

TEXAS GROUNDWATER PROTECTION COMMITTEE
Data Management Subcommittee
Subcommittee Charge

Date Approved

April 17, 2013

Sponsor

Texas Groundwater Protection Committee (TGPC)

Co-Chairs

Texas Commission on Environmental Quality (TCEQ)
Texas Water Development Board (TWDB)

Members

Participating and interested agencies and individuals.

Subcommittee Purpose

The primary goals of the Data Management Subcommittee are to:

- Facilitate interagency groundwater data communication;
- Provide an ongoing process for data collection and compilation for the TGPC in order to facilitate the work of agencies charged with the assessment of water quality for the state's aquifers and the identification of potential threats to groundwater quality; and,
- Represent the TGPC in or before data management advisory workgroups.

The Data Management Subcommittee's ultimate goal is to encourage the collection of groundwater quality data that are more accessible, usable, and valid.

On a continuing basis, the purposes of the Data Management Subcommittee are to:

- Further encourage best groundwater data management practices through promoting adherence to complementary database structure (identification of all sites with latitude and longitude) and each entity's guidelines and standards for accurate data;
- Encourage the use of geospatial data for Geographic Information Systems (GIS) in groundwater quality/contamination studies;
- Enhance availability of groundwater geospatial data for the public;
- Encourage publication of data online, frequently and consistently updated and maintained in useful formats;
- Coordinate the compilation of data to be assessed by the TGPC and its member agencies in order to satisfy direct or indirect state and federal mandates;

- Monitor federal data management initiatives and integrate these into state programs, as appropriate;
- Coordinate agency Quality Assurance and Quality Control practices between agencies collecting groundwater data; and,
- Provide recommendations for the continued improvement of groundwater data management and assessment of the state's groundwater protections programs.

Previous Initiatives and Results

In 2003 and 2004, the Data Management Subcommittee surveyed the data needs of state and federal agencies involved in groundwater quality assessment programs in Texas and the adequacy of existing monitoring programs in fulfilling these needs. Most agencies assessed fundamental adequacy of the data each was collecting for its own particular needs; although some regulatory programs included needs for new or more collection of particular types of data.

In 2006 and 2007, under the oversight of the Data Management Subcommittee, TCEQ engaged in two contracts intended to develop a strategy or a guide to creating a comprehensive, efficient system of collecting, managing, and analyzing information needed to detect and respond to issues of groundwater quality in Texas.

Recommendations from the second contract, in particular, were presented to the TGPC regarding the state's groundwater data collection efforts, including:

- The design for a flexible, comprehensive groundwater quality monitoring plan, incorporating existing networks to the extent possible;
- Improvements in coordination between monitoring programs and improvements in methods of sharing data; and,
- Suggestions for improved methods for the TGPC to use in aiding those agencies involved in and responsible for the assessment of impacts to groundwater quality.

In 2008 and 2009, Data Management Committee co-chairs became involved in federal groundwater monitoring activities, primarily the Subcommittee on Ground Water (SOGW) to the federal Advisory Committee on Water Information (ACWI). The Office of Management and Budget designated the Department of the Interior, through the U.S. Geological Survey (USGS), as the lead agency of the SOGW.

To improve collection of and access to groundwater information, the SOGW has developed a "framework document", *A National Framework for Ground-Water Monitoring in the United States*, for a National Ground Water Monitoring Network (NGWMN). In this June 2009 report, SOGW solicited Statements of Interest (SOI), and near the end of October 2009, TWDB and other states (or state consortiums) submitted their Statements of Interest to participate in the NGWMN's pilot project. TWDB's SOI described the agency's groundwater data collection programs, cooperation with groundwater conservation districts and other data collecting entities, field practices, database structure, data availability, general data accuracy, and QA/QC practices

associated with improving data quality. The SOGW chose TWDB and four other states or consortiums to participate.

The pilot projects consisted of each participant's preparation and identification of the best sites with water level and/or water quality data suitable for being made available through a database portal. A pilot network portal was developed using data from the five pilots and included data contributed by nine organizations. An important aspect of the Network portal is that the portal is not an aggregated database of data from all participants, but it is a gateway to the data as it is maintained and served by each participating organization. Original data are retrieved from each data provider by the portal in real time. The portal is capable of displaying water levels, well logs, and water quality in tabular or graphical formats and allows the user to bulk download all of the available data.

Expected Results

The Data Management Subcommittee will shift its focus from statewide adherence to particular data standards and instead encourage adoption by each agency of basic metadata essentials associated with all sites collecting groundwater data, or accurate latitude and longitude, as well as the provision of these data in a number of formats through each agency's website. The Data Management Subcommittee should use the National Ground Water Monitoring Network Data Portal of the Federal Advisory Committee on Water Information Subcommittee on Ground Water as a model for future data exchange. Under this charge, the Data Management Subcommittee will establish the minimum set of data elements necessary for efficient data exchange, based on all currently available groundwater datasets that can be used by state agencies in assessing the quality of the state's groundwater resources.

The Subcommittee will encourage the publication of summaries of data collected with links to each agency's web site where the data can be viewed and downloaded. Although in the past the Subcommittee has strived to promote and update the *Texas Groundwater Data Dictionary*, it will now encourage agencies to link to their particular Data Dictionaries and data collection manuals; agencies have adopted bits and pieces of fields recommended in this document over the past couple of decades but ultimately use their own entity's required database fields, QA/QC protocols, and database standards. Such a shift will acknowledge the different priorities of each organization's data collection programs while still providing a means to facilitate interagency cooperation through communication, coordination, and the sharing of groundwater quality data. Under this charge, the Data Management Subcommittee will compile and maintain an inventory of data collection projects and their publications. The Data Management Subcommittee may coordinate with the Public Outreach and Education Subcommittee

to undertake a study of potential revisions to the TGPC website to accommodate a webpage for a formal listing of links to projects identified in the inventory.

Groundwater contamination information and water-quality assessments of the state's aquifers will continue to be made available to the public through the publication of state and federally mandated reports, as well as through reports not required by any mandates. The TGPC either directly or indirectly responsible for satisfying the mandate reports, and the Data Management Subcommittee will coordinate the compilation of data to be assessed by the TGPC and its member agencies in order to accomplish this task. This coordination includes, but is not limited to, the following efforts:

- *The Joint Groundwater Monitoring and Contamination Report* (TCEQ publication SFR-056). This report is updated annually, as mandated by the state through the TGPC. The current edition can be found at http://www.tceq.state.tx.us/comm_exec/forms_pubs/search_pubs.html. Under this charge, the Data Management Subcommittee will assist with updating and revising the annual report's enforcement status matrix.
- The *Texas Integrated Report*, Groundwater Assessment portion (see <http://www.tceq.texas.gov/waterquality/monitoring/index.html> for the current version). This report is required of the TCEQ under the *Federal Clean Water Act, §305(b)*. Under this charge, the Data Management Subcommittee will help coordinate data collection activities to assess the groundwater quality of the state's aquifers for inclusion in the biennial *Texas Water Quality Inventory* report.

Scope and Boundaries

The Data Management Subcommittee may seek the participation of additional staff from appropriate agencies as needed in order to address specific issues and to exploit expertise related to its Charge.

Data Management Subcommittee members shall help establish and abide by ground rules and operating procedures and respect the autonomy of their fellow agencies. Meetings will be held as the Data Management Subcommittee finds necessary to complete specific publication tasks or other special projects.

The Data Management Subcommittee must meet all requirements of open meetings and must maintain written records of all meetings.

The Data Management Subcommittee may elect to form Task Force working groups in order to address individual issues, as needed. These Task Force working groups shall meet as necessary in order to support the Data Management Subcommittee.

The Data Management Subcommittee may be tasked with participating on behalf of the TGPC in contracts between member agencies and vendors.

Reporting to the Texas Groundwater Protection Committee

The Data Management Subcommittee shall report on its activities at the regularly scheduled TGPC quarterly meetings.