

GROUNDWATER ISSUES SUBCOMMITTEE
OF THE
TEXAS GROUNDWATER PROTECTION COMMITTEE
RECORD OF MEETING
First Quarter Meeting, Fiscal Year 2025

Meeting Date: September 18, 2024
Meeting No.: 39

Place: videoconference
Room: N/A

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MEETING ATTENDANCE

Subcommittee Members

Kathy McCormack (Co-Chair)
Chris Heiligenstein
Rebecca Storms
Omar Valdez
David Villarreal
Justin Thompson

David Gunn
Guy Fipps

Ken Rainwater
Natalie Houston
Margaret Willis

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)
Bureau of Economic Geology of The University of Texas at Austin (UTBEG)
Texas Department of Licensing and Regulation (TDLR)
Texas A&M AgriLife Extension Service (AgriLife Extension)
Texas Tech University (TTU)
United States Geological Survey (USGS)
Southwest Center for Pediatric Environmental Health (SWCPEH)

Agency Staff

Abiy Berehe
Katie Brice
Alan Cherepon
Hailey Davidson

Kristin DeBone
Heather Dodson
Stephanie Escobar
Larry Estrada
Thomas Fenstemaker
Cindy Hooper
Peggy Hunka
James LaManna
John Malito
Scott Underwood

Affiliation

TCEQ
TCEQ
TCEQ
TCEQ
TCEQ
TWDB
TCEQ
TDLR
TCEQ
TCEQ
TCEQ
TCEQ
UTBEG
TCEQ

Program

Water Availability Division
Water Availability Division
Water Availability Division
Program Support and Environmental Assistance Division
Water Quality Planning Division
Water Availability Division
Radioactive Materials Division
Water Availability Division
Water Availability Division
Water Supply Division
Water Availability Division

Interested Parties

Scott Crawford

Reyna Loosmore

Jessica Price

Affiliation

Texas Tech University Health Sciences Center (TTUHSC)
El Paso
Sam Houston State University (SHSU) Institute for Homeland Security
Children's Environmental Health Network (CEHN)

MEETING HANDOUTS

1. Texas Groundwater Protection Committee (TGPC) Groundwater Issues (GWI) Subcommittee Meeting Agenda, September 18, 2024
2. TGPC GWI Subcommittee Meeting Record, June 5, 2024
3. TGPC Agricultural Chemicals (AgChem) Task Force (TF) Status Report, September 18, 2024
4. TGPC Publications Status Report, September 18, 2024
5. *New Mexico Debates What to Do With Oil and Gas Wastewater* news article, <https://insideclimatenews.org/news/16062024/new-mexico-oil-produced-water-debate/>
6. *Texas Produced Water Consortium Announces Natura Resources Partnership* news article, <https://www.morningagclips.com/texas-produced-water-consortium-announces-natura-resources-partnership/>
7. *PWS speaker warns Permian approaching injection limits* news article, <https://www.mrt.com/business/oil/article/permian-water-injection-limits-19658434.php>
8. RRC Water Protection and Commercial Recycling Proposed Rulemaking Summary, <https://rrc.texas.gov/media/1j1h30gz/plain-lang-summ-prop-new-ch4-subcha-and-subchb-amdmts-english-081524.pdf>
9. U.S. Environmental Protection Agency (EPA) Coal Ash Rule announcement, <https://www.ngwa.org/detail/news/2024/05/15/epa-announces-final-rule-on-legacy-coal-ash-impoundments-at-inactive-facilities>
10. *Toothless and Widemouth Blindcats native to Texas underground aquifer considered for endangered listing* news article, https://www.crossroadstoday.com/news/toothless-and-widemouth-blindcats-native-to-texas-underground-aquifer-considered-for-endangered-listing/article_78acae28-4f82-11ef-9f15-87e4e25f6677.html
11. Draft TGPC GWI Subcommittee Annual Report, September 18, 2024
12. Final Draft *Children's Health and Groundwater Quality at Child Care Operations Using Private Water Wells* white paper – clean
13. Final Draft *Children's Health and Groundwater Quality at Child Care Operations Using Private Water Wells* white paper – TCEQ WSD feedback
14. Final Draft *Groundwater Quality Protection Through Monitoring* white paper – markup
15. Final Draft *Groundwater Quality Protection Through Monitoring* white paper – clean
16. USGS Groundwater Updates, TGPC GWI Subcommittee Meeting, September 18, 2024

MEETING RECORD OF SEPTEMBER 18, 2024

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 9:35 AM CDT and then called the roll of GWI Subcommittee members. The representatives from the Texas State Soil and Water Conservation Board (TSSWCB), Texas Alliance of Groundwater Districts (TAGD), Texas A&M AgriLife Research (AgriLife Research), and Texas Parks and Wildlife Department (TPWD) were not present at the meeting.

3. STATUS REPORTS

Agricultural Chemicals Task Force

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

- TWDB completed its Cooperative Monitoring for Fiscal Year (FY) 2024, but TCEQ's spectrophotometer was not working and had been sent in for repair, so the immunoassay (IA) pesticide sample analysis results would hopefully be reported at the next meeting.
- The proposed FY 2025 Pesticide Monitoring Plan was primarily dependent upon TCEQ's spectrophotometer being repaired or replaced, based upon available funds; if it is not repaired or replaced, only pesticide groundwater monitoring data from USGS and other TCEQ monitoring programs would be provided to U.S. EPA.
- The TCEQ Interagency Pesticide Database (IPD) would be updated after TCEQ's spectrophotometer was repaired or replaced and IA analyses 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 6 – 7, 2024, and at the annual TAGD Groundwater Summit in San Antonio on August 20 – 22, 2024.
- Alan Cherepon (TCEQ) attended and presented a summary presentation on TCEQ's atrazine monitoring for the U.S. EPA Federal Insecticide, Fungicide, and Rodenticide (FIFRA) grant at the Atrazine Stewardship meeting at TDA's office in Austin on August 28, 2024.
- The annual Texas Plant Protection Conference in Bryan was scheduled for December 10 – 11, 2024.

- The annual U.S. EPA/States/Tribes FIFRA Fall grant meeting for FY 2025 would be held in Dallas in late October or early November 2024. Alan Cherepon (TCEQ) was scheduled to attend the meeting virtually and report on his work for TCEQ’s FIFRA grant.

David Villarreal (TDA) asked about the holding time for IA samples and the possibility of there being another spectrophotometer in the area that could be used. Alan Cherepon (TCEQ) indicated that IA samples could be stored for up to two months before being analyzed, and that he was not aware of any other local spectrophotometer.

TGPC Publications

Cindy Hooper (TCEQ) reported on the following TGPC publications:

- *Joint Groundwater Monitoring and Contamination Report – 2023* (“*Joint Report*”, TCEQ publication SFR-56)
 - The Draft 2023 *Joint Report* had been completed and sent to TCEQ agency publications for an expected publication in September 2024.
- *Activities and Recommendations of the Texas Groundwater Protection Committee: Report to the 89th Legislature* (“*Legislative Report*”, TCEQ publication SFR-47)
 - The TGPC Legislative Report Subcommittee had met on March 20 and June 5, 2024, to work on the *Legislative Report* for the 89th Legislature.
 - The *Legislative Report* for the 89th Legislature was expected to be published and distributed to the Texas Legislature by December 31, 2024.

Cindy Hooper (TCEQ) also reported on the following groundwater-related TCEQ publications:

- *Groundwater Assessment* (TCEQ publication AS-465) for the 2024 *Texas Integrated Report of Surface Water Quality for Clean Water Act Sections 305(b) and 303(d)* (“*Texas Integrated Report*”)
 - The 2024 *Groundwater Assessment* was published in June 2024.
 - The published report was included in the Draft 2024 *Texas Integrated Report*, which was approved by TCEQ on June 26, 2024. The Draft 2024 *Texas Integrated Report* would be submitted to U.S. EPA for final approval.
- *Priority Groundwater Management Areas and Groundwater Conservation Districts, Report to the 89th Texas Legislature* (“*PGMA/GCD Legislative Report*”, TCEQ publication SFR-53)
 - Work on the *PGMA/GCD Legislative Report* would be initiated in late summer 2024.

4. SET FUTURE MEETING DATE

The next TGPC GWI Subcommittee meeting was scheduled for Wednesday, December 4, 2024, at 9:30 AM CST and it was planned as a videoconference.

5. DISCUSS CURRENT GROUNDWATER ISSUES

Oil and Gas Produced Water

In a hearing in Santa Fe, New Mexico on May 13 – 17, 2024, New Mexico Environmental Department (NMED) officials presented a proposed rule for reusing oil and gas produced water

outside of the oil fields (<https://insideclimatenews.org/news/16062024/new-mexico-oil-produced-water-debate/>). The proposal prohibited discharging treated oil and gas produced water into bodies of water, but it would allow for reuse in industrial processes, such as hydrogen production, chemical manufacturing, or power plant cooling. The rule also proposed on-going pilot projects to study oil and gas produced water and treatment processes which would build on the work of the New Mexico Produced Water Research Consortium. NMED said that there was not enough data to prove that discharges of treated oil and gas produced water can be safe or what testing would be needed. As per a phone conversation with John Rhoderic (NMED Water Protection Division) on August 16, 2024, a second round of deliberations resumed on July 1, 2024, the third round concluded on August 12, 2024, and they expected to adopt the final rule in late 2024 or early 2025 as part of a comprehensive water reuse package.

In July 2024, the Texas Produced Water Consortium (TxPWC, <https://www.depts.ttu.edu/research/tx-water-consortium/>) announced a partnership with Natura Resources, LLC to research the establishment of a small, modular, dispatchable, commercial molten salt nuclear reactor for use in powering oil and gas produced water treatment facilities in the Permian Basin (<https://www.morningagclips.com/texas-produced-water-consortium-announces-natura-resources-partnership/>). Final issuance of a Nuclear Regulatory Commission-approved construction permit for the unit was expected in September 2024.

On August 14, 2024, a speaker at the Produced Water Society (PWS, <https://producedwatersociety.com/>) Permian Basin Conference warned that demand for the disposal of oil and gas produced water could exceed current operational injection capacity around 2030 (<https://www.mrt.com/business/oil/article/permian-water-injection-limits-19658434.php>). The speaker's company:

- Had a pilot project in a lab in south Midland County growing alfalfa in soils from three counties and using oil and gas produced water with various amounts of Total Dissolved Solids (TDS) removed;
- Was working with RRC for permits for a field-scale version of the project in Reeves County;
- Was working with TCEQ for permits to discharge some of the treated oil and gas produced water into the Pecos River; and,
- Believed that aquifer recharge was the safest and most viable option for the beneficial reuse of oil and gas produced water.

On August 15, 2024, RRC approved publication of proposed rule changes in the *Texas Register* on August 30, 2024, with the public comment period originally closing on September 30, 2024, but being extended to October 15, 2024 (<https://rrc.texas.gov/media/1j1h30gz/plain-lang-summ-prop-new-ch4-subcha-and-subchb-amdmts-english-081524.pdf>, <https://rrc.texas.gov/general-counsel/rules/proposed-rules/>). Among other changes, they proposed to amend Title 16 Texas Administrative Code (TAC) Part 1 Chapters 3 (Oil and Gas Division) and 4 (Environmental Protection) to update oil and gas waste management procedures and incorporate recent legislation (<https://rrc.texas.gov/media/hhup0zyl/prop-new-and-amend-ch4-and-3-8-08152024-sig.pdf>), including recycling of oil and gas produced water. Chris Heiligenstein (RRC) added that Chapter 3 information was not eliminated, but only moved to Chapter 4.

Justin Thompson (UTBEG) asked about TCEQ's and TGPC's position on this topic, in general, and on using oil and gas produced water as a source for Aquifer Storage and Recovery (ASR), in particular. Thomas Fenstermaker (TCEQ) indicated that high-level internal discussions and collaboration on this topic were on-going, and Kathy McCormack (TCEQ) indicated that the TGPC had concerns related to water quality and protection, public health, and natural resources from the surface application of untreated oil and gas produced water on non-food or food crops, the discharge of untreated oil and gas produced water to surface water, and the discharge of oil and gas produced water (untreated or treated) to groundwater (e.g., Managed Aquifer Recharge (MAR) or ASR).

Emerging Chemical and Biological Contaminants

David Villarreal (TDA) reported that recent flooding had been adding contaminants (e.g., in urban and industrial runoff, attached to sediments, etc.) to rivers and lakes, and that ship ballast water and recent hurricanes had been adding contaminants to coastal ports, bays, and estuaries.

Aquifer Storage and Recovery (ASR)

Rebecca Storms (TWDB) reported that their Lower Valley Water District ASR study was under review and should be completed by the end of 2024.

Abandoned Water Wells

David Gunn (TDLR) reported that they had recently issued a press release aimed at dove hunters to remind them to stay vigilant for abandoned or deteriorated water wells and report any they come across (e.g., https://www.crossroadstoday.com/news/hunters-warned-about-abandoned-wells-as-dove-season-in-texas-begins/article_71378c98-64d2-11ef-95e5-331c7c3d1c77.html and http://www.ntxe-news.com/artman/publish/article_139002.shtml). David Gunn (TDLR) added that Larry Estrada (TDLR) had recently found and inspected 13 abandoned water wells.

Groundwater Quality Monitoring

Rebecca Storms (TWDB) reported that their FY 2024 groundwater quality sampling program had been completed at the end of August 2024, and that they were planning on sampling the Gulf Coast Aquifer and surrounding minor aquifers in FY 2025. Their Groundwater Monitoring Department was requesting additional funding from the Legislature for their water quality lab contract which would assist with increased analytical costs, special studies, and expanded monitoring efforts.

Brackish Groundwater

There was no discussion of this topic at the meeting.

Evapotranspiration Networks

Guy Fipps (AgriLife Extension) reported that a Texas evapotranspiration (ET) application had recently been released, and that agricultural irrigators were using it. He added that the TexMesonet had received authorization to include ET monitoring during the last Legislative session, but it had not received funding. Rebecca Storms (TWDB) reported that they were requesting additional resources from the Legislature to help achieve statewide weather station coverage through TWDB installations and partnerships, and to also support a statewide ET dataset and associated data products. She added that Nathan Leber (TWDB) was their contact for this. Guy Fipps (AgriLife Extension) noted that the TexMesonet would be meeting on September 19, 2024.

David Villarreal (TDA) reported that the Water Conservation Advisory Council (WCAC) was planning on submitting a Legislative recommendation that \$1.2M be provided to TWDB to support statewide ET Network efforts.

Guy Fipps (AgriLife Extension) also reported that the WaterMyYard program continued to grow with the addition of two new partners – the City of Corpus Christi and certain areas around Houston.

Others

On May 8, 2024, the U.S. EPA announced that they were finalizing a rule regarding the control and clean-up of contamination created by the disposal of coal combustion residuals (CCR or coal ash) at inactive surface impoundments at inactive power plants and historical coal ash disposal areas (<https://www.ngwa.org/detail/news/2024/05/15/epa-announces-final-rule-on-legacy-coal-ash-impoundments-at-inactive-facilities>, <https://www.federalregister.gov/documents/2024/05/08/2024-09157/hazardous-and-solid-waste-management-system-disposal-of-coal-combustion-residuals-from-electric>). This final rule would be effective on November 4, 2024. Coal ash contains contaminants which are associated with cancer and various other serious health effects, and inactive coal ash surface impoundments at inactive facilities are more likely to be unlined and unmonitored. The new safeguards for these legacy coal ash surface impoundments largely mirror those for inactive impoundments at active facilities, including requiring the proper closure of the impoundments and remediating coal ash contamination in groundwater.

On July 31, 2024, the U.S. Fish and Wildlife Service (FWS) announced an extension of their decision on whether to list the toothless blindcat and widemouth blindcat as endangered species by six months (i.e., to February 22, 2025), and that a 30-day public comment period would be reopened from August 1, 2024 to September 3, 2024 (https://www.crossroadstoday.com/news/toothless-and-widemouth-blindcats-native-to-texas-underground-aquifer-considered-for-endangered-listing/article_78acae28-4f82-11ef-9f15-87e4e25f6677.html). These two blind catfish are native to the Edwards Aquifer.

6. BUSINESS DISCUSSION AND POSSIBLE ACTION

Draft TGPC GWI Subcommittee *Annual Report*

During the meeting, this agenda item was moved to after the discussion of the two white papers. As required by the GWI Subcommittee's *Charge* (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 2024, 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 5, 2024, the GWI Subcommittee reviewed its *Charge* and did not have any changes to recommend to the TGPC. In FY 2025, the GWI Subcommittee would continue to develop one or more white papers and develop the next edition of its biannual *Activity Plan*. David Villarreal (TDA) moved, David Gunn (TDLR) seconded, and all remaining members approved the draft *Annual Report* with one minor change (i.e., the removal of the groundwater quality monitoring white paper from FY 2025 plans). The *Annual Report* would be presented to the TGPC for final approval at their next meeting.

Final Draft *Children's Health and Groundwater Quality at Child Care Operations Using Private Water Wells* White Paper

Margaret Willis (SWCPEH) reviewed the final draft of the *Children's Health and Groundwater Quality at Child Care Operations Using Private Water Wells* white paper. Prior to the meeting, DSHS had provided details in Appendix B on the Geographic Information Systems (GIS) methodology used for some of the analyses in the white paper, and TWDB was asked to review the references to their databases in Appendix B. TCEQ had also documented some feedback on the white paper prior to the meeting. An updated final draft would be presented at the next meeting.

John Malito (UTBEG) joined the meeting at approximately 10:24 AM CDT and was present for the remainder of the meeting. Justin Thompson (UTBEG) left the meeting at approximately 10:29 AM CDT and was absent for the remainder of the meeting.

Final Draft *Groundwater Quality Protection Through Monitoring* White Paper

Kathy McCormack (TCEQ) reviewed the final draft of the *Groundwater Quality Protection Through Monitoring* white paper and noted the good feedback received on the initial draft from UTBEG, RRC, TCEQ, TTU, and TAGD. Rebecca Storms (TWDB) moved, Chris Heiligenstein (RRC) seconded, and all remaining members approved the final draft *Groundwater Quality Protection Through Monitoring* white paper. The white paper would be presented to the TGPC for final approval at their next meeting. Rebecca Storms (TWDB), Cindy Hooper (TCEQ), and Heather Dodson (TWDB) were thanked for their year and half of work on both this white paper and the TGPC 2023 Groundwater Quality Monitoring Survey on which the white paper was based.

Discussion of White Papers Under Development

There was no discussion of this topic at the meeting.

7. ANNOUNCEMENTS

Natalie Houston (USGS) announced several items of potential interest to the members:

- Groundwater Watch was returning and more information would be available soon; in the meantime, a new National Groundwater Conditions application could be accessed at <https://waterdata.usgs.gov/blog/groundwater-levels-app/>.
- PFAS sampling was complete for approximately 25 water wells in the greater Houston area from a mix of private and small Public Water System (PWS) wells; some of these wells had been revisited as they were part of the old Trinity National Water-Quality Assessment (NAWQA) network. Their report was undergoing internal review.
- Geophysical work was underway at Randolph Air Force Base in San Antonio.
- Water quality monitoring of nitrate/nitrite at Jacob's Well had begun again after funding was previously dropped; data could be accessed at <https://waterdata.usgs.gov/monitoring-location/08170990/#parameterCode=99133&period=P7D&showMedian=false>.
- A webinar on their Bottled Water Project would be hosted by Andy Teeple (USGS) on October 3, 2024, at 12:00 PM CDT; to sign up for the mailing list, subscriber preferences could be accessed at <https://public.govdelivery.com/accounts/USDOIGS/subscriber/new?preferences=true#tab1>.
- Their recent publication on naturally-occurring lithium in groundwater nationwide was available at <https://www.usgs.gov/news/national-news-release/usgs-led-study-estimates-lithium-groundwater-can-be-used-drinking-water>.

Ken Rainwater (TTU) left the meeting at approximately 10:52 AM CDT and was absent for the remainder of the meeting.

8. PUBLIC COMMENT

David Villarreal (TDA) asked about the status of the TGPC *Legislative Report*. Abiy Berehe (TCEQ) indicated that the TGPC would be approving the final draft of the report at their meeting on October 9, 2024.

9. ADJOURN

Chris Heiligenstein (RRC) adjourned the meeting at approximately 10:59 AM CDT.