

Domestic Well Tips during a Drought

Oregon Water Resources Department | August 2015

Having supply issues with your well?

Groundwater is a source of water for many homes in rural Oregon and the quality and quantity of groundwater can vary based on geology, climate, and land use. Supply problems may occur when the pump is turned on and the water level drops sharply to meet demand. Well production will be severely reduced and damage to the pump may occur if the water level drops to the pump intake level. This can happen with aging wells due to the buildup of mineral deposits, silt, or bacteria and it can also happen during a drought.

If you're experiencing problems with your well during a drought, you may want to start by contacting a watermaster with Oregon Water Resources Department.

Symptoms of a Dry Well

- Lots of air in the water.
- Running out of water after heavy usage (like watering the lawn).
- Pump doesn't produce as much water as it used to.
- Pump runs for a long time before shutting off.
- Water pressure is very low.
- Takes a long time to build up pressure.
- Neighbors have problems with their wells.

It is important to remember that experiencing these symptoms doesn't necessarily mean your well is going dry.

Contact your local watermaster. The Oregon Water Resources Department is responsible for managing water supplies, both groundwater and surface water, across the state. To accomplish this, the Department employs experts who work hard to determine how much water is available and the best way to protect it in order to assure that sufficient and sustainable water supplies are available to meet current and future needs.

If you are experiencing well issues, the Department's watermaster may be able to look at the well and well log, take measurements and check to see if well interference may be a factor. In many cases, you might just need to deepen your well, pump, or address maintenance related issues. Locations of region offices and contact information for watermasters can be found here: <https://www.oregon.gov/owrd/aboutus/contactus/>

Examine pump or construction issues. Many water wells in Oregon have been drilled to deep depths, but some pumps are installed at shallow depths. This does not allow the pump access to all of the available groundwater and as groundwater levels decline due to the drought, wells with shallow pumps may experience reduced yields. To keep wells functioning properly, consider lowering your pump now and conducting any other well or pump maintenance. Well owners with a flowing artesian well may want to consider installing a pump to ensure access to groundwater in the event the artesian pressure diminishes. Licensed water well constructors can be found at: http://apps.wrd.state.or.us/apps/gw/well_license/

Monitor water levels and water use. During drought or other dry periods when your well is used a lot, it is helpful to measure the static (resting) water level in your well. The groundwater level in your well is an indication of how much groundwater is available for your use. It is common for groundwater levels to change seasonally, where the groundwater level often increases during the winter and spring as the aquifer recharges from rain and snowmelt. Groundwater levels typically decline through the summer and fall in response to natural discharge of the aquifer (to streams and springs) and in response to groundwater use from pumping wells. It is important to know where the groundwater level is relative to your well pump

intake. If the groundwater level declines to below the pump intake in your well, damage to your pump can occur. A water meter can also be installed and used to measure how much water is being pumped. This information is valuable to understand and manage water use. The Department has step-by-step instructions for how to collect and interpret a water level measurement from your well. You can access that information here: <https://www.oregon.gov/owrd/publicationsandreports/>.

Things to Consider

Conserving groundwater for essential uses is the best method to ensure a limited supply is adequate to carry you through the dry summer months. Be sure to check your system for leaks and repair any you find. Outside watering is commonly the biggest consumptive use for a typical household, so minimizing irrigation is the best way to save water.

Look for leaks. If the pump cycles on and off when water isn't being used, you likely have a leak. One way to easily check this is to watch the pressure gage on your water system when you are not using water. If it does not move over several minutes, your system is likely leak-free. The pressure gage is usually located near the pressure tank.

Consider rain sensors, drip irrigation, native plants, or dormant lawns. Reduce water use in your lawn or garden during periods of rainfall. Rain sensors on compatible watering systems will do this automatically. Use efficient outdoor irrigation devices, such as drip irrigation systems. Consider landscaping with low-water need vegetation or native plants. Allow lawns to go dormant during dry periods.

Consider rainwater as a source. Install a rainwater harvesting system to store surplus water from roofs for outside watering. Various sizes and designs of rain barrels are available on the Internet. Divert runoff from roofs, sidewalks, and driveways into rain gardens or yard areas. This will help recharge groundwater supplies.

Maintain your well records. Keep a water-well file of all maintenance or repair records. This water well file should include copies of:

- The well construction contract and receipt
- Pump installation or maintenance receipts
- Well maintenance receipts or information
- Copy of the Well Log (Water Supply Well Report)
- Results of any water quality tests
- Water level measurements

Additional Resources

Well Owner's Handbook (June 2015). Contains information for those who own, wish to construct, or plan to abandon a water well. It may also be helpful to those that are renting, selling, or buying property with a well in Oregon. <https://www.oregon.gov/owrd/publicationsandreports/>

The Wellcare® Well Owners Network. A national network funded by the Water Systems Council that provides consumers served by wells with education and information regarding the proper construction, regular testing, and maintenance of wells and septic systems to ensure safe drinking water. <https://www.watersystemscouncil.org/well-owners/join/>

Oregon State University's Water Well Program. OSU maintains an online website with a variety of information for well owners. <http://wellwater.engr.oregonstate.edu/well-going-dry>