ANNUEL REPORT
To the
Board of Directors
On
Attainment of Management Plan Goals
And
Selected Activities
Of the
LLANO ESTACADO UNDERGROUND WATER CONSERVATION DISTRICT

Fiscal year 2024
October 1, 2023 through September 30, 2024

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Seminole, TX 79360
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Llano Estacado Underground Water Conservation District

Board of Directors

Name	Representing	Term Ends
Weldon Shook, President	At Large	May 2027
Chuck Rowland, Vice-President	Precinct 2	May 2025
Walter Billings, Secretary	Precinct 1	May 2027
Rob Warren, Member	Precinct 4	May 2025
Larry Day, Member	Precinct 3	May 2025

Report Prepared
By

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District Mission Statement

The Llano Estacado Underground Water Conservation District (the District) will develop, promote, and implement management strategies to provide for the conservation, preservation, protection, recharging, and prevention of waste of the groundwater resources, over which it has jurisdiction, 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 the Most Efficient Use of Groundwater
2. Controlling and Preventing Waste of Groundwater
3. Controlling and Preventing Subsidence
4. Addressing Conjunctive Surface Water Management Issues
5. Addressing Natural Resource Issues
6. Addressing Drought Conditions
7. Addressing Conservation
8. Addressing Recharge Enhancement
9. Addressing Rainwater Harvesting
10. Addressing Precipitation Enhancement
11. Addressing Brush Control
12. Addressing 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 Management Plan of the District was developed during the summer of 2020. After notice and hearing, the Board of Directors officially adopted the plan on October 8, 2020. The plan became effective on October 8, 2020 and was certified by the Texas Water Development Board on December 4, 2020

This annual report is a review of the District's activities for fiscal year 2023 - 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 171 wells were measured (171 Ogallala).

Performance Standards
1.01a – 100% of measurement wells from the previous year were again measured.
1.01b –100% of wells had field notes written
1.01c – 171 water level measurements entered into database
1.01d – 171 wells in network
1.01e – 0 replacement Ogallala wells added

Management Objective 1.02 – Technical Field Services
3 requests for Technical Field Services were fulfilled in 2023-2024. This is 2 less than last year 2022-2023. August was the busiest month for flow test, when 5 test were performed.

Performance Standards
1.02a – 3 field service requests were fulfilled
1.02b – 3 test were entered in database.

Management Objective 1.03 – Laboratory Services
The total number of lab tests performed for producers in 2023-2024 was 4. This is 3 less than the 7 tests run in 2022-2023. These requests concern the suitability of irrigation water for certain crops.

Performance Standards
1.03a – 4 lab service requests were fulfilled
1.03b – 4 records entered in database.
1.03c – 4 results were reported to constituents.

Management Objective 1.04 – Research and Demonstration
N/A

Management Objective 1.05 – Center Pivot Inventory
Center pivot inventory was required in 2024 by the District's Management Plan.

Performance Standards
1.05a – N/A
1.05b – N/A
1.05c – 2157 pivots, 10 LEPA, 228 MESA, 1,086 LPIC, 833 LESA, 7 Side Row water, and 34 Drip Type Irrigation, systems are entered in District's database

Goal 2.0 Controlling and Preventing Waste of Groundwater

Management Objective 2.01 – Well Permitting and Completion
Since November 1999, the district has issued over 8,945 permits. The number of permits issued during 2023-2024 was 691. This is higher than the 572 issued in 2022-2023. February had the highest number of permits issued, which was 149.

Also, 696 wells were inspected during 2023-2024 to ensure proper completion and spacing. Some of these well were from previous years.

Performance Standards
2.01a – 691 permits issued
2.01b – 696 well sites inspected, 83 well sites were from previous years.
2.01c – 83 well sites failed to meet completion standards

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
3. Thirty three, uncovered wells were discovered during District Staff field visit, during 2023-2024.

Performance Standards
2.02a – 33 open, uncovered wells were discovered by District staff
2.02b – District staff notify responsible party
2.02c – 5 days to make initial contact with responsible party
2.02d – 2 weeks for responsible party to complete closure of uncovered wells
2.02e – 100% have been covered

Management Objective 2.03 – Maximum Allowable Production *
No instance of a maximum production violation were discovered this year
Performance Standards
2.03a – N/A
2.03b – N/A
2.03c – N/A

Management Objective 2.04 – Water Quality Monitoring *
Water quality samples were taken form 100 wells during the summer of 2024. The samples were tested for conductivity, total dissolved solids, chlorides, alkalinity, hardness, fluoride, iron and nitrates. The 2024 water quality map will be posted for viewing and printing on the District's web site.

Performance Standards *
2.04a – 100 samples collected and analyzed
2.04b – 100% of wells sampled in 2024, 100 were sampled in 2023
2.04c – Water quality maps were made available to the public
2.04d – 100 test results were entered in database

Goal 3.0 Controlling and Preventing Subsidence *

3.01 - This goal is not applicable to the District because there is no surface water in our district. Referenced in Chapter 36, Texas Water Code. TWC § 36.1071 (a) (3).

Goal 4.0 Addressing Conjunctive Surface Water Management Issues *

4.01 – This goal is not applicable to the District because there are no surface water resources in the District for use in conjunctive management.

Goal 5.0 Addressing Natural Resource Issues *

5.01 The District will investigate, or refer to the proper agency, any Citizen's or District Initiated complaint related to surface water, groundwater, or any natural resource within the District.

Performance Standards *
5.01a The District will record all complaints and report these annually to the District Board of Directors.

Management Objective *
5.02 The District will attend at least one Region O Meeting at which natural resource issues are discussed.
5.02 a 4 Region O Meetings
5.02 b 2 Region O Meetings attended

Goal 6.0 Addressing Drought Conditions

Management Objective 6.01 – Rain Gauges
The District maintains a network of 61 gauges. The District's network of rain gauges averaged 10.90 inches for the year 2024 compared to 10.39 inches for 2023, the same period last year. The readings from the rain gauges are gathered monthly.

Performance Standards
6.01a – 61 rain gauges in District network
6.01b – 720 Yearly rain gauge readings of 720 possible

Goal 7.0 Addressing Conservation

Management Objective 7.01
During 2023-2024 FY, water conservation curriculum, activities, and resources were made available to all 4th and 5th grade science/classroom teachers in the District. Ideas and links to lesson plans, activities, events, and other contests were shared with classroom teachers through email, SOCOP website, and SOCOP Facebook page posts.

Performance Standards
7.01a – Water Conservation curriculum, activities, and resources were made available to all three elementary schools within the District via in-person presentation, email and Facebook postings.

Management Objective 7.02 – News Releases
Five news articles were published in the Seminole Sentinel News during 2023-2024. These articles addressed LEUWCD Scholarship Essay Winners 2024, Annual Calendar Contest Winners 2023-2024, LEUWCD Scholarship Essay Contest Prompt for 2024, Texas 4H Water Ambassadors Program and Applications 2024 cadre, and advertisement for the annual Rainwater Harvesting Workshop.

Performance Standards
7.02a - Five news release articles were prepared for publication in the local newspaper. 134 Facebook posts were made online promoting water conservation, 4H Water Ambassador activities, Rainwater harvesting, and lessons and activities for educators.

Management Objective 7.03 – Public Speaking Engagements
The District fulfilled 31 public speaking engagements during 2023-2024. This included:
Present annual Calendar Artwork Contest to Loop 4th& 5th grade (1)
Present annual Calendar Artwork Contest to Seminole 4th& 5th grade (2)
Present Calendar Artwork Winners prizes – Seminole Elem & Seagraves; Loop Elem (3)
TownTalk Radio – annual Women in Ag Program (1)
Seagraves HS Senior Scholarship awards (1)
LEUWCD Rainwater Harvesting & Xeriscape Workshop (1)
Summer Library Presentation – Seagraves Library Program; Gaines Co Library, Seminole (2)

Host/present to Tier I Texas 4H Water Ambassadors Leadership Academy touring South Plains area (1)
Present to 4th graders at Gaines Co Oil & Ag Day –w/4H Water Ambassadors (9)
Present 2024 Calendar Artwork Contest to Seagraves 4th & 5th graders (1)
Present 2024 Calendar Artwork Contest to Loop 4tth & 5th graders (1)
Present 2024 Calendar Artwork Contest to Seminole 4th & 5th graders (8)

Performance Standard
7.03a – Thirty-one programs were presented in person to promote conservation and enhancement of our groundwater resources.

Management Objective 7.04 – Printed Material Resource Center and Technical File
Eleven (11) Different publications are displayed in the library area of the office. These publications are obtained from various sources, including the TWDB, the USGS and the Texas Ag Extension Service.

Performance Standards
7.04a – There 88 items on conservation, 5 on rules, and 11 on permitting, 11 on water quality
7.04b – N/A

Management Objective 7.05 – Saturated Thickness Maps
The most recent saturated thickness map is from 2020. No additional saturated thickness map is required until 2025.

Performance Standards
7.05a – There is currently one saturated thickness maps displayed in the District office and located on the District web site. Real estate agents and prospective land buyers frequently request this document.

Management Objective 7.06 – Conservation Literature
Eight publications displayed in the library area of the office are devoted to water conservation for the home and the farm
Performance Standards
7.**06a** – 8 publications are dedicated to water conservation
7.06b – 0 item was obtained by the public in 2023 – 2024

Goal 8.0 Addressing Recharge Enhancement

8.01 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 9.01 – Addressing Rainwater Harvesting
In May, the District hosted a Rainwater Harvesting Workshop; Xeriscaping Workshop for community members to learn about rainwater harvesting, xeriscaping, and composting to promote water conservation.

Performance Standards
9.01 - 10 participants received a rain barrel and rain chain for their participation in an educational program on rainwater harvesting, conservation, xeriscaping, and composting hosted by the District in May.

Goal 10.0 Addressing Precipitation Enhancement

10.01 - While the District did participate in this program for twelve years, the program has been dissolved. Therefore, this goal is not applicable.

Goal 11.0 Addressing Brush Control

11.01 - This goal is not applicable to the District because there is no fresh surface water in our district. Referenced in Chapter 36, Texas Water Code. TWC § 36.1071 (a) (4).

Goal 12.0 Addressing 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 DFC's for relevant aquifers at least once every five years.

The members of GMA 2 met on October 23, 2023 in Lamesa at Mesa UWCD's office. A quorum was present with six GCDs in GMA 2 represented. Representatives discussed the water decline of the aquifer in each Groundwater Management Area.

GMA 2 – wide average drawdown of 28 feet between 2013 and 2080 for the Ogallala and Edwards-Trinity (high Plains) Aquifers.

GMA 2 – wide average drawdown of 31 feet between 2013 and 2080 for the Dockum Aquifer.

- Amy Bush mentioned the aquifer recharge error within the model. This issue is in the resolution stage, with an expected completion date in the year 2024.

- Robert Bradley with the Texas Water Development Board advised the members to be aware of the renewal dates of their Groundwater Management Plans.

The members of GMA 2 met on March 26, 2024 in Seminole at Llano Estacado UWCD's office. A quorum was present with six GCDs in GMA 2 represented. Representatives discussed and signed a contract with Bill Hutchison as consultant for the upcoming current planning cycle.

Management Objective 12.01 – Calculate Annual Drawdown

Performance Standards
12.01a - The calculate annual drawdown results (-1.10) were presented to the District Board in the Annual Hydrograph Report at their February Board meeting
12.01b - The average drawdown results were presented to the District Board at their February Board meeting.

OTHER ACTIVITIES

IRS COST – IN – WATER DEPLETION PROGRAM

2023-2024 was the 22nd year the Llano Estacado Underground Water Conservation District participated in the IRS cost-in-water depletion program. This program benefits irrigated landowners who have experienced a cash loss due to declining water levels. 28 landowner requests were processed.

LLANOESTACADOUWCD.ORG

The District has developed and maintains a web site. The site provides education and information for District constituents, as well as people state-wide. The web site can be accessible from the Texas Alliance of Groundwater District's web site and is linked from various water district web sites. General information, hydrologic maps, rainfall information, rules, management plan and district program descriptions are available on the site.

FLOWMETER PROGRAM

2023-2024 marks the 16th year for the District's Flowmeter Program. With the help of approximately 10 cooperators, the District reads flow meters every 2 weeks during the growing season to determine water usage on various crops. Water usage for 2024 was calculated at the end of the growing season. The following table contains a summary of irrigation water applied during this year. The data received from the flow meter readings also helps the District calculate water efficiency in crop production.

	Cotton	Peanuts	Other	Wheat
2009 (total)	55.3 in.	45.169 in.	in.	in.
Average	13.835 in.	22.589 in.	in.	in.
2010 (total)	99.8488 in.	13.499 in.	6.161 in.	
Average	15.949 in.	13.499 in.	6.161 in.	
2011 (total)	90.143 in.	45.987 in.		
Average	12.878 in.	22.994 in.		
2012 (total)	132.845 in.	42.386 in.		
Average	16.605 in	21.193 in.		
2013 (total)	95.88 in.	48.53 in.	17.7 in.	
Average	11.99 in.	16.18 in.	17.7 in.	
2014 (total)	57.03 in.	27.57 in.	42.09 in.	15.87 in.
Average	11.41 in.	27.57 in.	14.03 in.	15.87 in.
2015 (total)	98.34 in.	28.12 in.	5.46 in.	
Average	8.94 in.	7.03 in.	5.46 in.	
2016 (total)	104.73 in.	32.93 in		
Average	8.73 in.	8.24 in		
2017 (total)	83.36 in.	68.53 in	12.39 in	
Average	8.33 in	17.14 in	12.39 in	
2018 (total)	122.39 in.	16.08 in.	3.28 in.	
Average	9.42 in.	8.04 in.	3.28 in.	
2019 (total)	157.45 in.	32.31 in.	6.78 in.	
Average	12.12 in.	10.77 in.	6.78 in.	
2020 (total)	105.09in.	102.73in.	12.29in.	
Average	10.50in.	20.54in.	6.14in.	
2021 (total)	153.21 in.	18.6 in.	7.29 in.	15.87 in.
Average	15.32 in.	18.6 in.	7.29 in.	7.93 in.
2022 (total)	96.75 in.	4.36 in.		
Average	7.44 in.	4.36 in.		
2023 (total)	142.84 in.	6.21 in.		
Average	10.2 in.	6.21 in.		
2024 (total)	76.81 in.	14.39 in.		
Average	7.68 in.	14.39 in.		

PUBLIC EDUCATION

In 2007, the District joined South Plains UWCD, 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 LEUWCD

This year, the 18th annual "Water Conservation Art Contest" was conducted. Students submitted water conservation art work after hearing a presentation concerning water usage and conservation. The winning art works were featured in a 2025 calendar to be published and distributed by the District. Calendars from the 2025 Water Conservation Contest were distributed throughout the District.
The District sponsored a "Water Conservation Scholar Ship Award" in 2023-2024. All senior students were eligible to enter the essay contest. Contest winners from each school, Loop,

Seagraves and Seminole will receive a $1,000 scholarship for 1st Place, $500.00 scholarship for 2nd Place and sent to the college of their choice.

The education website, www.savingH2O.org continues to be a part of the District's public education outreach along with an education blog and a Twitter entry. These mediums contain water conservation tips and information on the District's education program.

In 2018, SOCOP completed the installation of the models on the Education Trailer. The outside of the trailer is wrapped to emphasize water conservation using the SOCOP's own Aqua Cop character. The models in the trailer teach about the aquifer, water use in the home and rainwater harvesting. Each District contributed funds for the trailer's completion as did the county Farm Bureau office of each District. Already, the trailer has made stops in each District and has had a very positive response. Both children and adults can learn from the inside and outside displays.

USGS HYDROLOGY STUDY

In 2014, the Board of Directors voted to contract with the USGS to conduct a comprehensive study of the Ogallala and Edwards Trinity aquifers in the District. The objective of the project is to develop an updated regional conceptual model of the hydrogeologic framework, geochemistry and groundwater-flow system of the Ogallala and Edwards-Trinity (High Plains) aquifers within the District. Updates are presented to the Board by USGS staff. In 2015, the Board voted to continue with Phase 2 of the USGS study. The USGS attended the Board meeting on February 14, 2019 and gave an update on their continuing work. The web app has been released for public availability and is already being upgraded to include more components of analyzed data. The project has been completed and USGS staff are working on the final report. The USGS increased their contributions to the project so that the web app can be better maintained.

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 Llano Estacado Underground Water Conservation District is operational and achieving its stated goals, objectives, and standards.