High Plains Water District
www.hpwd.org

2024 Annual Report

High Plains Underground Water Conservation District No. 1
2930 Avenue Q
Lubbock, Texas 79411-2499

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High Plains Underground Water Conservation District No. 1 (HPWD)

The district was created to conserve, preserve, and protect the groundwater resources within its 16-county service area.

HPWD consists of all of Bailey, Cochran, Hale, Lamb, Lubbock, Lynn, Parmer, and Swisher Counties, and parts of Armstrong, Castro, Crosby, Deaf Smith, Floyd, Hockley, Potter, and Randall Counties. The district's service area is approximately 11,850 square miles.

HPWD has developed its management philosophy and resulting management strategies to: 1) protect property rights; 2) utilize the best available science to balance the conservation and development of groundwater; and 3) meet the management goals and desired future conditions of aquifers of the District.

The HPWD Board of Directors adopted the original management plan on August 11, 1998. The plan was later amended on these dates:

- January 29, 2004
- February 10, 2010
- July 19, 2011
- August 12, 2014
- September 10, 2019
- September 10. 2024

This document contains management goals, performance standards, and responses to the performance standards for FY 2024. **It is from October 1, 2023, to September 30, 2024.**

HPWD expresses its appreciation to its management and staff for their careful documentation of program data and assistance in compiling this annual report.

The High Plains Underground Water Conservation District No. 1 Board of Directors reviewed and approved this annual report at their November 12, 2024, regular meeting in Lubbock, TX.

BOARD OF DIRECTORS

Brandon Patschke	Member	Precinct One District Director	Lubbock, TX
Brad Heffington	Vice President	Precinct Two District Director	Littlefield, TX
Tony Beauchamp	Member	Precinct Three District Director	Lazbuddie, TX
Lynn Tate	President	Precinct Four District Director	Amarillo, TX
Ronnie Hopper	Secretary-Treasurer	Precinct Five District Director	Petersburg, TX

DISTRICT STAFF

Tammy Anderson	Accountant
Billy Barron	Field Technician Supervisor
Nathaniel Bibbs	Permit Assistant
Liz Casias	Administrative Assistant
Jason Coleman, P.E.	General Manager
Agatha Dettle	Executive Assistant
Lance Epperson	Field Technician
Luke Hickey	Field Technician
Cristian Lopez	Field Technician
Jennifer McClendon	Education Coordinator
Vance Porter	Field Technician
Gray Sanders	IT/Permit Administrator
Robert Triggs	Field Technician
DJ Warrick	Field Technician

COUNTY ADVISORY COMMITTEES

Each county has a county advisory committee that is nominated by the respective Precinct District Director. The members are presented for approval at regular board meetings. These advisory committee members make recommendations to the Board of Directors relating to rules, policy matters, programs, and activities of HPWD. These members are also a liaison between residents and the HPWD Board of Directors. A current list of all county advisory committee members is available here (map1.hpwd.org/precinctmap.html).

MANAGER'S MESSAGE – Jason Coleman, P.E.

This annual report is a summary of the programs and activities conducted during the 2024 fiscal year.

Most of the content is related to the objectives contained in the district management plan. Chapter 36 of the Texas Water Code specifies the goals that a groundwater conservation district (GCD) must address in the management plan. The Board of Directors adopted an updated management plan on September 10, 2024, as required by statute. This annual report addresses the items found in the management plan which was effective for most of FY 2024.

HPWD conducted all programs and activities for the 2024 fiscal year at a total cost of about $2.6 million. About $2.5 million of the district's revenue for FY2024 was property taxes.

All bills and monthly financial reports for the district are available on the HPWD website (**www.hpwd.org**). The public has access to the information presented during each board meeting using the "Transparency" link on the website.

Your comments and questions about HPWD programs are always welcome. Please contact us at (806) 762-0181.

ANNUAL REPORT OF ATTAINMENT OF GOALS 2024

GOAL 1: PROVIDING THE MOST EFFICIENT USE OF GROUNDWATER

Management Objective 1.1 – Monitor Water Levels

Water level measurements are vital to the study of the aquifers within the High Plains Water District (HPWD). Field staff make these measurements each winter, during which time most of the irrigation usage is at a minimum.

Performance Standards

1.1a Number of wells measured each year

There were 1,382 wells measured. Of these, 1,291 are Ogallala Aquifer wells, 59 are Edwards-Trinity (High Plains) Aquifer (ETHP) wells, and 32 are Dockum Aquifer wells.

1.1b Number of wells district staff are unable to measure each year

Approximately 10 Ogallala Aquifer, 2 ETHP, and 4 Dockum wells were unmeasurable in 2024. Publishable measurements are not obtained when wells are in use, the well has been plugged, the well is winterized, or accessibility is prohibited by other circumstances.

1.1c Number of new wells added to the network of observation sites each year

Three new wells were added to the observation well network in 2024. There were 17 wells dropped from the observation well network in 2024.

1.1d Construct maps illustrating the yearly changes in water levels

District staff updated the annual changes in depth-to-water and saturated thickness in wells within the district's observation well network. These data are available for online viewing at **map.hpwd.org**. Dockum Aquifer data are available for viewing at **dockumstudy.hpwd.org**

1.1e Maintain continuous water level monitoring transducers in at least 10 water wells

There are 50 continuous water level monitoring transducers installed/maintained in wells within the district. Changes in telemetry equipment have presented problems maintaining uninterrupted data. All available data is presented on the HPWD interactive web map.

Management Objective 1.2 – Monitor Saturated Thickness

Saturated thickness represents the aquifer section where groundwater pumping occurs. Water users should be aware of changes in saturated thickness.

Performance Standards

1.2a Once per year, calculate saturated thickness for Ogallala and Edwards-Trinity (High Plains) water level observation wells that have a log of well construction

County	Number of Observation Sites With Log of Construction	Average Saturated Thickness from Observation Wells
Armstrong	9	36
Bailey	76	64
Castro	89	50
Cochran	51	41
Crosby	20	81
Deaf Smith	85	58
Floyd	87	63
Hale	49	56
Hockley	75	38
Lamb	93	46
Lubbock	92	57
Lynn	62	49
Parmer	96	45
Potter	5	59
Randall	38	53
Swisher	54	43

1.2b Provide saturated thickness data via the district website

The *Aquifer Info* tool on the interactive map (map.hpwd.org) provides estimates of saturated thickness in the Ogallala/ETHP Aquifer.

Management Objective 1.3 – Technical Field Services

The district is frequently asked to measure well capacities. A variety of tools are used by District staff for this service. These may include ultrasonic flow meters, e-lines, and other instruments.

Performance Standards

1.3a Number of flow tests performed by District staff each year

1,192 tests were conducted in 2024. This includes 1,097 water wells and 95 irrigation systems. This includes Irrigation Assessment Program participants.

1.3b Number of flow tests performed by the public using the metering equipment loaned to water users.

HPWD loaned out flow meters three (3) times during the year. Multiple wells may have been monitored with these flow meters.

1.3c Number of water level measurements performed for individual well owners.

There were 1,401 water level measurements made for individual well owners. Of these, 547 were for the Irrigation Assessment Program. The remaining 854 measurements were performed upon request.

Management Objective 1.4 – Irrigation Assessment Program

Agricultural irrigation comprises most of the groundwater usage within the district. For this reason, it is important that the district understands the patterns of usage on different crops. Using a network of cooperators, the district should monitor application amounts and crop types.

Performance Standards

1.4a Number of sites enrolled in the district's irrigation assessment program each year

There are 121 sites covering 15,887 acres of land.

1.4b Document the types of crops being irrigated each year

Corn, cotton, grain sorghum, and wheat are the primary irrigated crops in 2024. There was also corn and sorghum silage.

1.4c Document the irrigation methods being utilized each year

There are about 13,459 acres with pivot irrigation and 2,428 acres with subsurface drip irrigation enrolled in the Irrigation Assessment Program.

Management Objective 1.5 – Data Availability

The district should provide the best available hydrologic information to the groundwater users. This information should be usable on a variety of platforms, such as electronic or print. Delivery and ease of access are also critically important.

Performance Standards:

1.5a Once per year, summarize and describe new/improved data tools

The annual observation wells and aquifer info tool were updated to display the latest data from 2024 observations. The aquifer info tool was updated to include the one-year water level change.

1.5b Once per year, summarize and describe existing data tools

The online map allows the public to view well locations and download associated documents. This includes permits, driller logs, and geophysical logs. The annual water level observation wells include a chart of tabular data, as well as a graphical representation of water levels and saturated thickness. The *Well Spacing Guide* allows users to estimate a desired drilling location based on the district's well spacing rules. The *Aquifer Info* tab allows persons to access a "virtual bore" for any location within the HPWD service area. This includes the saturated thickness of the aquifers and the depth and thickness of the formations.

1.5c Once per year, inventory all data tools available to the public

Interactive map

- well permit applications
- drillers' logs
- well spacing guide
- aquifer information tool
- annual water level observations
- geophysical logs
- daily water level observations
- contours of saturated thickness, the base of aquifer elevation, and water table elevation

Dockum Aquifer study map

- water quality observations
- flow measurements
- depth to water
- geophysical logs
- drillers' logs
- permitted/registered well locations

Well yield calculator (predicted well yields based on declining water levels)

Management Objective 1.6 – Irrigation System Inventory

As groundwater availability changes, it is expected that the amount of irrigated acreage will change as well. Monitoring this change may be accomplished using remote imagery or other tools.

Performance Standards:

1.6a Once per year, document the number of irrigation systems within the district

There are approximately 14,027 center pivot systems and 5,816 subsurface drip irrigation systems in operation within the district.

1.6b Once per year, calculate acreage covered by the irrigation systems

There are approximately 2,218,593 irrigated acres within the district. This includes 1,780,761 acres irrigated with center pivots and 437,832 acres irrigated with subsurface drip irrigation.

GOAL 2: CONTROLLING AND PREVENTING WASTE OF GROUNDWATER

Management Objective 2.1 – Well Permitting and Well Completion

HPWD issues permits for water wells expected to produce 17.5 gallons per minute or more.

Performance Standards:

2.1a Number of water well permits issued by aquifers each year

AQUIFER	2023	2024
Dockum Aquifer	101	92
Edwards-Trinity (High Plains) Aquifer	26	34
Ogallala Aquifer	1,173	967
TOTAL	**1,300**	**1,093**

2.1b Production categories of well permits issued.

DOCKUM AQUIFER		
Maximum Production	**2023**	**2024**
70 gallons per minute	2	1
165 gallons per minute	1	0
265 gallons per minute	12	10
500 gallons per minute	82	80
> 500 gallons per minute	4	1
TOTAL	**101**	**92**

OGALLALA/EDWARDS-TRINITY (HIGH PLAINS) AQUIFER		
Maximum Production	**2023**	**2024**
Under 17.5 gallons per minute	0	1
70 gallons per minute	374	394
165 gallons per minute	515	412
265 gallons per minute	169	148
390 gallons per minute	102	33
560 gallons per minute	39	10
800 gallons per minute	0	3
> 800 gallons per minute	0	0
TOTAL	**1,199**	**1,001**

Management Objective 2.2 – Open, Deteriorated, or Uncovered Wells

Open, deteriorated, or uncovered wells pose a threat to groundwater quality as well as human/animal safety. A staff member may discover such a well during routine fieldwork, or the office may receive notice of the same from a member of the public.

Performance Standards:

2.2a Number of open, uncovered or deteriorated wells reported each year
11

2.2b Number of well caps provided to cover open wells each year
2

2.2c Number of open, uncovered, deteriorated wells that were capped, closed, or repaired in accordance with district rules each year
9

Management Objective 2.3 – Waste of Groundwater

Waste of groundwater is typically reported to the district office by a member of the public, but may also be discovered by a staff member conducting routine field work. Since waste is prohibited by state law, these reports are investigated by staff, and the corresponding well owner is notified of the wasteful practice.

Performance Standards:

2.3a Number of water waste reports investigated by district staff each year

There were six reports of waste in 2024. These were resolved with the owners' cooperation.

2.3b Number of newsletter articles addressing water waste prevention each year

MONTH	ARTICLE HEADLINE
November	Fall Conservation Tips
December	Playa Lake Restoration and Conservation Program
March	WaterMyYard
April	How much water do you use outdoors?
May	Water Conservation Project
June	Do you have a leaky faucet at home?
July	Waste Reminder
August	Waste Reminder
September	Waste Reminder – Is your toilet leaking?

GOAL 3: CONTROLLING AND PREVENTING SUBSIDENCE – Not Applicable

Using the TWDB subsidence predictor tool, we performed analysis for selected water level observation wells. The transient predictions ended in the year 2070. Minimum predicted subsidence values were about 0.15 feet, while the maximum predicted subsidence values were about 0.70 feet. We also reviewed the TWDB report, "Identification of the Vulnerability of the Major and Minor Aquifers of Texas to Subsidence with Regard to Groundwater Pumping." The district concluded that this goal is not applicable to the operation of the district.

GOAL 4: CONJUNCTIVE SURFACE WATER MANAGEMENT ISSUES

Management Objective 4.1 – Coordination with Surface Water Management Agencies

There are very limited surface water resources in the district. Attending Regional Water Planning Group (RWPG) meetings will help the district stay current with issues that affect surface water agencies in the region.

Performance Standards:

4.1a Number of RWPG meetings attended by staff each year

HPWD Staff attended four Region O meetings and four Region A meetings during FY 2024.

GOAL 5: NATURAL RESOURCE ISSUES

Management Objective 5.1 -- Monitor Water Quality

Water quality affects many different user groups within HPWD. The total dissolved solids (TDS) in groundwater is of primary importance as a screening tool for assessing water quality. HPWD has several tools available for conducting this measurement.

Performance Standards:

5.1a Document the aquifer(s) being sampled

The Dockum Aquifer was included in the Dockum Aquifer Study; the Edwards-Trinity (High Plains) Aquifer was included in the Edwards-Trinity (High Plains) Study; and the Ogallala Aquifer was included in the annual Irrigation Assessment Program.

5.1b Number of wells sampled each year

AQUIFER	WATER SAMPLES TAKEN PER YEAR
Dockum Aquifer	100
Edwards-Trinity (High Plains) Aquifer	4
Ogallala Aquifer	149
Irrigation Systems	39
TOTAL	262

5.1c Document the type of sampling methods

Water quality samples were gathered for analysis using grab samples at well sites. In addition, In-Situ Aqua TROLL transducers measured water levels, pressure, conductivity, and temperature.

GOAL 6: DROUGHT CONDITIONS

Management Objective 6.1 – Ongoing and Relevant Drought Information

A link to current drought information is published monthly in the Cross Section newsletter. Drought awareness helps water users understand the level of conservation required to meet a particular need. The Texas Water Development Board (TWDB) has a very useful website for drought information, which is waterdatafortexas.org/drought

Performance Standards:

6.1a Number of drought-related articles provided to the public each year

HPWD provided 12 drought-related articles in the newsletter during FY 2024.

MONTH	ARTICLE HEADLINE
October	Drought Updates
November	Drought Updates
December	Drought Updates
January	Drought Updates
February	Drought Updates
March	Drought Updates
April	Drought Updates
May	Drought Updates
June	Drought Updates
July	Drought Updates
August	Drought Updates
September	Drought Updates

6.1b Number of rainfall maps provided to the public each year

West Texas Mesonet Rainfall Totals, as well as historic rainfall data for both Amarillo and Lubbock, are linked on the district's website mesonet.ttu.edu.

GOAL 7: CONSERVATION, RECHARGE ENHANCEMENT, RAINWATER HARVESTING, PRECIPITATION ENHANCEMENT, OR BRUSH CONTROL, WHERE APPROPRIATE AND COST-EFFECTIVE

Management Objective 7.1 – District Newsletter

HPWD will produce a newsletter (*"The Cross Section"*) and distribute it to area residents and other interested parties. Articles discussing methods to conserve and preserve groundwater quality and quantity will be included.

Performance Standards:

7.1a Once per year, document the number of newsletter subscribers

There are about 2,244 electronic version subscribers at the end of the fiscal year.

7.1b Document the number of electronic/print newsletters produced each year

There were 12 electronic issues distributed this year.

7.1c Document the number of articles addressing conservation practices published each year

There were 10 articles addressing conservation practices.

MONTH	NEWSLETTER ARTICLE HEADLINE
November	Fall Conservation Tips
December	Playa Lake Restoration and Conservation Program
February	Conservation Reminders – How much water do you use each day?
March	Conservation Reminders - WaterMyYard
April	Conservation Reminders - WaterMyYard
May	Conservation Reminders - Tips for outdoor water conservation
June	Conservation Reminders - Do you have a leady faucet at home?
July	Conservation - Every Drop Counts!
August	Conservation Reminder
September	Conservation Reminder - Toilet Conservation Kit

Management Objective 7.2 – News Releases

HPWD will prepare news releases about water conservation practices and other relevant subjects for distribution to print media, electronic media, and other interested parties.

Performance Standards:

7.2a Number of news releases sent to media and other interested parties each year

There were 5 news releases produced and distributed to the media.

MONTH	NEWS RELEASE
October	HPWD Offers Customers New Self-Serve Permit Portal
October	HPWD Rules Hearing - November 14, 2023
December	Research/Demonstration Grant Applications Due - February 5, 2024
December	Annual Water Level Measurements Begin January 2, 2024
March	2024 Water Level Measurements are Complete

7.2b Number of news releases addressing conservation practices each year

There was one conservation news release produced and distributed to the media.

MONTH	NEWS RELEASE
March	2024 Water Level Measurements are Complete

Management Objective 7.3 – Radio Announcements

HPWD will distribute pre-recorded 60-second radio announcements about water conservation practices and other subjects to local stations.

Performance Standards:

7.3a Document the number of radio announcements produced each year

One radio announcement was produced for the annual water level measurements beginning in January. That announcement was run approximately 115 times.

Management Objective 7.4 – Public Presentations

HPWD representatives will present information about water conservation practices, district programs and activities, and other subjects to civic clubs, professional organizations, and other interested parties.

Performance Standards:

7.4a Number of public presentations delivered each year.

HPWD Staff delivered 21 public presentations. (see 7.6b)

Management Objective 7.5 – Conservation Research

The district will seek opportunities to participate and partner with other groups conducting water conservation research and development.

Performance Standards:

7.5a Once per year, document the number of water conservation research projects in which the District participates

Eight projects were approved for funding by the HPWD Board of Directors.

PROJECT	AWARDED
LMGA Demonstration and Rainwater Retention Project	$20,050.00
Texas 4-H Water Ambassadors Program	$5,000.00

Ogallala Commons Stewarding Our Water Future: Field Days, Roundtables and Festivals	$15,000.00
Subsurface Drip Irrigation System on 28-acres Research Field for Enhancing Field Research Capacity at the Lubbock Center	$23,344.83
WaterWorks: Hands-on Water Education Exhibit at Fibermax Center for Discovery	$34,408.70
Strategic Meter-Specific Water Conservation Interventions Informed by Analyses of Municipal Hourly Water Consumption Date	$32,724.00
Development of Stress-Tolerant Hi-A Sweet Corn for High-Value Crop Production Under Limited Irrigation	$31,000.00
Plant Based Polymers as Effective Treatment Agents In Removal of Per-and Polyfluoroalkyl PFAS From Underground Water	$34,022.00

7.5b Number of newsletter articles describing the research projects each year

Five newsletter articles were presented on the research/demonstration projects.

MONTH	NEWSLETTER ARTICLE HEADLINE
December	Playa Lake Restoration and Conservation
May	HPWD Board Awards Research and Demonstration Funds
May	Brenda Wolfe-Water Conservation Project
July	4-H Tier I Water Ambassador Leadership Academy Visit
August	Playa Field Tour – Nazareth, Texas

Management Objective 7.6 – Public Information

District staff will provide general water conservation information at suitable venues each year. This may include exhibits at farm shows and information tables with publications at other meetings.

Performance Standards:

7.6a Document venues at which water conservation information is provided (See table below)

7.6b Estimate the attendance at each venue (See table below)

Almost 4,500 people attended HPWD public informational events.

DATE	VENUE	ATTENDANCE	PRESENTER(S)
10/3/2023	Whiteface Playa Festival	55	J. McClendon, B. Barron, A. Dettle
10/4/2023	Muleshoe National Wildlife Refuge	65	J. McClendon, A. Dettle
10/12/2023	Plainview Soroptimist Club	26	J. McClendon
10/31/2023	Lamb Co. Ag Awareness Day	133	J. McClendon, B. Barron, B. Harper

11/9/2023	Cochran Co. YEA Day	48	J. McClendon, A. Dettle
11/16/2023	WTAMU Horticulture Class	70	J. McClendon, J. Coleman
11/16/2023	West Texas Ag Chem. Conference	54	B. Barron, G. Sanders
11/28-30/2023	Amarillo Farm & Ranch Show (Exhibit)	200	J. McClendon, B. Barron, DJ Warrick, R. Eads, J. Coleman, G. Sanders, A. Dettle, M. Hamilton
1/18/2024	Mid-Plains Ag Expo. (Exhibit/Sponsor)	108	J. McClendon
1/24/2024	TAWC 10th Annual Water College (Exhibit/Sponsor)	130	J. McClendon
1/25/2024	2024 Caprock Crop Production Conference (Exhibit/Sponsor)	240	J. McClendon
2/6/2024	Exit Realty – Lubbock	50	J. McClendon
2/17/2024	New and Beginning Landowner-Texas Ag Workshop	27	J. McClendon
2/22/2024	South Plains Regional Science & Engineering Fair – Special Awards Judging	21	J. McClendon, B. Barron
2/28/2024	Panhandle Water Conservation (Exhibit/Sponsor)	200	J. McClendon, J. Coleman, A. Dettle
3/1/2024	TTU Water Law Symposium	35	J. Coleman
3/8/2024	Lubbock Business Association	27	J. McClendon
3/20/2024	NRCS Local Work Group in Cochran County	16	J. McClendon, J. Coleman
3/21-22/2024	Stewarding Our Water Future Conf. (Exhibit/Sponsor)	150	J. McClendon
4/25/2024	Citizens Climate Education Group	18	J. McClendon
5/2/2024	Amarillo Parks & Recreation	25	J. McClendon
5/8/2024	Slaton ISD Quest	12	J. McClendon
5/20/2024	Keep Levelland Beautiful Advisory Board	17	J. McClendon
5/23/2024	Lubbock Condra Charter School	23	J. McClendon, B. Barron
5/28/2024	Rainwater Harvesting Program – Castro (Exhibit/Sponsor)	50	J. McClendon

6/13/2024	4-H Water Ambassador Tier I	30	J. McClendon, B. Barron, A. Dettle, V. Porter
6/17/2024	Ropesville Lions Club	12	J. McClendon
8/29/2024	North Region AgriLife Ext. Agents Retreat	20	J. Coleman
9/11/2024	Hockley Co. Ag Appreciation Luncheon	230	J. Coleman
9/20-28/2024	South Plains Fair (Exhibit Booth/Sponsor)	2,400	J. McClendon, G. Sanders, B. Barron, R. Triggs, J. Coleman, A. Dettle, L. Epperson, V. Porter

Management Objective 7.7 – Youth Education

The district will provide water conservation education to youth within its service area.

Performance Standards:

7.7a Document the number of presentations and youth reached once per year

HPWD Education and Outreach staff gave eight presentations that reached an estimated 436 students.

Management Objective 7.8 – HPWD Website

The district will provide information about groundwater availability, water conservation, and other subjects on its website.

Performance Standards:

7.8a Document annual website traffic using an analytical program

We switched to a new website platform at the beginning of the fiscal year. This provider helps local governments comply with accessibility standards, and other issues that are specific to transparency. The total view count for FY 2024 was 628,163 visits. This is about 52,000 visits per month.

GOAL 8: RECHARGE ENHANCEMENT

Management Objective 8.1 – Research and Demonstration Opportunities

Since the District's creation, HPWD has committed many resources to recharge enhancement studies and demonstrations. Recharge wells and enhanced recharge structures are just several examples of this past work. As managed aquifer research (MAR) technologies evolve, we expect additional research and demonstration opportunities. HPWD may encourage work in this area through its policy of research and demonstration proposals.

Performance Standards:

8.1a Number of research/demonstration MAR proposals received by HPWD each year

Two projects were received:

- Stewarding Our Water Future: Field Days, Roundtables and Festivals
- West Amarillo Creek Water Restoration at Wildcat Bluff

8.1b Number of research/demonstration MAR proposals funded by HPWD each year

One project was funded:

- Stewarding Our Water Future: Field Days, Roundtables and Festivals

GOAL 9: RAINWATER HARVESTING

The District will promote awareness of this conservation practice to residents of the District.

Performance Standards:

9.1a Number of public presentations dedicated to rainwater harvesting each year

HPWD staff gave three public presentations dedicated to rainwater harvesting. In addition, rainwater harvesting was mentioned during other presentations given by HPWD staff during the year.

9.1b Number of articles or publications written regarding rainwater harvesting each year

MONTH	ARTICLE HEADLINE
June	HPWD Donates Rain Barrels & Rain Chains

9.1c Number of rainwater harvesting devices distributed to the public each year

HPWD gave away 70 rain barrels and 25 rain chains at a Castro County Rainwater Harvesting workshop in Dimmit. HPWD donated 1 rain barrel and 2 rain chains for the South Plains Fair in Lubbock for door prizes at the exhibitor awards ceremony.

GOAL 10: PRECIPITATION ENHANCEMENT – Not Applicable

During the years 1997-2002, HPWD conducted a weather modification ("precipitation enhancement") program. In late 2002, residents of the district voiced much opposition to this program, and several county commissioners' courts adopted resolutions against the continuation of the program. The program was subsequently terminated by the HPWD board, and this goal is not applicable.

GOAL 11: BRUSH CONTROL – Not Applicable

Existing programs administered by the U.S. Department of Agriculture Natural Resources Conservation Service (USDA-NRCS) are addressing this issue. This activity is not cost-effective and applicable for the district at this time. Therefore, the goal is not applicable to the operation of the district.

GOAL 12: DESIRED FUTURE CONDITIONS OF THE AQUIFERS

Management Objective 12.1 – Calculate Average Yearly Water Level Change

The district's currently adopted desired future conditions (DFCs) were developed using an average yearly water level change within the GMAs. Each winter, HPWD and other GCDs obtain water level measurements to determine the change from the previous year.

Performance Standards:

12.1a Number of wells included in the calculation

HPWD and the other groundwater conservation districts in GMA #2 collectively had 1,448 wells measured in both 2023 and 2024. A well must be measured in both years to calculate the yearly change.

12.1b Calculated average water level change

The calculated average water level change was -0.95 ft across GMA #2. This is from the Ogallala/Edwards-Trinity (High Plains) data.

12.1c Compare total cumulative change to the adopted DFC

The total cumulative change was a decline of -8.36 feet. This compares to the adopted DFC of -11.8 feet.

Management Objective 12.2 – Estimating Annual Usage

Calculating annual groundwater use is necessary for monitoring progress toward achieving the desired future conditions. Although a regional groundwater model provides an estimate of usage to meet that goal, a more specific local estimate may increase our understandingof the usage and corresponding changes in volume.

Performance Standards:

12.2a Estimate total usage within the district using reported data and irrigation estimates

Irrigation usage accounts for 98% or more of the annual usage within HPWD. Reported data is submitted by water users from a variety of different water user groups. These include beef feed yards, dairies, municipalities, school districts, and irrigated producers. Data obtained from the cooperators in the HPWD Irrigation Assessment Program is also very helpful.

Estimated 2023 Irrigation Water Usage — 2,043,228 acre-feet
Estimated 2024 Irrigation Water Usage — data collection still in progress

12.2b Compare estimated annual usage to data from the High Plains Aquifer System (HPAS)Groundwater Availability Model (GAM)

After adopting desired future conditions for relevant aquifers, each groundwater conservation district (GCD) is given a Modeled Available Groundwater (MAG) report. This data is supplied by the Texas Water Development Board. HPWD is part of Groundwater Management Areas 1 & 2, and consequently has MAG reports for both parts of the district.

Ogallala/Edwards-Trinity (High Plains) Aquifers
Total MAG for 2024 — 1,735,094 acre-feet

Dockum Aquifer
Total MAG for 2024 —43,619 acre-feet

A LOOK BACK AT FISCAL YEAR 2024