Lone Star Groundwater Conservation District

2014 ANNUAL REPORT

TABLE OF CONTENTS

2014 HIGHLIGHT

Groundwater Management Area 14 (GMA 14)

Groundwater Management Areas (GMA) were created by the Texas Legislature in 2005, with the purpose of conserving and protecting groundwater and controlling subsidence. One of the primary objectives of GMAs is to determine "desired future conditions" (DFCs) for use in establishing the managed available groundwater for the state's aquifers. In all, there are 16 GMAs in the state, and Montgomery County is located within GMA 14. For information on recent GMA 14 activity, see the General Manager's Letter on page six of this report.

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 to conserve and protect groundwater resources in Montgomery County, and has expended considerable resources to develop a system to ensure that the groundwater supply in Montgomery County will remain a sustainable resource for years to come.

Lone Star Groundwater Conservation District's Mission

The Lone Star Groundwater Conservation District is committed to managing and protecting the groundwater resources of Montgomery County and to working with others to ensure a sustainable, adequate, high quality and cost-effective supply of water.

LSGCD's regulatory system was developed through a public process and allows flexibility among water users in how they go about achieving compliance with LSGCD's rules and groundwater reduction requirements.

LSGCD will strive to develop, promote, and implement water conservation, augmentation, and management strategies to protect water resources for the benefit of the citizens, economy, and environment of Montgomery County. The preservation of this most valuable resource can be managed in a prudent and cost-effective manner through conservation, education, management and permitting.

Location and 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 Counties 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

Kathy Turner Jones » General Manager

Kathy Turner Jones is a native Texan, having lived the majority of her life in the Lubbock area before moving to Montgomery County. Ms. Jones earned a Bachelor of Arts and Sciences in Business with a Finance Minor from the University of the Southwest in Hobbs, New Mexico, graduating Summa Cum Laude. She is currently completing course work towards a Master of Science at Texas A&M University in the Water Management and Hydrologic Science Program. In 2002, Kathy was named General Manager of the newly formed Lone Star Groundwater Conservation District serving Montgomery County, bringing 12 years of groundwater experience and knowledge with her. Under her direction, the District has established its offices in Conroe, built a core staff and office operation, established a well permitting and registration system, and approved District Rules. In addition, Kathy has led the District through the process of compiling hydrologic information on the characteristics of the Upper Gulf Coast Aquifer, engineering planning, information on water usage and water supply in Montgomery County, and implementing regulatory procedures associated with the District's Groundwater Regulatory Plan. Prior to the Lone Star GCD, Kathy worked for the Sandy Land UWCD in West Texas and was later employed by an Austin-based environmental law firm to serve as their groundwater specialist. Kathy serves as a member of the Region H Water Planning Group, Chair of GMA 14, and currently serves on the Trinity and San Jacinto and Galveston Bay Basin and Bay Area Stakeholder Committee created by Senate Bill 3 during the 80th Legislative Session to look at environmental river flow issues in each river basin. In addition, Ms. Jones presides as current President of the Texas Alliance of Groundwater Districts (TAGD) and as an Executive Board Member of the Texas Water Conservation Association (TWCA).

Paul R. Nelson » Assistant General Manager

Mr. Nelson, former Planning and GIS Coordinator with the North Harris County Regional Water Authority, joined the Lone Star staff as the Assistant General Manager in May of 2011. Mr. Nelson comes to the District with an extensive background in the areas of public works administration, water conservation, and long-range water planning. He is an alternate member of the Region H Water Planning Group, and currently serves on the Trinity and San Jacinto and Galveston Bay Basin and Bay Area Stakeholder Committee created by Senate Bill 3 during the 80th Legislative Session to look at environmental flow issues in each river basin. In addition, Mr. Nelson is a member of the working committees of several statewide water-related organizations, including the Texas Water Conservation Association. He holds a Bachelor of Science Degree in Biology from Lamar University in Beaumont. He has lived in Montgomery County for over 30 years. Mr. Nelson's activities include performing, reviewing or coordinating efforts of consultants on technical studies pertinent to the determination of the effectiveness of the District's regulatory plan as it relates to the District's overall mission, managing and reporting on progress of consultant activities, assisting in presentations and communications with public water supply entities, and assisting the General Manager interfacing with federal, state and local agencies engaged in the groundwater industry in the state.

BOARD OF DIRECTORS

The Lone Star Groundwater Conservation District was created to develop, promote, and implement water conservation, augmentation and management strategies to protect water resources for the benefit of the citizens, economy and environment of Montgomery County, Texas. To fulfill this directive, the Board of Directors adopted rules on August 26, 2002, to regulate the drilling and operation of water wells in Montgomery County and to set fees for the production of groundwater.

The Board of Directors of the Lone Star Groundwater Conservation District represent the various water interests of Montgomery County. The Board meets monthly at the District offices to dispense with District business including the approval of well permits, decisions on rules and by-laws and progress reports on District committees.

LSGCD board members and staff (from left to right). Back row: W.B. Wood; Sam W. Baker; Reed Eichelberger, PE (retired from the board and position filled by Jace Houston, pictured below); John D. Bleyl, PE; Roy McCoy, Jr. and M. Scott Weisinger, PG. Front row: Kathy Turner Jones, Richard J. Tramm; James M. Stinson, PE; Rick Moffatt and Paul R. Nelson.

Reed Eichelberger, PE, (left) congratulates Jace Houston on his appointment to the Lone Star GCD's board of directors. Eichelberger retired from the San Jacinto River Authority in November 2013 and Houston was named to the Board to carry out the remainder of the term.

Richard J. Tramm, *President*
Represents Montgomery County
Term Expires 1/31/17

Sam W. Baker, *Vice President*
Represents Montgomery County
Term Expires 1/31/15

M. Scott Weisinger, PG, *Secretary*
Represents all cities except Conroe
Term Expires 1/31/17

James M. Stinson, PE, *Treasurer*
Represents Woodlands Joint Powers Agency
Term Expires 1/31/15

John D. Bleyl, PE
Represents City of Conroe
Term Expires 1/31/17

Jace Houston
Represents San Jacinto River Authority
Term Expires 1/31/17

Roy McCoy, Jr.
Represents MUDs West of I-45
Term Expires 1/31/15

Rick Moffatt
Represents MUDs East of I-45
Term Expires 1/31/15

W.B. Wood
Represents Soil and Water Conservation District
Term Expires 1/31/15

LETTER FROM THE GENERAL MANAGER

» by Kathy Turner Jones

The topic of water has seen its share of the spotlight in 2014 on both national and local levels. Montgomery County continues its steady and unprecedented growth, and everyone from residents and business leaders to legislators are recognizing the need and taking the steps to make certain that our county's water supply is sufficient to meet the demands well into the future.

The most recent population studies performed after the 2010 census indicate that the county's population will double by 2040, bringing our total number of residents near the one million mark. This population boom will stress all resources, and water is no exception.

Getting ahead of the curve with regard to water supply is just one piece of the puzzle. Our county (and state) is responding to this forecast by constructing roads, adjusting budgets and preparing to hire adequate staff. At the Lone Star Groundwater Conservation District (LSGCD), we are planning today for the demands of the future.

In 2013, the county's water demand was 102,000 acre feet, and projections place 2040's water needs as high as 140,000 acre feet. There are a number of ways to prepare for this increased usage, including: Alternative Water Sources (AWS), conservation and increased efficiency with regard to water utilization.

Two additional applicants applied for, and were granted, permits to drill water wells into the Catahoula Aquifer in 2014, bringing the total number of Catahoula wells in the county to 13. Currently, the Catahoula is classified as an Alternative Water Source by the Lone Star Groundwater Conservation District. Certain areas of the county are ideal for tapping into the Catahoula, and the District is encouraging utilization of this alternative.

Another water preservation method that we hope will gain momentum in the future is the use of reclaimed water for irrigation purposes. The Southern Montgomery County Utility District has begun offering their customers this option, which will not only conserve our water supply, but will save customers money as well. Several other entities, such as Walden, River Plantation and Panorama Village are using reclaimed water for their golf courses.

Overall, folks are beginning to think out of the box when it comes to water, and we couldn't be more pleased that water is beginning to be recognized for what it is — perhaps our most precious resource.

As the idea of conservation on all levels is spreading, the Lone Star GCD's board of directors continues to study, monitor and learn more about the treasure under our feet. We are blessed to have an adequate amount of water (groundwater and surface water combined) available for our current use, however it is our duty to ensure supplies for the Montgomery County of the future.

Mother Nature was good to Montgomery County in 2014. According to National Weather Service rainfall totals for Lone Star Airport in Conroe, annual rainfall totaled 48.49 inches, compared to 40.78 in 2013. Here at the LSGCD offices, this meant we were able to rely solely on captured rainwater to irrigate our landscaping for eleven months! Now that's recycling!

The District continues to serve as the lead organization for the Gulf Coast/Montgomery County Water Efficiency Network, under the direction of Assistant General Manager Paul R. Nelson. The network is a group of water professionals from around the region that meet regularly to share industry information. In 2014, District staff coordinated monthly meetings of the group with a range of topics that are outlined on page 37.

Regarding outreach and public education, District staff spoke at a number of community meetings and utilized our mobile education lab at various fairs, events and schools throughout the county. We also commissioned the creation of a new educational aquifer model for our mobile lab, which will make its debut during the first quarter of 2015. District staff works to keep the public informed through these mechanisms, as well as through the distribution of written material that explains District functions and conservation information. LSGCD also regularly updates its website with information about all District public meetings and posts information about conservation and water supply.

The District teamed up with Leadership Montgomery County in 2014 to place rainwater harvesting systems at three sites throughout the county. You can learn more about this significant project on page 35. This was a true public/private partnership that will not only harvest rainwater but educate all who see the systems, thanks to informative signage at each site. Our hope is that the residents and businesses will see how simple it is to make the most of our rainwater.

From a rules and regulations standpoint, the LSGCD Rules and Bylaws Committee has been working diligently over the course of the last two years to discuss, analyze, prepare, and review amendments to:

1. the District Rules, regarding well spacing and tract size requirements; and
2. the District Regulatory Plan ("DRP"), regarding the amount of authorized production for new large volume groundwater users in 2016, the transferability of permits by all permit holders, and the procedures applicable to Joint Groundwater Reduction Plan participants and sponsors.

The District's board of directors initially held a rulemaking hearing to consider for adoption the proposed amendments to the District Rules and DRP in October 2014, which, largely due to the public's request for additional time to review the proposed amendments, has been continued to allow for public comment at public hearings in November and December 2014. Also during this time, the District held a public workshop in November 2014, and has scheduled another workshop for late January 2015, at which the District's staff and consultants intend to provide a more detailed explanation of the proposed amendments and address questions and concerns raised by the public.

While the District's evaluation of well spacing and tract size requirements was initiated by the Rules and By-Laws Committee for the protection of well owners' investments in the production of groundwater from the Gulf Coast and Catahoula aquifers, the District's board of directors appears willing to table the discussion of the proposed amendments at this time for further deliberation and discussion.

» CONTINUED PAGE 8

LETTER FROM THE GENERAL MANAGER

» CONTINUED FROM PAGE 7

Also near the end of 2014, the District's board of directors embarked on an updated Strategic Water Resources Plan (the "Strategic Plan") to serve as a guide in the conservation and management of groundwater resources in Montgomery County. This Strategic Plan is designed to evaluate potential opportunities for the additional development of groundwater resources while ensuring the long-term viability of aquifers located in Montgomery County. The board also approved the commissioning of a three-part study which will result in a better understanding of available groundwater resources in Montgomery County. The first part of the study is a groundwater production and water-level data assessment, the second task is a review of the Total Estimated Recoverable Storage (TERS) and the third portion is determination of future groundwater availability. The study is expected to take 2–3 years to complete, and the District will share findings as they become available. As with all such studies, the District's board of directors, when authorizing this Strategic Planning study included as a fundamental component of this effort an open and interactive stakeholder process. In developing the Strategic Plan, it is important to the District that development of the Strategic Plan be conducted with as much involvement and support from the public as possible. Input and comments will be sought from water science professionals, water providers, and the general public at large throughout the study.

Additionally, I continue to chair the Groundwater Management Area Planning Group created to facilitate joint planning efforts in Groundwater Management Area 14 and serve on the Region H Regional Planning Group, which provides recommendations to the Texas Water Development Board (TWDB) for the State Water Plan. Lone Star GCD last adopted Desired Future Conditions (DFCs) in 2010 and has been participating in its second round of joint planning to develop DFCs since that time. Please see highlights below:

- GMA 14 has been engaged in its current round of joint planning since 2010, and the GMA has contracted the consulting services of Freese and Nichols, Inc., as well as Mullican and Associates, to aid and assist in the development of effective DFCs, including working though the statutory criteria and creating the explanatory report.
- To date, GMA 14 has held multiple joint planning meetings to consider, analyze, and evaluate, in detail, information applicable to the statutory criteria set forth above, and is currently in the process of formally considering DFC options. Before the GMA will vote to approve a DFC option as a proposed DFC to be distributed to the individual districts for public comment, the GMA will review the statutory criteria in consideration of the DFC.

The District has also redesigned its website to make it more convenient for staff to update, and easier for the public to find the information needed. Good websites are always being updated to meet the needs of the audience at hand. One key item on the site is a watering recommendations "button" on the front page. When visitors click the "How Much Should You Water This Week?" button, they are taken to a page completely dedicated to irrigation recommendations. On this page, watering recommendations are listed for eight different locations throughout Montgomery County, so that users can find the one nearest their home or business and see how much they should water for the week. These recommendations are based on calculations at the eight stations listed which consider temperature, rainfall and evapotranspiration numbers. For more information, see page 38 or go directly to the District's website, **www.LoneStarGCD.org**.

Another realized objective with regard to the website was making online reporting as convenient as possible. Permittees who are required to report their meter numbers can do so simply by choosing "Well Applications and Reporting" from the front page. We hope having these items front and center makes it easier for the public to navigate our site.

With regard to our permitting activities, LSGCD continues to work with the 623 well permittees to manage the annual regulatory requirements within the district's boundaries. LSGCD issued 63 new Gulf Coast Aquifer well permits and two Catahoula Aquifer well permits. Furthermore, LSGCD's staff is working with all the GRP administrators (33 GRPs in Montgomery County) to secure information of their status of compliance to reduce groundwater pumpage by January 2016.

On the state level this year, the Texas Water Development Board implemented the State Water Implementation Fund for Texas (SWIFT). Voters approved the creation of this funding mechanism in the 2013 elections, and the purpose of the program is to help communities develop and optimize water supplies at cost-effective rates. This is accomplished through low-interest loans, extended repayment terms, deferral of loan repayments and incremental repurchase terms for projects with state ownership aspects. At least ten percent of the funding is to support projects for rural communities and agricultural water conservation, and at least 20 percent must support water conservation and reuse projects. The initial funding amount is $800 million for fiscal year 2015, and any political subdivision of the state with a project included in the most recent state water plan can apply for assistance through the SWIFT program. The TWDB has developed rules to implement the program, including a point system to prioritize projects that apply for funding. They are anticipating the loan closings will occur at the end of 2015. For details on the process, including a timeline, visit the Texas Water Development Board's website (**twdb.texas.gov**).

Also from a state perspective, I continue to represent Montgomery County's groundwater needs by serving on the Texas Water Conservation Association's Groundwater Committee. Within the groundwater committee, I co-chair the Brackish Groundwater Subcommittee charged with developing draft legislation to encourage production of brackish groundwater while protecting the quality of existing groundwater supplies and the regulatory jurisdiction and powers of GCDs.

In conclusion, LSGCD will continue to keep the public informed as we carry out our mission of conserving, preserving, protecting, and recharging groundwater in Montgomery County. We look forward to gathering and sharing the new information expected to be gleaned from the current studies as we continue to learn about efforts we can take that will prevent subsidence, promote high water quality and encourage the preservation of groundwater. On a personal note, I welcome the opportunity to work with the community, business leaders and local and state legislators on water conservation and supply matters in 2015.

Sincerely,

Kathy Turner Jones

MANAGEMENT GOALS

Successful Achievement of 2014 Management Goals

The 75th Texas 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 designed 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 set forth 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 requirement of the District's Groundwater Management Plan of complying with the achievement of management goals as outlined herein.

OBJECTIVES and PERFORMANCE STANDARDS

GOAL 1: Addressing the Desired Future Conditions Adopted by the District Under Texas Water Code Section 36.108

The District seeks to protect the Gulf Coast Aquifer, the economy and environment of Montgomery County, and private property rights for today's constituents and for future generations. Therefore, the umbrella goal for the District, to which all other goals in this management plan are linked, is to manage the groundwater resources so that, in the near future, the amount of groundwater produced from the Gulf Coast Aquifer is no more than the average annual effective recharge to the Gulf Coast Aquifer System. Only upon achievement of this equilibrium will the water resources for Montgomery County be managed on a truly sustainable basis.

In order to achieve sustainability in the use of the Gulf Coast Aquifer in Montgomery County, the District has adopted Phase II (B) of the District Regulatory Plan (DRP). The DRP Phase II (B) is designed to provide the actual regulatory requirements for achieving a long-term sustainable rate of groundwater production within Montgomery County—beginning with an initial groundwater reduction and conversion effort that is required to be met by 2016. As part of those requirements, Phase II (B) requires each Large Volume Groundwater User (those using 10 million gallons per year and above) ("LVGU") in the District to submit a Groundwater Reduction Plan ("GRP"), either individually or jointly with other LVGUs. It also establishes regulatory milestones designed to allow for the initial phase of conversion from groundwater to an alternative water source, generally consistent with the underlying conversion assumptions set out in Phases I and II (A) of the DRP.

The primary purpose of a District Management Plan is to develop goals, management objectives, and performance standards that, when successfully implemented, will work together to achieve the adopted Desired Future Conditions ("DFCs") for a district. In this management plan, the Dis-

trict's second management plan update, goals 2 through 8 directly and/or indirectly support Goal 1. DFCs adopted for the Gulf Coast Aquifer System for the District are described below. A 50-year planning horizon (2010–2060) was used in setting the DFCs. Throughout the joint planning process, the District actively worked with the other member districts and stakeholders within Groundwater Management Area 14 ("GMA 14") to determine the DFCs for each aquifer located within each district. Pursuant to Texas Water Code Section 36.108(b), during the joint planning process for GMA 14, the district representatives considered Groundwater Availability Models ("GAMs") and other data, including information from the 2006 regional water plans and the 2007 Texas State Water Plan,[1] throughout the DFCs development process. As part of this planning effort, the TWDB developed and published GAM Run 10-023[2] and GAM Run 10-038 MAG (also see Appendix D).[3]

The following DFCs were adopted by the district representatives in GMA 14 on August 25, 2010, for Montgomery County and are summarized in **Table 1**:

- From estimated year 2008 conditions, the average draw down of the Chicot Aquifer should not exceed approximately 3 feet after 8 years.
- From estimated year 2016 conditions, the average draw down of the Chicot Aquifer should not exceed approximately 6 feet after 44 years.
- From estimated year 2008 conditions, the average draw down of the Evangeline Aquifer should not exceed approximately 13 feet after 8 years.
- From estimated year 2016 conditions, the average draw down of the Evangeline Aquifer should not exceed approximately 25 feet after 44 years.
- From estimated year 2008 conditions, the average draw down of the Burkeville Confining Unit should not exceed approximately 10 feet after 8 years.
- From estimated year 2016 conditions, the average draw down of the Burkeville Confining Unit should not exceed approximately 23 feet after 44 years.
- From estimated year 2008 conditions, the average draw down of the Jasper Aquifer should not exceed approximately 61 feet after 8 years.
- From estimated year 2016 conditions, the average draw down of the Jasper Aquifer should not exceed approximately -38 feet after 44 years.

Table 1: DFCs for the District

Aquifer	Drawdown (2008 - 2016)	Drawdown (2016 - 2060)
Chicot	3	6
Evangeline	13	25
Burkeville	10	23
Jasper	61	-38*

*Negative value indicates a water-level rise

These DFCs were adopted for the District because they are the projected aquifer conditions that will result once groundwater production is managed on a fully sustainable basis, based on the best available science as required by Texas Water Code Section 36.108(b). The corresponding estimates of modeled available groundwater (note the original term "managed available groundwater" was amended to "modeled available groundwater" in Senate Bill 660 by the 2011 Texas Legislature) were provided by the TWDB in GAM Run 10-038 MAG. These estimates, presented in acre-feet per year, are presented in **Table 2**.

» CONTINUED PAGE 12

» CONTINUED FROM PAGE 11

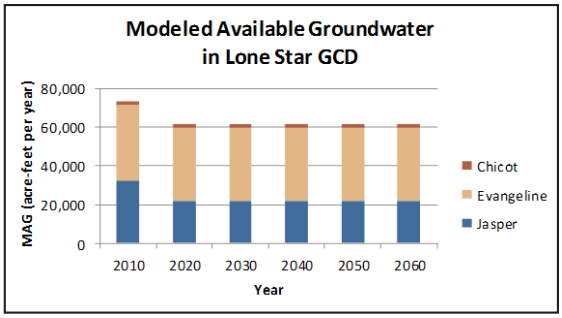
Estimates of modeled available groundwater include both non-exempt (or permitted use) and exempt use for the District. These estimates represent a reduction in pumpage from 73,264 acre-feet per year in 2010 to 61,629 acre-feet per year in 2060 for the Gulf Coast Aquifer in the District. Once this level of production is achieved, then the District anticipates that groundwater production will be at a level approximately equal to or slightly less than the effective rate of recharge. This equates to an 18.9 percent reduction in modeled available groundwater in the District over the 50-year planning horizon. This reduction is illustrated graphically in **Figure 3**.

Table 2: Estimates of Modeled Available Groundwater for the District Based on Adopted DFCs

Aquifer	Year					
	2010	2020	2030	2040	2050	2060
Chicot	1,482	1,722	1,722	1,722	1,722	1,722
Evangeline	39,381	38,293	38,293	38,293	38,293	38,293
Burkeville Confining Unit	0	0	0	0	0	0
Jasper	32,401	21,614	21,614	21,614	21,614	21,614
Gulf Coast Aquifer Total	*73,264*	*61,629*	*61,629*	*61,629*	*61,629*	*61,629*

DFCs and corresponding estimates of modeled available groundwater for the Chicot and Evangeline aquifers in the District fluctuate only slightly over the 50-year planning horizon. However, as documented in Table 2 and Figure 3, there is a significant change in DFCs and estimates of modeled available groundwater between 2010 and 2020 in the Jasper Aquifer. During this time period (starting in 2016), the goal is to reduce pumping sufficiently to achieve an average increase in water level elevations in the Jasper Aquifer of 38 feet from 2016 to 2060. To achieve this DFC for the Jasper Aquifer, between 2016 and 2020, estimates of modeled available groundwater for pumping for both exempt and non-exempt use will need to be reduced from 32,401 acre-feet per year in 2010 to 21,614 acre-feet per year in 2020, approximately equivalent to a 33 percent reduction in pumping from the Jasper Aquifer. This reduction in groundwater production will be accomplished through the full implementation of the District Regulatory Plan (see *Management of Groundwater Resources in the Lone Star Groundwater Conservation District* section for additional information on the District Regulatory Plan).

Figure 3: Estimates of Modeled Available Groundwater for the District from 2010-2060



[1] Texas Water Development Board, Water for Texas – 2007: The State Water Plan, Vol. I and II, variously paginated.
[2] Oliver, W., 2010, GAM Run 10-023, Texas Water Development Board 32 pg.
[3] Hassan, M. M., 2010, GAM Run 10-038 MAG, Texas Water Development Board 19 pg.

Objective 1.1

Soon after creation, the District committed to managing water in the Gulf Coast Aquifer on a sustainable basis, and it remains equally committed to this management principle today. This commitment is reflected in this updated District Management Plan. The sustainable yield of the Gulf Coast Aquifer is thus an important regulatory marker for the District. The District's permitting program allows the District to track water use and water levels in the Gulf Coast Aquifer. It also provides for the major funding source for the operations of the District, allowing it to continue to monitor the Gulf Coast Aquifer, to routinely participate in the development of the ever improving science of the Gulf Coast Aquifer, both specific to Montgomery County and as necessary on a regional basis, to introduce new technologies to acquire data, and to educate the public about water conservation and the need for alternative water supplies. It is the objective of the District to provide a permitting process that is straightforward, transparent, and easy for the permit-holder to access through the Internet. The District Board of Directors, General Manger, and legal counsel routinely review the District's permitting process in order to identify any procedural changes or amendments necessary to meet this objective. All substantive changes to the District's permitting process will be communicated through the District's website throughout any rulemaking process and will be summarized in the Annual Report submitted by the General Manager to the Board of Directors of the District.

Performance Standard 1.1

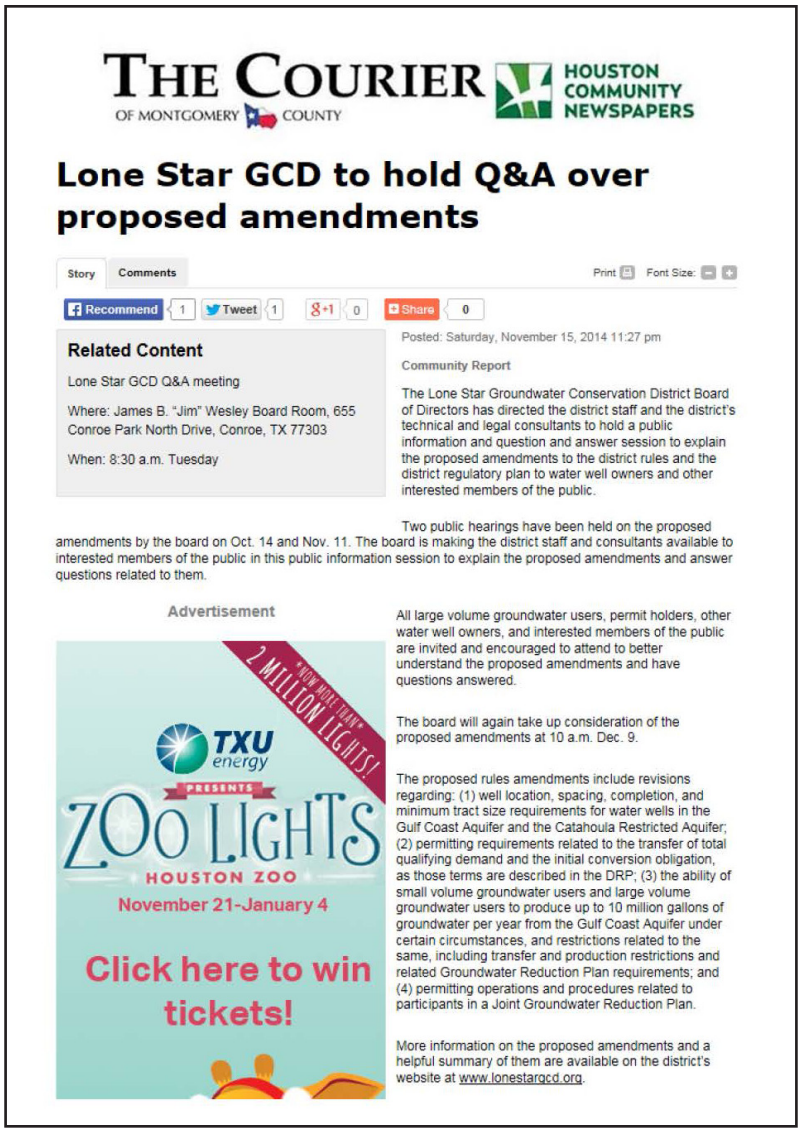
Draft rules, public meeting and hearing announcements, and available supporting materials will be included prior to rulemaking activities by the District on the District's website at **lonestargcd.org**.

Status

No new rules were approved in 2014, however, the rules adoption process began. All postings, notices, meeting announcements and draft rules were placed on the District's website. District staff also wrote and distributed press releases on the topic, resulting in media coverage and meeting attendance by interested parties. The District also posts on its website, notices and agendas for Groundwater Management Area 14 (GMA14) meetings, which are held at LSGCD offices.

Performance Standard 1.2
A summary of any amendments to 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 of the District.

Status
As noted in Performance Standard 1.1, the rules adoption process began toward the end of 2014, and all draft documents and public hearing announcements were posted on the District's website. However, at year-end, no new rules had been adopted.



THE COURIER OF MONTGOMERY COUNTY
HOUSTON COMMUNITY NEWSPAPERS

Lone Star GCD to hold Q&A over proposed amendments

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Related Content

Lone Star GCD Q&A meeting

Where: James B. "Jim" Wesley Board Room, 655 Conroe Park North Drive, Conroe, TX 77303

When: 8:30 a.m. Tuesday

Posted: Saturday, November 15, 2014 11:27 pm

Community Report

The Lone Star Groundwater Conservation District Board of Directors has directed the district staff and the district's technical and legal consultants to hold a public information and question and answer session to explain the proposed amendments to the district rules and the district regulatory plan to water well owners and other interested members of the public.

Two public hearings have been held on the proposed amendments by the board on Oct. 14 and Nov. 11. The board is making the district staff and consultants available to interested members of the public in this public information session to explain the proposed amendments and answer questions related to them.

Advertisement

All large volume groundwater users, permit holders, other water well owners, and interested members of the public are invited and encouraged to attend to better understand the proposed amendments and have questions answered.

The board will again take up consideration of the proposed amendments at 10 a.m. Dec. 9.

The proposed rules amendments include revisions regarding: (1) well location, spacing, completion, and minimum tract size requirements for water wells in the Gulf Coast Aquifer and the Catahoula Restricted Aquifer; (2) permitting requirements related to the transfer of total qualifying demand and the initial conversion obligation, as those terms are described in the DRP; (3) the ability of small volume groundwater users and large volume groundwater users to produce up to 10 million gallons of groundwater per year from the Gulf Coast Aquifer under certain circumstances, and restrictions related to the same, including transfer and production restrictions and related Groundwater Reduction Plan requirements; and (4) permitting operations and procedures related to participants in a Joint Groundwater Reduction Plan.

More information on the proposed amendments and a helpful summary of them are available on the district's website at www.lonestargcd.org.

GOAL 2: Providing the Most Efficient Use of Groundwater

Since the District's creation in 2001, the District has operated on the core principle (or goal) that groundwater should be used as efficiently as possible for beneficial purposes. In order to achieve this goal, 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 decisions 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. The following management objectives and performance standards have been developed and adopted to ensure the efficient use of groundwater.

Objective 2.1

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 2.1

The number of exempt wells registered and non-exempt wells permitted by the District for the year will be incorporated into the Annual Report submitted by the general manager to the board of directors of the District.

Status

To demonstrate completion of Performance Standard 2.1, the number of exempt and permitted (non-exempt) wells registered or permitted by the District for 2014 is provided in **Table 1** below:

Table 1: Number of Exempt and Permitted Wells Registered or Permitted by the District for 2014

Number of Exempt Wells Registered	529
Number of Non-Exempt Wells Permitted	91
Number of Non-Exempt Catahoula Wells Permitted	3
TOTAL	**623**

Objective 2.2
The District will work to ensure the efficient use of groundwater by maintaining 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 District Rules.

Performance Standard 2.2
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 included in the Annual Report submitted by the general manager to the board of directors of the District.

2014 HIGHLIGHT

Lone Star on the Big Screen

Since 2012, Lone Star GCD has been sharing the message of water conservation to movie-goers in Montgomery County. The Woodlands Joint Powers Agency joined Lone Star as an advertising partner in 2013, and this year, the San Jacinto River Authority took part in the joint-sponsorship campaign. In 2014, the message of watering less and conserving more was seen on 56 screens daily, resulting in a total of nearly two million impressions (views).

Status

The number and type of applications referred to in Performance Standard 2.2 is included in the charts that follow.

Table 2: Number and Type of Applications for the Permitted Use of Groundwater Received in 2014

Amendment to an Existing Operating Permit or Historical Use Permit Application*	96
New Operating Permits**	71
TOTAL	**167**

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

Table 3: Number of Operating Permits or Permit Amendments Issued and Administrative Disposition of Applications/Permits Made by the District in 2014

Application or Permit Disposition	Number
Applications Approved as Submitted	122
Applications Approved as Amended	17
Applications or Permits Expired Due to In-Action by Applicant or Permittee	0
Applications Approved w/ Conditions	17
Applications Denied	0
Applications Pending at End of 2014	25
Applications Voided or Merged	3
Applications Withdrawn by Applicant	8
TOTAL*	**192**
TOTAL Less Pending at End of 2014	**167**

**Reflects Board Action on Applications in 2014. This total includes applications submitted in late 2013 but with Board action on the application occurring in 2014. The total excludes applications submitted in late 2014 which could not be set for Board action until 2015.*

Table 4: Primary Use of Water on Permits Approved in 2014

Water Use	Number of Applications
Industrial	12
Irrigation	14
Irrigation (Agriculture)	5
Public Supply/Commercial	77
Public Water Supply (PWS)	58
Other	1
TOTAL	**167**

GOAL 3: Controlling and Preventing Waste of Groundwater

As with Goal 2 above, the District also constantly strives to prevent the waste of water resources in Montgomery County. The prevention of waste of groundwater is one of the core responsibilities for groundwater conservation districts, dating back to the original legislation authorizing the creation of groundwater conservation districts in 1949 (House Bill 162). The District works to control and prevent the waste of groundwater through the adopted District Rules and Regulatory Plan.

To this end, the District has developed standard usage numbers for the majority of use categories included in the District permittees. Each request for a new permit or a permit amendment is scrutinized based on these standard usage factors. For wells providing makeup water to impoundments, the District maintains records of the amount of evaporation measured by the San Jacinto River Authority at Lake Conroe. Permit amendments are only allowed to use the measured evaporation rate plus 10 percent for losses through the bottom and sides of the impoundment. Similarly, the District maintains records of evapotranspiration rates to guide permit amendment requests for irrigation water. Standards are also applied to single and multi-family residential usage as well as commercial usage. Requests for water in excess of the standards for these latter uses must provide additional justification for these requests.

As a practical matter, it is sometimes difficult to differentiate Goal 3 from Goal 2. For example, certain objectives such as Objective 2.1 and Objective 2.2 above could also be viewed as strategies to prevent and control the waste of groundwater, in addition to the stated goal of providing the most efficient use of groundwater.

Objective 3.1

In order to increase public awareness of the need to control and prevent the waste of groundwater in Montgomery County, the District operates a waste prevention outreach strategy. This outreach strategy currently 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 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 3.1

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

Status

The District has made its website easier to navigate, especially with regard to important links. As seen below, the District has posted a link under the "Conservation" heading to the *Best Management Practices Guide*, by the Texas Water Advisory Council, along with additional helpful links on conservation best practices.

Redesigning the website was not merely about aesthetics; the new design is easier for the public to navigate, including front page direct links for permittees and watering recommendations. The result is an increased reliance on the website for information, which allows Lone Star GCD to communicate with the public quickly and effectively.

Public outreach is critical to encouraging conservation, and although it's impossible to verify the number of gallons saved due to these activities, the District is able to report that for all speaking engagements, tours and events combined, staff directly interacted with more than 2,500 people in Montgomery County.

Below is a summary of public interaction opportunities in which staff was involved:

Speaking Engagements

» Homeschool FFA Group Tour
» Girl Scout Group Tour
» Rotary Club of Magnolia
» Texas Well Owner Network Class
» City of Conroe's Landscape Irrigation Symposium

Events

» Woodlands and Wildlife Expo & Spring Fling
» Montgomery County Water Symposium
» Water Fest
» City of Conroe's Recycling Event
» Leadership Montgomery County Rainwater Harvesting Site Ribbon Cuttings (3)

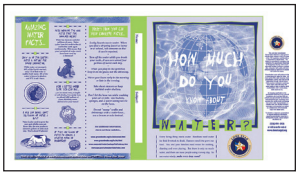
» Conroe KidzFest
» Woodlands Chamber of Commerce Business After Hours
» Houston Grand Opera's Production of Carmen at Cynthia Woods Pavilion

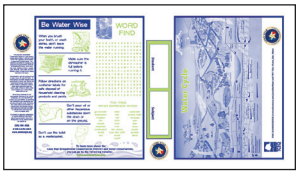
CONTROLLING and PREVENTING WASTE of GROUNDWATER

The District also believes that teaching children good habits are key to protecting the future levels of groundwater. Not only are they more open to the idea of saving water, they also carry conservation messages back into their homes and teach their parents.

Lone Star GCD partnered with the San Jacinto River Authority and The Woodlands Township in 2014 on a number of occasions to bring the message of conservation to classrooms in Montgomery County. In all, it is estimated that the total student reach was approximately 14,000 for 2014.

Additionally, the District provided book covers that contain water conservation messages to Montgomery County students. In all, more than 57,000 book covers were distributed to six school districts within the county to meet the Texas Education Agency's requirement that all textbooks be covered. School districts who received these covers included:

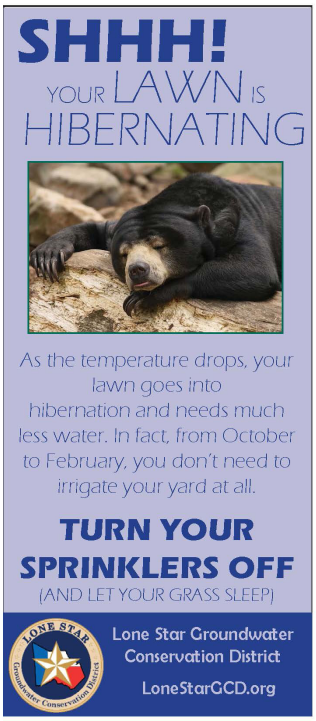




- » Conroe ISD
- » New Caney ISD
- » Willis ISD
- » Montgomery ISD
- » Splendora ISD
- » Magnolia ISD

Additional Outreach Activities

The District also distributed more than 65,000 winterizing fliers to area residents. An example of the flier is below:



The District authors a monthly column in Dock Line magazine, distributes press releases and communicates via social media to share information and educate the public about the issues of water supply and conservation.

Save Water This Summer!

By: Marlisa Briggs, Education/Public Awareness Coordinator, Lone Star Groundwater Conservation District

There's no denying it's here - summertime! Days are long, the sun is bright and any spot with water nearby is the place to be.

The hot Texas sun can take its toll on our lawns, so here are a few tips on how to take care of your landscaping while conserving water during the "dog days" of summer:

- Don't cut your grass too short! Longer blades reduce evaporation and root stress because shaded soil doesn't dry out as quickly.

- Raising the lawn mower blades just one notch higher can save between 500 and 1,500 gallons of water each month.
- As a general rule, proper watering for most Texas lawns is one inch of water weekly. That includes rainfall! If you don't have a rain gauge at home, you can simply place an empty can in your yard when it rains and measure the rainfall.
- To figure out how long you need to run your sprinkler, place at least three 1-inch-deep cans (e.g., empty tuna or cat food cans) throughout the area the sprinkler covers. Water the length of time you think is correct. Each can should have the same amount of water.
- Don't water on windy days! This can waste up to 300 gallons each time you water.
- Make sure you're watering just your lawn, and not your sidewalk, driveway or street.
- Use a sprinkler that emits large drops of water that remain close to the ground instead of one that sprays a fine mist into the air. Drip irrigation saves the most water of any type, so try this option when possible.
- Adjust your watering method to best fit the area. Water small areas by hand with a hose; use sprinklers for the larger lawn area; and use soaker hoses or drip irrigation systems for trees, shrubs and flower beds.
- If you have a sprinkler system, add a rain sensor so you're not "that neighbor" who is watering their lawn during or just after a rain.
- Water your lawn early in the morning hours since less evaporation will occur. This time of day is preferred over dusk, when you run a higher risk of fungus growth.
- Mulch does more than just look good! When you mulch your planting areas, it helps keep the ground from overheating, helps discourage weed growth and retains moisture that would otherwise evaporate.
- Apply fertilizer sparingly, with the goal of developing your lawn's root system and to help keep it thriving. Too much fertilizer leads to excessive growth, which requires more watering.
- Leave grass clippings on the lawn. This minimizes the need for additional fertilizer.
- If you choose to fertilize, make sure to keep it on the grass and not on the concrete. Stormwater

Using a soaker hose to water plants, shrubs and flowers is an efficient and effective way to keep landscaping healthy.

runoff can carry fertilizer directly to streams and rivers, potentially harming water quality.

Swimming Pool Tips

Swimming pools aren't just places to cool off, but places where family and friends gather for celebrations, dinners and long lazy summer days.

Since you'll likely be spending a significant amount of time by the pool, it's a great time to check on a few things that will result in not only conserving water but also saving money!

- When cleaning the pool deck, use a broom or blower, not a hose. This applies to cleaning your driveway and sidewalks as well!
- Check the pool regularly for cracks and leaks, making the necessary repairs quickly. A good rule of thumb is if you experience the pool water level dropping more than an inch in one day, you might have an issue that needs to be investigated.
- If you suspect a leak, specifically look for damp spots downstream of the pool; see if there is water-saturated soil near the pool, pumps or pool plumbing equipment; check for leaking pipes, valves and joiners; and loose tiles or cracks could be indicators of a leak.
- Consider purchasing a pool cover. This one change could save up to 7,000 gallons of water each year! Without a cover, more than half the water in your pool can evaporate over 12 months. Using a cover typically reduces evaporation by 90 to 95%. Added bonus: pool covers can reduce the need for more chemicals and helps reduce algae growth.
- Lower the pool's water level. Keeping the water level one inch above the bottom of the pool tile helps reduce water loss from extreme splashing.
- If your pets like to take a dip, check the skimmer baskets and remove any fur.
- Backwash pool filters only when necessary, and only backwash long enough for the water in the sight glass to run clean.
- Plug the overflow line when the pool is being used.

Continued on page 44 ➪

COMMUNITY IMPACT NEWSPAPER
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The Woodlands Edition

ENVIRONMENT

Reclaimed water distribution drawing interest in Montgomery County

By Jesse Mendoza

As Montgomery County utility providers work to reduce reliance on groundwater, some local providers are implementing reclaimed water—or treated wastewater—systems for commercial and residential customers.

While reclaimed water use has been discussed for decades by some local utility providers, such as the San Jacinto River Authority, an increasing amount of utility providers are implementing the systems to reduce groundwater reliance and the financial strain on customers. Because reclaimed water is filtered and recycled from treated wastewater, it is only used for irrigation and is more cost effective than potable water.

The Southern Montgomery County Municipal Utility District, or SMCMUD, has started inspecting, approving and delivering reclaimed water to seven commercial customers in the first phase of its reclaimed water delivery system. The first phase cost about $3 million, has a service area of 138 acres and primarily affects commercial customers. The plan is expected to conserve about 28 million gallons of potable water demand annually, MUD General Manager Rick Moffatt said.

> "We are anticipating [residential customers] will save between 45 and 55 percent on their water bill by using the reclaimed water for irrigation."
>
> —Rick Moffatt, MUD general manager

In addition, the SMCMUD will be the first in the county to deliver water to residential customers, which will directly address one of the largest strains on groundwater resources, Lone Star Groundwater Conservation District General Manager Kathy Jones said.

"The majority of water that is used for irrigation purposes goes onto home lawns during summertime conditions, and it is obtained through the public water systems," Jones said. "The Southern Montgomery County MUD has recognized this fact and … intends to furnish water to homeowners as well."

In Phase 2 of the project, the SMCMUD will serve up to 140 residential customers in the Rayford Road area for use for lawn irrigation. The district will continue to invest about $1 million per year to expand the system until it reaches about 85 percent of customers, Moffatt said. The project may take five to six years to complete.

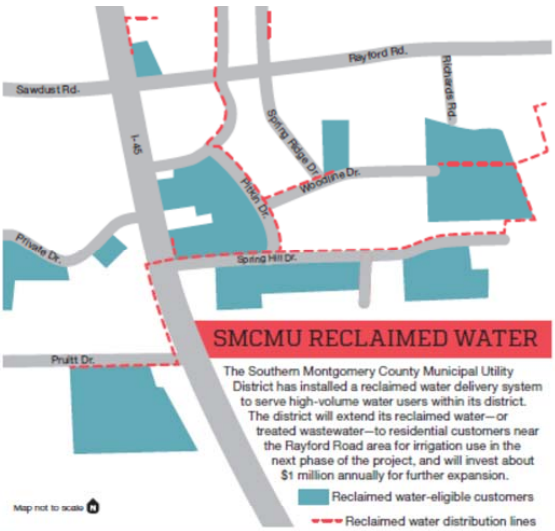
"We are anticipating [residential customers] will save between 45 and 55 percent on their water bill by using the reclaimed water for irrigation," Moffatt said.

Additionally, irrigation rates within the district will increase on Oct. 1 for customers eligible for the reclaimed water system that do not convert from potable water, Moffatt said.

The Woodlands division of the SJRA has been delivering reclaimed water to The Woodlands Country Club Tournament Course for about five years now.

The SJRA system, however, releases the reclaimed water into Lake Harrison as the golf course draws its irrigation water from the lake. Lake Harrison is located near the Grogan's Mill Road and South Millbend Drive intersection.

The pipeline for the partnership was laid in the 1970s, which shows the SJRA was considering reclaimed water system use over 30 years ago, said Steve Mckeon, SJRA The Woodlands division utility operations superintendent.



FUNDING

One of the biggest obstacles to reclaimed water use is the cost of infrastructure needed to deliver the water to potential customers. Because of this, high-volume customers are necessary to justify the cost of water deliver infrastructure.

The SMCMUD is extending a reclaimed water delivery system, targeting 85 percent of customers. To pay for the initial $3 million wastewater treatment facility and infrastructure, and future expansion efforts, the district is using proceeds from a half cent sales tax stemming from a partnership with the city of Houston.

Source: Lone Star Groundwater Conservation District

RATE INCREASE

Consumers eligible for the Southern Montgomery County Municipal Utility District reclaimed water system will see an increase in irrigation water rates if they failed to enroll in the new system by Oct. 1.

- $35 for the first 10,000 gallons
- $5 per 1,000 gallons, between 10,000–40,000 gallons
- $7.50 per 1,000 gallons between 40,000–60,000 gallons
- $10 per 1,000 gallons beyond 60,000 gallons

Source: SMCMUD

While the Tournament Course is the SJRA's only customer, the two entities are discussing a possible expansion of the partnership to deliver reclaimed water to other golf courses in The Woodlands. However, the cost of infrastructure construction prohibits the SJRA from further expansion, The Woodlands division manager SuEllen Staggs said.

"Logistically, the big expense is the pipeline cost, it is not additional treatment," Staggs said. "So you need a fairly high-volume user to make the pipeline infrastructure reasonable for a payback per thousand gallons. It just isn't terribly feasible to do it elsewhere."

Objective 3.2
Each year, the District will make an evaluation of the District rules to determine whether any amendments are recommended to decrease the amount of waste of groundwater within the District.

Performance Standard 3.2
The District will include a discussion of the annual evaluation of the District Rules and the determination of whether any amendments to the rules are recommended to prevent the waste of groundwater in the Annual Report submitted by the general manager to the board of directors of the District.

Status
During 2014, the Rules and Bylaws Committee continued to work diligently to discuss, analyze, prepare, and review proposed amendments to the District Rules. The proposed amendments address well spacing, well location, and tract size requirements. Proposed changes to the District Regulatory Plan ("DRP") regarding the amount of authorized production from new large volume water users in 2016, and the procedures applicable to Joint Groundwater Reduction Plan participants and sponsors were also analyzed and prepared for public comment.

While work by the committee has been ongoing over the course of the last two years, the District board of directors held a rulemaking hearing to consider adoption of the proposed amendments in October of 2014. Due in large part to public feedback and requests for additional time for review, there were additional public hearings in November and December. The District also held a public workshop in November and another is scheduled for January of 2015.

The District's proposed amendments to the Rules were related to well spacing and minimum tract size requirements for wells to be drilled in the Gulf Coast Aquifer in the future, and to well spacing requirements for future wells in the Catahoula (distance from existing wells in the Catahoula).

As to changes to the DRP, under current rules a new Large Groundwater Volume User ("LGVU" with zero 2009 permitted production authorization [i.e. zero Total Qualifying Demand]) would not be able to obtain a permit from the District to produce any groundwater whatsoever beginning in 2016, even if the new LVGU previously held a permit for as much as 9.9 mgy prior to becoming a LVGU. The proposed amendments to the DRP solve this problem by allowing a new LVGU to actually produce up to 10 mgy regardless of its 2009 permitted authorization. By allowing new LVGU to actually produce 10 mgy, either individually or within a Joint Groundwater Reduction Plan ("Joint GRP"), it benefits both the new LVGUs and the other Joint GRP members by freeing up the water that would otherwise have to be accounted for. Additionally the proposed amendments to the DRP authorize the transfer of permits between LVGUs, new LVGUs and SVGUs that are otherwise prohibited under the current DRP.

The final proposed DRP amendments involve clarifying some of the permitting procedures between the District and the participants in a Joint GRP. Because participants in Joint GRPs are authorized under the DRP to have some members overproduce groundwater while some under produce,

» CONTINUED PAGE 24

» CONTINUED FROM PAGE 23

to meet their overall pumping reductions, it is necessary that the District adjust its permitting system procedures to account for the operations of providing this flexibility to permit holders in a Joint GRP.

Under the proposed amendments, permit amendments for those included in a Joint GRP should be signed by both the permit holder and the GRP sponsor, or at least the party not signing the application should be notified of the application so that they can participate in the hearing. This amendment to the DRP has been proposed because any amendment to a member's permit can have a significant effect on the Joint GRP. Finally, the proposed amendments reiterate that individual participants and the Joint GRP sponsor remain jointly and severally responsible for all rules violations.

As stated earlier in this section, the committee and the board of directors have worked diligently to prepare these amendments and to take public comment via hearings and workshops, and have made staff and consultants available to respond where necessary. As of the close of 2014, these hearings and consideration of the amendment to the District rules and DRP continue.

Objective 3.3
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 3.3
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 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
In order to discourage water waste, LSGCD applies a water use fee structure to the permitted use of groundwater in Montgomery County. In 2014, fees associated with water use totaled $1,973,878. The tables on page 25 illustrate the fee structure and the amounts of water used for each type of groundwater use in the District.

2014 HIGHLIGHT

Strategic Water Resources Plan

The Lone Star GCD's board of directors decided in November 2014 to undertake updating the District's Strategic Water Resources Plan. This instrumental document is being created by incorporating information from a number of sources including independent studies, the latest technology and science, and public input. For details on this instrumental plan, see the General Manager's Letter on page six of this report.

Table 5: The Amount of Water Use Fees Generated by the District in 2014

Water Use Type	Permitted Amount (in gallons)	Fee Rate	Fee Amount
HUP/Operating Permits*	30,708,324,014	$.06/1000 gallons	$1,842,499.44
Water Subject to Transportation Fee	18,970,100	$.09/1000 gallons	$1,707.31
AG Permits/Applications	517,324,488	$1.00 per acre ft.	$1,587.61
Catahoula AWS Production Permits	2,134,740,000	$.06/1000 gallons	$128,084.40
TOTAL	**33,379,358,602 gallons**		**$1,973,878.76**

**May include water transported out of the District but not subject to transportation*

Table 6: The Amount of Water Reported to the District as Pumped for Each Type of Permitted Groundwater Use

Type of Use	Gallons
Commercial	77,350,497
Industrial	490,656,193
Irrigation	940,328,684
Irrigation (Agriculture)	120,700,811
Public Supply	445,051,859
Public Supply (PWS)	20,509,488,836
AWS - Catahoula Restricted Aquifer Formation	992,050,600
TOTAL*	**23,575,627,480**
GRAND TOTAL* (less AWS pumping)	**22,583,576,880**

**Data received as of March 18, 2015. The reported pumping for 2014 is incomplete due to incomplete reporting by a small number of permittees. The District is currently pushing enforcement action to ensure compliance with reporting requirements.*

GOAL 4: Controlling and Preventing Subsidence

Subsidence is geologic term used to describe the sinking of the land surface. Subsidence may occur as a result of natural causes or from man-induced or anthropogenic causes. Subsidence, especially in low lying coastal areas may cause significant damage due to flooding and also structural damage to roads and buildings. Subsidence in the Gulf Coast region has been caused by removal of oil and gas minerals as well as groundwater from the subsurface. Subsidence may also result from the removal of other minerals in the subsurface such as salt and sulfur. This is because these fluids are pressurized and, therefore, when naturally occurring, act to hold up the loosely consolidated sedimentary particles in the subsurface (clays, silts, and sands). Due to the inelastic nature of the sediments, in particular the clays, in areas where subsidence occurs, the subsidence is permanent. Flooding resulting from subsidence in the Harris/Galveston area has resulted in major losses to land and property over the past 50 plus years. The District, in cooperation with the Harris-Galveston Subsidence District, maintains a network of eight subsidence monitor stations to continually measure subsidence. To date, minor subsidence of approximately 0.5 foot has been measured at monitoring stations located in the southern portion of the District.

Objective 4.1

Each year, the District will hold a joint conference with the Harris-Galveston Subsidence District and the Fort Bend Subsidence District focused on sharing information regarding subsidence and the control and prevention of subsidence through the regulation of groundwater production.

Performance Standard 4.1

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

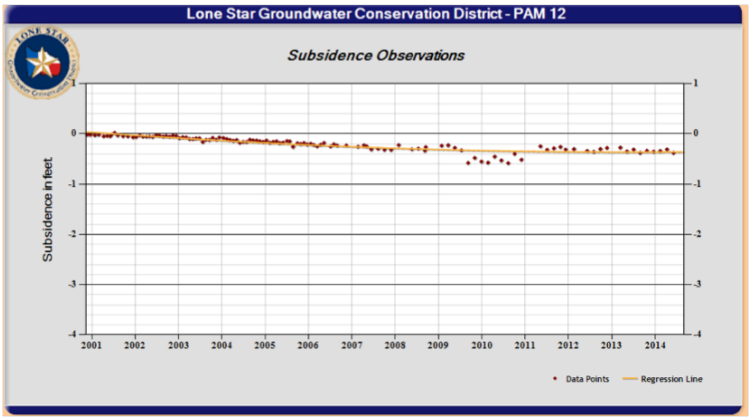
On November 18, Paul R. Nelson, Assistant General Manager, Lone Star GCD and Mark Lowry, Lone Star GCD's Consulting Engineer, met with Mike Turco and Robert Thompson, General Manager and Deputy General Manager for Permitting and Water Conservation of the Harris-Galveston and Ft. Bend Subsidence Districts respectively, to discuss and share information relative to subsidence and the prevention/control of same. During that meeting, the group reviewed the charts produced using data collected by the eight (8) PAM units located throughout Montgomery County and maintained by LSGCD staff. Charts for the six (6) units placed in 2011 are now accessible on the web pages of both the subsidence districts and LSGCD. The two (2) other units have been in place for over twelve (12) years. All of these graphs are available for viewing by anyone with access to the internet and Google Earth. In addition to reviewing the data collected by the monitors, the group discussed the continued funding of the data evaluation and the possibility of locating additional PAM units in Montgomery County. The positive effects of conversion to alternate water sources on the rate of subsidence in Harris and Galveston counties was also discussed.

Objective 4.2
The District is now participating with the Harris-Galveston Subsidence District in the collection of subsidence data from dedicated stations located in the District. Data from these subsidence monitor stations will be discussed during the joint conference described in Objective 4.1 above.

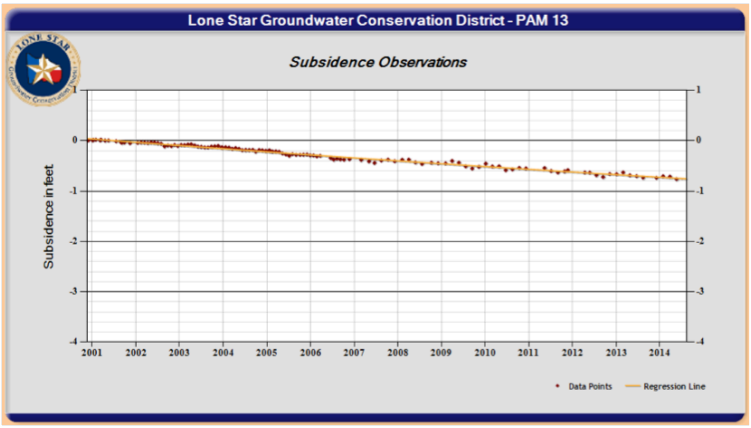
Performance Standard 4.2
Results from the subsidence monitor stations will be noted in the summary of the joint conference on subsidence described in Performance Standard 4.1 and included in the Annual Report submitted by the general manager to the board of directors of the District.

Status
The group agreed that the data gathered by the units were consistent with what was expected based on their individual location. PAM units 12 and 13 have been in place for over 12 years, and are located in areas of significant pumpage and/or growth (Woodlands and Kingwood) and the data collected demonstrate a linear decline in land surface over the 10 year period.

Data from PAM 12 (Kingwood)



Data from PAM 13 (Woodlands)



The "new" units, positioned in 2011, have not been in place long enough to make definitive statements about the land surface elevation changes. It was the consensus of the group that the data collected by the units thus far has proved very useful and that the monitoring for changes in surface elevation should continue.

Subsidence data are readily available for viewing by the public on the District's website. To the left are reproductions of the graphs prepared with data collected for both the Kingwood and The Woodlands sites. In addition, there is also a detailed article on subsidence on the District's website. District staff also authored an educational article about subsidence in the April issue of Dock Line Magazine.

Land Subsidence - The Hidden Menace

by Paul Nelson, Assistant General Manager, Lone Star Groundwater Conservation District

"Hidden menace" sounds like a bad horror movie, and is admittedly a little dramatic. However, the ground is literally sinking below our feet.

In the last ten years, Lone Star Groundwater Conservation District (LSGCD) has documented land subsidence of about six inches at one of our monitoring sites.

Half a foot may not sound too bad, and certainly other parts of the state have experienced worse conditions, but a steady trend of increasing subsidence is enough for us to take notice, and the LSGCD is doing just that.

This isn't a scare-tactic; it's science. Land subsidence, or the sinking of the ground beneath us, has been studied for decades.

As early as the 1940's, it was recognized that land subsidence was occurring in Galveston and Harris Counties, and studies showed that the subsidence was related to the withdrawals of groundwater.

As the population in these areas grew and industry expanded, the problem worsened. The increased frequency and severity of flooding was alarming, and before the problem of excessive groundwater pumping was addressed, areas of Harris and Galveston Counties subsided as much as 10 feet.

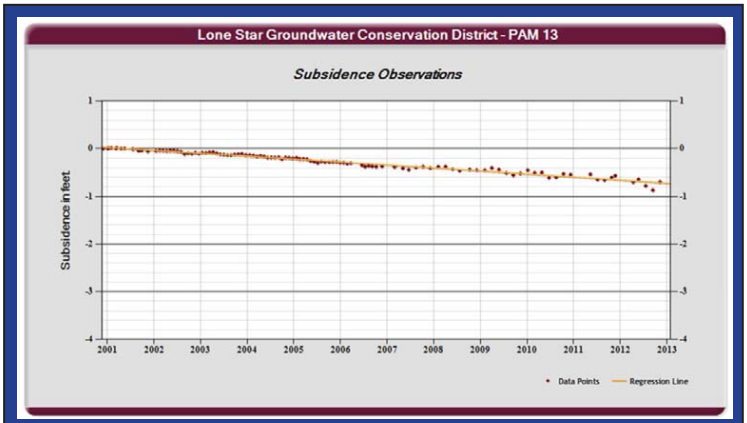
In the 1960's, efforts to address the problem of overpumping began, with several municipalities converting to surface water (rivers and lakes) for their drinking water supplies rather than the groundwater they had depended on for decades.

Pictured above is one of the Lone Star Groundwater Conservation District's Periodically Accessible Monitors (PAMs). The District has a total of eight PAM units located throughout Montgomery County, which enables the collection of land subsidence data.

Finally, in May of 1975, the Texas legislature created the Harris-Galveston Subsidence District, a regulatory agency charged with "ending subsidence" and empowered with the authority of restricting groundwater withdrawals. Thanks to the planning efforts and significant capital improvements funded by local water users over the past 30 years, most of Galveston and Harris Counties have been converted to surface water as major supply and subsidence has been largely halted.

It's clear that the best way to avoid all the negative impacts of land subsidence is to take all the steps necessary to prevent it from happening in the first place. That's why the board of the Lone Star Groundwater Conservation District, in the latter part of 2011, approved the purchase and installation of six (6) Periodically Accessible Monitors (PAMs) that are specifically designed to detect subsidence.

The six new units operate in conjunction with the two that have been monitoring land levels in Montgomery County for over 10 years.



The chart above shows a steady rate of increasing subsidence at the PAM 13 site in The Woodlands.

We take regular, precise, automated readings of the elevation of the ground at or near these locations, as measured by satellites. This data is temporarily stored in an on-site monitor and then periodically "up-loaded" to computers at the Harris-Galveston Subsidence District.

There, the data collected by the PAMs is converted to charts such as the one in this article. While the new monitors have been in place for a relatively short period of time, the data that's been collected to date is critical in establishing a base-line that will allow us to detect even small changes in the elevation of the land around us.

The creation of the land elevation monitoring system, along with the implementation of the many Groundwater Reduction Plans now in place, will bring assurance that we in Montgomery County will avoid the many negative impacts of land subsidence experienced by our neighboring counties to the south.

In January of 2016, these Groundwater Reduction Plans will be in place, and pumping of our Gulf Coast Aquifers will be reduced by 30%. In addition to assuring a plentiful supply of water for Montgomery County in the future, we will avoid the "hidden menace" of subsidence.

For more information and links about subsidence and water conservation, visit the District's website at lonestargcd.org.

Local Subsidence Data at Your Fingertips!

You can view data from the two PAM sites that are online by doing the following:

1. Download Google Earth if it isn't on your computer. It's free at earth.google.com

2. Go to lonestargcd.org/subsidence

3. Toward the bottom of the page, you will see a link and instructions on how to access the live data.

4. Please note that only "PAM 12" and "PAM 13" are online at this time. As this article states, the newer PAM units are still being set up for online access.

The Lone Star Groundwater Conservation District was created by the 77th Legislature in 2001 to protect and manage the groundwater resources of Montgomery County. Lone Star works to maintain a balance between protecting the rights of private landowners and the responsibility to conserve groundwater.

GOAL 5: Addressing Conjunctive Surface Water Management Issues

As demands for water supplies continue to increase, the importance of addressing groundwater and surface water management issues conjunctively will continue to increase. From its inception, the District has worked with public water suppliers, other stakeholders, and the sole surface water management entity in the District, the San Jacinto River Authority, to conduct studies and evaluate options regarding the conjunctive use and availability of groundwater and surface water resources in the District. These stakeholders have representation on the District's board of directors, which has helped to engender and ensure ongoing communication and coordination between the entities. This coordination eventually led to the development and adoption of the DRP, which encourages water users in the District to develop surface water supplies and other alternative water supplies through its requirements to reduce groundwater production and develop detailed plans identifying future water demands and supplies to meet those demands. In addition, through the District's designated representative(s), the District actively participates in a number of planning forums including the regional water planning process. It is through this commitment to participation in a broad mix of water-related forums that pertinent issues related to conjunctive surface water management issues will be addressed.

Objective 5.1

Each year, the District's designated representative will participate in the regional planning process by attending at least 75 percent of the Region H – Regional Water Planning Group meetings in order to encourage the development of surface water supplies to meet the needs of water user groups in the District.

Performance Standard 5.1

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.

Status

Each year, LSGCD participates in the regional planning process by attending Region H Planning Group Meetings. Attendance at these meetings, and membership on various Region H committees, provides valuable input to the planning group, relative to groundwater's role in overall regional planning.

A record of attendance of District Representatives at each Region H Regional Water Planning Group is noted in **Table 7**:

Table 7: Record of District representative attendance at Region H Regional Water Planning Meetings (Total of 4 meetings were held with 100% attendance)

Meeting Date	Attendees
February 5, 2014	Kathy Turner Jones, Paul R. Nelson
May 7, 2014	Kathy Turner Jones, Paul R. Nelson
August 6, 2014	Kathy Turner Jones, Paul R. Nelson
November 5, 2014	Kathy Turner Jones, Paul R. Nelson

GOAL 6: Addressing Natural Resource Issues

The District understands the important nexus between water resources and natural resources. The exploration and production of natural resources such as oil and gas in Montgomery County clearly illustrate this nexus. These activities, along with related issues such as waste disposal utilizing underground injection wells clearly represent potential management issues for the District. Improperly plugged oil and gas wells may provide a conduit for various hydrocarbon and drilling fluids to potentially migrate and contaminate groundwater resources in the District.

Objective 6.1

In order to monitor, as appropriate, waste injection activities associated with the exploration and production of oil and gas in Montgomery County, 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 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.

Performance Standard 6.1

Beginning with the 2014 Annual Report, a summary of injection well permit 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

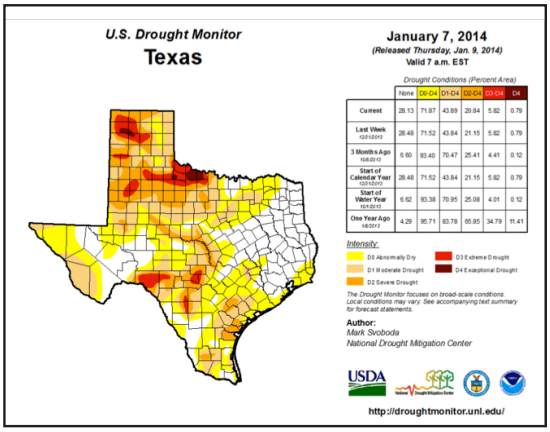
There were no injection well permit applications filed with the Texas Commission on Environmental Quality or the Texas Railroad Commission during calendar year 2014. In addition to tracking permitting activity, the District entered into an agreement with Anthony Bennett Consulting in 2014 to build a baseline of water quality data from testing done by the TCEQ on public supply water wells located in Montgomery County. Using the data obtained from the TCEQ, the District will develop a table of key water quality information, allowing the District to track certain parameters that will provide an “early warning” of possible contamination.

GOAL 7: Addressing Drought Conditions

Recurring drought conditions that climaxed in 2011 continue to serve as a reminder of how dependent we are on precipitation. Droughts occur and reoccur in the area, as do cycles of above average precipitation. A well-informed public can best respond to developing drought conditions by adopting best management practices appropriate for drought conditions.

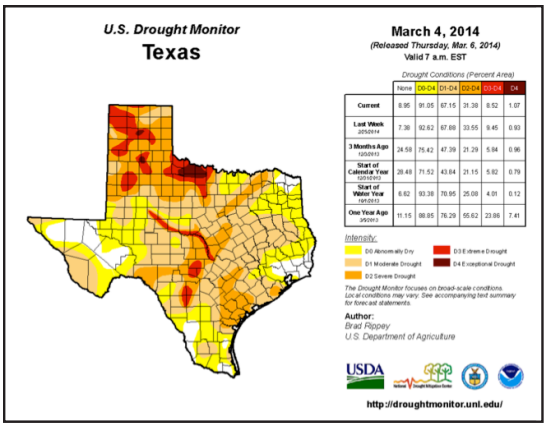
Objective 7.1

An important objective of the District is to provide ongoing and relevant drought-related meteorological information. Beginning in 2014, the District will make available through the District's website easily accessible drought information with an emphasis on developing droughts and on any current drought conditions. At least one of the following links will be provided: updates to the Palmer Drought Severity Index ("PDSI") map for the region, the Drought Preparedness Council Situation Report, and the TWDB Drought Page.



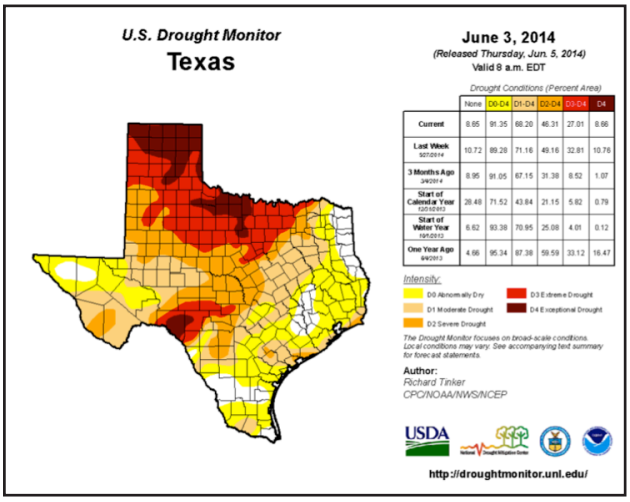
Performance Standard 7.1

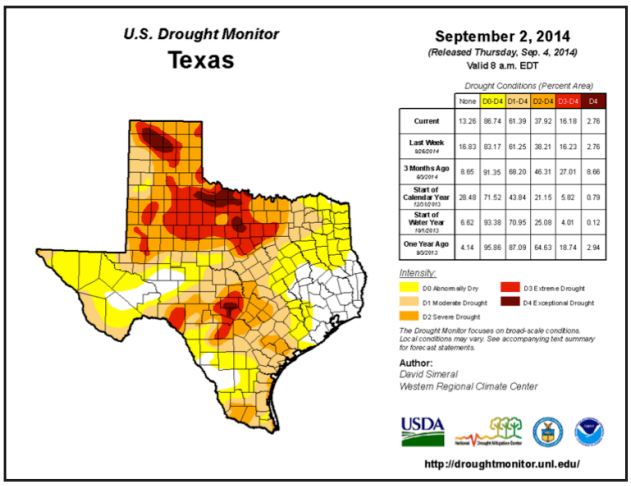
Current drought conditions information from at least one of the following multiple resources, including the PDSI map for the region and the Drought Preparedness Council Situation Report, will continue to be available to the public on the District's website by the end of the first quarter of 2014 and noted in the Annual Report submitted by the general manager to the board of directors of the District.

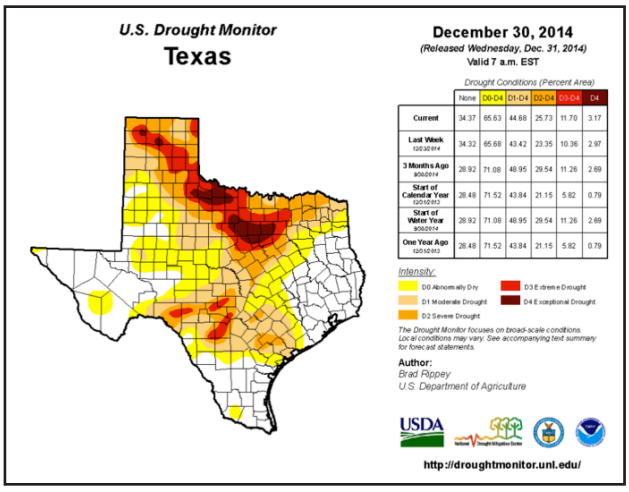


Status

Links to the PDSI maps and situation reports for 2014 can be found on the District website.


U.S. Drought Monitor
Texas
June 3, 2014
(Released Thursday, Jun. 5, 2014)
Valid 8 a.m. EDT
Drought Conditions (Percent Area)
None D0-D4 D1-D4 D2-D4 D3-D4 D4
Current 8.65 91.35 68.20 46.31 27.01 8.66
Last Week 10.72 89.28 71.16 48.16 32.81 10.76
3 Months Ago 8.95 91.05 67.15 31.38 8.52 1.07
Start of Calendar Year 28.48 71.52 43.84 21.15 5.82 0.79
Start of Water Year 6.62 93.38 70.95 25.08 4.01 0.12
One Year Ago 4.66 95.34 87.38 59.59 33.12 16.47
Intensity:
D0 Abnormally Dry
D1 Moderate Drought
D2 Severe Drought
D3 Extreme Drought
D4 Exceptional Drought
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.
Author:
Richard Tinker
CPC/NOAA/NWS/NCEP
USDA
http://droughtmonitor.unl.edu/


U.S. Drought Monitor
Texas
September 2, 2014
(Released Thursday, Sep. 4, 2014)
Valid 8 a.m. EDT
Drought Conditions (Percent Area)
None D0-D4 D1-D4 D2-D4 D3-D4 D4
Current 13.26 86.74 61.39 37.92 16.18 2.76
Last Week 16.83 83.17 61.25 38.21 16.23 2.76
3 Months Ago 8.65 91.35 68.20 46.31 27.01 8.66
Start of Calendar Year 28.48 71.52 43.84 21.15 5.82 0.79
Start of Water Year 6.62 93.38 70.95 25.08 4.01 0.12
One Year Ago 4.14 95.86 87.09 64.63 18.74 2.94
Intensity:
D0 Abnormally Dry
D1 Moderate Drought
D2 Severe Drought
D3 Extreme Drought
D4 Exceptional Drought
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.
Author:
David Simeral
Western Regional Climate Center
USDA
http://droughtmonitor.unl.edu/


U.S. Drought Monitor
Texas
December 30, 2014
(Released Wednesday, Dec. 31, 2014)
Valid 7 a.m. EST
Drought Conditions (Percent Area)
None D0-D4 D1-D4 D2-D4 D3-D4 D4
Current 34.37 65.63 44.68 25.73 11.70 3.17
Last Week 34.32 65.68 43.42 23.35 10.36 2.97
3 Months Ago 28.92 71.08 48.95 29.54 11.26 2.69
Start of Calendar Year 28.48 71.52 43.84 21.15 5.82 0.79
Start of Water Year 28.92 71.08 48.95 29.54 11.26 2.69
One Year Ago 28.48 71.52 43.84 21.15 5.82 0.79
Intensity:
D0 Abnormally Dry
D1 Moderate Drought
D2 Severe Drought
D3 Extreme Drought
D4 Exceptional Drought
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.
Author:
Brad Rippey
U.S. Department of Agriculture
USDA
http://droughtmonitor.unl.edu/

GOAL 8: Addressing Conservation, Recharge Enhancement, Rainwater Harvesting, Precipitation Enhancement, or Brush Control Where Appropriate and Cost Effective

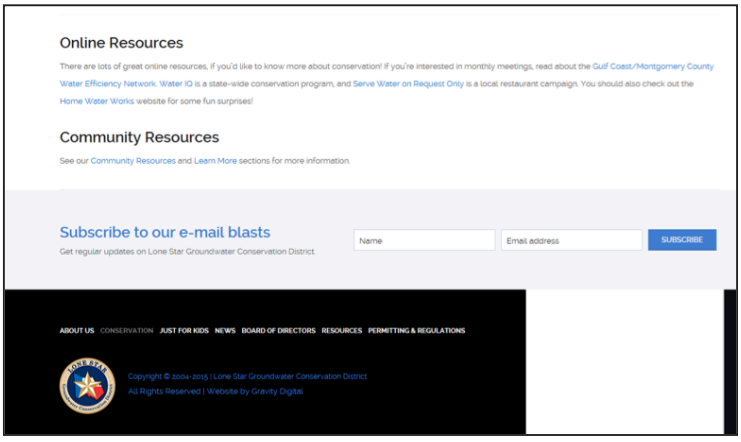
Conservation and rainwater harvesting have been determined to be appropriate goals for the District. As with Goals 2 and 3, the successful implementation of an effective water conservation program is a cornerstone to the efforts of the District. As part of this effort, the District sponsoring and participating in water conservation programs such as the Gulf Coast/Montgomery County Water Efficiency Network, Water IQ, Serve Water On Request Only, and the Home Water Works.

A visit to the District's new 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 of the positive benefits of rainwater harvesting in reducing water consumption from the Gulf Coast Aquifer. The design and subsequent construction of the various rainwater harvesting and water conservation techniques integrated into the new District headquarters have not only caught the attention of local residents, but recently, the District was awarded the 2012 Texas Rain Catcher Award from the 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, the general manager, and the District's 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 costs of operating and maintaining these programs, lack of neighboring programs in which to participate, and probable lack of effectiveness of these programs, due to the climate, hydrogeology, and physiography of the District.

Objective 8.1

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 recognized water conservation awareness programs such as the Gulf Coast/Montgomery County Water Efficiency Network, Water IQ, Serve Water On Request Only, and the Home Water Works programs on the District's website.

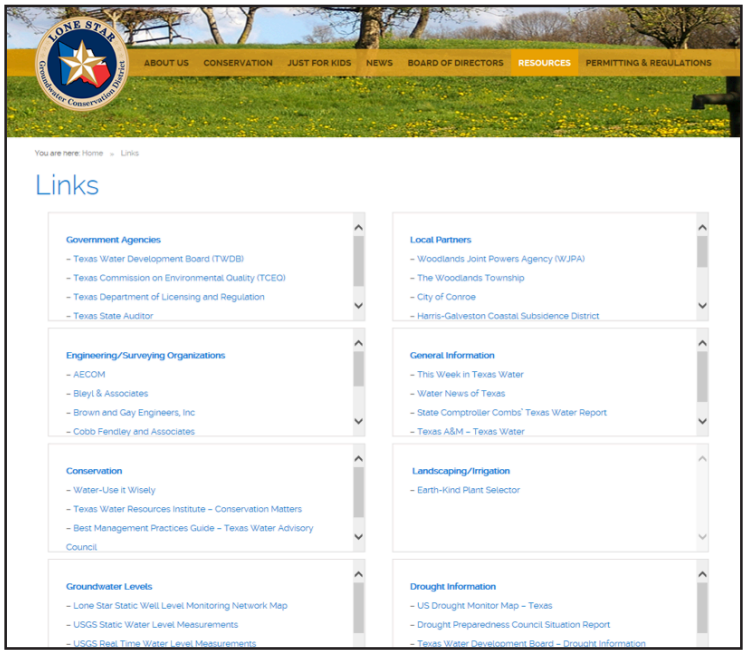


Performance Standard 8.1

Links to at least one of the water conservation awareness programs such as the Gulf Coast/Montgomery County Water Efficiency Network, Water IQ, Serve Water On Request Only, and the Home Water Works programs will be provided on the District's website and noted in the Annual Report submitted by the general manager to the board of directors of the District.

Status

The Lone Star GCD website contains valuable conservation links as well as references to outside expert resources. Internally, there is a conservation page displayed prominently on the site's main menu, which contains practical information on ways to conserve water at home, both indoors and out. Also on this page, there are links to outside resources, including the ***Texas AgriLife Earth Kind Plant Selector*** (native plant resource), ***Gulf Coast/ Water Efficiency Network***, ***Water IQ***, ***Serve Water on Request Campaign*** and the ***Home Water Works*** website. Many of these resources, in addition to others, are also located on the "Links" page for easy use.



One of the District's significant conservation efforts is the Gulf Coast/Montgomery County Water Efficiency Network. This group of professionals from throughout the region meets once each month to share ideas and hear from a speaker regarding a conservation-related topic. In 2014, topics included Low Impact Development, Smart Water Technology, water reuse, smart meters, landscape water budgets and a number of other informative talks. The group also hosts an annual Gulf Coast Water Conservation Symposium, a half-day gathering to learn the latest methods in conservation practices.

The District also partnered with Leadership Montgomery County's class of 2014 as they created and executed their "Harvesting the Rain" project. The end result was three unique rainwater harvesting sites in locations throughout the county: Oak Ridge Elementary, Bear Branch Sports Fields and North Montgomery County Community Center. The addition of these three sites have the potential to capture a total of 122,324 gallons of rainwater annually, based upon the average historical rainfall at the sites. In addition to the capture and use of rainwater, the project also had an impressive educational component. Signage is displayed at all three sites that educate the passers-by about rainwater harvesting and conservation, not to mention the media coverage and the messaging that each class member took back to their respective places of business.

Objective 8.2
Educational materials specific to rainwater harvesting have been developed to highlight the various water conservation techniques that are incorporated into the design of the new District headquarters. This information will be available at the main entrance to the District headquarters for visitors to take and review for potential use in homes and businesses in Montgomery County.

Performance Standard 8.2
Information on the District's new 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 GCD facilities serve as real-life examples of conservation at work. The general public is welcome for a visit during business hours. Upon arrival, visitors will see the arroyo (dry river bed) as they approach the lobby. 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 standalone, 2,500-gallon above-ground cisterns. The collected rainwater is used to irrigate the District's landscaping, which features native plants and grasses.

This award-winning system also has corresponding educational materials framed inside the District 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.

Visitors to District offices do not go away empty-handed. There is 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 CD, which describes all types of systems, ranging from small home systems to more elaborate ones.

2014 HIGHLIGHT

Gulf Coast/Montgomery County Water Efficiency Network

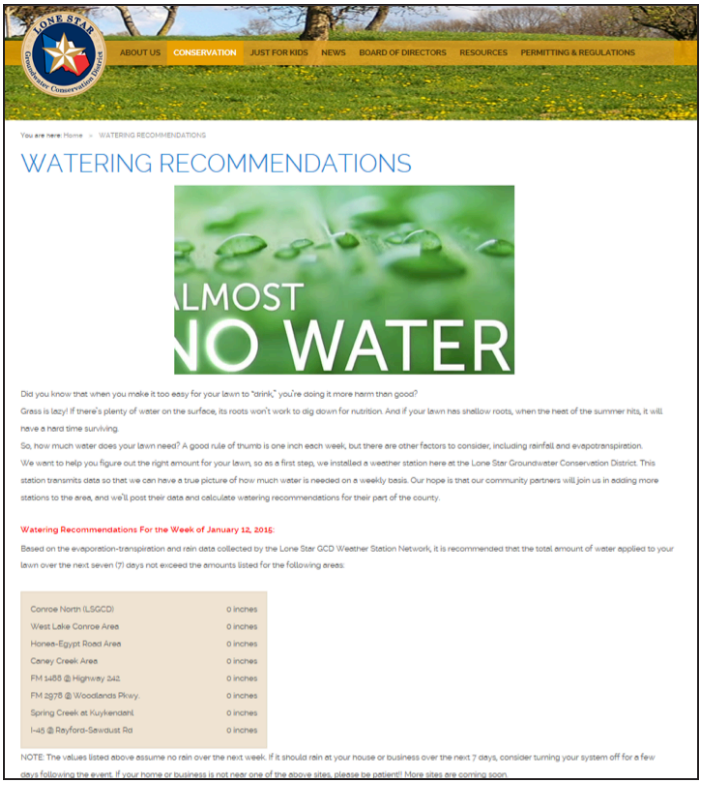
In 2014, the Water Efficiency Network was pleased to have the following water professionals speak throughout the year:

- Leslie Keen, Director of Operations, WaterLogic: *"What You Need to Know About Smart Water Technology"*
- Michael Reedy, P.E., Principal and Vice President, Freese & Nichols, Inc.: *"Water Reuse in Texas – Today and in the Future"*
- Jennifer Douglass Nations, Water Resource Coordinator, City of College Station: *"Landscape Water Budgets"*
- John Ferguson, Founder/Owner, Nature's Way Resources: *"Soil – The Ultimate Water Reservoir – Tapping the Potential"*
- Mark L. Loethen, P.E., CFM, PTOE, Deputy Director, Planning and Development Services Division, City of Houston's Public Works and Engineering Department: *"Water Use and Conservation in Israel – Recent Developments and Lessons Learned"*
- Rick Moffatt, General Manager, Southern Montgomery County MUD; Amber Hurd, P.E. and Mark Urback, P.E., Cobb, Fendley & Associates: *"Wastewater Effluent Reuse – A Case Study"*
- Sam Masiel, Utility Billing Manager, City of Conroe: *"Automatic Meter Read System – Another Conservation Tool"*
- Ashley Oliver, CE, LEED, AP, Environmental Project Manager, Halff Associates, Inc.: *"Zebra and Threatened Mussels – What We Need to Know About Them and Their Effect on Texas Water Supplies"*
- Justin Bower, Senior Environmental Planner, Houston-Galveston Area Council: *"Water Quality Status and Issue in the 13-County H-GAC Region"*

Objective 8.3
The District has recently added an important new tool at its comprehensive water conservation demonstration facility that will collect weather data 24/7 in collaboration with Texas A&M Agrilife Extension experts. The objective of installing this new equipment is to generate an Evapotranspiration ("ET") number to help residents use their irrigation systems more efficiently by knowing the ideal amount of water needed to sustain a healthy lawn. The District will be rolling out the information part of the new 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.

Performance Standard 8.3
Current measurements of ET will continue to be maintained on the District's website throughout the active growing season each year and noted in the Annual Report submitted by the general manager to the board of directors of the District.

Status
In 2014, Lone Star GCD debuted a "Watering Recommendations" section on its website. The new feature provides irrigation recommendations to the public on a weekly basis based on weather data collected by the District's state-of-the-art weather station and rainfall amounts as measured by remote gauges located across the county. Each week, working in conjunction with Texas A&M staff, the District compiles evapotranspiration based on the relative humidity, temperature, wind speed and radiation levels as measured by the weather station. By then comparing the amounts of rainfall in the same period, the District can provide the "water deficit" and advice the public on how much water needs to be added back to the soil to make up for that shortage. Each week the District publishes the amount of irrigation needed in inches per week.



Because of significant variations in the amounts of rainfall that occur across a county as large as Montgomery, it's important to track those amounts in multiple locations. Some areas may receive significant rains, while on the same day other parts of the region will receive none at all. Currently, the District is monitoring rainfall at eight (8) sites across the county, including at the District offices. The District will be adding rain gauges to its network in the coming year.

Financial Summary

For the fiscal year ending December 31, 2014, the District's total assets decreased by $361,644 and total current and non-current liabilities decreased by $499,596. Net position increased by $137,952. In 2011, a construction loan for the new facility was approved with a maximum borrowing limit of $1,500,000. The loan was completely repaid in 2014.

During the year, the District had expenses that were $231,323 more than the prior year. This was primarily due to legal and engineering consulting fees.

Total revenues in the current year were $29,291 more than in 2013, largely attributable to an increased amount of water use fees. Because the District's water use fee remained steady in 2014, the higher revenue directly relates to the amount of groundwater permitted (see table on page 25).

Total net position of the District increased by 5% over the year prior, according to the District's independent financial auditor.

Lone Star Groundwater Conservation District

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