

In North Dakota, private well owners are responsible for ensuring that their water supply wells are properly maintained.

What steps should I take to protect my well?

It is important to protect your well from damage and contamination to ensure it operates properly and protects groundwater quality.

- Mark your well location and install protective barriers if it is at risk of being run over.
- Lock your well if it is in a high-traffic area.
- Keep your well's surroundings clear of debris.
- Avoid planting trees or other large vegetation close to the well to avoid root damage to the well.
- Do not store, prepare, or use potential pollutants such as fertilizer, pesticides, manure, or other hazardous chemicals near the well.
- Be aware of nearby potential sources of contamination such as septic systems.
- Do not allow water to pond around the well.
- If your well is in a pit, extend the casing to one foot above the ground surface and fill the pit with clean earth; contaminants can pool in the pit.
- Do not pile snow near the well.
- Do not tie animals to the well.
- Immediately repair any damage to the well.
- Inspect your well regularly.

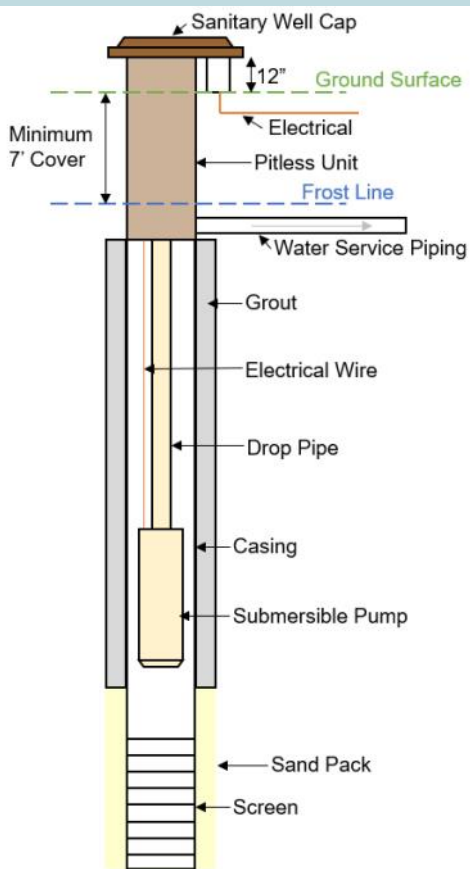
What should I look for when inspecting my well?

Inspecting your well is important to ensure it maintains physical and chemical integrity. Inspect your well at least annually and after any major storm, flood, or potentially damaging events.

- Look for damage including cracks or holes in the casing, corrosion, or loose wires.
- Verify that the well cap is securely attached and not damaged or missing.
- Make sure electrical connections are watertight and covered.
- Make sure the well casing sticks up at least one foot above the ground surface and ground slopes away from the well.
- If you have concerns about the underground portion of your well, contact a local well contractor to have them do a complete well inspection.
- Be sure you can locate your well log records. The well log has important information including the well installation date, construction details, and the geology encountered while drilling the well hole. If you don't have your well log, the State Water Commission may have it in their database at www.swc.nd.gov/info_edu/map_data_resources/mapservices.html



Basic Well Construction



What are special considerations for wells in flood-prone areas?

If your well is located in a flood-prone area, there are several extra precautions you can take to protect your well and the water it provides.

- It is recommended that the top of the well casing extends two feet above the highest known flood elevation and is surrounded by earth fill.
- Don't use water from the well following a flood until the well is properly disinfected. Contaminated flood waters may have entered the well, even if you think the well is completely sealed and watertight.

How do I know if I need a new well?

Often minor well damage can be repaired by a well contractor. The broken well components can be replaced or a liner can be installed. Sometimes the well damage is too severe or a change in groundwater levels may require the installation of a new well or a switch to rural water. There are several signals that may help you identify if you need a new well:

- Inspection reveals major irreparable damage to the well.
- The well produces significantly less water over time.
- The well goes dry.
- A noticeable change in water quality as a result of deterioration of the well or the groundwater source.

Where can I get more information?

North Dakota Department of
Environmental Quality
Groundwater Protection Program
deq.nd.gov/wQ/1_Groundwater/

North Dakota State Water
Commission
swc.nd.gov

North Dakota State University
Extension
[www.ag.ndsu.edu/publications/
environment-natural-resources](http://www.ag.ndsu.edu/publications/environment-natural-resources)

Well Owner Resources
www.wellowner.org

What should I do if I no longer need my well?

Unused or improperly abandoned wells pose a risk to groundwater quality because they can provide a conduit for water and contamination to enter aquifers from the surface and other, separate aquifers. They may also pose a physical safety risk. Properly plugging wells is important to eliminate these risks.

- Many private wells can be plugged using simple materials, such as native clay, bentonite chips, or cement grout.
- Deep (>250 feet), small diameter (<4 inch) wells are more difficult to properly seal since materials may bridge in the well, so contacting a professional well contractor to grout seal these wells is recommended.
- Wells permitted by the State Water Commission and artesian (flowing) wells have strict plugging requirements, so contacting a professional well contractor for assistance plugging these wells is recommended.
- The well casing is often cut off two feet below the surface.

The North Dakota State University Extension Service provides *A Guide to Plugging Abandoned Wells* at [www.ag.ndsu.edu/publications/
environment-natural-resources](http://www.ag.ndsu.edu/publications/environment-natural-resources).

Feel free to use this information, but please credit the North Dakota Department of Environmental Quality.