



YOU & YOUR WELL

WISCONSIN DEPARTMENT OF NATURAL RESOURCES



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This publication is available in alternative format (large print, Braille, audio tape, etc) upon request. Please call 608-266-0821 for more information.

For more information, request the following brochures: Well Abandonment (PUB-DG-016), Bacteriological Contamination of Drinking Water (PUB-DG 003), Driven-Point (Sand-Point) Wells (PUB-DG-022 92)

PUB-DG-002 2007



Is there a new well in your future? Perhaps you are building a new home, or are simply considering replacing or upgrading an existing water supply. Whatever the case, here is some information that can help you.

Who regulates water wells?

Wisconsin has had well regulations since 1936, and today is recognized as a national leader in well protection. NR 812, (formerly NR 112), Wis. Adm. Code, is administered by the Department of Natural Resources (DNR). The Well Code is based on the sound premise that if a well and water system is properly located, constructed, installed and maintained the well should provide safe water continuously without the need for treatment. Most county zoning and public health offices have a copy of the Well Code. For information about the code, contact a DNR regional water supply staff person or a licensed well driller or pump installer. Consult with licensed individuals or neighbors for background information on water quality.

When is an approval required prior to construction?

A DNR Notification Number is required prior to construction. You may obtain a DNR Notification Number online at: dnr.wi.gov. Under "Online Services" click on Well Construction Notification and answer the questions. Be sure to print a copy for your records. A second option is that you may also visit one of the 1500 locations throughout Wisconsin where hunting & fishing licenses are sold. You will receive a receipt for your records which displays a DNR Notification Number. Also, some DNR approved county ordinances require that a "well permit" be obtained prior to construction. Check with your county health department or zoning office.

State statutes require that any owner who constructs and/or operates a well or combination of wells on one property that are capable of producing 70 or more gallons per minute, in aggregate, must obtain an approval from the DNR prior to construction.

Approvals are also required for constructing school water systems, wastewater treatment plant water systems and community water systems governed under chapter NR 811 and for the installation of some types of water treatment.

Who can construct wells? Who can install pumps?

Well Driller—Only those persons holding a current well drilling license from the Department of Natural Resources may construct or reconstruct (deepen or install a liner or screen) potable wells.

Pump Installer—Only those persons holding a current pump installer license from the

Department of Natural Resources may install and replace pumps, pitless adapters and accessory piping and pressure tanks on both drilled and driven point potable wells.

Exceptions—A well drilling license is not required for constructing driven point wells.

A license is not required for a person constructing a well or installing a pump on property owned and occupied by him or her. State law requires, however, that no matter who does the work, it must comply with the State Private Well Code (ch. NR 812), and a Well Construction Report must be submitted to DNR.

A license is not required for an individual constructing a nonpotable well or installing a pump in a nonpotable well, however the installation must comply with the well code.

What are the responsibilities of a well constructor to the owner?

The well must be constructed or reconstructed in compliance with ch. NR 812, and upon completion of a well construction or reconstruction, a well driller or point driver is required to:

1. Test pump and flush the well.
2. Disinfect the well.
3. Collect a water sample for a bacteriological test; submit the sample to a laboratory certified for bacteriological testing; and provide a report of the results to the owner within 10 days of receiving the water test results. (The DNR recommends that the water also be tested for nitrates.)
4. Provide the owner or his agent with a copy of a Well Construction Report, that describes how the well was constructed, within 30 days of completion of the well. The report assigns a unique number to the well.

The water sample test results and well construction report must also be sent to the Department.

What are the responsibilities of a pump installer to the owner?

A pump installer must install the pump, the pitless adapter, pressure tank and sample faucet in compliance with the Well Code, disinfect the

pump and distribution system after installation, flush it, take a water sample for bacteriological analysis (as described in #3 above) and report the results to the owner.

The pump installer may delegate the sample collection to the owner or another agent, by leaving the sample bottle, instructions and form, but the pump installer is still responsible for the sample collection.

Some private well location requirements (from NR 812)

Always ensure that your well is located upslope and as far as possible from potential sources of contamination, but at least:

- ◆ 8 feet from an approved gravity building sewer pipe or 25 feet from building sewers made of other non-approved materials or a pressurized building sewer.
- ◆ 8 feet from a swimming pool.
- ◆ 100 feet from any buried petroleum tank, except that only 25 feet of separation is required for a buried fuel oil tank if the tank is used only for private residential heating.
- ◆ 25 feet from a septic or holding tank, or from a laundry or wastewater sump.
- ◆ 25 feet from the high water mark of a lake, pond or stream.
- ◆ 50 feet from a privy, dry well, soil absorption system ("drainfield") or mound system.
- ◆ 50 feet from a municipal collector sewer.
- ◆ 50 feet from an animal yard or animal shelter
- ◆ 250 feet from a sludge disposal area, a salvage yard or a salt storage area.
- ◆ 250 feet from an absorption, storage, retention or treatment pond; ridge and furrow system; or spray irrigation waste disposal site.
- ◆ 1,200 feet from any existing, proposed or abandoned landfill site.

NOTE: This list is not complete. Consult NR 812 or the DNR for specific requirements. Figures A and B show well location requirements.

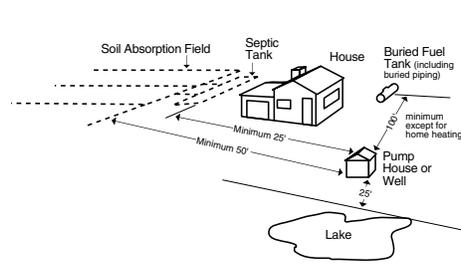


Figure A Common separation distances on residential lots

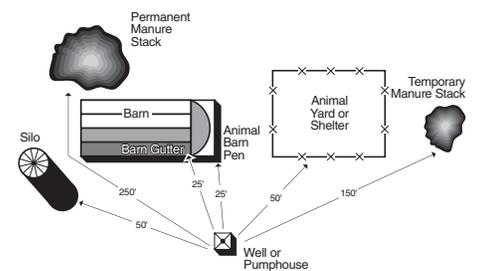


Figure B Common separation distances on farms

Some general DOs and DON'Ts

- DO** Make certain the well constructor extends the well casing pipe at least 12 inches above the finished ground surface and two feet above a floodplain. (Future landscaping must be taken into account.)
- DO** Properly install a vermin-proof well cap and electrical conduit to prevent entrance of insects into the well.
- DO** Make certain any underground connection to the well is made with an approved pitless adapter or unit. Properly installed, this will provide a water tight connection to the well and allow easy pump repair or well cleaning.
- DO** Completely fill and seal any unused wells (a DNR brochure on well abandonment is available).
- DO** Collect a water sample for bacteriological analysis at least once each year and anytime you notice a change in taste, odor, color or appearance. Also sample for nitrate if the water is to be used for an infant or a pregnant woman.
- DO** Construct your driven point well to a depth of at least 25 feet (not including the screen), or, 10 feet below the static water level, whichever is the greater depth.
- DO** Install an accessible downward-facing, non-threaded sampling faucet between the pump and the pressure tank at least 12 inches above the floor to allow for sampling water directly from the well.
- DO** Use only code-complying well casing pipe. (see NR 812.17).

DON'T Install a well in the basement or in a crawl space of your home. (The well would not be accessible for repair.) If the basement is of the walk-out type, installation is permissible. (Offset pumps may be installed in dry basements.)

DON'T Construct a well, pump, or pressure tank pit. A well may not terminate in a pit or an alcove. The DNR *does not* allow pits because of the potential for flooding and subsequent contamination of the water supply. (Pitless adapters have made pits obsolete.)

DON'T Install unprotected buried suction line between a well and a pump or pressure tank in a basement. If the pipe were to develop a hole or crack, it could allow surface water to get into the water supply. Instead use a pitless adapter or unit with a pressurized piping arrangement. Do not install a non-pressure conduit to enclose the suction piping between a well and a basement.

DON'T Use a well for disposal or drainage of solid wastes, sewage, surface water or wastewater. This can contaminate an aquifer.

DON'T Develop a spring as a drinking water source without obtaining advance approval from DNR. The DNR *does not* recommend the use of a spring as a source of water for drinking.

Types of acceptable pump installations

Offset Pump Installations (pump usually installed offset from the well in basement of house) with a seal-cross fitting or a flange adapter and pressurized, concentric discharge. Connections should be made below frost depth to eliminate the potential for freezing.

1. Offset shallow-well pump for driven point well (Figure C)
2. Packer jet assembly for offset for driven point well pump (Figure D)

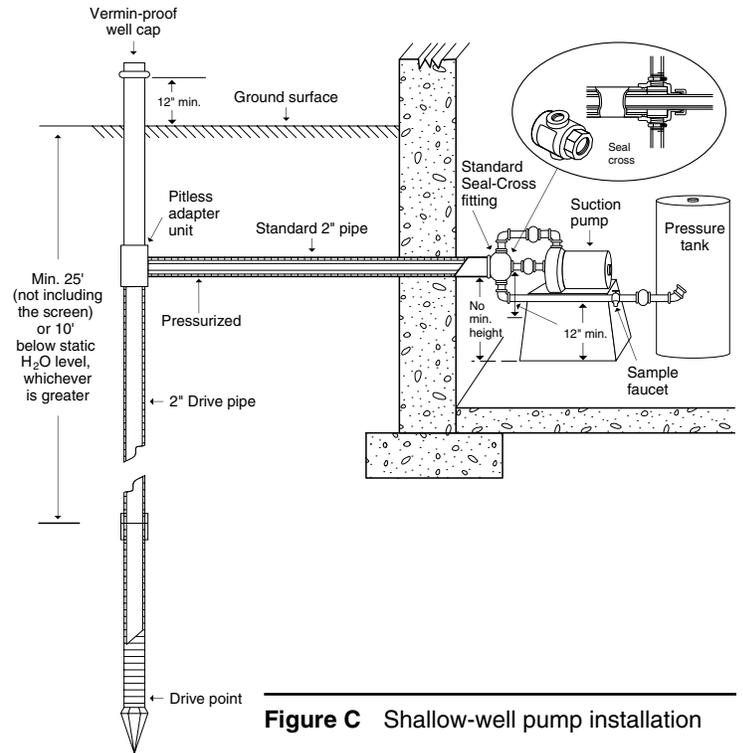


Figure C Shallow-well pump installation

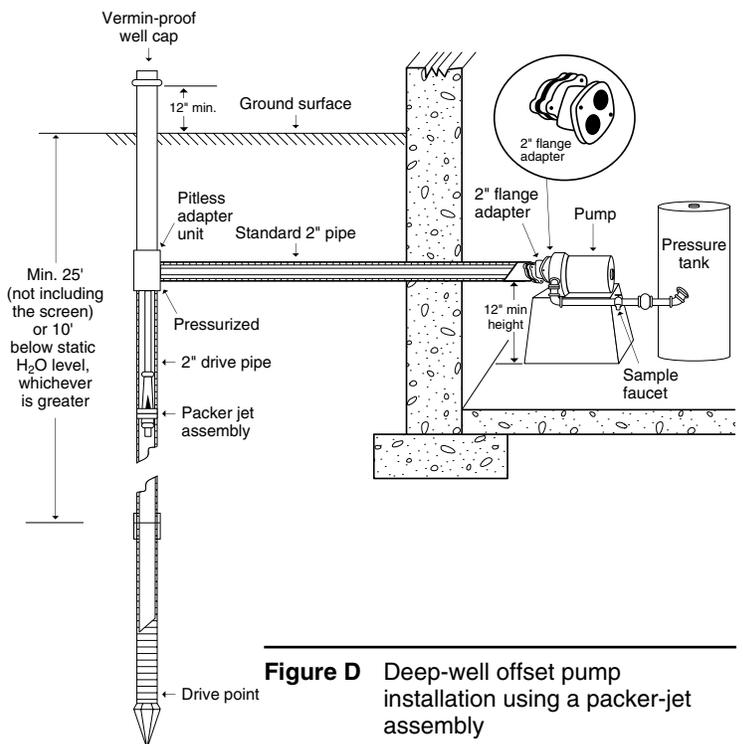


Figure D Deep-well offset pump installation using a packer-jet assembly

Submersible Pumps installed within well, below water level with:

1. An above-ground discharge pipe enclosed in a heated shelter (Figure E); or
2. Approved above-ground discharge unit, directed to an inside pressure tank (Figure F); or
3. A below-ground discharge with approved pitless adapter or pitless unit (Figure G); or
4. A buried pitless receiver tank (Figure H).

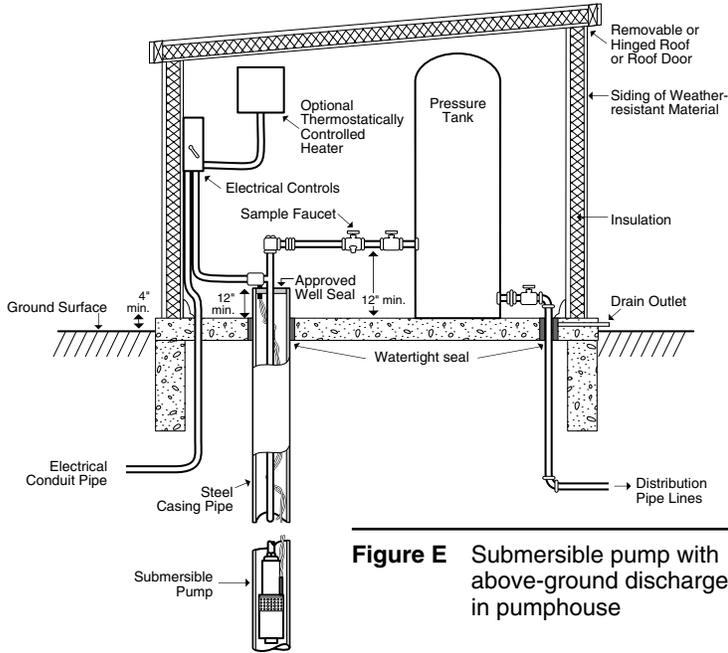


Figure E Submersible pump with above-ground discharge in pumphouse

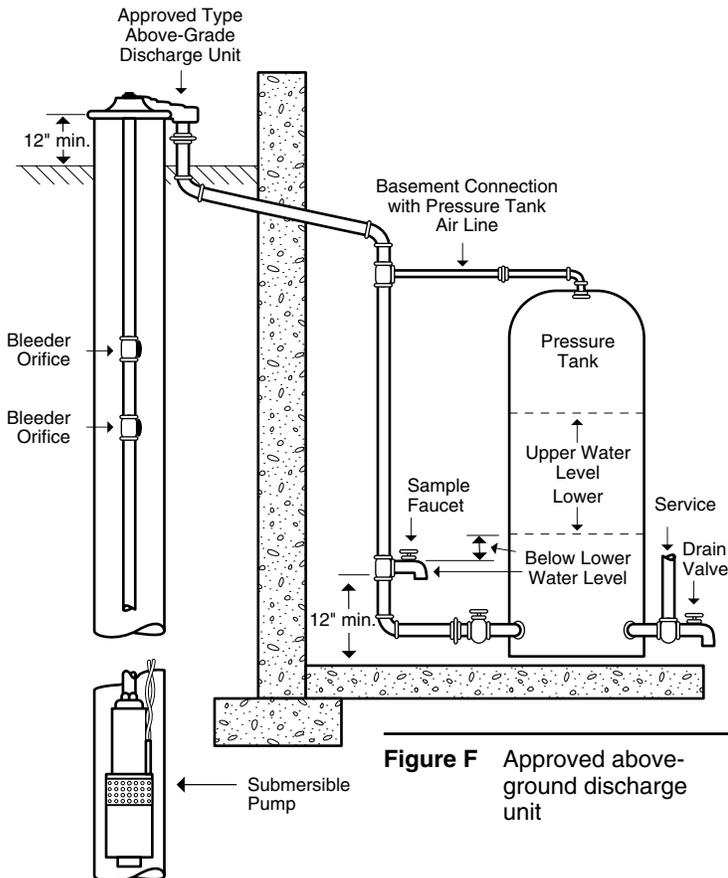


Figure F Approved above-ground discharge unit

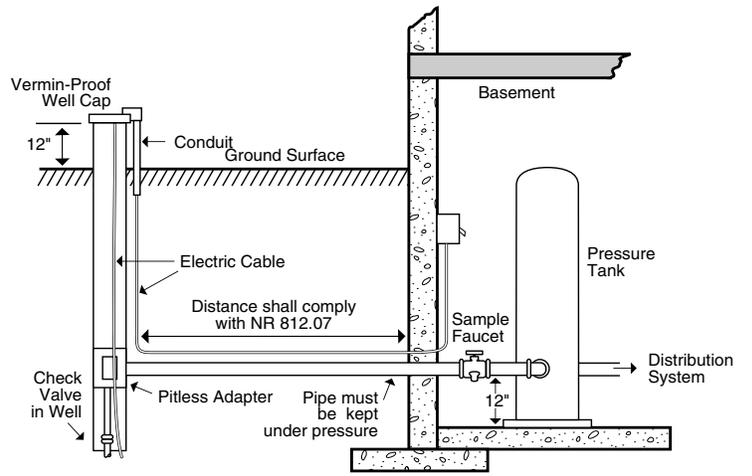


Figure G Submersible pump with below-ground discharge

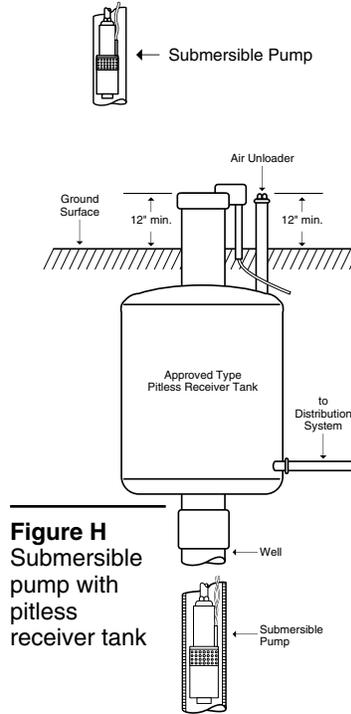


Figure H Submersible pump with pitless receiver tank

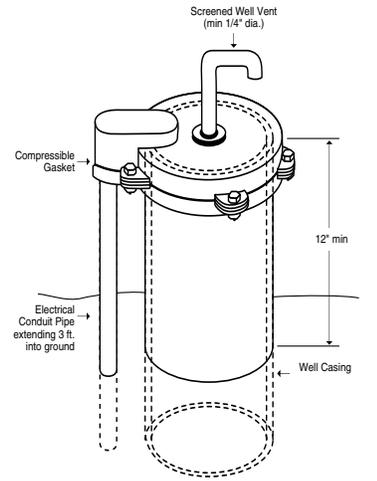


Figure I Example of a vermin-proof cap

Well Code requirements have been simplified for this pamphlet.

For specific details on the Wisconsin Well Code (NR 812), look on our website at: dnr.wi.gov/org/water/dwg/code.htm. If you have questions on the specifics of NR 812, please contact staff at one of the following offices.

Northern Region
810 W. Maple Street
Spooner, WI 54801
(715) 635-2101

Northeast Region
2984 Shawano Avenue
P.O. Box 10448
Green Bay, WI 54307-0448
(920)662-5100

Central Office
101 S. Webster
P.O. Box 7921
Madison, WI 53707-7921
(608) 266-0821

or
107 Sutliff Avenue
Rhineland, WI 54501
(715) 365-8900

South Central Region
3911 Fish Hatchery Road
Fitchburg, WI 53711
(608) 275-3266

West Central Region
1300 W. Clairemont
PO Box 4001
Eau Claire, WI 54702-4001
(715) 839-3700

Southeast Region
2300 N. Dr. Martin Luther
King, Jr. Drive
Milwaukee, WI 53212
(414) 263-8500

