2023

ANNUAL REPORT

PANHANDLE GROUNDWATER CONSERVATION DISTRICT

"Conserving Water For Future Generations"

TABLE OF CONTENTS

WHO ARE WE?

PANHANDLE GROUNDWATER CONSERVATION DISTRICT

Mission

The Panhandle Groundwater Conservation District will strive to develop, promote and implement water conservation, augmentation and management strategies, to protect water resources for the citizens, economy and environment of the District.

50/50 Standard: Our Motto

We want to preserve at least 50 percent of current water supplies for 50 years from now.

Created in 1955 by Texas Legislature.

Derives its authority from Chapter 36, Texas Water Code.

Funded by ad valorem taxes.

MANAGER'S ADDRESS

Fiscal year 2022-2023 was a busy and successful year for PGCD Board members and staff. Each November we begin our year with our Field Technicians beginning our annual winter water level program. This is our longest-running program, and we have data on many wells dating back to the 50s in some areas. Our Technicians obtain these measurements starting in November because our demand for groundwater is generally lower in the winter months. The data for these wells will be published in our Panhandle Water News July Newsletter. For anyone wishing to sign up for our newsletter, please use the signup box at the bottom of our homepage at www.pgcd.us.

Once the measurements for the ranch country portion of the District are complete, the Technicians switch focus and start reading meters across the entire District. In a span of 6-8 weeks, the three Technicians read around 1,500 meters. The meter usage data is evaluated and usage reports are sent to over 750 operators. This information is vital for area producers to understand how much groundwater is being produced from their land. This information also helps the District Board of Directors make policy decisions and is also used as part of the regional water planning process.

The 88th Texas Legislative Session convened in January 2023. The session turned out to be quite the water session, as well as a major focus on energy, border security, and infrastructure. Many changes made their way into Chapter 36 of the Texas Water Code, which is what governs groundwater conservation districts in Texas.

In April, we kicked off the 23rd year of our precipitation enhancement program. Even with the welcomed switch from El Nino to La Nina, the season turned out to be average with small windows of opportunities to work.

In May, the Board welcomed two new members, Wes Stockett and Marcus Hardcastle. We said goodbye to two tenured Directors, Jim Thompson, and Danny Harcastle. The Board met nine times over the fiscal year. All of the minutes from these meetings can be found at www.pgcd.us/board-agendas.

In August District staff attended a Texas Alliance of Groundwater District's annual summit, where I participated on a panel and spoke to over 400 attendees. I was honored to speak about what our District is doing to help conserve groundwater in our part of Texas.
As always, the District is here to serve its constituents. If you ever have a question, concern, or even the need for an educational presentation, we would love to help you. We look forward to working with you in the coming year!

Britney Britten

BOARD OF DIRECTORS

Chancy Cruse
President
Serving since 2013

Devin Sinclair
Vice President
Serving since 2021

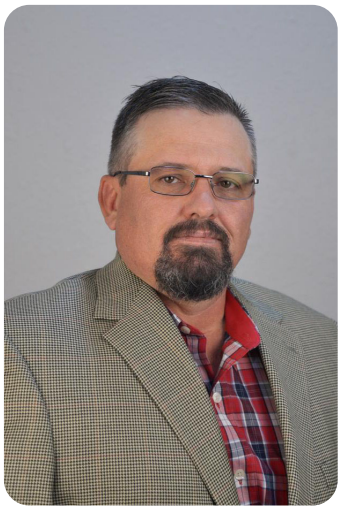
Lee Peterson
Secretary
Serving since 2021

Charles Bowers
Director
Serving since 1990

John R. Spearman Jr.
Director
Serving since 2000

William Breeding
Director
Serving since 2013

David Hodges
Director
Serving since 2020



Marcus Hardcastle
Director
Serving since 2023

Wes Stockett
Director
Serving since 2023

DESIRED FUTURE CONDITIONS

The main purpose of a management plan is to develop goals, management objectives, and performance standards that, when successfully implemented, will work together to achieve the adopted DFCs. Goals 2 through 10 directly and/or indirectly support Goal 1. DFCs adopted for the Ogallala and Dockum aquifers by GMA 1 on November 1, 2016, and subsequently adopted by the Panhandle GCD Board of Directors on July 14, 2016, for the District are described below (note, the Blaine Aquifer in Wheeler County is now classified by GMA 1 as non-relevant for joint planning). A 50-year planning horizon was used in setting the DFCs. Throughout the joint planning process, the District actively worked with the other District Representatives and stakeholders within GMA 1 to determine the DFCs for each relevant aquifer located within each district.

Management Objective 1.1

The cornerstone of the many programs and activities of the District is the 50/50 management Standard which drives its Rules and this Management Plan. The 50/50 Management Standard states that 50 percent of the current volume within the Ogallala Aquifer will remain in 50 years. This 50/50 Management Standard is the tool by which the District will ensure that it meets or exceeds the 50/50 DFC outlined in Rule 1, 3, and 4, which states the maximum allowable volume of pumping from the Ogallala Aquifer is 1-acre foot per acre per year. In order to ensure that the 50/50 Management Standard is being met, the District goes through an annual review process to identify and act upon Contiguous Acreage Tracts exceeding the maximum allowable volume of pumping from the Ogallala Aquifer utilizing flow meter data.

In order to complete Management Objective 1.1, the following Performance Standards will be met. Actions by the District Board of Directors that may result from this review include the enforcement actions stipulated in Rule 3.3, as required.

Performance Standard

1.1A	Quantify all permitted pumping volumes for individual Contiguous Acerage Tracks based on flow meter readings and report to Board in Annual Report	December 1st	Presented at the March 23, 2023 Board Meeting	Completed
1.1B	Evaluate all Ogallala Aquifer measurements collected during WLM and report to Board	August 31st	Presented at the July 26, 2023 Board Meeting	Completed
1.1C	The Board will conduct a Sunset Review to evaluate the effectiveness of the maximum allowable volume of production	Must be conducted by 01/1/25 and every 5 years after that	In Progress	To be Completed in 2025

Ogallala						
County	2020	2030	2040	2050	2060	2062
Armstrong	57,984	53,414	48,170	43,462	38,860	38,080
Carson	192,135	184,263	169,931	153,767	137,215	134,055
Donley	74,808	76,289	72,962	67,873	62,058	60,901
Gray	181,105	175,267	162,653	148,713	134,431	131,744
Hutchinson	15,734	16,740	15,156	13,324	11,742	11,455
Potter	16,969	15,820	14,442	13,162	11,836	11,609
Roberts	430,618	455,129	427,218	390,247	350,459	342,748
Wheeler	130,425	138,810	137,385	132,312	124,778	123,309
District Total	1,099,778	1,115,732	1,047,917	962,860	871,379	853,901

Management Objective 1.2

The District maintains an integrated geodatabase system based on the District's Observation Well Network and computer mapping programs to annually track and evaluate current supplies by a baseline (1998) Ogallala Aquifer saturated thickness dataset in the District. This analysis is utilized to track and review changes in water supplies.

Performance Standard

1.2A	Update Ogallala Aquifer Saturated Thickness Map on District's Website	Every 5 years	Maps were updated, sealed and approved on 2/23/21 https://www.pgcd.us/mapping	Completed

Dockum Aquifer DFCs

The Dockum Aquifer is classified by the TWDB as a minor aquifer that is present primarily in the western portions of the District and is generally under confined (artesian) conditions. Based on our current understanding of water resources in the Dockum Aquifer, DFCs have been adopted for Armstrong, Carson, and Potter counties within the District. Due to the predominantly confined nature of the Dockum Aquifer, a different approach was taken in adopting DFCs for the Dockum Aquifer. The DFCs adopted for the Dockum Aquifer in GMA 1 are that the average decline in water levels will be no more than 30 feet within the District over the next 50 years. The maximum allowable volume of pumping from the Dockum Aquifer is 1-acre foot per acre per year.

The estimates of modeled available groundwater for the Dockum Aquifer were extracted from predictive simulations performed for GMA 1 using the updated High Plains Aquifer System.

Dockum						
County	**2020**	**2030**	**2040**	**2050**	**2060**	**2062**
Armstrong	7,131	9,024	9,588	9,704	9,535	9,494
Carson	68	108	140	169	198	204
Potter	38,803	39,113	36,937	34,505	32,008	31,558
District Total	46,002	48,245	46,665	44,378	41,741	41,256

Management Objective 1.3

While there are tens of thousands of data points collected over time relative to the Ogallala Aquifer, the opposite is the case for the Dockum Aquifer. This can primarily be attributed to dominance of the Ogallala Aquifer in the region and the general prevalence of poor water quality and yields from the Dockum Aquifer. Due to declining water levels in the Ogallala Aquifer, there are areas where the Dockum Aquifer is becoming a more important water resource. There are localized areas of good water quality and where technological advances are being made using brackish groundwater desalination.

Due to the scarcity of data regarding the Dockum Aquifer, the District is primarily focused on data collection and trend analysis on wells completed in the Dockum Aquifer currently included in the District's Observation Well Network. This management objective is to monitor and report on Dockum Aquifer wells in the District's Observation Well Network that are experiencing declines for which the trend is in excess of the DFC of 30 feet.

Performance Standard

1.3A	Report data collection and trend analysis to the Board concerning Dockum Aquifer wells within the District's OWN.	August 31st	Presented at the July 26, 2023 Board Meeting	Completed

MANAGEMENT OF GROUNDWATER

Throughout its history, the District has operated on the core principle (or goal) that groundwater should be used as efficiently as possible for beneficial purposes. In order to achieve this goal, the District maintains a qualified staff to assist water users in protecting, managing, and conserving groundwater resources. The Board of Directors has in the past and continues today to base its decisions on the best data available to treat all water users as equitably as possible. Once data is collected, the District utilizes a wide variety of forums to provide important information to water users throughout the District so that sound decisions regarding the efficient use of groundwater can be made. The District's Observation Well Network will continuously be reviewed and maintained in order to monitor changing storage conditions of groundwater supplies within the District. The District will continue to undertake and cooperate with technical investigations of groundwater resources within the District. The following management objectives and performance standards have been developed and adopted to collect needed information, disseminate information, and provide opportunities through the District's Agricultural Water Conservation Equipment Loan Program to ensure the efficient use of groundwater.

Management Objective 2.1

The Observation Well Network, with approximately 850 water wells located throughout the District is continuously maintained and monitored. Wells in the Observation Well Network produce groundwater from the Ogallala Aquifer, the Dockum Aquifer, and also other minor aquifers in the area. Water levels are measured by District staff in as many wells as possible, with the management objective being to measure water levels in at least 90 percent of the wells in the Observation Well Network each year. This data is then processed for quality assurance/quality control, entered into the District's geodatabase, analyzed, mapped, and used to make decline calculations and update historic trend lines (hydrographs). Water level measurements from wells in the District's Observation Well Network are used to generate annual decline maps. The District will strive to install additional monitoring wells in locations when necessary in order to evaluate the effects of high-impact pumping operations as necessary.

Performance Standard

2.1 A	Measure Water Levels in at least 90% of the Wells in the District's Network	April 1st	Measured 96.8% by March 24, 2023	Completed
2.1B	Prepare Annual Depletion Map and publish it in the PWN	July 31st	Map was prepared and published in the July 2023 Newsletter	Completed
2.1C	Prepare Ogallala Aquifer water table decline map for use in the IRS annual depletion program, provide results to participating producers.	January 31st	Map was sealed on December 9, 2022, Decline letters were mailed January 3, 2023.	Completed

Management Objective 2.2

The District encourages efficient groundwater use by continued promotion of low pressure and other efficient sprinkler systems, drip irrigation systems, and other recognized water conservation measures, which will decrease the utilization of less efficient row irrigation techniques. This will be accomplished by increasing the use of the District's Agricultural Water Conservation Equipment Loan Program, as long as TWDB Agricultural Loan Program funds are available and economically competitive. The District will enhance awareness of the loan program by utilizing local newspapers and the PWN. The District website will have information on availability of funds and guidelines for applicants. The District will strive to provide timely responses to loan applicants.

Performance Standard

2.2A	Ag Loan Reminder in PWN	Twice a year	We did not have an Ag Loan during the 22-23 Fiscal Year.	Completed
2.2B	Review ag loan applications	Within 60 days	Since there was not an active ag loan, there were no loans to review.	Completed

Management Objective 2.3

The District encourages the efficient use of groundwater by disseminating educational information regarding current best management practices and trends in water conservation for agricultural, municipal, and industrial applications. The District publishes a newsletter quarterly that contains resources for water users interested in water conservation. In addition, the District also attends and participates in public events throughout the District including the annual Amarillo Farm and Ranch Show as often as possible.

Performance Standard

2.3A	Publish Panhandle Water News	Quarterly	October 2022, January, April, June and July 2023	Completed
2.3B	Attend the Farm & Ranch	Annually	Staff attended and partipated in the Farm and Ranch show during November 29-December 1, 2022.	Completed

Management Objective 2.4

In order to ensure that the Board of Directors and District constituents are aware of and informed on the most current information on water conservation, groundwater management, and emerging policy issues related to groundwater resources, District staff actively participate in a broad grouping of professional associations that focus on water resource issues. District staff will report at the next available regularly scheduled Board of Directors meting in the General Manager's Report on any activities resulting from participation with the following active affiliations:

- Texas Alliance of Groundwater Districts (TAGD)
- Texas Water Conservation Association (TWCA)
- Groundwater Management Districts Association (GMDA)

Performance Standard

2.4A	Attend and participate in 75% of TAGD, TWCA and GMDA meetings	Annually	Attended and participated in 8 out of 8 TAGD, TWCA and GMDA meetings- 100%	Completed

District Operators Worked Hard to Conserve

An impressive 93% of District Operators achieved the production goal for the fiscal year, meeting the current District rule of 1-acre-foot per contiguous acre owned or leased for annual production.

Board Members and Staff have been diligent in their commitment to educating, assisting, and collaborating with all water user groups.

MANAGEMENT OF GROUNDWATER CONTINUED

Management Objective 2.5

The District has adopted rules that require an approved metering method on all wells producing more than 35 gallons per minute. The District believes that when a water user understands the volume of groundwater being used, they are better able to adopt best management practices that result in the efficient use of groundwater. Therefore, the District is committed to continuing the program focused on requiring a metering method for wells pumping more than 35 gallons per minute, flow meter monitoring, and data collection and analysis of water use by cop and irrigation type. To achieve this objective the District will read and record meter data from installed, registered, and accessible meters in the District annually. The information from the District's metering program will be published in the District's Annual Report. Additionally, the District will provide water-users with meter data production reports. Finally, the Board will consider meter data with respect to individual Contiguous Acreage Tracts in order to document compliance with the District maximum allowable production rate.

Performance Standard

2.5A	Read and record flow meter data for 90 percent of installed flow meters	Annually	100% of the meters read in December 22 and January 23	Completed
2.5B	Production Reports sent to water-users	September 1st (Starting in 2020)	All production reports were sent to operators by April 2023	Completed
2.5C	Review and prepare revised estimates to TWDB annual agriculture water estimates	Within timeframe requested by TWDB	Requested by TWDB to be returned on August 24, 2033- returned to TWDB on August 24, 2022	Completed

GROUNDWATER WASTE PREVENTION

Management Objective 3.1

The District is continuously working to take positive and prompt action to identify and address all reported wasteful practices and instances of waste located by District Staff within the District. This effort involves the following actions to be taken by the District.

- Report each complaint to the landowner and/or operator within five working days
- Resolve the complaint and note the corrective action taken
- Report resolution of each complaint to the landowner/operator and to the Board at the next regularly scheduled meeting during the General Manager's Report

Performance Standard

3.1A	All complaints of waste will be recorded, investigated and reported to land owner	Within 5 working days	There were no official complaints of waste this year.	Completed
3.1B	Report each complaint to board with staff recommendation & resolution	As necessary	There were no official complaints of waste this year.	Completed

DROUGHT PLANNING

Management Objective 4.1

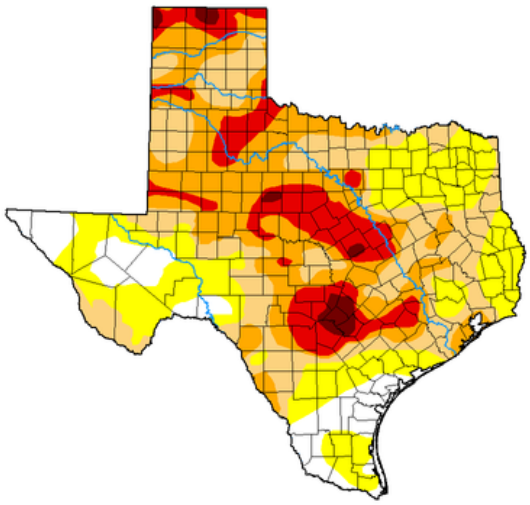
In order to provide ongoing information regarding water conditions in the District, establish and maintain links to National Oceanic and Atmospheric Administration Drought Monitor indices are on the District website.

Performance Standard

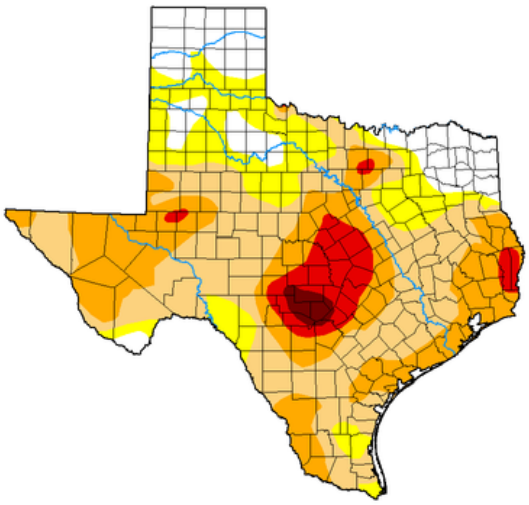
4.1A	Update links to the NOAA Drought Monitor indices on the District's Website	Annually	http://www.pgcd.us/links	Completed

2023 TEXAS DROUGHT MONITOR MAPS

November 8, 2022



August 8, 2023



November 7, 2023

(Released Thursday, Nov. 9, 2023)

Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	13.62	86.38	65.36	35.90	10.88	1.86
Last Week 10-31-2023	13.61	86.39	65.37	38.54	10.94	1.78
3 Months Ago 08-08-2023	13.97	86.03	68.76	34.27	7.87	1.18
Start of Calendar Year 01-03-2023	28.84	71.16	49.90	26.60	7.41	1.60
Start of Water Year 09-26-2023	3.03	96.97	80.64	59.66	38.06	12.68
One Year Ago 11-08-2022	9.80	90.20	64.84	40.18	14.86	1.73

Intensity:

- None
- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to https://droughtmonitor.unl.edu/About.aspx

Author:

Lindsay Johnson
National Drought Mitigation Center

droughtmonitor.unl.edu

JOINT MANAGEMENT EFFORTS

The Canadian River Municipal Water Authority (CRMWA) supplements member city allocations of groundwater with supplies from Lake Meredith. The CRMWA system is the largest conjunctive use water provider in the State of Texas, providing a combination of groundwater and surface water to 11 member cities. All current CRMWA groundwater supplies are produced within the boundaries of the District.

The Greenbelt Water Authority (GWA) is the second surface water user with supplies inside the boundaries of the District. GWA is now also utilizing groundwater resources from the Ogallala Aquifer. The District will communicate with regard to rules and technical data as it applies to conjunctive use within the District.

Management Objective 5.1

In order to continually monitor the impact of declining surface-water availability on groundwater resources within the District, the General Manager or designee will participate in the Panhandle Water Planning Group (PWPG) with the two surface-water entities currently operating within the District. This activity helps facilitate regular communication and cooperation with regards to conjunctive use issues in the District.

Performance Standard

5.1A	The district manager or designee will participate in 75% of PWPG meetings and activities	2019-2024	Participated in 100% of all meetings either virtually or in person.	Completed

NATURAL RESOURCE ISSUES

As part of the umbrella goal of achieving the adopted DFCs, the District recognizes that the protection of water quality is equally as important as working to ensure adequate water quantity. In order to protect the District's most important natural resource, the abundant, high quality groundwater resources, the District has for many years maintained and operated a water quality sampling program sampling different areas each summer which yields a complete set of data biennially.

Management Objective 6.1

In order to control and prevent the contamination of groundwater, the District maintains and works to expand the groundwater quality monitoring. As part of this effort, an annual sampling program will be conducted within the District's Water Quality Network. The objective will be to sample at least 80 percent of the wells in the District's Water Quality Network on a biennial basis. Also, upon request the District will conduct analysis of water within current District sampling capabilities, including sites near oil and gas industry injection well sites.

Performance Standard

6.1A	Sample 80% of the Water Quality Network report program status to the Board by September 1st	Biennially (spans over 2 years)	WQ1 network was sampled for 2023, and staff sampled 141 or 169 wells (83.4%)	Completed
6.1B	Record water quality data in database	Within 30 days	All data was recorded within 30 days and can be viewed in the District's database.	Completed

CUSTOMER SERVICE

Management Objective 7.1

Customer service is of great importance to the Board of Directors and Staff of the District. As detailed in the corresponding performance standards, the District will continue to provide timely response to customer assistance requests in the following areas:

- Pump flow tests
- Processing of well drilling permits
- Review and revision of District Rules, as necessary, to incorporate revisions required by new legislation and as necessary to achieve adopted Desired Future Conditions
- Well camera recordings

Performance Standard

7.1A	Provide requested flow tests and enter into database	Within 5 working days	District staff work with Operators to provide flow tests in a timely and convenient manner.	Completed
7.1B	Managers action on well drilling permits	Within 10 working days after approval	All permits were reviewed and either approved, amended or denied within 10 working days	Completed
7.1C	Provide well camera service and return information to landowner within 5 working days then archive DVD to library	Provide service wihtin 5 days of request and get info back to	Provided and documented within 5 days.	Completed

NEW BOARD MEMBERS ELECTED

Board Members were sworn in on May 11, 2023. Left to right: David Hodges (Precinct 2). Hodges won the election with 231 votes. Charles Bowers (Precinct 4). Bowers ran unopposed. Wes Stockett (Precinct 6). Stockett won the election with 174 votes. And Marcus Hardcastle (Precinct 8). Hardcastle also ran unopposed.

The District is thankful for their willingness to help conserve water for future generations!

PRECIPITATION ENHANCEMENT

Texas Water Code Section 36.1071(a)(7) required groundwater conservation districts to include in the management plan a goal addressing precipitation enhancement. The District has one of the longest continuous precipitation enhancement programs in the state of Texas.

Management Objective 8.1

The District will continue to operate its Precipitation Enhancement Program throughout the planning horizon of this management plan. The program will operate within budget. A rain gauge network will be maintained and monitored to confirm precipitation enhancement results. Flight records will be collected and archived.

The program will abide by Texas Department of Licensing and Regulation requirements for testing, monitoring, and reporting in order to ensure compliance with permit guidelines. Results of the District's Precipitation Enhancement Program will be presented to the Board of Directors.

Performance Standard

8.1A	Conduct program from April to September 30	Annually	April 1 - September 30	Completed
8.1B	Calculate the baseline costs for the program	Annually	$0.04 per acre	Completed
8.1C	Collect and record rain gauge reading	At least quarterly	Rain data from NOAA was monitored at least quarterly and reported to the Board at the July 26, 2023 Meeting. Rain gauge data from District's participants was also reviewed and input into the database.	Completed
8.1D	Maintain all flight records on all precipitation enhancement operations and make available for review upon request	Annually	Current Flight Tracks on our website - https://pgcd.us/flight-tracks	Completed
8.1E	Provide precipitation enhancement annual report to Texas Department of Licensing and Regulation	Annually	Provided to TDLR on 12/15/2022	Completed

2023 Program Summary	
Number of Seeding Days	14
Number of Seeding Missions	14
Number of Recon Flights	3
Total Flares Used	187
Total Cost per Acre	$0.04

Management Objective 8.2

Educate the public with regards to the benefits of the District's Precipitation Enhancement Program through informational articles in the PWN and local newspapers, public presentations, and program summaries in the District's Annual Report each year.

Performance Standard

8.2A	Publish an article about precipitation enhancement in at least 2 of the quarterly issues of PWN.	Twice a year	October 2022 and June 2023	Completed
8.2B	Provide at least 1 article about the program to all local newspapers	Annually	Published in the Claude News, White Deer News, Groom News, and Panhandle Herald on 9/25/23.	Completed
8.2C	At least 2 presentations to a public or civic group	Annually	Corey presented to TWDB Lunch and Learn on June 2, 2023, and Aspen presented to Carson County Library on June 21 2023.	Completed
8.2D	Complete the Program Summary Report and include in District's Annual Report each year	Annually	See Table Below	Completed

Due to a persistent LA Niña, the 2023 year started off very dry and warm with the first four months seeing below average precipitation. The first two months also recorded above average temperatures. By the middle of May, a series of troughs entered the region, providing opportunities of rainfall. This active pattern continued through the middle of June where excessive rainfall prompted a suspension in seeding starting June 5th. Some areas saw as much as 20 inches of rainfall in only a few short weeks with the city of Amarillo either under a flood warning or advisory during much of this period. The suspension was finally lifted on June 27th when conditions improved, and less standing water was seen around the district. Eight total flights were flown through June with four containing seeding missions. July then started off with near normal temperatures and rain occurring in portions of the district as frontal boundaries and shortwaves made their way through the Panhandle. Severe storms impacted the area on the 2nd which turned the anticipated seeding mission into a recon flight. By the 5th, the first seeding mission of the month occurred. Two additional seeding flights were conducted through the 14th before a large area of high pressure dominated our weather with decreased precipitation chances for the rest of the month. This also coincided with a hot stretch of five consecutive 100°F+ days, bringing the total of greater than 100°F for the month up to 10. The month of August came in like a lion as monsoonal moisture and frontal boundaries impacted the district, giving way to six total flights through the 14th, three of which were seeding missions. Much like July, the ridge restrengthened and moved back into the region towards the middle and end of the month limiting convective chances. Heading into September, a surprisingly active month commenced as six flights were flown (three were seeding flights). It was then decided to extend the season through October 4th due to continued chances of activity. One seeding mission was flown on the 1st with two recons missions through the 4th. A cold front moved through the area on the 4th shutting down all additional chances of convection, and thus, ending the 2023 season. In total, 27 total flights (14 seeding flights) covering 44.80 flight hours were conducted for the year with 171 glaciogenic flares and 16 hygroscopic flares being used.

CONSERVATION EDUCATION

Texas Water Code Section 36.0015 states, in part, that, "In order to provide for the conservation, preservation, protection, recharging, and prevention of waste of groundwater... Groundwater conservation districts may be created... are the state's preferred method of groundwater management through rules developed, adopted, and promulgated by a district in accordance with the provisions of this chapter." It is noteworthy that in this overview section of Texas water law addressing groundwater management that "conservation" is the first action groundwater conservation districts are to pursue. The 50/50 Management Standard can only be achieved if our groundwater resources are conserved in a manner that ensures adequate water resources will be available for future generations. While water District's programs, the following represent management objectives most focused on water conservation.

Management Objective 9.1

Continue and expand, when possible, the District's Groundwater Conservation Education program. District staff will make presentations on the importance of water conservation to at least 5 civic organizations and in at least 30 educational settings. Annually, the District will award at least three college scholarships to students in the District based on participation in a water conservation essay competition. The District will maintain an Internet information page and launch an aggressive conservation education initiative called "Water Warriors", as well as work with other entities to present an ongoing Panhandle area water conservation symposium.

Performance Standard

9.1A	Make at least 5 civic education presentations	Annually	Playa Festival, WISE 2022, Amarillo Farm and Ranch Show, Borger's Manufactures' Council, Panhandle Brownies, Texas Runs on Water Presentation in Amarillo.	Completed
9.1B	Present water conservation presentation in 30 educational settings	Annually	Total for the fiscal year: 35	Completed
9.1C	Provide at least 3 scholarships (student essay competition)	Annually	Scholarship Recipients include: Abbey Britten, Braylee Lewis and Binh Nguyen.	Completed
9.1D	Water Warrior Presenation to at least 3 public school settings outside of school	Annually	Playa Festival, WISE 2022, and all education programs at the District office.	Completed

CONSERVATION EDUCATION 2022/2023

It has been an exceptional year for the District, as they visited more than 30 schools and made presentations to various civic groups and organizations. Students were given a unique opportunity to visit the District office and engage in a hands-on learning experience about the water cycle and the District's rainwater harvesting system. Aspen Edgar, the District's PR/Education Director, made learning fun by incorporating games into her presentations, providing interactive learning experiences for students across the Panhandle.

RAINWATER HARVESTING

Rainwater harvesting is becoming an increasingly important strategy for meeting water supply needs, especially in the more rural areas of Texas. While rainwater harvesting is one of the many topics included in the District's water conservation education programs, the following management objective and performance standards are specifically focused on rainwater harvesting.

Management Objective 10.1

The District has established and maintains a rainwater harvesting system and provides educational tours to the public regarding the many benefits of the system. Tours of the District office rainwater harvesting system are provided upon request. A link to an informational page highlighting the rainwater harvesting system will be maintained and updated as necessary on the District's website. In addition, a link to the TWDB website on rainwater harvesting will also be maintained on the District's website.

Performance Standard

10.1A	Webpage Highlighting the district's rainwater harvesting system and information about tours	Update annually	https://www.pgcd.us/rainwater-harvesting	Completed
10.1B	Provide a link to TWDB rainwater harvesting webpage	Update annually	https://www.pgcd.us/links	Completed

DISTRICT GENERAL MANAGER PRESENTS AT ANNUAL TAGD SUMMIT

TAGD Summit Audience 2023

Panel Participants at TAGD Summit

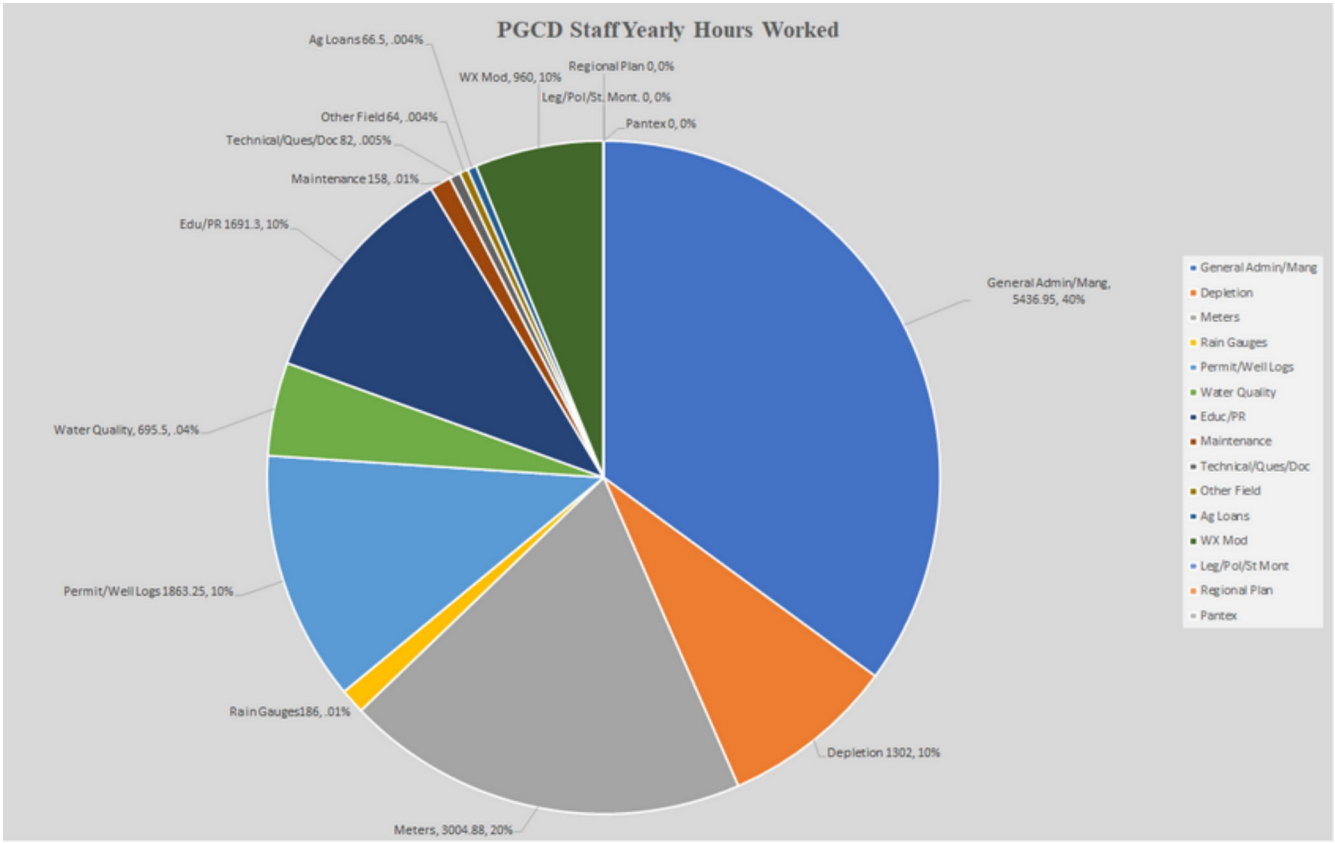
District General Manager, Britney Britten participated on a panel discussing the District's permitting and production rules. The discussion focused on the different ways Districts around the state carry out this charge.

2022-2023 EXPENDITURES

Merchant deposit fees	753.57
Rainwater Harvesting Rebate	7,500.00
GMDA Annual Conference Exp	0.00
1740 · Capital Operating Improvements	199,200.64
1755 · Symposium Expenses	0.00
1610 · App. Districts	34,822.80
1615 · Board Expense	21,239.70
1620 · Capitol Exp. A	0.00
1625 · Car Expense	27,330.56
1630 · Dues	12,777.36
1635 · Election Exp.	4,311.57
1645 · Field Supplies	12,803.66
1655 · Insurance	139,488.88
160 · Labor	574,355.38
1665 · Meter Expense	48,063.22
1735 · Miscellaneous	463.00

1675 · Office	28,437.09
1670 · Postage	5,574.67
1685 · PR	46,720.37
1680 · Prof. Services	68,748.85
1690 · Regional Planning	12,666.37
1695 · Repairs	17,438.04
1700 · Scholarship	10,625.00
1750 · Service Charges	210.60
1705 · Tax Increment Payment	15,058.00
1710 · Special Studies	45,933.00
1715 · Travel & Training	31,576.36
1720 · Utilities	23,161.00
1725 · Water Quality	12,880.82
1730 · Weather Modification	180,243.20
Total Expenses	1,583,697.98

TIME TRACKING



PERMITTING AND REGISTRATION

Well Permits Approved

	2022-2023	2021-2022	2020-2021	2019-2020	2018-2019
Armstrong	5	5	6	0	3
Carson	19	14	12	14	13
Donley	12	7	16	5	7
Gray	9	8	5	5	7
Hutchinson	0	0	0	0	0
Potter	2	1	1	0	5
Roberts	8	1	2	2	1
Wheeler	16	6	5	5	9
Total	**71**	**42**	**47**	**31**	**45**

Domestic, Stock and Rig Supply Well Registrations Received

	2022-2023	2021-2022	2020-2021	2019-2020	2018-2019
Armstrong	31	20	16	14	22
Carson	24	48	50	18	22
Donley	32	62	33	19	37
Gray	32	42	36	30	32
Hutchinson	0	0	0	0	1
Potter	60	56	25	60	65
Roberts	36	21	13	9	5
Wheeler	37	32	30	26	22
Total	**252**	**281**	**204**	**176**	**206**

Observation, Monitoring and Remediation Well Registrations Received

	2022-2023	2021-2022	2020-2021	2019-2020	2018-2019
Armstrong	0	0	0	0	0
Carson	45	26	23	45	8
Donley	0	0	0	0	0
Gray	0	0	0	0	1
Hutchinson	0	0	0	0	0
Potter	19	0	6	7	30
Roberts	0	0	0	0	0
Wheeler	0	0	0	4	4
Total	**64**	**26**	**29**	**56**	**43**

Operating Permits Approved

	2022-2023
Armstrong	5
Carson	9
Donley	8
Gray	8
Hutchinson	0
Potter	1
Roberts	3
Wheeler	3
Total	**37**

It is important to remember that all water wells drilled to the water table must have a completed application, signed by the landowner, before it is drilled. This statement is made every year, but is important because without the application prior to drilling, a fine will be assessed to the driller and the landowner. It is as simple as giving the District a call before drilling. "Spacing and Placing" the blue PGCD Logo Flag is has worked out extremely well. There is no mistaking if that blue PGCD Logo Flag is on the location where the water well is to be drilled.

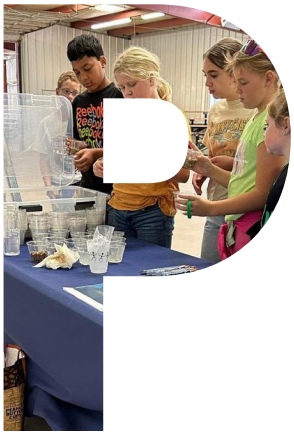
Currently, wells drilled pumping 17.5 gallons per minute or less, which are most commonly domestic and stock wells, is considered an exempt well and is required to be registered with the District prior to drilling, and may require being spaced from property lines and other wells. RIg supply wells generally produce more than 17.5 gallons per minute, but they are defined as an exempt use in Chapter 26 of the Texas Water Code.

Any well that produces more than 17.5 gallons per minute must be permitted. This requires being spaced both from property lines and other water wells. Once the proposed well location meets these requirements and is approved by our field technicians, by placing a blue PGCD flag with latitude, longitude, date spaced and initials, the well may be drilled at the landowner's risk. The application must be approved by the Board of Directors.

YEAR AT A GLANCE

October 2022

10.04	Carson County Playa Festival
10.05-10.07	TWCA Conference
10. 10-10.12	GSA Meeting in Denver
10.20	Rules Committee Meeting
10.27	PGCD Board Meeting



November 2022

11.01	Carson County Brownies Presentation
11.12	WISE Presentation
11.15-11.16	Texas Well Owners Network Presentations
11.29-11.30	Election Seminar in Austin
11.29-30	Amarillo Farm and Ranch Show

December 2022

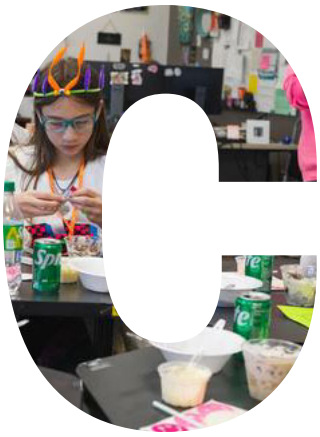
12.01-12.02	Election Seminar in Austin
12.01-12.02	Amarillo Farm and Ranch Show

January 2023

1.12	PGCD Board Meeting
1.23-1.26	GMDA Winter Conference
1.31	TAGD Winter Business Meeting

February 2023

2.01	TAGD Winter Business Meeting
2.09	PGCD Board Meeting



March 2023

3.01-3.03	TWCA Annual Convention
3.08-3.09	TAGD Meeting
3.23	PGCD Board Meeting

April 2023

4.05	PGCD Board of Directors Candidate Forum

May 2023

5.11	PGCD Board Meeting

June 2023

6.06-6.07	TAGD Business Meeting
6.14- 6.16	TWCA Summer Conference

July 2023

7.10-7.13	GMDA Summer Conference

August 2023

8.24	PGCD Board Meeting
8.28-8.31	TAGD Groundwater Summit

September 2023

9.21	PGCD Board Meeting


Conserving Water
for Future Generations


Conserving Water
for Future Generations

PGCD STAFF MEMBERS AND JOB TITLES

- Britney Britten, General Manager
- Julie Bennett, Permitting Administrator
- Jake Robinson, Meter Compliance Officer
- Katie Hodges, Office Manager
- Ashley Ausbrooks, Hydrogeologist/ Program Manager
- Rita Poor, Administrative Assistant
- Shawn Craig, Field Technician
- David Dees, Field Technician

PANHANDLE GROUNDWATER
CONSERVATION DISTRICT