The Role of the Drinking Water Protection Team in the Aftermath of Hurricanes Katrina and Rita

On August 29, 2005, Hurricane Katrina slammed ashore on the southeast coast of Louisiana devastating Orleans, Plaquemines, and St. Bernard Parishes, as well as major portions of St. Tammany Parish on the north shore of Lake Pontchartain. Less than one month later on September 24, 2005, Hurricane Rita devastated portions of southwest Louisiana, including Cameron Parish and portions of Vermillion Parish and Calcasieu Parish.

In keeping with the objectives of the Drinking Water Protection Program, staff conducted a reconnaissance of the impacted areas to: 1) survey damage to water wells and significant potential sources of contamination (SPSOCs) identified in source water assessments, and 2) determine the effect, if any, on inundation of water wells along the north shore of Lake Pontchartain. Significant potential sources of contamination may be gas stations, dry cleaners or any other facility that sells, stores, uses or disposes of chemicals. Chemicals, if not handled properly, have the potential to contaminate our surface water and ground water.

Assessment of Water Wells and Significant Potential Sources of Contamination

Public water supply wells in the impacted area were found to be intact. However, a number of domestic wells were damaged or destroyed. The staff made note of the location and condition of these wells when they were found. It is estimated that at most only a third of the domestic wells in these areas were located. The debris and sand covered many of them and some had already been bulldozed.

All of the damaged well information was provided to the Louisiana Department of Transportation and Development (LDDOTD) so that they may contact the owners to either repair these wells or plug them. The information also provided LDOTD with locations that were damaged and in need of further investigation. Many above ground storage tanks had either spilled or were overturned. All of the assessment information was provided to the DEQ Surveillance staff for further investigation. In the Katrina-impacted area 31 facilities were assessed. Twenty-nine of these were SPSOCs and two were possible sources of contamination.

On the Radar

Targeted Parishes for Drinking Water Protection Programs 2006
- Lafourche
- Terrebonne
- Lafayette
- Jefferson Davis

Congratulations! The Drinking Water Protection Team Salutes

Municipalities to pass Drinking Water Protection Ordinances, September 2005-August 2006:
- Crowley, Norwood, Eunice, Addis, Opelousas, Washington, Melrose Parishes to pass Drinking Water Protection Ordinance, September 2005-August 2006: St. Landry Parish

Wellhead Protection Programs Approved within September 2005-August 2006:

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Drinking Water Protection Programs

The Lafayette Parish Drinking Water Protection Program kicked off with a community meeting on June 29 in Lafayette. The meeting addressed the sources of drinking water in Lafayette Parish, the goals of the program and how residents can participate in protecting their drinking water. Presentations were also made to the Lafayette Parish Sheriff's Office TRiAD (the Right Information and Direction) and S.A.L.T. Council (Seniors and Law Enforcement Together). Fifteen persons volunteered to serve on the committee. The first meeting was held on August 3rd in Scott. Mr. Bruce Davidson was elected as the chairman of the committee and Mr. Don Broussard of Lafayette Utilities System was elected as the resource and media chairman. The second meeting is planned for September 7. On the agenda is a training session for distributing drinking water information to local businesses located near drinking water wells.

Hurricanes Katrina and Rita continued...

were overtopped above ground storage tanks located outside of source water protection areas. Two of these facilities required further investigation. In the Rita-impacted area 207 facilities were assessed. One hundred ninety eight were SPSOCs and nine were above ground storage tanks and oil and gas tank batteries located outside of source water protection areas. Fourteen facilities required further investigation.

Post-Katrina Ground Water Sampling Activities

Staff also participated in a cooperative sampling program with the Louisiana Geological Survey and the U.S. Geological Survey following Hurricane Katrina. The objective of this sampling program was to determine the effect, if any, of inundation of water wells along the north shore of Lake Pontchartrain. Wells that were overtopped by storm surge were sampled for the following parameters:

Water Quality

Dissolved Metals

Volatile Organic Compounds (VOCs)

Bacteriologicals

Selection of the wells was based on access and availability (those that could be physically reached and could be operated by the owner). Fourteen wells were sampled in September and October of 2005. There were no VOCs detected in any of the wells that were sampled. Unpurged results from one well showed elevated aluminum, calcium, potassium, magnesium, and selenium, but the sampled reamplified showed normal levels or were non-detect. Preliminary data show the majority of wells with a detection of one or more of the following bacteria: fecal coliform, total coliform, Escherichia coli, and enterococcus.

The follow up plan was to mail the sample results to the well owners, where practicable.

Submitted by Mary Gentry

Individual Sewage Treatment Systems

An individual sewage treatment system treats sewage that originates from the same property on which that system is located. They aren’t connected to any municipal or centralized sewage system, and commonly serve individual homes, camp, businesses, etc. There are a few basic types of individual sewage treatment systems. One type is a conventional septic system which is a septic tank followed by a drain field. Another type is a mechanical plant which uses aerobic bacterial action sustained by mechanical means to treat sewage. Other types include oxidation ponds, which use bacteria that need photosynthesis to break down sewage, and septic tank systems, which are a combination of conventional septic systems and mechanical plants.

These systems work well when maintained properly. However, malfunctioning or failed systems can be a major source of pollution and can contaminate sources of drinking water. In fact, 1% of the nation’s aquifers have been contaminated by pollution attributed to individual sewage treatment systems. Also, DEQ counted approximately 35,000 individual sewage treatment systems around public water wells/intakes. In Louisiana, it is estimated that 1,323,600 people are served by individual sewage treatment systems, and that half of these are malfunctioning. There are several ways in which these systems malfunction. It can be due to poor placement of septic tank fields or badly constructed perforation systems, but improper maintenance is the main issue. Noticeable signs of sewage system failure are:

- Backups of toilets and slow drains
- Discharge in ditches,
- Sewage odors.

The following are some general maintenance requirements for individual sewage treatment systems:

- Septic tanks must be inspected every six years. Pump out sludge periodically.
- Mechanical plants must be inspected for electrical and mechanical functioning, efficient and odor. Pump out sludge and be sure to maintain the power supply.
- Oxidation ponds must be kept in a sunny place for proper functioning.

Other tips include:

DO:
- Use trash cans to dispose of things that may cause maintenance problems.
- Conserve water.
- Use substitutes for hazardous products.

DO NOT:
- Flush dangerous substances.
- Drive or park on your system.
- Connect storm drains or gutters to your system.

Submitted by Jesse Means

Photos from the Year

Drinking Water Protection Team member Michael Marchand (left), along with representatives Dr. Barrons and Jared Allemand from Lafourche Waterworks District #1 to discuss the upcoming Lafourche Parish Drinking Water Program.

Louisiana Rural Water Source Water Protection Specialist Bill Chaumet and Lafayette Parish Drinking Water Protection Committee member Steven Thibeaux converse at a committee meeting.

Drinking Water Protection Team member Michael Marchand with representatives Dr. Barrons and Jared Allemand from Lafourche Waterworks District #1 to discuss the upcoming Lafourche Parish Drinking Water Program.

The Lafayette Parish Drinking Water Protection Committee holds its first meeting on August 3, 2006 in Scott, LA.