#### **MINUTES**

OF THE

#### SOUTHWESTERN TRAVIS COUNTY GROUNDWATER CONSERVATION DISTRICT

At the

Bee Cave School House 13333-A Highway 71 West Bee Cave, Texas 78738

(the Bee Cave Schoolhouse is located adjacent to Lake Travis Fire and Rescue Station 603)

#### Wednesday, November 14, 2018 at 10:00 am

1. Call to order, declare meeting open to the public, and take roll.

Director and Board President Scadden called the meeting of the Southwestern Travis County Groundwater Conservation District (SWTCGCD or District) Board of Directors to order at 10:01 AM on November 14, 2018. Six District Directors were present, including Directors Davis, Dower, Hennings, O'Malia, Scadden and Urie. Director Buddin was absent. Also present were visitors Representative-Elect Vikki Goodwin (part time), Bob Moore from Travis County, Saj Zappitello from City of Austin, John Hatchett, Gene Lowenthal and Pete Golde.

The meeting sign-in sheet is attached as Exhibit A

2. Public comments.

Director Scadden called for public comments and there were no public comments.

3. Discuss, consider and take action on previous meeting minutes

Approval of the October 10, 2018 minutes.

Upon motion by Director Davis, seconded by Director Dower, the Board approved the minutes of the October 10, 2018 Board meeting without changes - 6 ayes to 0 nays.

The approved meeting minutes are attached as Exhibit B for reference.

#### 4. Committee Reports

a. Finance – Director Scadden reviewed the SWTCGCD Financial Summary report provided by Director Buddin. Checking account balance is currently \$990.34. Director Davis said that the balance on the bank statement is \$1,170.38 and Director O'Malia advised that a refund of \$293.54 had been received from TML on the Bonding premium.

#### The SWTCGCD Financial Summary report is attached as Exhibit C

b. Legislative – Director Davis explained that with the change in leadership (Rep.-Elect Goodwin replacing Representative Workman) we will need to wait until January 2019 to file a bill since Representative Workman can't file it and Representative-Elect won't take office until January. The last date for filing is March 6<sup>th</sup>. Director Davis further advised that all committees serve at the pleasure of the Lt. Governor and there do not appear to be any changes so Senator Charles Perry should remain as Chair of the Agriculture, Water

& Rural Affairs Committee. Bob Moore from Travis County said that it will be important to work together due to the short timeline and notice requirements. Director Davis added that the current draft bill still requires a District confirmation election. Anything other than changing the election date should be placed in a separate bill.

#### A copy of the current draft bill is attached as Exhibit D

c. Science-Outreach – Director Hennings brought examples of Geo-Signs and reiterated that the Bureau of Economic Geology (BEG) at the University of Texas has an interest in creating a southwestern Travis County groundwater (Trinity Aquifer) Geo-Sign. The sign could possibly be placed in the Bee Cave Sculpture Park/Schoolhouse, West Cave Preserve or at Hamilton Pool. Director Davis offered to discuss with West Cave Preserve. Director Scadden opined that it would be best to be able to show an example of the actual proposed sign graphic in pursuing permission from Bee Cave for placement of the sign. Director Scadden asked for a motion to ask BEG to create a Geo-Sign graphic for the Trinity Aquifer in southwestern Travis County. Director O'Malia made the motion and after discussion it was agreed that the motion should be "The Board supports The Bureau of Economic Geology's effort to create educational signage (Geo-Sign) regarding geology of western Travis County".

# Upon motion by Director O'Malia, seconded by Director Urie, the Board approved the motion – 6 Ayes to 0 Nays

Director Hennings shared letter-sized versions of posters used at the Dripping Springs Rainwater Revival Festival and said she would send them to Director Dower for posting on the website. She then discussed the graphics including geological maps and cross sections near Lake Travis, figures showing how surface water and groundwater are connected, details of Texas water law, regional GCDs surrounding SWTCGCD, and a map showing the distribution of domestic, irrigation and monitor wells in southwestern Travis County.

#### The poster pages are attached as Exhibit E

Director Urie asked if there is any data on recent rainfall v. well levels. The Lovelady monitoring well recovered from Stage 2 to no Stage. Director Scadden noted that there is also a monitoring well at the Travis County maintenance facility on Hamilton Pool Road. BSEACD collects data from these wells and publishes it and he asked if we can put this data on the SWTCGCD website. Director Dower responded - yes. Director Hennings asked if the SWTCGCD can thank the BEG with a thank you note. Director Scadden said that he would do that and Director Hennings said she would provide the names and address for the note. The Board consensus was in agreement with the proposed thank you note.

Director Hennings briefed the Board on her attendance at the November 5<sup>th</sup> Groundwater Management Area 9 (GMA 9) meeting. The next GMA 9 meeting is in Kerr County on February 4, 2019. The GMA 9 Board is made up of 9 representatives from the current 9 GCDs in the GMA (Bandera County River Authority & Ground Water District, Barton Springs/Edwards Aquifer CD, Blanco-Pedernales GCD, Comal Trinity GCD, Cow Creek GCD, Hays Trinity GCD, Headwaters UWCD, Medina County GCD, and Trinity Glen Rose GCD). SWTCGCD was represented by Vicky Kennedy from Travis County and currently has no voting authority. The GMA 9 Board voted to approve removal of the Medina County GCD from GMA 9 because it only has two square miles of area in GMA 9. Steven Allen, the

Texas Water Development Board Manager for Groundwater Management Plans, requested that the GMAs stagger the schedule for submittal of plans to better manage workload. There was an extensive discussion of differing rules between GCDs, even adjacent GCDs, and a spreadsheet based "Common Rules Analysis" which compares rules from different GCDs. There are often different rules for the same things due to differences in the GCDs enabling legislation. Director Hennings explained that GMA 9 (not the GCDs) sets the Desired Final Condition (DFC) for the GMA every 5 years. There have been 2 cycles so far and the third cycle DFC proposal is due May 1, 2021 with final DFC submission by January 5, 2022. Ultimately the DFCs are used in the Texas Water Development Board model. GMA 9 contracted with Southwest Research Institute (SWRI) in San Antonio to develop the DFC. Director Scadden stated for the record that INTERA (his employer) is a subcontractor to SWRI and Director Hennings added that her husband is a trustee to the board of SWRI.

#### Representative-Elect Goodwin arrived at 10:45 AM

Director Hennings shared that she is authoring an article for the Westlake Picayune at the request of Mayor Anthony on groundwater titled "Hill Country Water and West Lake Hills" and would suggest posting it on the SWTCGCD website.

Director Davis advised of an upcoming educational opportunity with the Water for Texas conference on January 23<sup>rd</sup> through January 25<sup>th</sup>, 2019 at the University of Texas AT&T Executive Education & Conference Center. Registration is \$275 until November 30<sup>th</sup>. Director Davis will send out the web-link for the conference.

Director Hennings advised that the Texas A&M questionnaire about GCDs is due by November 26<sup>th</sup>. Should we defer until next year after confirmation? Ron Fieseler wants to come to a SWTCGCD meeting to explain GMA 9 requirements of its member GCDs. Director Hennings said she met the Hays Trinity GCD General Manager Rick Broun and Hydrologist Jeff Walker at the Rainwater Revival Festival and again at the GMA 9 meeting. They have about 50 monitoring wells and four employees. Linda Kaye Rogers, their former GCD Board President, wants to come to a SWTCGCD meeting to discuss issues that arise for GCDs with no tax revenue and how HTGCD gets their funding. There are especially sensitive areas in the northern tip of Hays County, so the adjacent area in southwestern Travis County is important for them to understand. Gene Lowenthal commented that originally some folks wanted a single GCD for this area. Director Scadden added that past discussions have included a single GCD for the entire GMA which covers the extent of the Trinity Aquifer.

#### 5. Discuss, consider, and act on Opinion Letter for Texas Attorney General's Office.

As he was not able to attend the October meeting, Director Scadden shared his perspective on the discussion at last month's meeting regarding a response to the Attorney General's (AG) Opinion regarding SWTCGCD authority and the desirability of evaluating how the AG Opinion letter compares to the letter received from the legislators. He said that, while the SWTCGCD was copied on the distribution of the AG Opinion we did not request it so there is no need to respond. The SWTCGCD Board is committed to following the directives from the elected representatives so there is no need to compare those directives with the AG Opinion. There is nothing to be accomplished by re-opening this discussion. Director Scadden said that he would encourage the Board not to pursue something like this with such an uncertain purpose and outcome. Director Davis agreed that this would best be left alone. Bob Moore commented that the AG Opinion is

just an opinion, not a ruling. The Travis County Attorney is reviewing the AG Opinion and Mr. Moore said he would share anything worthwhile that comes out of that review.

- 6. Discuss, consider, and act on scientific data collection, outreach and education.
  - a. Southwest Travis County Hydrogeologic Study by Travis County and BSEACD

Travis County and BSEACD staff were busy sampling wells, so Rick read a letter from GM Reinmund-Martinez about what they do at test sites. Site visits are going well and well owners are happy. There are 12 owners involved and 16 wells. Water levels are between 86 feet and 500 feet with high conductivity indicating salt level. Five wells were visited last week, two will be visited this week and five more next week. Only two wells are in West Lake Hills and more are needed, also in Oakhill. Bob Moore stressed the importance of sharing the data obtained by this study. Director Dower said that his well was visited yesterday and they did a good job including a draw-down test.

b. Workshops with other GCDs and related entities (e.g., Hayes Trinity GCD, Barton Springs Edwards Aquifer Conservation District)

Director Scadden said that he will invite Ron Fieseler and Linda Kaye Rogers to a SWTCGCD Board meeting.

c. Consistent Outreach message for public events, HOA meetings, City Council Meetings, Etc.

Director Hennings suggested that her November "Hill Country Water and West Lake Hills" article in the Picayune will start to define the SWTCGCD public message. Director Dower suggested that a list of questions should be developed and posted on the website. Director Hennings suggested that Hays Trinity might be a good source of information. Director Scadden suggested deferring until after the meeting with Ron Fieseler and Linda Kaye Rogers. Gene Lowenthal suggested that the main question is "Why do we need a GCD?" Director Scadden added that it is a two-fold question "What is a GCD and why do we need it?" Director Hennings pointed out that there is a comprehensive 31-page resource document about GCDs "GCD FAQ's" by TAMU's Texas Cooperative Extension in the resources section of our website. Gene Lowenthal added that Hill Country Alliance has also published a GCD document and Director Hennings said she has that document and would provide it for posting on the website. Bob Moore said that Gene has a good point about emphasizing the importance of the GCD rather than suggesting how people should vote and recommended asking an attorney to define education v. electioneering and proximity to the election. Director Davis asked if there was a list of HOAs and Pete Golde volunteered to compile one and share it with the Board.

7. Discuss, consider and act on information from Travis County staff on their funding support, staff support, and county budget requests.

Director Scadden said that last month the requested W9 was signed by Director Davis and sent to Travis County. It was returned by Travis County and they said it need to be signed by SWTCGCD Secretary Buddin which was done. Bob Moore said he would check on the status and advise.

8. Discuss, consider, and act on requests for additional funding or donations.

Director Scadden said that it is important to seek other sources of support, Bee Cave, West Lake Hills, HOAs etc. We need to show municipalities the plan for moving forward and a budget and we need Travis County's funding in hand for those discussions. He asked Director Hennings if there were any donations at the Rainwater Revival Festival and she said no that the visitors to the SWTCGCD booth were mostly kids. Bob Moore recommended having the proposed amended legislation in hand when speaking to the cities. Director Hennings added that we also need a budget to show the intended use of the funds.

#### 9. Discuss, consider, and act on a SWTCGCD Travel Policy.

Director Davis shared that travel policies were discussed at the TAGD Leadership workshop and that a written policy is needed. Most GCDs do pay reimbursements for reasonable expenses. All of the GCDs she discussed this with are funded by taxes. Director Hennings suggested that we need to contact Hays-Trinity to discuss this.

# 10. Discuss, consider, and act on a SWTCGCD Board Training – Texas Alliance of Groundwater Districts Leadership Training, October 24th in Austin

Director Davis share her experience at the Texas Alliance Of Groundwater Districts Leadership conference which she characterized as an incredibly important Board education meeting. She said she was surprised at how specific it was to GCDs. There were a lot of handouts, email and text messaging, public information, joint planning with GMAs, case law, and guidelines on GMAs and GWDs. Primary focus was on educating GCD board members. Director Davis summed up saying that the TAGD Leadership Training Conference an exceptional meeting for board members.

#### Some of the handouts are attached as Exhibit F

#### 11. Discuss, consider, and act on coordination with Representative-Elect Goodwin

Director Scadden welcomed and thanked Representative-Elect Vikki Goodwin for her attendance and her interest in the SWTCGCD especially at such a busy time for her. Representative-Elect Goodwin was briefed on the pending SWTCGCD legislation. Representative-Elect Goodwin thanked the Board for their invitation and said she was looking forward to serving. She shared that she had heard a lot about groundwater issues while she was on the campaign trail and she feels that more education is needed for realtors. Director Scadden thanked the Representative-Elect for her support and asked her to let us know how we can help.

#### 12. Discuss, consider and act on obtaining a sales tax exemption.

Jean Bessent will discuss at December meeting.

#### 13. Discuss, consider and act on the SWTCGCD website and email addresses.

Director Scadden advised that Director Dower had set up the swtcgcd.org email addresses. He discussed the need for an email retention policy and the need for directors to retain SWTCGCD emails currently on their personal email accounts or forward them to their swtcgcd.org email account. Director Dower recommended that all directors start using their SWTCGCD.org email addresses immediately. Director O'Malia suggested that the Board pass a resolution that all directors be on new email addresses going forward. John Hatchett suggested that directors sign an affidavit stating that all SWTCGCD emails are on the swtcgcd.org email server after a certain date and that they inform senders of new email messages of the new addresses.

# 14. Discuss, consider and act on public outreach, branding the SWTCGCD, preparing a logo and related matters.

Director Davis presented two new sets of logo graphics, one set using a Texas state map theme and the second using a water drop theme. Director O'Malia said that he did not want to incur any ongoing expense for licensing and graphic elements nor did he want to infringe on any others. There were brief discussions of the use of Southwest v. Southwestern in the SWTCGCD name and of quorum issues in working on logo development outside of the official noticed meeting times. It was agreed to form a non-quorum subcommittee made up of three directors to work on the logo development.

On a motion by Director O'Malia and a second by Director Urie the Board approved formation of a subcommittee consisting of Director Davis, Director O'Malia and Director Scadden to work on logo development— 6 Ayes to 0 Nays

15. Discuss and establish agenda items for the next meeting agenda.

The following items were suggested for the future meeting agendas:

- Invite Ron Fieseler from GMA 9
- Invite Linda Kaye Rogers from Hays-Trinity GCD
- Email Policy
- Logo
- Bonding issue (explain and discuss)
- Document Retention Policy (Director O'Malia will prepare a draft and Director Davis will provide examples from TAGD)
- 16. Discuss, consider, and act on setting the date, time and location for the next Board meeting.

The Board agreed that the next meeting would be held on Wednesday December 12, 2018.

17. Adjourn.

On a motion by Director O'Malia and a second by Director Urie the Board voted to adjourn th
meeting – 6 ayes to 0 nays. The meeting was adjourned at 12:23 pm

PASSED, APPROVED AND ADOPTED THIS	day of December, 2018	
	Jason Buddin, Secretary	-

# **Exhibit A**

Attendee Sign-in Sheet

BOARD MEETING

OF THE

SOUTHWESTERN TRAVIS COUNTY GROUNDWATER CONSERVATION DISTRICT

At the

Bee Cave School House 13333-A Highway 71 West

Bee Cave, Texas 78738

Wednesday, November 14, 2018 at 10:00 am

# ATTENDEES

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# **Exhibit B**

Approved Minutes for October 10, 2018 Meeting

#### **MINUTES**

#### OF THE

#### SOUTHWESTERN TRAVIS COUNTY GROUNDWATER CONSERVATION DISTRICT

At the Bee Cave School House 13333-A Highway 71 West Bee Cave, Texas 78738

(the Bee Cave Schoolhouse is located adjacent to Lake Travis Fire and Rescue Station 603)

#### Wednesday, October 10, 2018 at 10:00 am

#### 1. Call to order, declare meeting open to the public, and take roll.

Director Davis called the meeting of the Southwestern Travis County Groundwater Conservation District (SWTCGCD or District) Board of Directors to order at 10:02 AM on October 10, 2018. Six District Directors were present, including Directors Buddin, Davis, Dower, Hennings, O'Malia, and Urie. Director Scadden was absent. Also present were visitors Vince Clause from Allan R. Standen, LLC, Charlie Flatten from Hill Country Alliance, Vicky Kennedy from Travis County, Jackie Vay from BSEACD, John Hatchett, Gene Lowenthal and Pete Golde.

#### The meeting sign-in sheet is attached as Exhibit A

#### 2. Public comments.

There were no public comments.

#### 3. Discuss, consider and take action on previous meeting minutes

Approval of the September 12, 2018 minutes was tabled to allow Director O'Malia additional time to comment. Discussion and requested changes are detailed in Item 14.

Upon motion by Director Hennings, seconded by Director Buddin, the Board approved the minutes of the September 12, 2018 Board meeting with changes - 6 ayes to 0 nays.

The approved meeting minutes are attached as Exhibit B for reference.

#### 4. Committee Reports

a. Finance – Director Buddin provided a financial summary report. Checking account balance is currently \$851.29.

#### The SWTCGCD Financial Summary report is attached as Exhibit C

b. Legislative – Director Davis advised that Representative Workman will pursue legislation to change the date for confirmation and director elections from May 2018 to November 2019. Mr. Lowenthal asked when the deadline is for filing bills in the upcoming session. Director Davis responded that the deadline is March 8<sup>th</sup>. Mr. Lowenthal went on to discuss a meeting he had with Representative Workman at which Mr. Lowenthal proposed that the

confirmation election should be eliminated all together and Representative Workman responded with a number of points. Mr. Lowenthal then outlined the logic for not having an election including the State mandate that a GCD be formed or the TCEQ will do it, that the only citizens who will pay fees are well owners, and that the 27 years we have waited for a GCD is long enough. Director Davis said that the committee will continue working on strategy.

c. Science-Outreach – Director Hennings discussed the Bureau of Economic Geology Geo-Sign program support to erect area geology signs and their interest in doing one for the Trinity Aquifer. The sign could be displayed at West Cave Preserve, Hamilton Pool, or the Bee Cave Sculpture Garden, or in multiple places. Director Hennings said that she has examples of Geo-Signs and will bring them to next month's meeting. Director Davis asked if a Trinity Aquifer Geo-Sign could be displayed on the SWTCGCD website to which Director Hennings replied, yes. Director Hennings said that the BEG is printing posters and a poster wall for the Dripping Springs Rainwater Revival Festival and discussed manning of the SWTCGCD booth at the Festival on October 20<sup>th</sup> with setup being from 6:00 to 8:30 AM. She added that a couple of thousand attendees are expected and she showed several of the display items for the booth including maps and graphs showing relationship between surface water (lake levels) and groundwater levels, population projections, etc. Director Hennings attended the Hill Country Alliance Leadership Summit including a discussion of New Braunfels Utility District success in managing the aquifer, a panel of several generations of landowners, and a Dark-Sky discussion. She added that Camp Lucy is a great venue.

#### 5. Discuss, consider, and act on Opinion Letter for Texas Attorney General's Office.

Director Davis initiated discussion by stating that she wished the AG Opinion could have been known at the time of the Board's vote to cancel the election but that the Board had no idea what the terms of the proposed Travis County loan would be or how long it would take to pay it back. The estimated cost was \$400 thousand or more, later determined to be \$180 to \$200 thousand and there was zero time to make a decision. Director Hennings added that the Board knew that the cost of a November election would be in the vicinity of \$35,000. Director Davis said that the Board needs to tell constituents why the proposed fees are needed and in that regard the election cost would have been a problem. She asked if the Board felt that there was a need for any response to the AG Opinion, perhaps just a thank you. Director O'Malia added that there was a refusal by Travis County to put anything in writing regarding the loan terms. The Board agreed that just a thank you was the best response. Director Davis stated that it was a good thing to have this opinion from the AG. Director Hennings suggested that maybe there is a need to clarify with the Legislators about authorized authorities and actions in light of the AG opinion and perhaps compare the legislator's (Rep. Workman and Sen. Buckingham) opinion v. the AG's opinion. Director Davis asked if the Board should ask for an AG Opinion on how to proceed. Director Dower stated his opinion that the Board had received direction form the legislators and had agreed to follow that direction. Director Davis tabled the discussion for further discussion at the November meeting.

#### 6. Discuss, consider, and act on scientific data collection, outreach and education.

a. Southwest Travis County Hydrogeologic Study by Travis County and BSEACD

Jackie Vay from BSEACD provided an update on neighborhood site visits and a weather station installed at Shield Ranch. She shared a post card that was sent out to tell well owners how to sign up for monitoring (there are 12 slots per area for 5 areas) and she

said that they have had a really positive response. Director Davis asked if the post card could be added to the SWTCGCD website and the Board agreed that it should be added. There was then a discussion of well owner data sources.

b. Workshops with other GCDs and related entities (e.g., Hayes Trinity GCD, Barton Springs Edwards Aquifer Conservation District)

Director Hennings shared that she and Director Scadden are working on a January 2019 workshop with other GCDs and that Emily Green from Trinity Glen Rose and Comal Trinity GCDs is available in January. The Board needs to pick a date at the November meeting.

c. Consistent Outreach message for public events, HOA meetings, City Council Meetings, Etc.

Director Davis shared that she and Director Scadden attended the Hamilton Pool Maters (HPRM) Town Hall meeting in Belvedere and that she was impressed by the Hamilton Pool Road (HPR) safety survey performed cooperatively by several HPR communities. Mr. Lowenthal discussed the HPR safety document that was developed with modest compromises to reach a consensus. Director Davis advised the Board – When you can its good to go to HOA meetings. She added that HPRM will underwrite two Board Directors attendance at the upcoming TAGD Leadership Training for Emerging GCDs Small Group Meeting. She said she will be attending and the \$180 registration fee would be covered for a second Director to attend as well.

Charlie Flatten from the Hill Country Alliance (HCA) shared events in the next few months including the Texas State Water Symposium, Dripping Springs Rainwater Revival, House Natural Resources Committee Meeting in Waco, Bell County Water Symposium, Regional Water Planning meeting. Director Davis asked if there was a calendar on the HCA website to which Mr. Flatten responded – Yes, and she asked if it should be on the SWTCGCD website as well and Mr. Flatten responded that it is very difficult to maintain.

Director Davis suggested that it might be a good idea to do something with schools such as a drawing contest for water conservation to be publically displayed to encourage GCD community involvement. Director Hennings said that she has a coloring book from the Water Development Board that might be helpful.

7. Discuss, consider and act on information from Travis County staff on their funding support, staff support, and county budget requests.

Director Buddin said that Travis County needs a W9 for the SWTCGCD. He presented the completed form and Director Davis signed it. Director Buddin said he would email the signed form to John White at Travis County.

8. Discuss, consider, and act on requests for additional funding or donations.

Jean Bessent will discuss at November meeting.

9. Discuss, consider, and act on a SWTCGCD Travel Policy.

Director Hennings said that she and Director Scadden are collecting other GCD's travel policies and that they have several and would like to get them from Hays Trinity and Comal Trinity. Director Davis said travel policies will be a topic at the October 24<sup>th</sup> TAGD Leadership Training conference and she would like to see other non-taxing GCDs' policies. She will bring back materiel from the training conference. Director Davis also reiterated her recommendation that all directors keep track of expenses and mileage, and that donors often want to see how much personal expense is incurred.

# 10. Discuss, consider, and act on a SWTCGCD Board Training – Texas Alliance of Groundwater Districts Leadership Training, October 24<sup>th</sup> in Austin

Topic covered in earlier items.

#### 11. Discuss, consider, and act on obtaining bonding and insurance for SWTCGCD Directors.

Completed.

#### 12. Discuss, consider and act on obtaining a sales tax exemption.

This topic will be addresses at the November meeting.

#### 13. Discuss, consider and act on the SWTCGCD website and email addresses.

Director Dower stated that a payment method is still needed and that he would setup email addresses as soon as he had that in hand.

# 14. Discuss, consider and act on public outreach, branding the SWTCGCD, preparing a logo and related matters.

Director Davis said that she has additional logo samples and she will discuss then at the November meeting when Director Scadden is back.

The discussion of the minutes was resumed and Director O'Malia commented that the minutes did not indicate in Item 12. that he also presented two logo samples and that Item 14. The budget was not included as a future topic. It was agreed that these changes would be made and the minutes were approved with changes as indicated in Item 3. above.

#### 15. Discuss and establish agenda items for the next meeting agenda.

After discussion it was agreed that setting date for workshop with other GCDs, fund raising, sales tax exemption, budget, report on the Oct. 24<sup>th</sup> TAGD Leadership conference, and report on the Dripping Springs Rainwater Revival.

#### 16. Discuss, consider, and act on setting the date, time and location for the next Board meeting.

The Board agreed that the next meeting would be held on Wednesday November 14, 2018.

On a motion by Director O'Malia and a second by Director Urie the Board voted to adjourn the meeting – 6 ayes to 0 nays. The meeting was adjourned at 12:11 pm
PASSED, APPROVED AND ADOPTED THIS day of November, 2018
Jason Buddin, Secretary

17. Adjourn.

# **Exhibit C**

SWTCGCD Financial Summary report

#### STCGCD Financial Summary

#### **September 12, 2018**

Previous Balance \$808.13

Deposit 7-16-18 1,000.00 Hamilton Pool Road Matters Donation

Checks

4-23-18 0101 \$2,000.00 Lloyd Gosselink Legal Services related to start up

6-13-18 0102 \$191.98 Jim Dower Reimbursement for website

development

8-8-18 0103 \$957.00 Texas Municipal League Board Insurance

Balance \$851.13 Interest .13

**September 28, 2018** 

Previous Balance \$851.26

Interest earned .03

Closing Balance \$851.29

November 13, 2018

Previous Balance 851.29

Deposit 10-22-18 \$500 Hamilton Pool Road Matters Donation to cover cost associated

with Board Member participation in the Texas Alliance of

Groundwater Districts Leadership training.

Checks

11-9-18 0104 \$180 TX Alliance of Groundwater Districts. Tricia Davis training seminar

**Debit Card Payments** 

10-27-18 \$25.85 GoDaddy Email service for Board email

10-28-18 \$155.10 GoDaddy Email related setup charge for Board

Closing Balance \$990.34 This is unreconciled because I do not have the bank statement.

#### **Exhibit D**

Current Draft SWTCGCD Bill Amendment

#### SPECIAL DISTRICT LOCAL LAWS CODE

#### TITLE 6. WATER AND WASTEWATER

#### SUBTITLE H. DISTRICTS GOVERNING GROUNDWATER

CHAPTER 8871. SOUTHWESTERN TRAVIS COUNTY GROUNDWATER CONSERVATION DISTRICT

#### SUBCHAPTER A. GENERAL PROVISIONS

Sec. 8871.001. DEFINITIONS. In this chapter:

- (1) "Board" means the district's board of directors.
- (2) "Commission" means the Texas Commission on Environmental Quality.
  - (3) "Director" means a board member.
- (4) "District" means the Southwestern Travis County Groundwater Conservation District.

Added by Acts 2017, 85th Leg., R.S., Ch. 644 (H.B. 4345), Sec. 2.02, eff. September 1, 2017.

Sec. 8871.002. NATURE OF DISTRICT. The district is a groundwater conservation district in Travis County created under and essential to accomplish the purposes of Section 59, Article XVI, Texas Constitution.

Added by Acts 2017, 85th Leg., R.S., Ch. 644 (H.B. 4345), Sec. 2.02, eff. September 1, 2017.

Sec. 8871.003. FINDINGS OF PUBLIC USE AND BENEFIT. (a) The district is created to serve a public use and benefit.

(b) All land and other property included in the district will benefit from the works and projects accomplished by the district under the powers conferred by Section 59, Article XVI, Texas Constitution.

Added by Acts 2017, 85th Leg., R.S., Ch. 644 (H.B. 4345), Sec. 2.02, eff. September 1, 2017.

Sec. 8871.004. INITIAL DISTRICT TERRITORY. (a) The district is initially composed of the territory described by Section 2.03 of the Act enacting this chapter.

(b) The boundaries and field notes contained in Section 2.03 of the Act enacting this chapter form a closure. A mistake made in the field notes

11/12/2018 SPECIAL DISTRICT LOCAL LAWS CODE CHAPTER 8871. SOUTHWESTERN TRAVIS COUNTY GROUNDWATER CONSERVATION...

or in copying the field notes in the legislative process does not affect the district's:

- (1) organization, existence, or validity;
- (2) right to issue any type of bond for the purposes for which the district is created or to pay the principal of and interest on a bond; or
  - (3) legality or operation.

Added by Acts 2017, 85th Leg., R.S., Ch. 644 (H.B. 4345), Sec. 2.02, eff. September 1, 2017.

#### SUBCHAPTER B. TEMPORARY AND INITIAL DIRECTORS

Sec. 8871.021. APPOINTMENT OF TEMPORARY DIRECTORS; VACANCIES; TERMS.

- (a) Seven persons who reside in the district shall be appointed as temporary directors not later than the 90th day after the effective date of the article of the Act creating this chapter as follows:
- (1) the county judge of Travis County shall appoint one temporary director;
- (2) the county commissioner for the county commissioners precinct in which the district is principally located shall appoint two temporary directors;
- (3) the state representative who represents the house district in which the district is principally located shall appoint two temporary directors; and
- (4) the state senator who represents the senate district in which the district is principally located shall appoint two temporary directors.
- (b) If a temporary director fails to qualify for office or a vacancy occurs on the temporary board, the remaining temporary directors shall appoint a person to fill the vacancy. If at any time there are fewer than four temporary directors, the state representative under Subsection (a)(3) shall appoint the necessary number of persons to fill all vacancies on the board.
- (c) Temporary directors serve until the date initial directors are elected at an election held under Section 8871.024.

Added by Acts 2017, 85th Leg., R.S., Ch. 644 (H.B. 4345), Sec. 2.02, eff. September 1, 2017.

Sec. 8871.022. ORGANIZATIONAL MEETING. (a) Not later than the 45th day after the date on which the seventh temporary director is appointed under Section 8871.021, the temporary directors shall hold the organizational meeting of the district.

(b) The temporary directors shall select from among themselves a president, a vice president, and a secretary.

Added by Acts 2017, 85th Leg., R.S., Ch. 644 (H.B. 4345), Sec. 2.02, eff. September 1, 2017.

- Sec. 8871.023. AUTHORITY OF TEMPORARY DIRECTORS. (a) Except as provided by Subsections (c) and (d) or as otherwise provided by this subchapter, the temporary directors of the district have the same permitting and general management powers as those provided for initial and permanent directors under this chapter and Chapter 36, Water Code.
- (b) The temporary directors or their designees have the authority to enter any public or private property located in the district to inspect a water well that is not exempt under Section 8871.103, as provided by Section 36.123, Water Code.
- (c) Except as provided by Section 8871.024, the temporary directors do not have the authority granted by the following provisions of Chapter 36, Water Code:
  - (1) Sections 36.017, 36.019, 36.020, and 36.059;
  - (2) Sections 36.105, 36.1071, 36.1072, 36.1073, and 36.108;
  - (3) Sections 36.171-36.181;
  - (4) Sections 36.201-36.204; and
  - (5) Subchapters J and K.
- (d) The temporary directors may regulate the transfer of groundwater out of the district as provided by Section 36.122, Water Code, but may not prohibit the transfer of groundwater out of the district.

Added by Acts 2017, 85th Leg., R.S., Ch. 644 (H.B. 4345), Sec. 2.02, eff. September 1, 2017.

Sec. 8871.024. CONFIRMATION AND INITIAL DIRECTORS' ELECTION. (a) The temporary directors shall order an election in the district, to be held not later than the uniform election date in <a href="May 2018">May 2018</a>, to confirm the creation of the district and to elect the initial directors. NOVEMBER 2019

- (b) At the election held under this section, the temporary board shall have placed on the ballot the names of the candidates who are eligible under Section 8871.051 for each of the seven positions on the board.
- (c) Section 41.001(a), Election Code, applies to an election held under this section.
- (d) Except as provided by this section, an election held under this section must be conducted as provided by the Election Code and Sections

36.017, 36.018, and 36.019, Water Code. The following provisions of the Water Code do not apply to an election under this section:

- (1) Section 36.017(a);
- (2) the provision of Section 36.017(d) governing ballot provisions for the election of permanent directors; and
  - (3) Section 36.059(b).
- (e) If the district's creation is not confirmed at an election held under Subsection (a), the candidate who receives a majority of the votes cast at that election for each of the seven positions on the board becomes a temporary director of the district. The temporary directors elected under this subsection shall order a subsequent election to be held to confirm the creation of the district and to elect the initial directors not earlier than the uniform election date in May 2020.
  - (f) Temporary directors elected under Subsection (e) serve until:
- (1) the date initial directors are elected at the subsequent election ordered under Subsection (e) if the creation of the district is confirmed; or
- (2) the fourth anniversary of the date of the election held under Subsection (a) if the creation of the district is not confirmed.
- (g) The vacancy provision of Section 8871.021, and Section 8871.023, apply to the temporary directors elected under Subsection (e).

Added by Acts 2017, 85th Leg., R.S., Ch. 644 (H.B. 4345), Sec. 2.02, eff. September 1, 2017.

Sec. 8871.025. INITIAL DIRECTORS. (a) Promptly after an election has been held under Section 8871.024 and the votes have been canvassed, if the creation of the district is confirmed, the temporary directors shall:

- (1) declare for each board position the person who receives the most votes for that position to be elected as the initial director for that position; and
- (2) include the results of the initial directors' election in the district's election report to the commission.
- (b) The initial directors shall draw lots to determine which three initial directors serve two-year terms and which four initial directors serve four-year terms.

Added by Acts 2017, 85th Leg., R.S., Ch. 644 (H.B. 4345), Sec. 2.02, eff. September 1, 2017.

Sec. 8871.051. GOVERNING BODY; TERMS. (a) The district is governed by a board of seven directors.

- (b) Directors elected after the election held under Section 8871.024 serve four-year terms.
  - (c) The directors are elected as follows:
- (1) one director must reside in the corporate limits of the City of Bee Cave and be elected by voters residing in the City of Bee Cave;
- (2) one director must reside in the corporate limits of the City of Lakeway or Village of the Hills and be elected by voters residing in the City of Lakeway and Village of the Hills;
- (3) one director must reside in the corporate limits of the City of West Lake Hills and be elected by voters residing in the City of West Lake Hills; and
  - (4) four directors must:
- (A) reside inside the district and outside the corporate limits of the City of Bee Cave, City of Lakeway, Village of the Hills, and City of West Lake Hills;
- (B) be elected by voters residing inside the district and outside the corporate limits of the City of Bee Cave, City of Lakeway, Village of the Hills, and City of West Lake Hills; and
- (C) each use groundwater as a source of water supply for one or more beneficial uses at their respective residences.

Added by Acts 2017, 85th Leg., R.S., Ch. 644 (H.B. 4345), Sec. 2.02, eff. September 1, 2017.

#### SUBCHAPTER D. POWERS AND DUTIES

Sec. 8871.101. GROUNDWATER CONSERVATION DISTRICT POWERS AND DUTIES. Except as otherwise provided by this chapter, the district has the powers and duties provided by the general law of this state, including Chapter 36, Water Code, applicable to groundwater conservation districts created under Section 59, Article XVI, Texas Constitution.

Added by Acts 2017, 85th Leg., R.S., Ch. 644 (H.B. 4345), Sec. 2.02, eff. September 1, 2017.

Sec. 8871.102. AQUIFER STORAGE AND RECOVERY PROJECTS. The district may implement and develop aquifer storage and recovery projects in accordance with:

- (1) Chapters 27 and 36, Water Code; and
- (2) commission rules and guidance.

Added by Acts 2017, 85th Leg., R.S., Ch. 644 (H.B. 4345), Sec. 2.02, eff. September 1, 2017.

- Sec. 8871.103. EXEMPT WELLS. (a) Groundwater withdrawals from the following wells may not be regulated, permitted, or metered by the district:
- (1) a well used for domestic use by a single private residential household and incapable of producing more than 10,000 gallons per day; and
- (2) a well used solely for domestic use or for providing water for livestock or poultry if the well is:
- (A) located or to be located on a tract of land larger than 10 acres; and
- (B) drilled, completed, or equipped so that it is incapable of producing more than 25,000 gallons of groundwater a day.
- (b) The district may not charge or collect a well construction fee for a well described by Subsection (a)(2).
- (c) A well used for dewatering and monitoring in the production of coal or lignite is exempt from permit requirements, regulations, and fees imposed by the district.

Added by Acts 2017, 85th Leg., R.S., Ch. 644 (H.B. 4345), Sec. 2.02, eff. September 1, 2017.

Sec. 8871.104. PERMIT REQUIRED. A well owner must obtain a permit and pay any required fees, including a well construction fee, before using any groundwater withdrawn from a well for purposes other than those exempted by Section 8871.103.

Added by Acts 2017, 85th Leg., R.S., Ch. 644 (H.B. 4345), Sec. 2.02, eff. September 1, 2017.

- Sec. 8871.105. ACCESS TO PROPERTY. (a) Subject to Subsection (b), an employee or agent of the district is entitled to enter public or private property in the district at any reasonable time to:
  - (1) inspect an exempt well;
- (2) inspect and investigate conditions relating to the quality of water in the state; and
- (3) monitor compliance with any rule, regulation, permit, or other order of the district.
- (b) An employee or agent of the district must obtain the permission of the property owner before entering public or private property.

- (c) If any employee or agent of the district is refused the right to enter public or private property in the district under this section, the district may seek a court order from a district court authorizing the district to enter the land.
- (d) An employee or agent who enters private property under this section shall:
- (1) observe the property's rules and regulations, if any, concerning safety, internal security, and fire protection;
- (2) notify management or a person in charge of the presence of the employee or agent; and
  - (3) exhibit proper credentials.

Added by Acts 2017, 85th Leg., R.S., Ch. 644 (H.B. 4345), Sec. 2.02, eff. September 1, 2017.

Sec. 8871.106. NO EMINENT DOMAIN POWER. The district may not exercise the power of eminent domain.

Added by Acts 2017, 85th Leg., R.S., Ch. 644 (H.B. 4345), Sec. 2.02, eff. September 1, 2017.

#### SUBCHAPTER E. FINANCIAL PROVISIONS

Sec. 8871.151. WELL CONSTRUCTION FEE. The district may charge and collect a new well construction fee not to exceed \$1,000 for a new well.

Added by Acts 2017, 85th Leg., R.S., Ch. 644 (H.B. 4345), Sec. 2.02, eff. September 1, 2017.

Sec. 8871.152. PERMIT RENEWAL APPLICATION FEE. The district may charge and collect a permit renewal application fee not to exceed \$400.

Added by Acts 2017, 85th Leg., R.S., Ch. 644 (H.B. 4345), Sec. 2.02, eff. September 1, 2017.

Sec. 8871.153. SERVICE CONNECTION FEE. (a) This section does not apply to a water utility that has surface water as its sole source of water.

(b) The district may levy and collect a water utility service connection fee not to exceed \$1,000 for each new water service connection made after September 1, 2017.

Added by Acts 2017, 85th Leg., R.S., Ch. 644 (H.B. 4345), Sec. 2.02, eff. September 1, 2017.

Sec. 8871.154. PRODUCTION FEE. The district may impose reasonable production fees on each well that is not exempt from permitting under Section 8871.103 based on the amount of water actually withdrawn from the well. The district may not impose a production fee under this section in an amount greater than 20 cents per thousand gallons.

Added by Acts 2017, 85th Leg., R.S., Ch. 644 (H.B. 4345), Sec. 2.02, eff. September 1, 2017.

Sec. 8871.155. ADMINISTRATIVE MANAGEMENT FEE. The district may set a reasonable fee for administrative management on a per well basis. The district may set a fee for administrative management on a well that is exempt from permitting in an amount not greater than \$40 per well, per year.

Added by Acts 2017, 85th Leg., R.S., Ch. 644 (H.B. 4345), Sec. 2.02, eff. September 1, 2017.

Sec. 8871.156. CERTAIN FEES PROHIBITED. The district may not charge a fee under Section 36.205(b), (c), or (f), Water Code.

Added by Acts 2017, 85th Leg., R.S., Ch. 644 (H.B. 4345), Sec. 2.02, eff. September 1, 2017.

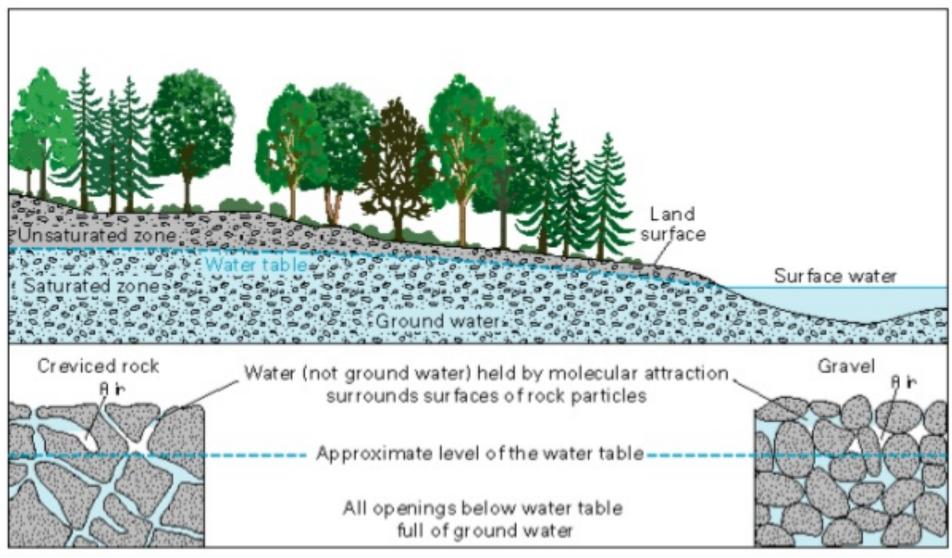
Sec. 8871.157. LIMITATION ON AUTHORITY TO IMPOSE TAXES. The district does not have the authority granted by Sections 36.020 and 36.201-36.204, Water Code, relating to taxes.

Added by Acts 2017, 85th Leg., R.S., Ch. 644 (H.B. 4345), Sec. 2.02, eff. September 1, 2017.

# **Exhibit E**

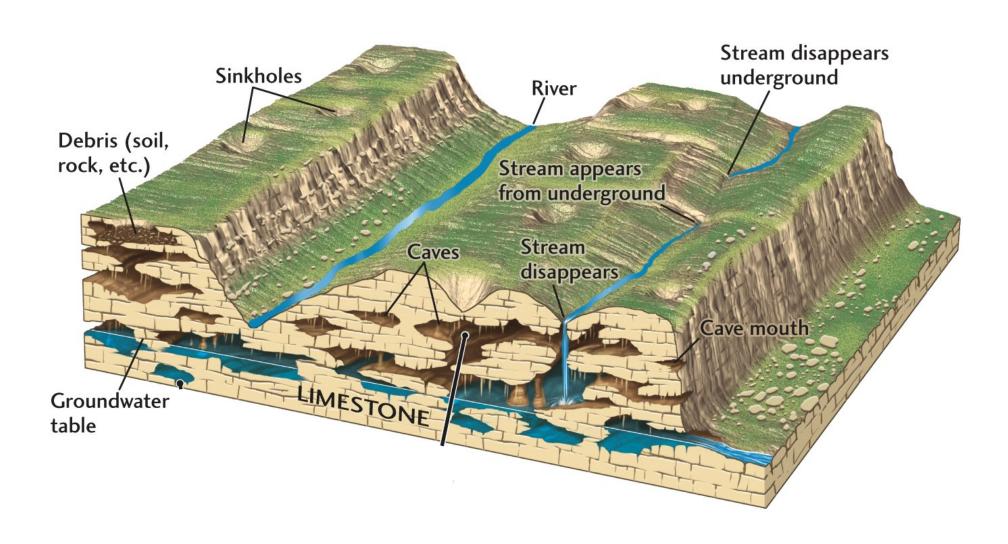
SWTCGCD Posters Used at the Dripping Springs Rainwater Revival Festival

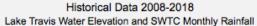
# How Groundwater occurs...

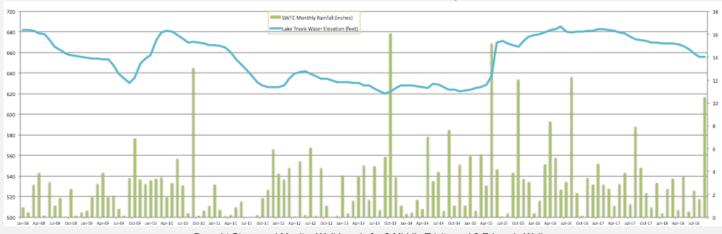


Source: USGS

# How Groundwater occurs in Karst Limestones...







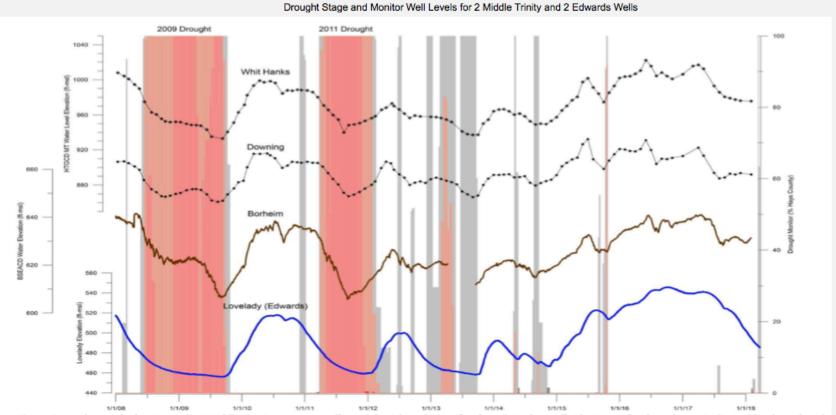
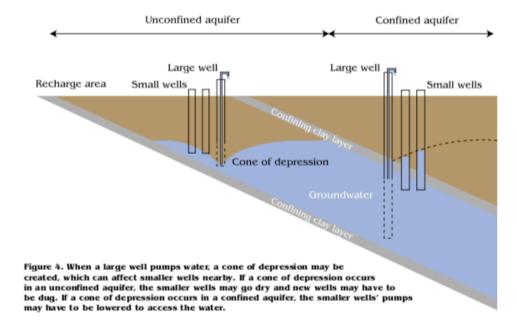
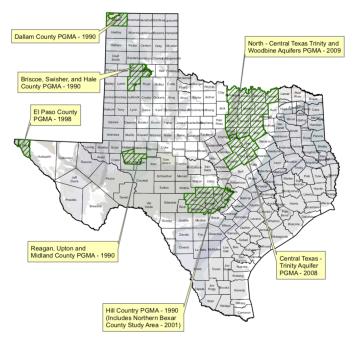


Figure 3. Hydrograph showing select Middle Trinity monitor wells and the Edwards Aquifer drought index well relative to the droughts as indicated by the colored US Drought Monitor stages. Drought stages are indicated as D2 (grey), D3 (orange), and D4 (red).

# Texas Water Law Basics and Groundwater Conservation Districts (GCDs)

- Surface water belongs to the state of Texas.
  - It can be used by a landowner only with the state's permission.
- Groundwater belongs to the landowner and is managed in 2 ways:
  - It may be managed individually by landowners under the rule of capture, adopted in 1904, sometimes referred to as the "law of the biggest pump".
  - Or it may be managed collectively by landowners via Groundwater Conservation Districts (GCDs).
  - Sometimes pumping causes groundwater to move away from neighboring property, which may cause nearby wells to go dry.
  - GCDs try to maintain a balance between protecting the rights of private landowners and the responsibility to protect the water resource.

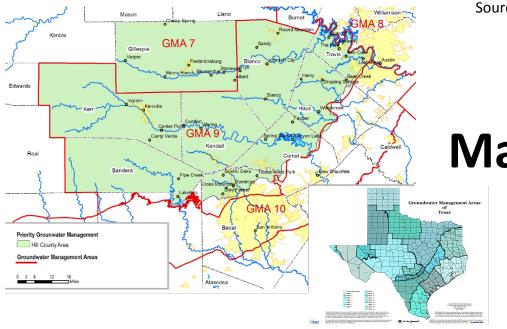




# Priority Groundwater Management Areas (PGMAs)

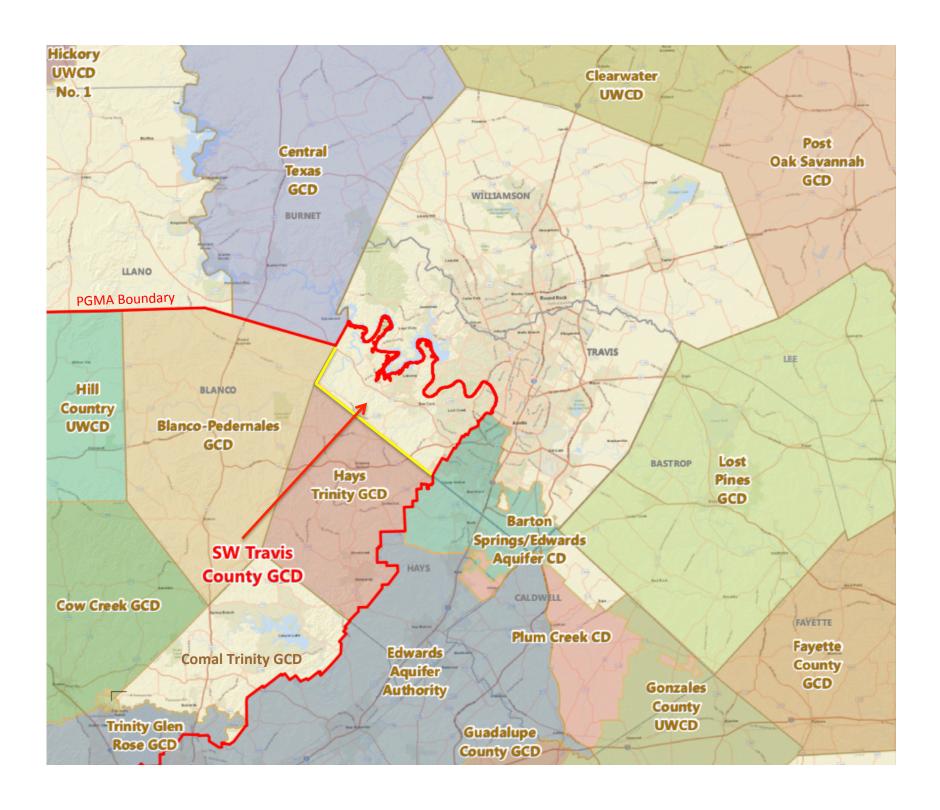
- The Texas Legislature enacted legislation designating certain critical areas expected to experience surface or groundwater shortages, land subsidence or contamination of groundwater in the next 50 years as Priority Groundwater Management Areas, or PGMAs.
- The Texas Water Commission designated the Hill Country Priority Groundwater Management Area in June of 1990.
- According to state law, if an area is within a designated PGMA, its
  citizens must form or be annexed into a groundwater conservation
  district within 2 years, or TCEQ is required to establish a GCD
  consistent with the original designation.

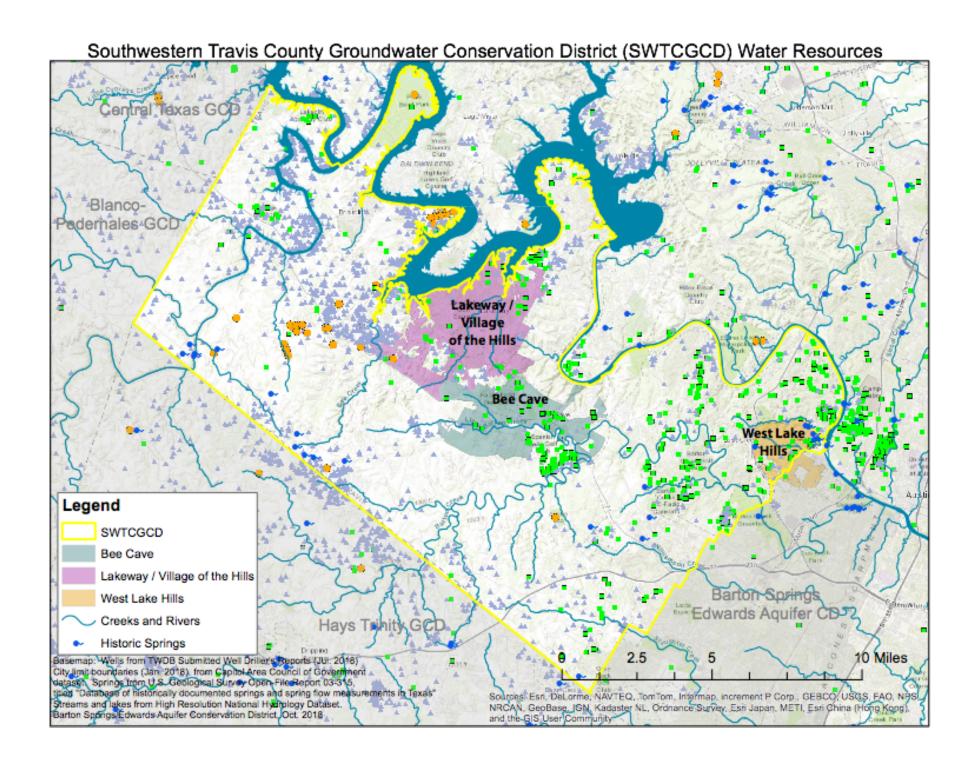
Source: Texas Water Resources Institute Report B-6120 June 2002



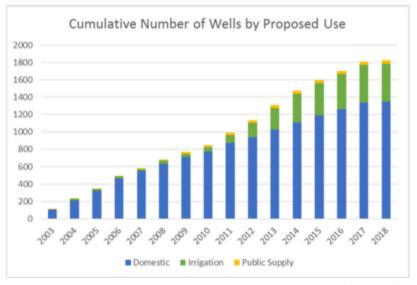
Groundwater
Management Areas
(GMAs)

- Because Groundwater Conservations Districts follow political boundaries such as county lines, they are organized into larger entities that are related to specific aquifers called **Groundwater Management Areas** (GMAs)
- GMA9 is concerned with the Hill Country Trinity Aquifer and covers most of the Hill Country PGMA.
- The SouthWestern Travis County Groundwater Conservation District (SWTCGCD) is the last district in Texas inside a PGMA that has not yet been confirmed by its constituents through an election. This election will take place in late 2019. If confirmed, SWTCGCD will be the 100<sup>th</sup> GCD in Texas.
- Until the District is confirmed, SW Travis County does not have voting rights for decisions made by GMA9, although the temporary board is invited to attend by our surrounding GCDs.





# SWTCGCD Well Drilling Trends



1824 wells since 2003

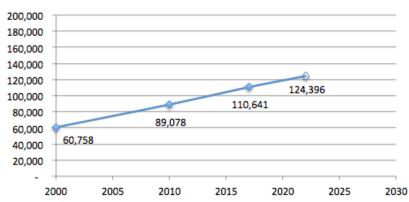
Cumulative total by proposed use:

Domestic: 1350 wellsIrrigation: 436 wellsPWS: 38 wells

Updated March 2018

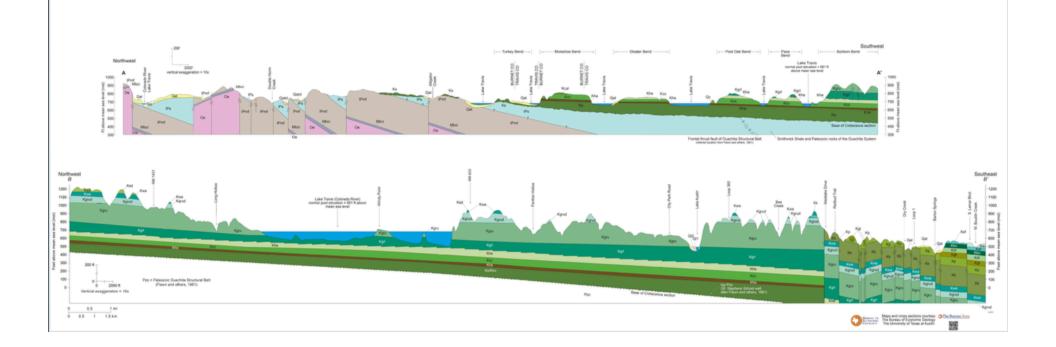
Source: BSEACD from TCEQ Records

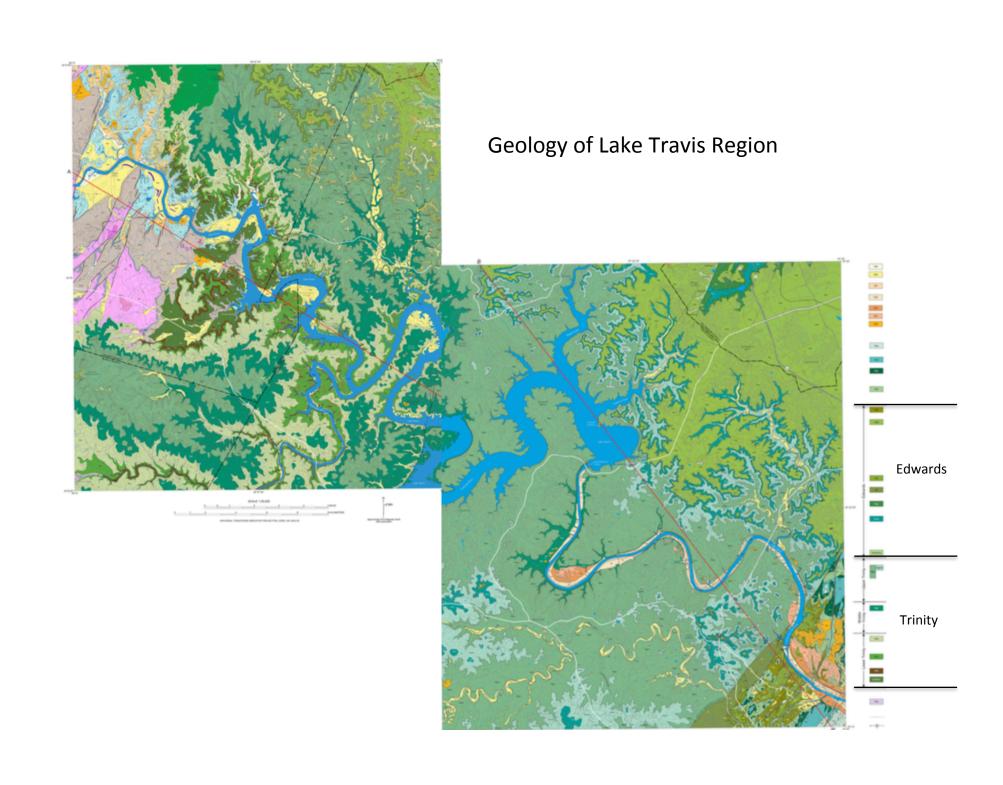
# SouthWestern Travis County Population Growth (Estimated to 2022)



Source: ESRI from 2010 US Census

# **Southwestern Travis County Groundwater Conservation District**





# **Exhibit F**

Sample Handouts from TAGD Leadership Conference



#### TAGD's Guide to Groundwater

**GCD:** Groundwater Conservation Districts are political subdivisions created to protect aquifers and manage the use of groundwater. GCDs are granted authority in Chapter 36 of the Texas Water Code to manage groundwater production through various methods, including well spacing and production limitations.

**GMA:** Groundwater Management Areas are designated by the TWDB for regional planning purposes. GCDs within the GMA meet to jointly develop DFCs for the GMA region.

**DFC:** a Desired Future Condition is a quantifiable condition of an aquifer at a specified future time. It may be based on aquifer levels, spring flows, or volumes of water in the aquifer (example: average drawdown not to exceed 75 feet at the end of 50 years). In setting DFCs, GCDs balance groundwater production with conservation and protection of the aquifer and then manage that production on a long-term basis to achieve and maintain the DFC.

**TWDB:** The Texas Water Development Board is the state agency responsible for overseeing state and regional water planning, providing financial assistance for local government water projects, and studying the state's surface water and groundwater resources.

**MAG:** the Modeled Available Groundwater is calculated by the TWDB and is the amount of water that may be produced on an average annual basis to achieve a DFC. The MAG is one tool used by GCDs to ensure consistency with the DFC, and is used by regional water planning groups.

texasgroundwater.org

# TAGD Texas Alliance Of Groundwater Districts

#### TAGD's Guide to Groundwater

**Rule of Capture:** grants landowners a legal right to capture the water beneath their property without regard to effects on neighboring wells except in cases of waste or malice.

**Groundwater Ownership:** the Texas Legislature and Texas Supreme Court have recognized that landowners have a constitutionally protected property right in groundwater and own the groundwater below the surface as real property, subject to the rule of capture and regulation by GCDs.

**GAM:** a Groundwater Availability Model is a regional groundwater flow model approved by the TWDB.

**Joint Planning:** the process by which GCDs in a GMA work together to develop DFCs, review groundwater management plans, assess the accomplishments of the GMA, and evaluate the need to modify the DFCs.

**Management Plan:** a plan adopted by a GCD, approved by the TWDB, and forwarded to regional water planning groups that outlines the GCD's management goals and objectives. The plan must include performance standards, methods for achievement, and groundwater estimates.

**TAGD:** the Texas Alliance of Groundwater Districts is a 501(c)(3) association made up of more than 80 GCDs and 30 associate members. TAGD assists GCDs, provides outreach and education, and facilitates groundwater communication.

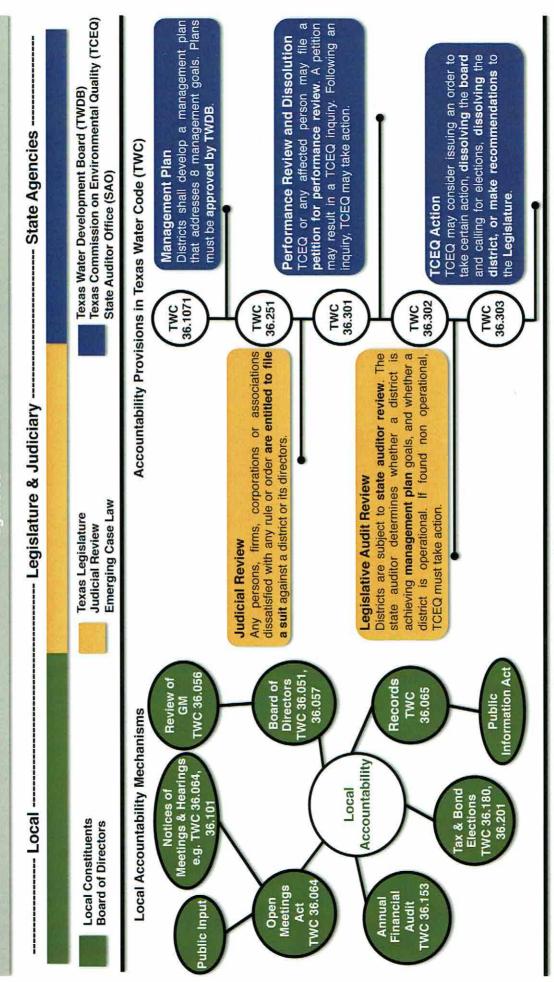
**GCDI:** the Groundwater Conservation District Index is available on TAGD's website and is a searchable, interactive online information bank with data on GCDs across the state.

texasgroundwater.org

# Current GCD Accountability Metrics

A review of accountability mechanisms in effect

A summary of current accountability mechanisms is provided to improve accountability on three levels: local, legislative & judiciary, and state the dialoque on Groundwater Conservation District (GCD) performance. aremoles



# Opportunities

Consider importance of board & stakeholder education

Consider improvements to Cor legislative audit review process cor



Consider difference between statutory compliance and performance metrics

# Groundwater Conservation Districts FAOS

# What is a Groundwater Conservation District?

GCDs are political subdivisions of the state created to protect and balance private groundwater interests with the conservation, preservation, protection, recharging, and prevention of waste of groundwater, and the control of subsidence caused by withdrawal.

#### What does a GCD do?

Establish rules for the spacing and drilling of all water wells
Consider and permit non-exempt water wells
Maintain records of non-exempt wells in a district
Submit management plans to Texas Water Development Board for approval
Collaborate regionally in joint planning for the establishment of DFCs
Collect water level and water quality data on aquifers
Educate stakeholders on water conservation
Work to prevent harm to the aquifer due to pumping or contamination



# How do GCDs allocate their budgets?



Education & Outreach



Science & Research



Operations



Conservation



Regional Planning

# How many GCDs are there in Texas?

Currently, there are GCDs plus 2 subsidence districts.

# What rules must a GCD follow?

GCDs are governed by Chapter 36 of the Texas Water Code. As political subdivisions of the state, they are also subject to Chapter 49 of the Texas Administrative Code. Based on the rules established by the State, each GCD creates policies to accomplish the goals of their District.

# Do I have to register my well with my GCD?



Yes, state law requires all wells to be registered with the GCD. This does not mean that all wells require a permit. All domestic wells and livestock wells that produce less than 25,000 gallons per day are exempt from permits. A GCD has the ability to exempt others in their rules.

# **More GCD EAQs**

# What is a management plan?

A management plan outlines a GCD's goals and course of action to achieve those goals. The management plan is submitted to TWDB for approval, and rules necessary to implement the management plan are adopted by each district.

#### What is a Desired Future Condition?

The desired future condition is a metric that is established during the joint planning process by GCDs in a common Groundwater Management Area (GMA). The DFCs provide for consistency in groundwater management in the GMA and a balance between groundwater protection and production.

#### How are GCDs funded?

GCDs are funded through property taxes, permitting fees and/or usage fees.

# **Groundwater Terms**

# Aquifer

An underground geological formation able to store and yield water in useable amounts. Aquifers in Texas can consist of sand, gravel, limestone, granite, and many other rock types that have pores or spaces for water to pass through.

# Aquitard

An aquitard, or confining layer, is a zone within the earth that restricts the flow of groundwater.

# Total Dissolved Solids (TDS)

TDS refers to the total concentration of dissolved constituents in solution. A TDS level of less than 1000 ppm is often considered freshwater, although many Texans' drinking water has a higher TDS.

# Cone of Depression

A cone of depression is a conically shaped area of decreased water level (or pressure) that occurs when water is withdrawn from an aquifer. If wells are too close to each other, these cones may overlap and cause interference resulting in abnormally low water levels in those wells. In areas that withdraw more water than is recharged or flows to that area, a semi-permanent regional cone of depression may occur.

# **Abandoned Wells & Water Quality**

There is a high environmental risk associated with abandoned or deteriorated wells, as they are a direct conduit from the surface to our groundwater resources. Because of this risk, it is highly recommended to have abandoned or deteriorated wells plugged. Some GCDs have have established programs to assist landowners in plugging abandoned wells.

# How often should I have my well water tested?

It is recommended that well owners have their water professionally tested annually or when an observed change in water quality occurs.

# Who can disinfect my well water?

It is recommend to contact a licensed water well driller or a pump installer to professionally disinfect your well.