

Saving Water in

Oregon

Nicknamed the "Webfoot State," Oregon has a reputation for having an abundance of water. Major rivers weave through the state, such as the Columbia, Willamette, and Snake Rivers. Oregon's water supply has experienced increased pressure from a growing state population and several years of drought. With decreased winter precipitation and snowmelt, the water levels of rivers and other sources of freshwater in Oregon have dropped.

SOURCES OF WATER

- Oregon relies on surface water for 68 percent of its freshwater withdrawals and ground water for the remaining 32 percent.
- The Cascade Mountains split Oregon into two distinct climates: the arid eastern region and wetter western region, which includes the coast.
- The western mountainous region can receive more than 200 inches of precipitation per year, while the eastern region can receive less than eight inches. Oregon's annual average is 28 inches.
- The Columbia River Basalt Group, which was formed by ancient lava flows, contains an extensive network of aquifers under northern Oregon that help store and supply water. These aquifers serve as a primary residential water source to many communities and provide irrigation for agriculture.

SUPPLY ISSUES

- Since surface water sources are fed by rainfall and snowpack from the mountains, reduced precipitation often leads to water shortages—especially during the summer months, when the state receives little rainfall.
- In 2015, 60 percent of snowpack measurement sites were snow-free or at record-low levels for the first time by mid-winter. Snowpack dropped 60 to 90 percent below normal accumulations in the western region and 30 to 80 percent below normal accumulations in the eastern region.
- The Clackamas, Hood, Chetco, and Illinois Rivers showed record low readings from decreased snowmelt in 2015. In addition, several southern Oregon reservoirs had little or no remaining



Drought conditions have caused water levels in Oregon's Detroit Lake Reservoir to consistently decline over the years, as *The Oregonian* photographs highlight the difference between 2010 and 2015.

storage. For example, Warm Springs Reservoir ran dry in 2015, with its storage at 0 percent of capacity, and Owyhee Reservoir storage was at 1 percent of capacity.

- From 2010 to 2014, Oregon's population rose 3.6 percent and is predicted to grow by more than 40 percent of the 2014 population, or to nearly 5.6 million people, by 2050.
- The Oregon Water Resources Department estimates that annual demand for water will, in turn, grow to about 3.4 trillion gallons by 2050, up from 3 trillion gallons today.
- Oregon's rising population has dramatically increased groundwater demand in many cities and towns, and in some locations, the aquifers can no longer sustain development. For example, aquifers in 12 areas of the Willamette Valley—one of the most populous areas of Oregon—have been completely withdrawn, leaving only enough water for minimal irrigation or fire protection.

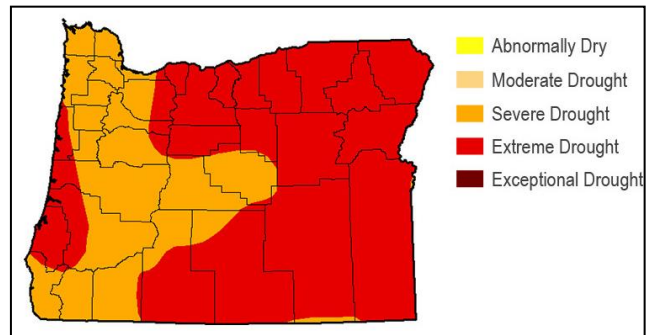
WATER USE CONCERNS

- In September 2015, the governor declared a drought emergency in 25 Oregon counties.
- In 2015, the U.S. Department of Agriculture estimated that 84 percent of topsoil and subsoil were short or very short of moisture; 67 percent of pastures and rangelands were in poor to very poor condition.
- Statewide salmon, trout, steelhead, and sturgeon populations have declined as a result of warmer temperatures and drought.
- In order to reduce stress experienced by native fish populations, the Oregon Department of Fish and Wildlife prohibited afternoon fishing on all state streams, as well as fishing at any time in the Willamette River downstream of Willamette Falls in 2015.

WHAT ARE OREGONIANS DOING TO SAVE WATER?

Many municipalities, utilities, and businesses in Oregon are partners with WaterSense®, the U.S. Environmental Protection Agency program that offers people a simple way to identify products and homes that use less water and perform well. Some notable water conservation efforts by partners include the following:

- The Regional Water Providers Consortium, which consists of 21 water providers in the Portland metropolitan area, collaborates on regional water supply plans and water conservation efforts. The consortium promotes water-efficient practices and WaterSense labeled products through broadcast, print, and online channels.
- The Portland Water Bureau helps its customers save water and energy by offering an assortment of free kits and resources, including home water audit



In October 2015, more than 67 percent of Oregon was experiencing extreme drought. (Source: U.S. Drought Monitor)

kits with toilet leak detection tablets and drip gauges; water conservation and energy saver kits with water- and energy-efficient showerheads and faucet aerators; and a guide to help homeowners choose native plants that require little to no supplemental watering. The bureau also conducts free commercial water efficiency surveys to help industrial, commercial, and institutional facilities save water.

- The City of Bend, Oregon, helps homeowners save water outdoors with its free sprinkler inspection program. During the inspection, a professionally trained auditor will conduct a visual inspection of the system and test it to determine how well it is applying water to the yard. After the inspection, the homeowner receives a customized watering schedule and recommendations to improve the sprinkler system's effectiveness and efficiency.

For more information, visit www.conserveh2o.org and www.oregon.gov/owrd/pages/wr/drought.aspx.

References available by request. Contact watersense@epa.gov for additional information.