Abandoned Water Well Program

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Texas Cooperative Extension
The Texas A&M University System
Texas Groundwater Protection Committee

About TGPC  Meetings  Subcommittees  Publications

The Texas Groundwater Protection Committee (TGPC) is a consortium of nine state agencies and the Texas Alliance of Groundwater Districts. The committee works to effectively manage Texas groundwater and protect this state’s vital resource.

Joint Groundwater Monitoring and Contamination Report-2004

TGPC Member Organizations

Click on member organizations for information on their role in the TGPC.

- Texas Commission on Environmental Quality (Chair)
- Texas Water Development Board (Vice Chair)
- Railroad Commission of Texas
- Department of State Health Services
- Texas Department of Agriculture
- Texas State Soil and Water Conservation Board
- Texas Alliance of Groundwater Districts
- Texas Agricultural Experiment Station
- Bureau of Economic Geology
- Texas Department of Licensing & Regulation

TGPC Subcommittees

The TGPC works on special issues through subcommittees composed of agency personnel and the general public. The subcommittees are:

- Agricultural Chemicals Subcommittee
Major Aquifers

- Ogallala
- Gulf Coast
- Edwards (BFZ)
- Carrizo - Wilcox
- Trinity
- Edwards - Trinity (Plateau)
- Seymour
- Hueco - Mesilla Bolson
- Cenozoic Pecos Alluvium
Abandoned wells can be pathways for pollutants

The Landowner is Responsible

http://abandonedwell.tamu.edu
Standing water

99 ft or less
Threat to Personal Safety and Water Supply

Wells are considered abandoned when they have not been used for six consecutive months. Many accidents have taken place in which people or animals have fallen into abandoned wells.

Abandoned wells also provide a direct route for contaminants to enter aquifers below the surface. When open to more than one aquifer, abandoned wells may also allow deeper, salty aquifers to contaminate shallow freshwater aquifers. In addition, abandoned wells contribute to regional depletion of pressure head within an aquifer.

Preventing Injury and Contamination

Options exist for reducing the risk of personal injury or contamination of the water supply. These include restoring it to working order, capping it, or plugging it.

The following are key steps to plugging the well:

- **Measure the dimensions of the well.** This information is used to determine the volume of material needed to plug the well and to determine the quantity of standing water in the well.

- **Remove all obstructions from the well.** Obstructions prevent plugging materials from reaching the bottom of the well, and create the potential for future settling and disturbance of the seal.

- **Disinfect the well by adding household bleach.** The household bleach will kill any microorganisms that have fallen into the well while it was open.

- **Remove as much casing as possible.** This removes direct conduit to the groundwater, removes annular space around the well, and allows

Who can plug an abandoned well?
A landowner, a licensed driller, or a licensed pump installer can legally fix an abandoned well.

What materials can be used to plug an abandoned well?
The different acceptable materials used to plug abandoned wells are:

- Cement
- Bentonite Chips
- Bentonite Grout

When plugging a well with a large diameter, clay or calciche soil may be used.

Publications
Abandoned Well Presentations
Bruce Lesikar
Abandoned Well Fact Sheets
Bruce Lesikar
Landowner’s Guide to Plugging Abandoned Water Wells
Texas Commission on Environmental Quality

Links
Abandoned Well Plugging

Our Mission:
To inform the public of the risk brought about by abandoned wells, and to promote the proper procedure when plugging abandoned wells.
Abandoned Well Plugging

Slide Sets & Presentation

Microsoft Power Point Presentations (.ppt files)

Abandoned Wells Are a Threat
How to Calculate the Volume of a Well
Plugging Abandoned Wells
Texas Groundwater
Well plugging steps
What Materials Can Be Used
When Is a Well Considered Abandoned
Who Can Plug an Abandoned Well

E-mail: b.leekan@tamu.edu
Landowner's Guide to Plugging Abandoned Water Wells

Texas Groundwater Protection Committee
February, 2005, DG-347

Water is one of our state’s most precious resources. Groundwater defined from many aquifers supplies over half of the water used in the state. Protecting the quality of this vital resource is the responsibility of all Texans.

For many years groundwater has been pumped through water wells. Over the years, many wells, around homes, farms, industrial sites, and schools have been abandoned without being properly plugged. Not only are these wells potential groundwater contamination sources, many are a safety hazard to children and animals. Although plugging an abandoned well takes time and money, these wells are a threat that cannot be ignored.

Texas law makes the landowner responsible for plugging abandoned wells. The landowner is also held responsible for injury or pollution related to the abandoned well. This publication is provided to help landowners understand how to plug a well properly. Before you begin the process of plugging a well, it is highly recommended that you seek advice from your local groundwater conservation district, a licensed water well driller and pump installer, or the Water Well Nurse/Pump Installer Section of the Texas Department of Licensing and Regulation (TDLR).

Abandoned wells are regulated by the TDLR and local Groundwater Conservation Districts through Texas Occupations Code, Section 1901.201 and 1901.214.

Please contact the TDLR and groundwater conservation districts for posted FAQs. A map showing the location of the state and groundwater conservation districts is also included.

WHAT ARE THE HAZARDS ASSOCIATED WITH ABANDONED WELLS?

Personal Safety
This hazard is obvious to anyone who has encountered an abandoned and unsecured large diameter well. Accidents involving humans and animals falling into abandoned wells have happened and continue to occur. Even when a well is secured, the soil around the well may be unstable and can cave in. The liability associated with abandoned wells has vastly increased in Texas. A good question for a landowner with an abandoned well is to ask, “Do I want to be the first legal non-compliant Texas landowner?"

Groundwater Contamination
An abandoned well is a direct conduit from the surface to the aquifer below. Contaminants that enter the well are introduced directly into the aquifer with no opportunity for normal filtration by soils or geologic materials. If a contaminated incident occurs with a contaminated chemical, the potential for adverse downstream effects is the underlying aquifer is high. This puts other wells in the aquifer at risk, particularly those wells on the same property or those that are close to the abandoned well. Just one gallon of 2,4-D herbicide can contaminate about three to four million gallons of water. In terms of groundwater, approximately 0.005 acres of an aquifer over a 20-acre area.

Co-agency of Groundwater
A well open to more than one aquifer will allow water to seep out of a well with higher pressure head and enter a zone with lower pressure head. In many areas of Texas, deep together are under high pressures and are extremely risky. When the casing from a high pressure well deteriorates, the well is
Other Resources

- **Websites**
  - [http://abandonedwell.tamu.edu](http://abandonedwell.tamu.edu)
  - [http://waterhome.tamu.edu](http://waterhome.tamu.edu)

- **Video Series**

- **DVD Series**