

Sources for Farm and Home Water Supply

A dependable, drinkable water supply is an absolute must for farm enterprises. Sources in Missouri include wells, cisterns, public water supplies, springs and ponds. Other important considerations of a water supply include the amount of water needed, as well as pumping, distribution and treatment options.

The following resources provide more detailed information on water sources:

- *Private Water Systems Handbook*, Midwest Plan Service number MWPS-14, <https://www-mwps.sws.iastate.edu/catalog/water-septic-systems/private-water-systems-handbook>
- *Planning for an Individual Water System*, Catalog number 600, available from the American Association for Vocational Instructional Materials, <http://www.aavim.com>, 706-742-5355
- *Water Systems Handbook (12th edition)*, available from the Water Systems Council, <https://watersystemscouncil.org/products-page/technical-manuals/water-systems-handbook-12th-edition-without-binder/>
- *Manual of Individual and Non-Public Water Supply Systems*, Order number PB-92-117944, May 1991, published by the Environmental Protection Agency (EPA), available from the National Technical Information Service, <https://ntis.gov>
- EPA Safe Drinking Water Hotline, 800-426-4791

Wells

A properly constructed well usually will provide a dependable supply of high-quality water for a long time with little maintenance. Before contracting with a well driller, you may wish to become familiar with current state regulations by reading Rules and Regulations of the Missouri Water Well Drillers Act, Title 10, Division 23, available at the Missouri Secretary of State website, <http://sos.mo.gov/adrules/csr/current/10csr/10csr.asp> or by contacting the Missouri Geological Survey Division, Missouri Department of Natural Resources, 573-368-2100.

Information on availability of water, depth at which an adequate supply might be found and other geological information may be obtained from the Missouri

Geological Survey Division, Missouri Department of Natural Resources, P.O. Box 250, 111 Fairgrounds Road, Rolla, Mo. 65401, 573-368-2165 or askageologist@dnr.mo.gov. Information is also available at <https://dnr.mo.gov/geology/> and <http://dnr.mo.gov/mowells/>. Well monitoring data are available at <http://dnr.mo.gov/env/wrc/groundwater/gwnetwork.htm>.

Cisterns

A cistern with enough capacity can provide water for domestic purposes, but a cistern usually is not adequate for livestock.

Cistern construction, drainage surfaces and filtering equipment are important considerations in preventing contamination of the water supply. A cistern must be large enough to provide water during periods of little or no rainfall, unless you can arrange to haul water to refill the cistern. Treatment of the water should be continuous to eliminate harmful bacteria.

Springs

A properly developed spring can provide water for domestic and farm use, if the amount of water available meets the needs through the year.

Springs do not necessarily provide safe water for drinking without treatment. In Missouri, the Department of Health will approve spring water supplies for domestic purposes if the spring is properly improved and water tests are satisfactory.

Ponds

Ponds are a water source in many areas where other supplies are not available.

To be satisfactory, the pond's watershed should be about 10 times the surface area of the pond in clay pan areas. The entire drainage area should be grassed and free of livestock. A buffer strip at least 100 feet wide from the edge of the water should be grassed and free of shrubs and trees and livestock.

Pond water for domestic use should be filtered and treated. The filter may be a commercially available type or constructed on the site.

Reviewed by
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Public water supply

Many areas of Missouri have public water supplies available. Where available, this usually provides a dependable water supply that is constantly monitored and treated.

When other options are available, evaluate the cost of water. This includes the cost of developing, managing and maintaining a private system.

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ALSO FROM MU EXTENSION PUBLICATIONS

AGW1013 *Checking and Disinfecting Flooded Wells*

G1801 *How to Size a Farm and Home Water System*

G1805 *A System for Pond Water Purification*

WQ104 *Understanding Home Water Treatment Systems*

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