

The Wellhead

Word

Winter 2009

Protecting Groundwater Supplies Through Wellhead Protection

SoonerWarn: "Utilities Helping Utilities"

Oklahoma's Water-Wastewater Agency Response Network, referred to as SoonerWARN, is the formalized system of "utilities helping utilities" with mutual aid during emergency situations. The project is designed to reduce bureaucratic red tape in times of crisis. The goal of SoonerWARN is to provide immediate relief for member utilities during times of emergencies. The purpose is to get personnel with the necessary tools and equipment that can both assess and assist the impacted water and wastewater system as quickly as possible by whatever means necessary until such time that a permanent solution to the devastation may be implemented. SoonerWARN will provide a network of "utilities helping utilities" as the best method for responding to the immediate water and wastewater damage caused by natural disasters. By combining a mutual aid network with security information collaborative, SoonerWARN will cover all aspects of both natural and manmade emergency assistance.

Oklahoma is vulnerable to a variety of natural and man-made hazards that threaten the safety and well being of our communities, businesses and the environment. The formation of Sooner-

WARN is driven by a nationwide preparedness initiative based on natural and human caused emergencies and awareness that utility operations are specialized and must be self-sufficient to fill the gap between when a disaster happens and the arrival of government aid. The initial WARN systems were developed in Florida, Texas, and Louisiana where hurricanes were the trigger for the development of the program. Concerns of public water utilities along with preparedness planning within EPA and FEMA determined that every state can utilize and benefit from a WARN system since disasters can occur everywhere.

When there is advance knowledge of an event, the steering committee will begin pre-planning ahead of time. As a disaster develops, utilities out of the path of impact prepare to help the affected areas. Member utilities are able to request assistance through the SoonerWARN web site. Since electricity is often out during an emergency, SoonerWARN administrators and steering committee members attempt to contact, using emergency contact information, all members in the area of the storm to determine their needs. Administrators may then post any needs to the web page. This is an innovative process as it allows

member utilities to match their available resources to requests for assistance. SoonerWARN is designed to get the correct resources to the appropriate location within the first days after an event. SoonerWARN is designed to gear up without any notice using the web page and personal contact to respond to any man-made emergencies or other disasters.

The Oklahoma Mutual Aid Law (MAL) establishes a statewide mutual aid agreement between local jurisdictions, thereby eliminating the need for written mutual agreements. All mutual aid is provided at the discretion of the providing jurisdiction. It should be noted that jurisdictions retain the option of providing mutual aid on a case-by-case basis. Private utilities are not included in the Oklahoma MAL, however those utilities are encouraged to join SoonerWarn. The SoonerWarn Steering Committee has provided a mutual aid agreement or private utilities which will help promote "utilities helping utilities" in time of emergency.

For more information about the SoonerWARN program or to become a member of SoonerWARN visit www.SoonerWarn.org.

Who Can I Contact for More Information about Wellhead Protection Education?

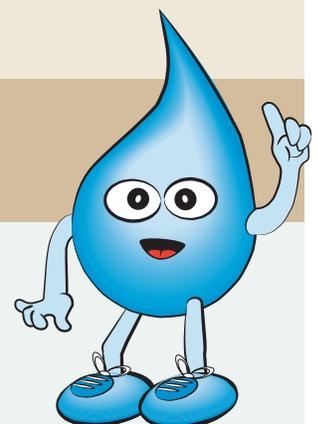
- Your local DEQ office.
- Oklahoma City Groundwater Support.

H2O Joe says contact your local DEQ office for copies of:

- The Wellhead Word Newsletter
- Fact Sheets
- Bill Inserts
- Power Point Presentations



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Can One Individual Impact an Entire Water Supply?

Lone Grove: A Closer Look

How protected is your water supply? Are the potential sources of contamination within your city's borders clearly identified? These are questions very few of us have the time to consider but this past year an Oklahoma community found itself searching for answers.

Lone Grove is located in south-central Oklahoma with a population of approximately five thousand and growing. Until late January 2008 it was unaware of the potential sources of contamination to its drinking water. Never was this fact more evident than when the entire water supply was shut down due to a series of events.

The morning of January 23, 2008 began much like any other. City workers were repairing a water line break on Brock Road unaware of the fact that less than one mile north of the break a pesticide applicator was also working. A pesticide applicator preparing for a day of work may not appear like a potential source of contamination, but a series of mistakes occurred while he was filling his 500 gallon tank that led to the contamination of the public water supply.

A water hose had been placed in the bottom of the fill tank, directly in contact with the chemical concentrate of 2, 4-D, Dicamba, Glyphosate and Simazine. An air gap or physical separation between the end of the water hose and the chemical concentrate should have been maintained or a backflow preventer should have been utilized. The absence of either made a significant impact on the outcome of events. Backflow preventers were not installed on any of the water service connections, even though they are required by the Department of Agriculture and plumbing codes to prevent contamination of the drinking water source from back siphonage.

This scenario in combination with the water line break created an emergency situation for the small community of Lone

Grove. While attempting to fill his tank, the pesticide applicator had created a direct link between the chemicals in this tank and the public water supply; the line break pulled the chemicals out of the tank and into the water hose. The chemicals were siphoned into the water lines of the applicator's shop, residence and the public water supply.

2, 4-D, Dicamba, Glyphosate and Simazine in Lone Grove's drinking water posed a health threat to residents. Potential health effects included nervous system problems such as headaches and dizziness as well as nausea and vomiting. The city, in consultation with DEQ, had to quickly determine the best course of action to protect its citizens' health and contain the extent of damage.

The entire water system was shut down. The line break occurred over a dry creek bed and bright blue water flowed from the break into the creek. Earthen dikes were placed both upstream and downstream of the break to contain the spill. Lone Grove and DEQ personnel went house to house in the areas that were thought to have residual water remaining

in the lines to take samples and determine the extent of the contamination. Samples were brought back to the DEQ laboratories for testing. Residents were without a safe source of drinking water, so a water distribution site had to be established to get clean water to the citizens of Lone Grove. The Fire Department was selected to be the water distribution center and information site for the city. Schools, local businesses and restaurants were closed until water could be re-established. Local officials were faced with the daunting task of addressing its concerned citizens and the media. In the end, some citizens were without water for 16 days and the cost to DEQ alone was estimated to be over \$95, 000. The cost to the local business owners who were forced to close their doors is harder to tabulate. How does one put a price on the lost revenue to the local restaurant



owner whose business was slow to pick up even after the water was restored?

The incidents of Lone Grove were featured in local newspapers and news broadcasts because of the impact to the public water supply and the potential hazard to public health. The quick response by the community and DEQ shortened the time citizens were without water and minimized the threats to public health. In hindsight, the cause of the incident is apparent and even more painful is the fact that **it was preventable**. The alarming truth of the

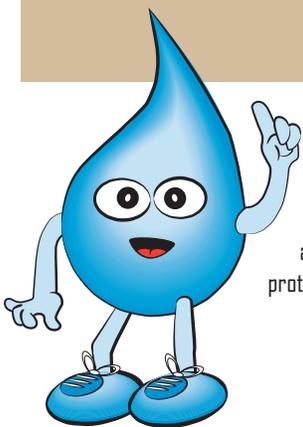
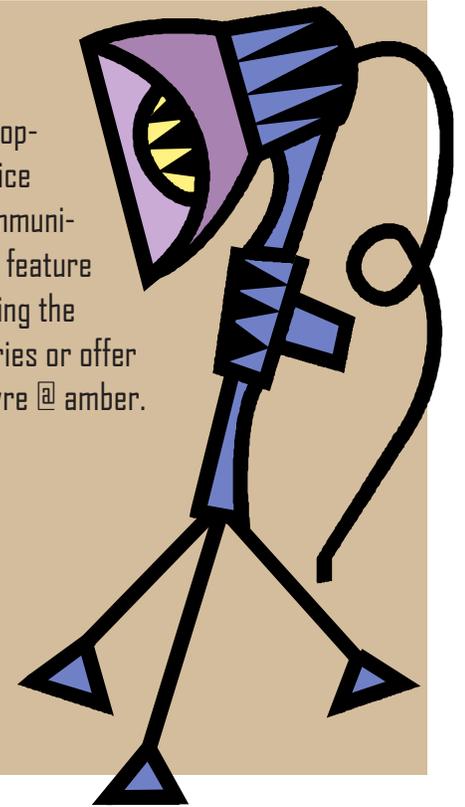
incident at Lone Grove was that it could have been any community. There was nothing unique about the events that led to the emergency. Every community has businesses that operate out of their homes and very few communities have procedures in place to assure protection of their water system. Many businesses operate out of small workshops and small repair shops, and must use oils, solvents and other hazardous substances. Many businesses are operating within your community's jurisdiction and are connected to a public

water supply. There are resources available to assist communities in identifying and regulating potential sources of contamination. Most Fire Departments maintain a list of businesses that store hazardous materials and plumbing codes have requirements for backflow preventers. Hopefully the incidents at Lone Grove can be a hard lesson learned and cause other communities to take a closer look at the potential sources of contamination within their borders.

Spotlight on Success

Have you implemented a thriving education/outreach program? Are you utilizing developmental material created by ODEQ? Have you successfully developed and put into practice your Contingency Plan? If so, we want to hear about it! We would like to showcase communities that are making great strides with their Wellhead Protection Program. We hope to feature in each issue of the Wellhead Word Newsletter an article spotlighting communities putting the Wellhead Protection Program into action. If you would like to share ideas, success stories or offer suggestions for how we can improve our program please submit them to Amber McIntyre @ amber.mcintyre@deq.ok.gov or to the following mailing address:

Groundwater Protection Team
ECLS/ODEQ
P.O. Box 1677
Oklahoma City, OK 73101



As of October 2008 the Wellhead Word Newsletter is issued on a Quarterly Basis.

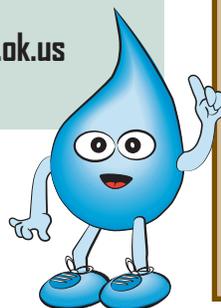
Utilize your community's resources to get the word out on protecting source water. Mobilize the efforts of your local organizations such as, the Boy Scouts, School Organizations, and Social Clubs. Work to inform your friends and neighbors about the importance of wellhead protection and about what you can do as a community to identify potential contaminants.

Environmental Complaints and Local Services Wellhead Protection Contacts

For more information about the Wellhead Protection Program contact your local DEQ office or Oklahoma City Groundwater Support Unit.

Groundwater Support
Oklahoma City:
(405) 702-6100
Matt Pace
Amber McIntyre
Lynne Moss

Web Site
www.deq.state.ok.us



Local Offices

Ada.....	(580) 332-3157	Miami.....	(918) 540-0150
Alva	(580) 327-2649	Oklahoma City.....	(405) 702-6100
Ardmore.....	(580) 226-2554	Ponca City	(580) 762-1907
Bartlesville.....	(918) 333-2734	Poteau	(918) 647-5734
Burns Flat.....	(580) 562-4394	Purcell	(405) 527-8738
Chouteau.....	(918) 476-8588	Tulsa.....	(918) 293-1600
Claremore	(918) 341-7179	Sallisaw	(918) 790-2498
Duncan.....	(580) 255-6068	Shawnee.....	(405) 275-7967
Durant.....	(580) 920-2037	Stillwater	(405) 372-7387
Enid.....	(580) 234-0997	Tahlequah.....	(918) 456-5714
Guymon.....	(580) 338-1357	Valliant.....	(580) 933-5566
Henryetta.....	(918) 652-0446	Wagoner.....	(918) 485-8873
Jay.....	(918) 253-4656	Wheatland.....	(405) 745-7120
Lawton	(580) 357-9733	Wilburton	(918) 465-5218
McAlester.....	(918) 423-3482	Woodward.....	(580) 256-0641



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