Mono Lake under the public trust doctrine.¹²¹ The California Supreme Court found the state violated its public trust obligations in allowing the appropriation of water without consideration of the impacts to public values, which the court had recognized to include environmental values.¹²² The court held that the public trust doctrine was an independent constraint on water appropriation, including on existing water rights.¹²³ Further, the court held that the public trust

¹¹⁷ *Id.* at 162.

¹¹⁸ In its most recent decision on the public trust doctrine, the Oregon Supreme Court declined to extend the doctrine to protect non-navigable waters, fish and wildlife, and the atmosphere. *Chernaik v. Brown*, 367 OR at 166.

¹¹⁹ *Id.* at 162.

¹²⁰ *Saving Mono Lake*, Mono Lake Committee, <https://www.monolake.org/learn/aboutmonolake/savingmonolake/> (providing a history of Mono Lake).

¹²¹ *National Audubon Society et al. v. Superior Court*, 658 P2d 709, 716-17 (1983).

¹²² *Id.* at 744.

¹²³ *Id.* at 728.

obligation extended to the management of non-navigable tributaries and groundwater, where water use could impact the public trust resource.¹²⁴

As a result, the court invalidated existing diversion permits and required the state to reissue permits considering the protection of public trust values. The state subsequently curtailed the city's water diversions to raise the lake by 20 feet.¹²⁵ The court's decision and state's subsequent implementation spurred Los Angeles to invest in water conservation efforts to absorb the water reductions. Drought conditions and continued diversions have hindered lake level recovery.

Walker Lake¹²⁶

The local county and a nonprofit working to restore Walker Lake sued the State of Nevada asserting the public trust doctrine required the state to maintain minimum water levels in Walker Lake and requested the court reallocate water rights to meet those levels.¹²⁷

The Nevada Supreme Court affirmed that the public trust doctrine applies to all navigable and nonnavigable waters within the state—including Walker Lake.¹²⁸ With respect to the scope of the trustee's duties, the court found that the public trust doctrine constrains the state's allocation of water. However, the court further clarified that the water code embeds the public trust doctrine in the state's water allocation framework and, therefore, compliance with the water code's provisions in allocating water rights satisfies the state's public trust obligations. Importantly, the court held that the public trust doctrine did not require—or authorize—the state to reallocate existing appropriative rights.

In response to the Nevada Supreme Court's decision, the county asserted that while the decision foreclosed reallocation of water rights, the public trust doctrine could still require the state to take actions to protect the lake, such as requiring irrigation efficiency improvements or development of a restoration plan for the lake.¹²⁹ The case has been remanded to the district court to determine the appropriate remedies.

Great Salt Lake¹³⁰

Several nonprofits have sued the State of Utah seeking recognition of the Great Salt Lake as a public trust resource and to enforce the state's duty to manage the lake to protect public trust

¹²⁴ *Id.* at 721.

¹²⁵ Mono Lake Basin, Water Right Decision 1631, State of California Water Resources Control Board (Sept. 28, 1994).

¹²⁶ Background on Walker Lake is included in Section II B (Water Allocation Policies to Reallocate Water).

¹²⁷ The case was heard by the federal district court and court of appeals. Because the scope of the public trust doctrine is a matter of state law, the court of appeals asked the state supreme court to issue a determination on the doctrine's application to Walker Lake.

¹²⁸ Mineral County v. Lyon County, 473 P2d 418, 425 (Nev. 2020).

¹²⁹ United States et al. v. Walker River Irrigation District et al., No. 15-16342, 21 (Feb. 28, 2021).

¹³⁰ Background on Great Salt Lake is included in Section II (Water Allocation Policies).

uses.¹³¹ The complaint asserts the public trust doctrine imposes an ongoing duty to protect the public trust resource, including to take reasonable measures to maintain minimum lake levels necessary to protect public uses.¹³² Importantly, the complaint argues the public trust obligation requires the state to ensure that water diversions do not impair the public trust resource and empowers and requires the state to “modify” diversions to protect public trust resources.¹³³ The court has not yet ruled in the case.

B. Rights of Nature

Rights of Nature (RoN) describe strategies that recognize legal rights of nature. These strategies represent a fundamental shift in how the law considers nature, from human property to having inherent and legally enforceable rights. Functionally, RoN provide a pathway to challenge state action that impairs the environment.

The application of RoN as a mechanism to protect the environment is still an emerging approach, with broad variations in implementation, including what is protected, how legal status is conferred, rights recognized, and who has authority to enforce rights.¹³⁴ RoN have conveyed legal status on the environment generally or on particular ecosystems, plants, or animals, and have been recognized through legislation, constitutional amendments, and by courts. RoN laws may convey legal personhood, provide a substantive right for the ecosystem to be healthy, or impose environmental management obligations on the government.¹³⁵ Once established, they may be enforceable by the public or a discrete set of named advocates.

In United States, RoN provisions have been adopted through citizen initiatives, by local governments, and Tribes¹³⁶—as of 2023, 52 local ordinances and Tribal laws established RoN.¹³⁷ Many of these efforts have focused on waters. For example, residents of the City of Toledo amended the city charter with the Lake Erie Bill of Rights, establishing legal personhood for the lake.¹³⁸ The Yurok Tribe adopted a Resolution Establishing the Rights of the Klamath River “to exist, flourish, and naturally evolve” and “to have a clean and healthy environment” and granting the Yurok people the right to protect the river.¹³⁹

¹³¹ Utah Physicians for a Healthy Environment et al v. Utah Department of Natural Resources, et al., Complaint, Case No. 230906637 (Sept. 6, 2023).

¹³² *Id.* at ¶¶ 7-10.

¹³³ *Id.* at ¶¶ 106-11.

¹³⁴ See Erin Ryan et al., “Environmental Rights for the 21st Century: A Comprehensive Analysis of the Public Trust Doctrine and Rights of Nature Movement,” 42:6 *Cordoba Law Review*, 2506-12 (2021).

¹³⁵ See Karen Bradshaw, “Identifying Contemporary Rights of Nature in the United States,” 95 *S. Cal. L. Rev.* 1439, 1457 (2022).

¹³⁶ In many ways, the theory of RoN has its foundation in Indigenous worldviews, and Tribes are playing a leading role in implementing RoN laws.

¹³⁷ Alexandra Huneeus, “The Legal Struggle for Rights of Nature in the United States,” *Wisconsin Law Review*, 134 (2022).

¹³⁸ Toledo, Ohio, Municipal Code ch. XVII § 253 (2019).

¹³⁹ Resolution 19-40, Yurok Tribal Council (May 9, 2019). Other examples include the Nez Perce, Ho-Chunk Nation, Ponca Tribe of Indians of Oklahoma, and White Earth Band of Ojibwe.

Despite these successes, when challenged, municipal RoN ordinances¹⁴⁰ have been overturned by courts and legislatures. Courts have found ordinances preempted by state law or unconstitutional.¹⁴¹ In other cases, state legislatures have blocked local ordinances through legislation prohibiting the establishment of legal rights for nature. For example, the Utah Legislature prohibited the recognition of rights of nature in response to efforts to recognize legal rights for the Great Salt Lake.¹⁴² While RoN laws have had limited legal effect, they can still have important symbolic effect by elevating the intrinsic values of nature and affirming a duty to protect the environment.

Given the wide variety of approaches to RoN laws, it is difficult to forecast how a RoN strategy could impact efforts to restore Lake Abert. While the legal effect of a provision is likely limited, the recognition of RoN for Lake Abert could serve a symbolic function of elevating the urgency of protection.

Conclusion

Worldwide saline lakes and the unique ecosystems they support are threatened. Human water use is a critical factor in the desiccation of many of these lakes. As with other saline lakes, Lake Abert has experienced significant water level declines, impairing its ecological functions. These threats have spurred efforts at the federal, state, and local level to protect the lake ecosystem. The policy interventions outlined in this report can help address water scarcity challenges in the basin and support sustainable water use to build Lake Abert's and the basin communities' resilience to natural variations in water availability and increasing water scarcity due to climate change.

¹⁴⁰ Tribal RoN laws have been more durable.

¹⁴¹ Alexandra Huneeus, *supra* note 137, at 131.

¹⁴² House Bill (HB) 0249 (Utah 2023).