



# Abandoned Water Well Program

**Monty C. Dozier**

**Extension Specialist - Water Resources**



Easy CD thomastank... Overviewf... play,rbn.rm... roughdraft...

Texas Groundwater Protection Committee - Microsoft Internet Explorer

File Edit View Favorites Tools Help


Back Forward Stop Home Search Favorites Refresh Print Mail Stop AutoLink AutoFill Options

Address http://www.tgpc.state.tx.us/ Go Links

Google Search 286 blocked Check AutoLink AutoFill Options

Favorites

E... L... T... M... G... R... T... M... T... S... H... T... T... T... A... T... S... W... T... E... T... A... h... G... T... C... H... M... T... Y... C



## Texas Groundwater Protection Committee

About TGPC Meetings Subcommittees Publications

**HomePage**

**Groundwater Information**

**Pesticides**

**Water Wells**

**Septic Systems**

**Groundwater Contamination**

**Pollution Prevention**

**Water Conservation**

**Classroom**

**Oil, Gas and**

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.

**new** [Joint Groundwater Monitoring and Contamination Report-2004](#)

**TGPC Member Organizations**

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

**More than half the water used in Texas comes from groundwater**

- [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

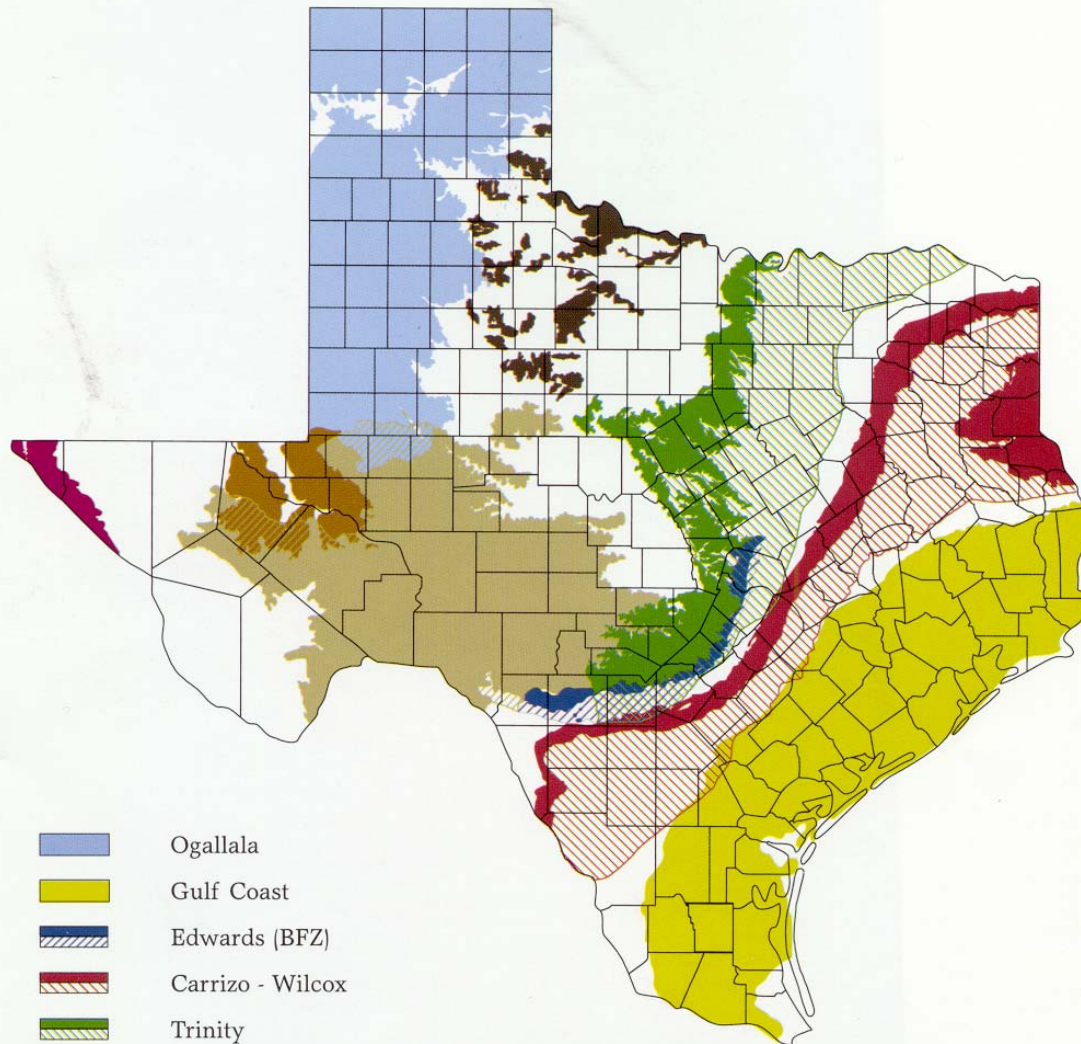
Internet

Election11... Default-m... nieselpropo... SETAC Budget Shortcut to My 12-15-4 rev... Documents

start

http://tcebookstore... Texas Groundwater Pr... Microsoft PowerPoint ...

1:35 PM



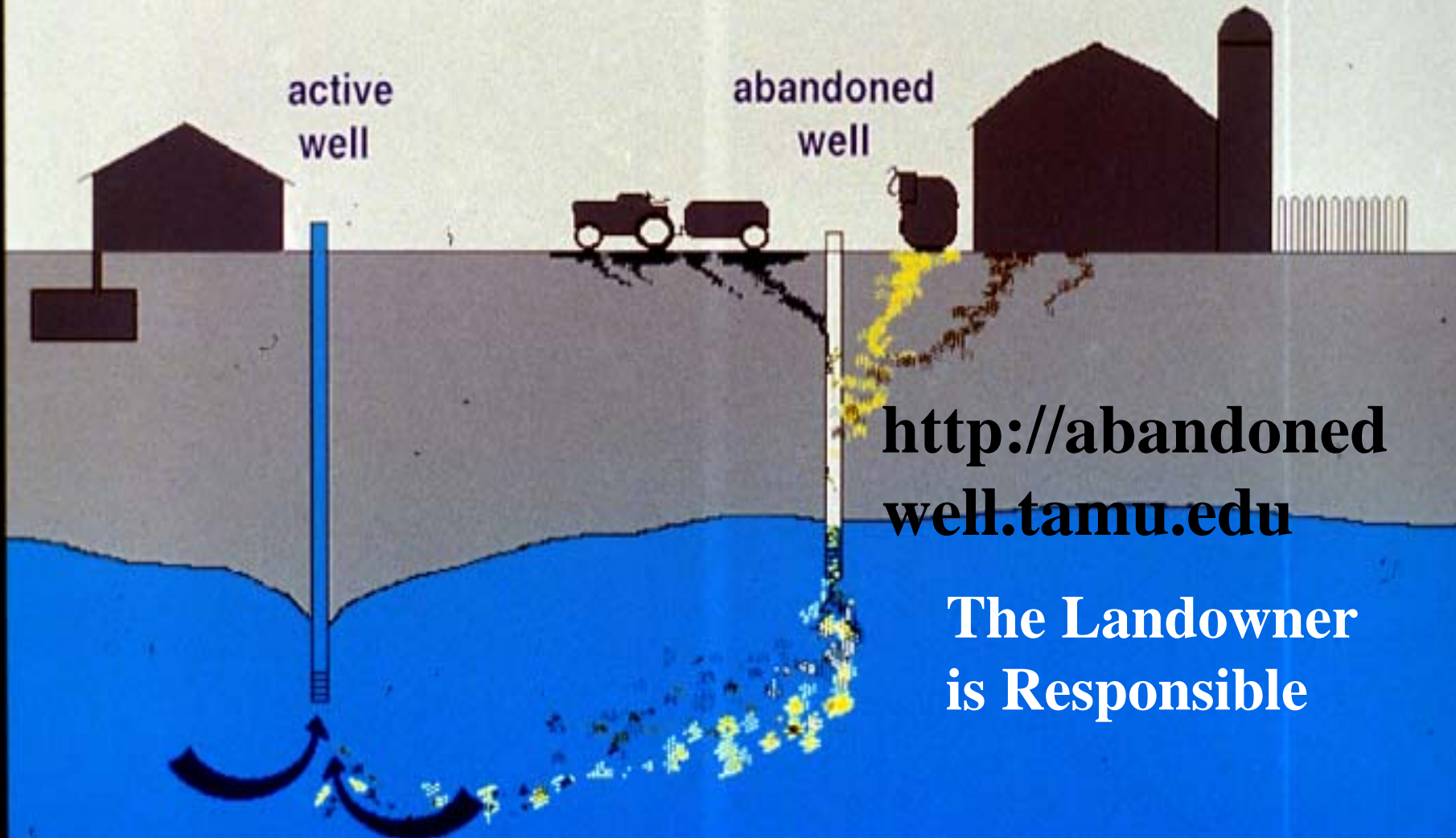
- Ogallala
- Gulf Coast
- Edwards (BFZ)
- Carrizo - Wilcox
- Trinity
- Edwards - Trinity (Plateau)
- Seymour
- Hueco - Mesilla Bolson
- Cenozoic Pecos Alluvium

## Major Aquifers

# Abandoned wells can be pathways for pollutants

active  
well

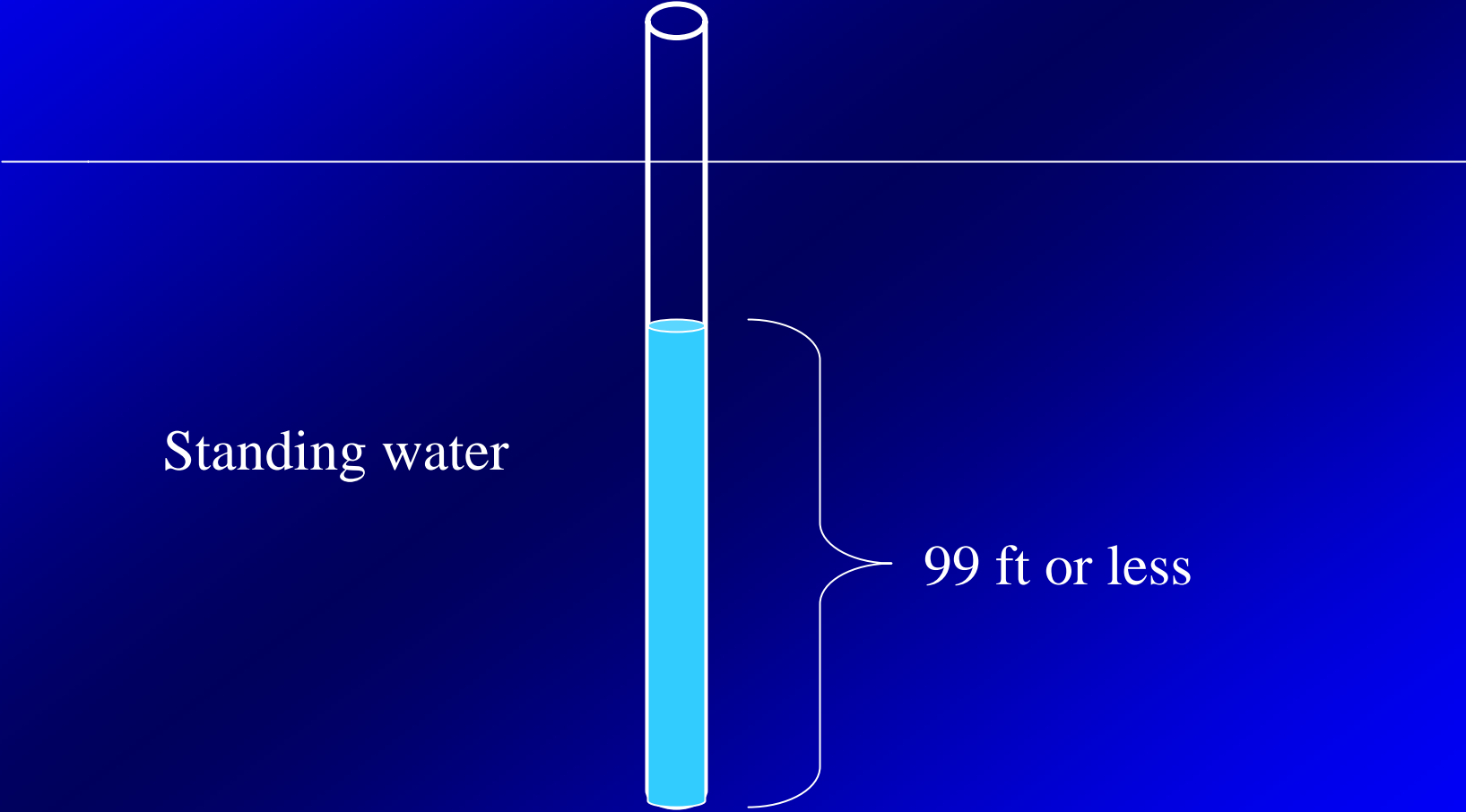
abandoned  
well



<http://abandonedwell.tamu.edu>

**The Landowner  
is Responsible**





Standing water

99 ft or less





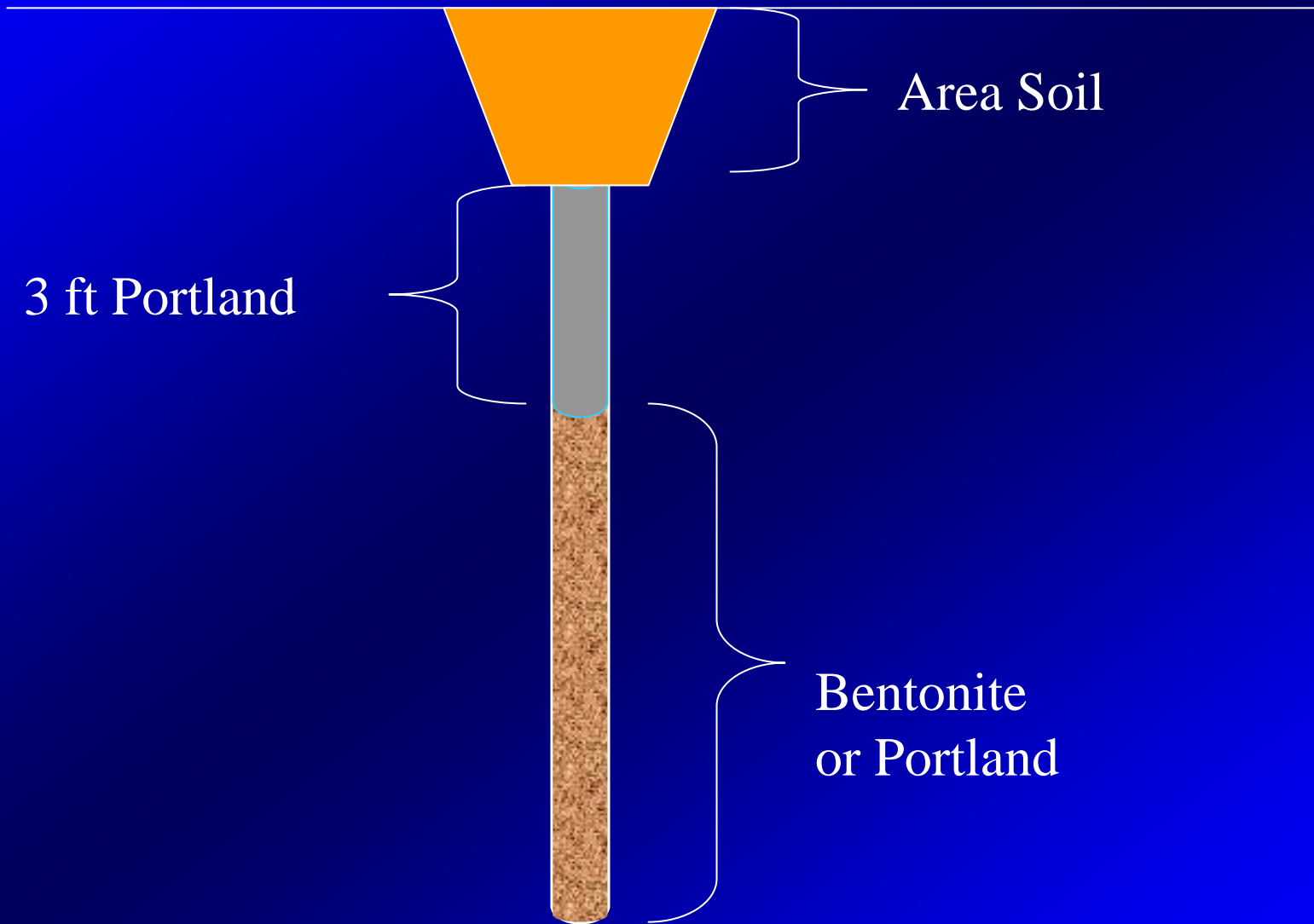




















Texas Water: Water Resources Education - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address http://texaswater.tamu.edu/


Google Search 286 blocked Check AutoLink AutoFill Options


[home](#)   [water faculty](#)  
[about us](#)  
[conferences](#)


[conservation](#)   [groundwater](#)   [stormwater](#)   [surface water](#)   [wastewater](#)   [water law](#)   [water marketing](#)

Learn more about:  
[Conservation](#)  
[Groundwater](#)  
[Stormwater](#)  
[Surface Water](#)  
[Wastewater](#)  
[Water Law](#)  
[Water Marketing](#)

**What's New at Texas Water**  
[▶ Conference Registration: Watershed Management Training Conference](#)  
[▶ New Publication: Who Owns the Water?](#)  
Reproduced with permission from the July 2005 issue of Texas Parks & Wildlife magazine.  
[▶ New Publication: Solving the Texas Water Puzzle: Market-Based Allocation of Water](#)


[Texas Water Facts](#)  
 Learn more about Texas Water in this slideshow.

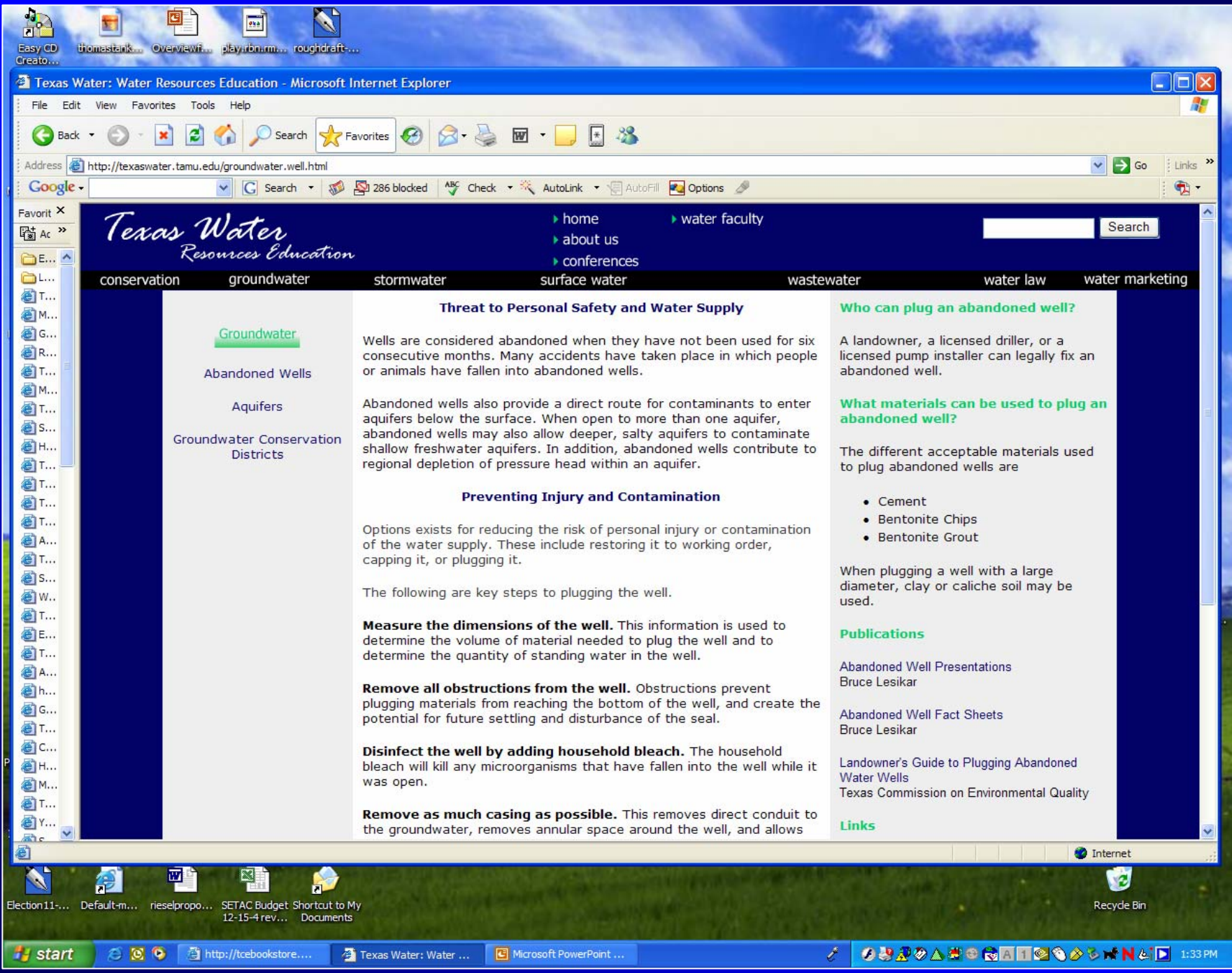

[Sign up for e-mail updates](#)  
 Receive alerts about upcoming Texas Water events and publications.


[Ask a question](#)  
 Submit your own FAQ to be answered on Texas Water.

Texas A&M University · Texas Agricultural Experiment Station · Texas Cooperative Extension · Texas Water Resources Institute

IS532EN.exe   Watering Efficiently3...   DOSSIERT... application\_...   Election11-...   Default-m...   rieselpropo...   SETAC Budget Shortcut to My Documents

start   Internet   http://tcebookstore...   Texas Water: Water ...   Microsoft PowerPoint ...   1:31 PM



# Texas Water Resources Education

- ▶ home
- ▶ water faculty
- ▶ about us
- ▶ conferences



- conservation
- groundwater
- stormwater
- surface water
- wastewater
- water law
- water marketing

## Groundwater

- Abandoned Wells
- Aquifers
- Groundwater Conservation Districts

### 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 exists 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 caliche 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

- Favorit X
- Ac >>
- E...
- L...
- T...
- M...
- G...
- R...
- T...
- M...
- T...
- S...
- H...
- T...
- T...
- T...
- T...
- A...
- T...
- S...
- W...
- T...
- E...
- T...
- A...
- h...
- G...
- T...
- C...
- H...
- M...
- T...
- Y...
- S...
- M...
- W...
- W...
- S...
- T...
- G...
- E



# Abandoned Well Plugging

- Home
- Facilitators Guide
- Photos
- Links
- Fact Sheets
- Slide Sets & Presentations

## Our Mission:

*To inform the public of the risk brought about by abandoned wells, and to promote the proper procedure when plugging abandoned wells.*



E-mail: [b-lesikar@tamu.edu](mailto:b-lesikar@tamu.edu)



# Abandoned Well Plugging

Home

Facilitators Guide

Photos

Links

Fact Sheets

Slide Sets & Presentations

## Fact Sheets

- [Abandoned Wells Are a Threat](#)
- [How to Calculate the Volume of a Well](#)
- [Plugging Abandoned Wells](#)
- [Well plugging steps](#)
- [Chapter 1: Introduction](#)
- [Chapter 2: Program Overview](#)
- [Chapter 3: Supplemental Resources for Facilitators](#)
- [Chapter 4: Handouts](#)
- [Chapter 5: Evaluation of Materials](#)
- [Resources for Further Inquiry](#)

All files can be viewed with Adobe Acrobat  [click here to get it for free.](#)

E-mail: [b-lesikar@tamu.edu](mailto:b-lesikar@tamu.edu)

Favorites X

- Ac >>
- E...
- L...
- T...
- M...
- G...
- R...
- T...
- M...
- T...
- S...
- H...
- T...
- T...
- T...
- A...
- T...
- S...
- W...
- T...
- E...
- T...
- A...
- h...
- G...
- T...
- C...
- H...
- M...
- T...
- Y...
- S...
- M...
- W...
- W...
- S...
- T...
- G...
- E...
- R...
- D...



# Abandoned Well Plugging

- Home
- Facilitators Guide
- Photos
- Links
- Fact Sheets
- Slide Sets & Presentations

## 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-lesikar@tamu.edu](mailto:b-lesikar@tamu.edu)

## Landowner's Guide to Plugging Abandoned Water Wells

Texas Groundwater Protection Committee  
February, 2005; RG-347

---

Water is one of our state's most precious resources. Groundwater derived 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 urban areas have been abandoned without being properly plugged. Not only are these wells potential groundwater-contamination avenues, 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/or pump installer in your area, or the Water Well Driller/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, Sections 1901.255 and 1901.256

Phone numbers for the TDLR and groundwater conservation districts are included on pages 6 - 8. A map showing the location of the state's 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 unmarked and uncovered large diameter well. Accidents involving humans and animals falling into abandoned wells have happened and continue to occur. Even when a well is covered, the soil around the well may be unstable and can cave in. The liability associated with abandoned wells has not really been tested in Texas. A good question for a landowner with an abandoned well to ask is, "Do I want to be the first legal test case in Texas?"

**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 natural filtration by soils or geologic materials. If a contamination incident occurs with a concentrated chemical, the potential for health-threatening levels in 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 that much water would be held in the upper three feet of an aquifer over a 20-acre area.

**Co-mingling of Groundwater**

A well open to more than one aquifer will allow water to migrate out of a zone with higher pressure head and enter a zone with lower pressure head. In many areas of Texas, deep aquifers are under high pressures and are extremely salty. When the casing from a high pressure well deteriorates and the well is

# Other Resources



## 💧 Websites

💧 <http://abandonedwell.tamu.edu>

💧 <http://waterhome.tamu.edu>

## 💧 Video Series

## 💧 DVD Series

- Confirmed Groundwater Conservation Districts**
1. Anderson County UWCD
  2. Bandera County River Authority and Groundwater District
  3. Barton Springs/Edwards Aquifer CD
  4. Bee GCD
  5. Blanco-Pedernales GCD
  6. Blauzonnet GCD
  7. Brazos Valley GCD
  8. Brewster County GCD
  9. Clear Fork GCD
  10. Clearwater UWCD
  11. Coastal Bend GCD
  12. Coastal Plains GCD
  13. Coke County UWCD
  14. Collingsworth County UWCD
  15. Cow Creek GCD
  16. Culberson County GCD
  17. Dallam County UWCD No. 1
  18. Edwards Aquifer Authority
  19. Emerald UWCD
  20. Evergreen UWCD
  21. Fayette County GCD
  22. Fort Bend Subsidence District
  23. Fox Crossing Water District
  24. Garza County Underground And Fresh WCD
  25. Glasscock GCD
  26. Goliad County GCD
  27. Gonzales County UWCD
  28. Guadalupe County GCD
  29. Harris-Galveston Coastal Subsidence District
  30. Hays Trinity GCD
  31. Headwaters GCD
  32. Hemphill County UWCD
  33. Hickory UWCD No. 1
  34. High Plains UWCD No.1
  35. Hill Country UWCD
  36. Hudspeth County UWCD #1
  37. Irion County WCD
  38. Jeff Davis County UWCD
  39. Kenedy County GCD
  40. Kimbrell County GCD
  41. Kinney County GCD
  42. Lipan-Kickapoo WCD
  43. Live Oak UWCD
  44. Llano Estacado UWCD
  45. Lone Star GCD
  46. Lone Wolf GCD
  47. Lost Pines GCD
  48. McMullen GCD
  49. Medina County GCD
  50. Menard County UWCD
  51. Mera UWCD
  52. Mid-East Texas GCD
  53. Middle Pecoe GCD
  54. Middle Trinity GCD
  55. Neches & Trinity valleys GCD
  56. North Plains GCD
  57. Panhandle GCD
  58. Pecan Valley GCD
  59. Permian Basin UWCD
  60. Pineywoods GCD
  61. Plateau UWC And Supply District
  62. Plum Creek CD
  63. Post Oak Savannah GCD
  64. Praetorio County UWCD
  65. Real-Edwards C and R District
  66. Red Sands GCD
  67. Refugio GCD
  68. Rolling Plains GCD
  69. Rusk County GCD
  70. Salt Fork UWCD
  71. Sandy Land UWCD
  72. Santa Rita UWCD
  73. Saratoga UWCD
  74. South Plains UWCD
  75. Southeast Texas GCD
  76. Sterling County UWCD
  77. Sutton County UWCD
  78. Tarrant GCD
  79. Tarrant County GCD
  80. Trinity Glen Rose GCD
  81. Uvalde County UWCD
  82. Was-Tex GCD
  83. Wintergarten GCD
- Pending Groundwater Conservation Districts**
- 84. Brazos County GCD + #
  - 85. Crossroads GCD \*\*
  - 86. Lavaca County GCD \*\*
  - 87. Lower Seymour GCD +
- \*\* District Failed Initial Confirmation Election  
+ No Election  
# Created by the 76th Legislature

# GROUNDWATER CONSERVATION DISTRICTS: CONFIRMED AND PENDING CONFIRMATION

