

What is a Water Budget?

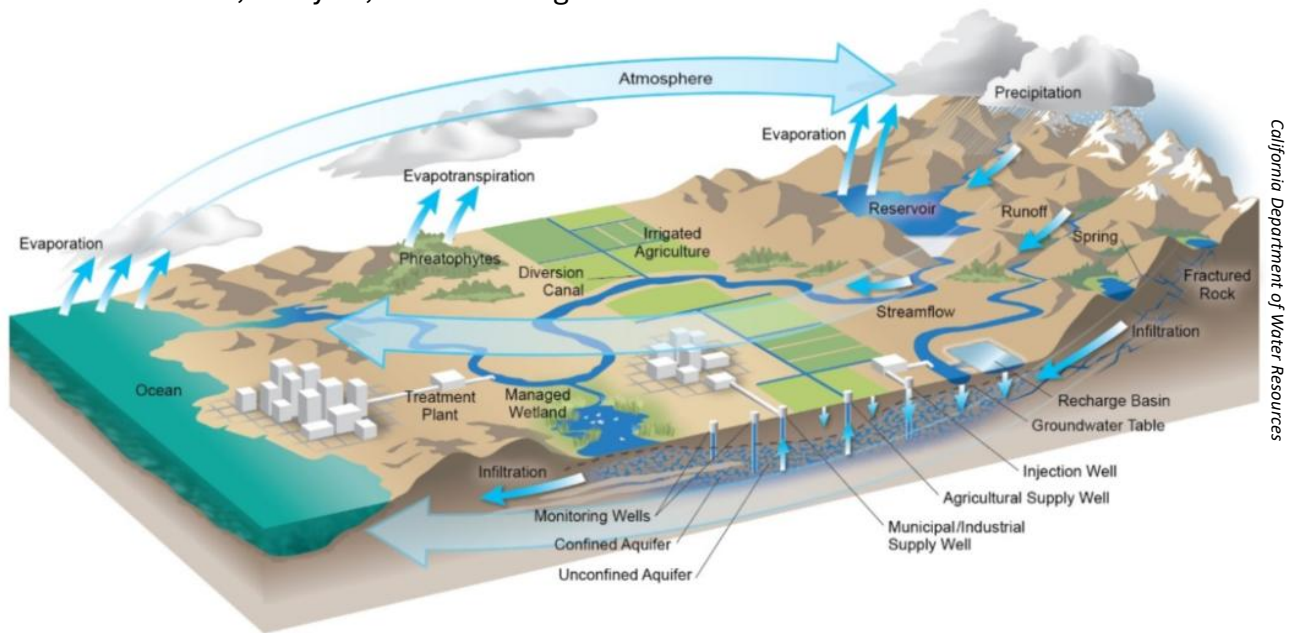
A water budget accounts for the balance of water flowing into and out of an area over a specific time period:

$$\text{inflows} - \text{outflows} = \text{change in storage}$$

Water budgets are sometimes compared to bank accounts, where inflows and outflows are analogous to deposits and withdrawals, and changes in water storage similar to the account balance. However, the natural environment is more complex than a single account; a better comparison might be balancing the books of a business with multiple operations, each with regularly fluctuating and varied income streams and expenditures. Understanding the company's overall financial position means accounting for each operation as well as the transfers between them.

Similarly, a complete water budget for a hydrologic basin accounts for all water entering and leaving the system, as well as flow between hydrologic systems within the basin. These include the atmosphere, surface water, and groundwater.

Oregon is a state with complex and diverse hydrogeologic conditions. The importance of various components and flow pathways varies locally depending on the climate, topography, land cover, hydrogeology, water use, and the human footprint. Some of these components are difficult to measure. As a result, developing meaningful water budgets requires a good understanding of local conditions and extensive data collection, analysis, and modeling.



California Department of Water Resources

Why water budget information is important to Oregonians

With the support of recent legislative investments, the Oregon Water Resources Department has launched multiple scientific investigations to better estimate some of these harder-to-measure components, such as baseflow, groundwater recharge, and the water lost from evapotranspiration. Once complete, these investments will result in greater understanding of groundwater resources, and more effective tools to adaptively manage consumptive use. This work is still in early stages, with new information and tools coming through 2030. To get the latest information, please visit our [water budget webpage](https://www.oregon.gov/owrd/programs/Research/WaterBudgetInfo/Pages/default.asp):

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