



Ohio Department of Natural Resources

Division of Water Resources

Fact Sheet

Fact Sheet 92-3

Water Efficiency for Private Well Owners

(What to Do Before the Well Goes Dry)

If your household is one of the many thousands in Ohio that depend upon private water wells, now is the time to learn all you can about the ground water resources your well relies upon. An adequate, dependable supply of ground water, replenished throughout the year by rainfall and melted snow, is essential to keep your well from running dry. Ohio has been blessed with an abundant supply of water, but that's no reason to take our most important natural resource for granted. During periods of drought you may discover - too late - why proper well maintenance and water conservation are so important. Here are some ways to ensure that your well has an adequate supply of water to meet your family's needs today and into the future.

Learn about Your Ground Water Resources

As a well owner you need to know all you can about the ground water in your area, how it occurs and the ways it moves around. The ODNR, Division of Geological Survey produces ground water resource maps for each of Ohio's counties. These maps provide general information on the occurrence and availability of ground water. The Division of Geological Survey also monitors ground water levels in 120 observation wells around the state and publishes a newsletter with updates on hydrologic conditions statewide. You can consult copies of these publications by contacting local drillers, your county's Soil and Water Conservation District or Cooperative Extension Service office. Many public libraries also have this information available for reference.

Your Well Log

Know all you can about the ground water supply that is available to your private well. That begins with a copy of the well log, a document filed with the Geological Survey by the well driller. Your well log describes the depth of the well, the

geologic materials beneath the surface, the well's yield and the depth of water at the time the well was drilled.

A copy of the log for any well on your property (if filed) may be obtained free of charge from the Division of Geological Survey. See the end of this fact sheet for contact information. You will need to provide information on the county, township, address, name of property owner at the time the well was drilled and the approximate date of drilling (if known).

By comparing the depth of water to your well's total depth, you can calculate approximately how much water is stored in the well. Data on the yield of your well and the amount of water stored there will give you some idea about the need to conserve water or take corrective action.

Resolving Water Supply Problems

Start by obtaining a copy of your well log. Contact a recommended, registered driller in your area for a complete evaluation of your entire water system. You may have a mechanical or electrical problem that is not related to ground water supply or yield. A driller or pump installer can usually measure your well's current static water level (that's the water level with no pumping). By comparing this information with the original water level (as shown on your well log), you can see how the level may have changed and determine just how much water is left in the well. Depending on the depth of your well, it may be possible to lower the pump intake and still get sufficient water.

Well Maintenance and Cleaning

Older wells may become clogged or encrusted, so water cannot move freely from the ground water supply (aquifer) to the well bore. In this case there may be good ground water resources, but the pump

removes water from the well faster than it can be resupplied from the aquifer. Maintenance to improve this situation includes bailing, surging and acidizing - followed by appropriate disinfection. This work requires a professional well driller, in consultation with your local health department. A health department permit may be required in some Ohio counties.

To improve yield in a relatively new well (or in an older one that's not been helped by cleaning), it may be necessary to drill a deeper well. It may be possible to deepen an existing well, if the original construction permits and if additional ground water can be obtained from a deeper zone. Otherwise a new, deeper well will be required. If that's your course, you must properly seal and abandon the old well to avoid water contamination - it's the law! Geologists with Division of Geological Survey can evaluate your local ground water resources to determine if deeper drilling will provide additional supplies to your well.

If the Well Goes Dry

If ground water supplies decline to the point that your well fails to yield water, it may be necessary to arrange for water hauling or temporary water storage. Contact your county health department or the Ohio Department of Health for a list of registered water haulers in your area and for information on approved water storage tanks. Remember that any alteration of your existing private water system must be done only with the approval or inspection of your county health department.

Low-Yield Well Systems

You may get advice to drill your well deeper in order to provide additional water storage in the well - an expensive way to add back-up storage. It may be more economical to look into one of the new low-yield well systems that are now available.

These systems use special switches for the pump and a storage tank to provide a consistent supply of water, even when ground water yields are low. They usually are a much less expensive alternative to digging a deeper well. Ask a reputable driller in your area or your local health department about low-yield systems. The Division can also provide

you with an information sheet on the subject.

Before Work Begins

Anytime you construct or service a well -or abandon an existing well - the work should be done by State of Ohio Registered Private Water Systems Contractor. They are bonded for your protection. Check with your county health department to find out if a particular contractor is registered.

Community Resources

Talk to your neighbors, community groups, local health officials and your county's Soil & Water Conservation District to find out if other well-owners in your area are experiencing water supply problems. Work with others in your community to develop conservation plans and to improve public awareness about the importance of ground water resources and conservation.

The Division of Geological Survey stands ready to evaluate ground water conditions in your area and provide you with technical information and assistance. If necessary, the Division can also work to resolve conflicts between ground water users.

Practice Water Efficiency

Learn to conserve your ground water resources by practicing water efficiency in your home and garden. Ask for the ODNR Division of Water Resources Fact Sheet, "**Water Efficiency at Home**" and "**Water Efficiency in Your Own Back Yard**". These publications offer tips to help you and your family conserve water before the well runs dry.

For additional information on private wells and water systems, ground water resources and water efficiency contact:

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