

Expanding Water Testing of Private Wells in Minnesota

In 2020, about 1.2 million Minnesotans rely on private wells for drinking water. The Minnesota Well Owners Organization and the Minnesota Groundwater Association are working to expand water quality testing of Minnesota's estimated 470,000 private water supply wells. The focus for this effort is to increase private well owner awareness of water quality at the kitchen faucet and to give them options that they can implement to protect or improve the quality of their drinking water.

Expansion of water testing focuses upon –

- Clinics where private well owners can have their well water tested free of charge for water quality indicators;
- One-on-one free consultation with experts who can answer private well owner questions about well construction/maintenance, drinking water contaminants, options for follow up water quality testing, and future actions that can be taken to protect or improve drinking water quality;
- Establishing long-term involvement by retirees who form the core of the volunteers that staff clinics and can assist private well owners with follow up actions; and
- Developing long-term working relationships between non-profit organizations, academia, citizens groups, and state/local government to put on water testing clinics and to increase private well owner understanding of drinking water quality.

Non-profit organizations are a good fit for leading this effort because –

- Experience to date with testing clinics shows that many private well owners are distrustful of government knowing the quality of their private well water;
- Developing and continuing private well testing is a dynamic process that often requires shifting emphasis to different geographic regions of Minnesota on an annual basis which may be difficult for government to do; and
- Increasing volunteer participation by retirees is more likely to be successful if requested by a non-profit organization of which they are members rather than by government.

What this effort does **not** do –

- Replace the efforts by state/local governments to manage and protect Minnesota's groundwater resources;
- Promote or emphasize the 1) agendas or policies of advocacy groups, 2) specific types of water treatment equipment, or 3) specific contractors a private well owner may hire to correct well construction problems or to eliminate potential contamination sources; and
- Share information about well construction, well water quality, and potential contamination sources that is not approved by a private well owner.

Each testing clinic is tailored to address the likely drinking water quality issues faced by a private well owner in a specific geographic area and consists of three principal phases –

- Pre-clinic assessment of aquifer conditions, types of well construction, and existing publicly available groundwater quality data. The assessment is used to identify 1) the aquifers and types of well construction occurring in the geographic area covered by the clinic, 2) the likely range of values for the water quality indicators that are tested for at the clinic and 3) the types of follow up water quality tests for contaminants of geologic origin or human-caused that a private well owner should consider having run by a laboratory that is certified by the Minnesota Department of Health.
- The testing clinic event at which private well owners have their well water tested for water quality indicators at no cost. A private well owner can opt for free consultation with volunteers who are knowledgeable about the options for 1) follow up water quality testing and 2) actions that can be taken by a well owner to protect or improve their drinking water quality.
- Post-clinic follow-up support to 1) private well owners who may have further questions about the results of follow-up water quality testing and 2) assess clinic effectiveness to increase private well owner knowledge. The results from the post-clinic phase are used to improve or enhance private well owner experiences at future clinics.

There are many challenges that must be overcome to expand private well water testing in Minnesota. The interests and roles of non-profit organizations, academia, the private sector, and government are needed to address –

- Recruiting volunteers who can fill the jobs with organizing and running testing clinics as well as training other volunteers to fill testing clinic jobs.
- Ensuring that there is sufficient analytical equipment and supplies to run the water quality indicator tests on water samples at a clinic.
- Developing and maintaining the data assessment tools needed to support clinics and to track clinic effectiveness.
- Communicating the availability of water testing clinics to private well owners and ensuring that communication tools are effective in generating interest by private well owners.
- Developing and improving the educational materials that are given to private well owners so that many will implement measures to protect or to improve the quality of their drinking water.
- Meeting the logistical needs of clinics held in sparsely populated areas versus those of high-density populations.
- Ensuring that financial resources are used effectively and that accountability for their use meets the reporting requirements of the grantor.