2022 ANNUAL REPORT

LONE STAR Groundwater Conservation District

www.LoneStarGCD.org

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District Information

CREATION

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

MISSION

The mission of the Lone Star Groundwater Conservation District includes honoring and protecting private property rights by affording an opportunity for a fair share to every owner of each common, subsurface reservoir underlying Montgomery County. The District is also committed to providing a regulatory program that encourages the best conservation and development practices for the groundwater resources of the county.

LOCATION & EXTENT

The Lone Star Groundwater Conservation District is located in Montgomery County, in southeastern Texas. Its boundaries are coterminous with the boundaries of Montgomery County, 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.

DISTRICT OFFICE

655 Conroe Park North Drive
Conroe, Texas 77303
(p) 936-494-3436
(f) 936-494-3438

www.LoneStarGCD.org

Management

SARAH KOUBA
General Manager
2023

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 Disaster Advising Committee, 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

2022 saw several changes and milestones for Lone Star Groundwater Conservation District. The year started off with Groundwater Management Area 14, reaching an agreement on the Desired Future Conditions (DFC) for the area, and this DFC was approved by the Texas Water Development Board. During the summer, the Board of Directors reviewed and made minor revisions to the 2022 District Rules and Policies. Finally, in December, the District welcomed a new director as Kenneth Earnest was elected to represent Precinct 3.

Another milestone completed in 2022 was the completion of Phase II of the Subsidence Study which began work on Phase III. More details of which are included in this report. Other Ongoing projects continued as planned. The PAM monitor conducted extensive field inspections and operational activities, ensuring our commitment to efficient water management. Moreover, our Tinker educational program witnessed significant growth, with increased participation from 18 schools, 32 teachers, and 1,717 students. This program has proven to be instrumental in promoting water conservation, with an impressive 4,203 gallons saved per kit.

In addition to the above milestone events, District staff completed issuing new perpetual permits and continued the transition to the 2020 District Rules and Policies. As part of that process, District staff has been actively engaged in updating our database to align with the new rules and policies. District staff also began undertaking comprehensive 5-year permit audits.

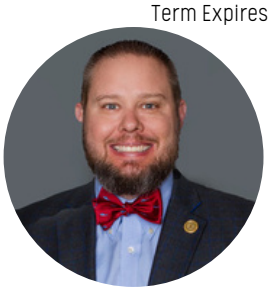
In conclusion, the District staff has remained committed to its responsibilities and objectives. We continue to prioritize compliance, effective resource management, and educational outreach. I extend my gratitude to the entire team for their dedication and hard work.

Board of Directors

JIM SPIGENER
President
Represents Count 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 12-01-26

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

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

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

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

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

Executive Committee
Jim Spigener
Stuart Traylor
Janice Thigpen

Successful Achievement of 2022 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 necessary.

Status

The United State Geological Survey, in cooperation with the District, has worked together to monitor and assess the Gulf Coast Aquifer System by conducting yearly synoptic water level measurements, evaluations, and continuous real-time data collections within the Montgomery County region. A link to the District's well data can be found on the District's website (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 improve efficiency will be posted on the District's Website (LoneStarGCD.org).

Status

In 2022, the Gulf Coast Water Conservation Symposium was not held, and the District is no longer affiliated with it. Instead, our staff attended the Center Texas Water Conservation Symposium as a suitable alternative for the year.

Management Objective 3

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

Performance Standard 3

Each year a summary of the publications and speaking appearances done by the Districts public education program will be included in the Annual report provided to the Board of Directors.

Status

The District provides live water conservation education opportunities for students in classrooms throughout Montgomery County. A multifaceted program is implemented with hands-on learning utilizing the District's Mobile Lab and classroom 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 is able to 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.

- Bear Branch Elementary School Visit
- Central Texas Water Conservation Symposium
- East County Water Forum
- Lake Conroe Region Outlook Conference
- Managed Aquifer Recharge Conference
- Montgomery County Fair Kids Day
- Montgomery County Leadership Summit
- NGWA Hydrogeology of States: Texas Virtual Lunch & Learn
- Oak Hills Junior High School School Visit
- School Visit Training & Preparation (3x)
- TAGD Bootcamp Module 1, 2, & 3
- TAGD Groundwater Summit
- TCEQ Take Care of Texas Professional Development Webinar
- Texas Groundwater Conference
- Woodlands GREEN Lecture Series

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 accepts, processes, and reviews applications for the permitted use of groundwater in the 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 included in the Annual Report submitted to the Board of Directors.

Status

To demonstrate the completion of Performance Standard 4, the number of exempt and permitted (non-exempt) wells registered with the District office in 2022 is provided in Table 1. Table 2 is included to reference the type of permitted use received by the District

Number Of Exempt And Permitted Wells Registered or Permitted by The District in 2022

Number of Exempt Wells Registered	597
Number of Non-Exempted Wells Permitted	54
Number of Non-Exempt Catahoula Wells Permitted	0
Total	**651**

Table 1

Number and Type of Application For the Permitted Use of Groundwater in 2022

Amendment of an Existing Operating Permit or Historical Use Permit Application*	82
New Operating Permits**	48
Amendment to an Existing Alternative Water Source Permit*	0
New Alternative Water Source Permit**	0
Total	**130**

Table 2

**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 Districts's well registration and permitting system. This effort includes the timely processing and technical review of permit applications. Each year, the District will regulate the 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 will evaluate and monitor groundwater conditions and 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 groundwater waste. The District website provides a routine update link containing a Best Management Practice Guide (published by the Texas Water Conservation Advisory Council in partnership with the Texas Water Development Board). 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 (LoneStarGCD.org) to Best Management Practices, which includes helpful tips to control and prevent waste of groundwater.

Status

The District maintains a link on its website (LoneStarGCD.org) to the *Best Management Practices Guide* by the Water Conservation Advisory Council. Additional helpful links on conservation are also available, including Best Management Practice mini-guides specific to 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 groundwater waste.

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 number 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.

Status

See Tables 3 & 4

The Amount of Water Use Fee Generated by the District in 2022

Water Use Type	Permitted Amount Gallons	Fee Rate	Fee Amount
*HUP / Operating Permits	**30,341,955,403**	$0.085/1,000 Gallons	**$2,579,066.21**
AG Permits / Applications	**540,149,288**	$1.00 Per Acre Foot	**$1,647.66**
Catahoula Aquifer Production Permits	**2,894,640,000**	$0.06/1,000 Gallons	**$173,678.40**
Total	**33,776,744,691**		**$2,754,402,.2**

Table 3

**May include water transported out of the district but not subject to transporation*

The Amount of Water reported to District As Pumped For Each Type of Permitted Groundwater Use

Commercial	131,736,540	Public Supply	69,861,721
Industrial	450,453,459	Public Supply (PWS)	25,543,802,932
Irrigation	1,058,307,642	Catahoula Aquifer Production Permits	1,715,017,000
Irrigation (Agriculture)	124,890,660	**Total**	27,379,052,954

Table 4

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 six (6) subsidence monitor stations to continually measure subsidence.

Performance Standard 1

Results from the subsidence monitor stations will be noted in the summary of the joint conference on the subsidence and included in the Annual Report submitted by the General Manager to the District Board of Directors.

Status

In 2022, Lone Star Groundwater Conservation District collected data from the 6 subsidence Monitoring stations throughout Montgomery County. The results of the data collected to date from all stations are available for viewing by the public on the District's website (LoneStarGCD.org).

Management Objective 2

Each year, the District shall participate in a joint conference with the neighboring groundwater conservation or subsidence districts focused on sharing information regarding subsidence

Performance Standard 2

Each year, a summary of the joint conference on issues regarding subsidence will be included in the Annual Report submitted by the General Manager to the Board of Directors.

Status

The joint planning process by the groundwater conservative districts Groundwater Management Area 14 focuses on the primary objective of determining desired future conditions (DFCs) for relevant aquifers underlying the 21 counties within GMA 14. Throughout 2022, the groundwater conservation district's representatives met to continue their work to develop reasonable DFCs.

The GCDs in GMA 14 had the option of selecting one of two or both DFC options. The DFCs adopted for aquifers in GMA 14 were: "In each county in Groundwater Management Area 14, no less than 70 percent median available drawdown remaining in 2080 **or** no more than an average of 1.0 additional foot of subsidence between 2009 and 2080" for each GCD to consider for adoption into their management plan.

Management Objective 3

Issues regarding subsidence will be addressed in the review and processing of permits as authorized in Chapter 36 and District Rules, and in setting desired future conditions for the common reservoirs insofar as groundwater withdrawal may be found to cause subsidence.

Performance Standard 3

The District will continue its subsidence study and provide updates on the results of the study in the Annual Report provided to the Board of Directors. The subsidence study consists of four phases, and is currently in the third phase.

Status

Updates and results of the subsidence study phase will be made available to the Board and public upon being presented by the District technical consultants at the monthly Board meetings. To view more on the subsidence study, see page 11.

District Subsidence Study Phase II Summary

On May 10th, 2022, the District's Board of Directors approved the Subsidence Study Phase II Final Report. Phase II of the subsidence investigations were focused on addressing questions most relevant and applicable to the data-driven management of groundwater resources in Montgomery County as identified by Lone Star Groundwater Conservation District and their consultants. Additionally, the report also served as the groundwork for the proposed Phase III drilling and testing program.

One area of investigation was the brackish Jasper Aquifer conceptual model developed by Kelley et al. (2018). The review of this model raised questions about its accuracy regarding several of the critical values used in the model, including shallow depth porosity of the Jasper, hydraulic conductivity, and several stress coefficients. This results in modeled conditions that may not accurately represent the existing known aquifer conditions and potentially overestimates potential future conditions. While no model is perfect, it is critically important to understand any inaccuracies in the model and uncertainty can be lowered using observations.

Phase II of the Subsidence Study also examined the hydrostratigraphy of the Gulf Coast Aquifer System in Montgomery County. This report mainly focused on the Chicot, Evangeline, and Jasper aquifers in part due to their importance to groundwater production in Montgomery County. A multitude of data was reviewed as part of this study including geophysical logs were evaluated to improve understanding of the depth, thickness, and composition of the principal aquifers. Understanding the characteristics of the aquifer is not only critical to understanding the timing and magnitude of subsidence but also vitally important when considering future studies or sampling of the aquifer.

Finally, the report uses the above analysis in conjunction with previous work completed under Phase I to lay the framework for Phase III. Phase III will focus on data collection to address previously identified gaps. This collected information would not only benefit the District as it strives to responsibly manage groundwater resources in Montgomery County but will also benefit future scientific endeavors and educational opportunities.

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

Performance Standard 1

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

Status

The District's representative, the General Manager, continued participating in the regional planning process by attending 100 percent of the Region H meetings. 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.

Region H Water Planning Group Attendance

January 18, 2022
February 2, 2022
May 4, 2022
June 21, 2022
August 3, 2022
November 2, 2022

Management Objective 2

The District will review the State Water Plan in Appendix B (Water availability and existing supplies) 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 participating in regional joint planning through GMA 14 and the Region H Regional Planning Group.

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 permits 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

During 2022, the District was notified of a Class II injection well in Montgomery County to be operated by Denbury, Inc. The District filed a protest of the application to ensure the groundwater quality in Montgomery County would be protected. After reviewing the District's concerns, Denbury amended its application to address the District's concerns and the District withdrew its protest.

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 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.

Performance Standard 1

Current drought condition 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 to the Board of Directors: the US Drought Monitor map for the region, the Drought Preparedness Council Situation Report, or the TWBD Drought page.

Status

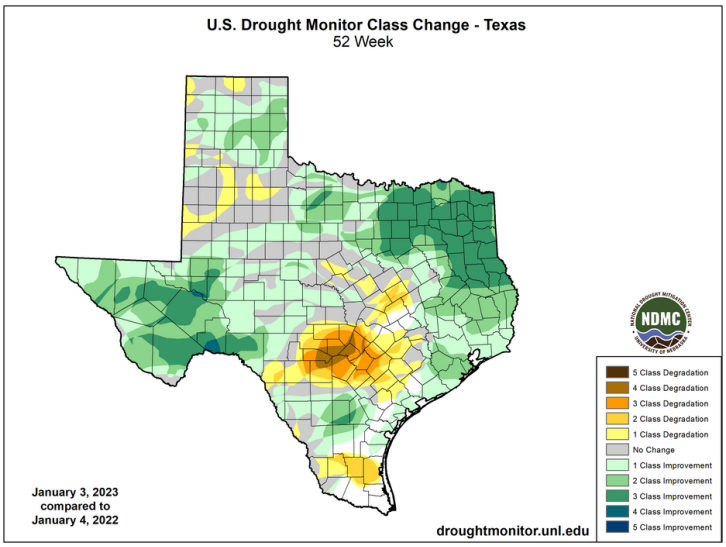
Links to the US Drought Monitor maps and situation reports can be found on the District's Website (LoneStarGCD.org)

Management Goals 10.6

Local Precipitation

According to precipitation data collected from the weather station at Conroe-North Houston Regional Airport (station ID# USW0053902) **2022's annual rainfall total equaled 43.07 inches**, 9.18 inches less than 2021 total precipitation (52.25 inches)

Three Months of the year saw rainfall totals greater than 5 inches: May , August and December.

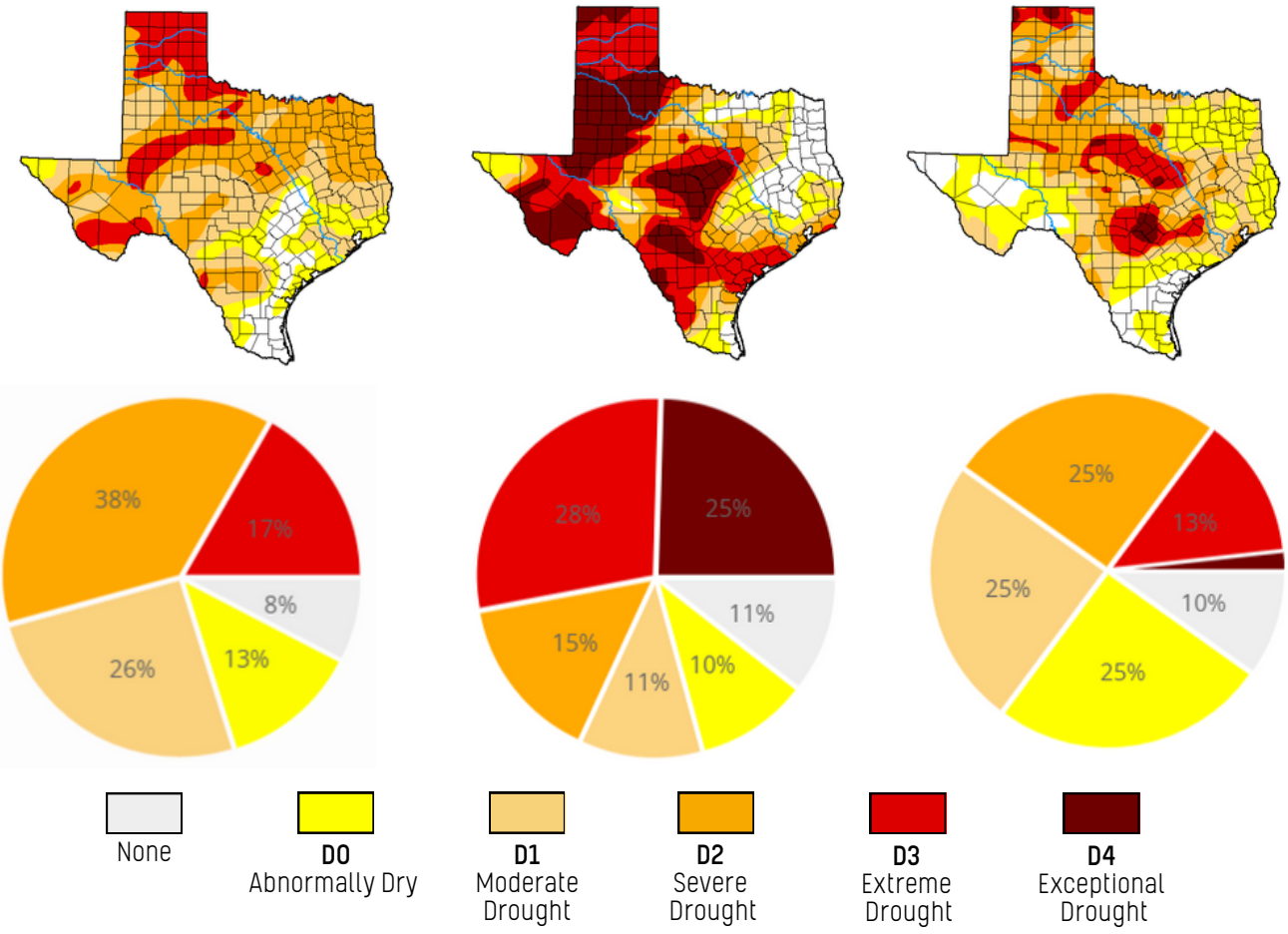


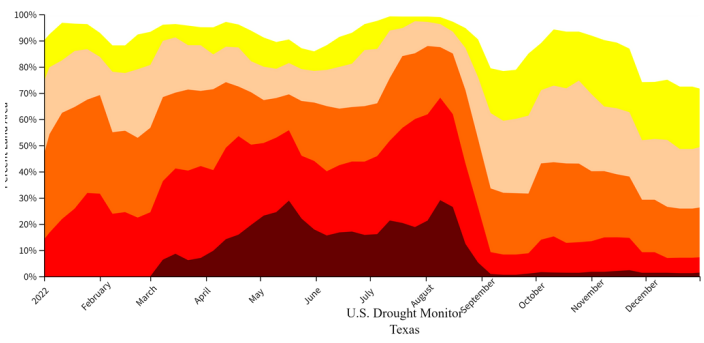
2022 Monthly Rain Fall Totals at Conroe-North Houston Regional Airport	
January - 4.48 Inches	July - 0.68 Inches
February - 1.53 Inches	August - 5.66 Inches
March - 3.71 Inches	September - 2.85 Inches
April - 2.58 Inches	October - 1.92 Inches
May - 5.97 Inches	November - 4.09 Inches
June - 0.03 Inches	December - 9.30 Inches

Data from ncdc.ncaa.gov - Conroe-North Houston Regional Airport Weather Station

Texas Percent Area in U.S. Drought Monitor Categories

January 4, 2022 | May 10, 2022 | November 8, 2022





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

Management Goals 10.7

Goal 10.7

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

Conservation and rainwater harvesting has been determined to be appropriate goals for the District. As part of the effort, the District is sponsoring and participating in water conservation programs such as the Gulf Coast/Montgomery County Water Efficiency Network, Texas WaterWise Program, and the Home Water Works.

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 (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's website contains valuable conservation links as well as references to outside expert resources. There is a "Consumer Tips" and "Resources" page, which can be accessed through the Programs and Education page, which contains practical information on ways to conserve at home, both indoors and outside. Also on the "Resources" page, there are links to outside resources, including Texas AgriLife Extension Earth Kind Plant Selector, the Gulf Coast/Montgomery County Water Efficiency Network, Water IQ, Water-Use It Wisely, and Home Water Works Website.

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. Information will be available at the main entrance of the District's for visitors to take and review for homes and businesses in Montgomery County.

Performance Standard 2

Information on the District's headquarters and rainwater harvesting capabilities will be made available during regular business hours for use by visitors to the facilities. A summary of educational opportunities will be included in the Annual Report submitted 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 river bed) 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 grasses.

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, ere 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 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 (LoneStarGCD.org)

Performance Standard 3

Lawn water guidance is based on current measurements of ET and will continue to be maintained on the District's website (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 2022, 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 thru the website to receive emails weekly directly to their inboxes. Each week during irrigation season, working in conjunction with Texas A&M AgriLife Extension Program Specialist, the District compiles evaporation and transpiration information based on relative humidity, temperature, wind speed, and radiation levels as measured by the weather station located at its facilities. The water losses calculated are then compared to the amount of rainfall for the same period determining how much water should be applied to make a difference and maintain a healthy lawn while using as little water as possible. 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.

Management Goals 10.8

Goal 10.8

Desired Future Conditions

Management Objective 1

The District is committed to continually working with the other GCD members of GMA 14 to adopt and to achieve the most appropriate Desired Future Conditions (DFC) 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 choice are uncertain, in addition to hydrogeologic 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 material will be included prior to rulemaking activities by the District on the District's website (LoneStarGCD.org).

Status

All postings, notices, hearing announcements, and available supporting materials will be included prior to rulemaking activities by the District on the District's website (LoneStarGCD.org). The GCDs in GMA 14 conducted analysis that concluded the GCDs were in compliance with the then applicable DFCs.

Management Objective 2

The District will adopt well-spacing and production allocation rules to implement the goals in this 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.

Status

The District has adopted rules to regulate groundwater withdrawal by means of well spacing as authorized in Chapter 36. The District will continue to consider whether acreage-based rules are appropriate.

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

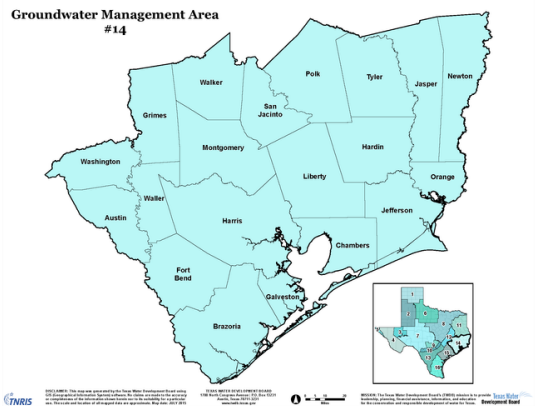
Based on collected monitoring and reporting pumping data demonstrating trends in reservoir conditions, the District will review annually whether: (i) the current plan and rules are working, and (ii) specific amendments need to be made to this plan and/or rules; or (iii) amendments are needed to meet the management goals of the District; (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."

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 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 13 of the 21 counties in GMA 14. Three other counties are represented by subsidence districts; five counties are not represented by any type of district. In 2022, GMA 14 successfully concluded its third round of the joint planning process, culminating in the final approval of the DFCs on January 5, 2022. The District officially adopted the applicable DFCs on September 13, 2022.



Financial Summary

2022

For the calendar year ending December 31, 2022,

- Total Revenue was $2,990,696
- Total Expenses were $2,097,079
- Net excess was $893,617.

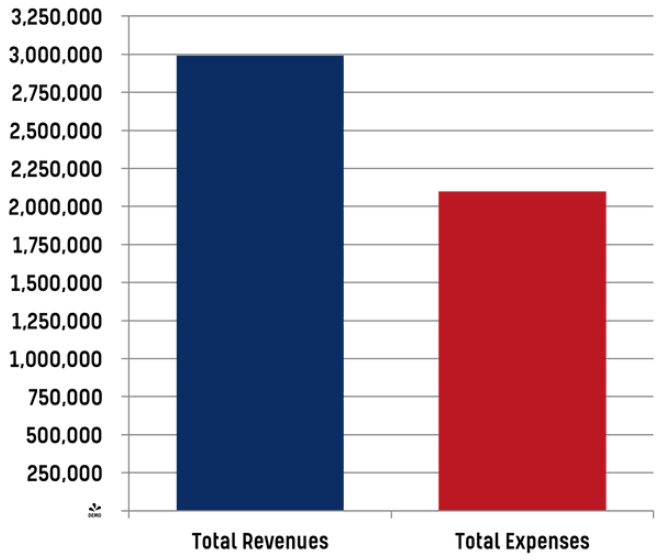
Total assets exceeded total liabilities by $5,170,831

- $893,617 Increase

Unrestricted net position was $3,718,795

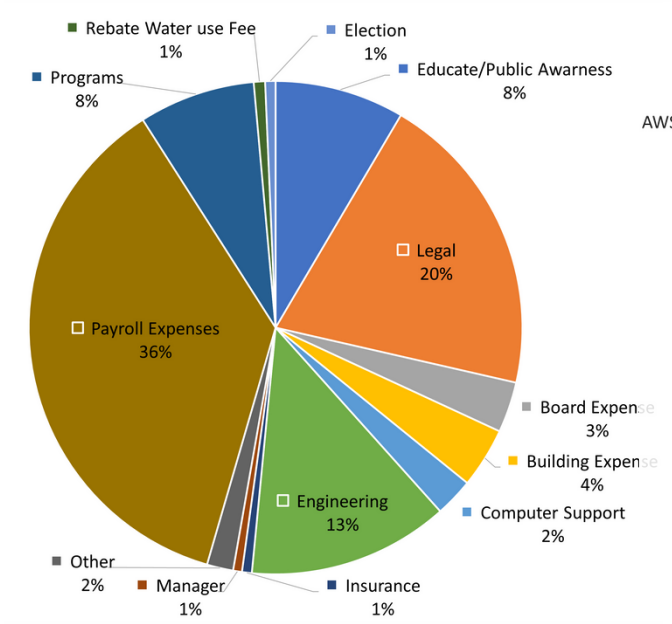
- 177% of total expenses

Cash increased by $1,153,521 during the year from $3,964,792 to $5,118,313

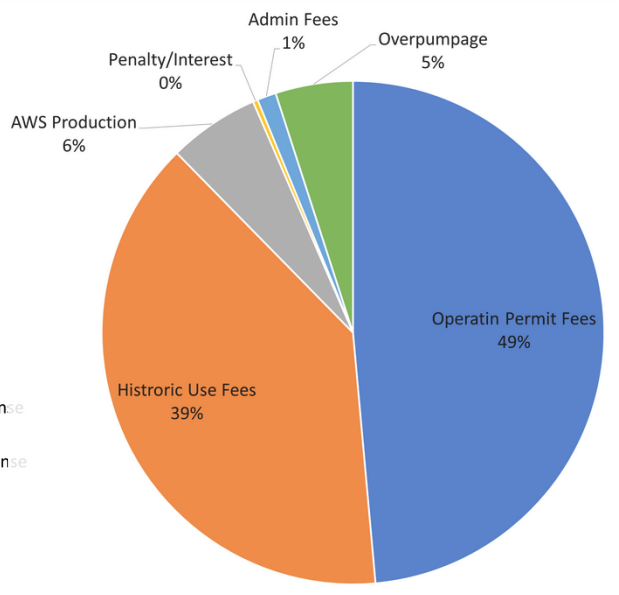


These amounts are per the audit financial statement for the year that ended on December 31, 2022

Expenses



Income



Lone Star Groundwater Conservation District

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