2023 ANNUAL REPORT

LONE STAR Groundwater Conservation District

www.LoneStarGCD.org

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About Us

In 2001, the 77th Texas Legislature, through House Bill 2362, authorized the creation of the Lone Star Groundwater Conservation District (LSGCD). Montgomery County voters then confirmed the district's creation on November 6, 2001, with 73.85 percent of the vote.

Since its creation, LSGCD has carried out its statutorily mandated functions of conserving and protecting groundwater in Montgomery County and has developed a system to ensure that the groundwater supply in Montgomery County will remain a sustainable resource for years to come.

The Lone Star Groundwater Conservation District is located in Montgomery County, in southeastern Texas. The District is bordered by Walker County to the north, San Jacinto and Liberty Counties to the east, Harris County to the south, and Waller and Grimes to the west.

Peach Creek is the boundary with San Jacinto County, and Spring Creek forms most of the boundary with Harris County. LSGCD comprises an area of approximately 1,090 square miles.

Image Courtesy of Texas Almanac

MISSION

The Lone Star Groundwater Conservation District's mission is to be transparent and judicious stewards of Montgomery County's groundwater. We use the law and the best available science in decision-making processes and policies. We prioritize the highest practicable production of your aquifers while mindfully balancing the protection of private property rights and conservation for present and future generations.

Lone Star Groundwater Conservation District
655 Conroe Park North Drive Conroe, Texas 77303
www.LoneStarGCD.org
(p) 936-494-3436
(f) 936-494-3438
info@lonestargcd.org

General Manager

SARAH KOUBA
General Manager

Ms. Kouba is a native Texan, born and raised in Tomball, Texas, attending College at both The University of Houston-Downtown, and Texas State University in San Marcos, Texas. Ms. Kouba has over twenty years of experience in residential construction, joining LSGCD with an impressive background in financial, operational, and procedural leadership. With previous experience as the Scheduling Director for Arcxis Engineering and Inspection Solutions, she excelled in overseeing operations, merger acquisitions and successful departmental restructure across the nation. Additionally, Ms. Kouba showcased her exceptional capabilities as the Disaster Repair Program Director for Houston Habitat for Humanity helping coordinate state and local county efforts with VOAD, The Greater Houston Community Foundation, The City of Houston Long Term Recovery Committee, The City of Houston Resilience Fellowship, and would later become a founding member of The City of Houston Hoarding Task-Force Coalition, as well as a consultant for Puerto Rico Habitat's Long Term Recovery Mission.

Letter From The District

In 2023, the Lone Star Groundwater Conservation District (LSGCD) achieved several important milestones. The Groundwater Management Area (GMA) 14 planning cycle is in the second year of development. The Texas Water Development Board (TWDB) released a draft version of the new Groundwater Availability Model (GAM), GULF-2023, prepared by the United States Geological Survey (USGS), in early 2023. Comments on the draft model files and reports were provided on behalf of LSGCD to the TWDB in April 2023. Additional draft model comments were prepared and submitted to the TWDB in conjunction with the other groundwater conservation districts within Groundwater Management Area (GMA) 14. An approach was developed by the GMA 14 consultants to update the GULF-2023 model to make the model more useful for the planning purposes of the GMA.

A significant achievement in 2023 was the finalization of a location for Phase III of the Subsidence Study. We extend our gratitude to Porter Special Utility District for their partnership for Site 1. During a Special Meeting of the Board of Directors on December 1, 2023, Alsay was awarded the bid for drilling, which is set to begin in early 2024. This is an exciting development, as the hydrogeologic study will be a first of its kind for Montgomery County. The District has proposed that the data collected could also be used to update the GAM for GMA 14.

In August 2023, the District welcomed Sarah Kouba as the General Manager for the District. In the second half of 2023, the District added a new Field Operations Technician and plans to add a Director of Operations and a third Permitting Technical Support role in 2024.

For the second year in a row, Montgomery County experienced drought conditions. Having only received 0.59 inches of rain in July and August, the county entered D3 Extreme Drought on August 15, 2023. In response, the Board of Directors voted to adopt Resolution #23-006, enacting a Temporary Drought Buffer as authorized under District Rule 4.2. By September 12, 2023, the drought had intensified, with 40.69% of Montgomery County experiencing D4 Exceptional Drought.

In conclusion, the District remains committed to fulfilling its responsibilities and objectives while prioritizing the highest practicable production of your aquifers while mindfully balancing the protection of private property rights and conservation for present and future generations.

Board of Directors

JIM SPIGENER
President
Represents County At-Large
Place 5
Term Expires 12-01-24

STUART TRAYLOR
Vice President
Represents Precinct #1
Place 1
Term Expires 12-01-24

JANICE THIGPEN
Secretary
Represents Precinct #2
Place 1
Term Expires 12-01-26

JONATHAN PRYKRYL
Treasurer
Represents Precinct #4
Place 4
Term Expires 12-01-26

JON PAUL BOUCHÉ
Member
Represents City of Conroe
Place 6
Term Expires 12-01-24

KENNETH EARNEST
Member
Represents Precinct #3
Place 3
Term Expires 12-01-26

GARRY O. DENT
Member
Represents The Woodlands Township
Place 7
Term Expires 12-01-24

In 2017, the passage of House Bill 1982 by the 85th Texas Legislature Session amended Lone Star Groundwater Conservation District's enabling legislation, changing the previously nine member appointed board to a seven-member elected board. Four of the directors are elected from each county commissioner's precincts (Place No. 1 - 4), one director is elected by the voters at Large (Place No. 5), one director is elected by the City of Conroe (Place No. 6), and one director is elected from The Woodlands Township (Place No. 7).

The newly elected Board of Directors was sworn in on November 16, 2018. Under the new board structure, the permanent directors served in staggered four-year terms and are prohibited from serving more than three full terms. The LSGCD's Board of Directors serves to protect private property rights while developing and promoting strategies to both conserve and utilize groundwater resources in Montgomery County.

Board Committee Assignments

Executive Committee
Jim Spigener
Stuart Traylor
Janice Thigpen

Budget & Finance Committee
Jonathan Prykryl, Chair
Janice Thigpen
Stuart Traylor

Rules, Bylaws & Policies Committee
Jim Spigener, Chair
Jon Paul Bouché
Garry Dent

DFC & Technical Committee
Stuart Traylor, Chair
Kenneth Earnest
Garry Dent

External Affairs Committee
Jim Spigener, Chair
Jon Paul Bouché
Janice Thigpen

Successful Achievement of 2023 Management Goals

The 75th Legislature in 1997 enacted Senate Bill 1 (SB1) to establish a comprehensive statewide water planning process. In particular, SB1 contained provisions that required groundwater conservation districts to prepare management plans that identify the water supply resources and water demands which will shape the decisions of each district. SB1 requires the management plans to include management goals for each district to manage and conserve the groundwater resources within their boundaries.

Each year, the District is charged with providing evidence of the District's progress in achieving the management goals outlined in the District's Groundwater Management Plan. The evidence of the District's progress toward each goal is included in this Annual Report and made available to the public after adoption by the Board of Directors. This report is intended to fulfill the District's Groundwater Management Plan requirement in complying with the achievement of management goals outlined herein.

Goal 10.1
Efficient Use of Groundwater

Management Objective 1
The District will maintain a monitoring well network to provide coverage across aquifers and measure water levels at least once every calendar year. A written analysis of the water level measurements from the monitoring wells will be made available through a presentation of the Board of Directors at least once every three years.

Performance Standard 1
Maintain a monitoring well network and its criteria, measure monitoring wells at least once every calendar year, and perform site inspections as necessary.

Status
The United State Geological Survey (USGS), in cooperation with the District, has monitored and assessed the Gulf Coast Aquifer System by conducting yearly water level measurements and evaluations within Montgomery County. On December 12, 2023, the District Board of Directors voted unanimously to renew the monitoring program with USGS. The last presentation by the USGS of the water level data collected was on September 21, 2021. The link to the collected water level data can be found on the District's website (www.LoneStarGCD.org).

Management Goal 10.1

Management Objective 2
The District will continue to support the activities of the Gulf Coast/Montgomery County Water Efficiency Network, WaterWise Program, and the Home Water Works, and maintains a technical library of information providing guidance on the efficient use of water.

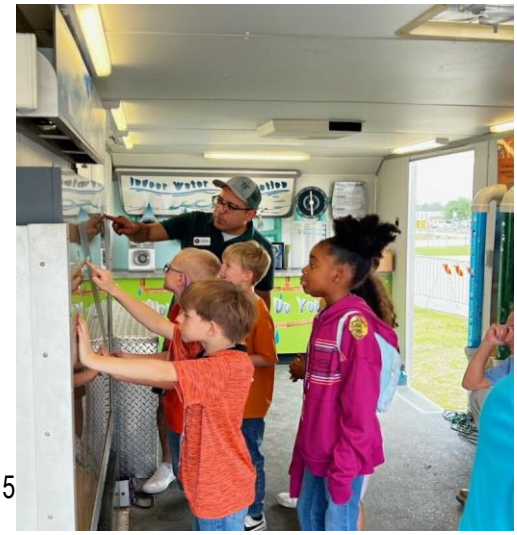
Performance Standard 2
Program updates, notifications of monthly meetings, and links to specific topics to improve efficiency will be posted on the District's Website (www.LoneStarGCD.org).

Status
In December 2023, it was announced that the next Gulf Coast Water Conservation Symposium would be held in February 2024. District staff attended the Burleson and Milam Counties Groundwater Summit to stay involved with water conservation in neighboring counties.

Management Objective 3
The District will provide educational leadership to citizens annually through at least one printed publication, such as a brochure, and/or speaking at service organizations and public schools as provided for by the District's public education program.

Performance Standard 3
The number of publications and speaking appearances by the District each year under the District's public education program and as it is reported in the Annual Report.

Status
The District participated in 5 live water conservation education opportunities throughout Montgomery County which included demonstrations, distribution of educational materials, and utilization of the District's Mobil Lab. For the 2022-2023 and 2023-2024 school years, the District contracted with an educational program provider to deliver classroom education kits to 1,579 students in Montgomery County. The kits were created to be used in collaboration with a multifaceted program using an appropriate grade level curriculum following TEKS guidelines.



Education & Outreach

Public education plays a vital role in fostering and advancing conservation efforts. Through the presence of a District Educational and Conservation Outreach Coordinator, the District can actively participate in a variety of speaking engagements, tours, and events across the county, enabling staff members to directly engage with the public. Presented below are some examples of the opportunities for public interaction that staff members have been involved in.

- Montgomery County Fair Kids Day
- Magnolia Fall Fest
- Montgomery County Home & Garden Show
- GCD's Educator Collaborative Training
- Youth To Career Fair
- 4-H Ambassador Advisory Committee
- Rooted In Health Nurtured by Nature
- Champion 4-H Club

Management Goal 10.1

Management Objective 4
Each year, the District will require all new exempt or permitted wells that are constructed within the boundaries of the District to be registered or permitted with the District in accordance with the District Rules.

Performance Standard 4
Each year the District will accept, process, and review applications for the permitted use of groundwater in the District in accordance with the permitting process established by District Rules. The number and type of applications made for the permitted use of groundwater in the District and the number and type of permits issued by the District will be located in the annual report submitted by the General Manager to the Board of Directors of the District.

Status
To demonstrate the completion of Performance Standard 4, the number and type of applications received for permitted use of groundwater by the District in 2023 is provided in Table 1. Table 2 includes the number and type of permits issued by the District in 2023.

Table 1: Number and Type of Applications Received for Permitted Use of Groundwater by the District in 2023

Number of Exempt Wells Registered	528
Number of Non-Exempt Wells Permitted	61
Number of Non-Exempt Catahoula Wells Permitted	0
Total	589

Table 2: Number and Type of Permits Issued by the District in 2023

Amendment of an Existing Operating Permit or Historical Use Permit Application*	163
New Operating Permits**	41
Amendment to an Existing Alternative Water Source Permit*	1
New Alternative Water Source Permit**	0
Total	205

**Applications for Permit Amendments may not reference a specific well*
***Applications for new Operating Permits may include more than one well*

Management Objective 5

The District will maintain qualified staff and technical consultants necessary to execute and maintain the District's well registration and permitting system. This effort includes the timely processing and technical reviews of permit applications. Each year, the District will regulate the production of groundwater by maintaining a system of permitting the use and production of groundwater within the boundaries of the District in accordance with the Districts' Rules.

Performance Standard 5

The District maintains a qualified staff to assist water users in protecting, preserving, and conserving groundwater resources. The Board of Directors has in the past and continues today to base its decision 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.

Status

The District continues to maintain qualified staff and technical consultants as managed by the District Board of Directors and General Manager. The District evaluates and monitors groundwater conditions and used the best available data to regulate productions consistent with the District Rules. Production will be regulated, as needed, to conserve groundwater and protect groundwater users, with consideration of private property owners' rights.

Goal 10.2

Controlling and Preventing Waste of Groundwater

Management Objective 1

The District operates a waste prevention outreach strategy that focuses on enhancing the use of the District's website to provide resources applicable to the prevention of waste of groundwater. The District website provides a routinely updated link containing a Best Management Practices Guide (published by the Texas Water Conservation Advisory Council in partnership with the TWDB). The District will work to identify outreach opportunities with regional and local water providers so as to increase public awareness for the prevention of groundwater waste.

Performance Standard 1

The District provides and will routinely update the link on the District's website (www.LoneStarGCD.org) to Best Management Practices, which includes helpful tips to control and prevent the waste of groundwater.

Status

The District maintains a link on its website (www.LoneStarGCD.org) to the Best Management Practices Guides published by the Texas Water Conservation Advisory Council in partnership with the TWDB. Best Management Practice Guides are separated by type of use categories including Agriculture, Commercial and Institutional, Industrial, Municipal, and Wholesale.

Management Goal 10.2

Management Objective 2
Each year, the District will apply a water use fee structure to the permitted use of groundwater in the District to encourage the elimination and reduction of waste of groundwater.

Performance Standard 2
Each year, with the exception of wells exempt from permitting, the District will apply a water use fee to the permitted use of groundwater in the District pursuant to the District Rules. The amount of fees generated by the water use fee structure and the amount of water used for each type of permitted use of groundwater will be included in the Annual Report submitted by the General Manager to the Board of Directors of the District.

Status
See Tables 3 & 4

Table 3: The Amount of Water Use Fee Generated by the water use fee structure in 2023
**May include water transported out of the district but not subject to transportation*

Water Use Type	Permitted Amount Gallons	Fee Rate	Fee Amount
*HUP / Operating Permits	36,593,240,289	$0.085/1000 Gallons	$3,110,425.42
AG Permits / Applications	538,439,653	$1.00/Acre Foot	$1,652.41
Catahoula Aquifer Production Permits	3,025,640,000	$0.06/1,000 Gallons	$181,538.40
Total	40,157,319,942		$3,293,616.23

Table 4: The Amount of Water Used for Each Type of Permitted Groundwater Use in 2023 (gallons)

Commercial	110,121,536	Public Supply	76,432,360
Industrial	477,917,795	Public Supply (PWS)	25,926,722,166
Irrigation	1,109,720,011	Catahoula Aquifer Production	1,857,852,000
Irrigation (Agriculture)	147,863,241	**Total**	29,706,629,109

Management Goals 10.3

Goal 10.3
Controlling And Preventing Subsidence

Management Objective 1
The District shall, in cooperation with the Harris-Galveston Subsidence District, monitor in real-time and maintain a network of 8 subsidence monitor stations to continually measure subsidence. To date, minor subsidence of less than 1 foot has been measured at monitoring stations located in the southern portion of the District.

Performance Standard 1
Each year a summary of the joint conference on subsidence issues will be included in the annual report submitted by the General Manager to the Board of Directors of the District.

Status
In 2023, Lone Star Groundwater Conservation District collected data from the 6 Periodically Accessible Monitors stations throughout Montgomery County. The raw data was provided weekly to Harris Galveston Subsidence District to continually measure subsidence.

Management Objective 2
Each year, the District shall participate in a joint conference with the neighboring groundwater conservation districts or subsidence districts focused on sharing information regarding subsidence and the control and prevention of subsidence through the regulation of groundwater production.

Performance Standard 2
Results from the subsidence monitor stations will be noted in the summary of the joint conference on subsidence and included in an annual report to the District Board of Directors.

Status
The District attended one of more GMA 14 meetings (where Harris Galveston participated) and/or Harris Galveston Subsidence District's meetings.

Management Objective 3
Controlling and preventing subsidence will be addressed during the review and processing of permits as authorized in Chapter 36 and District Rules and in setting Desired Future Conditions for the common reservoirs.

Performance Standard 3
The District will continue its subsidence study and provide updates on the results of the study in the Annual Report of the District provided to the Board of Directors.

Status
District staff and technical consultants provide updates on the results for the Subsidence Study monthly to the Board of Directors at regularly scheduled public board meetings.

2023 District Subsidence Study Phase III Summary

In the past year, the District made significant strides in advancing the Subsidence Study to Phase III, building on the groundwork established in earlier phases. This next phase focused on filling crucial data gaps related to the management of groundwater resources in Montgomery County. With a strong emphasis on drilling and testing, the District collaborated closely with stakeholders and consultants to identify optimal sites for coring and monitoring wells, ensuring that the subsidence study moves forward with accuracy and precision.

A key aspect of Phase III was engaging local stakeholders, resulting in enthusiastic interest from entities such as MUD 89 and Spring Creek MUD. Additionally, collaborative meetings with Porter SUD and Southern Montgomery County MUD were held to refine locations for coring, ensuring the best sites were chosen for this critical research. The District secured the location from Porter SUD for coring, marking a major step forward in site selection.

Furthering this progress, a pre-bid meeting was held to launch the bidding phase of the project. The District successfully finalized a contract with Alsay for the drilling project and initiated coordination with the San Jacinto River Authority (SJRA) on a potential additional site in The Woodlands. These efforts marked a pivotal advancement in understanding subsidence patterns and groundwater management.

The drilling and coring phase of the Phase III Subsidence Study is set to begin at the Porter SUD site in early 2024. As Phase III continues to unfold, the data collected will not only support the District's mission of managing groundwater responsibly but also contribute to future scientific research and educational endeavors. The District remains committed to ensuring the long-term sustainability of Montgomery County's groundwater resources through these ongoing efforts.

Management Goals 10.4

Goal 10.4
Conjunctive Surface Water Management

Management Objective 1
Each year, the District's designated representative will participate in the regional planning process by attending at least one of the Region H Regional Water Planning Group meetings annually.

Performance Standard 1
The participation and attendance of the District's designated representative at each Region H Regional Water Planning Group will be noted in the Annual Report submitted by the General Manager to the Board of Directors of the District.

Region H Water Planning Group Attendance

February 1, 2023
May 3, 2023
September 25, 2023
December 6, 2023

Status
The District's representative, the General Manager, continued participating in the Region H Regional Water Planning Group by attending three out of the five Region H Water Planning Group meetings for 2023. The General Manager also attended the September 25, 2023, Groundwater Supply Committee meeting. Attendance at the meeting provides the District with the opportunity to provide valuable input regarding the role of the groundwater in overall regional planning and to encourage the development of surface water supplies and conjunctive use to help meet the needs of water user groups in the District.

Management Objective 2
The District will review the State Water Plan in Appendix B (of the LSGCD Management Plan) and coordinate with public water suppliers, other stakeholders, and surface water management entities on the conjunctive use.

Performance Standard 2
Each year the District will include a summary of the District's review of the State Water Plan and meeting summaries on the conjunctive use in the Annual Report to the Board of Directors of the District.

Status
The District works to address conjunctive surface water management issues by attending GRP Review Committee Meetings, evaluating user water portfolios, participating in regional joint planning through GMA 14, Region H Regional Planning Group, and trade organization conferences on water conservation and conjunctive use. The District hosted a Montgomery County stakeholder meeting to address various strategies that could be implemented to meet water demands in the future or in times of groundwater shortage.

Management Goals 10.5 & 10.6

Goal 10.5
Natural Resources Issues

Management Objective 1
The District will monitor permit applications and permit amendment applications for Class II injection wells filed with the Railroad Commission of Texas and Class I and Class V injection well permit applications and permit amendment applications filed with the Texas Commission on Environmental Quality. District staff will review these notices and brief the Board of Directors as appropriate. A summary of injection well permit activity and any action taken by the District in the response will be included in the Annual Report submitted by the General Manager to the Board of Directors of the District.

Performance Standard 1
Beginning with the 2014 Annual Report, a summary of injection well permits activity at the Railroad Commission of Texas and the Texas Commission on Environmental Quality along with any actions taken by the District in response will be included in the Annual Report submitted by the General Manager to the Board of Directors of the District.

Status
No applications for permitting or amending an existing permit for injection wells within Montgomery County were filed with the Texas Railroad Commission or the Texas Commission on Environmental Quality in 2023. The District will continue to monitor carefully for such activity.

Goal 10.6
Efficient use of Groundwater

Management Objective 1
An important objective of the District is to provide ongoing and relevant drought-related meteorological information. Bringing in 2014, the District began making available through the District's website, easily accessible drought information with an emphasis on developing drought and on any current drought conditions. At least one of the following links will be provided: updates on the US Drought Monitoring Map for the Region, the Drought Preparedness Council Situation Report, and the TWBD Drought page at www.waterdatafortexas.org/drought.

Performance Standard 1
Current drought conditions information from at least one of the following will continue to be available to the public on the District's website and noted in the Annual Report submitted by the General Manager to the Board of Directors: the US Drought Monitor map for the region, the Drought Preparedness Council Situation Report, or the TWBD Drought page at www.waterdatafortexas.org/drought.

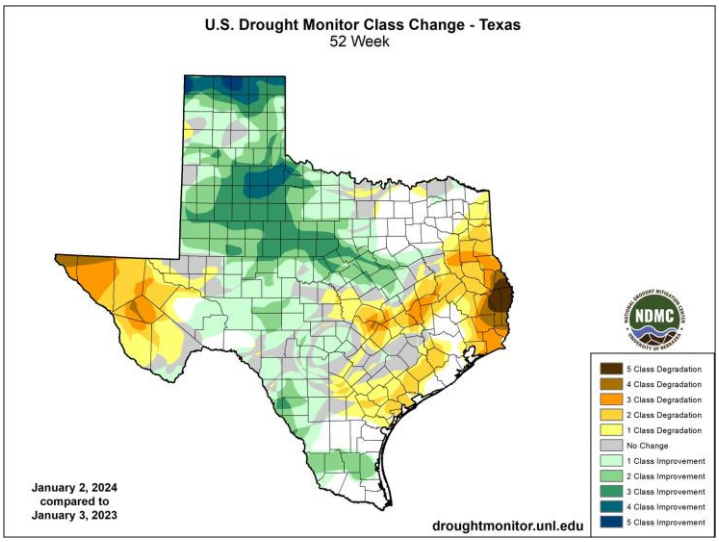
Status
Links to the US Drought Monitor maps for Montgomery County and the TWDB Drought Information Summary can be found on the District's Website (www.LoneStarGCD.org). Throughout the duration of the 2023 drought, Weekly Drought Update emails were sent every Thursday with the updated Drought Monitor Maps for the state, region, and county.

Management Goals 10.6

Local Precipitation

According to precipitation data collected from the weather station at Conroe-North Houston Regional Airport (station ID# USW0053902) 2023's annual rainfall total equaled 38.47 inches, 4.6 inches less than 2022 total precipitation (43.07 inches)

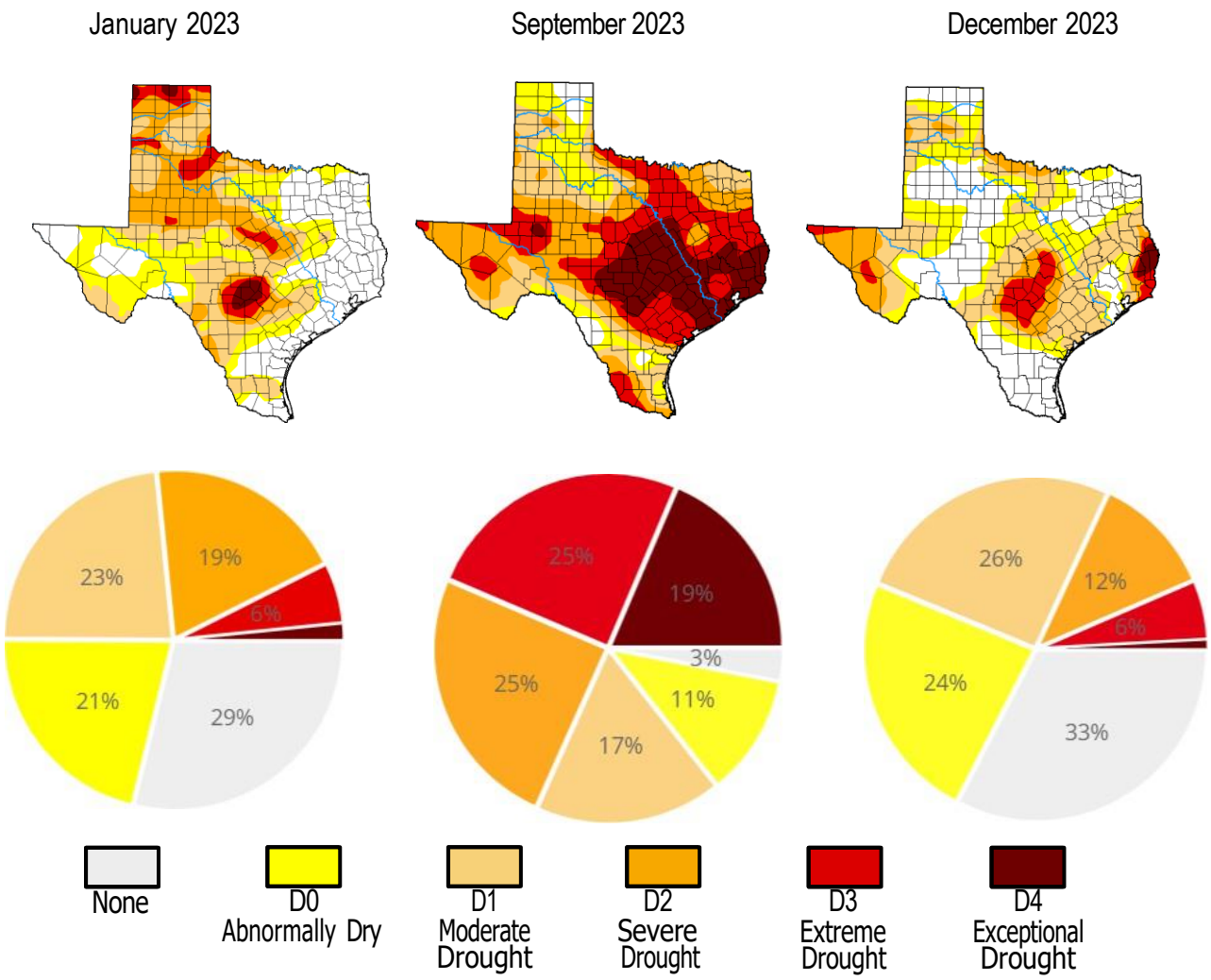
Four Months of the year saw rainfall totals greater than 5 inches: January, April, May, and October.

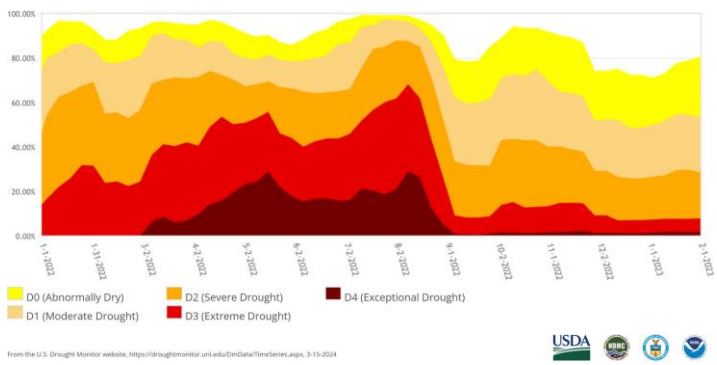


2023 Monthly Rain Fall Totals at Conroe-North Houston Regional Airport	
January - 9.08 Inches	July - 1.03 Inches
February - 1.41 Inches	August - 0.13 Inches
March - 2.15 Inches	September - 2.85 Inches
April - 6.82 Inches	October - 8.75 Inches
May - 5.50 Inches	November - 1.91 Inches
June - 2.42 Inches	December - 2.46 Inches

Data from National Weather Service – Conroe Monthly Total Precipitation 2023

Texas Percent Area in U.S. Drought Monitor Categories





The U.S. Drought Monitor (USDM) is a map that is updated to show the location and intensity of drought across the country. The USDM uses a five-category system: D0, D1, D2, D3, and D4. Drought categories show experts' assessments of conditions related to dryness and drought including observations of how much water is available in streams, lakes, and soils compared to usual for the same time of year. Source:Drought.gov

Goal 10.7

Conservation, Recharge Enhancement, Rainwater Harvesting, Precipitation Enhancement, or Brush Control Where Appropriate and Cost Effective

A visit to the District's headquarters is all that is required to realize the commitment of the District to rainwater harvesting. The entire comprehensive water conservation demonstration facility was designed as a demonstration to the citizens of Montgomery County on the positive benefits of rainwater harvesting in reducing water consumption from the Gulf Coast Aquifer. The design and subsequent construction techniques integrated into the District headquarters have not only caught the attention of local residents but also the 2010 Texas Water Development Board for the innovation demonstrated by the design of the new comprehensive water conservation demonstration facility.

After review by the Board of Directors, General Manager, and the District technical consultants, it has been determined that recharge enhancement, precipitation enhancement, and brush control are not appropriate groundwater management strategies for the District. This evaluation is based on the cost of operating and maintaining these programs, the lack of neighboring programs in which to participate, and the probable lack of effectiveness of these programs due to the climate, hydrogeology, and philosophy of the District.

Management Goals 10.7

Management Objective 1

The District seeks to promote water conservation through an active water conservation awareness program. As part of this program, the District will maintain links to the recognized water conservation awareness programs such as the Gulf Coast/Montgomery County Water Efficiency Network, WaterWise Program, and the Home Water Works program on the District's website (www.LoneStarGCD.org).

Performance Standard 1

Links to at least one of the water conservation awareness programs such as the Gulf Coast/Montgomery County Water Efficiency Network, WaterWise Program, and the Home Water Works Program will be provided on the District's website and noted in the Annual Report submitted by the General Manager to the Board of Directors.

Status

The District continues to bring awareness to water conservation programs and provide resources to the residents of Montgomery County. You will find water conservation reference links under the "Resources" tab on the District website. Examples of the references linked include the Water-Use It Wisely, Texas Manual on Rainwater Harvesting, Texas Water Resources Institute – Conservation Matters, Texas Water Advisory Council Best Practices Management Guide, and Smarter About Water.

Management Objective 2

Educational materials specific to rainwater harvesting have been developed to highlight various water conservation techniques that are incorporated into the design of the District's headquarters. This information will be available at the main entrance of the District's for visitors to take and review for potential use in homes and businesses in Montgomery County.

Performance Standard 2

Information on the District's headquarters and rainwater harvesting capabilities will be made available during business hours for use by visitors to the facilities. A summary of this educational opportunity will be included in the Annual Report submitted by the General Manager to the Board of Directors of the District.

Status

The Lone Star Groundwater Conservation District facilities serve as a real-life example of conservation at work. The general public is welcome to visit the District facilities during normal business hours. Upon arrival, visitors will see the arroyo (dry riverbed) upon entering. The purpose of this feature is to convey any parking lot rainwater runoff into a 15,000-gallon capacity underground tank. The majority of the roof downspouts are directed into four stand- alone 2,500-gallon above-ground cisterns. The collected rainwater is used to irrigate the District's landscaping, which features native plants and grass.

The award-winning system also has corresponding educational materials framed inside the District's lobby, which tells the story and shows construction photos. This enables visitors to see the underground tanks, which provides perspective on how much rainwater is being utilized. In addition, there is also an abundance of educational material about conservation, water supply, and the purpose of the District. For those interested in installing a rainwater harvesting system at their home or business, there is a rain harvesting manual available on USB flash drives. The manual describes all the types of systems, ranging from small home systems to more elaborate ones. An additional 500-gallon rainwater harvester was added in 2017 on the backside of the District's building to expand the building's total rainwater harvesting capacity.

Management Goals 10.7

Management Objective 3

The District added an important tool at its comprehensive water conservation demonstration facility that will collect weather data 24/7 in collaboration with Texas A&M AgriLife Extension Service. The objective of installing this equipment was to generate an Evapotranspiration (ET) estimate to help residents use their irrigation system more efficiently by knowing the ideal amount of water needed to sustain a healthy lawn. The District will roll out the information from the program to enable commercial and residential "users" to regulate their irrigation system controllers so that they deliver only the amount of water necessary. Current measurements of ET will be maintained on the District's website (www.LoneStarGCD.org).

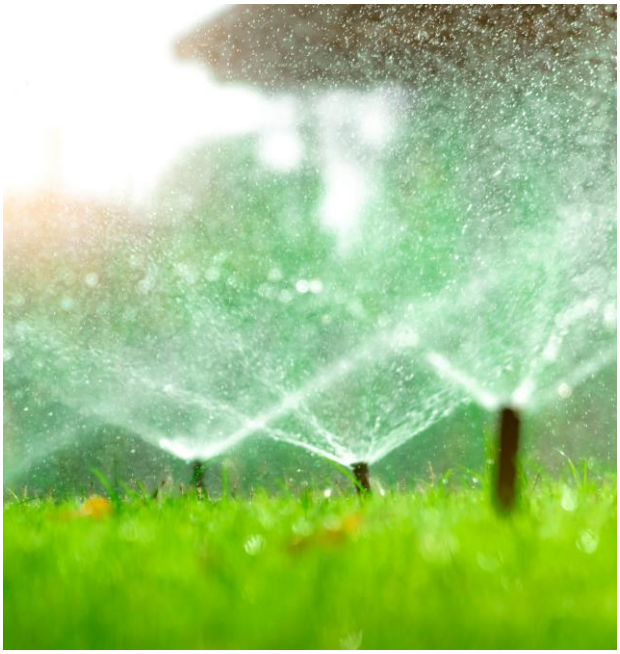
Performance Standard 3

Lawn watering guidance is based on current measurements of ET and will continue to be maintained on the District's website (www.LoneStarGCD.org) throughout the active growing season each year and noted in the Annual Report submitted by the General Manager to the Board to Directors of the District.

Status

In 2023, the District continued to monitor weather conditions on a daily basis and posted weekly landscape water advisories on its website under the heading, "Watering Recommendations". Montgomery County citizens can sign up through the website to receive emails weekly.

Each week during irrigation season, working in conjunction with a Texas A&M AgriLife Extension Program Specialist, the District compiles evaporation and transportation information and provides that information to the residents of Montgomery County. To account for the significant variations in the amount of rainfall that occurs across an area as large as Montgomery County, rainfall amounts for the previous seven days are obtained from rain gauges across the county.



Goal 10.8
Desired Future Conditions

Management Objective 1
The District is committed to continually work with the other members of GMA 14 to adopt and to achieve the most appropriate Desired Future Conditions (DFCs) for each relevant groundwater reservoir identified in the joint planning process. The DFCs adopted by the District will support the District's regulatory mission to afford an opportunity for a fair share to each owner of a common subsurface reservoir. Because future use and landowner's choices are uncertain, in addition to hydrologic variability and uncertainty, the actual conditions of the reservoirs in the future may change.

Performance Standard 1
Draft rules, public meetings, hearing announcements, and available supporting materials will be included prior to rulemaking activities by the District on the District's website (www.LoneStarGCD.org).

Status
All draft rules, public meetings, hearing announcements, postings, meeting notices, and available supporting materials will be included prior to rulemaking activities by the District on the District's website (www.LoneStarGCD.org).

Management Objective 2
The District will adopt well-spacing and production allocation rules to implement the goals in this plan (LSGCD Management Plan).

Performance Standard 2
At least once every two years, the District will include a discussion of the evaluation of the District's rules and determination of whether any amendments to the rules are recommended.
A summary of any amendments to the District rules that are adopted throughout the calendar year will be included in the Annual Report submitted by the General Manager to the Board of Directors.

Status
The District's rules were reviewed, and amendments were approved by the Board of Directors on June 8, 2022. On November 14th, 2023, the District Board of Directors approved the adoption of District Rule 1.19 to bring the District into compliance with rule changes to Chapter 36 approved in HB 2443 allowing for persons with real property interests to petition the District for adoption or modification of a District rule. The District amended its management plan in 2023 and amended the plan to incorporate the newly adopted DFC and determined no other changes to the plan or rules were necessary through that process.

Management Objective 3
At least once every two years, the District will collect and examine monitoring well data for the Chicot, Evangeline, and Jasper aquifers from all available resources including the USGS monitoring well network and the TWDB groundwater database and analyze the historical data.

Performance Standard 3
A summary of any amendments to the District rules that are adopted throughout the calendar year will be included in the Annual Report submitted by the General Manager to the Board of Directors.

Status
The District will maintain a monitoring well that will be used by the District to monitor aquifer conditions over time.

Management Goals 10.8

Performance Standard 4

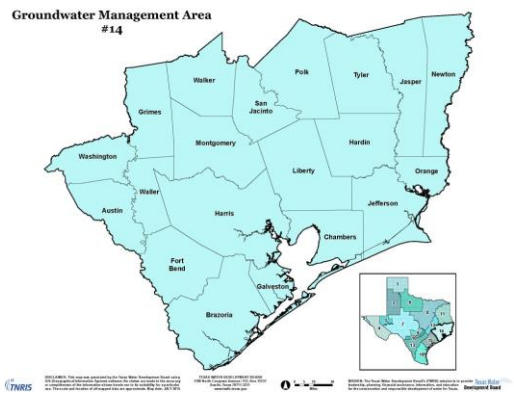
Based on collected monitoring and reporting pumping data demonstrating trends in reservoir conditions, the District will review annually whether: (i) the current plan and rules are working effectively, and (ii) specific amendments need to be made to this plan and/or rules; or (iii) amendments are needed to meet the management goals of the District; or (iv) a combination(ii) and (iii). The collected data may be shared with GMA 14 districts and used to inform possible amendments to the adopted desired future conditions.

Status

The District will make regular assessments of water levels and aquifer conditions and report those conditions, as appropriate, during public Board meetings or public announcements. Production will continue to be regulated to protect users and conserve groundwater in a manner not to adversely limit production and to achieve the "Desired Future conditions." District consultants are scheduled to provide an update on water levels and aquifer conditions in early 2024.

Groundwater Management Area 14

The process of joint planning by Groundwater Conservation Districts (GCDs) for Groundwater Management Areas (GMAs) was originally established by House Bill 1763 in 2005 and substantially amended by Senate Bill 660 in 2011. One of the primary objectives of GMAs is to determine "desired future conditions" (DFCs) for relevant aquifers located within each GMA. Desired future conditions are defined as the desired, quantified condition of groundwater resources (such as water levels, spring flows, or volumes) within a GMA at one or more specified future times as defined by the participating GCDs within a GMA as part of the joint planning process. There are 16 GMAs in Texas, and Montgomery County is in GMA 14. In September 2018, Southeast Texas GCD's General Manager, John Martin, was appointed to serve as Chair of GMA 14 for the next planning cycle. There are five GCDs in GMA 14 representing 12 of the 20 counties in GMA 14.



Financial Summary

2023

For the calendar year ending December 31, 2023

- Total Revenue was $4,295,098
- Total Expenses were $2,278,669
- Net excess was $2,016,429

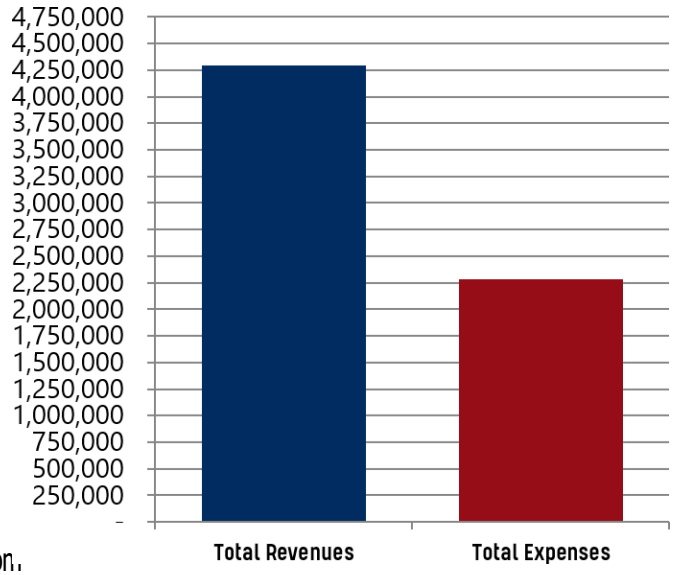
Total assets exceeded total liabilities by $7,187,260

- $2,016,429 Increase

Unrestricted net position was $5,761,523

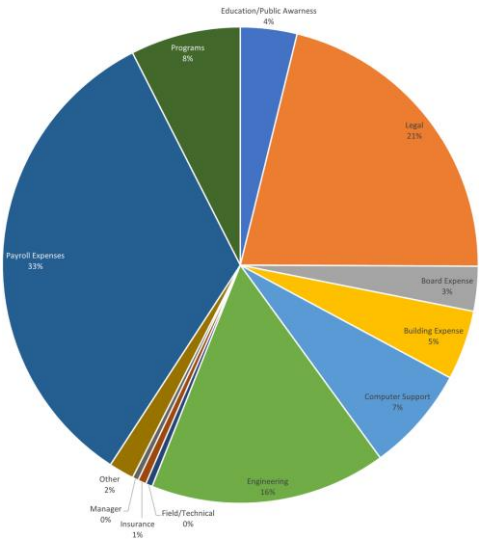
- 253% of total expenses

Cash increased by $1,756,158 during the year from $5,118,313 to $6,874,471

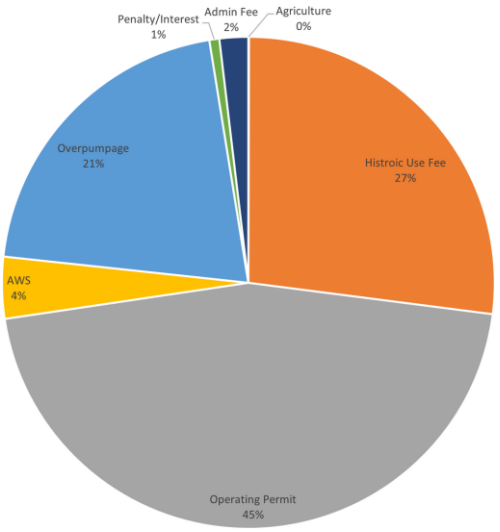


These amounts are per the audit financial statement for the year that ended on December 31, 2023

Expenses



Income



Lone Star Groundwater Conservation District

655 Conroe Park North Drive
Conroe, Texas 77303
Phone: 936-494-3436
Fax: 936-494-3438
www.LoneStarGCD.org