

Source Water Protection

Tennessee Association
of Utility Districts

Vital for Tennessee's future



Why?

Community	Type of Problem	Response to Problem	Costs
Perryton, Texas	Carbon tetrachloride in ground water	Remediation	\$250,000 (estimated)
Rockford, Illinois	Solvents in ground water	Replace supply, hook private wells to public water supply	\$11.5 million (estimated)
Camden-Rockland, Maine	Excess phosphorus in Lake Chickawaukie	Advanced treatment (not yet installed)	\$6 million (estimated)
Moses Lake, Washington	Trichloroethylene in ground water	Blend water, public education	\$1.8 million (estimated)
Mililani, Hawaii	Pesticides, solvents in ground water	Build and run treatment plant	\$2.5 million plus \$154,000/year
Tallahassee, Florida	Tetrachloroethylene in ground water	Enhanced treatment	\$2.5 million plus \$110,000/year
Pittsfield, Maine	Landfill leachate in ground water	Replace supply, remediation	\$1.5 million
Rouseville, Pennsylvania	Petroleum, chlorides in ground water	Replace supply	\$300,000+ (estimated)
Atlanta, Maine	VOCs in ground water	Replace supply	\$500,000 to \$600,000
Montgomery County, Maryland	Solvent, Freon in ground water	Install county water lines, provide free water	\$3 million plus \$45,000/year for 50 years
Milwaukee, Wisconsin	<i>Cryptosporidium</i> in river water	Upgrade water system, immediate water utility, city health department costs	\$89 million to upgrade system, millions in immediate costs
Hereford, Texas	Fuel oil in ground water	Replace supply	\$180,000
Coeur d'Alene, Idaho	Trichloroethylene in ground water	Replace supply	\$500,000
Orange County Water District, California	Nitrates, salts, selenium, VOCs in ground water	Remediation, enhanced treatment, replace supply	\$54 million (capital costs only)

History

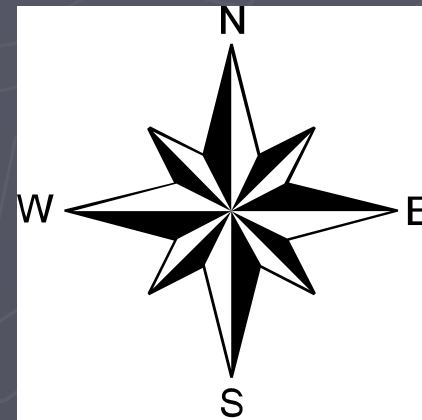
- ▶ Wellhead Protection requirement began in 1997
- ▶ Most plans were done with assistance from TAUD, engineers, or state.
- ▶ In 2005, the new rules went into effect and surface water protection was added.

Requirement

- ▶ according to 1200-5-1-.34(g)3(ii)
"...complete new inventories and plans shall be due on December 31, 2010..."
- ▶ 3-year cycle requirement
 - Update form versus new plan
- ▶ Remember this is a "Plan". You will be held accountable for what you "plan" to do!

What does this mean?

- ▶ New Plan...
- ▶ Download template from TAUD website
 - <http://www.taud.org/Resources/Downloads/Sourcewater.htm>
- ▶ If you have added or removed wells or springs, you need help
- ▶ New pictures (8 per source)



What does this mean?

► Complete new inventory

- Review current inventory and update as needed
- Contact local EMA and ag extention for potential contamination from spills.
- If you remove any underground fuel storage tanks, you need documentation of proper removal.
- Get address locations and phone numbers for each location if possible.
- New map will need to be done if there are changes.

Map for Plan


ArcGIS Online Resource Center - Windows Internet Explorer

http://resources.esri.com/arcgisonlineservices/

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 **What is ArcGIS Online?**

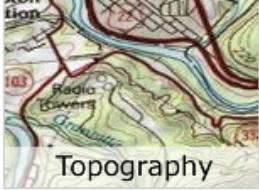
ArcGIS Online provides maps and other resources for your GIS applications:

- **Sharing:** Share, find, and use GIS content across the Web with the new sharing application.
- **ArcGIS Online:** ArcGIS Online uses JavaScript, Flex, and Silverlight.
- **Free maps:** Access free maps and reference layers.
- **Premium maps:** Buy subscriptions to access premium imagery and street maps

 Imagery

 Streets

 Shaded Relief

 Topography

<http://resources.esri.com/arcgisonlineservices/>

Internet 100%

Potential Contaminant Source Inventory

- ▶ Who or what needs to be in the inventory?
 - Geological Settings (Streams, sinkholes, etc.)
 - Agricultural (Major farming operations)
 - Commercial/Industrial
 - Contaminated sites (superfund, landfills, etc)
 - Major Transportation Routes
 - Wastewater (major sewer lines, lagoons, etc)

TAUD Template

- ▶ Requires Microsoft Word

