

**NORTH TEXAS
GROUNDWATER
CONSERVATION
DISTRICT**

BOARD MEETING

**MUSTANG SUD ADMINISTRATIVE OFFICES
7985 FM 2931
AUBREY, TEXAS**

**TUESDAY
FEBRUARY 12, 2019
10:00 AM**

NOTICE OF PUBLIC MEETING

OF THE
BOARD OF DIRECTORS of the

NORTH TEXAS GROUNDWATER CONSERVATION DISTRICT
at the

Mustang SUD Administrative Offices
7985 FM 2931
Aubrey, Texas
Tuesday, February 12, 2019

Public Hearing

The Public Hearing will begin at 10:00 a.m.

Notice is hereby given that the Board of Directors of the North Texas Groundwater Conservation District ("District") will hold a show cause hearing and may discuss, consider, and take all necessary action regarding the subject matter of the hearing.

Agenda:

1. Call to Order, declare hearing open to the public, and take roll.
2. Conduct Show Cause hearing under Rule 9.6 on the following for alleged violations of District Rules, discuss, consider, receive testimony, and take appropriate action, including without limitation authorizing the District to initiate a civil lawsuit to enforce compliance with the District Rules, including recovery of civil penalties, costs, and attorney's fees, and all other appropriate legal and equitable relief.
 - A. 440 Ranch, 4381 South Highway 377, Aubrey, Texas 76227
3. Adjourn or continue show cause hearing.

Board Meeting

The regular Board Meeting will begin at 10:05 a.m. or upon the adjournment of the above-noticed Public Hearing, whichever is later.

Notice is hereby given that the Board of Directors of the North Texas Groundwater Conservation District ("District") may discuss, consider, and take all necessary action, including expenditure of funds, regarding each of the agenda items below:

Agenda:

1. Pledge of Allegiance and Invocation.
2. Call to order, establish quorum; declare meeting open to the public.
3. Public comment.
4. Consider and act upon approval of the minutes from the December 11, 2018, Board meeting.
5. Consider and act upon approval of invoices and reimbursements.
6. Receive reports from the following Committees*:
 - a. Budget and Finance Committee
 - 1) Receive Monthly Financial Information
 - b. Investment Committee
 - 1) Receive Quarterly Investment Report
 - c. Management Plan Committee
 - 1) Receive Quarterly Report
7. Discussion and possible action on amendments to the District Hydrogeological Report requirements.
8. Discussion and possible action on the creation of a Legislative Committee and any authorizations the Board may want to provide in relation to this Committee.
9. Consider and act upon ordering Brochures for the District's Well Monitoring Program.
10. Consider and act upon authorizing purchase of District flow meter calibration services.
11. Consider and act upon procedure for completion deadlines on applications submitted under Temporary Rules.
12. Update and possible action regarding the process for the development of Desired Future Conditions (DFCs).
13. Consider and act upon compliance and enforcement activities for violations of District rules.
 - a. THI Water Well(Prosper ISD well)
14. General Manager's Report: The General Manager will update the board on operational, educational and other activities of the District.
 - a. Rule Implementation update
 - b. Interlocal Agreement with GMA 8
 - b. Recognize Paul Sigle for earning his Master's Degree in Engineering
15. Open forum / discussion of new business for future meeting agendas.
16. Adjourn public meeting.

* Reports from District standing committees will include a briefing by each committee for the Board on the activities of the committee, if any, since the last regular Board meeting.

The above agenda schedule represents an estimate of the order for the indicated items and is subject to change at any time.

These public meetings are available to all persons regardless of disability. If you require special assistance to attend the meeting, please call (855) 426-4433 at least 24 hours in advance of the meeting to coordinate any special physical access arrangements.

For questions regarding this notice, please contact Velma Starks at (855) 426-4433, at ntgcd@northtexasgcd.org, or at 5100 Airport Drive, Denison, TX 75020.

At any time during the meeting or work session and in compliance with the Texas Open Meetings Act, Chapter 551, Government Code, Vernon's Texas Codes, Annotated, the North Texas Groundwater Conservation District Board may meet in executive session on any of the above agenda items or other lawful items for consultation concerning attorney-client matters (§551.071); deliberation regarding real property (§551.072); deliberation regarding prospective gifts (§551.073); deliberation regarding personnel matters (§551.074); deliberation regarding security devices (§551.076); and deliberation regarding cybersecurity (§551.089). Any subject discussed in executive session may be subject to action during an open meeting.

ATTACHMENT 4

**MINUTES OF THE BOARD OF DIRECTORS' BOARD MEETING AND PUBLIC HEARING
NORTH TEXAS GROUNDWATER CONSERVATION DISTRICT**

TUESDAY DECEMBER 11, 2018

**MUSTANG SUD ADMINISTRATIVE OFFICES
7985 FM 2931
AUBREY, TEXAS**

Members Present: Ronny Young, Allen Knight, Maurice Schwanke, Ron Sellman, Evan Groeschel, and Chris Boyd

Members Absent: Joe Helmberger, David Flusche, and Thomas Smith

Staff: Drew Satterwhite, Paul Sigle, Wayne Parkman, Carolyn Bennett, and Velma Starks

Visitors: Kristen Fancher, Fancher Legal
Peter M. Schulmeyer, Collier Consulting
Michelle Carte, UTRWD
Neal Welch, Public Works Director, City of Sanger
Michael Baur, Oak Hollow Golf Course
Les Westbrook, Axis Drilling
John Faulkner, Faulkner & Son

1. Pledge of Allegiance and Invocation

President Ronny Young led the group in the Pledge of Allegiance and provided the invocation.

2. Call to order, establish quorum; declare meeting open to the public

President Young called the meeting to order 10:03 a.m., established a quorum was present, and declared the meeting open to the public.

3. Public Comment

Peter Schulmeyer, with Collier Consulting, comments were pertaining to the Hydrogeological Report Guidelines. Under Section III, any laboratory analysis should be mandatory. Under Section IV, the measuring tube should be on the inside of the casing along the column pipe.

4. Consider and act upon approval of the minutes from the November 13, 2018 board meeting

Motion was made by Chris Boyd to approve the minutes of the November 13, 2018 meeting. The motion was seconded by Allen Knight, and passed unanimously.

5. Consider and act upon approval of invoices and reimbursements

After review and brief discussion Evan Groeschel made the motion to approve Resolution No. 2018-12-11-01. Ron Sellman seconded the motion. Motion passed unanimously.

6. Receive reports from the following Committees*:

a. Budget and Finance Committee

1) Receive Monthly Financial Information

General Manager Drew Satterwhite reviewed the financial information with the Board.

7. Consider and act upon adoption of a District Flow Testing Procedure Manual.

General Manager Drew Satterwhite informed the Board during the public comment period for the Permanent Rules, the staff heard from several drillers and pump representatives that operate in the District. The conclusion from these conversations was that it would be very difficult to meet a desired flow rate on a new well without a margin for error. In an effort to address the concerns raised by the drillers and pump representatives and given the implications of a flow rate being larger than expected on a new well, the District staff thought it would be wise to have a standard protocol establishing the margin of error for the staff and drillers to follow when testing a new well.

Kristen Fancher, Legal Counsel, informed the Board that the procedure can be altered by the Board as the situation may arise. Chris Boyd made the motion to adopt the District Flow Testing Procedure Manual. Allen Knight seconded the motion. The motion passed unanimously.

8. Consider and act upon permanent rules adoption, including well spacing, exemptions, permitting and other regulatory requirements related to water wells within the District.

Ron Sellman made the motion to adopt the Permanent Rules Resolution 2018-12-11-01. Maurice Schwanke seconded the motion. The motion passed unanimously. Board President Ronny Young expressed gratitude that the Permanent Rules have finally been adopted after a lengthy process of developing the rules.

9. Consider and act upon adoption of District Hydrogeological Report requirements.

The Board discussed the requirements and the suggested changes made by Peter Schulmeyer, Collier Consulting. Ron Sellman recommended that the guidelines be replaced with requirements in the title of the document. Ronny Young expressed that the TCEQ required sampling should be a requirement for public water system wells to submit. He also recommended that staff review what constituents would be tested with non-public water system wells and require that those be submitted as well. The staff and legal counsel recommended adopting the document with all changes and that they would bring back a revised version with non-public water sampling requirements at a later date. Allen Knight made the motion to adopt the District Hydrogeological Report requirements with the changes discussed. Chris Boyd seconded the motion. The motion passed unanimously.

10. Consider and act upon 2019 legislative consulting efforts.

General Manager Drew Satterwhite reviewed a list of bills both returning and new. The proposed positions on these bills were also discussed. The Board discussed and recognized that the legislative session is a fluid process and that the bills can and will be modified throughout the process. The board agreed with the proposed positions and the general manager expressed that he follows relevant committees and associations. Chris Boyd recommended that a legislative committee be formed at the next meeting in the event that a quick legislative related decision needed to be made on an issue that could be considered controversial. The Board will receive updates during this legislative session.

11. Update and possible action regarding the process for the Development of Desired Future Conditions (DFCs)

General Manager Drew Satterwhite reported that GMA 8 met on November 30, 2018 and selected WSP teamed with Blanton & Associates, Inc. as the consultants to perform professional services related to the DFC process. James Beach is the Senior Supervising Hydrogeologist. The GMA 8 appointed Drew Satterwhite as part of a committee to negotiate a contract, scope of work and cost to be presented to the GMA 8 at a meeting sometime in the Spring of 2019.

12. Consider and act upon compliance and enforcement activities for violations of District's Rules.

General Manager Drew Satterwhite informed the Board that Debi Atkins, Finance Officer, has been contacting out of compliance well owners. Michael Baur, Oak Hollow Golf Course, DWW Golf Management Company requested to address the board. He asked that the board to waive the \$50 late fees. He questioned why he has to read the meter, and asked why the District does not read it for him. Kristen Fancher, Legal Counsel, responded that it is required under Water Code, Chapter 36 and that it also would not be financially feasible for the District to read the meters.

The Board adjourned into Executive Session at 11:07 a.m. The Board reconvened into regular session at 11:15 a.m. No action was taken on any items discussed during Executive Session.

Chris Boyd made the motion to not waive the late fees and requested that Kristen Fancher notify Mr. Baur of the decision. Ron Sellman seconded the motion. The motion passed unanimously.

13. General Manager's Report: The General Manager will update the Board on operational, educational and other activities of the District.

General Manager Drew Satterwhite reported that 35 well have been registered during November. He reported that he gave a presentation to Kimley-Horn and some of their clients with interests in groundwater located in the District.

14. Open forum/discussion of new business for future meeting agendas.

It was suggested that the possibility of adding funds for legal legislative be considered and also

creating a legislative committee.

The District Hydrogeological Report Requirements with changes are to be brought to the next meeting.

15. Adjourn public meeting

President Young declared the meeting adjourned at 11:17 a.m.

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Recording Secretary

Secretary-Treasurer

ATTACHMENT 5

RESOLUTION NO. 2019-01-12-01

A RESOLUTION BY THE BOARD OF DIRECTORS OF THE NORTH TEXAS GROUNDWATER CONSERVATION DISTRICT AUTHORIZING PAYMENT OF ACCRUED LIABILITIES FOR THE MONTH OF JANUARY

The following liabilities are hereby presented for payment:

<u>Administrative Services</u>	<u>Amount</u>
GTUA - December 2018	24,067.46
GTUA - January 2019	33,892.28
<u>Consultant</u>	
WSP USA - Professional Services November 2018	3,734.45
<u>Direct Costs</u>	
County Tax Assessor Collector - 2019 Registration for Ford F150	7.50
Hillerby Printing - Business Cards / Envelopes	179.13
NexTraq - December 2018 gps tracking	39.95
NexTraq - January 2019 gps tracking	43.15
TWDB - Major Rivers Educational Packages	1,089.00
<u>Insurance</u>	
Bayless-Hall Blanton Insurance - Dishonesty / blanket bond policy renewal 2019	219.00
<u>Injection Well Monitoring</u>	
Statewide Plat Services - November 2018	50.00
Statewide Plat Services - December 2018	62.10
<u>Legal</u>	
Fancher Legal - November 2018 BOD General Counsel	3,037.25
Fancher Legal - December 2018 BOD General Counsel	4,368.00
<u>Legal-Injection Well Monitoring</u>	
Sledge Law - October 2018 Professional Services	2,877.35
Seldge Law - November 2018 Professional Services	1,808.00
Sledge Law - December 2018 Professional Services	2,277.35
<u>Meetings & Conferences</u>	
Mustang SUD-BOD Room Rental February 2019	75.00
<u>Software Maintenance</u>	
Aquaveo-November 2018 well database maintenance	500.00
Aquaveo - December 2018 well database maintenance	500.00
GRAND TOTAL:	\$ 78,826.97

On motion of _____ and seconded by

the foregoing Resolution was passed and approved on this, the 12th day of February, 2019 by the following vote:

AYE:

NAY:

President

Secretary/Treasurer

ATTACHMENT 6 A-1

North Texas Groundwater Conservation District

Balance Sheet

For General Fund (00)

January 31, 2019

Assets

00-01-10001	Checking Account	243,525.04
00-01-10005	Index Account	6,603.96
00-01-10008	Cash- TexStar	260,782.25
00-01-10010	Investments	1,150,000.00
00-01-10025	Accounts Receivable	180,376.05
00-01-10041	A/R Saratoga UWCD	173.02
00-01-10048	A/R Strittmatter Irrigation	14,000.00
00-01-10050	A/R 440 Ranch	1,500.00
00-01-10052	A/R Alpha Omega	100.00
00-01-10053	A/R AC Denton LLC	1,500.00
00-01-12001	PP Expense	1,697.06
	Total	<u>1,860,257.38</u>
	Total Assets	<u>\$ 1,860,257.38</u>

Liabilities and Fund Balance

00-01-23100	Accounts Payable	45,348.28
00-01-23150	Well Drillers Deposits	45,250.00
	Total	<u>90,598.28</u>
	Total Liabilities	<u>90,598.28</u>
00-01-35100	Fund Balance	1,292,708.63
00-01-35110	Current Year Excess of Revenue over Expenses	510,604.45
	Total	<u>1,803,313.08</u>
	Excess of Revenue Over Expenditures	<u>(33,653.98)</u>
	Total Fund Balances	<u>1,769,659.10</u>
	Total Liabilities and Fund Balances	<u>\$ 1,860,257.38</u>

North Texas Groundwater Conservation District
Statement of Revenue and Expenditures

2/7/2019 10:04am

Revised Budget
 For General Fund (00)
 For the Fiscal Period 2019-1 Ending January 31, 2019

Account Number	Current Budget	Current Actual	Annual Budget	YTD Actual	Remaining Budget %
Revenues					
00-01-46001 Well Production Fees	\$ 0.00	\$ 0.00	\$ 686,000.00	\$ 0.00	100.00%
00-01-46003 Well Registration Fees	1,666.67	300.00	20,000.00	300.00	98.50%
00-01-46010 GMA8 Fees	1,666.67	0.00	20,000.00	0.00	100.00%
00-01-46016 Penalty and Fines	0.00	500.00	0.00	500.00	0.00%
00-01-46100 Interest Inc	250.00	0.00	3,000.00	0.00	100.00%
Total General Fund Revenues	\$ 3,583.34	\$ 800.00	\$ 729,000.00	\$ 800.00	99.89%
Expenditures					
00-01-77012 Admin-Mileage	\$ 250.00	\$ 314.32	\$ 3,000.00	\$ 314.32	89.52%
00-01-77013 Admin-Secretarial	2,083.33	1,799.00	25,000.00	1,799.00	92.80%
00-01-77014 Admin-Project Coordinator	1,666.67	2,093.50	20,000.00	2,093.50	89.53%
00-01-77015 Admin-GM	5,000.00	5,304.00	60,000.00	5,304.00	91.16%
00-01-77016 Admin-Clerical	2,833.33	3,991.00	34,000.00	3,991.00	88.26%
00-01-77025 Accounting	2,083.33	3,741.25	25,000.00	3,741.25	85.04%
00-01-77027 Auditing	458.33	0.00	5,500.00	0.00	100.00%
00-01-77030 Advertising	166.67	0.00	2,000.00	0.00	100.00%
00-01-77150 Consulting- Hydrogeo	5,000.00	0.00	60,000.00	0.00	100.00%
00-01-77325 Direct Cost	350.00	566.28	4,200.00	566.28	86.52%
00-01-77450 Dues & Subscription	250.00	0.00	3,000.00	0.00	100.00%
00-01-77480 Equipment	833.33	735.58	10,000.00	735.58	92.64%
00-01-77485 Equipment-Database	833.33	0.00	10,000.00	0.00	100.00%
00-01-77500 Fees-GMA8	1,833.33	0.00	22,000.00	0.00	100.00%
00-01-77550 Field Tech	10,416.67	10,826.00	125,000.00	10,826.00	91.34%
00-01-77560 Field Permitting/Geologist	5,833.33	3,726.00	70,000.00	3,726.00	94.68%
00-01-77650 Fuel/Maintenance	291.67	261.48	3,500.00	261.48	92.53%
00-01-77800 Injection Well Monitoring	58.33	0.00	700.00	0.00	100.00%
00-01-77810 Insurance	385.17	339.42	4,622.00	339.42	92.66%
00-01-77970 Legal	4,166.67	0.00	50,000.00	0.00	100.00%
00-01-77975 Legal-Injection	1,250.00	0.00	15,000.00	0.00	100.00%
00-01-77980 Legal-Legislation	1,250.00	0.00	15,000.00	0.00	100.00%
00-01-78010 Meetings & Conferences	541.67	275.71	6,500.00	275.71	95.76%
00-01-78310 Rent	200.00	200.00	2,400.00	200.00	91.67%
00-01-78600 Software Maint	416.67	0.00	5,000.00	0.00	100.00%
00-01-78610 Telephone	200.00	280.44	2,400.00	280.44	88.32%
00-01-78780 Well Monitoring/Testing	375.00	0.00	4,500.00	0.00	100.00%
Total General Fund Expenditures	\$ 49,026.83	\$ 34,453.98	\$ 588,322.00	\$ 34,453.98	94.14%
General Fund Excess of Revenues Over Expenditures	\$ (45,443.49)	\$ (33,653.98)	\$ 140,678.00	\$ (33,653.98)	123.92%

ATTACHMENT 6 B-1

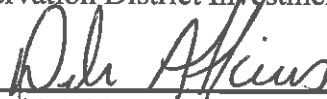
North Texas Groundwater Conservation District
Quarterly Investment Report
For the Quarter Ended
December 31, 2018

The investment portfolio of the North Texas Groundwater Conservation District is in compliance with the Public Funds Investment Act and the Investment Policy and Strategies.

Presented by North Texas Groundwater Conservation District Investment Officers:



Drew Satterwhite
General Manager



Debi Atkins
Finance Officer

Book/Market Value Comparison

Description	Coupon/ Discount	Maturity Date	September 30, 2018		Purchases/ Adjustments	Sales/Adjust/ Call Maturity	December 31, 2018	
			Face Amount/ Par Value	Book/Market Value			Face Amount/ Par Value	Book/Market Value
Independent (DDA)	1.80%	10/1/2018	\$ 60,032.66	\$ 60,032.66	201,566.08	\$	\$ 261,598.74	\$ 261,598.74
Independent (ISS)	1.50%	10/1/2018	6,373.80	6,373.80	24.90	\$	\$ 6,398.70	\$ 6,398.70
TexStar	1.995%	10/1/2018	400,000.00	400,000.00		(139,217.75)	\$ 260,782.25	\$ 260,782.25
Landmark Bank	1.59%	11/16/2018	500,000.00	500,000.00		(500,000.00)	\$	\$
Legacy Bank	2.42%	3/25/2019	500,000.00	500,000.00			500,000.00	500,000.00
East West	2.80%	9/10/2019			650,000.00		650,000.00	650,000.00
			<u>\$ 1,466,406.46</u>	<u>\$ 1,466,406.46</u>	<u>\$ 851,590.98</u>	<u>\$ (639,217.75)</u>	<u>\$ 1,678,779.69</u>	<u>\$ 1,678,779.69</u>

Investment Holdings
12/31/2018

Description	Ratings	Coupon/ Discount	Maturity Date	Settlement Date	Face Amount/Par Value	Book Value	Market Price	Market Value	Life (Day)	Yield
Independent (DDA)		1.80%	10/1/2018	12/31/2018	\$ 261,566.08	\$ 261,566.08	1.00	\$ 261,566.08	1	1.80%
Independent (ISS)		1.50%	10/1/2018	12/31/2018	6,603.96	6,603.96	1.00	6,603.96	1	1.50%
TexStar		2.3069%	10/1/2018	12/31/2018	260,782.25	400,000.00	1.00	400,000.00	1	2.31%
Legacy Bank		2.42%	3/25/2019	9/24/2018	500,000.00	500,000.00	1.00	500,000.00	84	2.42%
East West		2.8%	9/10/2019	12/10/2018	650,000.00	650,000.00	1.00	650,000.00	253	2.80%
					<u>\$ 1,678,952.29</u>	<u>\$ 1,818,170.04</u>			<u>123</u>	
										(1)

(1) Weighted average life - For purposes of calculating weighted average life, bank accounts, pools and money market funds are assumed to have an one day maturity.

ATTACHMENT 6 C-1

NTG NORTH TEXAS GCD GROUNDWATER CD CONSERVATION DISTRICT

COLLIN COUNTY - COOKE COUNTY - DENTON COUNTY

General Manager's Quarterly Report

Date: December 31, 2018

North Texas GCD Management Plan

This quarterly briefing is being provided pursuant to the adopted Management Plan for the quarter ending December 31, 2018.

Well Registration Program:

Current number of wells registered in the District: 2,375

Aquifers in which the wells have been completed: Trinity and Woodbine

Well Inspection/Audit Program:

**2018
Well Inspections**

Month	Collin	Cooke	Denton	Total
January	0	0	28	28
February	21	7	2	30
March	6	7	45	58
April	6	32	41	79
May	19	6	31	56
June	5	24	72	101
July	3	12	66	81
August	6	12	79	97
September	4	7	32	43
October	0	8	32	40
November	8	5	42	55
December	3	0	13	16
Total	81	120	483	684

ATTACHMENT 7

DATE: February 7, 2019

SUBJECT: AGENDA ITEM NO. 7

DISCUSSION AND POSSIBLE ACTION ON AMMENDMENTS TO THE DISTRICT HYDROGEOLOGICAL REPORT REQUIREMENTS

ISSUE

The District requires a hydrogeological report to be submitted as part of the application process for wells capable of producing 200 gallons per minute or more.

BACKGROUND

The District Board reviewed the draft hydrogeological report requirements at the December 2018 meeting. All comments from that meeting have been incorporated into the updated document. The Board adopted the document at the meeting with all changes and the provision that a revised version with non-public system ("PWS") water sampling requirements would be brought back at a later date.

The attached Hydrogeological Report Requirements document incorporates all changes discussed to-date. The District staff has further researched this topic and believes the Texas A&M Agrilife Extension has a comprehensive sampling program that is reasonable in costs. The analysis performed and associated costs are found in the table below:

1. Routine Analysis (R) (201) (Conductivity, pH, Na, Ca, Mg, K, CO ₃ ²⁻ , HCO ₃ ⁻ , SO ₄ ²⁻ , Cl ⁻ , P, B, Nitrate-N, Hardness, and SAR)	\$25 per sample
2. R + Metals (202) In addition to Routine Analysis includes: (Zn, Fe, Cu, and Mn)	\$40 per sample
3. R + Titrate of Drip Irrigation (203)	\$33 per sample
4. R + Metals + Titrate for Drip Irrigation (204)	\$47 per sample
5. R + Metals + Heavy metals and Fluoride (205) In addition to test number 2, include As, Ba, Cr, Cd, F, Ni, Pb.	\$75 per sample
Hardcopy mailed to address listed above	\$2 per invoice

Based upon the table above, the staff would recommend requiring all constituents listed in Test #2 be submitted for non-PWS wells producing 200gpm or more. The Board may not want to require that Texas A&M Agrilife Extension be the testing laboratory, but still require those constituents be analyzed and point the applicant toward Texas A&M Agrilife Extension as an option for performing the analysis.

STAFF RECOMMENDATIONS

The staff recommends that the Conductivity, pH, Na, Ca, Mg, K, CO₃²⁻, HCO₃⁻, SO₄²⁻, Cl⁻, P, B, Nitrate-N, Hardness, SAR, Zn, Fe, Cu and Mn be the required constituents to be analyzed for non-PWS wells that are required to submit a hydrogeological report.

ATTACHMENTS

Hydrogeological Report Requirements

PREPARED AND SUBMITTED BY:

A handwritten signature in blue ink, consisting of a large, stylized initial 'D' followed by a series of horizontal strokes and a long, sweeping tail.

Drew Satterwhite, P.E., General Manager

NORTH TEXAS GROUNDWATER CONSERVATION DISTRICT
HYDROGEOLOGICAL REPORT REQUIREMENTS

Adopted pursuant to District Rules 3.10(a)(13), 3.10(b) and 3.15(b)

I. Introduction

- A. Hydrogeological Reports that meet the criteria in these guidelines must be included with administratively complete applications for any of the following:
 - 1. requests to drill and operate a proposed new well or well system with a proposed aggregate production capacity of 200 gallons per minute or more;
 - 2. requests to modify or increase an existing well or well system that would result in the existing well(s) being equipped to produce 200 gallons per minute or more; and/or
 - 3. exception to spacing requirements for wells covered by (1) or (2) above.
- B. Purpose of the Hydrogeological Report is to provide the District with hydrogeological information addressing the impacts of the proposed well on existing wells and in relation to the Desired Future Condition (DFC) for the applicable aquifer, as required by Sections 36.113(d) and 36.1132 of the Texas Water Code.
- C. Reports submitted pursuant to District Rules 3.10(a)(13), 3.10(b) and 3.15(b) and these guidelines are required to be sealed by a Professional Geoscientist or Professional Engineer licensed in the State of Texas.
- D. Hydrogeological Reports submitted to the District should follow the chronological order of the criteria set forth in Section II.

II. Required Content of Hydrogeological Reports

- A. Well construction specifics must include the following:
 - 1. Details on all aspects of well.
 - 2. Schematic well construction diagram.
 - 3. Lithologic description of geology encountered during well drilling.
 - 4. Identify specific location through maps:
 - a. Maps showing location of property relative to county level, location of well relative to property boundaries, and other relevant features
- B. Discussion of hydrogeologic setting must include the following:
 - 1. Identification of the aquifer.
 - 2. Discussion of surface and subsurface geology at well site.
 - a. Include whether there is any occurrence of any significant groundwater recharge features such as outcrop, surface water bodies, caves, sinkholes, faults or other geologic features.

3. Include depth interval of proposed water bearing zone and identify target production zone.
 4. Provide anticipated thickness of water bearing zone.
 5. Identify whether the target production zone is anticipated to be confined or unconfined.
 6. Provide estimates of thickness of confining layer at well site location.
 7. Provide specific aquifer parameters at the well site, including transmissivity, hydraulic conductivity and storativity based on the Texas Water Development Board (TWDB) approved Groundwater Availability Model for the aquifer.
 - a. Provide a discussion of the variability of wells in the area, if applicable.
 8. Identify all registered wells within a 1-mile radius of the proposed well using publicly-available District well database.
 - a. In the event the 1-mile radius does not include any registered wells, the radius will be extended to a 2-mile radius in order to address impacts under Section II(D)(3) of these guidelines.
 9. Include identification of streams or springs within 1-mile radius of the proposed well.
- C. Water quality analysis must include the following:
1. Include discussion of known quality in the area based on literature and well reports.
- D. Interference analysis must include the following:
1. Provide a quantitative analysis that shows the projected impacts from proposed production.
 - a. Simulation results must be included showing drawdown at 24 hours, 30 days, and 1 year (contoured with the smallest contour equal to 1-foot water level decline).
 - i. Include discussion of the methodology used for estimating drawdown, including software that was used, the assumptions and/or solution method employed.
 - ii. Include illustration and/or maps showing the estimated cone of depression. If there is more than one well in the group, two maps should be included demonstrating:
 - (1) contours for impacts from pumping the proposed well only;
and
 - (2) contours for impacts from all wells in the system.
 2. For well systems, include a discussion of the amount or degree of interference that each of the system wells may exert on other same system wells.

3. Include a discussion of the estimated impacts on existing registered wells identified under Section II(B)(8) of these guidelines.

E. Desired Future Condition (DFC) and Modeled Available Groundwater (MAG) Analysis

1. Discussion of the proposed pumping amount in relation to the MAG, as well as the impact of the proposed pumping on the adopted DFC.

III. Post-Drilling Requirements

A. Mandatory requirements:

1. Geophysical logs required to be submitted upon completion of the well.
 - a. Geophysical logs must consist of a resistivity or induction curve and a spontaneous potential or gamma ray curve at a minimum.
 - b. Geophysical logs performed in the initial open-borehole are required and will consist of resistivity (self potential and gamma ray at a minimum).
 - c. Wells cased with PVC require induction and gamma ray logs.
 - d. All digital log files to be submitted in LAS format as well as printed.
2. All public water supply sampling completed in accordance with TCEQ/EPA requirements must be submitted to the District.

B. Must provide if available:

- a. Digital or tabulated data of water levels measured during drawdown, specific capacity, or pumping test;
- b. Field parameters of specific conductivity, temperature and pH of measurements made during the drawdown or pumping test; and/or
- c. Any laboratory analysis completed on samples collected from the well after construction and development.

IV. Additional Construction Requirements

- A. Measuring tube at least one inch in diameter to be installed from the well head to the bottom most screen interval in all new wells with a capacity to produce 200 gpm or more.
1. The measuring tube shall be a separate PVC pipe connected/adjacent to the casing.

ATTACHMENT 9



AGENDA COMMUNICATION

DATE: February 7, 2019

SUBJECT: AGENDA ITEM NO. 9

CONSIDER AND ACT UPON ORDERING BROCHURES FOR THE DISTRICT'S WELL MONITORING PROGRAM

ISSUE

The District staff is requesting approval from the Board to order brochures to assist with building the Well Monitoring Program.

BACKGROUND

The District is currently in the process of trying to expand the well monitoring network. The Well Monitoring Program consists of taking groundwater level measurements at multiple locations across the region in order to better our understanding of the aquifers and gain insights on the impacts of water levels due to recharge and pumping. Data collected from the wells is also used for the developing and improvement of Groundwater Availability Models for each aquifer.

The District staff has drafted a letter intended to be sent to Public Water System well owners as the next step in adding wells to the program. The District staff also believes that a brochure detailing the program would be a beneficial tool for this effort. The idea is that we would include this brochure with the letter to public water suppliers. We would also propose that the District field staff carry these brochures with them to pass out during their inspections.

CONSIDERATIONS

The Well Monitoring Program is a key component to the District furthering our understanding of the aquifers we are tasked to manage. The cost breakdown of the brochures is found below:

Amount	Cost
25	\$ 20.00
50	\$ 40.00
100	\$ 60.00
250	\$ 120.00
500	\$ 200.00
750	\$ 280.00
1000	\$ 350.00

A draft of the brochure has been run by the TCEQ's enforcement division leader in Austin to ensure accuracy. If approved, we would propose to relay this information to the Fort Worth Division so they can help spread the word.

STAFF RECOMMENDATIONS

The staff recommends the board authorize the purchase of at least 250 brochures to assist in our efforts of expanding the monitoring network.

ATTACHMENTS

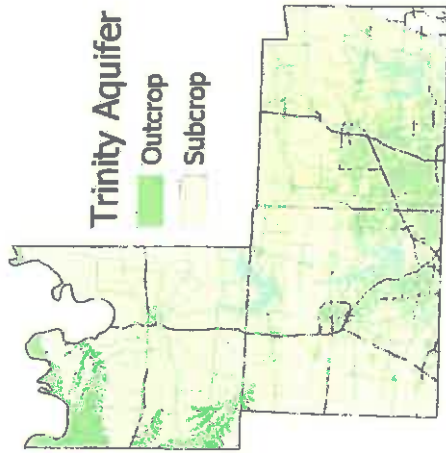
Draft Well Monitoring Brochure

Draft Well Monitoring Letter

PREPARED AND SUBMITTED BY:

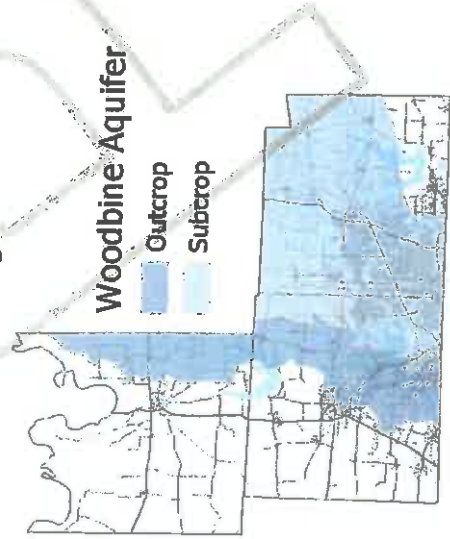
A handwritten signature in blue ink, consisting of a stylized 'D' followed by a long horizontal stroke.

Drew Satterwhite, P.E., General Manager



The Trinity Aquifer is a major aquifer extending across much of the central and northeastern part of Texas. This aquifer is composed of several water bearing formations that may or may not bear water depending on geographic location. The Antlers, Paluxy, and Twin Mountains are the water bearing formations comprising the Trinity within the District's jurisdiction. The Trinity is one of the most extensive and highly used groundwater resources in Texas.

The Woodbine Aquifer is a minor aquifer located in northeast Texas and overlies the Trinity Aquifer. The aquifer consists of sandstone inter-bedded with shale and clay that form three distinct water-bearing zones. Although the state classifies the Woodbine Aquifer as minor, this aquifer is a significant source of water for our region.

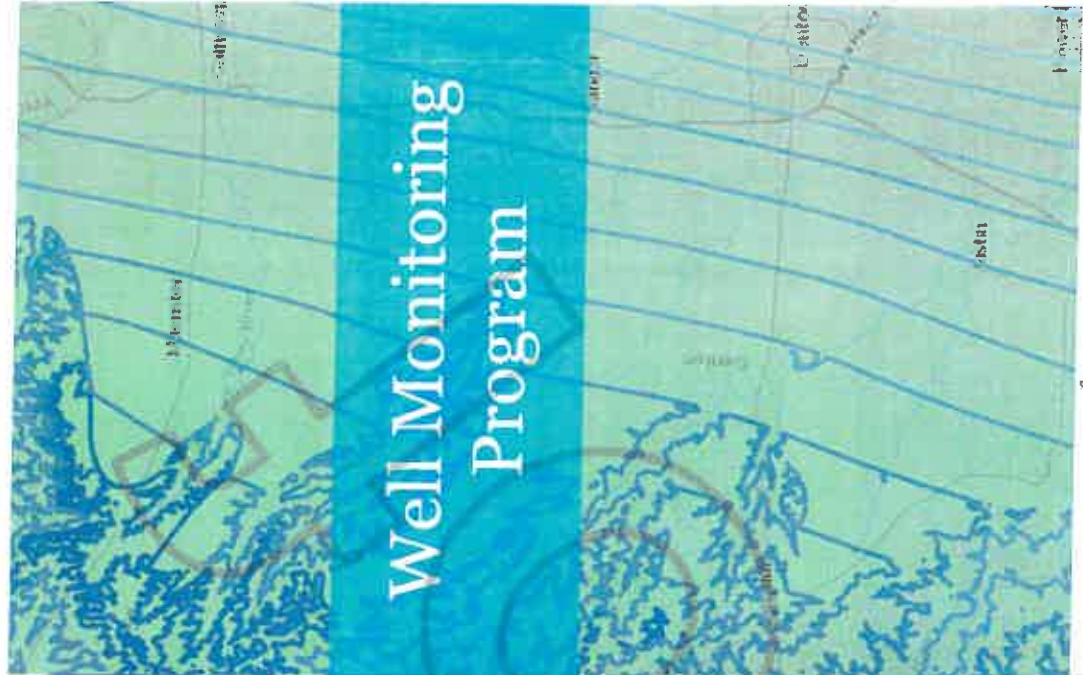


Serving Collin, Cooke and Denton Counties

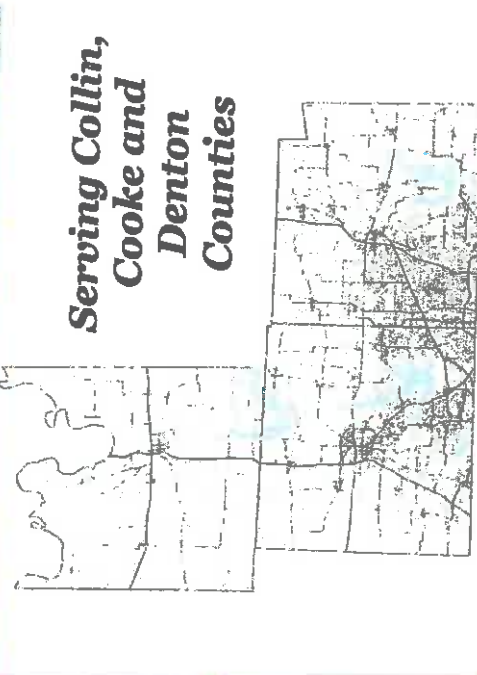


For more information, contact the District today
(855) 426-4433

North Texas Groundwater Conservation District
P.O. Box 508, Gainesville, TX 76241
ntgcd@northtexasgwd.org
www.northtexasgwd.org



Well Monitoring Program

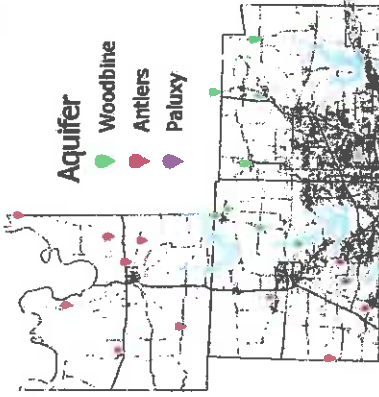


Serving Collin, Cooke and Denton Counties

Program Overview

The District is in the process of trying to expand our Well Monitoring Program. The Well Monitoring Program consists of taking groundwater level measurements at multiple locations across the region in order to better our understanding of the aquifers and gain insights on the impacts of water levels due to recharge and pumping. Data collected from the wells are also used for developing and improving Groundwater Availability Models for each aquifer.

Current District's Monitoring Wells



Well owners who are considering adding their well to the District's well monitoring program will benefit by having accurate readings of water levels at their well location and will gain a better understanding of how pumping in and around the District impacts their wells.

Requirements for All Monitoring Wells

All wells used in the program shall be registered or permitted with the District. Owners will be asked to register any unregistered well, free of charge, by filling out appropriate forms and applications. Additionally, the owner will be asked to sign a simple monitoring well agreement with the District.

Procedure

At least once per year, District staff will measure the water level of the wells in the well monitoring program using methods such as air lines, graduated steel tapes, electric tapes and pressure transducers.

Air lines, graduated steel tapes, and electric tapes are used to take a single water level measurement at the time the District's staff is visiting the well. If a well is equipped with an air line this is the preferred method of measurement by District staff. The District's staff will attempt to arrange a time with the well owner to measure the well. It is best for the District to understand how long it has been since the well last pumped.

Pressure Transducers



Pressure transducers include a data logger that will collect data from the pressure transducers at a designated time-interval. Pressure transducers provide trends related to the aquifers throughout the day and ultimately year. Typically, pressure transducers will be installed in a well that is not operational.

Retired wells are usually ideal candidates for the Districts Monitoring Program. These wells can be measured in many ways including the utilization of pressure transducers so the District can continuously measure the water level. For Public Water Systems, the Texas Commission on Environmental Quality (TCEQ) requires that retired wells be plugged and the plugging of a well can be cost prohibitive to a well owner. However, TCEQ will allow an entities' unused wells to be used for the District's water level monitoring program which would give the well a purpose and defer plugging of the well as long as it was not a risk for contamination. By placing an unused well in the District's monitoring plan, this arrangement can be a great benefit to both the District and well owner.

Requirements for Retired Wells

Assuming the well casing is not in a deteriorated condition, the District and the well owner would need to reach an agreement to allow the District access to the wells. The District has a simple standard agreement used for monitoring wells. The well owner will still be required to remove any equipment down hole which is part of the plugging process. If the casing condition or screen location is unknown, then the well may need to be further investigated with a down-hole well camera.

What will the District do with the collected data?

Data collected from the wells will be used by the District to help make sound and informed management decisions and rule amendments. Data collected from the wells will also be used for developing and improving Groundwater Availability Models for each aquifer.

North Texas Groundwater Conservation District

For more information, contact the District at (855) 426-4433

Unused/Retired Wells



To: Representative
PWS Name
Address
City, State Zipcode

From: Drew Satterwhite, P.E., General Manager

Thursday, February 7, 2019

Re: Request for Well Monitoring Agreement

The North Texas Groundwater Conservation District ("District"), through strategies and programs adopted in the District's management plan and rules, strives to ensure the most efficient use of groundwater to sustain available resources for the future while maintaining the vibrant economic growth of the District. The Well Monitoring Program is one of the key programs implemented to ensure the most efficient use of the groundwater resources within the region.

Texas Water Development Board ("TWDB") has measured 20 wells across Cooke, Collin, and Denton counties. Data collected from the wells are used in the development of Groundwater Availability Models for each aquifer. Increasing the number of monitoring wells is essential to better understand the aquifers and gain insights on the impacts of water levels due to pumping. Data collected from the wells will be used by the district to make sound and informed management decisions and rule amendments that will meet the goals and the purpose of the District.

The District's staff has identified *Number of Wells* of your wells as possible candidates for the Well Monitoring Program. The District is proposing to monitor the identified wells, and all the information collected, along with any other overall information collected would be available to you, as well as anyone in the area. You would be able to terminate this agreement with the District at any time upon providing written notice that you would like to suspend the District's monitoring of your wells (by email or U.S. mail).

The District maintains General Liability Insurance, which would cover our employees while on your property conducting the water well monitoring activities. The District would be responsible for its activities related to the collection of water level information from your wells, and you would be responsible for your individual activities related to your wells.

Attached to this letter is the District's standard well monitoring agreement, outline of the wells selected for monitoring, and a brochure detailing the District's program. If you wish to participate in the Well Monitoring Program, please sign the attached agreement and return the agreement to the District. If you have any questions, please contact the District at ntgcd@northtexasgcd.org or (855) 426-4433.

Respectfully Submitted,

Drew Satterwhite, P.E., General Manager



Well Monitoring Agreement

Well Owner: Owner Name

Mailing Address: Address, City, State Zipcode Phone: Phone# Email: Email

Property Address/Location of Water Well(s): Address, City, State Zipcode

GPS Coordinates: Latitude, Longitude

Number of Water Wells to be Monitored: Number

Monitoring Entity: North Texas Groundwater Conservation District (“District”)

Mailing Address: P.O. Box 508, Gainesville, Texas 76241 Email: ntgcd@northtexasgcd.org

Phone: (855) 426-4433

Owner and District hereby agree as follows:

- 1. Term of Agreement.** This Well Monitoring Agreement (“Agreement”) will commence on the last date of signature below, and terminate upon the expiration of twenty (20) years after the Effective Date (“Term”), unless terminated earlier according to Section 2.
- 2. Right to Early Termination.** Either Owner or District may terminate this Agreement as it relates to one or more well(s) prior to the end of the Term. Such early termination will become effective sixty (60) days after delivery of written notice (by mail or email) to the other party. If early termination occurs, Owner may request in writing that District cap the well(s) subject to this Agreement, or Owner may continue or begin to use the well according to all applicable laws and regulations, including the rules of District. All equipment belonging to or installed by District at the well(s) subject to this Agreement, if any, will at all times belong to District and, upon termination, Owner will allow sixty (60) days from the effective date of termination for the District to remove any equipment from the well(s).
- 3. Use and Purpose.** Owner authorizes access by District employees and/or duly authorized representatives, including both vehicular and pedestrian, to only those portions of Owner’s property necessary to carry out well monitoring. The use of Owner’s well(s) will be limited to monitoring groundwater levels. Owner retains all rights of ownership to the well(s) and Owner’s real and personal property. District may access utility lines in order to provide telecommunications and electrical service to the well(s) as necessary for monitoring, at District’s sole cost and expense, and subject to Owner’s agreement as to the location(s) of such lines.
- 4. Equipment and Data.** A monitoring probe may be placed in the well(s) below the static water level. If so, a cable will run from the probe to the surface. The probe will measure and store water level changes. District will download the readings on a periodic basis, or District may install equipment to send the information to District on a “real-time” basis. District may physically measure the water level in the well(s) by means of a measuring tape or other similar equipment. District will make data gathered from the well(s) available to Owner at no cost to Owner. District will pay any and all costs associated with the installation, operation, and maintenance of equipment used for monitoring. District, its employees, contractors, and authorized representatives will comply at all times with all applicable laws, rules, and safety standards in connection with District monitoring.
- 5. Well Owner Activities.** If Owner intends to pull or rework a well or its pump, Owner will make diligent effort to protect and maintain any equipment installed in or around the well for monitoring purposes. If Owner intends to engage in any such activities or projects that could affect monitoring of the well(s), Owner will provide advance written notice in order to minimize any interference.

6. **Mutual Indemnification and Insurance.** To the extent permitted by law, **Owner will indemnify and hold District harmless** from any and all claims related to Owner's, its partners', agents', and/or assigns', actions and activities at the well(s) and on Owner's property. To the extent permitted by law, **District will indemnify and hold Owner harmless** from any and all claims related to District's, its employees', agents' and/or authorized representatives', actions and activities at the well(s) and on Owner's property. District will at all times maintain General Liability Insurance to provide coverage for District's activities at the well site(s) and on Owner's property.

WELL OWNER:

By: _____

Printed Name: _____

Title: _____

Date: _____

NORTH TEXAS GROUNDWATER CONSERVATION DISTRICT:

By: _____

Printed Name: _____

Title: _____

Date: _____

ATTACHMENT 10



AGENDA COMMUNICATION

DATE: February 7, 2019

SUBJECT: AGENDA ITEM NO. 10

CONSIDER AND ACT UPON AUTHORIZING PURCHASE OF DISTRICT FLOW METER CALIBRATION SERVICES

ISSUE

The District staff would like to have the District's flow meter calibrated to ensure accuracy.

BACKGROUND

Several years ago, the District partnered with the Red River Groundwater Conservation District to purchase a flow meter for the testing of water wells in the District. This meter has been a valuable asset to the District for field staff to confirm well capacities.

In the past, the District was mainly concerned with determining whether a well is capable of producing 25 gallons per minute or more. The 25 gallons per minute was the District's exemption cutoff. As of January 1, 2019, the District has implemented new spacing rules which are based on a formula with the variable being the well's production capacity. The District Staff believes that the new spacing regulations will place an added importance on production capacity and that it would be in the District's best interest to be able to verify meter accuracy.

CONSIDERATIONS

The manufacturer does not have a recommended calibration/verification interval; however, TCEQ does require a public water system to calibrate their meters every three (3) years.

Cost for this calibration/verification would be split 50/50 with the Red River Groundwater Conservation District. The District's share would be \$300. Red River Groundwater Conservation District approved, at their January 16, 2019 meeting, the purchase of the meter calibration services contingent upon North Texas Groundwater Conservation District doing the same.

STAFF RECOMMENDATIONS

The Staff recommends authorizing the District staff to proceed with meter calibration services.

ATTACHMENTS

Calibration Quote

SUBMITTED BY:

A handwritten signature in blue ink, appearing to read 'Drew Satterwhite', written over a horizontal line.

Drew Satterwhite, P.E., General Manager

INSTRUMART

Service Quote

Instrumart is a registered trade name of
Total Temperature Instrumentation, Inc. ("TTI")

35 Green Mountain Drive • S. Burlington • VT • 05403 • USA
P: 802-863-0085 • F: 802-863-1193
www.instrumart.com
DUNS: 197963499 • FEIN: 03-0316999

Date	Quote #
11/28/2018	Q1148163

This is a quote, not an invoice. Actual shipping date and charges will be determined at the time of invoicing.

Bill To	Ship To
North Texas Groundwater Conservation District 5100 Airport Drive Denison TX 75020 United States	North Texas Groundwater Conservation District 5100 Airport Drive Denison TX 75020 United States

Expires	Reference #	Customer Contact	External Memo			
12/28/2018		James Parkman				
Terms	Ship Via	Freight Collect #	TTI Sales Rep			
TBD	FREE SHIPPING - UPS GROUND		Matthew M Wheeler			
Item	Quantity	Description	Rate	Amount	Serial Nu...	Manufact...
TKUSTTNI	1	NIST-Traceable Calibration with Calibration Certificate. 5-Point NIST-Traceable Calibration for clamp-on ultrasonic flow meters. \$450.00 USD for FSC and 1 transducer set, \$150.000 per additional transducer set Current Availability: ~15-20 business days plus transit time from our South Burlington, Vermont location.	600.00	600.00		United States
* Lifetime Tech Support	1	Unlimited lifetime technical support via phone (800-235-8367) or email (support@instrumart.com) for the items on this order.	0.00	0.00		
If you have any questions please don't hesitate to contact me. Regards, Matt Wheeler mwheeler@instrumart.com (800) 235-8367 x 237			Subtotal	600.00		
			Shipping Cost (FREE SHIPPING - UPS GROUND)	0.00		
			Total - US \$	\$600.00		

Service Information: The in-house evaluation of all products distributed by Instrumart will be done at no cost to the customer as long as the unit/units have been purchased within the last 12 months. Beyond 12 months charges for evaluation shall only be accrued for product that must be returned to select vendors for further evaluation. Upon completion of our evaluation we will advise the customer of repair charges and request a purchase order prior to proceeding.

Note: All items returned for service must be shipped prepaid.

THESE PRODUCTS ARE SUBJECT TO U.S. EXPORT CONTROL LAWS INCLUDING THE U.S. EXPORT ADMINISTRATION ACT AND ITS ASSOCIATED REGULATIONS. BUYER AGREES TO COMPLY STRICTLY WITH ALL REGULATIONS AND ACKNOWLEDGES THAT IT HAS THE RESPONSIBILITY TO OBTAIN LICENSES TO EXPORT, RE-EXPORT, OR IMPORT THE PRODUCTS. DIVERSION CONTRARY TO U.S. LAW IS PROHIBITED.

ATTACHMENT 11

DATE: February 7, 2019

SUBJECT: AGENDA ITEM NO. 11

**CONSIDER AND ACT UPON PROCEDURE FOR COMPLETION DEADLINES ON APPLICATIONS SUBMITTED UNDER
TEMPORARY RULES**

ISSUE

The District staff is requesting direction from the Board on how to treat well applications submitted under the temporary rules that are yet to be completed.

BACKGROUND

As of January 1, 2019, the District's Permanent Rules became effective which included changes to the amount of time, including extensions, which an applicant has to complete a well.

Temporary Rules Summary:

- An applicant has 240 days to dill and complete with option for an additional 240 day extension. The applicant was also required to commence drilling within 180 days.

Permanent Rules Summary:

- An applicant of a non-Public Water System ("PWS") well has 240 days to commence, drill and complete a well with the option of an additional 240-day extension.
- A PWS applicant has 365 days to commence, drill and complete a well with the option of 2 additional 365-day extensions.

CONSIDERATIONS

The District has several wells that are pending completion under varying circumstance under the old rules. The District Staff would like to discuss several scenarios with the Board of Directors and get direction on how to treat the pending wells.

STAFF RECOMMENDATIONS

The staff will provide scenarios to the Board and subsequently request direction from the Board on this matter.

PREPARED AND SUBMITTED BY:



Drew Satterwhite, P.E., General Manager

ADJOURN