

GROUNDWATER ISSUES SUBCOMMITTEE  
OF THE  
TEXAS GROUNDWATER PROTECTION COMMITTEE  
RECORD OF MEETING  
First Quarter Meeting, Fiscal Year 2024

Meeting Date: September 13, 2023  
Meeting No.: 35

Place: videoconference  
Room: N/A

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**MEETING ATTENDANCE**

Subcommittee Members

Kathy McCormack (Co-Chair)  
Chris Heiligenstein (Co-Chair)  
Rebecca Storms  
Eric Lawrence  
David Villarreal  
T.J. Helton

David Van Dresar  
Allen Berthold  
Bridget Scanlon

David Gunn  
Marty Kelly  
Linzy Foster  
Ken Rainwater

Agency Staff

Alan Barraza  
Alan Cherepon  
Heather Dodson  
Grant Gibson  
Peggy Hunka  
John Malito  
James LaManna  
Leah Martinsson  
Casey Stevens  
Scott Underwood  
Omar Valdez  
Margaret Willis

Interested Parties

Monica Jacobs  
Jennifer Miller

Affiliation

Texas Commission on Environmental Quality (TCEQ)  
Railroad Commission of Texas (RRC)  
Texas Water Development Board (TWDB)  
Texas Department of State Health Services (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)  
Texas Department of Licensing and Regulation (TDLR)  
Texas Parks and Wildlife Department (TPWD)  
United States Geological Survey (USGS)  
Texas Tech University (TTU)

Affiliation

Program

TCEQ	Water Quality Division
TCEQ	Water Availability Division
TWDB	
TCEQ	Water Availability Division
TCEQ	Water Availability Division
UTBEG	
TCEQ	Water Supply Division
TAGD	
TDLR	
TCEQ	Water Availability Division
DSHS	
DSHS	

Affiliation

Kelly Hart & Hallman, LLP  
Brazos River Authority

## MEETING HANDOUTS

1. Texas Groundwater Protection Committee (TGPC) Groundwater Issues (GWI) Subcommittee Meeting Agenda, September 13, 2023
2. TGPC GWI Subcommittee Meeting Record, June 14, 2023
3. TGPC Agricultural Chemicals (AgChem) Task Force (TF) Status Report, September 13, 2023
4. TGPC Publications Status Report, September 13, 2023
5. *Texas' environmental agency enables companies to increase oilfield wastewater disposal in rivers* news article, <https://www.texastribune.org/2023/08/17/texas-oilfield-wastewater-rivers-tceq-fracking/>
6. *Tap water study detects PFAS 'forever chemicals' across the US* press release, <https://www.usgs.gov/news/national-news-release/tap-water-study-detects-pfas-forever-chemicals-across-us>
7. *'Sad tragedy': 3 people recovered from hole in Bastrop County corn field* news article, <https://www.kxan.com/news/local/bastrop-county/bcso-investigating-after-three-people-found-dead-in-hole/>
8. *Texas Department of Licensing and Regulation releases safety warning about abandoned wells* news article, <https://www.kvue.com/article/news/local/tdlr-safety-notice-abandoned-wells/269-0711e59e-c054-453a-a25d-af130932f6db>
9. *Their water is undrinkable. So these West Texas residents have taken matters into their own hands.* news article, <https://www.texastribune.org/2023/08/30/west-texas-water-residents-utlity/>
10. Draft TGPC GWI Subcommittee Annual Report
11. Groundwater Quality Monitoring Survey Summary

## MEETING RECORD OF SEPTEMBER 13, 2023

### 1. PRE-MEETING REMINDERS

Before the meeting started, Chris Heiligenstein (RRC) provided the attendees with some tips that would facilitate a productive videoconference.

### 2. CALL TO ORDER AND INTRODUCTIONS

The TGPC approves all Subcommittee products and designated TGPC members attending this Subcommittee meeting participated as an employee or representative of their agency or organization, not as a designated TGPC member. Therefore, this Subcommittee meeting was not subject to the Open Meetings Act and it was held 100% virtually. The public was also able to attend this meeting via videoconference or teleconference at no cost.

Chris Heiligenstein (RRC), Co-Chair of the GWI Subcommittee, called the meeting to order at approximately 9:34 AM CDT and then called the roll of GWI Subcommittee members. The representative from Texas A&M AgriLife Extension Service (AgriLife Extension) was not present at the meeting.

### 3. STATUS REPORTS

#### Agricultural Chemicals Task Force

Alan Cherepon (TCEQ) reported on the Agricultural Chemicals Task Force:

- Fiscal Year (FY) 2023 monitoring results:
  - 12 water well samples collected and analyzed by TCEQ, and also one duplicate and one blank; all 14 were analyzed by immunoassays for atrazine and 2,4-D and were collected from Panhandle region Public Water System (PWS) wells with previous high atrazine levels;
  - Two atrazine detects at 0.12 ppb and 0.10 ppb, and no 2,4-D detections;
  - Six of the samples were analyzed by Method 525.2 by the DSHS laboratory; there were no pesticide detections;
  - Cooperative monitoring in FY 2023 began in April 2023 and concluded in August 2023, and included samples from various aquifers; 175 water well and seven spring samples which include duplicate and blank samples for immunoassay analyses; 182 atrazine and 96 2,4-D for a total of 278 analyses; and,
  - Two atrazine detections at 0.25 ppb and 0.12 ppb, and two 2,4-D detections at 26.09 ppb (below the Maximum Contaminant Level (MCL) of 70 ppb) and 3.07 ppb.
- End-Of-Year and monitoring reports would be sent to the U.S. Environmental Protection Agency (EPA) Region 6 in Dallas in September 2023.
- The Cooperative and Panhandle sample results were entered into the TCEQ Interagency Pesticide Database (IPD) in August 2023.
- USGS data were recently checked and downloaded, but due to the different database formats and effort required to properly transfer the data we are awaiting additional sample results before entering into the IPD.

- Current totals for the three tables that comprise the IPD: Wells 7,017, Samples 15,736, and Analytes 389,127.
- The IPD and pesticide queries from the TCEQ Public Drinking Water and Source Water Protection programs would be uploaded into the U.S. EPA Central Data Exchange Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) Grant Database as soon as the queries for FY 2023 were completed.
- A table-top display and staff providing information on the TGPC, including pesticide information and data, was set up at the annual TCEQ Public Drinking Water conference in Austin on August 8 – 9, 2023.
- The revised draft FY 2024 TCEQ Quality Assurance Project Plan (QAPP) had been submitted to U.S. EPA for review and was awaiting approval.

#### TGPC Publications

Grant Gibson (TCEQ) reported on the following TGPC publication:

- *Joint Groundwater Monitoring and Contamination Report – 2023 (“Joint Report”, SFR-56)*
  - Work would begin on the *2023 Joint Report* in January 2024.

Grant Gibson (TCEQ) also reported on the following groundwater-related TCEQ publication:

- Groundwater Assessment (AS-465/24) for the *2024 Texas Integrated Report for Clean Water Act Sections 305(b) and 303(d) (“Texas Integrated Report”)*
  - Work on the Groundwater Assessment for the *2024 Texas Integrated Report* would begin in September 2023.

#### 4. SET FUTURE MEETING DATE

The next TGPC GWI Subcommittee meeting was scheduled for Wednesday, December 13, 2023, at 9:30 AM CST and it was planned as a videoconference.

#### 5. DISCUSS CURRENT GROUNDWATER ISSUES

##### Oil and Gas Produced Water

Chris Heiligenstein (RRC) referred members to a recent news article about oil and gas (O&G) produced water which indicated that:

- Untreated wastewater from conventional oil and gas activities had been permitted by RRC to be discharged to surface water in Texas and were now permitted by TCEQ, and Texas Pollutant Discharge Elimination System (TPDES) permits may soon be granted by TCEQ for this in west Texas.
- Texas water quality standards do not cover many of the constituents found in O&G produced water because the state does not have toxicity data on the chemicals that could be present.
- Wastewater treatment plants in Pennsylvania could not sufficiently reduce several water quality constituents (e.g., Total Dissolved Solids (TDS), radionuclides, and strontium) from fracking produced water before it was discharged to surface water.
- TCEQ proposed a new Oil and Gas Extraction General Permit (TXG310000) that would authorize the discharge of certain wastewater associated with oil and gas extraction activities

in the state of Texas (<https://www.tceq.texas.gov/permitting/wastewater/general>). The proposed permit would “authorize discharges of produced water from stripper wells – marginal wells with low production levels – to inland rivers and streams east of the 98th Meridian.” In addition, the proposed permit would authorize “discharges from both fracking sites and conventional drilling off the Texas coast into the Gulf of Mexico.” The proposed permit specifically states that, “This TPDES general permit does not authorize disposal of wastewater discharges by land application or evaporation from oil and gas extraction activities.” The comment period for this proposed general permit closed on June 11, 2023.

- The recently approved two-year state budget included \$5 million in funding for the Texas Produced Water Consortium (TxPWC) with their next report due to the Legislature in October 2024. Their pilot projects were planned to treat O&G produced water in “closed loop” settings in order to understand its characteristics in the Permian Basin and determine the viability of using it outside of the oil and gas industry.

### Emerging Chemical and Biological Contaminants

Chris Heiligenstein (RRC) reported that on July 5, 2023, USGS announced a recent study (<https://www.usgs.gov/news/national-news-release/tap-water-study-detects-pfas-forever-chemicals-across-us>) which estimated that 45 percent of U.S. tap water had at least one type of per- and polyfluorinated alkyl substances (PFAS). Current analytical tests can not detect all of the more than 12,000 types of PFAS; the USGS study tested for 32 of these in tap water from private water wells and government-regulated Public Water Systems (PWSs) across the country. In this study, the interim updated health advisories released in 2022 by the U.S. EPA for perfluorooctanoic acid (PFOA) and perfluorooctane sulfonate (PFOS), at 0.004 ppt and 0.02 ppt, respectively, were exceeded in every sample in which they were detected. In addition, PFAS concentrations were similar, and detected at the same frequency, between both private water wells and PWSs. Samples were collected from 716 locations representing a range of low, medium, and high human-impacted areas. Most of the exposure was observed near urban areas and potential PFAS sources (e.g., industrial or waste sites).

David Villarreal (TDA) reported that pharmaceuticals and respiratory viruses were current hot topics in other meetings that he attended.

Ken Rainwater (TTU) left the meeting at approximately 9:58 AM CDT.

### Aquifer Storage and Recovery (ASR)

John Malito (UTBEG) reported that they were working with TCEQ’s Underground Injection Control (UIC) group to evaluate using stormwater as a source for ASR.

### Abandoned Water Wells

Chris Heiligenstein (RRC) referred members to a recent news article about three people that died after jumping into an abandoned cistern in an effort to rescue their dog that had fallen in (<https://www.kxan.com/news/local/bastrop-county/bcso-investigating-after-three-people-found-dead-in-hole/>). The cistern had standing water in it about six to eight feet below ground level,

and it had accumulated a high amount of hydrogen sulfide gas which most likely was a factor in the cause of death. Casey Stevens (TDLR Water Well Drillers and Pump Installers Program) visited the site and reported that the hole at ground level was four feet in diameter and it had no cover. Unfortunately, TDLR has no jurisdiction over cisterns – perhaps this is something that could be added to the next TGPC *Legislative Report* and its recommendation related to abandoned water wells. In the wake of this tragic incident, TDLR released a new safety warning about abandoned water wells across the state (<https://www.kvue.com/article/news/local/tdlr-safety-notice-abandoned-wells/269-0711e59e-c054-453a-a25d-af130932f6db>).

David Gunn (TDLR) reported that, since the last meeting:

- 10 abandoned or deteriorated water wells had been plugged or brought into compliance;
- Enforcement action notices had been mailed to 10 violators;
- 30 additional notices would be mailed in October 2023;
- They were working with landowners on other abandoned or deteriorated water wells; and,
- They would be making a press release on this topic directed toward dove hunters.

#### Environmental Justice and Groundwater Access and Quality

Chris Heiligenstein (RRC) reported that residents near Lubbock created the South Plains Water Supply Corporation to address ongoing water quality problems with four small rural Public Water Systems (PWSs, <https://www.texastribune.org/2023/08/30/west-texas-water-residents-utility/>).

#### Groundwater Quality Monitoring

Rebecca Storms (TWDB) reported that they were still planning their 2024 groundwater quality monitoring season, but that they would definitely be going to the Panhandle to collect samples from the Ogallala and Dockum Aquifers along with some of the minor aquifers in the state.

Chris Heiligenstein (RRC) reported that they planned to revisit some of their State Managed Well Plugging legacy sites for groundwater sampling during FY 2024.

#### Brackish Groundwater

David Villarreal (TDA) noted that Texas Proposition 6, the Creation of the Water Fund Amendment, will be on the ballot in Texas on November 7, 2023. Prop 6 was a legislatively-referred constitutional amendment to create the Texas Water Fund (TWF) which would be administered by TWDB to finance water projects in the state. The TWF's New Supply Fund would be used to finance projects to create 7 million acre-feet of new water supplies by December 31, 2033. These projects would include marine and brackish water desalination, water treatment, ASR, and the development of infrastructure to transport water. David Villarreal (TDA) asked how this might affect groundwater and the TGPC, especially if O&G produced water was included. Leah Martinsson (TAGD) indicated that the enabling legislation (Senate Bill 28 – 88(R) 2023) was focused on water quantity, but the proposed infrastructure improvements may have ancillary benefits for groundwater quality.

Bridget Scanlon (UTBEG) joined the meeting at approximately 10:12 AM CDT and was present for the remainder of the meeting. John Malito (UTBEG) left the meeting at approximately 10:13 AM CDT and was absent for the remainder of the meeting.

#### Evapotranspiration Networks

Alan Barraza (TCEQ) reported that he had not attended any meetings of the TWDB TexMesonet Advisory Committee recently, but that TCEQ had been developing a general land application permit for the state (e.g., for irrigation, municipal, and domestic use; it would not be for industrial use). Marty Kelly (TPWD) asked if this general permit would replace Texas Land Application Permits (TLAPs) for municipal use, and Alan Barraza (TCEQ) indicated that this general permit would be in addition to them. Kathy McCormack (TCEQ) added that the TexMesonet was installing its 100th weather station at the Edwards Aquifer Authority (EAA) Field Research Park in northern Bexar County.

#### Others

Bridget Scanlon (UTBEG) noted that TWDB had received \$100 million from legislative appropriations for the 2022 – 2023 biennium for their Economically Distressed Areas Program (EDAP, <https://www.twdb.texas.gov/financial/programs/EDAP/index.asp>) for water and wastewater improvement projects across the state, that TAMU also had an EDAP, and asked if there were opportunities for any studies. David Villarreal (TDA) indicated that he would check to see if they were doing a survey to improve the Rio Grande Valley (RGV) colonias maps. Allen Berthold (AgriLife Research) offered to share their EDAP coordinator's contact information with Bridget Scanlon (UTBEG).

Bridget Scanlon (UTBEG) also asked about TCEQ's interest in manganese as an emerging contaminant in PWSs. James LaManna (TCEQ) indicated that they consistently do manganese sampling for all PWSs in the state, and that they were using the available emerging contaminants funding for this and other work, as needed.

Bridget Scanlon (UTBEG) added that Justin Thompson (UTBEG) was working with TWDB and TCEQ on the development of a tool to anticipate when PWSs might run out of water during drought conditions and potential solutions.

David Villarreal (TDA) reported that there was a petition for adding two blind catfish found in the Edwards Aquifer and two freshwater mussels found in six counties along the RGV to the U.S. Fish and Wildlife Service (FWS) Threatened and Endangered Species List. Marty Kelly (TPWD) indicated that they were not taking any specific actions related to the freshwater mussels at this time, and David Villarreal (TDA) thought that the blind catfish would probably be included in the existing EAA Habitat Conservation Plan.

Ken Rainwater (TTU) rejoined the meeting at approximately 10:26 AM CDT and was present for the remainder of the meeting. Marty Kelly (TPWD) and Allen Berthold (AgriLife Research) left the meeting at approximately 10:29 AM CDT, and Leah Martinsson (TAGD) left the



meeting at approximately 10:32 AM CDT, and they were absent for the remainder of the meeting.

## 6. BUSINESS DISCUSSION AND POSSIBLE ACTION

### *Draft TGPC GWI Subcommittee Annual Report*

As required by the GWI Subcommittee's *Charge* ([https://tgpc.texas.gov/wp-content/themes/responsive/subcommittees/gwissues/GWI\\_SubComm\\_Charge10Jul2019.pdf](https://tgpc.texas.gov/wp-content/themes/responsive/subcommittees/gwissues/GWI_SubComm_Charge10Jul2019.pdf)), Chris Heiligenstein (RRC) presented a draft of the *TGPC GWI Subcommittee Annual Report*. In FY 2023, the GWI Subcommittee met four times, reviewed the Agricultural Chemicals Task Force and TGPC Publications status reports, and discussed a number of topics. At the meeting on June 14, 2023, the GWI Subcommittee reviewed its *Charge* and approved an update that fixed two broken links. The GWI Subcommittee approved two white papers: *Abandoned Water Wells and the Challenges They Pose* and *Prioritizing New Drinking Water Infrastructure Funding in Texas*. The GWI Subcommittee approved its *TGPC GWI Subcommittee Fiscal Year 2024 – 2025 Activity Plan* and conducted an online Groundwater Quality Monitoring Survey. In FY 2024, the GWI Subcommittee would continue to develop one or more white papers. David Van Dresar (TAGD) moved, David Villarreal (TDA) seconded, and all remaining members approved the draft *Annual Report*. The *Annual Report* would be presented to the TGPC for approval at their next meeting.

### TGPC Groundwater Quality Monitoring Survey Results

The TGPC Groundwater Quality Monitoring Survey was conducted June 15 – July 28, 2023, and Kathy McCormack (TCEQ) presented a user-friendly summary of the 44 survey responses:

- There were 14 responses from state and federal agencies and organizations, 17 from GCDs, four from researchers, three from water utilities, four from water organizations, and two from others;
- 28 respondents had a program, six may/would have a program in the near future (August 2023 through end of 2024), and 10 did not have a program;
- Most of the datasets were in Excel, and they were not available online, but they were available upon request;
- A majority of respondents had a program, and most of the programs collected ambient (i.e., general, baseline, or background) data or were research-oriented;
- Samples were collected from each of the nine major aquifers in the state, but mostly from the Edwards (BFZ), Gulf Coast, and Trinity Aquifers, and fewer samples were collected from the state's 22 minor aquifers;
- Private water wells were the most common source of the samples, with springs and public water supply wells also being important sources;
- The majority of samples were collected annually, with other frequencies (e.g., as required) also being reported;
- Field parameters (e.g., pH, temperature, conductivity, etc.) were collected along with about a third of the groundwater samples, and inorganics and nutrients were the most common constituents for which the samples are analyzed, but no respondents reported analyzing their samples for microplastics or nanoplastics;

- Respondents reported that samples were analyzed for several specific constituents of particular interest as follows:
  - Conductivity – 24%
  - Nitrate – 23%
  - TDS – 21%
  - Arsenic – 14%
  - *E. coli* – 12%
  - Atrazine – 5%
  - PFAS – 2%
- Overall, the top three resources preventing respondents from doing, or doing more, groundwater quality monitoring were funding, staff, and time; however, for those that may/would have a program, or did not have a program, funding was the major resource that they were lacking.

David Villarreal (TDA) asked if there were any initial Lessons Learned from conducting the survey. Kathy McCormack (TCEQ) indicated that multiple answers should have been allowed for survey question 7 instead of just one. Rebecca Storms (TWDB) indicated that additional pilot testing may have been beneficial prior to conducting the survey, and that it would be good to perform this type of survey more frequently in the future.

*Draft Children’s Health and Groundwater Quality in Private Water Wells in Child Care Operations in Texas* White Paper

Margaret Willis (DSHS) reported that they were still in collaboration with a number of Subject Matter Experts (SMEs), but the Geographic Information System (GIS) analysis was complete, and some of that data was discussed. An initial draft of the *Children’s Health and Groundwater Quality in Private Water Wells in Child Care Operations in Texas* white paper was expected for the next meeting.

Discussion of White Papers Under Development

There was no discussion of this topic at the meeting.

7. ANNOUNCEMENTS

Linzy Foster (USGS) reported that they had collected groundwater PFAS samples at three U.S. Air Force bases in Texas, as well as a geophysical survey and surface water PFAS samples at one of these bases, and that those reports should be complete in FY 2024 or 2025. In addition, analysis was underway for PFAS samples collected from PWSs in San Antonio, and that this report was expected in early 2024.

Rebecca Storms (TWDB) announced that they had new project regarding a statewide database of aquifer and long-term water well test data, and that a contractor had been hired to review archived data used in groundwater models.

Kathy McCormack (TCEQ) announced that the National Habitat Conservation Plan (HCP) Coalition 2023 Annual Meeting was scheduled for November 7 – 9 , 2023, in West Virginia.

8. PUBLIC COMMENT

There was no public comment at the meeting.

9. ADJOURN

Chris Heiligenstein (RRC) adjourned the meeting at approximately 11:14 AM CDT.