Water Policy and Innovation Service

Data Centers and Water

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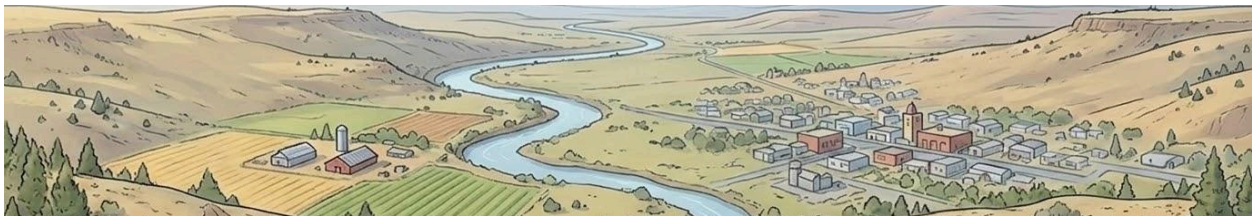

Summary for Decisionmakers

Depending on the source, there are anywhere from 123 to 136 data centers currently operational in Oregon, and those data centers can be large, industrial water users. There has also been significant growth in data centers over the last five years. Data centers can vary greatly in the number of servers (from small to hyperscale), the cooling technology used, their source of energy, and other factors that determine different water use requirements. Lastly, their location in regions with more or less existing water stress matters (see Table i.1).

Data centers can provide significant economic benefits to the cities that house them, including investment in municipal water infrastructure (see Section 4.7 below), but also pose risks to long-term water availability or infrastructure if there is not adequate water or wastewater capacity (see Sections 4.1 and 4.5). 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 gathered from how other states and cities are proposing to manage water for data centers and other large-scale industrial users.

Water Policy and Innovation Service

The Water Policy and Innovation Service (Service)[1] is an offering of Portland State University's National Policy Consensus Center (NPCC), Oregon State University's Institute for Natural Resources (INR), 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.

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

Table i.1 Not All Data Centers Are the Same

Facility (location)	Size (sq feet)	Electricity use	Cooling technology	Direct water use (gal/year 2024) (water use equivalents)
Meta (Prineville)	4.6M	1,728 GWh/yr	Air + Evaporative	70M[2,3] (64 acres alfalfa[4] | 420 houses[5])
Google (The Dalles)	1.0M	??	Evaporative	361M[6,7] (388 acres cherries[8] | 3700 houses[9])

Findings

Information on the potential impacts and benefits of data centers is evolving rapidly, and Oregon will need an adaptable approach, whichever policy options the state chooses. Data centers can require significant water supplies, and there are few regions in Oregon with plentiful water now. Climate change will exacerbate stress on water supplies. If data centers are located where there is less water stress now and in the future, many of the existing Oregon water quantity and quality policies may be adequate to address potential risks. Data centers provide local tax revenue, high-wage job creation, and infrastructure modernization in Oregon cities that house them. There are ways to ensure cities have the information and capacity to negotiate community benefits with companies in a consistent, fair manner. Data centers are an attractive economic opportunity because they require relatively few municipal services relative to local tax revenue generated.

Data centers present the most risk where there is rapid, large water-using data center growth in water basins where A) water is already overallocated or water quality concerns exist, B) water availability information is missing or outdated, C) there are not adequate protections for

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

[3] 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.

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

[7] Li *et. al.*, 2023. See note 2.

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

[9] City of The Dalles. (2024). Water System Master Plan Update. Accessed at https://www.google.com/url?q=https://cityofprineville.com/sites/default/files/fileattachments/city_council/page/18554/2023_water_master_plan_-_volume_1_reduced.pdf.

instream, agriculture, and other water uses, and D) the municipality or local water utility does not have adequate long-range plans or capacity to best expand water and wastewater service to meet data center and other demands. Some of the options for Oregon to consider include:

- Encourage siting data centers where new water uses can be fully mitigated with water savings nearby, and where there is less water stress now and expected into the future.
- Generate and regularly update good information on current and long-range water and municipal revenue needs to meet water and infrastructure demands.
- Provide municipalities with information on the effect any large incremental increases in water demand or wastewater discharge may have on the capacity of public water and wastewater systems.
- Encourage the most efficient water use at data centers.
- Ensure community benefits for the cities that house data centers.
- Encourage full mitigation for new data center water use with water savings in the watersheds that house data centers.

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