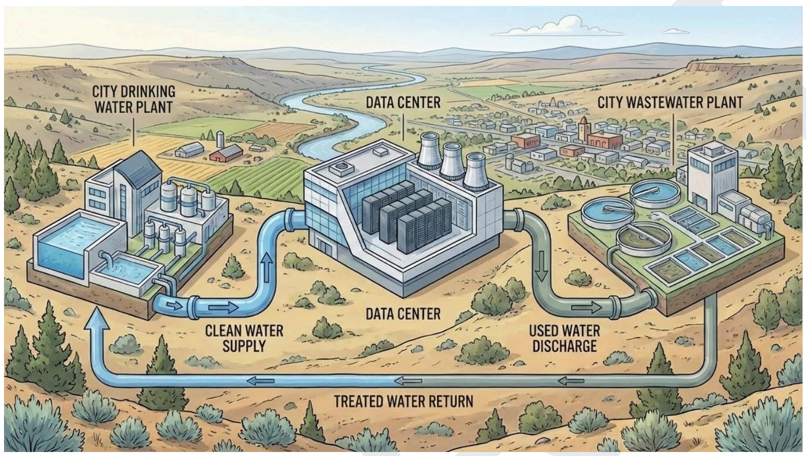
Water Policy and Innovation Service

Data Centers and Water

[DIALOGUE DRAFT]



This image generated using AI

Last updated 3/18/26

Guide for Feedback

We consider this a “Dialogue Draft.” Its purpose is to inform policymakers in a dialogue on how best to consider the water opportunities and challenges with data centers in Oregon. Here are some questions to consider:

- What are the current water use reporting requirements for industrial users at the municipal level? There is currently no aggregate data on data center water use in Oregon.
- Water Efficiency Use (WUE) is the standard metric used to look at data center water use, but this loses a lot of nuance on off-site water use and server efficiency. WUE (L/kWh) = Total Water Consumed / Total Energy Consumed by IT Equipment.
- Should the Policy Service consider both the direct and indirect (electricity use) water footprints of data centers? We’re assuming we don’t want to focus on embodied water use (i.e., water used to manufacture servers), correct?
- Are there other efforts to look at the broader community benefits provided by data centers (i.e., so we just focus on the ones connected to water)?

Water Policy and Innovation Service

Data Centers and Water

Assessment Team
Bobby Cochran, National Policy Consensus Center, Portland State University
Trevor Hildebrand, National Policy Consensus Center, Portland State University
Peter Maille, Rural Engagement and Vitality Center, Eastern Oregon University
Jamie Trammell, Southern Oregon University
Robin Harkless, National Policy Consensus Center, Portland State University
Alison Hopcroft, Institute for Natural Resources, Portland State University/Oregon State University

Acknowledgements
The assessment team wishes to thank the people who participated in interviews for this report. All of these participants care deeply about the history and the future of Oregon's water. This report reflects their wisdom and commitment.

About the Water Policy and Innovation Service
The Water Policy and Innovation Service is a joint project of Portland State University, Eastern Oregon University, and Southern Oregon University. The Service pulls expertise in water and policy to meet the needs of particular projects. The Service's goal is to provide objective, third party analysis of options and considerations to the collaboratives and decisionmakers wrestling with some of Oregon's toughest water policy challenges.

Contact
Bobby Cochran, Water Policy and Innovation Service
Portland State University
506 SW Mill Street, Suite 720, Portland, Oregon 97207
jcochran@pdx.edu
https://www.pdx.edu/policy-consensus-center/water-policy-and-innovation-service

Contents

i. Executive Summary

Depending on the source, there are anywhere from 123 to 136 data centers currently operational in Oregon, and those data centers are large, industrial water users. There has also been significant growth in data centers over the last five years. A single data center (4.6 million square feet and using 1.7 MWh/year in Central Oregon) consumed about 70 million gallons in 2024.[1,2] This is close to the 50 million gallons the Intel Aloha manufacturing campuses used in 2023[3], and equivalent to about the amount of water one half of a center pivot in Central Oregon growing alfalfa consumed in the same year (about 70 irrigated acres)[4], or about as much water as 420 Prineville households in 2021.[5]

Data centers can provide significant economic benefits to the cities that house them, but also pose risks to long-term water availability or stress infrastructure if there is not adequate water or wastewater capacity. The Oregon Water Policy and Innovation Service was asked by the Statewide Data Center Advisory Committee (representing conservation, energy and climate, local government, and academic perspectives) to research policy options for managing data center water gathered from similar state and local policies used for data centers and other large-scale industrial users.

The Water Policy and Innovation Service (Service)[6] is an offering of Portland State University's National Policy Consensus Center (NPCC), Eastern Oregon University (EOU), and Southern Oregon University (SOU). The Service completes analysis, designed to be third-party, objective, and useful, at the request of at least two parties with different perspectives of a statewide water policy issue that's of interest to both the state and Oregon communities.

Findings

If data centers are located where there is plentiful water now and into the future, many of the existing Oregon water quantity and quality policies may be adequate to address potential risks. Data centers are often providing community water benefits to Oregon cities that house them. There may be ways to ensure cities have the information and capacity to negotiate those community benefits with companies in a consistent, fair manner. Data centers are an attractive

---

[1] Meta. (2025). Environmental Data Index. Accessed at https://sustainability.atmeta.com/wp-content/uploads/2025/10/Meta_2025-Environmental-Data-Index.pdf.

[2] This estimate assumes 80% of water withdrawn is consumed via evaporative cooling, from Li, P., Yang, J., Islam, M. A., & Ren, S. (2023). *Making AI Less "Thirsty": Uncovering and Addressing the Secret Water Footprint of AI Models*. Accessed at https://doi.org/10.48550/arxiv.2304.03271.

[3] Intel. (2024). 2023-24 Corporate Responsibility Report. Accessed at https://csrreportbuilder.intel.com/pdfbuilder/pdfs/CSR-2023-24-Full-Report.pdf.

[4] Open ET. (2025). Filling the Biggest Data Gap in Water Management. Accessed at https://etdata.org/.

[5] City of Prineville, (2023). City of Prineville, Oregon Water System Master Plan. Accessed at https://cityofprineville.com/sites/default/files/fileattachments/city_council/page/18554/2023_water_master_plan_-_volume_1_reduced.pdf.

[6] Water Policy and Innovation Service. (2026). Accessed at https://www.pdx.edu/policy-consensus-center/water-policy-and-innovation-service.

economic opportunity because they require relatively few municipal services relative to local tax revenue generated.

However, data centers are large water users, and present the most risk where there is rapid growth in water basins where A) water availability information is missing or outdated, B) there are not adequate protections for instream, agriculture, and other non-municipal and industrial uses, and C) the municipality or local water utility does not have adequate long-range plans or capacity to best expand its serves to meet data center and other demands. Therefore, some of the options for Oregon to consider could help:

- Encourage siting data centers where there is enough water now, and expected into the future.
- Generate and update on a regular basis good information on current and long-range water and municipal revenue needs to meet immediate and growing water and infrastructure demands.
- Encourage the most efficient water use at data centers.
- Ensure community water benefits for the cities that house data centers, and encourage net positive water for the watersheds that house data centers.

I. Context & Problem Definition

> "Oregon is experiencing unprecedented demand from large-scale energy users including data centers and artificial intelligence, creating a need to establish clear siting criteria and assessment protocols before further development occurs across our state's landscape. Proactive planning in partnership with local governments is essential to protect Oregon's iconic forests and farmlands, sustain thriving local economies, and preserve affordability for all Oregonians." Oregon Statewide Data Center Advisory Committee[7]

Governor Kotek formed the Data Center Advisory Committee in early 2026 to make recommendations on a regulatory framework for data centers and other large-scale energy users that balance economic development with other resource demands, including water. The co-chairs of the Advisory Committee, who have experience in rural development, energy, and conservation, requested that the Water Policy Service explore:

- A conceptual framework for the water inputs to data centers (both directly for cooling, and indirectly via their sources of energy), water outputs (via industrial wastewater), and community water benefits (via investments in water supplies, infrastructure, and other actions that benefit the communities where data centers are located more broadly); and

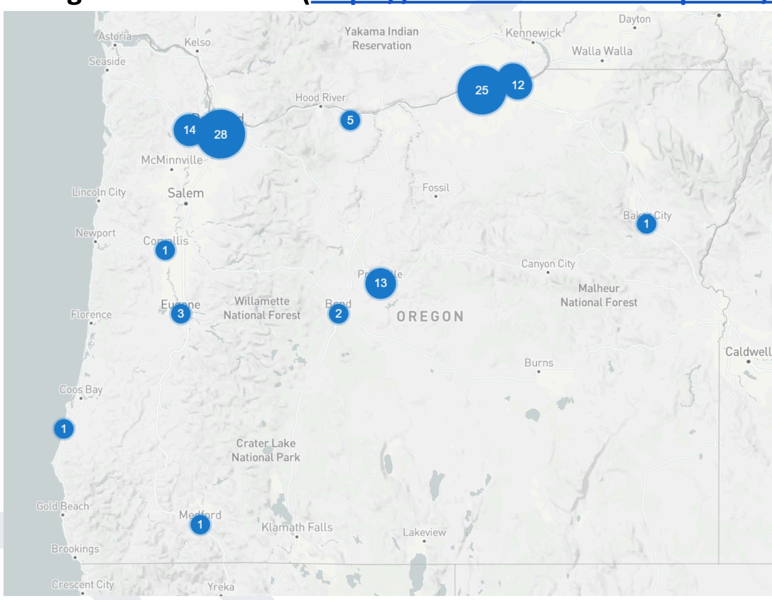
[7] Oregon Statewide Data Center Advisory Committee. (2026). Charge. Accessed at https://www.oregon.gov/energy/Get-Involved/Documents/Data-Center-Advisory-Committee-Charge.pdf.

- Policy options for managing data center water gathered from similar state and local policies used for data centers and other large-scale industrial users.

The results presented in this report aim to provide policymakers with a "more complete deck" of options, and potential considerations, to inform dialogue and their actions on possible solutions for Oregon communities considering data centers.

The Service does not recommend particular courses of action, nor does it make an assessment on the viability of these actions politically, or otherwise. The Service made this assessment to include policy options that *could* be viable and come from examples that are *comparable enough* to be worth presenting to Oregon policymakers.

Figure 1.0. Current Oregon Data Centers (https://www.datacentermap.com/usa/oregon/)



There are anywhere from 123 to 136 data centers currently operational in Oregon depending on the source. There is currently no statewide source for information on data centers, so estimates can vary. Those centers have 37 different operators, and Amazon Web Services operates 47 facilities. The Google facility in the Dalles is the largest at 80 megawatts and 290,000 square feet[8]. Most of the data center facilities are located in the Portland metro area with other concentrations in the Boardman/Umatilla and Prineville areas.

II. Policy Research Methods and Approach

[8] Baxtel. (2026). Oregon Data Center Market. Accessed at https://baxtel.com/data-center/oregon.

The findings in this report followed a series of process steps to define A) the policy problem/issue to be resolved, B) the kinds of options and considerations that would be useful to explore, and C) the format for delivering those findings. We explored potential case studies, relevant literature, and other published information. An initial conceptual framework for data center water inputs and outputs, and initial policy options, were reviewed by the Data Center Advisory Committee. Initial feedback from the Advisory Committee will lead to followup interviews and revisions to this Dialogue Draft.

The policy options were gathered from other states and local governments who have passed or are actively considering:

- Policies specific to data centers; and/or
- Policies to manage other large-scale industrial water users in rapidly growing industrial sectors (e.g., microchip and battery manufacturing; auto manufacturing; hydraulic fracking; and new power plant construction).

III. Data Center Water Use and Community Water Benefits

3.1. Data center water use and wastewater

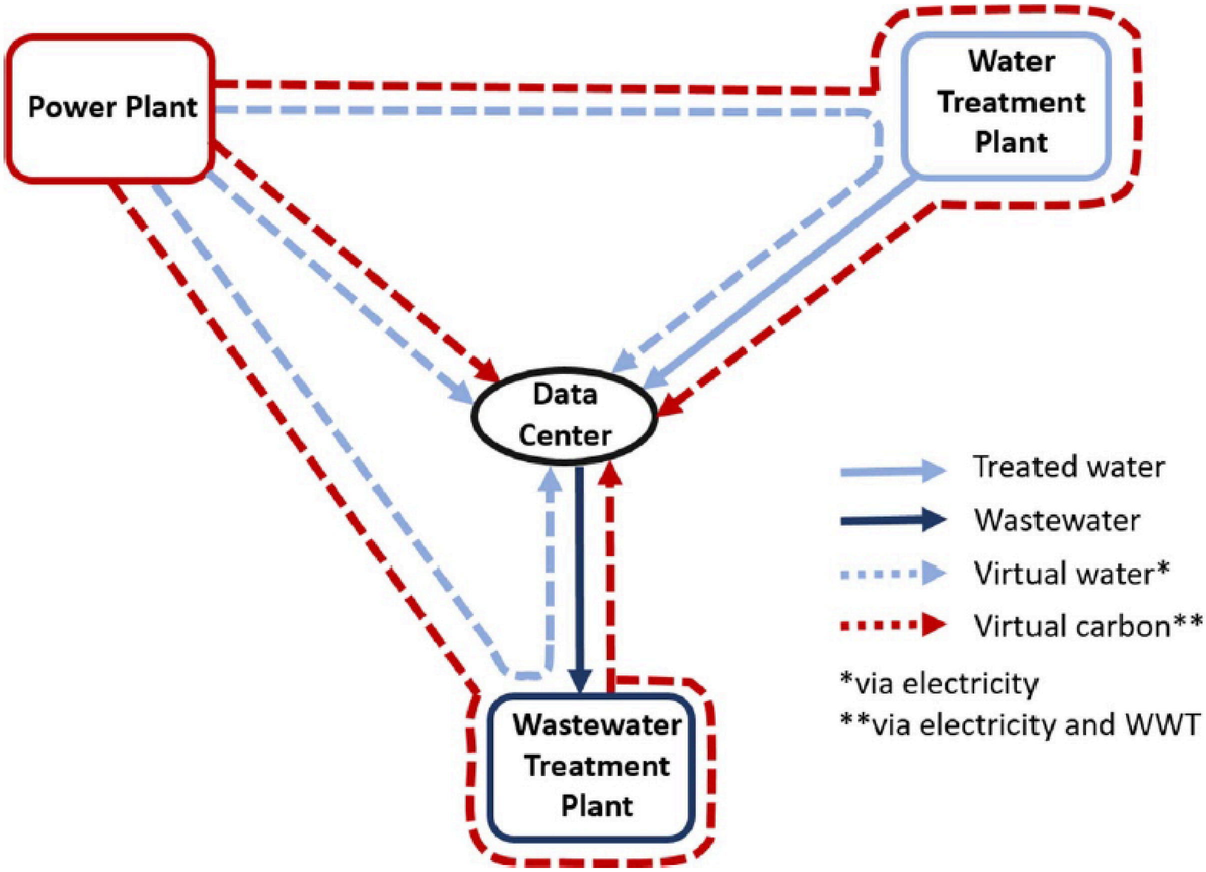
Data centers largely use potable water to cool the servers within their facilities. Some data centers in other states are recycling wastewater from nearby wastewater treatment plants. Data centers can use close-loop cooling (which uses less water, but is more expensive to build and operate) and/or open-loop or evaporative cooling (which uses more water, but is currently cheaper to build and operate). There are some data centers in Oregon using groundwater, but very few relative to those tied into municipal potable water systems. The direct annual water use of a 4.6 million square foot data center using 1.7 million MWh/year per year, is about equivalent to:

- 420 units of new housing; or
- Half to one center pivot of alfalfa growing in central Oregon.

Cooling water is eventually discharged, usually to municipal wastewater treatment plants. The volume of that wastewater discharge could be small as a percentage of the total (e.g., to a Clean Water Services in Hillsboro) or large as a percentage (e.g., to the Dalles). The cooling water isn’t chemically very different from the incoming potable water, except for some amount of residue from anti-corrosion chemicals, metals, or other elements picked up from the cooling infrastructure. These are the direct water inputs and outputs.

The most significant water footprint from data centers is tied to their sources of energy. Energy generated from hydropower, coal and gas-fired power plants, and other sources consumes water. In 2023, it is estimated power generation for data center electricity demand consumed 211 billion gallons of water nationwide based on regional energy mixes. Alternatively, direct on-site water consumption for cooling in 2023 is estimated to be 17 billion gallons (or only 8% of the total indirect and direct water consumption footprint).[9] Water-cooled chillers can evaporate up to 80% of the water withdrawn. The water that recirculates can be reused 3-10 times.[17] See Figure 3.1 for a diagram visualizing a data center's direct and indirect water footprint.

Figure 3.1 Data Center Environmental Footprint **(from Siddik, Shehabi, and Marston, 2021[10])**



[9]Arman Shehabi, A., Smith, S.J., Hubbard, A., Newkirk, A., Lei, N., Siddik, M.A.B., Holecek, B., Koomey, J., Masanet, E., and Sartor, D. (2024). 2024 United States Data Center Energy Usage Report. Energy Analysis and Environmental Impacts Division, Lawrence Berkeley National Laboratory. Accessed at https://eta-publications.lbl.gov/sites/default/files/2024-12/lbnl-2024-united-states-data-center-energy-usage-report_1.pdf.

[10] Siddik, M.A.B., Shehabi, A., and Marston, L. (2021). The environmental footprint of data centers in the United States. Environ. Res. Lett. (vol 16). Accessed at https://iopscience.iop.org/article/10.1088/1748-9326/abfba1/pdf.

3.2. Data center community water benefits

As data centers are sited in communities, there are often negotiations between a data center company and a local government to invest in the community (See Section 4.7 for more detail). Those investments might be focused on water and have included:

- Construction of new potable water storage and conveyance systems (e.g., aquifer storage and recovery, expanded surface water reservoir storage, new potable water treatment facilities, and updated conveyance pipes to reduce unwanted leaks and inflow); and
- Construction of new wastewater treatment and conveyance (e.g., new wastewater treatment facilities or upgrades, new wastewater conveyance, and new conveyance for recycled wastewater for industrial and other uses).

Our research has found that most of the conversations around community benefits so far have been around A) ensuring additional tax and other revenue to support the community economically, B) workforce development and local procurement, and C) investing in additional infrastructure capacity to cover both the data center needs and future growth for the community.

3.3. Data center typology

Data centers are not all the same, and some key differences affect their water footprint, including:

- Size (i.e., number of servers);
- Energy sources and the associated water footprint of those sources;
- Server efficiency (amount of work or ‘computation’ per unit heat);
- Utilization (i.e., the timing and duration of use based on roles for training AI models, storing data, etc.); and
- Cooling technology used (i.e., open or closed loop, and using recycled or potable input water).

IV. Options and Considerations for Oregon

4.1. Siting where there is enough water

In areas of abundant water, there may be few concerns about siting new data centers as long as existing supply infrastructure and wastewater treatment capacity is adequate to handle the new demands. The challenge in Oregon is that there are few areas where allocated water meets all the needs of existing and forecasted users, especially in summer where cooling demands may be highest for data centers. For instance, some of Oregon’s current data center site clusters are located within or near Groundwater Restricted Areas (e.g., the Deschutes Groundwater Mitigation Program, Lower Umatilla Basin Groundwater Management Area, and the Dalles

Critical Groundwater Area). Some states, such as Minnesota, require inter-agency coordination on large data center permits (i.e., where consumptive water use exceeds 100 million gallons/year or about 307 acre feet/year). For Minnesota, the Business First Stop is the coordinating agency among water quantity and quality agencies.[11] Given this challenge, there are several aspects of siting to consider:

- Has the municipality appropriately planned for the development of new industrial or large commercial water users?
- Does the municipality have adequate water rights to grow into as data centers, housing, and other development increases demand?
- Does the basin itself have adequate water supply (i.e., "wet water") to allow a municipality to develop its full water rights and still ensure enough water for agriculture, Tribes, the environment, and other water users?
- If a city wishes to pursue new water rights or permitted uses, what options and restrictions must they consider? (i.e. water right transfers, aquifer storage and recovery, mitigation credits etc.)
- What priority provisions during a drought exist and how does that affect non-municipal uses?

4.2. Better reporting and transparency of water use

Precise information on data center water use is hard to come by. Facility-level industrial use (for data centers, breweries, metal fabrication, etc.) is business information, and is usually rolled into a city's overall water consumption or wastewater discharge reporting. Water use reporting is currently driven by an individual corporation's own sustainability or environmental stewardship policy; for example Google and Meta are often cited as the most detailed reporters of water use while the largest data center operator, Amazon, does not report consumption. The reports that are made available vary in how metrics are reported and indirect water use is usually unavailable.

There is a growing policy interest to increase reporting on consumptive water use, but how would Oregon, or local cities, use that new information to inform decisions (e.g., permitting, allocation of tax incentives, or for long-range planning)? If Oregon is interested in more data on data center water use, it may also need to investigate how best to measure and report on water use to get the information it needs (see Table 4.2). Oregon's Integrated Water Resources Strategy includes several actions to improve collection and accessibility of water data.[12]

[11] Minnesota 94th Legislative Session 2025-2026, H.F. 16, Data center regulatory bill. Accessed at https://www.revisor.mn.gov/bills/94/2025/1/HF/16/versions/0/.

[12] Oregon Department of Water Resources . (2025). Oregon's 2025 Integrated Water Resources Strategy. Accessed at https://www.oregon.gov/owrd/programs/Planning/IWRS/Documents/2025%20IWRS_w%20appendices.pdf.

Water use reporting and transparency is an active policy area regarding data centers:

- California AB 1577[13] was introduced in January, 2026 and would require data center owners to submit monthly reports to the State Energy Commission on water use effectiveness (WUE), total water consumption.
- Iowa HF 2447[14] was introduced in February, 2026 and would require quarterly reports to the Iowa Department of Natural Resources that include total water withdrawal categorized by specific need, water source, and water use effectiveness.
- Michigan SB 762[15] was introduced in December, 2025 and would require the state Public Service Commission to report the annual water consumption of data centers in a public water supply service area.
- Georgia Senate Bill 421[16] was introduced in January, 2026 and would bar local governments from entering into NDAs with data center operators that prohibit disclosure of water and energy use.
- The Public Utility Commission of Texas in 2026 will require data centers to report direct water use, cooling technology, and energy sources. The Texas legislature is not in session until early 2027.[17]

Table 4.2 Water-related Reporting Metrics

Metric	**What to Know**
Water Usage Efficiency (WUE): The amount of water consumed due to the on-site cooling process (liters) divided by IT equipment energy (kWh)	WUE is a common reporting metric that is useful to understand on-site water efficiency, however WUE cannot be used to compare two or more facilities as it does not account for server efficiency, utilization, or off-site water use.
Energy Source: Hydropower, Coal, Natural Gas, etc.	Recent studies show a data center's energy source is one of the key determinants of its total water footprint.

---

[13] California General Assembly 2025-2026, A.B. 1577, Data centers: monthly reporting. Accessed at https://calmatters.digitaldemocracy.org/bills/ca_202520260ab1577.

[14] Iowa House General Session 2025-2026, H.B. 2447, Water and energy use for data centers. Accessed at https://legiscan.com/IA/text/HF2447/id/3363291.

[15] Michigan Legislature 2025-2026, S.B. 762, Energy and water usage report requirements for data centers. Accessed at https://www.legislature.mi.gov/Bills/Bill?ObjectName=2025-SB-0762.

[16] George General Assembly 2025-2026, S.B. 421, The Data Center Transparency Act. Accessed at https://www.legis.ga.gov/legislation/72340.

[17] National Ground Water Association. (2026). Texas regulators will require data centers to report water usage this spring. Accessed at https://www.ngwa.org/detail/news/2026/02/18/texas-regulators-will-require-data-centers-to-report-water-usage-this-spring?.

Total Withdrawal or Consumptive Use: Withdrawal is the volume of water piped into a data center. Consumptive use is water evaporated away or otherwise made unavailable for discharge.	Total consumptive use may be the most useful for municipal-scale planning.
Water Use per Workload:[18] The total amount of on-site and off-site water consumed per query.	This metric is a step closer to standardizing water use across different data center types and sizes, but it may be difficult to implement.

4.3. Maximum extent practicable technology requirements

For some time, federal environmental laws have used a standard of "maximum extent practicable" (MEP) to require technology and best practices for pollution prevention. The MEP standard considers technology cost, safety, and effort, as different from "best available technology" which is just the most effective technology currently available. Some states are requiring technology choices for data centers (i.e., Utilize closed loop-cooling to limit water consumption):

- Kansas Senate Bill No. 400 (in committee as of 3/4/26) introduces legislation to require large load data centers (20MW+) to use closed-loop cooling.[19]
- South Carolina House Bill 4583 (in committee as of 3/4/26) would require closed-loop cooling systems and prohibit data centers from extracting groundwater or municipal water.[20]
- The Southern Nevada Water Authority adopted a moratorium on new evaporative cooling systems in commercial and industrial buildings.[21]

4.4. Incentivizing energy and water use efficiency

Requiring particular technologies can be inefficient. For example, lack of flexibility may preclude superior technologies or practices. This may be important given the variety of site conditions present and developing nature of this industry. Technology requirements can also become outdated as technology advances. Policies can set outcome expectations, but provide flexibility and/or incentives for data centers to innovate around technology choice (e.g., Utilize closed

[18] Lei, N., Lu, J., Shehabi, A., & Masanet, E. (2025). The water use of data center workloads: A review and assessment of key determinants. *Resources, Conservation and Recycling*, *219*, Article 108310. Accessed at https://doi.org/10.1016/j.resconrec.2025.108310.

[19] Kansas General Session 2025-2026, S.B. 400, Requiring data centers to use closed-loop cooling systems to mitigate water consumption. Accessed at https://www.kslegislature.gov/li/b2025_26/measures/sb400/.

[20] South Carolina General Assembly 126th Session 2025-2026, H. 4583, The South Carolina Data Center Responsibility Act. Accessed at https://www.scstatehouse.gov/sess126_2025-2026/bills/4583.htm.

[21] Southern Nevada Water Authority. (2025). Understand Laws and Ordinances. Accessed at https://www.snwa.com/conservation/understand-laws-ordinances/index.html.

loop-cooling to limit water consumption) or operational choices (e.g., flex time of use, ramping up and ramping down utilization, etc.). Some examples include:

- Virginia Senate Bill 417 introduces a provision that data centers can receive funds from grant programs only if cooling systems use treated wastewater. To be considered in 2027.[22]
- The Colorado Data Center Development and Grid Modernization Act (Introduced, died in chamber) would have established an incentive program with strong emphasis on environmental stewardship: tax incentives only available to developers who follow water stewardship strategies and conduct detailed infrastructure assessments addressing availability.[23]
- Minnesota HF 16 requires consideration of water conservation technology, "...including but not limited to using water efficient fixtures and practices, recycling water before discharging, partnering with local water utilities to use discharged water from the data center, using reclaimed water, installing closed-loop systems, and supporting water restoration and replenishment in local watersheds."[24] Minnesota also requires large data centers to achieve certification from one of a list of green building standards.

4.5. Accurate forecasting and revenue for municipalities to meet immediate and growing water and infrastructure demands

Water affordability, and more generally utility rate affordability, are important issues in Oregon and across the country. Data centers, especially if their water and wastewater use is a large percentage of a city's total use, could be both an opportunity or a challenge to water affordability. The question is whether cities are getting enough advanced notice and/or support to accurately incorporate data center needs into their long-range water forecasting, so they can also evaluate how they can serve data centers and generate the revenue they need to cover the cost of those services without additional burden on existing residents and businesses. Some examples of what other states are doing include:

- Virginia introduced SB 1449 that would allow a locality to require developers of high energy facilities to complete site assessments on ground and surface water impacts before rezoning applications or obtaining special use permits; this bill was vetoed.[25]

---

[22] Virginia Legislature 2026 Regular Session, S.B. 417, Cloud Computing Cluster Infrastructure Grant Fund; reclaimed water usage. Accessed at https://lis.virginia.gov/bill-details/20261/SB417.

[23] Colorado 75th General Assembly 2025, S.B. 25-280, Data Center Development & Grid Modernization Act. Accessed at https://leg.colorado.gov/bills/sb25-280.

[24] Minnesota H.F. 16, 2026. See note 11.

[25] Virginia General Assembly 2025, S.B. 1449, Data centers; site assessment for high energy use facility. Accessed at https://lis.virginia.gov/bill-details/20251/SB1449.

- Iowa HF2261 would create a new customer class for water utilities supplying facilities requiring at least 20MW of power with separate rates, charges, and schedules.[26]

States and local governments have also looked ahead toward decommissioning. Several states have decommissioning requirements for energy generation facilities (Oil, gas, wind, and solar). Payne County, Oklahoma passed a resolution encouraging the state legislature to require performance bonds equal to the cost of construction to cover costs with decommissioning if needed.[27]

4.6. Mitigation and "water positive" pledges

Several major companies operating data centers (e.g., AWS, Microsoft, and Meta) have committed to be water positive across their value chains by 2030.[28] This means that companies are promising to replenish more water than they consume. This might include watershed restoration to get more water instream, or other actions to contribute more water. It is less clear on how localized those efforts might be.

Oregon has experience with water quantity mitigation programs. The Deschutes River Groundwater Mitigation Program requires new groundwater users to provide additional instream water prior to getting permission to pump water.[29] The City of Prineville used that Mitigation Program to expand its aquifer storage and recovery capacity by acquiring a water right for the release of up to 5,100 acre-feet (AF) of stored water from Prineville Reservoir for downstream fish and wildlife use. These mitigation credits are part of the federal Crooked River Collaborative Water Security and Jobs Act of 2014.[30] Similarly, East Bay Municipal Water District in California requires new planned communities to fully offset projected water demands through on-site and off-site conservation.[31]

---

[26] Iowa 91st General Assembly, H.F. 2261, Customer classes for large energy use facilities. Accessed at https://www.legis.iowa.gov/legislation/BillBook?ba=HF%202261&ga=91.

[27] Peters, C. (January 30, 2026). Payne County passes resolution urging decommissioning bonds for wind, solar, data centers. The Stillwegian. Accessed at https://www.thestillwegian.news/payne-county-passes-resolution-urging-decommissioning-bonds-for-wind-solar-data-centers/.

[28] Satariano, A., Mozur, P., and Weise, K. (February 1, 2026). Microsoft Pledged to Save Water. In the A.I. Era, It Expects Water Use to Soar. New York Times. Accessed at https://www.nytimes.com/2026/01/27/technology/microsoft-water-ai-data-centers.html.

[29] Oregon Water Resources Departments. (2026). Deschutes Groundwater Mitigation Program. Accessed at https://www.oregon.gov/owrd/programs/waterrights/permits/deschutesgroundwatermitigation/pages/default.aspx.

[30] City of Prineville, 2023. See Note 5.

[31] Christiansen, B. (2015). Water Offset Policies for Water-Neutral Community Growth. Alliance for Water Efficiency. Accessed at https://allianceforwaterefficiency.org/wp-content/uploads/2019/06/Water-Offset-Policies-for-WaterNeutral-Community-Growth150126.pdf.

4.7. Ensuring community water benefits

Data centers are often described as the "invisible backbone" of the digital economy. While they have a small physical footprint in terms of personnel relative to their size in square footage, their economic and community impact is documented across several key areas: tax revenue, high-wage job creation, and infrastructure modernization. Each one of us uses data centers each and every day, whether we realize it or not. Data centers have a relatively high service to revenue ratio. For example, in Loudoun County, Virginia, for every $1 in public services provided to data centers, the county receives approximately $26 in tax revenue.[32]

Traditionally, municipalities have incorporated new water users into their water, sewer, and stormwater services by charging system development charges.[33] Some states are defining large data centers as "large load users" and creating different fee structures, conditioned tax incentives, etc. since existing system development charges may not fully account for the infrastructure costs of large data centers.

How can communities that house data centers ensure their communities benefit? There are multiple community benefit possibilities, but this report focuses specifically on community *water* benefits, which might include:

- Additional tax and other revenue to cities;
- Investments in workforce development (infrastructure and beyond);
- Upgrades to current water, wastewater, and stormwater infrastructure that benefits both data centers and the broader community;
- Agreements that generate investment in river, riparian, or other aquatic habitat;
- Agreements that generate additional water availability for the environment, agriculture, and other water users

Some ways Oregon communities have worked with data centers to create community benefit include:

- Prineville implemented a 5% Franchise Fee on electricity usage. Because data centers consume a lot of power, this generated $8.19 million in 2024 alone, accounting for 63% of the city's entire tax base.
- Companies funded the Prineville's Aquifer Storage and Recovery (ASR) system, which helps manage the local water supply during droughts.
- Meta has invested over $2 million directly into the Crook County School District for STEM and technology.

[32] Northern Virginia Technology Council. (2024). Virginia Data Centers Supported 78,140 Jobs and $31.4 Billion in Economic Output in 2023. Accessed at https://www.nvtc.org/press-releases/virginia-data-centers-supported-78140-jobs-and-31-4-billion-in-economic-output-in-2023.

[33] League of Oregon Cities. (2020). System Development Charges. Accessed at https://www.orcities.org/resources/reference/topics-z/details/system-development-charges.

- Google invested $28 million to build a municipal water treatment and storage system. Upon completion, Google transferred ownership of the system and its associated water rights to the City of The Dalles, providing the community with 100 million additional gallons of water capacity annually.
- Under a 2021 Strategic Investment Program (Business Oregon) agreement, Google committed to a "Total Annual Payment Amount" which is the greater of 50% of what property taxes would have been or a minimum of $3 million per year. By the end of current abatement periods, the community is projected to have received over $45 million in direct payments.
- In Morrow and Umatilla counties, AWS returns up to 96% of its cooling water—treated and cooled—to local farmers for free, supporting irrigation for corn, soybean, and wheat crops in a water-stressed region. AWS funded a specialized Data Center Technician Training Program at Blue Mountain Community College, including $100,000 in annual scholarships.
- In Hillsboro, companies have agreed to purchase at least 10% of their services from local vendors.

V. Fitting Options Within the Oregon Context

Oregon has land use, water quantity, and water quality policies and programs that may be able to manage much of the increased demand presented by data centers. Some of those programs are summarized below.

Forecasting long-range municipal and industrial water needs
Oregon's statewide land use planning system, overseen by the Department of Land Conservation and Development, guides long-range planning and includes:

- Goal 9 and Economic Opportunity Analyses (EOA) to ensure appropriate zoning for planned economic growth. This includes identifying "target industries" that will require the service of public facilities.[34]
- Goal 11 and public facilities plans to ensure 20 years of service for residential growth and target industries.[35]

The Oregon Water Resources Department requires cities to create a Water Management and Conservation Plan that ensures existing water rights can support the Goal 11 public facilities plan as a part of the municipal water permit extension process. In practice, the requirements for water availability, serviceability, and allocation from these planning documents are combined into a single Master Water Plan that also includes requirements from the Oregon Health

[34] Department of Land Conservation and Development. (2026). Goal 9: Economic Development. Accessed at https://www.oregon.gov/lcd/OP/Pages/Goal-9.aspx.
[35] Department of Land Conservation and Development. (2026). Goal 11: Public Facilities and Services. Accessed at https://www.oregon.gov/lcd/OP/Pages/Goal-11.aspx.

Authority for safe drinking water. The interplay between these planning efforts is designed to ensure cities have a well-informed 20 year plan, with periodic review, to meet forecasted residential and industrial growth. The Portland State Population Research Center provides regular population forecasts,[36] but industrial growth forecasts are harder to predict. Industrial growth forecasts are based on current zoning, project proposals from developers, and preferences of city leaders.

Providing information on water availability and access to water rights

Oregon Water Resources Department maintains the Water Availability Reporting System[37] for new water right applications for most surface water. This system is based on outdated streamflow data and is in the process of modernization. Other information on groundwater basin volumes or in-stream water needs may be incomplete or outdated. The Oregon Water Data Portal is also a new platform designed to make statewide water data more accessible.

Most municipal water rights have existed as long as agricultural water rights, and are thus senior. In droughts, there may need to be conversations about who has access to which water. With scarce water, Oregon's system of prior appropriation ensures older/more senior water right holders get their water before more recent/junior water right holders. If a city does have enough water rights to support industrial growth, they can acquire additional water using tools such as water right transfers, aquifer storage and recovery, and mitigation credits.

Protecting water quality

Oregon Health Authority implements the federal Safe Drinking Water Act to protect the quality and safety of drinking water–especially water provided by public water systems.[38] Oregon Department of Environmental Quality issues water quality permits for activities such as industrial and construction stormwater management, pretreatment of industrial wastewater discharged to publicly operated treatment works, and the discharge from those public wastewater plants.[39]

Potential challenges to implementing these options

- Missing and outdated information for long-range planning
- TO BE COMPLETED AFTER INITIAL FEEDBACK

[36] Portland State University Population Research Center. (2026). Population Forecasts. Accessed at https://www.pdx.edu/population-research/population-forecasts.

[37] Oregon Water Resources Department. (2026). Surface Water Availability Reporting System. Accessed at https://www.oregon.gov/owrd/programs/streamslakessanddams/surfacewater/pages/surface-water-availability.aspx.

[38] Oregon Health Authority. (2026). Oregon Drinking Water Services. Accessed at https://www.oregon.gov/oha/PH/HEALTHYENVIRONMENTS/DRINKINGWATER/Pages/index.aspx.

[39] Oregon Department of Environmental Quality. (2026). Water Quality Permits. Accessed at https://www.oregon.gov/deq/wq/wqpermits/pages/default.aspx.

VI. Next Steps and Conclusion

Oregon experienced a wave of data center development before fully knowing what the future of AI and hyperscale data centers might demand from Oregon electricity, water, and other resources. Those data centers provide important community and economic benefits. This report attempts to provide more precision on how data centers use water, how that water use is different from, or similar to, other large industrial uses, and some options taken from other states on how Oregon might use its existing policies and/or update policy to best balance the opportunity and challenge provided by future data center development.

This report is preliminary. We consider it a dialogue draft, and welcome feedback on the types of additional information that might be helpful for the State of Oregon, Oregon municipalities and Tribes, and others looking to manage water in Oregon.

Appendix A. List of Interviewees

TBD–May not be necessary, but this memo is based on a policy scan and literature review, and interviews with other states and national excerpts can add valuable nuance. If valuable, will complete after 3/27