

Update: Unregulated Drinking Water Initiative for Environmental Surveillance and Public Health (UDWI)

Lorraine C. Backer

Senior Scientist

Health Studies Branch

National Center for Environmental Health

Ground Water Protection Council Forum

Atlanta, Georgia

September 27, 2011

Background

- **Approximately 13 percent of the U.S. population relies on private wells for drinking water.**
- **Ensuring the safety of this source of drinking water is largely the responsibility of the well owner.**
- **Studies have documented the occurrence of unsafe levels of contaminants in private well water**
 - Radionuclides (e.g., radon)
 - Heavy metals (e.g. arsenic)
 - Fluoride
 - Nitrates/nitrites
 - Bacteria

Background

- **The U.S. does not have a comprehensive public health program to ensure the safety of private well systems.**
- **The Private Well Initiative will address this deficiency**
 - Surveillance
 - Intervention
 - Education
 - Evaluation
 - ...to empower private well owners to ensure the quality and safety of the water their wells produce.

Partners

Federal

- Centers for Disease Control and Prevention
 - National Center for Environmental Health
 - National Centers for Infectious Diseases
- U.S. Environmental Protection Agency
- U.S. Geological Survey

States

- Departments of Health
- Departments of Environment
- State Geological Surveys

NGOs

- Association of American State Geologists
- Association of State and Territorial Health Officers
- Association of State Drinking Water Administrators
- National Association of County and City Health Officers
- National Ground Water Association
- State FIFRA Issues Research and Evaluation Group
- Universities

Contractors

- SciMetrika
- Ross and Associates

Vision

- **The 45 million Americans relying on private well systems will drink clean, safe water.**

Goals

- ***Develop and organize data, information, and knowledge about current status and conditions of private well systems.**
- **Develop means to inform public health practitioners and the public on issues associated with private well systems.**
- **Identify and recommend interventions to address public health issues associated with private well systems.**
- **Explore opportunities and approaches to continue to track private well system safety and implement the identified interventions.**

National Workgroup Activities

- **External Advocacy Team**
 - Explore options for an external report on private wells and public health
 - National Institute of Medicine, National Academy of Science Study
 - Council of State and Territorial Epidemiologists
- **Well Data Needs and Users**
 - Clarify use and users of private well system data.
 - Who would be interested in well water data in my state or community?
- **Well Data Inventory**
 - Develop and organize data, information, and knowledge about current status and conditions of private well systems across the U.S.
- **Literature review**

HSB Activities

- **Published RFP July 2010**
 - Projects to identify constraints and issues associated with accessing private well data
 - Funded 7 projects (~\$320,000) in July, 2010
- **Published FOA June 2011**
 - Projects to identify and assess data and potential public health impacts associated with unregulated drinking water sources.
- **Developing communication plan**
- **Developing outreach materials for the initiative**

State Projects

7 States and 7 Approaches

Creation of a Web Accessible, Diversified Data base for Florida's Private Water Wells

Goal: Create a data base that would allow a healthcare professional to research issues related to Florida private water wells from any location by accessing data bases available on the web.

Activities:

- Identify available data bases that relate to private water wells and groundwater issues.
- Determine the agencies/owners of those data bases, and begin collaborations with those parties to explore the sharing of data.
- Establish keywords and create metadata for those key fields of interest that would answer technical questions about the data.
- Define relational fields or processes that will enable the data bases created by different agencies to relate to the same well or area.
- Make the data bases accessible to the public in as many different formats as possible.

Contact: Charles Donahue, Florida Department of Health

Compilation and cost estimation for digitization of agency groundwater data for entry into the **Kentucky Groundwater Data Repository**

Goals:

- Identify and characterize groundwater data sources collected by State and federal agencies in Kentucky
- Determine the appropriate methodology and estimate the cost to capture these data in digital format

Activities:

- Contact State and federal agencies that compile groundwater-quality data to investigate whether they have data sets for inclusion in the UDWI
- Determine whether each data set is suitable for distribution to the public via the Kentucky Groundwater Data Repository
- Develop summary reports for each data set located in the pilot study
- Determine methodology and cost to digitize all groundwater-data that are in paper format
- Estimate the cost of entering data into the Kentucky Groundwater Data Repository, which would then be available to the UDWI

Contacts: James S. Dinger and Bart Davidson, Kentucky Geological Survey, University of Kentucky

Unregulated Drinking Water Initiative North Carolina

Goals:

- Compile, transfer, and store State Lab of Public Health private well contaminate data to the State Center for Health Statistics.
- Catalog and describe available well data sets.
- Draft MOAs that can be implemented for future data sharing among state agencies.

Activities:

- Contract with UNC School of Public Health to compile and transfer geocoded private well dataset to SCHS.
- Enter metadata on two available NC state-level well data sets into standard template provided by Ross & Associates.
- Draft MOA acceptable to NC DENR for data sharing.

Contact: Mina Shehee, Occupational/Environmental Epidemiology Branch, North Carolina Department of Health

Oregon Unregulated Drinking Water Initiative

Goals:

- Inventory and assess available data sources, explore methods to link data and improve usability
- Evaluate primary data collection process, plan to improve the process

Activities:

- Connect with primary water quality and quantity data collection agencies in Oregon to inventory and assess data sources, then to discuss ways to improve data linkage.
- Develop and implement evaluation tool for Oregon's Domestic Well Testing Act and Real Estate Transaction data collection, which represents the primary source of private well data in Oregon. Assess results and meet with stakeholders to develop plans to improve Act and data collection.

Contacts: Curtis Cude, Brenda Hoppe, and Dan Rubalo, Oregon Department of Health

Wisconsin's Private Well Initiative for Environmental Surveillance and Public Health

Goals and Activities

- Comprehensive review of legal and regulatory issues for collecting, analyzing and disseminating private well water quality data
- Inventory sources of private well water quality data
- Plan and implement a data integration pilot project
- Create a test product in Wisconsin's Environmental Public Health Tracking Network
- Provide final reports summarizing lessons learned from activities

Contact: Marni Y.V. Bekkedal, PhD. Wisconsin Bureau of Environmental and Occupational Health



Collaborative projects

- **ASTHO**
 - Data base of state agency responsibilities for water
 - Survey of potential partners' interests and resources
- **AWWA**
 - Decision tree for private well testing
- **National Ground Water Association**
 - Expand activities for National Ground Water Week
- **Water Systems Council**
 - Well Care program projects

Action Items

Focus on Emerging Issues

- **Ubiquity of water**
- **Reaching out to the unengaged**
- **Translate USGS data**
- **Bottled water—a sustainable alternative?**
- **Impacts on water resources (e.g., agriculture)**
- **Emerging contaminants**

Action Items

- **Coordinate with other CDC water-related efforts**
- **Develop partnerships**
- **Share the literature review with potential advocates**
- **Develop a shorter template for metadata to describe relevant data sets (the “card catalog”)**
- **Conduct pilot research studies**
- **Translate science for public health applications**
 - Create a video on private wells
 - Contribute to CDC’s Healthy Water website
 - Engaging conservation groups

Summary

- **National Workgroup**
- **Funding for State efforts to identify and access data on unregulated drinking water sources**
- **Collaborative projects with partners**
- **Ultimately develop a resource to support public health actions**

For more information about the UDWI

Lorraine C. Backer
lfb9@cdc.gov

For more information please contact Centers for Disease Control and Prevention

1600 Clifton Road NE, Atlanta, GA 30333
Telephone, 1-800-CDC-INFO (232-4636)/TTY: 1-888-232-6348
E-mail: cdcinfo@cdc.gov Web: www.cdc.gov

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