



## ***Pump & Water System FAQ***

### What are typical water supply components?

**Casing:** The casing is a tube in the ground that houses the well pump and the pipe that moves water from the pump to the surface. It also prevents the hole from collapsing, and keeps contaminants from entering the water supply.

**Cap:** The cap is the on of the well casing. The cap must end at least 18" above the ground so it is not subject to flooding. The cap usually has a screened vent to prevent insects from entering the well.

**Pump:** The well pump draws water up the hole and pushes it into the home. The well pump is usually submersible. This means the pump is installed in the well casing several feet below the ground, making it operate more quietly.

**Pressure Tank:** The pressure tank is usually a 3' - 4' tall cylinder located in the home or pump house. It stores water and distributes it through the home at an even pressure. The tank can also serve as additional storage for low-yield wells. The pressure switch located at the tank controls the pump's on/off cycle.

**Pitless Adapter:** The pitless adapter is a plumbing fitting that attaches to the well casing and routes the water supply line from the pump to the home. It is installed approximately 4' below ground in pits so it is not subject to freezing. Before these adapters were invented, old wells often terminated below ground in pits. Pits are no longer necessary, hence the name "pitless adapter".

**Screen:** The screen is at the very bottom of the well, attached to the casing. It keeps sand and gravel out of the well while allowing groundwater to flow into the well. Some wells drilled into bedrock do not need screens since the water travels through crevices in the rock and there is no sand to filter out.

### How do I know if my water is safe to drink?

It is up to the owner to ensure that their water is safe for consumption. Well water should be tested after the well is drilled and then once every year because normal groundwater flow and other changing conditions can alter the quality of your water. Although we do not perform the actual testing of the water, we can assist you with taking the samples and delivering them to a local lab for analysis. Annual chlorination of your well is also a good idea. For the best results have this done by the professionals at Rainbow Pump Company. 541-726-1394

### How do I troubleshoot a quick cycle pump?

#### Possible cause #1: Waterlogged pressure tank

1. Record start pressure of pump
2. TURN POWER OFF
3. Drain water from tank by opening valve or faucet, leave it open

4. With tire gauge, check air pressure. Air pressure should be 2 lbs less than the start pressure of the pump.

5. If start pressure is unknown, add air to 25 lbs and call Rainbow Pump for service

Possible cause #2: Leak before or after discharge of pump

1. Close gate valve on discharge side of pump. If pump quits cycling, there is a leak in the water lines going to either the house, irrigation system or there is something turned on somewhere. Check sinks, toilets, washing machine, outside faucets, etc.

2. Close the gate valve on the discharge side of the tank. If the cycling continues, there is a problem with either the well, foot valve or deep well jet. Call Rainbow Pump for service. (541-726-1394)

Pump does not run

1. Check breaker, on/off switch or ensure pump is plugged in.

Pump has power but does not run.

1. TURN POWER OFF AT CIRCUIT BREAKER.

2. Call Rainbow Pump for service

Pump hums but does not run

1. TURN OFF POWER AT BREAKER

2. Call Rainbow Pump for service

PUMP RUNS NO WATER

1. Possible cause: Pump has lost its prime

STEPS TO RE-PRIME A SHALLOW WELL JET PUMP (HORIZONTAL)

1. TURN POWER TO PUMP OFF

2. Remove gauge with bushing or bladder tank from top of pump

3. Pour water into pump until water fills pump housing

4. Replace gauge and bushing or tank, TIGHTEN

5. TURN POWER ON

6. Open faucet or hose bib at pump to bleed air from system

Note: Steps 1-6 may need to be repeated. If still unable to prime or pump keeps losing prime--

Call Rainbow Pump for service

STEPS TO RE-PRIME A DEEP WELL JET PUMP (VERTICAL)

1. TURN POWER TO PUMP OFF

2. Remove bushing with gauge and vent plug on opposite side of gauge on casing.

3. Pour water into pump until water comes from the vent hole.

4. Reinstall vent plug, top off water at gauge and reinstall gauge and bushing.

5. TURN POWER ON

6. Open faucet or hose bib at pump to bleed air from system

Note: Steps 1-6 may need to be repeated. If still unable to prime or pump keeps losing prime--

Call Rainbow Pump for service

#### FROZEN PUMP

Allow pump to completely thaw out from the freeze before calling for service. As long as there are no broken pipes, pump castings, or broken pressure tubing, the pump should start working normally when it has thawed. If any of the above appears to be damaged, turn power off and call Rainbow Pump for service.

#### PRECAUTIONS FOR A FREEZE

1. Cover pump but keep well ventilated
2. Run water at slow trickle in a safe area to keep water moving through the system.
3. Use heat tape

#### DISINFECTING A WELL

1. Remove the well cover. Pour the required amount of bleach. Required amount of chlorine is 1 gallon for every 100 feet of water in the well. Example: 300 foot deep well would require 3 gallons of bleach.
2. Connect garden hose to an outside tap. Put other end of hose into well, turn on faucet, and from time to time move the hose so the chlorinated water bathes the sidewalls of the well. Do this for at least 4 hours, preferably over night.
3. After the minimum 4 hours of circulation, run all faucets in the house, one at a time, until you smell chlorine at each faucet. This ensures that the whole system gets disinfected. Hot, cold, inside and outside faucets and washing machine faucets.
4. After circulating chlorinated water back into the well for the 4 hours, shut off faucet, remove hose from well casing and replace the well cover.
5. Don't use the water for at least 12 hours. 48 hours if optimal.
6. After a minimum of 12 hours, run water to waste, but not into the septic system, for several hours or until the chlorine smell and taste is gone.
7. To avoid over pumping a low producing well or over heating the pump, turn off water when flow is at a trickle and wait at least 1 hour before resuming.
8. Test for bacteria after a week of use.
9. In some cases, one chlorination will not be sufficient. Repeat disinfecting procedure as needed.

#### CHECKING THE CAPTIVE AIR TANK

1. Note your operating pressure of the well system. (pump on at 30 psi / off at 50 psi or on at 40 psi / off at 60 psi)
  2. Turn off power to pump and drain the Captive Air tank (tank should feel light and wiggle easily)
  3. With an accurate tire gauge, check air in tank at the tire valve. (Usually on top of the tank)
  4. Air pressure, when the tank is empty of water, should be **two (2) psi less** than the pump **on psi** setting.
- Example: Pump running at 40/60 should have 38 psi of air in it.
5. If the air pressure is lower or higher than the correct amount--adjust accordingly.