



Business Plan 2006 – Division of Environmental Health - Florida Department of Health

Mission: "Promote and Protect Health"

Vision: "Healthier Floridians"

Goal: To prevent disease of environmental origin

Bureau of Water Programs – DRINKING WATER TOXICS PROGRAM

Trends and Conditions:

Florida's groundwater resources support average withdrawals of more than 4.6 billion gallons per day and supply drinking water to over 15 million of Florida's residents. While Florida's aquifers are some of the most productive in the nation, their drinking water quality is threatened by the state's rapid urbanization and widespread use of agricultural and industrial chemicals. Florida contains 33 of the nation's 75 first-magnitude springs, which is evidence of significant ground and surface water interchange. The combined presence of karst topography, shallow aquifers, and well-drained, sandy soils with little to no organic content, facilitates the rapid transport of surface applied chemicals into groundwater, thereby making Florida's drinking water supplies particularly vulnerable to contamination.

Division Cost: \$ 132548

Division Positions: 3

County Program Cost: \$292542

County Positions: 10

Agricultural runoff is widely recognized as one of the top contributors to non-point source contamination of water resources. Approximately 30% of Florida land mass is dedicated to agricultural operations, with an estimated 44,000 commercial farms utilizing 10.2 million acres. Florida is the recognized leader in citrus, accounting for over 75% of the total U.S. citrus production. Florida ranks 12th among States in the number of chickens with an estimated 125 million chickens and, 12th among States in the number of beef cows with an estimated 1.75 million head of cattle, and 14th among States in the number of milk cows. Historical water quality data documents the impact that agriculture has had on Florida's water supplies. Ethylene dibromide, a soil fumigant once used to control nematodes in citrus and other crops, has been found in over 2,400 potable wells. Nitrate contamination of drinking water supplies has been a growing concern to the agricultural, environmental, and public health agencies within the state.

Hazardous waste facilities represent yet another threat to Florida's drinking water supplies and are among the identified targets for acts of terrorism. According to the Environmental Protection Agency's (EPA's) Toxic Release Inventory, Florida contains over 500 facilities housing reportable quantities of hazardous materials, and ranks 12th in the country for the number of on-site and off-site chemical releases. Florida also ranks third among states in the number of hazardous waste sites listed on the Comprehensive Environmental Response and Cleanup Liability Information System (CERLIS).

Discovery of extensive contamination of wells with the agricultural fumigant ethylene dibromide (EDB) in the early 1980's led to widespread public concern about the water quality of Florida's private potable wells. Faced with increasing pressure to be more proactive in protecting public health and the environment, the Florida legislature enacted the Water Quality Assurance Trust Fund in 1983. This trust fund gave the Florida Department of Environmental Protection (DEP) the ability to financially support investigations to assess water quality in private wells and to remediate those wells found to contain contaminants (not including those that occur as a result of natural conditions) above the maximum contamination level (MCL) or health advisory level (HAL). Since that time, the program has been broadened to include pesticides other than EDB, as well as ground water contaminants associated with underground storage tanks (USTs), industrial and/or hazardous waste sites, landfills, fertilizers (nitrates), and other surface applied compounds.



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In 1995, the Florida Department of Health (DOH) entered into a contract with the Florida Department of Environmental Protection (DEP) and assumed the public health responsibility of identifying and sampling private potable wells at risk for environmental contamination. The Drinking Water Toxics Program is designed to respond to citizen complaints and can perform investigation for any potential anthropogenic contaminant that may be present in residential potable wells. Under this contract, the county health departments (CHDs) complete the well investigations per the direction of the Drinking Water Toxics Program. To date, the Drinking Water Toxics Program has collected more than 30,000 samples from private drinking water wells.

Objectives Completed

Completed between January, 2006 and January 2007

- Standardized Well Surveillance map and report format
- Developed EHWater website for use on the intranet
- Developed a Well Tracking System to monitor resampling activities
- Finalized the Well Surveillance Technical Guide
- Developed an evaluation process to be consistent with the new Well Surveillance Technical Guide
- Integrated the well tracking system and Concern Area Tracking System (CATS) into the contamination assessment process

Short Term Objectives

By January 1, 2007:

- Maintain task assignments with CHDs and DEP
- Cleanup the "wells" database
- Develop process flow diagram for all computer programs developed by HSEW
- Provide training to CHDs performing sampling for the Well Surveillance Program
- Design and implement a sampling approach for EDB, NO₃ and other non-point source contamination spread over very large areas.
- Review historical data for trends and identify potential areas needing investigation

Long Term Objectives

By January 1, 2008:

- Integrate the EHWater as a resource for the CHDs and DEP
- Coordinate with DOH Laboratory to design methods to tracking and checking field and laboratory processes
- Evaluate alternative methods to identify potentially contaminated areas.
- Use information on the internet to identify where wells may be located or neighborhoods where wells are unlikely.
- Identify databases on the internet that can help defined contaminants and/or groundwater movement



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Measure #1: Develop training and program reference materials by January, 2008.

HP 2010 Objective		Strategy	Benchmark	Responsible Party	Target Date (up to 18 months)	Status
8-21	Ensure DOH establishes training, plans, and protocols.	Consolidate all procedures into a Well Surveillance Technical Guidance Document	Document is a year old and should be updated to include all new activities that have been developed during the past year.	Charlie Donahue, Larry Gordon	January 1, 2008	Work will begin 2 nd quarter 2007.
		Provide training to new employees.	One course for new employees every 2 months (or as needed)	Gilbert Hoover,	On going	Training is being provided
		Provide refresher training to CHDs through the use of computer software such as “net-meeting” and “Breeze.”	Provide both personal and automated training to CHDs.	Gilbert Hoover	January 1, 2008	Half of the Well Surveillance activities performed by the CHDs have some form of recorded videos for employees to reference. We will continue to enlarge our list.
		Perform Well Surveillance program evaluation	Perform program evaluation of about 20 CHDs per year	Lee Skornia Gilbert Hoover	January 1, 2008	Perform program evaluation of about 22 CHDs per year
		Assist CHDs through the use of on-site training and evaluation as requested by CHDs	Perform site visits to at least two CHDs having trouble maintaining required quality.	Lee Skornia Gilbert Hoover	January 1, 2008	Provide assistance as requested by the CHDs.

Measure #2: Establish and maintain contracts and Task Assignments with DEP and CHDs by January, 2008.

HP 2010 Objective		Strategy	Benchmark	Responsible Party	Target Date (up to 18 months)	Status
8-25	Reduce exposure to pesticides,	Coordinate with CHDs and DEP to resolve workload issues and	Conduct quarterly meetings between DEP HQ, and DOH HQ to	Charlie Donahue, Larry Gordon	On going	Meetings with DEP-petroleum and DEP-Toxics representative every quarter



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heavy metals, and other toxic chemicals through sampling of residential wells.	develop a plan of execution	identify issues and solutions.			
	DEP requires that costs associated with investigating Cattle Dip Vats (CDV) be tracked separately	Maintain Cattle Dip Vat task assignment as required by DEP	Charlie Donahue	On going	CDV are currently being tracked. We will continue to work with DEP to raise the awareness of CDV.
	DEP requires that costs associated with investigating installation of new wells in delineated zones be tracked separately	Maintain sampling for newly installed wells in delineated zones as required by DEP	Charlie Donahue	On going	Newly installed delineated zones wells are currently being tracked.
	Develop a sampling program to evaluate the problems associated with EDB and NO ₃	Work with DEP and CHDs to design an approach for sampling of large-area contamination such as EDB and NO ₃	Lee Skornia Charlie Donahue	January 1, 2008	Currently identifying areas of regional concern. Will begin sampling by 2 nd quarter.
	Perform well surveys around responsible party (RP) hazardous waste sites	DEP has a list of 120 RP hazardous waste sites that DOH will perform well surveys around	Lee Skornia Charlie Donahue	July 1, 2007	Completed
	Perform well surveys around RP or state-lead hazardous waste sites	DEP has a list of 300 RP or state-lead hazardous waste sites with the potential for chemical release	Lee Skornia Charlie Donahue	January 1, 2008	Working with DEP to get the authority to sample around the RP sites
	Sampling of specific areas surrounding documented or potential contamination sources	Establish at least 2 specific sampling projects per year	Charles Donahue	January 1, 2008	In addition to several ongoing special interest projects like Coronet Phosphate Plant; Suwannee River Basin Nutrient Management Partnership, and Jackson County Arsenic investigation, we will continue to develop these special interest projects as needed.



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		Establish cluster areas in specific counties so that all sampling in an area will be performed at the same time.	Work with DEP to establish polygons and assign all work in a polygon at one time.	Charlie Donahue	January 1, 2008	Work with DEP to establish polygons and assign all work in a polygon at one time
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Measure #3: Facilitate electronic collection and standardization of potable water wells and associated risk sources information.

HP 2010 Objective		Strategy	Benchmark	Responsible Party	Target Date (up to 18 months)	Status
	Develop databases and electronic systems to enhance potable well assessment	Develop and maintain an electronic data base for potable wells and risk source information	Migrate all data storage into a centralized SQL database.	John Folsom	January 1, 2007	COMPLETED
		Develop and implement a well sample tracking system	Have a functional well sampling tracking system used by the CHDs	John Folsom	July 1, 2007	COMPLETED
		Develop and implement a GIS website on the intranet (EHwater)	Have a functional mapping service that can be used by CHDs to view DOH before they go out into the field to collect a sample	Ruili Lang Charlie Donahue	January 1, 2008	Site is developed and waiting for DOH-IT to deploy.
		Develop and implement a MAP services with password protection so that DEP can have access to our data	Have a functional mapping service that can be used by DEP with real-time access to DOH data (similar to EHWater)	Ruili Lang Charlie Donahue	January 1, 2008	Site is developed and waiting for DOH-IT to deploy.
		Develop and implement a	Have a functional	Ruili Lang	January 1, 2008	Site is under development



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		MAP services for the general public so they can see if contamination is around their home	mapping service that can be used by the general public to inquire about contamination around their home.	Charlie Donahue		
		Develop a program that will directly download data from GPS instruments and perform some QC checks	Be able to quickly download data from the GPS instruments.	Mike Berry Gilbert Hoover Charlie Donahue	January 1, 2008	Will probably use a contractor to develop this software.
		Use the intranet to make the HSEW database available to the CHDs.	Make our results database (read only) available to the CHDs through the intranet.	Bill Reinhold Charlie Donahue	January 1, 2008	Currently evaluating servers and software that could be used to create this interface.
		Use the intranet to make a “comments” database available to both HSEW and CHDs.	Develop a “comments” database (read/write) available to the HSEW and CHDs through the intranet.	Bill Reinhold Charlie Donahue	January 1, 2008	Currently evaluating servers and software that could be used to create this interface.
		Use the intranet to make standard queries and forms that access the HSEW database available to CHDs	Identify specific queries and forms used by CHDs and make them available on the intranet	Mike Berry Charlie Donahue	January 1, 2008	Currently evaluating servers and software that could be used to create this interface.
		Develop an intranet program that will allow CHDs to edit their own well locational information	CHDs would be able to edit their own data without sending emails to HSEW asking HSEW to make the changes	Bill Reinhold Charlie Donahue	January 1, 2008	Currently evaluating servers and software that could be used to create this interface.
		Evaluate the mobile technology for the type of field activities Well Surveillance personal perform	Determine if changing to real-time mobile communication is appropriate for the well surveillance program	Calvin Desouza Charlie Donahue	On going	We are meeting with vendors and constantly assessing their equipment for potential use in our program
	Implement Data Quality Measures	Minimize data omissions, inconsistencies, and transcription errors	Document processes and information flow and identify areas that can be	Lato'sha Littles Irena Stoilova Charlie Donahue	January 1, 2008	Approximately 50% of the well surveillance processes have been documented.



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		through automated electronic transfers	automated.			Work is on going.
		Review and correct historical/archived well and risk information	Reduce the percentage of incorrect data by one percent	Mike Berry Irena Stoilova Charlie Donahue	January 1, 2008	Once all analytical results are in HSEW SQL database, then we will perform a QC check of the data
		Develop uploading procedures that will integrate quality assurance checks into the process	Identify the upload procedures and design a program for each.	Mike Berry Irena Stoilova Charlie Donahue	January 1, 2008	Upload process will be automated with checking steps added.
		Develop process flow diagrams for all computer programs developed by HSEW	There are about 20 programs developed by HSEW. Each one should be documented.	Lato'sha Littles Irena Stoilova Charlie Donahue	January 1, 2008	Complete the development and documentation of computer processes that are critical to the HSEW programs. Activity is approximately 50% complete
Develop methods that will help to identify at-risk wells		Evaluate models and methods that may be useful to identifying at-risk wells	As we hear of potential methods we will evaluate them for applicability to our programs	Larry Gordon Charlie Donahue	On-going	As we hear of potential methods we will evaluate them for applicability to our programs
		Evaluate public and private well data for trends in contamination movement	Mining our data and other sources for wells that may be contaminated	Charlie Donahue	On-going	COMPLETE A review of historical data has been completed. Additional queries are possible.
		Develop a “comments” database. The database will consolidate the comments from the different databases into one location and be available to a reader in chronological order.		Mike Berry		

Objective #4: Assess the occurrence and human health significance of pharmaceuticals in drinking water.



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8-25	Reduce exposure to pesticides, heavy metals, and other toxic chemicals through sampling of residential wells.	Information and Analysis	Utilization of additional chemical scans in drinking water analyses to include pharmaceuticals and other emerging potential harmful compounds	Charlie Donahue	On-going	This is a long-term goal that is limited by the analytical detection ability. Florida will continue to be in the forefront in groundwater protection and will continue to watch the research in this area to take advantage of any new developments. We will initiate contacts with researchers in federal agencies and other state agencies
		Work with the USGS on a project to collect water sampling to identify exotic chemicals in the water	Analytical results	Charlie Donahue	On going	USGS and DOH have had several meetings.
		Work closely with the wastewater programs to find areas where we can work closer together	Talks between Bureaus are ongoing. The website EHwater is being designed with both Bureaus represented	Charlie Donahue	On going	On going
		Facilitate interaction with DOH Laboratory to facilitate methods for better access of their information	Talks between Bureaus are ongoing.	Charlie Donahue	On going	On going