

GROUNDWATER ISSUES SUBCOMMITTEE
 OF THE
 TEXAS GROUNDWATER PROTECTION COMMITTEE
 RECORD OF MEETING
 Third Quarter Meeting, Fiscal Year 2016

Meeting Date: April 20, 2016
 Meeting No.: 5

Place: TCEQ Campus, Bldg F
 Room: 2210

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MEETING ATTENDANCE

Subcommittee Members

Kathy McCormack (Co-Chair)
Chris Moore (Co-Chair)
Alan Cherepon
Emily Hall
David Villarreal
T.J. Helton

David Van Dresar
John Tracy
Linda Ruiz McCall

Lynne Fahlquist
Cindy Loeffler

Affiliation

Texas Commission on Environmental Quality (TCEQ)
Railroad Commission of Texas (RRC)
TCEQ
Texas Department of State Health Service (DSHS)
Texas Department of Agriculture (TDA)
Texas State Soil and Water Conservation Board
(TSSWCB)
Texas Alliance of Groundwater Districts (TAGD)
Texas A&M AgriLife Research (AgriLife Research)
Bureau of Economic Geology of The University of Texas
at Austin (UTBEG)
United State Geological Survey (USGS)
Texas Parks and Wildlife Department (TPWD)

Agency Staff

Sean Ables
Abiy Berehe
Leon Byrd
Bill Carter
Mike Chadwick
Cindy Hooper
Peggy Hunka
Andrea Morrow
L. Scott Underwood
Marcia Workman

Affiliation

TCEQ
TCEQ
TCEQ
TCEQ
TCEQ
TCEQ
TCEQ
TCEQ
TCEQ
TCEQ
TCEQ

Program

Water Supply Division
Water Availability Division
Water Availability Division
Water Quality Planning Division
Water Availability Division
Water Availability Division
Water Availability Division
Water Availability Division
Agency Communications Division
Water Availability Division
Water Availability Division

Interested Parties

David Barer
George Ozuna
Tom Rapp

Affiliation

KXAN
USGS
KXAN

MEETING HANDOUTS

1. Texas Groundwater Protection Committee (TGPC) Groundwater Issues (GWI) Subcommittee Meeting Agenda, April 20, 2016
2. TGPC GWI Subcommittee Meeting Record, January 13, 2016
3. TGPC Agricultural Chemicals (AgChem) Task Force (TF) Status Report, April 2016
4. TGPC Publications Status Report, April 2016
5. Topic Summaries:
 - a. Brush Control
 - b. Potential Impacts of Hydraulic Fracturing on Drinking Water
 - c. Overview of Federally Endangered, Candidate, and Petitioned Freshwater Mussel Species in Texas
 - d. Emerging Contaminants
 - e. Saline Groundwater Trends and Impacts in Texas
 - f. Have pesticides decrease[d] in urban and rural areas of Texas
 - g. Priority Groundwater Management Area (PGMA)
6. Draft TGPC GWI Subcommittee white paper outline

The following item was also on display on the handout table:

1. TGPC Public Information Act Policy

MEETING RECORD OF APRIL 20, 2016

1. CALL TO ORDER AND INTRODUCTIONS

Kathy McCormack (TCEQ), Co-Chair of the TGPC GWI Subcommittee, called the meeting to order at approximately 9:37 AM CDST. GWI Subcommittee members were introduced. Representatives from the Texas Department of Licensing and Regulation (TDLR) and the Texas Water Development Board (TWDB) were not present at the meeting, and representatives from UTBEG and TAGD were not present at the beginning of the meeting.

2. STATUS REPORTS

Agricultural Chemicals Task Force

Alan Cherepon (TCEQ) reported that:

- There had been no Agricultural Chemicals Task Force meetings (via email, phone, or in person) since the last GWI Subcommittee meeting;
- He had provided training for TWDB staff regarding pesticide monitoring in March 2016;
- With four staff (Heather Rein was working on creating reports for public access of data from the newly restructured groundwater database), TWDB was planning to sample groundwater at 310 sites in 2016:
 - Major aquifers: Ogallala, Pecos Valley, and Hueco-Mesilla Bolson; and,
 - Minor aquifers: Dockum, Edwards-Trinity (High Plains), West Texas Bolson, Igneous, Capitan Reef Complex, Rustler, Marathon, Hickory, Marble Falls, and Ellenburger-San Saba.
- He was planning to sample groundwater in the Austin and San Antonio areas in 2016, including near apiaries for imidacloprid (a neonicotinoid);
- The Alliance for Natural Health USA had recently published an article about glyphosate in breakfast foods (<https://ecowatch.com/2016/04/19/glyphosate-breakfast-foods/>);
- Regarding QA/QC work on the TCEQ Interagency Pesticide Database (IPD), he had removed 120 duplicate wells from the Wells table, added data for eight missing 2014 samples to the Samples table, and removed nearly 6,000 duplicate records from the Analytes table; and,
- The U.S. Environmental Protection Agency (EPA)/States/Tribes semi-annual pesticide meeting would be held in Albuquerque, NM, on May 10 – 11, 2016.

Alan Cherepon (TCEQ) requested information from GWI Subcommittee members on apiary locations in the Austin and San Antonio areas.

Lynne Fahlquist (USGS) reported that their National Water-Quality Assessment (NAWQA) Program would be performing pesticide sampling in the Ogallala Aquifer during this fiscal year and in the Edwards-Trinity Aquifer during the next fiscal year.

David Villarreal (TDA) announced that fipronil had been approved by the U.S EPA for use against crazy ants, and Lynne Fahlquist (USGS) indicated that they had found low levels of fipronil in some of their groundwater samples.

Linda Ruiz McCall (UTBEG) arrived at 9:49 AM CDST and was present for the remainder of the meeting.

TGPC Publications

Abiy Berehe (TCEQ) reported on the following TGPC publications:

- Groundwater Assessment for the *2016 Texas Integrated Report for Clean Water Act Sections 305(b) and 303(d)* (“*Texas Integrated Report*”):
 - TCEQ staff had completed the draft Groundwater Assessment and it would be routed for management review during the first week of May 2016;
 - The *2016 Texas Integrated Report* would be posted on the TCEQ website together with the other surface water assessment reports;
 - This was a biannual report to the U.S. EPA; and,
 - The TWDB ambient water database was used extensively for this draft report.
- *Joint Groundwater Monitoring and Contamination Report – 2015* (“*Joint Report*”, SFR-056):
 - TCEQ staff were working on the 2015 *Joint Report* and it would be completed by the end of June 2016.
- *Activities and Recommendations of the Texas Groundwater Protection Committee: Report to the 85th Legislature* (“*Legislative Report*”, SFR-047):
 - There had been two TGPC Legislative Report Subcommittee meetings since the last GWI Subcommittee meeting;
 - The Legislative Report Subcommittee updated the draft *Legislative Report* and it would be presented at the July 2016 TGPC meeting;
 - After obtaining TGPC approval, the final draft *Legislative Report* would be routed for upper management review and concurrence;
 - TCEQ staff would send the final *Legislative Report* to Agency Publications after the October TGPC meeting; and,
 - The final *Legislative Report* would be distributed to the Legislature in December 2016 before the session begins on January 10, 2017.
- *Texas Groundwater Protection Strategy* (“*Strategy*”, AS-188):
 - The new *Strategy* is envisioned to be a dynamic document modeled around the topics being discussed in the TGPC Groundwater Issues Subcommittee; and,
 - This procedural document would not only identify and evaluate groundwater issues, but it would also outline the processes by which information is exchanged and recommendations are made in order to protect the groundwater resources in the state.

Updates on the TGPC’s two other publications, *Landowner’s Guide to Plugging Abandoned Water Wells* (Plugging document, RG-347) and *Texas Groundwater Protection Committee* (TGPC trifold brochure, GI-088), would be provided at the next meeting.

David Van Dresar (TAGD) arrived at 9:58 AM CDST and was present for the remainder of the meeting.

3. SET FUTURE MEETING DATE

The next TGPC GWI Subcommittee meeting was scheduled for Wednesday, June 22, 2016, at 1:00 PM CDST, in TCEQ's Building F, Conference Room 2210.

4. DISCUSS CURRENT GROUNDWATER ISSUES

Kathy McCormack (TCEQ) continued the discussion of the following topics from the last GWI Subcommittee meeting.

Brush Control

There was no discussion of this issue at the meeting.

Hydraulic Fracturing

There was no discussion of this issue at the meeting.

Freshwater Mussels

There was no discussion of this issue at the meeting.

Emerging Contaminants

There was no discussion of this issue at the meeting.

Saltwater Intrusion

Kathy McCormack (TCEQ) presented a Saline Groundwater Trends and Impacts in Texas topic summary to GWI Subcommittee members. Discussion items included:

- David Villarreal (TDA) – they have had internal discussions on how to take advantage of brackish water for growing salt-tolerant specialty crops (aquaculture and field crops), especially along the coast and near hydraulic fracturing sites;
- Lynne Fahlquist (USGS) – in addition to assessing the state's brackish resources and their levels of salinity, there are various modeling tools (e.g., TWDB Groundwater Availability Models) which can investigate the possible interactions between freshwater and brackish water zones; evaluating saline water impacts over time will be important;
- John Tracy (AgriLife Research) – there has been recent research regarding the substitution of brackish water for freshwater in order to irrigate salt-tolerant turfgrass, especially where the existing groundwater is already slightly saline; there are differences in saline water sources, processes, and conjunctive uses in the various regions of Texas;
- Chris Moore (RRC) – the impact of surface brackish water application on soil structure and shallow groundwater should be investigated;
- David Van Dresar (TAGD) – there was a lot of discussion during the last Legislative session about the production and use of brackish groundwater and its impact on freshwater supplies;

- Emily Hall (DSHS) – the health and infrastructure impacts (e.g., blood pressure, heart disease, long-term health effects, cost, by-products, etc.) on small Public Water Systems (PWSs) and private wells should be explored; and,
- Linda Ruiz McCall (UTBEG) – looking at the statewide impacts of saline groundwater (near surface, at depth, aerial extent, and processes) has a lot of value.

Agricultural Chemicals

Alan Cherepon (TCEQ) presented a Pesticides Trends in Urban and Rural Areas of Texas topic summary to GWI Subcommittee members. Discussion items included:

- Alan Cherepon (TCEQ) – the pesticides that are used the most in both rural and urban Texas are herbicides, and while some are still being detected seasonally in surface water and groundwater, they do not exceed Maximum Contaminant Levels (MCLs); legacy pesticides (e.g., DDT) with long half-lives persist in surface water; use of glyphosate, certain pyrethroids, neonicotinoids, and 2,4-D have increased or are expected to increase in the future; fipronil detections in groundwater may be increasing; there are renewed concerns about pesticides affecting pollinators in a natural setting (e.g., glyphosate, imidacloprid, and other neonicotinoids);
- David Villarreal (TDA) – in general, there are very low levels of pesticide contamination in Texas groundwater;
- Lynne Fahlquist (USGS) – most of their groundwater pesticide detections have been at very low levels, so there is a connection with surface water, but the trends need to be determined; Edwards Aquifer trends in the San Antonio region seem to be seasonal (dry vs. wet weather) because it is a very transmissive system; and,
- Linda Ruiz McCall (UTBEG) – pesticides are Nonpoint Sources (NPS) of groundwater contamination due to groundwater – surface water interactions, and therefore educational outreach on the proper use of pesticides, especially in urban areas, is important.

Priority Groundwater Management Areas (PGMAs)

Kathy McCormack (TCEQ) presented a Priority Groundwater Management Area (PGMA) topic summary to GWI Subcommittee members. Discussion items included:

- Cindy Loeffler (TPWD) – it would be helpful to know the status of the PGMA areas and Groundwater Conservation District (GCD) creation within them; PGMAs are the mechanism for managing critical groundwater quantity issues, and perhaps future groundwater quality should be part of that discussion; previous PGMA reports may have some information on groundwater quality in specific areas;
- Linda Ruiz McCall (UTBEG) – groundwater quantity issues in the state can have an associated impact on groundwater quality; the geospatial aspects of groundwater contamination across the state could be reviewed and compared to existing and potential PGMAs;
- Kathy McCormack (TCEQ) – the TCEQ PGMA definition of critical groundwater problems includes shortages (quantity), land subsidence, and contamination (quality);
- Mike Chadwick (TCEQ) – any additional information (e.g., nearby recharge rates and groundwater withdrawals which could affect Desired Future Conditions) that GCDs could provide during PGMA discussions would be helpful;

- David Van Dresar (TAGD) – most of the PGMA designations are based on groundwater shortages, but it may be necessary to start talking about creating a PGMA and/or GCD based on groundwater quality concerns;
- David Villarreal (TDA) – as more freshwater mussel and spring-dependent species are added to state and federal threatened and endangered lists, it will start impacting Texas in the future; and,
- Chris Moore (RRC) – the TDLR database of undesirable water found by water well drillers may be able to provide useful information.

Border Groundwater

There was no discussion of this issue at the meeting.

Others

There was no discussion of other issues at the meeting.

5. BUSINESS DISCUSSION AND POSSIBLE ACTION

Identify Members for the Agricultural Chemicals Task Force

Alan Cherepon (TCEQ) proposed, David Van Dresar (TAGD) seconded, and all remaining GWI Subcommittee members approved the following agencies and organizations as members of the Agricultural Chemicals Task Force: TCEQ, TDA, TWDB, TAGD, TSSWCB, AgriLife Research, Texas A&M AgriLife Extension Service (“AgriLife Extension”), and USGS. These agencies and organizations would be listed on the Agricultural Chemicals Task Force Status Report, and more members could be added in the future.

Identify Members That Will Draft White Papers for the Next Meeting

White papers on selected groundwater issues will be prepared, reviewed, and approved by the GWI Subcommittee prior to being presented to the TGPC. The TGPC can then determine whether it will issue any policy statements based on these white papers; if so, these policy statements may subsequently be included in future TGPC *Legislative Reports*. GWI Subcommittee members agreed on the following issues, leaders, and suggested participants for the initial white papers:

- Brush Control – TSSWCB – TDA, TPWD, AgriLife Research, USGS, and TWDB;
- Freshwater Mussels – TPWD – UTBEG, Texas Comptroller of Public Accounts (CPA), USGS, AgriLife Extension, and U.S. Fish and Wildlife Service (FWS); and,
- PGMAAs – TCEQ – TWDB, TPWD, and TAGD.

Lynne Fahlquist (USGS) noted that they can provide their publicly-available reports and data, and status reports on their current work (if needed), as well as Subject Matter Experts (as available) for any of these issues. However, USGS would not be able to make recommendations, and they would abstain when such discussions arise.

A white paper outline was reviewed and some updates were suggested. The updated outline would be available on the TGPC GWI Subcommittee webpage (<http://tgpc.state.tx.us/tgpc-subcommittees/tgpc-groundwater-issues-subcommittee/>) under the “Additional Resources” heading. If consensus on white paper recommendations cannot be reached, policy options (including the pros and cons for each option) may be provided instead.

Lynne Fahlquist (USGS) left at 11:29 AM CDST, returned at 11:30 AM CDST, and was present for the remainder of the meeting.

6. ANNOUNCEMENTS

Lynne Fahlquist (USGS) announced that:

- They had a new digital product, the Texas Water Dashboard (<http://txpub.usgs.gov/txwaterdashboard/>) which was a web mapping application that presents USGS real-time stream, lake, reservoir, precipitation, and groundwater well data in Texas in context with current weather and hazard conditions (click “Layers” to select the well information); and,
- A report from the USGS Texas Water Science Center had been selected as a finalist as one of the best groundwater reports of 2015 from a USGS Water Science Center:
 - Brakefield, L.K., White, J.T., Houston, N.A., Thomas, J.V., 2015, *Updated numerical model with uncertainty assessment of 1950-56 drought conditions on brackish-water movement within the Edwards aquifer, San Antonio, Texas*: U.S. Geological Survey Scientific Investigations Report 2015-5081, 66 p., <http://dx.doi.org/10.3133/sir20155081>; and,
 - The corresponding fact sheet was *New Insights Into the Edwards Aquifer -- Brackish-Water Simulation, Drought, and the Role of Uncertainty Analysis*, <https://pubs.er.usgs.gov/publication/fs20163002>).

7. PUBLIC COMMENT

There was no public comment.

8. ADJOURN

Kathy McCormack (TCEQ) adjourned the meeting at approximately 11:49 AM CDST.