TEXAS GROUNDWATER PROTECTION COMMITTEE
RECORD OF MEETING
Second Quarterly Meeting, Fiscal Year 2005

Meeting Date: January 13, 2005 Place: TCEQ Campus, Building F
Meeting No.: 63 Room: 2210

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MEETING ATTENDANCE

TGPC Members	Affiliation
Mary Ambrose	TCEQ
Janie Hopkins	TWDB
Bill Renfro	RCT
Ambrose Charles	TDA
Lee Parham	TDLR
Bruce Lesikar	TAES
Richard Egg	TSSWCB
no representative present	TAGD
Claren Kotrla	DSHS
Andrew Tachowsky	BEG

Agency Staff	Affiliation	Program
Tony Bennett	TCEQ	
Abiy Berehe	TCEQ	Technical Analysis Division
Cary Betz	TCEQ	Technical Analysis Division
Leon Byrd	TCEQ	Technical Analysis Division
Patricia Bobeck	DSHS	
Alan Cherepon	TCEQ	Technical Analysis Division
Jennifer Delk	TCEQ	Technical Analysis Division
Richard Eyster	TDA	
Linda Haynie	TCEQ	Policy & Regulations
April Hoh	TCEQ	Water Quality Division
Isaac Jackson	TCEQ	Intergovernmental Relations
Joe Peters	TCEQ	Technical Analysis Division
Steve Walden	BEG	

Interested Parties	Affiliation
Mary Etter	LCRA
Lynne Fahlquist	USGS
Jim O'Connor	SAWS
Geoff Saunders	LCRA

MEETING HANDOUTS

1. Agenda
2. TGPC Record of Meeting, First Quarter, FY2005
3. Data Management Subcommittee Activities
4. Nonpoint Source Task Force Meeting Minutes, December 16, 2004
5. Presentation Slides- Texas State Map Program
6. Joint Report Memorandum Letter
7. Joint Groundwater Monitoring and Contamination Report - 2004 TCEQ Questionnaire
8. Draft Table of Contents for the 2004 Joint Groundwater Monitoring Report
9. Information on TGPC Web Accessibility Policy
10. Perchlorate Distribution Maps
11. Report to the 78th Legislature - Activities of the Texas Groundwater Protection
12. Nonpoint Source Management Program Update
13. National Water Quality Monitoring Council Update
14. TGPC Rule Log Update on January 13, 2005
15. TCEQ Press Release on State Edwards Aquifer Program and Federal Endangered Species Program to Function in Concert.
16. Groundwater Summit Announcement

MEETING RECORD OF January 13, 2005

I. Call to Order and Introductions

Mary Ambrose, Designated Chairman of the Texas Groundwater Protection Committee (TGPC), called the FY2005, Second Quarterly Meeting to order at 1:00 P.M., CDT.

Barry Miller, TAGD, not present.

II. Subcommittee Reports

Agricultural Chemicals - Joe Peters, TCEQ, Chair. The Agricultural Chemicals Subcommittee held its FY 2005 second quarter meeting on January 13, 2005 at 10:30 a.m.

The members were updated on Task Force (TF) activities:

Site Selection - The TF Chairman (TWDB) reported that the TWDB is now doing water levels rather than water quality sampling. They will be starting water quality sampling in March in the Gulf Coast Area.

Education - The TF Chairman (TCE) gave an announcement about a presentation he would be giving later in the meeting, on Pesticide Best Management Practices materials that TCE put together for training events. Training events will take place in March and April in Amarillo and Lubbock.

Under the Subcommittee's Business items:

A report was presented on the revisions to the Groundwater Pesticide Monitoring Plan for FY 2005. Amarillo monitoring moved up in priority to 3rd, Gulf Coast monitoring was moved up to 1st place in priority.

Information Exchange:

TCEQ Superfund Team/Remedial Investigation staff provided a report on sampling done at Hale County Airport (Miller Flying Service), Plainview. Atrazine was found in the groundwater. Investigation was conducted on soils, monitoring wells and nearby municipal wells.

A status update on Interagency Pesticide Database was given.

A report on was given on Atrazine trends in the High Plains Aquifer. This was in response to some questions brought up at an earlier AgChem Subcommittee meeting.

The results were that there were no obvious seasonal trends in Atrazine detections. There is no obvious seasonal connection to rainfall. In the future there are plans to look at connection to chlorinated metabolites for atrazine, alachlor, simazine, and metolachlor.

A report on Atrazine iRED triggers and methods of analysis was provided.

The Subcommittee heard announcements and there were no public comments.

Data Management - Lynne Fahlquist, USGS. The Data Management Subcommittee did not meet during the past quarter. The review of the revisions to the ambient groundwater monitoring strategy report are being addressed and the report will be delivered soon.

Public Education and Outreach - Bruce Lesikar, TCE, Chair. The Subcommittee held its FY 2005 first quarter meeting on December 16, 2004 at 1:30 p.m.

The Subcommittee is still working on fact sheet development and publication for the following topics: Homeowners Guide to Abandoned Wells, On-site Sewage Facilities, Graywater, Operations and Maintenance. The projected completion date for the documents is May 2005.

Dr. Lesikar spoke about several abandoned well closure demonstrations: Bell County, January 26; Fayette County, April 7; and Nacogdoches County, June 7).

The Subcommittee is currently looking at implementing programs for Priority Groundwater Management Areas that have currently been named and developing a fact sheet for potential Priority Groundwater Management Areas that would discuss the process involved in groundwater district creation. A question and answer format will be used. A potential date for an organizational meeting to bring together potential participants will be sometime in mid February.

Groundwater Research - Andrew Tachovsky for Bridget Scanlon, BEG, Co-Chair. The Subcommittee held its FY 2005 second quarter meeting on January 13, 2005 at 9:00 a.m.

The Subcommittee is currently working on a matrix of projects and potential funding sources and research groups. The matrix will aid in prioritization of research for funding based on the TGPC's Recommendations to the 79th Legislature. The Subcommittee is also drafting white papers on the recommendations for distribution to the legislature.

Nonpoint Source Task Force - Cary Betz, TCEQ. The Subcommittee held its FY 2005 first quarter meeting on December 16, 2004 at 10:00 a.m. The main topics of discussion at the meeting were the State Nonpoint Source Management Plan and the Clean Water Act FY2005 Grant. The Railroad Commission has applied for TCEQ 319 funds for oilfield site remediation at Petronilla Creek. Lower Colorado River Authority has submitted a pre-proposal for Texas Soil and Water Conservation Board 319 funds to

address land fragmentation, the resulting increase in the number of wells, and declining groundwater quality. Due to groundwater issues, LCRA is proposing to bring surface water out to many areas throughout the Hill Country.

The Subcommittee also addressed the number of changes taking place at the Texas State Chemist office. The Texas State Chemist office is charged with reviewing the content of fertilizers making sure that they meet label standards.

The meeting closed with a brief discussion on the TGPC report to the Legislature.

IV. **Business - Discussion & Possible Action**

Joint Groundwater Monitoring and Contamination Report - 2004 (Format & Content) - Cary Betz and Abiy Berehe, TCEQ. A draft table of contents of the *Joint Groundwater Monitoring Report, 2004* was included as a handout to the committee. The only revision is that there is a case that has been transferred from TCEQ to DSHS. This would add an additional table to the Joint Report. Traditionally, Committee approval of the Table of Contents has been sought prior to approval of the total report which is due on April 1 of each year for the previous year.

Mary Ambrose, chair, asked how House Bill (HB) 3030 cases would be handled in the report.

Mr. Betz replied that HB 3030 cases would be addressed in the subsection on Notification of Groundwater Contamination under notification to private water well owners. There is a description of the process and procedure that has been implemented in response to HB 3030. There has been a discussion on including a small figure that describes the notifications that were sent out during calendar year 2003. Each of the cases will also appear in the main contamination tables.

A question was raised as to whether or not the 2003 report was sent out.

Cary Betz responded that the 2003 report was sent out. It has been on the web site for several months now and hard copies are available. The report was sent out to county judges and local public health officials, the state library and legislative library. We have a partial request of the agencies needs.

Mary Ambrose, chair, made a motion for approval on the draft outline presented.
Bruce Lesikar, TAES, seconded the motion.
The committee voted in favor of moving forward with the draft outline presented.

TGPC Web Accessibility Policies - Jennifer Delk, TCEQ. A draft accessibility policy and TRAIL information was included as a handout. The committee's approval is needed to make changes to the Web site to gain compliance with 1 TAC Chapter 206. We need to add an accessibility policy; incorporate TRAIL metadata; provide links to the State of

Texas Web site, Texas Homeland Security Web site and the Statewide search website; and add a description of our open records policy/public information act policy/procedures of the agency.

Mary Ambrose, chair, made a few suggestions on changing the accessibility policy and asked if our site met all of the standards listed in the policy.

Jennifer Delk's response was that we currently meet the standards but they are not listed on our Web site at this time.

Mary Ambrose, chair, asked if the committee had any problems with the description of the agency. Being a "consortium".

There were no suggestions from the committee for alternate language.

Mary Ambrose, chair, said that the accessibility policy sounds fine and asked if we needed more time to decided on the keywords.

There was a question raised on additional keywords.

Jennifer Delk responded that the metadata can be changed as needed. The TRAIL system checks for updates in metadata periodically.

Mary Ambrose, chair, asked if everyone was ok with what was discussed.

The committee decided to use the proposed TRAIL keywords and accessibility policy.

Jennifer Delk asked if the proposed open records policy was acceptable. Since TCEQ maintains the TGPC records, would it be acceptable to add a link to the TCEQ open records policy?

Mary Ambrose, chair, replied that TCPC files are not stored in the same place as other TCEQ records. The committee chair suggested that we revisit the open records policy at another meeting.

Texas Groundwater Protection Strategy- Discuss Strategy Implementation Issues - Mary Ambrose, TCEQ, called the committee's attention to the *Activities of the Texas Groundwater Protection Committee: Report to the 79th Legislature*. The *Texas Groundwater Protection Strategy (Strategy)* was used in two ways in the drafting of the legislative report. First, in the table of contents, the recommendations were broken down into four main categories that support the *Strategy*. Second, the implementation of the *Strategy* recommendations is discussed in a separate section of the report.

Set Future Meeting Dates

Next meeting: Wednesday, April 27, 2005, 1:00 p.m., Room 2210, Building F, TCEQ Campus.

IV. Information Exchange for Groundwater Related Activities/Status Update

TCEQ/Texas Tech University Perchlorate Study - Tony Bennett, TCEQ. Handouts from the Texas Tech presentation were distributed as handouts. The study resulted from TCEQ Drinking Water Supply Section's unregulated contaminant monitoring program required by the Safe Drinking Water Act. Contaminants that EPA thought there might be a concern for in drinking water. 1) They didn't quite know what the health effects were and 2) did they actually show up in drinking water. Sampling took place over a three year period. Perchlorate was one of the contaminants sampled for. Entry points for every public water system serving more than 10,000 people were targeted. EPA sampled a cross section of about 80 water systems below 10,000 population.

After a year and a half there were two occurrences in the Panhandle where perchlorate was found at a concentration above 4 micrograms/liter. This was above the action level set by TCEQ for groundwater cleanups. Extra sampling took place to confirm that perchlorate was there. More sampling proved that additional research was needed.

The Water Resource Center at Texas Tech University was contracted to do additional sampling for perchlorate. The contract had two phases. 1) Sample the lower 9 counties displayed on the map (Midland/Odessa area - up two more rows of counties). 2) Sample the rest of the counties up to the Oklahoma border then out towards New Mexico. Some sampling occurred in New Mexico.

The maps displayed the estimates of perchlorate concentration in groundwater in the High Plains area. Ranges from non-detect to 20 micrograms/liter. A number of studies were done on water wells in the area, to determine where the perchlorate was coming from.

Perchlorate can exist as an impurity or byproduct in two common agricultural products, mined nitrate fertilizers primarily from Chile and chlorate defoliants. For many years perchlorate was thought to only occur in Chilean nitrate deposits in the Atacama Desert, the most documented occurrence of natural perchlorate. However, recent studies showed that changes made by the fertilizer industry have significantly reduced the concentration of perchlorate in commercial Chilean nitrate fertilizer. Widespread perchlorate in groundwater in this study area would more likely represent historical releases and not more recent events.

The other two slides display Texas Tech University's conclusions. There was a definite decreasing trend in perchlorate concentration with increase in depth. There is also an inverse correlation between saturated thickness of groundwater and concentration of

perchlorate. The greater the saturated thickness the lower the concentration of perchlorate.

While no single piece of data collected or calculated was able to definitively identify the source of perchlorate in the study area, it is the strong opinion of the research team that atmospheric production and/or surface oxidative weathering is the source of the perchlorate. The mass of perchlorate produced/deposited per year appears to be concentrated in the unsaturated zone by evapotranspiration during dry periods and flushed to the water table during wet periods. This process has led to higher concentration in groundwater where the water table is relatively shallow, and in areas with lower saturated thickness and thus less available dilution. Agricultural irrigation may have accelerated this process in some areas.

Texas Tech completed the perchlorate study last August. The full report provides more information on how they arrived at these conclusions, the different areas of research, and an evaluation of the area.

The significance of this from a drinking water regulatory stand point is that at some point EPA will come up with regulations/standards for perchlorate. There have been bills introduced in Congress for EPA to come up with standards.

Part of the interest in perchlorate is the deep pockets issue. Potential sources for high perchlorate concentrations are the Department of Defense, the Department of Energy, or a manufacturer or contractor related to them. In Texas, we can show that this is not the case. The really high concentrations outside of this area, however, can be traced back to manufacturing or explosives operations.

EPA has to go through a cost benefit analysis in determining maximum contaminant level. The cost benefit if you have a few sites with a lot of really heavy contamination within a small area may be fairly easy to clean up by a Federal Agency such as the Department of Defense or the Department of Energy. It is a totally different issue if the perchlorate is naturally occurring and the water system has to pay to clean up the area. This report will have some positive effects when it comes down to determining the cost benefit analysis.

The National Academy of Science released its report on January 11, 2005. Their reference dose for perchlorate is 24.5 micrograms/liter. They are currently acting as "referee" between the EPA and the Department of Defense who have differing opinions on what the MCL should be. EPA said that it should be closer to 1.0 micrograms/liter and Department of Defense said it should be closer to 200 micrograms/liter.

Mary Ambrose, chair, asked what the treatment method to remove perchlorate from drinking water was.

Tony Bennett responded that it is removed by hollow-fiber membrane biofilm reactor processes, reverse osmosis, and ion exchange. Using those technologies, you are really only moving the perchlorate from point A to point B. There are microbial treatments. Perchlorate serves as an oxygen source and it is reduced to chloride.

Mary Ambrose, chair, raised a question about domestic water wells which are shallower than municipal wells. Were there any depth trends within the saturated Ogallala Aquifer?

Tony Bennett responded that there were some analyses done but the results were not really clear. The perchlorate has been there for a long time and its making its way down to the saturated zone. The more water in the saturated zone the lower the concentration of perchlorate. Texas Tech analyzed data from coring and studied striations of contaminants and the results were related to the existence of other ions (flouride, arsenic, etc, ...).

Mary Ambrose, chair, mentioned that the Public Outreach and Education Subcommittee will be working on some Perchlorate education materials for domestic well owners in that area. What should we tell people that are in these areas?

Tony Bennett responded that the highest levels occur in those areas because of the shallow well depth.

Janie Hopkins, vice chair, asked if TCEQ would wait for further guidance from EPA before the action level is changed.

Tony Bennett replied that TCEQ would review whether or not an action level of 4 micrograms/liter would be maintained. The toxicologists are currently reviewing ingestion pathways for perchlorate. It is showing up in food sources and the action level for water may be set lower to account for these other sources.

Status- TGPC Report to the 79th Legislature, 2005. Mary Ambrose, TCEQ. The report was delivered to the Governor, Lieutenant Governor, Speaker of the House, the Committee Clerks for House and Senate Natural Resource Committees. Committee members were emailed a link to the publication on the TCEQ website. Hard copies are now available.

Status - Water Quality Inventory ("305(b)") Report -2004. Cary Betz, TCEQ. The report should be finished in mid February. Their will need to be a Data Management Subcommittee meeting between now and then to review it.

Status - State NPS Management Plan Development - Cary Betz, TCEQ. The state is currently updating the Nonpoint Source Management program which will guide activities for the next five years. The Nonpoint Source Management Program revision is in the last stages of completion. Formal "response to comments" addressing EPA's most recent set

of comments, has been completed and will be sent out for EPA's review in January 2005. Following negotiation with EPA the report will go through publication review for two months and the final copy should be available around March or April of 2005.

Regional Water Planning Update - Texas Water Development Board. Janie Hopkins, TWDB had nothing specific to share.

Groundwater Availability Modeling Update - Texas Water Development Board. Janie Hopkins, TWDB. The all of the models have been delivered and they are currently working on the minor aquifers.

National Water Quality Monitoring Council Update. Mary Ambrose, TCEQ. The council met back in December and at that time they accepted a charge that came from the White House's Council on Environmental Quality and the National Science and Technology Council. The purpose of the charge was to design a national water quality monitoring network. This came out of recommendations from *An Ocean Blueprint for the 21st Century: Final Report of the U.S. Commission on Ocean Policy*. What they had in mind was not just for bays and estuaries, they wanted to apply it to the entire watershed. Groundwater is definitely a component that they are interested in. They are trying to target some specific areas for initial projects. They are supposed to complete a conceptual network by January 2006. They are being encouraged by USGS to have specific monitoring sites identified. One of the potential case studies is for the Mississippi Basin and Gulf of Mexico specifically, for the hypoxia issue. The emphasis is not just surface water and not just water quality. It is also microorganisms, the whole gambit of what you would consider necessary for a healthy ecosystem or indications of what is going on within an ecosystem.

Since many National Water Quality Monitoring Council members are from the Washington D.C. area, they are aware that groundwater is an important issue. In dealing with the Chesapeake Bay study, trying to find out where the final nitrate component was coming from, they finally concluded that it was coming from groundwater. They do know that groundwater is an important component to be considered in the whole watershed approach.

A steering committee was formed and different subgroups will be formed. There will be specific projects to be addressed and once they are finished the group will be disbanded. There should be a conceptual draft available that is due in August.

V. Announcements (All Members)

Rules Update - A summary of the TCEQ rule tracking log was distributed to members. There are ten rules summarized in the tracking log that bear interest to the Committee. Questions concerning a specific rule should be directed to the Project Manager listed beside the rule.

Lee Parham, Texas Department of Licensing and Regulations (TDLR). A Memorandum of Understanding between TDLR and TCEQ was approved by the Texas Commission on Licensing and Regulation on December 16, 2004. The effective date will be in March 2005.

New Publications

TCEQ, SFR/084, January 2005, *Report on the Study and Evaluation on Electronic Access to Geologic Data and Surface Casing Depths Necessary to Protect Groundwater.*
TCEQ, SFR-047/03, January 2005, *Activities of the Texas Groundwater Protection Committee, Report to the 79th Legislature.*
TWDB, December 2005, *Volume 1, 2004 Biennial Report on Seawater Desalination .*
TWDB, December 2005, *Volume 2, Technical Papers, Case Studies and Desalination Technology Resources.*

Upcoming Conferences

US Fish and Wildlife Service & TCEQ will provide briefings on endangered species and water quality. It is a supplemental effort under the Edwards Aquifer Program. Meetings will be held in Austin on January 19, 2005; San Marcos on January 10, 2005; and San Antonio on January 21, 2005.

Association of Groundwater Scientists and Engineers Meeting April 17-20, 2005, San Antonio.

Groundwater Protection Council Annual Policy Meeting, March 2005, Washington D.C.

USGS, Meeting to discuss Cycle 2 plans for the Edwards Aquifer, February 2, 2005, University of Texas San Antonio Campus

VI. Public Comment

No public comment.

VII. Adjourn

Chair, Mary Ambrose, adjourned the meeting at approximately 2:50 P. M., CDT.