

GROUNDWATER RESEARCH SUBCOMMITTEE MEETING RECORD

TIME AND DATE:

9:00 AM, Wednesday April 15, 2009

LOCATION:

Texas Commission on Environmental Quality Campus Building F, Room 2210, 12100 Park 35 Circle, Austin, TX 78753

PURPOSE OF MEETING:

Third quarter regular business meeting

AGENCIES/ENTITIES REPRESENTED:

AMEC Geomatrix
Bureau of Economic Geology [BEG]
Texas AgriLife Extension Service [TAES]
Texas AgriLife Research [TAR]
Texas Commission on Environmental Quality [TCEQ]
Texas Department of Agriculture [TDA]
Texas Water Development board [TWDB]
United States Geological Service [USGS]

ATTENDEES:

B.L. Harris	TAR, Co-chair of the GW Research Subcommittee of the TGPC
Bridget Scanlon	BEG, Co-chair of the GW Research Subcommittee of the TGPC
Brian Aiken	AMEC Geomatrix
Cary Betz	TCEQ, Chairman of TGPC
Radu Boghici	TWDB
Alan Cherepon	TCEQ
Richard Eyster	TDA
Joseph L. Peters	TCEQ
David Villarreal	TDA

MEETING SUMMARY:

Call to Order and Introductions

Dr. Bridget Scanlon called the meeting to order at about 9:02 AM. Her first order of business was to have everyone introduce themselves.

Discussion of Sources of Funding and Current Calls for Proposals

Dr. Scanlon initiated discussion on the 303d list, asking for clarification on its purpose. Mr. Betz replied that the 305b Report is a requirement of the Federal Government, and that the 303d list, which is now a part of that Report, is required to list impaired surface water bodies. He

continued by stating that since we don't really regulate groundwater, we use the 305b Report to identify aquifers about which there are concerns. Dr. Scanlon then brought up the issue that groundwater should be getting 10% of nonpoint source money, but in reality was getting much less. Dr. Scanlon suggested that the ranking criteria for proposals should be changed so that surface water projects would not be so strongly favored over groundwater projects. Dr. Harris suggested that there may be some shift in Region 6 EPA toward groundwater with the naming of the new Groundwater Coordinator, Michael Overbay. Dr. Scanlon suggested that there should be a separate ranking criteria for groundwater. And Dr. Harris suggested that there should be a closer adherence to the 10% rule. Dr. Harris went on to suggest that the Groundwater Research Subcommittee may want to send such a recommendation to EPA, TCEQ, and TSSWCB. Dr. Scanlon suggested that we might want to have the appropriate people from TCEQ and TSSWCB present at our next meeting to discuss the problem. And maybe we can develop an application form specifically designed for applying for funding for groundwater projects. The importance of groundwater should be recognized since over 50% of the state uses groundwater.

Mr. Cherepon suggested that one possible groundwater project would be to determine pesticide use, at least in urban settings. Mr. Betz also pointed out that the nonpoint source program has been very focused on implementation over research. It was also suggested that, besides the appropriate people from TCEQ and TSSWCB, maybe even Mike Overbay, the new Groundwater Coordinator for EPA Region 6, could be invited for the next meeting. Dr. Harris also suggested that our collective agencies write up a guideline that could be used to make decisions about funding activities.

Dr. Scanlon brought up how some irrigation practices are building up salts in the soil. There are some examples where there has been more salt build-up during the period from the introduction of irrigation than during the previous ten to thirty thousand years.

Dr. Harris asked if anyone was familiar with the recent decision from the Sixth Circuit Court of Appeals concerning the case of The National Cotton Council of America, et al. vs. The United States Environmental Protection Agency which basically states that any nozzle will be deemed a source of pollution if its applying pesticide in or near water bodies or in areas where water runoff from the area of application would reach water bodies or streams. This essentially would be any field or application point in the state. EPA has asked for a 2-year period delay to study the best way to implement the decision. This decision has the potential of having a large economic impact on agriculture and other users of pesticides, especially considering that we in Texas do not have a pesticide problem that needs solving.

Dr. Scanlon brought up the problem of water quality of individual wells and whether EPA would ever get involved with regulating individual wells in rural areas. Mr. Betz responded that all EPA programs are geared toward public water supply systems. The Safe Drinking Water Act is directed toward providing safe drinking water **systems** – with the emphasis on **systems**. It doesn't consider individual rural wells at all, and consequently our state regulations do not provide very much protection for individual rural water wells. TCEQ does not really have any authority over individual private water wells. Dr. Harris reiterated that there are not any adequate programs that address rural water well owners. He, however did mention that Texas AgriLife Extension does have some education programs to teach rural water well owners how to collect samples and where to have them analyzed. Occasionally counties will have water-testing days. Mr. Betz added that in 2003 the TCEQ began notifying private well owners of any

groundwater contamination that could potentially affect their wells. There was, following this, a general discussion concerning the problem of nitrogen build-up in soils from the application of fertilizers.

Dr. Harris offered up a possible solution for private owners of rural wells, an idea that may give these well owners some of the benefits of public water systems. The proposal is that rural water well owners drawing water from a given aquifer or portion of an aquifer could combine together as a cooperative. This cooperative could then in essence be considered in many respects as a public water system. Then there would be a program available that would supply funds for various things like monitoring and maybe even a part time water manager that could help with individual well and treatment system maintenance. The primary purpose of this type of rural public water system would be to insure the quality of drinking water. The creation of community water systems is a federal (EPA) program with the states administering the program. The primary target areas for this type of rural water systems would be those with known groundwater problems, perhaps starting with nitrate and arsenic. Perhaps such rural water systems could be organized with the help of groundwater conservation districts.

There was a discussion on the need for epidemiological studies in certain areas of the state to determine the actual health effects of certain groundwater constituents such as arsenic and perchlorate.

Dr. Scanlon at this point reviewed what the actions items are to be for the next meeting. The goal is to get the appropriate personnel from the nonpoint source program to attend the next meeting. Brad Lamb or Michael Overbay from EPA, John Foster or Aaron Wendt from the Texas State Soil and Water Conservation Board (TSSWCB), and Laurie Curra or Lauren Bilbe from TCEQ.

Mr. Betz indicated that he was going to do a little research on how it may be possible to form a rural water supply system that consists of a community of well owners with wells completed in a common aquifer.

Dr. Harris at this point gave a real example of a circumstance where this type of rural water supply system might be appropriate. The case was in Jim Hogg County in an area with approximately 125 rural home owners that had a problem with arsenic in the groundwater. They were in desperate need of a rural water system, but for such a small rural community the cost was prohibitive for a conventional water supply system. What would be more appropriate for this type of situation would be individual under-the-counter treatment systems. However, for a basically illiterate low income population such as this one, there would be a maintenance problem in keeping all the individual systems functional. If the community could be organized as a rural community water system, it would be able to obtain the resources for a part time manager that could periodically service the individual treatment systems.

It was suggested by Mr. Cherepon that perhaps the best solution would be bottled water. However, it was opined that there would be a problem with this too, in keeping 100% of the population faithful to buying bottled water on a regular basis rather than using their limited financial resources for food or clothing.

The subject of conversation returned to irrigation efficiency. The question posed by Dr. Scanlon was whether or not improved irrigation practices actually saved water. Dr. Harris responded that improved irrigation methods such as drip irrigation certainly do increase efficiency, but then the question is what is to be done with the saved water. The solution by the producers usually is to use this water to irrigate additional acreage, or to irrigate more often. There is also a trend in the High Plains of producers switching from cotton to corn, which increases water use.

There was some discussion also about land coming out of the Conservation Reserve Program (CRP). This year a large portion of land in the CRP will be returning to production. Only a very small portion of this land is classified as irrigated cropland. However, the expectation is that as much of this irrigated cropland as possible will be going into the production of high value crops such as corn.

Mr. Betz brought up the question of monitoring for endocrine disrupting and pharmaceutical chemicals. The question was brought up at a recent internal meeting at TCEQ for the purpose of issues identification. The issue is that there is no groundwater monitoring for these constituents. One problem with this type of monitoring is that the analyses are expensive and the results inconsistent. Although there are labs that can do this type of analyses, they have a difficult time obtaining consistent results, probably because they don't get enough samples to perform the analyses on a routine basis and thus be able to develop the proper expertise. Mr. Betz asked if there might be some screening methods for these constituents. There was no ready answer for this, but Dr. Scanlon suggested that we need to do a literature search. The opinion was that there hasn't been enough funding for endocrine disrupting and pharmaceutical monitoring for labs to develop the necessary skills or for the development of screening methods. Mr. Cherepon suggested that we could check with the National Water Quality Monitoring Council and the Methods and Data Comparability Board. He then indicated that he would be willing to contact them about the issue.

The meeting adjourned at 10:18 AM.

Minutes prepared by Joseph L. Peters, July 8, 2009

Action Item:

* Invite the appropriate personnel from the nonpoint source program to attend the next meeting. Brad Lamb or Michael Overbay from EPA, John Foster or Aaron Wendt from the Texas State Soil and Water Conservation Board (TSSWCB), and Laurie Curra or Lauren Bilbe from TCEQ. The purpose is to discuss how groundwater projects can receive closer to their theoretically allotted 10% of the nonpoint source money.