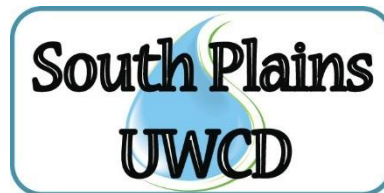


**Annual Report
to the
Board of Directors
on
Attainment of Management Plan Goals
and
Selected Activities
of the
South Plains Underground
Water Conservation District**



**Fiscal Year 2024
September 1, 2023 through August 31, 2024**

**PO Box 986
Brownfield, TX 79316
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South Plains Underground Water Conservation District

Board of Directors

<u>Name</u>	<u>Representing</u>	<u>Term Ends</u>
Barrett Brown, President	Precinct 4	May 2028
Gabe Neill, Secretary	Director-at-Large	May 2028
Tye Day, Member	Precinct 3	May 2026
Tim Swaringen, Member	Precinct 1	May 2026
Jon Williams, Member	Precinct 2	May 2028

Report prepared by:

Layne Marlow, General Manager
Darice Russell, Administrative Assistant

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District Mission Statement

The South Plains Underground Water Conservation District will develop, promote, and implement management strategies to provide for the conservation, preservation, recharging, and prevention of waste of the groundwater resources, over which it has jurisdictional authority, for the benefit of the people that the District serves.

Introduction and Overview

SB 1, 75th Texas Legislature (1997), requires groundwater conservation districts governed by Chapter 36, Texas Water Code, to submit management plans for certification by the Texas Water Development Board. The management plans must specifically address the following management goals as applicable:

1. providing for the most efficient use of groundwater
2. control and prevention of the waste of groundwater
3. control and prevention of subsidence
4. conjunctive surface water management issues
5. natural resource issues
6. drought conditions
7. conservation
8. recharge enhancement
9. rainwater harvesting
10. precipitation enhancement
11. brush control
12. desired future condition of the aquifers

The management plans must also identify the performance standards and management objectives under which each district will operate to achieve their management goals.

The current District Management Plan is effective until November 2029. After notice and hearing, the Board of Directors officially adopted the plan on May 14, 2024. The plan was certified by the Texas Water Development Board on June 28, 2024.

This annual report is a review of the District's activities for Fiscal Year 2024 and an evaluation of the District's performance in meeting its goals and objectives.

Report on Attainment of Goals

Goal 1.0 **Providing the Most Efficient Use of Groundwater**

Management Objective 1.01 — Water Level Monitoring

During the winter of 2023/2024, a total of 143 wells were measured: 136 Ogallala and 7 Edwards-Trinity (High Plains).

Performance Standards

1.01a -- 143 wells were measured in 2023/2024.

1.01b -- Results entered into database, sent to Texas Water Development Board and Hydrologist Amy Bush, and posted on SPUWCD website, www.spuwcd.org.

Management Objective 1.02 — Technical Field Services

Forty-three (43) requests for Technical Field Services were fulfilled in 2024. This is twenty-one (21) more than the 22 requests in 2023.

Some tests were made for prospective land buyers.

Performance Standards

1.02a — 43 field service requests were fulfilled.

Management Objective 1.03 — Laboratory Services

The total number of lab tests performed for producers in 2024 was 24. This is more than the 22 tests run in 2023. These requests concern the suitability of irrigation water for certain crops.

Six of the lab tests performed for producers/landowners included bacteria testing. This is twice the number in 2023. None of the tests indicated positive for either coliform or e-coli and disinfection and/or additional testing was not recommended.

Performance Standards

1.03a — 24 lab service requests were fulfilled.

1.03b — 24 records entered in database. Data was obtained from water quality lab testing onsite.

Management Objective 1.04 — Irrigation Monitoring

2023 marks the 21st year for the District’s Flow Meter Program. With the help of approximately 20 cooperators, the District reads flow meters during the growing season to determine water usage on various crops. Water usage for 2023 will be calculated at the end of the growing season. The following table contains a summary of irrigation water applied during previous years. The data received from the flow meter readings also helps the District calculate water efficiency in crop production.

	Cotton	Peanuts	Grain	Wheat	Grapes
2004	7.99	14.46	0.49	6.25	
2005	9.86	16.59	0.50	3.42	
2006	14.09	20.51	7.03	5.71	
2007	6.52	13.36	9.16	3.34	
2008	10.70	13.78	5.78	9.61	
2009	13.46	20.81	8.35	8.07	
2010	10.15	14.69	4.43	4.42	
2011	17.92	24.58		7.54	
2012	12.59	25.19	5.32	6.24	
2013	14.71	23.02	15.98	8.95	6.27
2014	11.29	14.23	7.14	5.94	4.78
2015	5.52	8.90	5.09	2.61	4.51
2016	8.34	10.90	2.00	3.33	4.92
2017	9.91	13.64	1.81	1.45	8.80
2018	11.74	17.08	3.54	3.82	11.86
2019	7.98	13.95	9.66	3.62	5.64
2020	9.96	15.94	5.02	4.21	12.33
2021	5.38	10.86	6.90	5.97	6.11
2022	12.80	16.35	10.61	6.10	11.4
2023	8.99	14.12	5.09	7.96	8.41
	209.9	322.96	113.9	108.56	85.03
Average	11.50	16.15	5.99	5.43	7.73

Performance Standards

- 1.04a** — In 2023, there were 30 irrigation systems in the cooperative program.
- 1.04b** — Each year, the crops which are monitored vary according to what producers plant. In 2023, 8 different crops were monitored. These crops included cotton, peanuts, grain, wheat, watermelons, pumpkins, peas, and grapes.
- 1.04c** — The table above shows the irrigation application for the major crops monitored.

Management Objective 1.05 — Irrigation System Inventory

The District conducts an Irrigation System Inventory every five years. The District continuously updates its database as systems go in and out, converted to drip, etc.

Performance Standards

1.05a — Presently there are 1,471 pivots and 141 sub-surface/above-ground drip-type irrigation systems.

Goal 2.0 Controlling and Preventing Waste of Groundwater

Management Objective 2.01 — Well Permitting and Completion

Since March 1993, the District has issued 5,049 permits. The total number of permits issued during 2024 was 340 -- 279 irrigation well permits and 61 exempt/domestic/stock well permits. This is lower than the 377 issued in 2023. March had the highest number of permits issued (64). Of the permits issued, 34 were either not used or a well was not completed or was plugged. Of the permits issued, approximately 10 were reported as deepening existing wells and two (2) identified as replacement wells.

361 wells, which include irrigation and exempt, were inspected during 2024 to ensure proper completion and spacing. At the time of inspection, the GPS location of each well is obtained. This information is added to the database. The coordinates are also added to the District's ArcMap program so that all wells can be mapped. Currently about 7,749 (85%) of the approximately 9,609 wells within the District have GPS coordinates associated with them.

Performance Standards

2.01a — 279 irrigation permits issued.

2.01b --- 61 exempt-well registrations issued.

2.01c — 361 well sites inspected.

Management Objective 2.02 — Open, Deteriorated or Uncovered Wells

Open or uncovered wells are discovered in one of two ways:

1. a person reports it to the District office; or
2. District staff discovers the well during a field visit.

Three (3) deteriorated or uncovered wells were reported to or discovered by District staff during 2023.

Performance Standards

2.02a — Two (2) deteriorated or uncovered well discovered by the District.

One (1) deteriorated or uncovered well reported.

2.02b — All three landowners contacted by phone, text or personally - issues were resolved immediately with a follow up inspection by the District.

Management Objective 2.03 — Maximum Allowable Production

No instances of a maximum production violation were discovered this year.

Performance Standards

2.03a — Not Applicable

Management Objective 2.04 — Water Quality Monitoring

Water quality samples were taken from 50 irrigation wells during the summer of 2024. The samples were tested in-office for conductivity, total dissolved solids, and chlorides.

Performance Standards

2.04a — Approximately 50 samples collected and tested in-office.

2.04b --- Approximately 50 water quality test results entered in database

Goal 3.0 **Controlling and Preventing Subsidence**
(Not applicable.)

Goal 4.0 **Conjunctive Surface Water Management Issues**
(Not applicable.)

Goal 5.0 **Natural Resource Issues**

Performance Standards

The District received no complaints related to surface water, groundwater, or any natural resource within the District.

Goal 6.0 **Drought Conditions**

Management Objective 6.01 — Rain Gauges

The District maintains a network of 36 electronic rain gauges. These gauges allow staff to gather rainfall information at any time, not necessarily at the end of each month. The exact time and amount of rain collected is downloaded from the gauge to a computer. This information is published on the District’s web site, www.spuwcd.org/Conservation/rainfall monitoring.

Performance Standards

6.01a -- 36 rain gauges in District network.

6.01b -- Rain gauge results posted to website on interactive map and historic printout and mailed to landowner participants.

Goal 7.0

Conservation

Management Objective 7.01 – Classroom Education

During 2023-2024, twenty-one (21) total presentations were made to schools within the district.

This year marks the 19th annual “Water Conservation Calendar Artwork Contest” for local 4th & 5th grade students within the district. Students submit water conservation artwork after hearing a presentation about water usage and conservation practices. The winning artwork is featured in the 2025 calendar to be published, distributed, and made available to the public by the district. Over 400 entries were received in the Spring of 2024. Approximately seventy-five (75) 2023 SPUWCD Water Conservation Calendars were distributed throughout the district and local communities.

October 2023 – Kids, Kows & More program (4th graders)

November 2023 – Kendrick Memorial Library Story Hour Program (Pre-school age)

January 2024 – Calendar Artwork Contest presentation to Oak Grove (4th & 5th Grade Students)

February 2024 – Calendar Artwork Contest presentation to Wellman and Meadow 4th & 5th Grade Students

March 2024- Terry County Farm Tour for Kids (5th Grade)

April 2024 – Women in Ag Annual Conference

May 2024 – Present Calendar Artwork Contest winners to Meadow, Oak Grove, and Wellman-Union (3); Present Scholarship Essay Contest winners to seniors from Meadow, Brownfield, and Wellman-Union (3)

June 2024 – Kendrick Memorial Summer Reading Program (PK-10th grade); Host Tier I Texas 4H Water Ambassadors Leadership group (9th-12th grade); Present summer programs to Oak Grove Summer ACES program (3 different topics/events) for grades Kinder-5th grade.

July 2024 – ACES Health Fair on the Square with Water Ambassadors & SOCOP Education Trailer

Performance Standards

7.01a – Twenty-one (21) ongoing and long-term classroom and library education presentations and programs were made available to children ages pre-kindergarten to 12th grade during 2023 - 2024.

Management Objective 7.02 – News Releases

Brownfield News and Town Talk Radio both posted news releases for SPUWCD and SOCOP. There were also approximately 133 posts to Facebook and Twitter/X between September 2023 and August 2024.

December 2023 – 2024 SPUWCD Calendars available article

January 2024 – Scholarship Essay Contest info & topic release article

March 2024 -- Women in Ag event with Terry County Soil & Water Conservation District press release

March 2024 – Texas 4H Water Ambassadors Applications press release

May 2024 – SPUWCD 2025 Calendar Winners

May 2024 – SPUWCD Scholarship Winners article and pictures

May 2024 -- Promotion of Rainwater Harvesting Week and workshop on Facebook page, Brownfield News and Town Talk Radio page/website

Performance Standard

7.02a — Seven (7) articles were published in the local newspaper and/or local news media websites and social media.

Management Objective 7.03 -- Public Speaking Engagements

The District fulfilled seventeen (17) public speaking engagements during the 2022/2023 fiscal year. These included:

SPUWCD:

January 2024 Lions Club

March 2024 - Kids Farm Tour, Kids Kows and More

May 2024 Rainwater Harvesting Week

June 2024 Tier 1 Texas 4H Water Ambassadors Leadership group.

The District donated 4 -5 Rain Barrels throughout the year for different nonprofit events and fundraisers.

SOCOP:

November 2023 – Education Collaborative meeting with other groundwater educators around the state to present lessons to leaders

January 2024 – Texas Environmental Education Advisory Commission meeting; TTU Water College with Ambassadors

February 2024 – Town Talk Radio; Biennial Panhandle Groundwater Conference with Ambassadors

May 2024 – Annual Rainwater Harvesting Week

June 2024 – Host Tier I Texas 4H Water Ambassadors Leadership group, meet-and-greet with TTU Dean of CASNR Dr. Krehbiel; Participate in Our Promise Youth Academy fundraiser event

July 2024 -- ACES Health Fair on the Square with Ambassadors and SOCOP Education Trailer;

August 2024 – Texas Water Symposium with Ambassadors; TAGED Groundwater Summit with District Managers

Performance Standard

7.03a -- Ten (10) programs were presented in conjunction with and by Education Coordinator/SOCOP.

7.03b -- Four (4) public speaking engagements presented by General Manager Layne Marlow.

Management Objective 7.04 — Printed Material Resource Center

Over 36 different publications are displayed in the reception area of the office. These publications are obtained from various sources, including the Texas Water Development Board (TWDB), the United States Geological Survey (USGS), and AgriLife Extension Service. District staff developed twelve of the brochures.

Six (6) items were distributed from the resources center.

Performance Standards

7.04a — All six (6) publications distributed from the reception area of the SPUWCD office discussed private domestic wells, permitting/registration, and dealing with contaminated wells.

Management Objective 7.05 — Saturated Thickness Maps

In years past, saturated thickness maps were printed and reproduced and kept in the office. We have suspended this process due to the fact that information on the maps was too small to read and better, more legible information is available on the www.spuwcd.org website.

Performance Standards

7.05a — USGS Interactive Hydrogeologic Data Map - Ogallala Formation Saturated Thickness Zone Layer - is Maintained by USGS and updated annually with District water level measurements webapps.usgs.gov/HDE/SouthernHighPlains/

Management Objective 7.06 — Conservation Literature

Fourteen (14) publications displayed in the reception area of the office are devoted to water conservation for the home and the farm.

Performance Standards

7.06a — 14 publications are dedicated to water conservation.

7.06b — Zero water conservation items were obtained by the public..

Goal 8.0 **Recharge Enhancement**
(Not applicable.)

Goal 9.0 **Rainwater Harvesting**

Management Objective 9.01 — Public Awareness Program

Rainwater Harvesting Week 2024 took place the first week of May, Monday, May 06, 2024 through Thursday, May 09, 2024. The education trailer was parked at the district office barn at 802 E Tahoka Roal all three days, between the hours of 11:00 AM and 1:30 PM. Local residents were invited to visit and view the trailer and register to win a rain barrel and rain chain. Winners were: Monday, May 06 – No entrants; Tuesday, May 07 – Beverly Muschalek; Wednesday, May 08 – Joe Zuniga.

Approximately 18 people attended the Rainwater Workshop on Thursday, May 09, 2024, Lindy Harris Day. Layne Marlow presented a PowerPoint presentation and information regarding Xeriscape, Softscape, and Hardscape in homeowner landscaping. The first 15 pre-registered attendees received rain barrels and rain chains.

Winner of the “Every Raindrop Counts” award was Israel Limon, who took home a certificate and a rain barrel and rain chain.

Performance Standards

9.01a — District ran ads for one week in the Brownfield News. Those same ads were posted on SPUWCD Facebook page and website. Town Talk and the Brownfield Chamber of Commerce also posted information and photographs on their social media accounts. Information and photographs, daily rain barrel and rain chain winners were posted on SPUWCD Facebook page.

Goal 10.0 **Precipitation Enhancement**
(Not applicable.)

Goal 11.0 **Brush Control**
(Not applicable.)

Goal 12.0 **Desired Future Condition of the Aquifers**

The process of adopting a Desired Future Condition (DFC) was established by the Texas Legislature in 2005 and requires groundwater conservation districts within their respective GMA to establish DFCs for relevant aquifers at least once every five (5) years.

The members of GMA 2 met on March 25, 2021 via virtual meeting. Each GMA 2 district was represented at the meeting. Representatives of Groundwater Management Area 2 adopted the proposed desired future conditions.

- A GMA 2-wide average drawdown of 28 feet between 2013 and 2080 for the Ogallala and Edwards-Trinity (High Plains) Aquifers.
- A GMA 2-wide average drawdown of 31 feet between 2013 and 2080 for the Dockum Aquifer.

GMA 2 member Districts had a 90-day public comment period (March 25-June 23, 2021). Each district conducted a public hearing to receive comments about the proposed DFCs during this time. The District's hearing was 6/15/2021 and no comments were received.

GMA 2 was notified by TWDB in February 2022 that the DFC and explanatory report were administratively complete. There was an addendum from TWDB on June 15, 2022. Permian Basin has amended its management plan with the most recent modeled available groundwater report. The report is for informational purposes only. No action was taken.

Management Objective 12.01 — Calculate Annual Drawdown

Performance Standards

12.01a -- The average drawdown result of minus point thirty-seven feet (-.37') was presented to the District Board at the April 2024 Board meeting.

12.01b -- The drawdown results were published on the District website, www.spuwcd.org.

OTHER ACTIVITIES

SPUWCD.ORG

SPUWCD continues to build and upgrade its website. Content and offerings are updated monthly. The site provides education and information for District constituents, as well as people state-wide. The website can be accessed from the Texas Alliance of Groundwater District's website and is linked from various water district websites. General information, hydrologic maps, a Terry County vineyard map, rainfall information, newsletters, rules, management plan, and water level data are available on the site.

In 2015, a weather station was installed at the District office. The real-time information is accessible on the Home Page. Interactive maps were also added to enhance water levels and water quality information.

In 2022, new headings were added to easily identify Newsletters and Regulatory & Compliance information.

HIGH SCHOOL ESSAY SCHOLARSHIP PROGRAM

2023-2024 was the 9th year scholarships were made available to all three high schools within the District. Scholarship entries presented an essay on the topic of water in their communities. 1st and 2nd place scholarships were awarded to graduating seniors from each high school in Terry County, for a total of \$4,500. The scholarship winners for the 2023/2024 school year were:



Brownfield High School: 1st Place – Kaden J. Wise

2nd Place – Carissa Martinez



Wellman-Union High School: 1st Place – Sadie Crowley

2nd Place – Tina Friesen



Meadow High School: 1st Place – Dylan Paiva

2nd Place – Andrea Fraire

SOUTHERN OGALLALA CONSERVATION AND OUTREACH PROGRAM (SOCOP)

In 2007, the District joined Llano Estacado UWCD and Sandy Land UWCD to form The Southern Ogallala Conservation and Outreach Program (SOCOP) which serves the education needs of the three districts. Through the Education Coordinator hired by SOCOP, more emphasis has been placed on education to students in the three school districts in the SPUWCD.

The education website, www.savingH2O.org, as well as the Facebook and Twitter pages for SOCOP, continue to be a part of the District's public education outreach. The website contains water conservation tips and information regarding the District's education program along with curriculum ideas for teachers. The social media pages serve as an up-to-date resource regarding program participation, including but not limited to the Texas 4H Water Ambassador program, school programs etc. They also provide a method to share resources from other entities such as Farm Bureau, FFA, etc., through which local students can become more involved in water conservation.

SOCOP participated in and held numerous education programs for the three school districts. Other education outreaches are held within the District through SOCOP:

- Presentations at Kendrick Memorial Library Story Hour and summer reading programs
- Presentations to Oak Grove ACES Summer Enrichment Program
- Texas 4H Water Ambassadors Program sponsor and service on Advisory Board for the State of Texas
- SOCOP Education Trailer was taken to numerous events, Kids, Kows & More; Farm Tour for Kids, Summer ACES Program at Oak Grove, etc. This mobile classroom continues to travel throughout the District to both student and adult events
- SOCOP participates in the statewide Groundwater Education Collaborative and mentors other groundwater educators new to the field. The collaborative is a network of groundwater educators from across the state of Texas

AGRICULTURAL CAREER EXPO (ACE)

In 2012, a group of ag and education professionals held the first Ag Career Expo. The goal of the Ag Career Expo (ACE) is to inform high school sophomores about the many different education, scholarship, and job opportunities available in the agricultural industry. Local colleges, equipment companies, vendors, and local producers are represented at the ACE event. The District has participated in and helped organize each ACE Day since its inception.

Spring 2020 and Spring 2021 were both cancelled due to Covid. Spring of 2022 and Spring 2023 were not held due to limited availability of vendors, producers, and volunteers, as the West Texas Young

Farmers group was dissolved. Due to lack of interest and local support, this event has yet to be reinstated.

RAINWATER HARVESTING PROJECT

Several Producers and landowners indicated interest in applying for the District's assistance with rainwater harvesting projects. Plans and location designs pending further direction.

WOMEN IN AG

This is a joint project with Terry County Soil & Water Conservation District. The third and fourth annual Women in Ag Conference scheduled for April 2020 & April 2021 were cancelled due to Covid-19. The event was re-organized and took place in April 2022 for the third year.

The event has grown yearly and, in 2024, had participation from both local and national Women in Agriculture members, in addition to recognition by Texas Congressmen and Legislators. The theme for April 2024 was "Women – Cultivating the Future of Ag" Conference topics were related to cultivating, creativity, future generations, and growing a network for women in agriculture.

SUMMARY

The original legislative intent of groundwater district performance evaluations through management plan certification and auditing was to answer two main questions:

1. Is the district operational, and
2. Is the district actively engaged in achieving stated goals, objectives, and performance standards?

Without a doubt, the South Plains Underground Water Conservation District is operational and is achieving its stated goals, objectives, and standards.