

GROUNDWATER ISSUES SUBCOMMITTEE
OF THE
TEXAS GROUNDWATER PROTECTION COMMITTEE
RECORD OF MEETING
First Quarter Meeting, Fiscal Year 2020

Meeting Date: September 4, 2019
Meeting No.: 19

Place: TCEQ Campus, Bldg F
Room: 2210

TABLE OF CONTENTS

MEETING ATTENDANCE	2
MEETING HANDOUTS	3
MEETING RECORD OF SEPTEMBER 4, 2019.....	4
1. CALL TO ORDER AND INTRODUCTIONS	4
2. STATUS REPORTS	4
Agricultural Chemicals Task Force	4
TGPC Publications.....	4
3. SET FUTURE MEETING DATE	5
4. DISCUSS CURRENT GROUNDWATER ISSUES	5
Hydraulic Fracturing	5
Oil and Gas Produced Water.....	5
Emerging Contaminants.....	7
Aquifer Storage and Recovery (ASR)	7
Abandoned Water Wells	7
Wellhead Impacts After Natural Disasters	7
Brackish Groundwater	7
Desalination	7
Endangered Species	7
Coal Ash from Power Plants	7
Anthropogenic Mixing of Groundwater	7
Others	8
5. BUSINESS DISCUSSION AND POSSIBLE ACTION.....	8
Draft TGPC GWI Subcommittee Fiscal Year 2019 <i>Annual Report</i>	8
TGPC GWI Subcommittee White Paper Outline Update.....	8
Draft <i>How is Groundwater Quality Affected by Anthropogenic Mixing of Groundwater ?</i> White Paper.....	8
Discussion of White Papers Under Development.....	8
6. ANNOUNCEMENTS.....	8
7. PUBLIC COMMENT	9
8. ADJOURN.....	9

MEETING ATTENDANCE

Subcommittee Members

Kathy McCormack (Co-Chair)
Alan Cherepon
Leslie Bruce (Co-Chair)
Evelyn Reátegui-Zirena
Natalie Ballew
David Villarreal
T.J. Helton

Leah Martinsson
John Tracy
Kimberly Horndeski
Ken Rainwater
Lynne Fahlquist

Agency Staff

Abiy Berehe
Tim Cawthon
Grant J. Gibson
James Harcourt
Cindy Hooper
Tiffany Humberson
Jessica Kessinger
Lauren McFarland
David Murry
L. Scott Underwood

Interested Parties

Gary Phillips

Affiliation

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

Affiliation

Program

TCEQ	Water Availability Division
TCEQ	Water Quality Planning Division
TCEQ	Water Availability Division
RRC	Oil & Gas Division
TCEQ	Water Availability Division
RRC	Oil & Gas Division
DSHS	Health Assessment & Toxicology Program
RRC	Oil & Gas Division
TCEQ	Radioactive Materials Division
TCEQ	Water Availability Division

Affiliation

LyondellBasell

MEETING HANDOUTS

1. Texas Groundwater Protection Committee (TGPC) Groundwater Issues (GWI) Subcommittee Meeting Agenda, September 4, 2019
2. TGPC GWI Subcommittee Meeting Record, June 12, 2019
3. TGPC Agricultural Chemicals (AgChem) Task Force (TF) Status Report, September 4, 2019
4. TGPC Publications Status Report, September 4, 2019
5. Excerpts from *Study of Oil and Gas Extraction Wastewater Management Under the Clean Water Act* (EPA-821-R19-001, Draft May 2019),
https://www.epa.gov/sites/production/files/2019-05/documents/oil-and-gas-study_draft_05-2019.pdf
6. TCEQ e-clip, *New laws could pump billions of dollars into Permian Basin's rapidly growing water recycling industry*, story link
<https://www.houstonchronicle.com/business/energy/article/New-laws-could-pump-billions-of-dollars-into-14273540.php>, August 2, 2019
7. TCEQ e-clip, *Texas Commission on Environmental Quality and Oklahoma Department of Environmental Quality seek authority to issue permits for oilfield wastewater*, story link
<https://www.jdsupra.com/legalnews/texas-commission-on-environmental-33154/>, August 21, 2019
8. TCEQ GovDelivery email, *The Advocate: Oil and Gas Discharge Delegation Stakeholder Meeting*, August 21, 2019
9. Excerpts from *Produced Water Report: Regulations, Current Practices, and Research Needs*, <http://www.gwpc.org/producedwater>, June 2019
10. TDLR press release, *TDLR urges landowners to properly cap or plug abandoned or deteriorated water wells*, August 26, 2019
11. National Ground Water Association (NGWA) press release, *NGWA Reports over 2.5 Million Households on Wells Potentially Affected by Flooding in 1st Half of 2019*, June 12, 2019
12. Draft TGPC GWI Subcommittee Fiscal Year 2019 Annual Report, September 4, 2019
13. TGPC GWI Subcommittee White Paper Outline Update, September 4, 2019

The following items were also on display on the handout table:

1. TGPC Public Information Act Policy
2. *Joint Groundwater Monitoring and Contamination Report – 2018* (TCEQ SFR-056/18),
https://www.tceq.texas.gov/assets/public/comm_exec/pubs/sfr/056-18.pdf

MEETING RECORD OF SEPTEMBER 4, 2019

1. CALL TO ORDER AND INTRODUCTIONS

Kathy McCormack (TCEQ), Co-Chair of the TGPC GWI Subcommittee, called the meeting to order at approximately 9:36 AM CDT. GWI Subcommittee members were introduced. The representatives from the Bureau of Economic Geology of The University of Texas at Austin (UTBEG), Texas Department of Licensing and Regulation (TDLR), and Texas A&M AgriLife Extension Service (AgriLife Extension) were not present at the meeting.

2. STATUS REPORTS

Agricultural Chemicals Task Force

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

- TCEQ Pesticide Monitoring (northern Panhandle):
 - 19 samples, immunoassay analysis (IA) for atrazine and 2,4-D;
 - Three low atrazine detects (high of 0.50 ppb), one low 2,4-D detect (0.72 ppb); and,
 - Lab results: Atrazine detect in one well (0.18 ppb); Bromacil (2.7 ppb) and Simazine (0.14 ppb) detects in one well.
- Cooperative Pesticide Monitoring Program with TWDB (Trinity, Edwards, and Edwards-Trinity Aquifers and several minor aquifers):
 - 131 samples, all IA for atrazine, 79 analyzed for 2,4-D; and,
 - Three atrazine detects (high of 0.06 ppb), six low 2,4-D detects (high 0.75 ppb).
- Pesticide water monitoring data from other TCEQ programs was scheduled to be requested in September 2019.
- The update and quality assurance and control activities on the Interagency Pesticide Database (IPD) had been completed for all 2019 groundwater monitoring samples from TCEQ and the Cooperative Pesticide Monitoring Program.
- TCEQ provided displays and personnel for the Southern Regional Water Conference in College Station on July 24 – 25, 2019, the annual Public Drinking Water Conference in Austin on August 8 – 9, 2019, and the Milam/Burleson Counties Groundwater Summit in Caldwell on August 14, 2019.

TGPC Publications

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

- *Joint Groundwater Monitoring and Contamination Report – 2018* (“*Joint Report*”, SFR-056):
 - Staff had published and distributed the 2018 *Joint Report*; and,
 - The report was posted on the TCEQ’s and TGPC’s websites and a notice of its publication was sent to County Judges, County Health Officials, and Groundwater Conservation Districts.

3. SET FUTURE MEETING DATE

The next TGPC GWI Subcommittee meeting was scheduled for Wednesday, December 4, 2019, at 9:30 AM CST, in TCEQ's Building F, Conference Room 2210.

4. DISCUSS CURRENT GROUNDWATER ISSUES

Hydraulic Fracturing

There was no discussion of this topic at the meeting.

Oil and Gas Produced Water

Kathy McCormack (TCEQ) reviewed several handouts related to produced water:

- Excerpts from *Study of Oil and Gas Extraction Wastewater Management Under the Clean Water Act* (EPA-821-R19-001, Draft May 2019),
https://www.epa.gov/sites/production/files/2019-05/documents/oil-and-gas-study_draft_05-2019.pdf
 - This draft report had an interesting section describing the U.S. Environmental Protection Agency's (EPA's) outreach to stakeholders across the country, including the major themes that they heard from state agencies.
- TCEQ e-clip, *New laws could pump billions of dollars into Permian Basin's rapidly growing water recycling industry*, story link
<https://www.houstonchronicle.com/business/energy/article/New-laws-could-pump-billions-of-dollars-into-14273540.php>, August 2, 2019
 - This article noted that, "For the moment, the water recycling efforts remain limited to reuse in the oilfield, but some in the industry see the potential of using recycled oilfield water for dust control at construction sites, industrial cooling and irrigation at golf courses." In addition, "Texas House Bill 3246 [which became effective on September 1, 2019] determined that oil and gas operators own the produced water and they could sell it to recyclers, who then take over legal responsibility for the toxic brine."
- TCEQ e-clip, *Texas Commission on Environmental Quality and Oklahoma Department of Environmental Quality seek authority to issue permits for oilfield wastewater*, story link
<https://www.jdsupra.com/legalnews/texas-commission-on-environmental-33154/>, August 21, 2019
 - This article noted that Texas House Bill 2771 became effective on September 1, 2019 "requiring the TCEQ to submit to EPA no later than September 1, 2021 a request for delegation of NPDES permitting authority for discharges of produced water, hydrostatic test water and gas plant effluent associated with oil and gas activities, pipelines and natural gas processing plants that are under Railroad Commission of Texas ("RRC") jurisdiction. The bill also transfers state authority to regulate permitting for those discharges from the RRC to TCEQ, although such transfer of authority would not be effective until TCEQ obtains primacy from EPA."

- TCEQ GovDelivery email, *The Advocate: Oil and Gas Discharge Delegation Stakeholder Meeting*, August 21, 2019
 - This announcement was in regards to a “stakeholder meeting to discuss TCEQ’s activities and schedule for implementing House Bill 2771.”
- Excerpts from *Produced Water Report: Regulations, Current Practices, and Research Needs*, <http://www.gwpc.org/producedwater>, June 2019
 - This Ground Water Protection Council (GWPC) report “addresses the drivers and potential benefits for increasing produced water reuse both in unconventional oil and gas operations and outside the industry, as well as complex economic, scientific, regulatory, and policy considerations, specifically with respect to risk management. It also identifies research that will be needed to enable informed decision-making on produced water reuse, as well as regulatory and policy initiatives that would facilitate reuse.”

James Harcourt (RRC) indicated that there were a number of uncertainties related to recycling produced water. Tiffany Humberson (RRC) added that there was an economic cost to treating produced water. John Tracy (AgriLife Research) noted that this was not a geographically homogenous situation, and that differences in produced water exist across the country.

David Villarreal (TDA) reported that:

- The previous month’s Industry Council on the Environment (ICE) meeting in Austin had a presentation on emerging technologies for wastewater reuse in the Eagle Ford Shale region;
- The United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Wildlife Subcommittee was providing funding for aquaculture, and that TDA and USDA were investigating the possible use of produced water and/or brackish groundwater for aquatic species (e.g., shrimp and oysters) that could tolerate high Total Dissolved Solids (TDS); and,
- The Texas Comptroller of Public Accounts (CPA) had a Dune Sagebrush Lizard project whose Texas habitat lies in the middle of the Permian Basin, the large oil and gas production region in west Texas.

James Harcourt (RRC) wanted to better understand how produced water and recycled water were accounted for in regards to Enhanced Oil Recovery (EOR) in conventional oil and gas wells. Tiffany Humberson (RRC) added that UTBEG was doing a large produced water chemical analysis study.

Natalie Ballew (TWDB) reported that participants in the legislative panel at the recent TAGD Groundwater Summit had said that produced water would be a big topic in the upcoming Texas interim and legislative sessions.

Leah Martinsson (TAGD) left at approximately 10:30 AM CDT and was absent for the remainder of the meeting.

Emerging Contaminants

There was no discussion of this topic at the meeting.

Aquifer Storage and Recovery (ASR)

There was no discussion of this topic at the meeting.

Abandoned Water Wells

Kathy McCormack (TCEQ) presented a TDLR press release, *TDLR urges landowners to properly cap or plug abandoned or deteriorated water wells*, and noted that the TGPC's *Landowner's Guide to Plugging Abandoned Water Wells* (TCEQ RG-347, https://www.tceq.texas.gov/assets/public/comm_exec/pubs/rg/rg-347.pdf) was one of the references.

Wellhead Impacts After Natural Disasters

Kathy McCormack (TCEQ) presented a NGWA press release, *NGWA Reports over 2.5 Million Households on Wells Potentially Affected by Flooding in 1st Half of 2019*, and noted that the estimated number of households in Texas with a water well source in flood-impacted counties in the first half of 2019 was 189,235.

Brackish Groundwater

There was no discussion of this topic at the meeting.

Desalination

Ken Rainwater (TTU) reported that the Texas Desal 2019 Annual Conference was being held in Austin the next day.

Endangered Species

There was no discussion of this topic at the meeting.

Coal Ash from Power Plants

There was no discussion of this topic at the meeting.

Anthropogenic Mixing of Groundwater

There was no discussion of this topic at the meeting.

Others

There were no other topics discussed at the meeting.

5. BUSINESS DISCUSSION AND POSSIBLE ACTION

Draft TGPC GWI Subcommittee Fiscal Year 2019 *Annual Report*

Evelyn Reátegui-Zirena (DSHS) left at approximately 11:05 AM CDT, returned at approximately 11:09 AM CDT, and was present for the remainder of the meeting.

Kathy McCormack (TCEQ) presented the draft TGPC GWI Subcommittee Fiscal Year 2019 *Annual Report*. Ken Rainwater (TTU) proposed, Leslie Bruce (RRC) seconded, and all remaining members approved the draft *Annual Report* with the changes discussed at the meeting (i.e., removing the DRAFT watermark and the highlighting on page 2). The *Annual Report* would be presented to the TGPC for approval at their next meeting.

TGPC GWI Subcommittee White Paper Outline Update

Kathy McCormack (TCEQ) presented an update to the TGPC GWI Subcommittee White Paper Outline and noted that the wording in the last main bullet on page 4 (i.e., the third primary goal of the TGPC GWI Subcommittee) had been updated to match the wording in the current TGPC GWI Subcommittee *Charge* that was approved by the TGPC on July 10, 2019. Natalie Ballew (TWDB) proposed, Leslie Bruce (RRC) seconded, and all remaining members approved the white paper outline update. The white paper outline update would be posted on the TGPC website.

Draft *How is Groundwater Quality Affected by Anthropogenic Mixing of Groundwater ?* White Paper

Kathy McCormack (TCEQ) reported that they were waiting on input from a subject matter expert on this topic and may have more information at the next meeting.

Discussion of White Papers Under Development

There was no discussion of white papers under development at the meeting.

6. ANNOUNCEMENTS

Kathy McCormack (TCEQ) announced that:

- Cary Betz (TCEQ), the Designated Chair of the TGPC, had retired at the end of August 2019, and that TCEQ was in the process of designating a replacement; and,
- Rosario Sanchez (Texas Water Resources Institute) had provided a Spanish translation of the *Transboundary Groundwater Resources along the Texas-Mexico Border* white paper and it was posted on the TGPC website (https://tgpc.texas.gov/gwissues/white_papers/BorderGWwhitepaper10Jul2019esp.pdf).

Lynne Fahlquist (USGS) announced that:

- *Adjudicating Groundwater: A Judge's Guide to Understanding Groundwater and Modeling* (<https://www.judges.org/dtw/adjudicating-groundwater/>) had recently been published. USGS scientists contributed to the groundwater modeling section.
- The National Water Quality Project (formerly known as the National Water Quality Program) in its current form was being sunsetted in 2019 after three decades of contributions to water quality science. Development of future National Water Quality Project directions, monitoring, and plans were ongoing.
- USGS was undergoing three levels of reorganization:
 - The Department of Interior (DOI) had implemented a regional-level reorganization. Texas and Oklahoma were located in Unified Region 6. New regional boundaries were available at <https://www.federaltimes.com/management/2018/08/29/interiorfinalizes-boundaries-of-12-new-unified-regions/>.
 - As part of the DOI reorganization, USGS had also reorganized its regional boundaries to reflect those of the DOI Unified Regions. Texas and Oklahoma were now part of the Southeast Region of USGS. As a result of the regional USGS reorganization, Texas and Oklahoma would merge to form one yet-to-be-named Water Science Center. Their duties and functions would largely remain the same and likely would not affect their external partners and collaborators in either state. Texas Water Science Center Director Tim Raines would be the Director of the combined Water Science Center organizational unit. See <https://www.usgs.gov/media/images/usgs-regional-map> for more information.
 - The Water Mission Area of USGS was also undergoing a reorganization. See the USGS Mission Areas at <https://www.usgs.gov/science/mission-areas> for more information. The Water Mission Area organizational structure, as well as other strategic information, was at <https://www.usgs.gov/mission-areas/water-resources/about/message-associate-directorwater>.

7. PUBLIC COMMENT

There was no public comment at the meeting.

8. ADJOURN

Kathy McCormack (TCEQ) adjourned the meeting at approximately 11:19 AM CDT.