wellcare® information for you about

Drought and Your Well

Drought is a period of drier than normal conditions that results in water-related problems. A drought can last for months or years, or may be declared after as few as 15 days.

Groundwater, which is found in aquifers below the surface of the earth, is among the nation's most important natural resources. Groundwater provides drinking water to private well owners. Droughts can significantly impact the Nation's groundwater resources while drought is occurring and for some time afterward. This information sheet will help guide you through the steps to take as a private well owner if drought occurs in your area.

How Water Levels Change

The water level in the aquifer that supplies a well does not always remain the same. Droughts, seasonal variations in rainfall, and pumping affect the height of the groundwater levels. If wells in the area are pumped at a faster rate than the aquifer around it is recharged by precipitation or other underground flow, then water levels in the well can be lowered. This can happen during drought, due to the extreme scarcity of rain.

Your well will need several slow, soaking rains for the water to filter through the ground and replenish the supply. Shallower wells may see water levels rise more quickly with a return of rain. Deeper wells tend to withstand a drought with no problems. But if your well is affected, it can take several months of adequate rain or snow to restore the supply.

What You Can Do During Periods of Drought

During periods of drought, there are some things you can do to manage water levels and help prevent your well from going dry.

Measure Water Levels

Knowing the exact yield of your well is critical to managing the use of water or considering options to expand the supply.

First, review the well history if you have a well log or report from the professional who installed your well. In most states, well contractors are required to file this information with the state health department or environmental agency. Ask for information about the well depth and its capacity in gallons per minute when it was first drilled and/or tested in later years. Compare this historical information to the actual water level in your well today.

There are three ways to measure water levels: use an electric sounder or depth gauge, the wetted tape method, or the air line method. Each can be complicated to use and it is very difficult to measure water levels in a deep well. Ask your water well professional to measure the water level or review the wellcare® information sheet *Determining Static Water Level in a Well*.

Manage Water Levels

If you have a low yielding well – producing less than five gallons per minute – you should be very careful how much demand you place on it.

Water conservation practices can mean the difference between getting through a dry spell or the cost and inconvenience of having the well run dry.

Try to limit the demand on your well by spreading out your daily and weekly water-use activities, such as bathing, watering the garden, and washing dishes or clothes. Take the time to repair dripping faucets or leaking toilets. Invest in water-efficient fixtures for faucets and showerheads. Replace older toilets with low-flow models.

Even seemingly small measures can save thousands of gallons of water per year in the average household. The wellcare® information sheet *Water Conservation* offers tips on how to measure household water use and employ the most effective conservation options.

Add Water Storage

The capacity of your well and the size of your well pump determine the efficiency of your water well system. Added storage can help provide greater capacity when water levels are low. In fact, a larger water storage tank can prolong the life of your well pump, as it reduces the need for the pump to cycle as often. Most wear and tear on the well pump occurs when it stops and starts. Added storage will also give your well time to rest and recharge.

There are times when the well capacity is so low that a two-pump system is needed. In a two-pump system, the well pump supplies water to an atmospheric storage tank. A second pump, a shallow well unit, takes water from the atmospheric tank and sends it to the pressure tank or directly into the household system. Operation is controlled with a pressure switch.

Contact your water well professional to see how added water storage can meet your household water needs.

Additional Options

Ask your water well professional about some other options to reach water within your existing well. Perhaps the well's pump can be lowered. If there is room, the pump can be placed deeper into the well's borehole.

Deepening a well, so that it reaches further below the water table, may help to ensure a more drought-resistant water supply. However, deepening a well is never a guarantee that you will get more water and it can be as expensive as drilling a new deep well.

Redeveloping an existing well may make it more efficient. Hydrofracturing, a technique that uses high-pressure water to open fractures in surrounding rock and thereby increase water flow, may improve your water supply.

Again, contact your water well professional to review your alternatives, which are also outlined in the wellcare® information sheet *What to Do If the Well Runs Dry*. Also, remember to test your well water after any maintenance, deepening, or other procedure.

FOR MORE INFORMATION to help you maintain your well and protect your water supply

wellcare® is a program of the **Water Systems Council (WSC)**. **WSC** is the only national organization solely focused on protecting the health and water supply of the 43 million people nationwide who depend on household wells for their water supply.

This publication is one in a series of **wellcare®** information sheets. There are more than 90 information sheets available FREE at www.watersystemscouncil.org.

Well owners and others with questions about wells or groundwater can also contact the FREE wellcare® Hotline at 1-888-395-1033 or visit www.wellcarehotline.org.

JOIN THE WELLCARE® WELL OWNERS NETWORK!

By joining the FREE **wellcare®** Well Owners Network, you will receive regular information on how to maintain your well and protect your well water.

Contact us at 1-888-395-1033 or visit www.watersystemscouncil.org or www.wellcarehotline.org.