

GROUNDWATER RESEARCH SUBCOMMITTEE MEETING RECORD

TIME AND DATE:

9:00 AM, Wednesday July 15, 2009

LOCATION:

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

PURPOSE OF MEETING:

Fourth quarter regular business meeting

AGENCIES/ENTITIES REPRESENTED:

Bureau of Economic Geology (BEG)
Steve Walden Consulting [SWC]
Texas AgriLife Research
Texas Commission on Environmental Quality [TCEQ]
Texas Department of Agriculture [TDA]
Texas State Soil and Water Conservation Board [TSSWCB]

ATTENDEES:

Cary Betz	TCEQ, Chairman of TGPC
Lauren Bilbe	TCEQ
Alan Cherepon	TCEQ
Richard Eyster	TDA
Donna Long	TSSWCB
Joseph L. Peters	TCEQ
David Villarreal	TDA
Steve Walden	SWC (Representing BEG)
Kevin Wagner	Texas AgriLife Research

MEETING SUMMARY:

Call to Order and Introductions

Mr. Cary Betz called the meeting to order at about 9:20 AM. Neither of the Co-chairs, Dr. Bridget Scanlon or Dr. B. L. Harris, were present. Also, overall attendance was very sparse at this point in the meeting and Mr. Betz commented that the meeting could only be for informational purposes since there was no quorum. Mr. Betz began the meeting by having everyone introduce themselves.

Discussion of Sources of Funding and Current Calls for Proposals

Ms. Lauren Bilbe was given the floor first to make some announcements concerning the nonpoint source program. She announced that the next request for grant applications would be

going out in October. For the 319 grant they will be looking primarily for implementation projects for both surface water and groundwater. Ms. Bible announced that the drafting of the **2010 Texas Nonpoint Source Management Program** document was in progress. There is an update of this document every five years; the last one was in 2005. Dr. Villarreal had a question for Ms. Bilbe concerning the possibility of funding for Non-Governmental Organizations (NGOs). Ms. Bilbe replied that they could not be funded directly, but that NGOs are encouraged to partner-up with governmental or quasi-governmental entities such as councils-of-government, municipalities, or universities.

Ms. Bilbe also announced that the **2009 Annual Report: Managing Nonpoint Source Pollution in Texas** was in progress and that TSSWCB would appreciate any nonpoint source groundwater success stories that could be included in the report.

Ms. Bilbe also answered some questions concerning the proportion of available nonpoint source funds allotted to groundwater. Groundwater is supposed to get 10%. There was some discussion in our last meeting that perhaps groundwater was getting less than its 10% portion. Ms. Bilbe reported that through the Performance Partnership Grant (PPG), groundwater does actually get 10% of the funds. These funds go to Edwards Aquifer Protection Program. They get \$940,000 each year, which achieves the 10%.

Information Exchange

At the last meeting the issue of monitoring for endocrine disrupting and pharmaceutical chemicals was discussed. A need was expressed to learn more about analytical methods for these chemicals, especially for screening purposes. At the last meeting Mr. Cherepon volunteered to gather some information on analytical methods for endocrine disrupting and pharmaceutical chemicals. Just after the last meeting Mr. Cherepon did some research on methods for these types of analytes and the pertinent websites were emailed to the Groundwater Research Subcommittee members. For this meeting Mr. Cherepon gave us a review of this information plus some additional information that he had gathered. This information was provided in a handout. Mr. Cherepon also reported that TCEQ's Public Drinking Water Section indicated that the need for monitoring for these types of analytes may become part of the UCMR3 requirements.

Mr. Betz reported that back in May a group from the TCEQ Public Drinking Water and Chief Engineers Office, and Mr. Betz met with Dr. Robert B. Finkelman from UT Dallas. Dr. Finkelman is beginning a study of the Carrizo-Wilcox Aquifer, the portions that have lignite beds adjacent to the aquifer, where water trickles through the lignite and enters the aquifer. In passing through the lignite, the water is picking up a set of hydrocarbon compounds similar to hydrocarbons that have been linked to a health condition called Balkan endemic nephropathy (BEN). In the Balkans they have identified groundwater under similar geochemical conditions in the areas where there is a large incidence of certain types of urinary tract diseases. Mr. Betz said that he offered Dr. Finkelman help from the Groundwater Subcommittee in coordinating activities in getting his study initiated. The study is in the very early stages of development. Mr. Betz described a slide shown at the group meeting, showing the areas of incidence of kidney problems (problems similar to those associated with BEN) in the state. Mr. Betz proposed that the slide indicated that the incidence of kidney disease was more closely correlated with areas of alpha radiation than with lignite deposits. Mr. Walden made some comments about various ways

of determining the causes of certain problems and how quite often the correlation between a problem and its possible cause is initially misinterpreted.

[Mr. Kevin Wagner joined the meeting at this time, 9:43 AM, to represent Dr. Harris.]

Mr. Walden indicated that he would be very interested in obtaining the epidemiological data showing where the incidence of kidney disease occurs in the state. This is data very pertinent to the types of things with which Mr. Walden has been involved over a number of years. This includes looking at the various aquifer strata that contain radioactive minerals, among which the Hickory Formation is the hottest, especially 50 to 60 miles East of San Angelo. Also, areas near Lubbock and in the Gulf Coast contain radioactive minerals. But it has been difficult to put together enough data to statistically correlate these areas with possible health effects. Unless a connection can definitely be made between the radioactive constituents and an incidence of health problems, it is difficult to get anyone to adopt a treatment system. Recently there has been developed a treatment system that can remove the radium constituent of groundwater in a cost effective way.

[Ms. Dona Long jointed the meeting at about 9:47 AM.]

Mr. Cherepon asked if there was any drought related research going on. Mr. Betz responded that probably not since it takes a couple of years to get any kind of research going.

Mr. Wagner informed the attendees of some up and coming projects by Texas Water Resources Institute (TWRI). One of these projects, still in the proposal stage, will be with the BEG, involving work in the Rolling Plains and the High Plains, to better evaluate the sources of nitrogen in the aquifers in those areas and to assess some BMPs for controlling the leaching of nitrates into the aquifers in those areas. A second project, also with the BEG, is to look at microbial interaction between the surface water and groundwater in the alluvium of the Colorado River in Bastrop, Texas area. This one has been approved and will be receiving funding under a 604(b) grant.

Ms. Long brought up the need to update **TEX*A*Syst**. Mr. Wagner added that there has been interest in updating the **TEX*A*Syst** program and that Texas AgriLife Research had actually tried to get some funding through USDA, but had been turned down. Ms. Long responded that there may be some funding available through a NPS grant.

Mr. Wagner went on to discuss the difficulty of getting funding for communities with private wells that have water problems. Mr. Walden added that in general there is difficulty in getting funding to take action on a problem involving natural contaminants. He mentioned that there are some grant programs through the Texas Water Development Board (TWDB) that can be used to aid Colonias in solving some of these water problems.

There was a return to discussing the **2010 Texas Nonpoint Source Management Program** document. Ms. Long gave some additional information on this update. It's in review and Mr. Arthur Talley is the contact person for TCEQ for input to the 2009 update of the report. It will be due at the end of 2010. EPA, TCEQ, and TSSWCB rely on this plan to determine what types of projects need to be funded. We need to make sure that we get everything necessary in the plan concerning groundwater. This would then increase the chances of the groundwater projects that

we need being funded. Mr. Wagner pointed out that for surface water projects the 303(d) list determines what the priorities are for funding. He asked if there was anything similar for groundwater. Ms. Long mentioned that there was a list of 57 pesticides from SFIREG that were common contaminants in groundwater in the nation. These could possibly be used in a similar manner to the 303(d) list for surface water. Dr. Villarreal pointed out that the list of 57 from EPA was a combined list of problem pesticides from all the states. It is not a list specific to Texas. And this list may even go away with a change in federal administration. Ms. Long cautioned that the 303(d) list initially was not very important to EPA, but eventually became all-important. Therefore, we need to be open to any contingency. Dr. Villarreal pointed out that what we are doing with the list of 57 -- evaluating the pesticides that are important in Texas and informing EPA of the pesticides that are not important in Texas -- is the proper way to proceed for now. Ms. Long pointed out that our priorities for groundwater, whether in the form of a list or by some other means, should be incorporated into the **Nonpoint Source Management Program** document. This would help us fund projects in the future.

Dr. Villarreal asked, besides the list of 57 pesticides, if there was any other list of compounds that are important as groundwater pollutants, particularly endocrine disrupters and pharmaceuticals,. The response in general was that there was interest in the scientific community in this area and some proposals for research were beginning to come in, but none has yet received funding. Dr. Villarreal expressed the opinion that it would be good for the Groundwater Research Subcommittee and the **Nonpoint Source Management Program** to be proactive and to begin to shift their focus to this new issue. Mr. Walden reminded the group that there is a national approach to this already in place. There is the Contaminant Candidate List (CCL) process, a responsibility of EPA as mandated by the 1996 Safe Drinking Water Act. In this process, all large systems and a statistically significant portion of small systems is sampled each year to determine what contaminants need to be added to the CCL. Perchlorate was discovered through this process when some of the small systems in the Panhandle were sampled. Also, the USGS, sometimes with their own money and other times with EPA money, does national studies to determine what new contaminants might be surfacing. The results of these studies are available through their website. The contaminants found by the USGS are usually in very small concentrations. The quantification limits of USGS methods are very low and generally could not be replicated in a cost-effective way at a state lab. The tenths of a ppb obtainable by USGS methods would only show up as non detections with the methods affordable by state labs. At this time the most cost-effective technology will not detect most of the pharmaceuticals that may end-up in the groundwater.

Mr. Wagner related a conversation he had recently with a couple of researchers interested in developing some new treatment technologies. They were anticipating some of these new contaminants such as pharmaceuticals and personal care products becoming more of an issue five or ten years down the road. They were considering EPA National Center for Environmental Research's (NCER) Science to Achieve Results (STAR) or the National Science Foundation (NSF) for funding since this would be true basic research and wouldn't have an immediate connection with Nonpoint Source. He said that the researchers had already developed a new treatment system for atrazine and that they want to extend the same technology to develop treatment systems for some of the higher priority personal care products. Their treatment system keys in on the specific chemical characteristics of the target contaminant to accomplish its removal. They are targeting all the possible points of treatment: at the tap, at the water treatment plant, or at the wastewater treatment plant. Mr. Walton suggested that the American

Water Works Association's (AWWA) Water Research Foundation also be considered as a possible source of funding for this research.

The meeting adjourned at 10:29 AM.

Minutes prepared by Joseph L. Peters, September 30, 2009

Action Items: None for this meeting

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