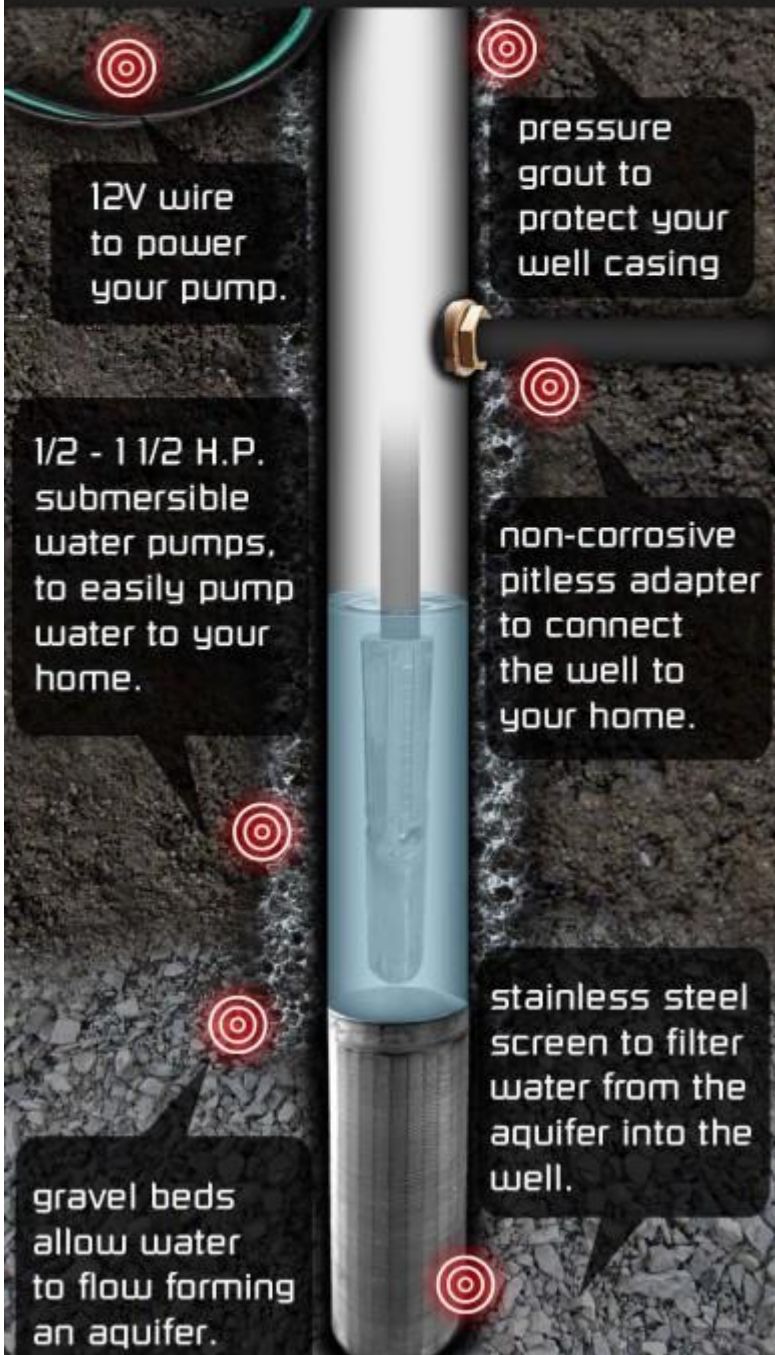




5 inch pvc well casing



Anatomy of a well



12V wire to power your pump.



pressure grout to protect your well casing



1/2 - 1 1/2 H.P. submersible water pumps, to easily pump water to your home.

non-corrosive pitless adapter to connect the well to your home.



gravel beds allow water to flow forming an aquifer.

stainless steel screen to filter water from the aquifer into the well.



Anatomy of a Water Well

“Just the tip of the iceberg.” That well-known phrase is a good way to describe a water well. There’s a lot more to a well than the tip that sticks out above ground. The anatomy of a well is a complex system that provides your home with a steady stream of potable water. Many different water well components work together to make this process possible.

Water wells have evolved greatly over the years, and today’s well looks a lot different than the one you remember using as a kid. Let’s take a look at the anatomy of a modern well.

Anatomy of a Well: Well Head

At the top of a water well is the well head. Of all the water well components, this is the most visible. The head is made out of durable PVC and holds a cap that keeps debris out of the well. A smaller PVC pipe attached to the head protects the electrical wires that power the well pump.

Anatomy of a Well: Casing

Heading underground, you’ll find the majority of water well components. These include the casing, which allows water to flow up from an aquifer and reach a pump embedded inside the casing. Today’s high quality wells use PVC casings instead of steel, so that owners never have to worry about corrosion.

Anatomy of a Well: Pump

One of the most important water well components, the pump acts like a heart, pumping water throughout the system. Electric pumps draw water from inside the casing and deliver it through high-density polyethylene black plastic water pipes into a home. This special piping is highly durable and affordable to repair and replace.

Anatomy of a Well: Added Protection

In addition to the water well components listed above, modern wells feature devices that provide extra protection for the water supply. Pressure grout is used to coat the inner wall of a well and blocks foreign material from getting into the water. Stainless steel screens and sand at the bottom of a well casing provide additional filtration for the groundwater entering the casing. Drilling into natural gravel beds when building a new well helps groundwater form aquifers that provide a steady supply of fresh water.

There is much skill that is needed to be able to both find a good location for a water well and drill it. It’s also very important that the well drilling contractor uses the best products and materials available. If not, you will be left with an underperforming well. There are reputable well drillers with long histories of satisfied customers that have drilled wells here in Creston. Look under **Contractors*** in the Resources and Helpful Links section.

[*Link to the Contractors section.](#)

North Carolina Public Health: Private Wells - Frequently Asked Questions

1. What is required to install a private well?

North Carolina General Statute 87-97 requires counties to have programs for permitting, inspecting, and testing of private drinking water wells, which are constructed, repaired, or abandoned, on or after July 1, 2008. As a result, county health departments enforce state statutes and rules and receive technical and legal assistance from the Environmental Health Section. The program is designed to protect human health and groundwater quality by ensuring private drinking water wells are properly constructed, repaired, and abandoned.

2. Why do I have to obtain a permit to construct or repair my well?

Obtaining a permit enables the health departments' staff to ensure wells are properly located, constructed, and repaired, so that water quality and public health are protected. Additionally, obtaining a permit to construct or repair a well is required by North Carolina General Statute 87-97 and by North Carolina Administrative Code, 15A NCAC 02C .0300.

3. How much does a permit cost?

Permit costs vary from one county to another as each county has the authority to set its own permitting fee. Regardless, the fees are used to cover permit processing and staffing costs, including site visits, well water sampling, laboratory testing, and notification of water analysis results.

4. How do I get a permit to construct or repair my well?

Please contact your county [health department](#) and ask about obtaining a well permit to construct or repair your well. Additionally, you will need to fill out a permit application form as part of the permitting process.