

Minutes
Pilot-SOGW Meeting
November 8-10, 2010
Austin, TX –

Meeting Participants: Bob Schreiber, Bill Cunningham, Tom Patton, Luke Buckley, Janie Hopkins, Brian Anderson, Radu Boghici, Mike MacDonald, Sherri Kroenig, Al Wehrman, George Roadcap, Dave Larson; Jerry Unterreiner, Jim Sullivan, Daryll Pope; Chuck Job, Mike Wireman; Tim Parker, Scott Andres; Dave Langseth; Nate Booth; Jessica Lucido; Dave Wunsch; Mary Musick; John Jansen; Cary Betz; Darrel Osterhoudt; Bill Hutchison; Virginia McGuire

Representatives from the National Ground Water Monitoring Network pilot states of Illinois-Indiana, Minnesota, Montana, New Jersey and Texas met with Subcommittee on Ground Water representatives and others in Austin. The goals of the meeting were to:

- Achieve, to extent possible, greater uniformity in pilot reports to assist in synthesis.
- Generally assist the pilots in their work.
- Work toward resolution of framework document changes already identified or identified during this meeting.
- Discuss next steps.

Day one was spent reviewing the framework document to provide everyone with a common basis for discussion. Participants also heard presentations from the five pilots outlining their progress to date. The sessions also provided an opportunity for the pilots to share their questions, problems encountered to date, and recommendations for framework document changes.

After preliminary organization, day two started with a presentation by Bill Hutchinson, Texas Water Development Board, on their work. Participants had an opportunity to see how the Texas groundwater monitoring network and modeling are assisting Ground Water Conservation Districts to join together to develop desired future condition statements or benchmarks. Following the presentation, USGS staff, Nate Booth and Jessica Lucido, briefed the participants on general plans for the portal. A demonstration of the portal was also provided. Suggestions were made as to its features and portal-related questions were answered. The afternoon breakout sessions provided an opportunity for the pilots to begin work on their reports and confer with SOGW members. The pilots also visited with USGS portal staff to discuss the mechanics of standing up the portal. In the afternoon as well, Chuck Job led a session on the Value of Groundwater. A white paper is being drafted by a workgroup under Chuck's leadership. The white paper, or excerpts, will be used in various documents of the SOGW. Additionally, the SOGW reviewed and made decisions on several changes to the framework document as well as exploring further the unstressed or targeted well classification and other topics.

The final day was spent summarizing the major action steps from the meeting, hearing a presentation by Virginia McGuire on the process that she uses to compile groundwater monitoring data for the Ogallala aquifer and the many steps she takes to ensure its accuracy.

The meeting adjourned with thanks to the participants for a productive meeting. Field trips were arranged by the Texas Water Development Board for those who could remain and attend.

Framework Document Issues

Decisions Made Regarding Changes to Framework Document

1. *Public Water Supply Wells:* Public water supply wells are eligible as NGWMN water level or water quality monitoring points. Data providers will be the ones to determine if a public water supply well will be included in the NGWMN. The data providers will also determine whether the well will be identified as a public water supply well. The federal government shall not supersede the data provider's decision regarding disclosure of the well as a public water supply well. Public water supply wells included in the NGWMN must have three-dimensional location information available to the NGWMN data user. Guidance will be specifically provided on water level measurements of public water supply wells, e.g. time elapsed between pumping operations and water level measurement.
2. *Owner Information:* Section 4.3 in the list of minimum data elements related to well owner name and contact information will be deleted.
3. *Unclassified Well Category:* A category of unclassified well will be established. The data provider can decide whether to classify the well to unstressed or targeted without a baseline period. As an alternative, the data provider can use the unclassified category until the baseline is met. (Note: issue of categorizing wells as unstressed and targeted was not resolved. The resolution of that issue may affect this decision)

Potential Changes Identified Prior to Austin Meeting:

1. Use of public supply wells (FINAL DECISION REACHED AT MEETING)
2. Aquifer resolution, e.g. national, regional, major
3. Well owners name and contact information (FINAL DECISION REACHED AT MEETING)
4. Water quality and water levels - frequency of measurement baseline and on-going
5. Definition of unstressed and targeted wells
6. Use of terms surveillance and trend and how they are being used and interpreted.
7. Diagram needs review, especially where baseline box is positioned.
8. Greater definition on Superfund/RCRA wells and their use
9. Private sector data not mentioned in framework document.

Potential Changes Identified at the Austin Meeting:

1. Include more discussion on the use of new technologies
2. Review proposed minimum data elements for such items as follows:
 - a. Potential to provide greater flexibility in minimum data elements for existing wells versus new wells, i.e. maintain those valuable wells with a long record of measurement

- b. Separation of meta data between elements required and those that would be nice to have.
 - c. Separate minimum data elements required for water level measurement from water quality measurement, e.g. possibly delete casing material, time of measurement from required water level minimum data elements
 - d. Clarify difference between casing depth and top of screen or open hole
 - e. Ensure clarity of difference between Depth versus elevation
 - f. Missing well logs, lithology
3. Which data fields should be in state data base or addressed through the portal, e.g. field for targeted or unstressed, surveillance or trend, state name
 4. Potential use of sentinel or early warning wells, e.g. monitoring in upper aquifer for nutrients that may filter to principal aquifer or monitoring at top of aquifer
 5. Add discussion on use of nested wells and coverage of vertical dimension
 6. Add more guidance on number and spatial density of wells needed
 7. Acceptance of wells into the NGWMN – are all wells that meet NGWMN required to be added to the national network.
 8. Availability of non-NGWMN wells that meet NGWMN criteria through the portal
 9. Additional discussion on use of modeling and its limitations
 10. Consider adding guidance on use of volunteer wells and how to encourage their continued use
 11. Review discussion of baseline period – wells can be added to surveillance and trend network without baseline? Have unclassified category to park wells where they are not yet classified as untargeted or stressed.
 12. Address how water levels that are collected at the same time as water quality sample will be handled. Right now Texas puts the results in either the water level or water quality data base and ties them together based on well number.
 13. QA/QC may be a concern, e.g. Texas relies on their cooperators largely. For water quality, the samples go to the contracted lab and it is uploaded from there. For water level though, they are dealing with 42 groundwater districts that send data in various formats besides the measurements taken by TWDB staff. Generally water quality is much more uniform than water level data.
 14. Criteria for matching continuous and tape down water levels of .01 ft
 15. Accuracy of continuous water levels over all depths
 16. Calibration worksheet with device serial number.
 17. Add definition of NGWMN site
 18. Discuss transboundary aquifers and whether they should have a higher level of priority
 19. Clarify what groups are eligible to be gatekeepers for adding NGWMN data, e.g. states, tribes, National Park Service, others
 20. Consider discussing how potential changes in water quality methods would be handled and what the impact may be to reporting out through the portal. There is the potential that reporting may stop at certain time if methods change. Suggestion made to work with ACWI and tie into the Methods Development Board.

21. Add explanation of why/purpose behind why wells have to be classified as unstressed or targeted.

Portal Development

Decisions Made Regarding the Portal:

1. Montana will work toward data transfer through web services
2. Minnesota will attempt to get web services up for water levels. Water quality is migrating right now and Mike hasn't pursued but assume will handle web services.
3. Generally, Illinois-Indiana will be able to provide web services with the possible exception of some of water quality data.
4. Texas should be able to do web services.
5. New Jersey data will be through web services.

Assumptions Working Under For Pilot Phase

1. Only publicly available data is being fed to the portal.
2. Pilot organizations will be responsible for maintaining the data
3. Following piloting, nodes will be responsible for keeping the configuration files up to date.
4. The IT infrastructure will eventually be there for direct services for all nodes
5. Nodes should be able to operate independently of portal.

Comments, Suggestions or Issues to Address

1. Would like to have screen interval displayed on well log
2. Are there going to be links to reports and models in the data base?
3. Are both depth and elevation information going to be provided?
4. How will the potential variance in measuring point be addressed, e.g. land surface versus top of casing.
5. Like having state and/or USGS logos as appropriate.
6. Can a link to the full state data base be provided?
7. What tools will be available? Interest in having ability to identify wells that have dropped in water levels by x feet. While this is a good idea the issue has not been resolved. There will be outside tools available through WaterML. Besides being able to work in WaterML, you can work in common formats such as .csv and excel.
8. Decide how well registry will be maintained, e.g. on line form or the potential to maintain the registry on the state system.
9. Questions were raised regarding partners, their entry and exist from the NGWMN including questions such as:
 - a. How are you going to handle Boards or Programs that disappear?
 - b. How would that data be handled if you dropped out of the program?
 - c. How do you take yourself out for one reason or another? Do you leave the data behind?
10. Performance issues, e.g. low external bandwidth, applications and data bases may not be optimized
11. Developing and maintaining catalog and crosswalk initially and long term

Action items for the Portal Group:

1. The portal group will write up some of the challenges and their strategy to address them.

Action Items

Pilots:

1. Pilot partners are encouraged to capture benefits of state and national network in their reports
2. Texas pilots are asked to check with their management about whether/how some sort of local knowledge can be added to the data base to inform users of local conditions not captured in the hydrographs or other data currently available through the proposed NGWMN portal. They are asked to report out their input on how the framework could be better in this area.
3. Pilot reports and data transfer capability deadline remains December 31. It is understood that data transfer may slip but items that may affect the pilot reports should be addressed by the December 31 deadline and incorporated into the draft report.
4. Pilots are asked to get with SOGW/USGS if issues arise in developing the report or meeting the deadlines.
5. Pilot calls are cancelled for the month.

All/SOGW:

1. Send Bill, Bob, Chuck, and Chris ideas, articles or case examples where problems occurred because of lack of monitoring or that show the importance of this issue and the growing awareness among various sectors (e.g. government, business, the public, etc.)
2. Provide Chuck with case example for the Value of Ground Water White Paper. Chuck will put out an email for the types of information he is seeking.
3. SOGW should develop a timeline for review of the draft pilot reports and completion of their synthesis and other documents.

Specific Individuals:

1. Dave Langseth, Bob Schreiber, Dave Wunsch, Mary Musick, and Mike Wireman volunteered for a work group to develop a straw man addressing the classification of wells as unstressed or targeted.
2. Dave Wunsch volunteered to do up bullet points for the classification work group.
3. Chris will get out to the classification work group her notes and information from Emery
4. Mike Wireman is working on a draft introduction for the pilot project report. It should be available the first week of December. The pilots should review that section, and modify it as necessary before incorporating into the report.
5. Outreach session at the NGWA Summit/GWPC Spring Meeting:
 - a) Emery will be asked about connecting with the Maryland state water monitoring council to let them know about the monitoring session and the Summit.
 - b) Dave Wunsch will submit an abstract providing an overview of the NGWMN, SOGW and ACWI.

- c) Daryll Pope and Bill Cunningham will cover between the two of them the summary of the pilot process and details on the New Jersey pilot.
- d) Bob Schreiber and Mike Wireman will submit a paper on the EU experience.
- e) USGS will cover the details on the portal and will invite their Canadian counterparts to participate.
- f) Chuck Job will submit a paper on the Value of Ground Water Monitoring for a Summit session.
- g) Anyone needing a letter of invitation to facilitate participation should contact Chris or Bob.
