

Examples of How Water Use Data is Used

The information below presents a high-level list of specific examples of how the water use reported data is used and how diverted data is used by the Oregon Water Resources Department. The information presented includes the type of water use data, whether it is stored in a WRD database, what program requires such data, and how the data is collected and/or used.

Data	Data Characteristics
Water Use Reported Data	Generally, requires monthly volume of water used, reported on an annual water year basis.
Water Use Diverted Data	Depending on device, may or may not record volume of water use. Information accessed at the measuring device by the watermaster, Department staff, or the water user.

Type	Required Pursuant To	How Implemented/Used
Diverted Data and (in some cases) Reported Data [Reported Data in WRD database]	Critical Groundwater Area (CGWA)	<ul style="list-style-type: none"> • Umatilla Basin permitted basalt well flow meter data is read by staff annually, and additionally required to be reported for some Critical Groundwater Areas (CGWA). • CGWAs requires basalt water right holders in the Stage Gulch and Butter Creek areas to record weekly and report annually. • Water use data in the CGWAs provides a basis to compare variation in annual use to annual changes in spring static water levels, thereby allowing estimates of sustainable yield for critical groundwater areas. • Watermaster orders require permitted basalt wells in the “Umatilla Structural Basin” irrigating more than 10 acres to be metered. The watermaster ordered flowmeter requirement was put in place to aid in the distribution of the ground water supply by the watermaster as per the CGWA orders and rules. • See other uses of data in <i>Water Uses in WRD Database</i> below.
Diverted Data and Reported Data [Reported Data in WRD database]	Serious Water Management Problem Area (SWMPA)	<ul style="list-style-type: none"> • Basalt aquifers in the Walla Walla Basin have been declining at a rate of up to 4 feet per year. • Permitted basalt well flow meter data read by staff annually. • Walla Walla SWMPA requires permitted basalt well owners in the Walla Walla basin to record use monthly and report annually. • Water use data will be used to help define a basin water budget and calibrate a model of the groundwater system for the Walla Walla cooperative groundwater basin study. • Water use data provides a basis to compare variation in annual use to annual changes in spring static water levels, thereby allowing estimates of sustainable yield for the Walla Walla SWMPA. • See other uses of data in <i>Water Uses in WRD Database</i> below.
Diverted Water Use Data	Watermaster Requested Permit/Transfer Condition Required to Measure	If watermaster requests a measurement condition, the condition is made in anticipation of a water management need either to prevent injury or enlargement or due to a system being fully appropriated.

<p>Diverted Water Use Data</p>	<p>Water Measurement Devices Required by Watermaster for Management</p>	<p>Required by the watermaster to: resolve disputes over water use; ensure a right is being used within the terms and conditions of the water right; to assist with water distribution, particularly in basins fully appropriated/insufficient supply for all users; to determine if unauthorized use is occurring. Watermaster will return onsite to check device as needed to address the water management problem and in accordance with workloads.</p>
<p>Diverted Water Use Data</p>	<p>Significant Points of Diversion</p>	<p>Device provides water user with information about how much user is diverting, and whether they are diverting more or less than their right. In some cases, the Department does not check device once installed; in other instances, it is used by the watermaster for water distribution and management. Whether watermaster returns to the device and uses the data is dependent on whether it meets one of the criteria in the <i>Water Measurement Devices Required by Watermaster for Management</i> above.</p>
<p>Water Use Reported Data [In WRD database]</p>	<p>Water Uses in WRD Database (including SWMPA, CGWA, etc) Water Use Reported Data - 537.099 Governmental Entities Reporting Condition of a permit</p>	<p>Water Management and Conservation Plan Review and Oversight of Development Limits: Water use reported data is used to validate data in Water Management and Conservation Plans (WMCP) to ensure that the numbers reported in the WMCP match what is being reported. Discrepancies may help Department staff identify when permit diversion rates or development limitation rates are being exceeded by the permit holder.</p> <p>District Water Management Flexibility – ORS 540.570 Irrigation District Pilot Project: Helps districts and the Department demonstrate compliance with statutory requirement to have a full and accurate measurement of the water appropriated.</p> <p>Proving up on Water Rights: At proof, if a permit/transfer required water use reporting, staff check reporting data to see if data was reported at least once.</p> <p>Monitoring Drought Permits: The data is used to monitor groundwater appropriation under emergency drought permits, primarily in the Klamath Basin where the Department issues the most drought permits.</p> <p>Verify Use for Processing Transfers, Leases, and Other Transactions: Water use reported data is sometimes used by staff to help verify water use within the past 5 years; it is not always necessary if other supporting documentation clearly demonstrates that water was used within that timeframe, such as dated aerial photographs.</p> <p>Groundwater Complaints: Water use reported data are referenced during investigations of groundwater interference complaints.</p> <p>Harney Basin Groundwater Study – Reported and diverted data was used in the Harney Groundwater Study.</p> <p>Deschutes, Klamath, and Willamette Groundwater Studies and Models – Water use reported data was used as part of the data to develop simulations of pumping. Monthly data is essential for this task.</p>

		<p>Place-Based Planning – Used to develop non-irrigation estimates of water use (e.g., water districts, municipalities, hatcheries, etc) at different spatial scales. It is also used to verify/validate assumptions made to develop estimates of water used by irrigated agriculture within the planning areas, but there is generally not sufficient water use reported by agricultural producers to rely on it exclusively.</p> <p>USGS Water Use Census – WRD reports state water use information to USGS, which is then used in their reports.</p> <p>Water Availability Reporting System – Municipal data was used as an input. Limited agricultural data was used due to the limited amount of data. More data is now available, and the Department intends to use the data as much as possible when water availability model is updated in the future.</p> <p>Willamette Reservoir Reallocation Study: Reported agricultural water use data was one of the seven approaches explored as a way to estimate demand. Agricultural reported water use data was not selected as the preferred method due to too few diversions being required to report/insufficient sample size. However, it was used as a method (Estimate 7) of comparison to vet accuracy of other methods. See pages 41-49, page 53. In regards to municipal and industrial use, “OWRD maintains a database that contains reported water use data on a monthly basis, and these data were downloaded and analyzed for study area M&I systems. For each M&I system, monthly water use data were aggregated by month and divided by annual water use (as reported within the database) in order to arrive at a percent estimate of monthly M&I water use. June through September water use data were aggregated to establish an estimate of a system’s average peak season use.” See page 48.</p>
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