

SANDY LAND UNDERGROUND WATER CONSERVATION DISTRICT

**Annual Report
January 1, 2019 through December 31, 2019**



**Sandy Land Underground Water Conservation District
1012 Ave. F
P.O. Box 130
Plains, Texas 79355
(806)456-2155**

SANDY LAND UNDERGROUND WATER CONSERVATION DISTRICT

TABLE OF CONTENTS

BOARD OF DIRECTORS AND STAFF	3
DISTRICT CREATION	5
2019 ANNUAL REPORT OVERVIEW	7
GOALS, MANAGEMENT OBJECTIVES AND PERFORMANCE STANDARDS	12
IRRIGATION EFFICIENCY TESTS, WATER LEVEL MONITORING NETWORK, DEPLETION PROGRAM	19
WATER QUALITY NETWORK	26
WELL PERMITTING AND REGISTRATION	33
AGRICULTURAL LOAN PROGRAM	36
SCHOLARSHIP AND EDUCATION PROGRAM	38

**SANDY LAND UNDERGROUND
WATER CONSERVATION DISTRICT**

BOARD OF DIRECTORS AND STAFF

SANDY LAND UNDERGROUND WATER CONSERVATION DISTRICT

BOARD OF DIRECTORS

Ross Hilburn, President
Linda Powell, Vice-President
Tracy Welch, Secretary
Rickey Bearden, Director
Stanley Ashburn, Director (May 2019)

DISTRICT STAFF

Amber Blount, Manager
Gale McDonnell, Office Manager
Michelle Cooper, Education Coordinator

DISTRICT OFFICE

1012 Avenue F
P.O. Box 130
Plains, Texas 79355
(806)456-2155 (806)456-5655 Fax
www.sandylandwater.com

**SANDY LAND UNDERGROUND
WATER CONSERVATION DISTRICT**

DISTRICT CREATION

DISTRICT CREATION

Sandy Land Underground Water Conservation District was created by the 71st Legislature of the State of Texas under Article 16, Section 59 of the Constitution of Texas Statutes.

On November 7, 1989, a special election was held in Yoakum County in order to confirm the establishment of the district as provided by Senate Bill No 1777, agree to a levy of a maintenance tax at a rate not to exceed 2½ cents per \$100 valuation, and to elect the initial board members for the district. A total of 764 votes were cast with 388 voting “for” and 177 voting “against” the district establishment and levy. David Turnbough, L.J. Sanders, Jr., R. E. Bearden, Brad Palmer and Don Parrish were elected as the initial board members.

Gary L. Walker was selected as the first Manager of Sandy Land Underground Water Conservation District in January 1990.

Kathy Jones was employed by the District in February 1990 to serve as District Secretary and remained so until her resignation in October 2001.

Board members adopted the proposed Rules and Regulations for Sandy Land Underground Water Conservation District on December 12, 1990. The initial tax rate of the District was set at \$.007 per \$100 valuation at a tax hearing held on August 26, 1991.

David Turnbough was elected President of the Board in 1990. He served in that capacity for the entire time that he was a Sandy Land UWCD Director. David and his wife, Vi, moved to Lubbock in the summer of 2006 necessitating his resignation from the Board of Directors.

R. E. Bearden served on the Board of Directors continuously for 18 years. Mr. Bearden’s retirement became effective September 2007.

Amber Blount was named Manager of Sandy Land Underground Water Conservation District in March 2015 after the retirement of Gary L. Walker on January 31, 2015

Dennis G. Harrison resigned from the board in December of 2017. He served continuously on the board for almost 25 years.

**SANDY LAND UNDERGROUND
WATER CONSERVATION DISTRICT**

2019 ANNUAL REPORT OVERVIEW

2019 ANNUAL REPORT OVERVIEW

Sandy Land UWCD is, today, an active, functional enterprise that had its beginning in 1989 with the creation of the Water District. The common thread that runs through this program is that of water conservation. We hope this report will detail some challenges and efforts of water conservation this year.

January

- Rain gauge readings taken in 26 locations throughout the county.
- Annual well depth measurements taken for Monitor Well Network.
- Manager Blount presented Legislative update.
- Gale McDonnell mailed loan payment letters to borrowers in our Water Conservation Agricultural Loan Program.
- Ms. Blount attended TAGD meeting in Austin.
- Ms. McDonnell posted Notice of Deadline to File Applications for a Place on the Ballot and published in DC Press for Director Election.
- Depletion letters mailed to eligible county residents.
- Reporting begins for 2019 Water Use.
- District Manager Blount continues her role and responsibilities as TAGD Vice-President and Legislative Executive Committee member.
- Continue USGS project – Hydrogeologic Framework of the Ogallala and Edwards-Trinity Aquifers in Gaines, Terry and Yoakum Counties.
- Raymond Brady and Amy Bush continue contracted hydrological work for the water district.
- Michelle Cooper, Education Coordinator, continues work with the region's water districts.

February

- Rain gauge readings taken in 26 locations throughout the county.
- Manager Blount presented Legislative update.
- Loan payments on existing loans due from producers on February 15.
- USGS representatives presented project update for the Hydrogeologic Framework of the Ogallala and Edwards-Trinity Aquifers in Yoakum County.
- Board of Directors reviewed and approved the Sandy Land UWCD 2018 Annual Report.
- Directors review Irrigation Water Estimates.
- District Manager Blount continues her role and responsibilities as TAGD Vice-President and Legislative Executive Committee member.
- Continue USGS project – Hydrogeologic Framework of the Ogallala and Edwards-Trinity Aquifers in Gaines, Terry and Yoakum Counties.
- Raymond Brady and Amy Bush continue contracted hydrological work for the water district.
- Michelle Cooper, Education Coordinator, continues work with the region's water districts.

March

- Rain gauge readings taken in 26 locations throughout the county.
- Manager Blount presented Legislative update.
- Terry and King CPAs PC perform 2018 in-house tax audit.
- Ms. Blount attended legislative meetings to review fills in Austin and testified in the Senate Water & Rural Affairs and House Natural Resources hearings.
- Gale McDonnell presented the Order of Cancellation and Certification of Unopposed Candidates authorizing the cancellation of the May 4, 2019 Board of Directors' election.
- Management Plan Public Hearing was held March 6, 2019.
- Received TAGD Ag Loan Contract Amendment to extend funds for one year.
- Manager Blount continues her role and responsibilities as TAGD Vice-President and Legislative Executive Committee member.

- Continue USGS project – Hydrogeologic Framework of the Ogallala and Edwards-Trinity Aquifers in Gaines, Terry and Yoakum Counties.
- Raymond Brady and Amy Bush continue contracted hydrological work for the water district.
- Michelle Cooper, Education Coordinator, continues work with the region's water districts.

April

- Rain gauge readings taken in 26 locations throughout the county.
- Sandy Land UWCD made loan payment to Texas Water Development Board for the Water Conservation Agricultural Loan Program.
- Manager Blount presented Legislative update.
- Terry and King CPAs presented Sandy Land UWCD's 2018 financial audit.
- SLUWCD 2018 Financial Audit approved.
- Texas Tech University endowment recipients were presented at the regular Board Meeting.
- Amber attended Women in Ag in Brownfield.
- Ms. Blount attended the Region O meeting in Lubbock.
- Fourth Annual Rainwater Harvesting Community workshop presented in Plains by Education Coordinator, Michelle Cooper.
- District Manager Blount continues her role and responsibilities as TAGD Vice-President and Legislative Executive Committee member.
- Continue USGS project – Hydrogeologic Framework of the Ogallala and Edwards-Trinity Aquifers in Gaines, Terry and Yoakum Counties.
- Raymond Brady and Amy Bush continue contracted hydrological work for the water district.
- Michelle Cooper, Education Coordinator, continues work with the region's water districts.

May

- Rain gauge readings taken in 26 locations throughout the county.
- Manager Blount presented Legislative update.
- Gale McDonnell presented Certificates of Election, administered Oaths of Office and Statements of Officers to Sandy Land UWCD Directors.
- Directors' officer election was conducted for SLUWCD.
- Executive Session held in May Board of Directors' meeting.
- Ms. Blount attended TY Pickett Appraiser's meeting.
- Board and staff reviewed 2019 estimated tax values.
- Amber Blount attended Yoakum County Soil & Water Conservation Awards Breakfast.
- Macy Downs begins as summer contract labor.
- District Manager Blount continues her role and responsibilities as TAGD Vice-President and Legislative Executive Committee member.
- Continue USGS project – Hydrogeologic Framework of the Ogallala and Edwards-Trinity Aquifers in Gaines, Terry and Yoakum Counties.
- Raymond Brady and Amy Bush continue contracted hydrological work for the water district.
- Michelle Cooper, Education Coordinator, continues work with the region's water districts.

June

- Rain gauge readings taken in 26 locations throughout the county.
- Water quality tests begin for Sandy Land UWCD's Water Quality Network.
- The Board begins work on Sandy Land's 2020 budget.
- Ms. Blount attended TAGD meeting in Austin.
- Amber Blount office visit with Dr. Paul Adams, researcher with UT.
- Amber attended TWCA meeting in Galveston.
- Ms. Blount attended Region O meeting in Lubbock.
- District Rules changes discussed in regular Board of Directors' meeting.
- Macy Downs attended Texas 4-H Water Ambassadors Camp.
- District Manager Blount continues her role and responsibilities as TAGD Vice-President and Legislative Executive Committee member.

- Continue USGS project – Hydrogeologic Framework of the Ogallala and Edwards-Trinity Aquifers in Gaines, Terry and Yoakum Counties.
- Raymond Brady and Amy Bush continue contracted hydrological work for the water district.
- Michelle Cooper, Education Coordinator, continues work with the region's water districts.

July

- Rain gauge readings taken in 26 locations throughout the county.
- Water quality testing continues for wells in the Water Quality Network.
- Reviewed and discussed SLUWCD 2020 budget.
- Jake Wood presented Amber Blount, Gale McDonnell, and Michelle Cooper retirement updates – Wood Financial Review.
- District Rules changes discussed in regular Board of Directors' meeting.
- Macy Downs completes summer contract labor.
- District Manager Blount continues her role and responsibilities as TAGD Vice-President and Legislative Executive Committee member.
- Continue USGS project – Hydrogeologic Framework of the Ogallala and Edwards-Trinity Aquifers in Gaines, Terry and Yoakum Counties.
- Raymond Brady and Amy Bush continue contracted hydrological work for the water district.
- Michelle Cooper, Education Coordinator, continues work with the region's water districts.

August

- Rain gauge readings taken in 26 locations throughout the county.
- The Board of Directors adopted and approved the SLUWCD 2020 budget.
- Manager Amber Blount, Board Vice-President Linda Powell, Director Stanley Ashburn, and Education Coordinator Michelle Cooper attended the Texas Groundwater Summit in San Antonio.
- Tax Rate Hearing notice posted in Denver City Press.
- Texas 4-H Water Ambassadors Presentation.
- Manager Blount attended TWDB Flood Stakeholder meeting in Lubbock.
- District Rules changes discussed in regular Board of Directors' meeting.
- District Manager Blount continues her role and responsibilities as TAGD Vice-President and Legislative Executive Committee member.
- Continue USGS project – Hydrogeologic Framework of the Ogallala and Edwards-Trinity Aquifers in Gaines, Terry and Yoakum Counties.
- Raymond Brady and Amy Bush continue contracted hydrological work for the water district.
- Michelle Cooper, Education Coordinator, continues to work with the region's water districts.

September

- Rain gauge readings taken in 26 locations throughout the county.
- Water quality testing concluded on wells in the Water Quality Network.
- Public Hearing to set 2020 Tax rate at .015806/\$100.
- Board reviewed and approved the Sandy Land UWCD policy, Investment policy and Professional Services.
- Directors approved list of financial institutions.
- Ms. Blount attended Rural Legislative Wrap-up in Lubbock
- Manager Blount met with Erin Atkinson of Half Associates Inc. pertaining to database proposal.
- Amber Blount attended GMA2 Meeting in Seminole.
- Ms. Blount attended Region O meeting in Lubbock.
- With no further changes, District Rules will be submitted to attorney for finalization.
- District Manager Blount continues her role and responsibilities as TAGD Vice-President and Legislative Executive Committee member.

- Continue USGS project – Hydrogeologic Framework of the Ogallala and Edwards-Trinity Aquifers in Gaines, Terry and Yoakum Counties.
- Raymond Brady and Amy Bush continue contracted hydrological work for the water district.
- Raymond Brady begins preparing decline maps. This map is constructed from data gathered earlier in the year from well depth measurements and used for IRS depletion program.
- Michelle Cooper, Education Coordinator, continues to work with the region's water districts.

October

- Ray Brady begins initial work on hydrographs.
- Rain gauge readings taken in 26 locations throughout the county.
- Amber Blount attended and assisted organizing Kel Seliger Town Hall Meeting.
- GMA2 meeting and luncheon hosted by Sandy Land UWCD in Plains.
- Ms. Blount and Michelle Cooper presented information at Plains ISD Career Fair.
- Board of Directors approved Ag Loan Resolution in regular meeting.
- District Manager Blount continues her role and responsibilities as TAGD Vice-President and Legislative Executive Committee member.
- Continue USGS project – Hydrogeologic Framework of the Ogallala and Edwards-Trinity Aquifers in Gaines, Terry and Yoakum Counties.
- Raymond Brady and Amy Bush continue contracted hydrological work for the water district.
- Raymond Brady continues work on decline map for use in IRS depletion program.
- Michelle Cooper, Education Coordinator, continues work with the region's water districts.

November

- Rain gauge readings taken in 26 locations throughout the county.
- Ms. Blount attended TAGD Executive Retreat in Kingsville.
- Half Associates, Inc. representatives presented a detailed proposal for the database management system in regular board meeting.
- District Manager Blount continues her role and responsibilities as TAGD Vice-President and Legislative Executive Committee member.
- Continue USGS project – Hydrogeologic Framework of the Ogallala and Edwards-Trinity Aquifers in Gaines, Terry and Yoakum Counties.
- Raymond Brady and Amy Bush continue contracted hydrological work for the water district.
- Raymond Brady continues work on decline map for use in IRS depletion program.
- Michelle Cooper, Education Coordinator, continues work with the region's water districts.

December

- Rain gauge readings taken in 26 locations throughout the county.
- Half Associates, Inc. Database proposal approved by directors in regular directors' meeting.
- TWCARMF property appraisal performed.
- District Manager Blount continues her role and responsibilities as TAGD Vice-President and Legislative Executive Committee member.
- Continue USGS project – Hydrogeologic Framework of the Ogallala and Edwards-Trinity Aquifers in Gaines, Terry and Yoakum Counties.
- Raymond Brady and Amy Bush continue contracted hydrological work for the water district.
- Michelle Cooper, Education Coordinator, continues work with the region's water districts.
- Sandy Land Board and staff enjoyed Christmas dinner at Las Brisas Restaurant in Lubbock.
- End of year reporting begins for Sandy Land.

**SANDY LAND UNDERGROUND
WATER CONSERVATION DISTRICT**

**GOALS, MANAGEMENT OBJECTIVES AND
PERFORMANCE STANDARDS**

Goal 1.0 Provide for the most efficient use of groundwater within the District.

Management Objective

- (a) Annually conduct irrigation well efficiency tests for 100 percent of requests within 10 days of the property owner request.

Performance Standard

- (a1) Percentage of irrigation well efficiency test requests conducted annually within ten (10) days of request.

Current Performance Status

In 2019, property owners requested well efficiency tests from the District for **27** wells & pivots. One hundred percent (100%) of these wells/pivots were tested within 10 days.

Management Objective

- (b) There are currently 93 water wells in the District's water level monitoring network. The objective is to annually measure water levels in a majority of the district's monitor well network and replace wells as needed.

Performance Standard

- (b1) Percentage of monitor wells in monitor well network in which water levels were measured.

Current Performance Status

In 2019, **90** of the wells in the monitor well network (**97%**) were measured or attempted to be measured. (81 depths were recorded; 9 wells were either dry or not measurable)

Goal 2.0 Control and prevent waste of groundwater within the District

Management Objective

- (a) Each year, the District will sample the water quality in at least one selected well(s) in order to monitor water quality trends and prevent the waste of groundwater by contamination. The District will also sample for water quality analysis on 100 percent of other wells which the owner requests to be sampled each year.

Performance Standard

- (a1) Number of wells sampled for water quality analysis by the District to monitor water quality trends, each year.

Current Performance Status

Out of 97 wells in the District's water quality network, **85** wells were sampled 2019 to monitor water quality trends and prevent the waste of groundwater by contamination.

Performance Standard

- (a2) Percent of wells sampled for water quality analysis by the District upon request each year.

Current Performance Status

In 2019, the District performed water quality and bacteria analysis tests on 100 percent of the 34 requested samples for the residents of Sandy Land Underground Water Conservation District and for others outside the district.

Management Objective

- (b) Each year, the district will enforce district spacing and production limitation rules requiring the permitting of all new wells to prevent the waste of groundwater. The District will issue temporary permits for 100 percent of the application requests that meet the District's rigorous rules for spacing within 30 days of the receipt of the application.

Performance Standard

- (b1) Number of temporary permits issued by the District for new wells in compliance with spacing and production limits each year.

Current Performance Status

Sandy Land Underground Water Conservation District has issued **121** well permit applications for fiscal year 2019.

Performance standard

- (b2) Percent of temporary permits issued to applications that meet the District's rigorous rules for spacing within 30 days of receipt of application.

Current Performance Status

Sandy Land Underground Water Conservation District has issued 100% of permits within 30 days of receipt of application this year to date.

Management Objective

- (c) The District will publish articles on the district's activities and water conservation to encourage a reduction of water use. This information may be made available by direct mail, website or local newspaper.

Performance Standard

- (c1) Number of articles on water conservation presented by the District each year.

Current Performance Status

In 2019, a total of 10 articles were given to the newspapers of the county to publish, several articles or comments referencing conservation were posted on social media, and the website contains information for any interested parties.

Goal 3.0 Controlling and Preventing Subsidence

The goal of controlling and preventing subsidence is not applicable to the District.

Goal 4.0 Addressing Conjunctive Surface Water Management Issues

The goal for addressing conjunctive surface water management issues is not applicable to the District due to the absence of any surface water features and hence, any surface water management issues.

Goal 5.0 Addressing Natural Resource Issues

The goal for addressing natural resource issues that impact the use and availability of groundwater or are impacted by the use of groundwater within the District is not applicable.

Goal 6.0 Addressing Drought Conditions

As previously stated in the Drought Contingency Plan section on page 9 (of the District's Management Plan), the District is in a constant state of drought and recognizes the importance of rainfall.

Management Objective

- (a) The District will maintain a Rain Gauge Network across the county.

Performance Standard

- (a1) Maintain a network of rain gauges in the District. Publish rainfall data on the District's web site as collected.

Current Performance Status

District staff collected rainfall data on the District's 26 rain gauges and published on the District website.

Goal 7.0 Addressing Conservation of Groundwater within the District

Management Objective

- (a) As long as funding is available from TWDB, the District will participate in the TWDB Agricultural Conservation Loan program as a lender district and make loans available to all qualified applicants for the purchase of water conserving irrigation apparatus, up to the maximum amount of the loan commitment made to the District by TWDB.

Performance Standard

- (a1) Number of Agricultural Conservation loan applications received by the District from qualified applicants, each year.

Current Performance Status

For the fiscal year 2019, five (5) Agricultural Conservation loan applications were received from qualified applicants.

Performance Standard

- (a2) Number of Agricultural Conservation loans made by the District to qualified applicant, each year.

Current Performance Status

For the fiscal year 2019, five (5) Agricultural Conservation loans were made to qualified applicants.

Management Objective

- (b) Each year, the district will award scholarships to at least four (4) high school students graduating from a high school within the District to facilitate study of water conservation topics.

Performance Standard

- (b1) Number of scholarships awarded to students graduating high school within the District to facilitate study of water conservation topics, each year.

Current Performance Status

In May of 2019, a total of four scholarships were awarded to seniors within Yoakum County.

Management Objective

- (c) Each year, the District will provide Educational material to specific teachers at each school within the District.

Performance Standard

- (c1) Number of teachers who were provided educational materials

Current Performance Status

Twenty-two (22) teachers within the District were provided with educational material from the District's Education Coordinator.

Management Objective

- (d) each year the District will promote water conservation through presentations given within the District

Performance Standard

- (d1) Number of presentations given during the fiscal year.

Current Performance Status

Fifteen (15) presentations were given during fiscal year 2019 to the public, schools, libraries and other civic organizations.

Goal 8.0 Addressing Recharge Enhancement

A review of past work conducted by others indicates this goal is not appropriate at present; therefore, this goal is not applicable.

Goal 9.0 Addressing Rainwater Harvesting

Management Objective

- (a) The District will conduct an educational program for this conservation strategy at least once a year.

Performance Standard

- (a1) Number of educational programs given on rainwater harvesting.

Current Performance Status

The District held a one (1) rainwater workshop on April 29th at the Plains Community Building.

Goal 10.0 Addressing Precipitation Enhancement

While the District did participate in this program previous, in 2015 the Board determined that it was not cost effective. Therefore, this goal is not applicable.

Goal 11.0 Addressing Brush Control

Existing programs administered by the USDA-NRCS are sufficient for addressing this goal. The Board does not believe that this activity is cost-effective and applicable for the District at this time; therefore, this goal is not applicable.

Goal 12.0 Addressing the Desired Future Conditions (DFC)

For the purposes of this management plan, the District proposes to evaluate the cumulative drawdown in 5-year increments, which will gage our attainment of the DFC in shorter increments and allow us to make changes accordingly.

Management Objective

(a) The District will calculate the average annual drawdown using the results of annual water level measurements each winter.

Performance Standard

(a1) Present the average drawdown results to the Board of Directors each year.

Current Performance Status

(a1) The District staff presented the drawdown results to the Board of Directors during the annual report presentation in the February 2019 monthly board meeting.

(a2) The average drawdown results will be made available to the public each year.

Current Performance Status

(a2) The drawdown results are published in the Districts Annual Report which is available to the public. The results are also published on the district's website.

Management Objective

(b) The District will calculate the average cumulative drawdown in 5 year increments.

Performance Standard

(b1) Present the cumulative average drawdown results to the Board of Directors each year.

Current Performance Status

(b1) The cumulative average drawdown results were presented to the Board of Directors during the annual report review at the February 2019 monthly board meeting.

(b2) The cumulative average drawdown results will be made available to the public each year.

Current Performance Status

(b2) The cumulative average drawdown results are available to the public through the district's website.

**SANDY LAND UNDERGROUND
WATER CONSERVATION DISTRICT**

**IRRIGATION EFFICIENCY TESTS
WATER LEVEL MONITORING NETWORK
DEPLETION PROGRAM**

IRRIGATION EFFICIENCY TESTS, WATER LEVEL MONITORING NETWORK & THE DEPLETION PROGRAM

Reference Goal 1.0 (a) (b) (c)

One of the goals of Sandy Land UWCD is to provide the most efficient use of groundwater within the District. One of the ways this is accomplished is by conducting efficiency tests on irrigation wells at the owner's request. District personnel endeavor to perform these tests in a timely manner so that the owner may have the needed information as soon as possible to make important irrigation decisions.

Sandy Land UWCD took the first water level measurements in 1991 and has been doing so on a yearly basis ever since. Approximately 90 wells are in the Water Level Monitoring Network and these are measured each year in January and/or February to provide information about the Ogallala Aquifer in Yoakum County. Measurements in the network are generally taken in the winter months because water levels are more stable at that time than during the summer months when pumping is heavier. Irrigation wells are normally used in the monitoring program as they afford ease of entry for measurements. The measurements from these wells are compared with previous year's measurements to determine any changes in water levels.

District personnel use this well depth data to construct hydrographs and depletion maps which are given to an Internal Revenue Service agent for review. After approval, these are used to determine the amount of decline allowable on federal income tax returns.

All landowners in Yoakum County who utilize groundwater may claim a cost-in-water income tax depletion allowance on their federal income tax return. Landowners must have an established value in their water and a decline of the water table for the year before the claim may be made.

Based on the interest from landowners over the last few years it appears the benefits have been exceptionally good. Request forms may be picked up at the district office in Plains. Requests to participate in the Depletion Program must include:

- name;
- address;
- complete legal description of the tract of land on which a claim is to be filed;
- date of acquisition; and
- the number of acres in the tract.

Sandy Land UWCD currently has approximately 93 participants and approximately 92,000 acres of land enrolled in the Depletion Program.

Below is an allocation of time spent on Irrigation Efficiency Tests, Water Level Monitoring Network and Depletion Program.

Activity	Total Hours
Perform Irrigation Efficiency Tests at Producers Request	27
Measure Water Levels	90
Draw Decline Map & Assign Declines	30
Update Hydrograph Spreadsheet & Charts, Prepare Hydrograph Book	24
Update, Prepare and Mail Depletion Letters	24
TOTAL	295

Well Depth Measurement Sheet for 2019 Measurements

Well Depth Measurement Sheet			
Comparing 2018 and 2019 Measurements			
Well Number	Section Number	2018 Measurement	2019 Measurement
24-33-801	41	135.10	135.0
24-41-201	100	121.30	121.90
24-41-502	183		169.5
24-41-602	187	113.70	116.30
24-41-802	306	77.30	76.50
24-41-804	305	84.80	85.50
24-42-401	128	128.60	128.50
24-42-801	252		
24-43-403	196	88.40	88.10
24-43-501	146	113.70	114.20
24-43-801	260		37.40
24-44-101	10, Block K	144.60	140.00
24-49-101	344	51.70	52.20
24-49-201	365	57.20	56.30
24-49-203	397	95.40	97.30
24-49-303	368	33.30	33.90
24-49-401	418		151.20
24-49-601	422		168.80
24-49-702	518		156.50
24-49-802	540	155.00	148.30
24-49-903	514		
24-50-203	371	103.30	103.50
24-50-204	312	152.60	152.00

Well Number	Section Number	2018	2019
24-50-402	425	107.30	107.70
24-50-501	440	48.10	48.20
24-50-801	510	88.30	88.40
24-51-101	317	125.00	122.70
24-51-201	380	78.60	79.50
24-51-602	489		125.40
24-51-701	504		117.90
24-52-701	40, Block K		107.40
24-57-101	581	149.60	150.20
24-57-301	576	120.00	120.00
24-57-302	640	90.90	91.20
24-57-501	642		81.90
24-57-502	707	56.70	57.50
24-57-601	734	81.80	81.40
24-57-702	772	100.00	100.50
24-57-802	770	85.80	86.00
24-57-901	797	69.90	74.40
24-58-101	607	109.60	110.30
24-58-201	610	104.20	105.50
24-58-301	632		
24-58-401	637	87.50	87.40
24-58-501	634		
24-58-601	696	97.50	97.70
24-58-801	764		71.9
24-58-901	761		76.4
24-59-101	566	97.00	97.20
24-59-201	564	60.60	61.20

Well Number	Section Number	2018	2019
24-59-301	627	131.00	131.50
24-59-601	690		
24-59-801	757	74.80	75.00
24-60-402	686		104.90
24-60-701	752		50.00
25-48-301	121	134.40	135.00
25-48-601	165	115.10	115.90
25-48-801	299	59.80	62.10
25-56-201	358		125.40
25-56-502	414		150.70
25-56-802	534		153.00
25-56-901	521	146.40	143.50
25-64-301	597	151.50	153.40
25-64-501	660		139.9
25-64-602	710		
25-64-801	777	149.50	149.20
25-64-901	789	152.30	152.30
26-08-202	852		169.70
27-01-101	901		
27-01-202	835		124.20
27-01-301	895		
27-01-302	862		
27-02-101	864	67.30	67.40
27-02-303	825	69.60	69.80
27-03-101	886	132.40	130.60
27-03-202	819		
27-04-101	Block 19, C34, PSL		144.20
24-44-701	Block 20, K, PSL		25.8

Well Number	Section Number	2018	2019
22-42-504	154	88.80	88.60
25-48-921	241	68.60	69.70
26-08-317	854	218.00	218.80
24-50-605	431	84.90	84.50
24-57-112	645	84.10	85.10
24-58-508	700	94.90	95.00
27-02-212	891	98.10	98.50
24-50-924	549	109.00	103.20
24-57-735	791	208.00	
25-48-329	106	134.80	136.00
24-41-535	160	95.20	97.40
24-41-202	101	135.30	137.60
24-42-702	248	70.30	70.10
25-64-604	662	139.50	140.60
27-01-102	902	193.10	193.40

**SANDY LAND UNDERGROUND
WATER CONSERVATION DISTRICT**

WATER QUALITY NETWORK

SANDY LAND UNDERGROUND WATER CONSERVATION DISTRICT WATER QUALITY NETWORK

Reference Goal 2.0 (a)

Sandy Land UWCD has completed 29 years of study of rural water in Yoakum County. The district performs water quality analysis on a majority of the 97 wells in the network yearly and has data on the majority of these wells since the districts creation in 1990. Sandy Land UWCD believes it is important to monitor the trends of these wells in order to detect changes in water quality within the Ogallala Aquifer. By detecting changes in the groundwater quality, the District would ideally be able to identify the source that caused the change and work to eliminate it. We at Sandy Land UWCD feel it is important, as a single county water district, to continue to work to protect the groundwater in our area.

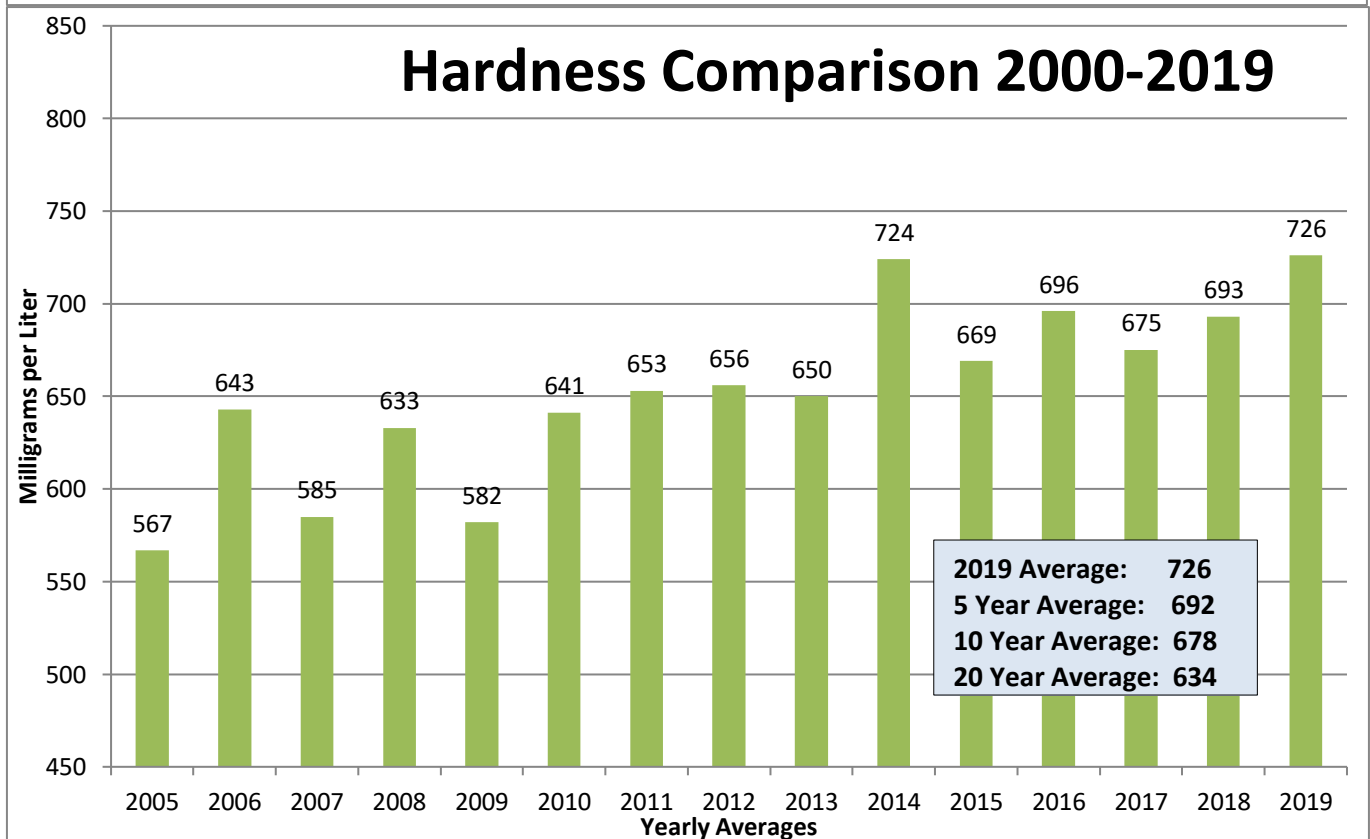
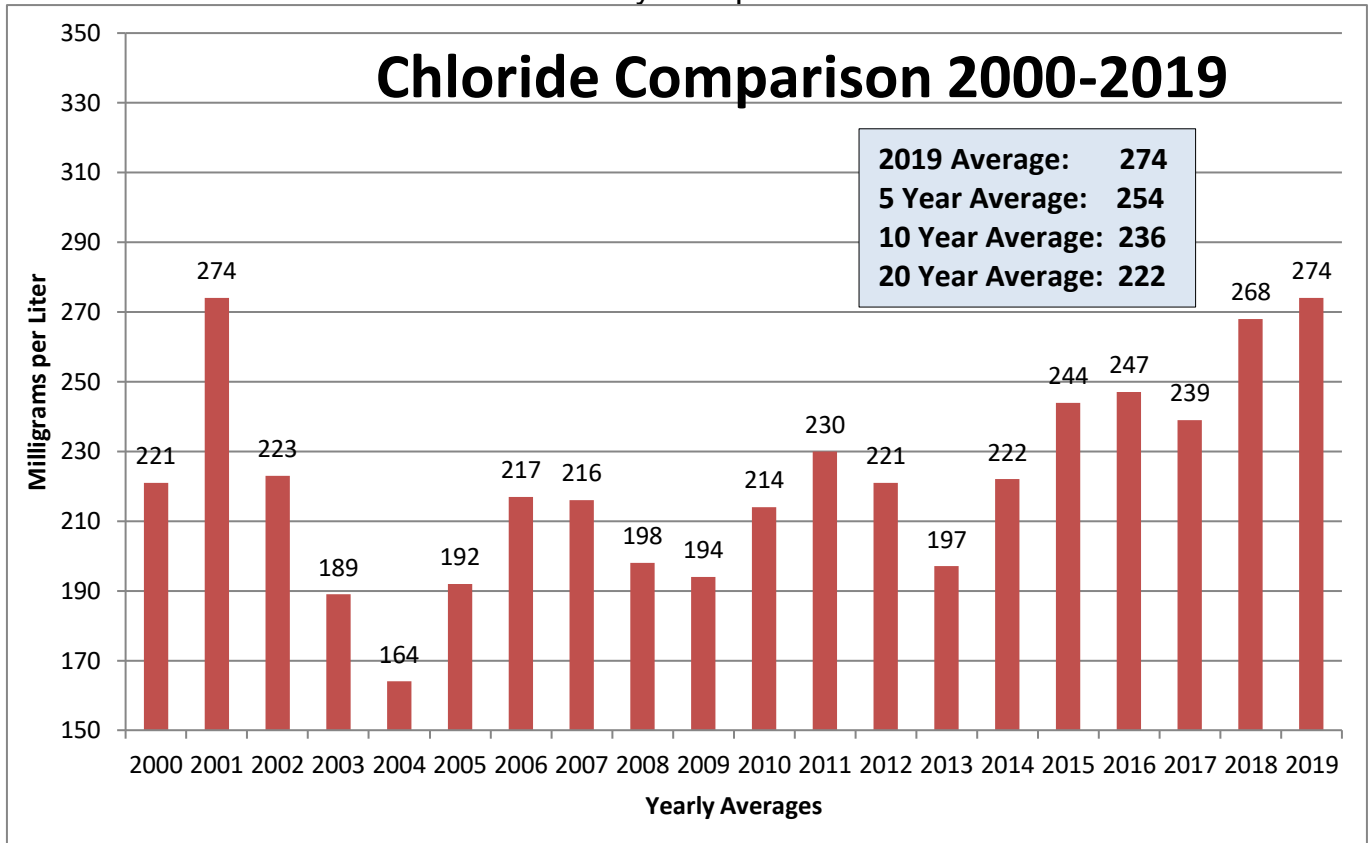
Sandy Land tests for a total of seven components or properties each year. These consist of chloride, hardness, total dissolved solids, fluoride, iron, nitrate, and pH for each well. During the testing process in 2012, we decided that the alkalinity and specific conductivity tests were not pertinent to determining the district's water quality. For this reason, we decided to no longer keep a record of these levels. Bacteria test analysis is not routinely done on network wells but can be done upon request. Residents of the District may request water quality tests at any time and we will perform these tests in a timely manner. Within each property, we are able to detect variances from year to year. Since the test wells are scattered throughout Yoakum County, we are able to tell the difference in quality in different regions of our county.

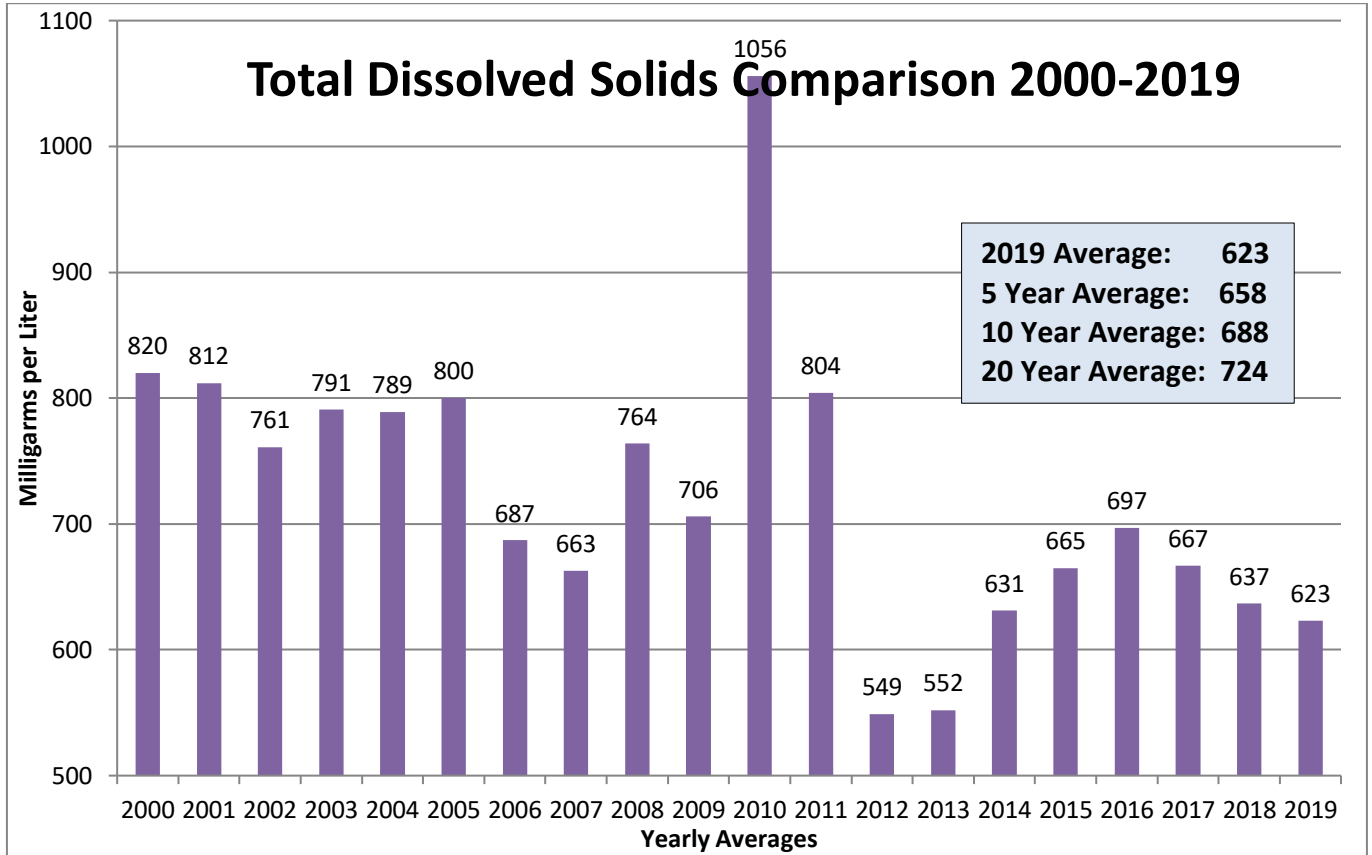
The chart below shows the number of well samples, average, maximum, and minimum values for 2019, as well as the current drinking standards, if available.

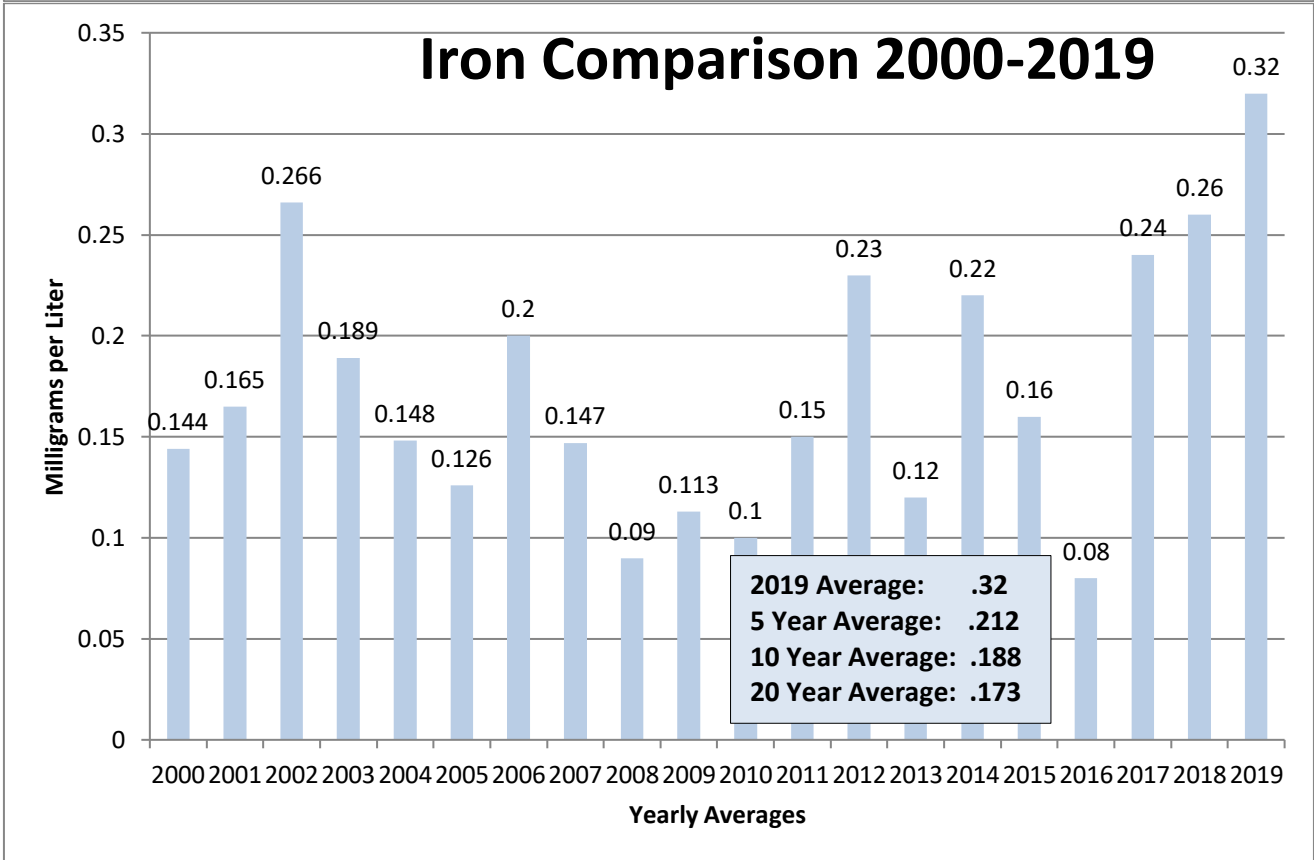
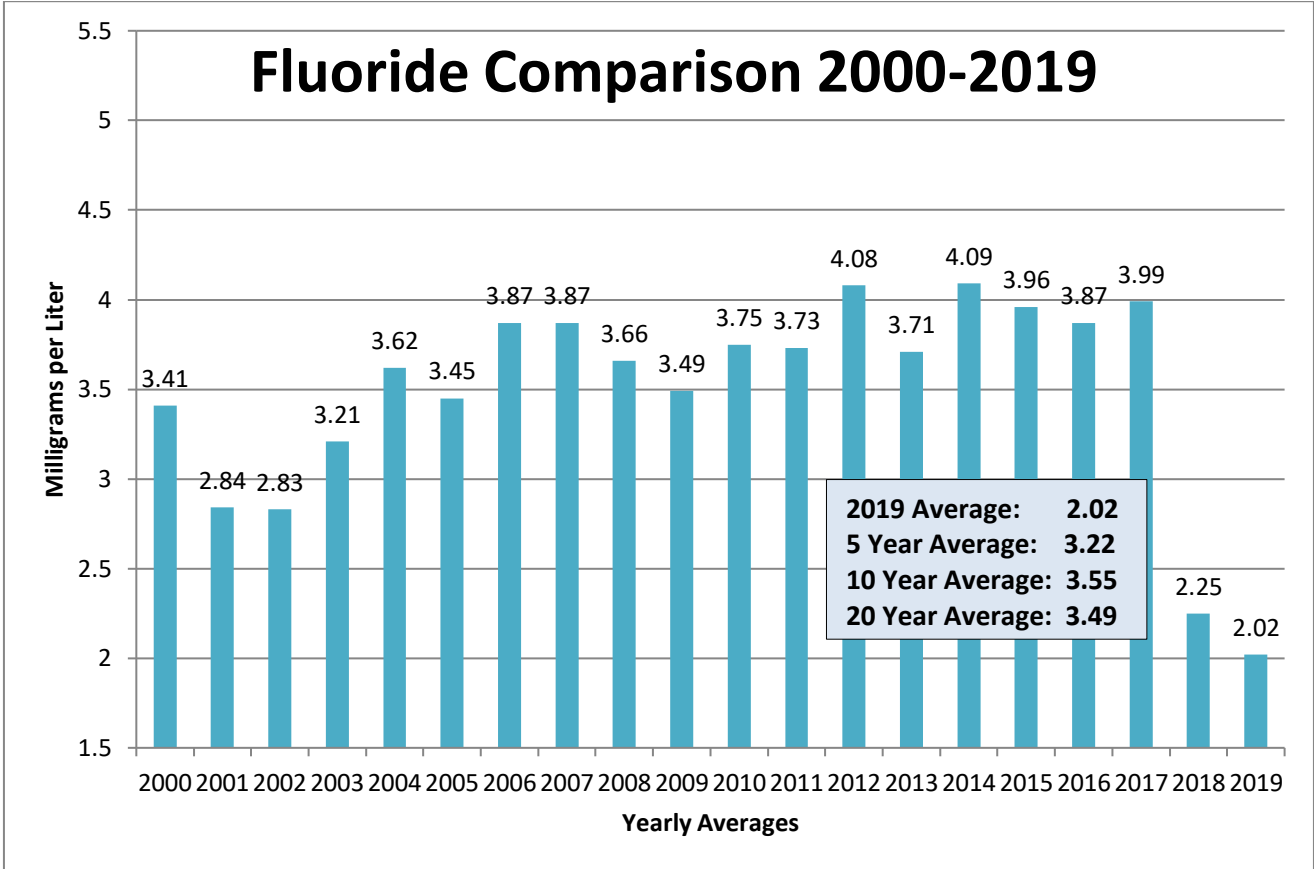
2019 Water Quality Data

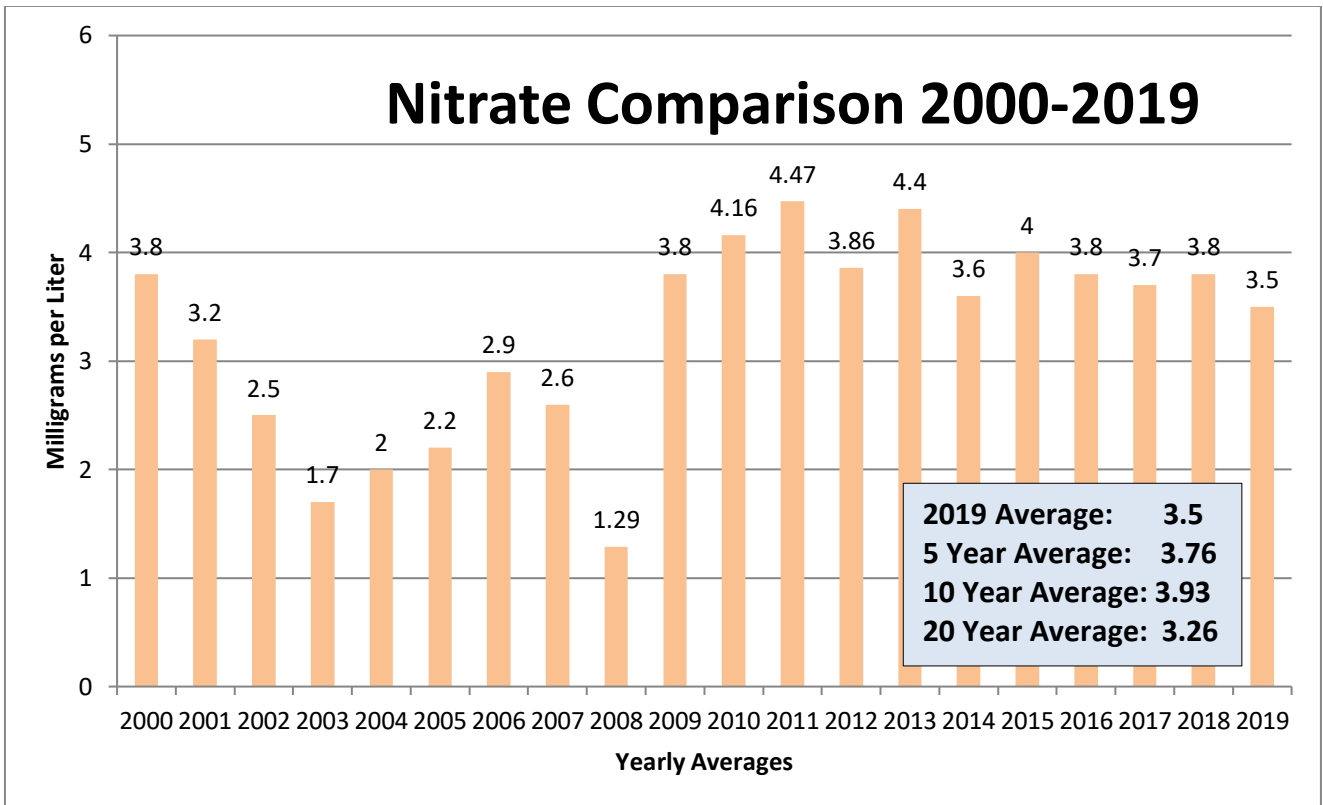
2019	Chloride	Hardness	Total Dissolved Solids	Fluoride	Iron	Nitrate	pH
Average	274	726	623	2.02	.32	3.5	7.35
No. of Wells Tested	85	83	85	85	85	85	85
Minimum	39	323	298	.09	.001	.052	6.4
Maximum	972	2026	1620	3.54	3.7	16	7.92
Drinking Water Standard	Not to Exceed 300 mg/L	N/A	N/A	Not to Exceed 4.0 mg/L	Not to Exceed 0.3 mg/L	Not to Exceed 10 mg/L	N/A

Water Quality Comparisons









Below is an allocation of time spent on Water Quality Program.

Activity	Hours per Sample	Number of Samples	Total Hours
Perform Water Quality Tests by Requests	1	34	34
Water Quality Network - Retrieve Samples and Perform Tests	1	85	85
Update Records, Notification to Residents	.50	119	59.5
		TOTAL	178.5

**SANDY LAND UNDERGROUND
WATER CONSERVATION DISTRICT**

WELL PERMITTING AND REGISTRATION

WELL PERMITTING AND REGISTRATION

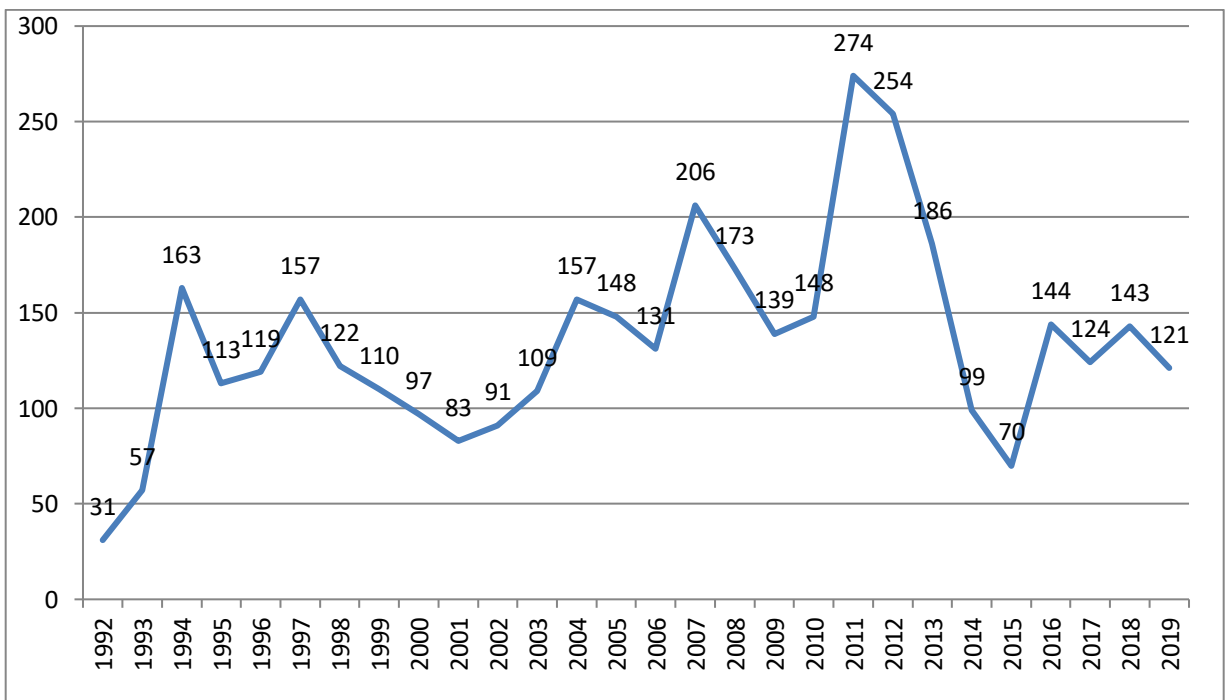
Reference Goal 2.0 (b)

Each year, the District enforces spacing and production limitation rules requiring the permitting of all new wells to prevent the waste of groundwater. The District issues temporary permits for requests that meet the District's rules for spacing. Production limits are also set in an attempt to prevent misuse of our groundwater supply.

During 2019, one hundred and twenty-one (**121**) permits have been issued to local producers. Of these permits, one hundred and two (102) have been returned with well registration logs from the driller or have been voided in view of the fact that the well was not drilled, or the well log has been retrieved from internet. Of the remaining nineteen (19) permits not returned, ten (10) are still within the 90-day drilling period and are not due at this time. This leaves nine (9) permits (or 7%) not returned within the allotted time period.

Raymond Brady was hired in October of 2005 as a contract hydrologist to enter the well log data into a well log database program. From this information, he has been able to prepare new maps for the district. He presented saturated thickness maps, base of the aquifer maps and prepared our decline map for the depletion program. He is currently working on finding information from other aquifers.

The following graph denotes the number of permits issued over the past 28 years, a total of 3,769.



Below is an allocation of time spent on the Well Permitting and Registration Program.

Activity	Hours	Number of Applications/Logs	Hours
Preparing Permit and Well Log for Applicant, Refunding Deposit	.50	121	60.5
Entering Permit Information into Computer	.50	121	60.5
		TOTAL	121

**SANDY LAND UNDERGROUND
WATER CONSERVATION DISTRICT**

AGRICULTURAL LOAN PROGRAM

AGRICULTURAL LOAN PROGRAM

Reference Goal 3.0 (a)

In 1989, the 71st Texas Legislature implemented the Agricultural Water Conservation Program to allow the Texas Water Development Board to loan money to water conservation districts. This money was to be used by local districts to make loans to producers within their respective districts for improved efficiency of irrigation systems.

In the February of 1992, the Texas Water Development Board approved their initial loan to Sandy Land Underground Water Conservation District in the amount of \$500,000 to provide financing for the purchase of approved agricultural water conservation equipment, including center pivot irrigation systems, sprinkler package conversions, and drip irrigation equipment. Since that time, the Texas Water Development Board has made 22 loans to Sandy Land for over **\$17,725,000.00**.

Since 1992, Sandy Land UWCD has loaned money for **405** new and used water conserving center pivot irrigation systems, for a total of **\$12,006,269.01** to Yoakum County producers. The District has also loaned money for four sprinkler packages in the intervening years. Sandy Land UWCD has never had a default on a loan.

Below is an allocation of time spent on the Ag Loan Program.

Activity	Hours per Loan	Number of Loans	Total Hours
Processing Existing Loans (Preparing Invoices, Receipts, UCC Filings, etc.)	1.00	30	30
Maintaining Database	1.00	30	30
Maintaining Insurance	.50	30	15.0
Inspection	.50	30	15.0
		TOTAL	90

**SANDY LAND UNDERGROUND
WATER CONSERVATION DISTRICT**

SCHOLARSHIP AND EDUCATION PROGRAM

SCHOLARSHIP AND EDUCATION PROGRAM

Reference Goal 3.0 (b) (c)

Not only is Sandy Land Underground Water Conservation District concerned with the technical side of water issues, education has also become a top priority. With the knowledge that the Ogallala Aquifer has been depleting over the last few years, Sandy Land believes that it has an obligation to help educate the residents of Yoakum County in water conservation. This is being done in several ways, including water conservation booklets and presentations to our school age children, a scholarship essay contest for our high school senior students, and newspaper articles, newsletters, and program presentations at various events and conferences for everyone in the District.

Sandy Land Underground Water Conservation District began awarding scholarships to Plains and Denver City high school seniors in 1991. These scholarships are based on essays written by these students on the topic of the current water situation in our area and proposals for future conservation of that water. In the beginning, only two scholarships were awarded every year, one to a Plains student and one to a Denver City student. In 1996, the Board of Director's decided to give two scholarships to each school. Over the past **25** years, Sandy Land Underground Water Conservation District has awarded **\$106,000** to the students of Yoakum County through these scholarships.

Sandy Land Underground Water Conservation District has participated for many years in the Conservation Jamboree, a presentation of the Natural Resource Conservation Service in Yoakum County. This Jamboree, which targets all the fifth-grade students in the county, presents different learning stations that highlight many aspects of conservation. District personnel from Sandy Land present a water conservation activity to the fifth graders. Sandy Land's education coordinator, presented teacher gifts to elementary science teachers at the beginning of the school year. The gift boxes contained water saving tools, along with a note informing the teachers of the availability of videos, lesson plans, etc. from the water district.

Sandy Land UWCD frequently has articles published in the county newspaper. These articles are used to inform the residents of upcoming events, public notices, deadlines for conservation programs and scholarship essays, and other services that are provided by the District.

Various members of the District staff have been very busy this year both attending and speaking at conferences and meetings.

Sandy Land UWCD keeps a supply of water-conserving showerheads and aerators to be given away in an effort to make water conservation more convenient and accessible to Yoakum County residents.

Below is a listing of scholarship winners by year.

1991
Plains – Dan Rushing
Denver City – J.J. Klearn

1992
Plains – Ashlee Winn
Denver City – Tie
Evertt Harrel
Dallas Stevens

1993
Plains – Gerald Goodman
Denver City – Lysette Silvas1994

1994
Plains – Gabriel Flores
Denver City – Shailaja Marion

1995
Plains – Ken McAdams
Denver City – Jamie Huber

1996
Plains – Valerie Blair
Kelly McGinty
Denver City – Joshua Smith
Jonathan Mock

1997
Plains – Marte Pierce
Jacob Lester
Denver City – Amy Risley
Bud Sanders

1998
Plains – Yvonne Gonzales
Shawna Box
Denver City – Elvia Garcia
Justin Mock

1999
Plains – Steven Bunch
Mike Bell
Denver City – Kristen Long
Traci Tucker

2000
Plains – Jason Swann
Shaunda Eady
Denver City – Glinnis Wolf
Nichole Newsom

2001
Plains – Taylor Gray
Armando Luna
Jessica Long
Denver City – Jennifer Arnold

2002
Plains-Chris Hansen
Jeffrey Lollar
Denver City- Kyndal Eady
Jarryn Mock

2003
Plains- Ryan Swann
Kelly Bowers
Denver City- Jeremy Thompson
Nicole Gutierrez

2004
Plains- Brandon Davis
Lashonda Diamond
Denver City- Abby Droogsma
Leah Gibson

2005
Plains-Caylon Garnett
Payton Bean
Denver City-Chelsey-Anne Bearden
Torre Stewart

2006
Plains- Blake O'Quinn
Benjamin Hays
Denver City- Melina Terrazas
Lizette Bayona

2007
Plains-Clarissa Zorilla
Jose Luis Gallegos
Denver City- Chelsea Stroud
Brandon King

2008
Plains- Lauren Davis
Maria M. Andazola
Denver City- Mallory Milligan
Jacqueline Martinez

2009
Plains- Tie for 1st (\$500 each)
Bené Baum and Yesenia Loya
Denver City- Javier Arzate
Lindsey Hudgins

2010
Plains- Natalie Haynes
Emilia Gallegos
Denver City- Amanda Guzman
Katelyn Flores

2011
Plains-Hannah Crump
Shaylin Taylor
Denver City-Brittani Weir
Celia Broadwater

2012
Plains – Jordan Martin
Whitney Davis
Denver City – Garrett English
Mariza Santillan

2013
Plains - Merrit Crump
Matthew Ramos
Denver City - Kathryn English
Jaci Zingerman

2014
Plains – Bailey Winn
Taylor Michaleson
Denver City – Rowdy Brumley
Kaleb King

2015
Plains - Riley Earnest
William Boyles
Denver City - Angel Loya
Hadel Almubiadin

2016
Plains - Brittany Michaleson
Madison Davis
Denver City - Bailee Burkett
Katy Patterson

2017
Plains - Sage Lovelace
Leigha Willians
Denver City - Jacee Billings
Kolt Dierschke

2018
Plains - Kennedy Earnest
Sydney Downs
Denver City - Jaryd Ivy
Cheyenne Beach

2019
Plains - Breann Griffiths
Mark Hartman
Denver City - Kaitlin Stephens
Kenzi Stephens

Below is an allocation of time spent on the Scholarship and Education Program.

Activity	Hours
Scholarship Program	15
Conservation Jamboree	10
Newsletter Publications and Newspaper Articles	10
Public Programs and Presentations	40
Total Hours	75