

Dug Wells

Because they draw from shallow water tables, dug wells are generally more vulnerable than drilled wells to contamination. However, a properly constructed dug well in a good location can produce high-quality water. The following should be considered in developing or improving a dug well.

LOCATION

The well should be located at least 100 feet from all sources of contamination. Depending on the soils, geology, and slope of the land, an even greater distance may be needed. The well should be located uphill of septic systems, barnyards, livestock pastures, and fuel tanks, and at least 25 feet from streams and ponds. In addition, wells should not be located in extremely wet areas.

CONSTRUCTION

Refer to the sketch on the back of this sheet for proper construction. If the well is on sloping ground, build up soil to create a barrier to divert surface water from running toward the well.

DISINFECTION

All newly dug or repaired wells should be disinfected, because the handling of construction material and pump equipment can contaminate the well water. Disinfect the well by adding one gallon of household bleach for every 10 feet of depth (3 foot diameter well). Scrub the sides of the well with a longhandled brush using a bleach solution. When done, the chlorinated water will disinfect the well, the pipeline between the well and the house, and the indoor plumbing. Run the water at each faucet until there is a chlorine odor, then turn faucet off and allow the chlorine to stay in the system for about 12 hours or overnight.

The chlorinated water can be run out through a garden hose to a safe area after the disinfection is complete. Plan ahead to get a safe source of drinking water during the disinfection period and until test results are re-

turned. An alternative is to boil water for five minutes. Use caution when bathing because the chlorine may irritate the eyes and skin of sensitive individuals.

TESTING

The well water should be tested for bacteria two to three days after the chlorine odor disappears. Wells that are newly dug or have persistent problems with bacteria should have a complete chemical analysis. Sample containers for both the bacteria and chemical tests may be ordered from the Vermont Department of Health Laboratory (telephone 863-7335 or 1-800-660-9997).

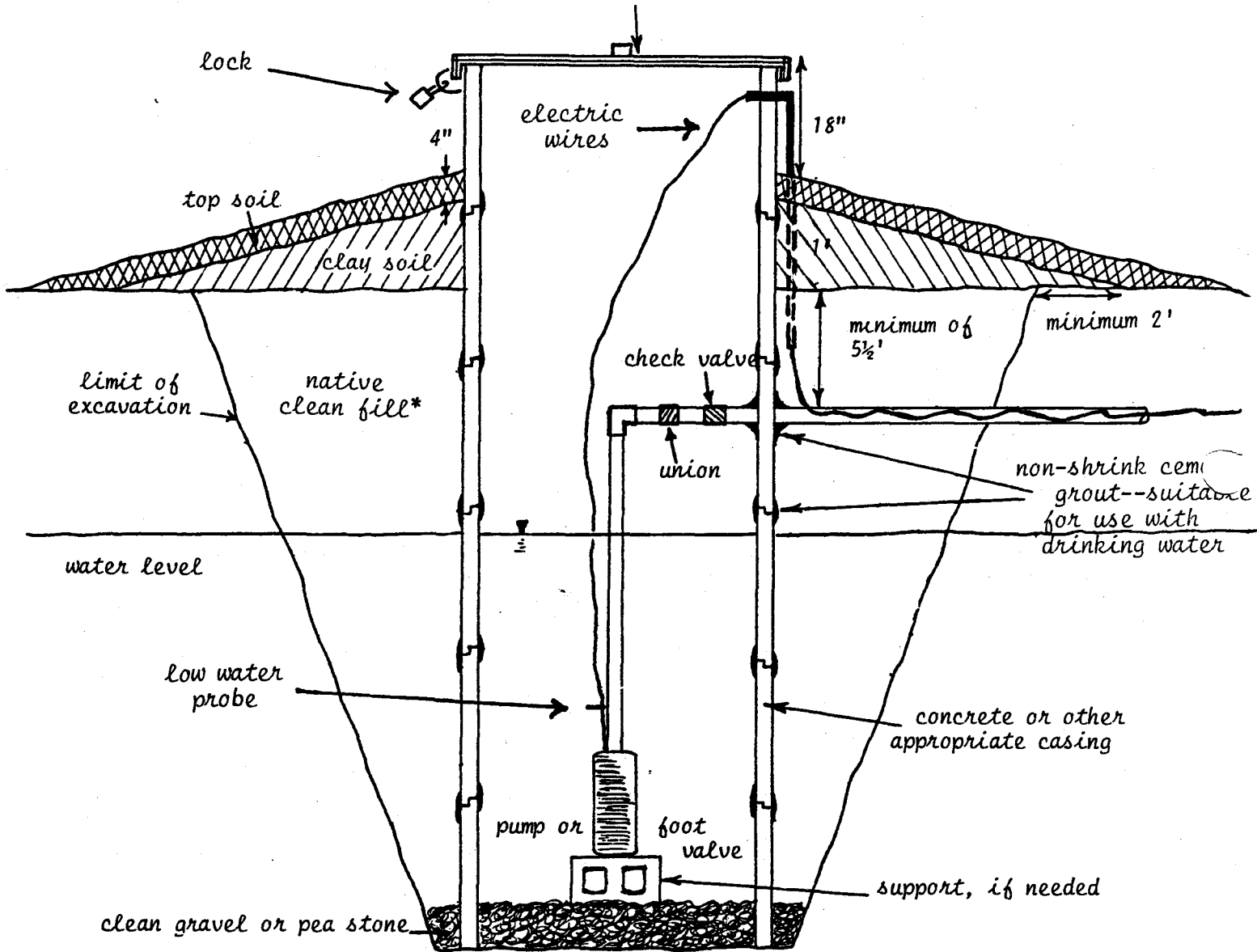
BACTERIAL CONTAMINATION

The most common way to determine drinking water quality is to test for coliform bacteria, a common bacteria found in soil, plants and surface water. Though coliform bacteria does not generally cause disease, its presence in the well water means that contamination has entered the well. Inspect the well and the area around the well to determine how runoff water may have entered. The water should not be consumed as there is a possibility that it could contain disease-causing organisms. Boil the water for 5 minutes before drinking.

Specific types of coliform bacteria called fecal coliform or *E. coli* can originate in the intestines of animals and humans. IF your water sample tests positive for total coliform bacteria, a second test is automatically conducted to determine whether fecal coliform or *E. coli* are present. Results showing the presence of these kinds of coliform indicate a strong likelihood that human or animal wastes have entered the water system.

Do not drink contaminated water until the source is corrected, the system is disinfected, and a follow-up test shows that the water is safe to drink; or unless the water is boiled for 5 minutes.

Easily removable, over-lapping
tight-fitting and locking cover
metal preferred



"DUG WELL"

*do not substitute gravel or sand