



**Barton Springs
Edwards Aquifer**
CONSERVATION DISTRICT

**ANNUAL REPORT
FISCAL YEAR 2019**

(Board-approved December 12, 2019)

BOARD OF DIRECTORS (August 31, 2019)

Blayne Stansberry, President	Precinct 2	November 2014 – November 2022
Craig Smith, Vice President	Precinct 5	May 1998 - November 2022
Blake Dorsett, Secretary	Precinct 3	November 2012 - November 2020
Mary Stone, Director	Precinct 1	February 2008 - November 2020
Robert D. Larsen, Ph.D., Director	Precinct 4	May 2003 - November 2020

DISTRICT STAFF
August 31, 2019

Alicia Reinmund-Martinez

General Manager

Administration Team

Dana Wilson

Senior Administrative Manager
and Team Leader

Tammy Raymond

Senior Administrative Specialist

Shannon DeLong

Senior Accounting Specialist

Aquifer Science Team

Brian Smith

Principal Hydrogeologist
and Team Leader

Brian Hunt

Senior Hydrogeologist

Justin Camp

Hydrogeologist Technician

Lane Cockrell

Hydrogeologist

Education and Community Outreach Team

Robin Gary

Senior Public Information and Education
Coordinator and Team Leader

Jackie Vay

Outreach Specialist

Regulatory Compliance Team

Vanessa Escobar

Senior Regulatory Compliance Coordinator
and Team Leader

Kendall Bell-Enders

Senior Regulatory Compliance Coordinator

Erin Swanson

Regulatory Compliance Specialist

A.J. Dennis

General Management and Regulatory
Compliance Intern

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1.0 BACKGROUND

The Barton Springs/Edwards Aquifer Conservation District (District) Bylaws require the District Board President or the District General Manager to report on the status of the District and its programs annually to the Board and to the Texas Commission on Environmental Quality (TCEQ). This document is the Annual Report for Fiscal Year 2019, covering the period from September 1, 2018 to August 31, 2019.

According to District Bylaw 4-6, this report shall include:

- The status of the aquifer and the District's programs,
- A financial report to include the report of the annual audit and the security of any District investments,
- A review and evaluation of professional services rendered to the District,
- A status report of any capital projects of the District, and
- The evaluation of the District's long-range plans pursuant to §36.107 (now §36.1071) of the Texas Water Code (TWC).

This introductory section provides an overview of the District, and summarizes the mission and vision of the District and its Board-established critical success factors. Other major report sections that follow include a summary of the active programs in FY 2019; a recap of other specific information required by statute, including an assessment of performance in terms of objectives and performance standards identified in the prevailing Management Plan (MP); and a financial summary. The annual audit report conducted by an independent audit firm is included in its entirety as Appendix A. The Board's assessment of progress toward the MP's objectives by performance standards and the basis for that assessment are included as Appendix B.

1.1 General Information About the District

The District was created in 1987 by the 70th Texas Legislature, under Senate Bill 988. Its statutory authorities include Chapter 52 (later revised to Chapter 36) of the TWC, applicable to all groundwater conservation districts (GCDs) in the state, and the District's enabling legislation, now codified as Chapter 8802, Special District Local Laws Code (SDLLC). The District's legislative mandate is to conserve, protect, and enhance the groundwater resources located within the District boundaries. The District has the power and authority to undertake various studies, assess fees on groundwater pumpage and transport, and to implement structural facilities and non-structural programs to achieve its statutory mandate. The District has rulemaking authority to implement its policies and procedures and to help ensure the management of groundwater resources. The District is not a taxing authority. Its only sources of income are groundwater production fees, including a water use fee supplement paid by the City of Austin (CoA); administrative processing fees; and occasional grants from various local, state, and federal programs for special projects.

Upon creation in 1987, the District's jurisdictional area encompassed approximately 255 square miles and was generally defined to include all the area within the Barton Springs segment of the Edwards Aquifer with an extended area to the east to incorporate the service areas of the Creedmoor-Maha Water Supply Corporation (WSC), Goforth Special Utility District (SUD), and Monarch Utilities. In this area, designated as the "Exclusive Territory," the District has authority over all groundwater resources. In 2015, the 84th Texas Legislature House Bill 3405 expanded the District's jurisdictional area to include the portion of Hays County located within the boundaries of the Edwards Aquifer Authority (EAA) excluding

the overlapping area in the Plum Creek Conservation District (see Figure 1). The newly annexed area designated as "Shared Territory," excludes the Edwards Aquifer and includes all other aquifers, including the underlying Trinity. The District serves southern Travis County, central and eastern Hays County, and portions of northwestern Caldwell County. The District's jurisdictional area including the Shared Territory encompasses approximately 420 square miles and includes both urban and rural areas.

Water from the Barton Springs segment of the Edwards Aquifer serves as the primary water source for public water supply, industrial, and commercial purposes in the District, and is a major source of high-quality base flow to the Colorado River via discharge through the Barton Springs complex. The Barton Springs complex provides the only known habitat for the listed endangered Barton springs and Austin blind salamanders under the federal Endangered Species Act (ESA), requiring all activities that would or could adversely affect the species to represent optimal conservation efforts. The Trinity Aquifer, underlying the Edwards, is an important primary water resource in some parts of the District and is increasingly being developed as an alternative water supply to the oversubscribed Edwards Aquifer in both the Exclusive and Shared Territory. Some wells in the District also produce water from the Taylor and Austin Chalk formations as well as various alluvial deposits along river and stream banks.

A five-member Board of Directors (Board) governs the District. The Directors are elected in even-numbered years to staggered four-year terms from the five single-member precincts that comprise the District. As a result of legislation in 2011 and subsequent Board action in late FY 2011, director elections were moved from the May local elections date to the November general elections date.

In FY 2019, there was no District election. District elections occur every two years. The next election is set to be held in November of 2020 for District Director Precincts 1, 3, and 4.

In accordance with District Bylaws, the Board elects its officers for one-year terms in December of each year. The elected officers in December 2018 were Blayne Stansberry, President; Craig Smith, Vice President; and Blake Dorsett, Secretary. As a local political subdivision of the State of Texas, all meetings of the Board are conducted in accordance with the Open Meetings Act, and the District's business is subject to the Texas Public Information Act.

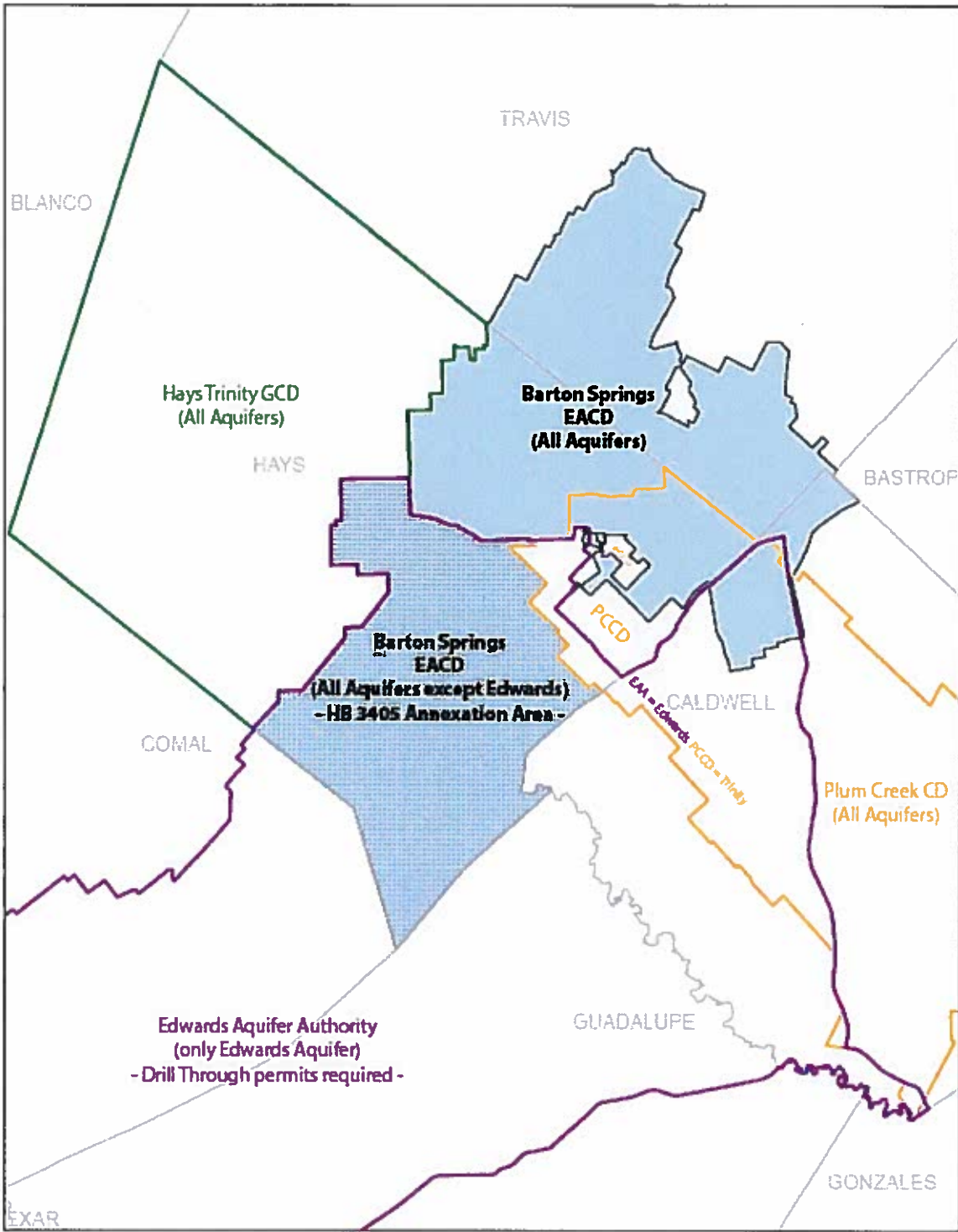


Figure 1 - The District's territory including the expanded Shared Territory and the adjacent Groundwater Conservation Districts and their respective jurisdiction over aquifers.

1.2 District Mission and Vision Statements

The District Board has assessed and articulated not only the mission of the District but also its vision and overarching strategic purpose.

The mission of the District is largely mandated by and adapted from its enabling legislation and statutes:

“The Barton Springs/Edwards Aquifer Conservation District, as the responsible public agency and authority, is committed to conserving, protecting, recharging, and preventing waste of groundwater and to preserving all aquifers within the District.”

The vision of the District provides a succinct statement of the ultimate, continuing goal of the District, describing the standard by which it will execute its mission:

“The Barton Springs/Edwards Aquifer Conservation District will excel in its operations and administration so that it is considered the model and standard for other groundwater districts.”

The overarching strategic purpose articulates more action-oriented direction consistent with the mission and vision:

“We will manage the District aquifers to optimize the sustainable uses of groundwater in satisfying community interests.”

1.3 District Critical Success Factors

The District has established a set of continuing “critical success factors” that flow from and are generally consistent with the goals and objectives MP. These critical success factors include:

- Providing sound science to support and form the basis of policy and tactical decisions made by the District that affect water supply users and endangered species habitats;
- Being highly efficient, accurate, and fair in administering staff activities related to all District programs;
- Developing and instituting an equitable and consistently administered regulatory program that is required to serve our mission;
- Becoming a respected and effective part of the state and local political landscape for water resource management and its stakeholder communities;
- Serving our permittees, stakeholders, and the public at large as a readily accessible source of first resort for reliable information about local water, groundwater, aquifer science, water use and conservation; and
- Providing the programmatic and resource basis for innovative, cost-effective solutions to augment the sustainable quantity of water in the District and to protect the quality of District waters required for various existing uses.

2.0 DISTRICT PROGRAM AREAS AND TEAM HIGHLIGHTS FOR FY 2019

The District continues to successfully use a team-oriented organizational structure in which all staff members are assigned to a primary team but also support other teams as needs arise. Each staff member works under the direct supervision and directly reports to their respective team leaders who are responsible for executing team-specific responsibilities and duties. Each team leader works under the supervision of and directly reports to the General Manager (GM). All staff members ultimately report to the GM for administrative supervisory purposes.

This section of the report summarizes the operational teams that existed throughout FY 2019, and provides some highlights and notable achievements for each. Appendix B contains more information and details on the work undertaken by these teams in support of the various goals, objectives, and performance standards identified in the applicable 2017 District MP.

2.1 General Management Team

Alicia Reinmund-Martinez served as the District's GM throughout FY 2019. Holland Groundwater Management Consultants offered GM support as needed through August 31, 2019.

The GM is responsible for the day-to-day business of the District and is an *ex-officio* member of all the other teams. The key areas of functional responsibilities for the GM include staff management and development, programmatic planning and execution, stakeholder relationship development and cultivation, and financial administration of the District. The GM:

- Ensures that the policies and direction of the Board are implemented effectively, appropriately, and efficiently;
- Provides leadership both inside and outside the District organization in accomplishing the mission, vision, and goals of the District; and
- Serves as an advocate for the staff with the Board, and an advocate for the Board with the staff.

In FY 2019, some highlights for the office of the GM:

- The State Auditor's Office (SAO) evaluated the implementation of the District's State Statutory Requirements and Management Plan for the first time in 19 years. The GM, Administration and Regulatory Compliance Teams provided the required financial and programmatic information. The SAO gave the District a "Low" rating or low risk for both areas of evaluation.
- After the sediment plume incident at Barton Springs Pool, the District staff worked hour by hour with the geo-thermal well driller to ensure no further problems and collaborated with the CoA on establishing protocols for wells to be drilled in the Risk Management Zone.
- Organized meeting between neighboring GCDs and Kinder Morgan (KM) to inform the pipeline company of the sensitivity of the Karst aquifers in the Hill Country. Organized KM presentation to the Board and made presentations at two Hays County meetings – informing the public of the BSEACD's concerns with the pipeline.

- Reduced end-of-year spending to ensure District checking and General Fund accounts remained in the positive, and developed a FY 2020 Budget that reflected a decrease of more than \$300,000 from FY 2019 to ensure a positive net balance.
- Worked with the Board Personnel Committee to revise the District's Employee Policy Manual (EPM). The Board adopted the new EPM on May 23, 2019. The new EPM was presented to staff shortly after Board adoption.
- Held routine (usually twice a month) meetings with the Team Leaders to discuss District's current priorities and Board meeting agenda items, and conducted end-of-year performance evaluations and evaluations of FY 2019 incentive projects, which are linked to the FY 2019 District Objectives.
- Held fall and spring staff retreats to tour and learn about Jacob's Well, the Narrows, and Shields Ranch. As a part of the retreats, staff were given presentations from the president of the Wimberley Valley Water Association and the External Relations Officer at Shields Ranch.
- Served as the primary point of contact and coordinated with Brian Sledge of SledgeLaw Group, PLLC, the District's legislative consultant, to monitor bills of interest to the District. Efforts included bill tracking and analysis, and meeting and providing information to legislators. The SledgeLaw Group provided a legislative debriefing report to the Board of Directors at the June 13, 2019 meeting.
- Served as the District Representative to Groundwater Management Area (GMA) 10, including related interfaces with the Texas Water Development Board (TWDB). This year, discussions at meetings included desired future conditions (DFC) monitoring activities and discussions on the GMA 10's evaluation needs for the development of the 2022 DFCs.
- Participated actively in regional water planning group activities, including serving as the GMA 10's voting representative to Region K and serving on the Unique Stream Segments Committee. Meetings included presentations and discussions on the water management strategies, updates to non-Modeled Available Groundwater availability, the draft of some chapters to the Region K report, and summary of the bills that were approved in the 86th legislative session,
- On April 11, 2019, the Board of Directors approved an Interlocal Agreement between the District and the CoA to collaborate and coordinate on routine and planned activities relative to each entity's respective Habitat Conservation Plan (HCP). The first HCP Annual Report will be submitted to the U.S. Fish and Wildlife Service (USFWS) in February 2020.

2.2 Administration Team

Ms. Dana Wilson, Senior Administrative Manager, serves as the Administration Team Leader, with Ms. Tammy Raymond, Senior Administrative Specialist, and Ms. Shannon DeLong, Senior Accountant Specialist, as team members for administrative programs support.

The Administration Team is responsible for banking, accounting, timekeeping and payroll administration, records retention and management, facilities and vehicle fleet management, personnel and human resources administration, contracts administration, director compensation and reimbursement administration, and state/federal grant administration.

In FY 2019, some highlights for the Administration Team included:

- District Board and staff members maintained their financial resources in a manner that maximizes liquidity while maintaining the greatest return on District fund balances by investing in securities or investment pools that operate in low risk investments and are backed by the state and/or federal government.
- Contracted for and participated in the independent annual financial audit, including the provision of all financial records and preparation of the Management Discussion and Analysis. Year-end reports are submitted to the TCEQ and the State Pension Board, as required by law.
- Maintained District financial records to receive a clean financial audit in December 2018 (see Appendix A), and a second “low risk” clean financial report from the State Auditor’s Office that began in February 2019 with the final report date in July 2019.
- Developed and monitored the District annual budgets. For FY 2019, there were four versions. The initial budget was brought before the Board in a public hearing held on August 9, 2018 where it was approved. The Board approved Budget Revision 1 on March 14, 2019; Budget Revision 2 on June 27, 2019; and Budget Revision 3 on July 25, 2019.
- Continued the eternal process of electronically scanning historical hard-copy records for archival purposes.
- Administrative staff is responsible for proper maintenance, management, retention, and disposition of all District records; inventory of District property (asset management); and capital depreciation. Administration preserved and protected all public documents in accordance with state and federal laws, the adopted District Records Retention Schedule, and with the Texas State Library regulations; and maintained the District’s reference material library.
- Supported the revisions to the EPM and sub-policies that were finalized and approved on May 23, 2019.
- Assisted the District’s information technology (IT) consultant in making improvements to the IT infrastructure to standardize productivity tools and improved security, and resolving various staff IT issues. In FY 2019, the District organized and scheduled the migration of all of its computer equipment to Windows 10 (due to the current operating systems no longer to be supported after January 2020). The actual migration happened in October 2019 (FY 2020).
- Continued monthly District transparency efforts, specifically in the area of finance (on the District’s web-site Transparency tab), since achieving a Financial Transparency Star Award from the Texas Comptroller’s office in FY 2017.

- The District issued a total of \$19,148.06 in conservation credits in FY 2019 (\$11,967.54 issued to 23 permittees, and \$7,180.52 issued to the CoA). Permittees donating credits back to the District's camp scholarship fund include Cook-Walden/Forest Oaks (\$54.15), Creedmoor-Maha WSC (\$1,373.61), and Goforth SUD (\$749.00). The CoA also donated their \$7,180.52 credit to the District's camp scholarship fund. Total donations combined equal \$9,357.28.

2.3 Aquifer Science Team

Dr. Brian Smith, P.G., Principal Hydrogeologist, serves as the leader of the Aquifer Science Team which is involved in various internally- and externally-funded groundwater research and assessment programs. The team is supported by Brian Hunt, P.G., Senior Hydrogeologist; Justin Camp, Hydrogeologic Technician; Lane Cockrell, Hydrogeologist (two-year contract, beginning July 2018); and from time to time other staff members, including interns.

To protect and manage the groundwater resources of the District's aquifers, the District continued an active research program that is designed to better understand the hydrogeology and hydrodynamics of aquifers in the District, and to advise the Board on policy-related decisions.

In FY 2019, the Aquifer Science Team worked on many projects, developed new technical reports and memos, presented technical talks, published technical papers, and attended technical conferences including:

- South Central Texas Water Research Interest Group bi-annual meeting at Southwest Research Institute (SWRI), San Antonio (December 4, 2018)
- EAA Distinguished Lecturer: Dr. Todd Halihan (October 5, 2018; SWRI, San Antonio)
- Brian Hunt and Brian Smith gave a presentation about groundwater demand for the Trinity Aquifers to the South Texas Geological Society in San Antonio (November 14, 2018).
- Attended the Bell County Water Symposium (November 15, 2018).
- Capital Area Council of Governments (CAPCOG) Flood Forecasting Subcommittee Meetings (Kyle, February 28, 2018 – present)

Presented technical information and studies to the public and students:

- Travis County Commissioners Court related to an Interlocal Agreement (ILA) (July 3, 2018)
- Barton Springs University (September 26, 2017)
- Hydro-Geo Workshop, EAA sponsor, Cave Without A Name (October 6-7, 2018)
- Texas A&M Kingsville (April 5, 2018)
- Presentation to Hays County Historical Commission (March 28, 2019)
- Led portion of field trip for hydrogeology students of the University of Texas (UT) Jackson School of Geosciences with Dr. Bayani Cardenas (November 10, 2019).
- Austin Cave Festival at the Wildflower Center (February 23, 2019)

In FY 2019, other highlights for the Aquifer Science Team included:

- Maintained a monitor well network of about 32 wells with instruments that collect hourly data. The District's weather station at the District office also collects hourly data.
- The District routinely measures water levels in the six multipoint monitor wells that are completed in the Edwards and Trinity Aquifers.
- Analyzed the results of an aquifer test and other data for the Electro Purification (EP) application in Central Hays County. This includes modeling and the publication of three technical memos (see Published Papers).
- Field staff visited about 25 wells in the EP area for water levels and field parameter measurements. Some sites were visited multiple times.

- Determined and documented drought status, including keeping the District's drought monitor blog up to date. The aquifers were in Alarm Stage Drought at the beginning of FY 2019, but heavy rains in September and October 2018 brought the aquifers to No-Drought status. Water levels in the Lovelady monitor well peaked on June 14, 2019 before starting a drop that continued through the end of FY 2019.
- Participated with GMA 9 (March 12, 2019 and April 22, 2019) and GMA 10 (April 2019) in technical discussions.
- Worked cooperatively with the Ruby Ranch WSC to conduct phase four of aquifer storage and recovery (ASR) pilot testing.
- In cooperation with EAA, Hays Trinity Groundwater Conservation District (HTGCD), and Blanco-Pedernales Groundwater Conservation District (BPGCD), measured water levels regionally in the Middle Trinity Aquifer to construct a potentiometric map.
- In FY 2018, Brian Hunt and Brian Smith were appointed by HTGCD to a technical advisory committee to make recommendations for a groundwater management zone in the vicinity of Jacob's Well. Work with this committee continued into FY 2019.
- Maintained the Antioch Cave Recharge Enhancement Project as an ongoing part of a 319(h) grant from the Environmental Protection Agency (EPA) and TCEQ.
- Implemented an annual sampling program in cooperation with Magellan Pipeline Company related to the operation of the Longhorn Pipeline that transports crude oil through the District. In May 2019, staff sampled about eight springs and well sites for hydrocarbon contaminants as a screening test for BTEX and TPH. Staff also worked on locations for the installation of two anticipated new monitor wells.
- Collected water-quality data (major ions and isotopes) from about 32 sample locations in FY 2019 in cooperation with the TWDB.
- Cooperated with Travis County to develop a second ILA to continue a hydrogeologic study of western Travis County. The ILA was signed by Travis County on October 1, 2019.
- Continued collecting data at the Shield Ranch in southwest Travis County. Also planned the installation of a Barton Creek flow station for FY 2020.
- Staff attended numerous webinar and live-webinar courses in groundwater modeling to develop an initial draft numerical model for eventual use in permit evaluations in FY 2019.
- Provided technical review and compiled comments on the draft conceptual model update for the Hill Country portion of the Trinity Aquifer (SWRI report contracted by the TWDB). See Published Papers.
- Visited and assessed potential sensitive karst features along MoPac construction projects with CoA and Texas Department of Transportation (TxDOT) staff. These include several caves and other karst features.
- Measured water levels in the saline Edwards multiport monitor well on November 6, 2018; March 15, 2019; and March 18-19, 2019.
- Brian Smith continued to serve on the CoA Environmental Commission through FY 2019.

Published Papers and District Documents:

- Smith, Brian A., Hunt, Brian B., Gary, Marcus, O., and Watson, Jeffrey, 2018 in review, Applying Dye Tracing to Characterize Surface-water and Groundwater Interactions in the Trinity Aquifers, Central Texas: 2018 Abstracts with Programs, Geological Society of America, Annual Meeting, November 4-7, 2018, Indianapolis, Indiana.
- Hunt, Brian B., Smith, Brian A., Wierman, Douglas A., Gary, Marcus, O., and Watson, Jeffrey, 2018, Sustainable Yield of Jacob's Well Springshed, Middle Trinity Aquifer, Wimberley, Texas: 2018 Abstracts with Programs, Geological Society of America, Annual Meeting, November 4-7, 2018, Indianapolis, Indiana.
- Smith, Brian A., Hunt, Brian B., 2019, Multilevel Monitoring of the Edwards and Trinity Aquifers: in The Edwards Aquifer: The Past, Present, and Future of a Vital Water Resource: eds. Sharp, Jr., John M., Schindel, Gary M., Green, Ronald T., Geological Society of America Memoir 215, Chapter 25. **Peer review**
- Hunt, Brian B., Smith, Brian A., Hauwert, Nico M, 2019, The Barton Springs Segment of the Edwards (Balcones Fault Zone) Aquifer, central Texas: in The Edwards Aquifer: The Past, Present, and Future of a Vital Water Resource: eds. Sharp, Jr., John M., Schindel, Gary M., Green, Ronald T., Memoir 215 Chapter 7, Geological Society of America. **Peer review**
- Sharp, John M., Smith, Brian A., 2019, Water quality and the bad-water (saline-water) zone of the Edwards (Balcones Fault Zone) Aquifer: in The Edwards Aquifer: The Past, Present, and Future of a Vital Water Resource: eds. Sharp, Jr., John M., Schindel, Gary M., Green, Ronald T., Memoir 215, Chapter 12, Geological Society of America. **Peer review**
- Gary, Marcus O., Hunt, Brian B., Smith, Brian A., Watson, Jeffrey A., and Wierman, Douglas A., 2019, Evaluation for the development of a Jacob's Well groundwater management zone Hays County, Texas: Technical report prepared for the Hays Trinity Groundwater Conservation District, Hays County, Texas, Meadows Center for Water and the Environment, Texas State University at San Marcos, TX, Report: 2019-05, July 2019. **Peer review**

2.4 Education and Community Outreach Team

Ms. Robin Havens Gary serves as the leader of the Education and Community Outreach Team. Ms. Gary is the District's Senior Public Information and Education Coordinator, Geographic Information System (GIS) Specialist, and is the team leader for the Education and Community Outreach Team. In September 2019, Ms. Jackie Vay converted from half-time to full-time Outreach Specialist dedicating half-time to the collaborative Travis County Groundwater Study. The team collaborates regularly with other members of the staff, including interns, to maintain a diverse and effective Education and Outreach program.

The District continues its active, multi-dimensional educational program that emphasizes awareness of the finite and fragile aspects of the groundwater resources in the District. To increase awareness of District programs and roles, staff applied a multi-faceted approach. Programs and events this year included Barton Springs University, Rainwater Revival and Hill Country Living Festival, Austin Cave Festival, Camp and College scholarships, Kent Butler Summit, Well Water Checkup, Neighborhood Site Visits, Groundwater to the Gulf: A Summer Institute for Educators, and Rocks, Water, and Mud Nature Nights at the Wildflower Center.

The digital newsletter continued circulation in FY 2019. Feedback and metrics show that the more frequent updates in the mobile-friendly, digital format has been highly popular. Subscribers receive regular updates on permitting, aquifer science, events, and programs. Each eNews was opened/accessed over 1,000 times. The eNews is sent to over 2,900 subscribers that include press, teachers, permittees, Homeowner Associations, and interested members of the public. Social media posts increased distribution of announcements and news and received high view rates.

The Education and Community Outreach Team constantly seeks to maintain and create new partnerships with like-minded local entities to more efficiently and effectively carry out the District's mission. Through these partnerships, staff members augment their knowledge base and are able to make a contribution to efforts that reach larger and more diverse audiences. This year staff continued partnerships with the Austin Youth River Watch, Central Texas Water Efficiency Network (CTWEN), Capital Area Master Naturalists (CAMN), CoA, City of Sunset Valley, Colorado River Alliance, EAA, Greater Edwards Aquifer Alliance, Hill Country Alliance, Hill Country Conservancy, Keep Austin Beautiful, Lady Bird Johnson Wildflower Center, Lower Colorado River Authority (LCRA), Meadows Center, Save Barton Creek Association (SBCA), San Antonio River Authority, San Antonio Water System, Shield Ranch, Splash! Exhibit, Texas Cave Management Association, Texas Parks and Wildlife Department (TPWD), Texas River School, Travis County, TWDB, University of Texas's Bureau of Economic Geology, and UT Jackson School of Geosciences.

In FY 2019, some highlights of the Education and Community Outreach Team included:

- Participated in more than 30 outreach events (including field trips, presentations, and events) that reached approximately 3,800 adults and 4,200 children—a significant increase from last year.
- eNews bulletins were opened over 13,400 times from over 2,900 subscribers. Facebook posts were viewed 27,900 times. Twitter posts made 17,800 impressions. The web pages were viewed 39,700 times.
- Collaborated with Aquifer Science staff on the Travis County Groundwater Study. The Travis County Groundwater Project Group including staff from the Aquifer Science and Education Outreach Teams organized neighborhood site visits to collect water data in five different areas within the southwest Travis County study area. The visits took place in Hamilton Pool/Pedernales,

Spicewood/Briarcliff, Lakeway/The Hills/Hudson Bend, Bee Cave, and Westlake/Lost Creek/Oak Hill areas. Approximately 50 well owners participated in the site visits and approximately 50 additional field measurements. Water level and water quality analysis was collected from the over 100+ data collection points. Presentations were made to Travis County Commissioners and SWTC GCD Board.

- Approximately 47 well owners in the District brought in water samples for the free water well screening for common contaminants during the Well Water Checkup.
- Co-hosted the 9th Annual Central Texas Water Conservation Symposium “Integrated Water: Keeping Conservation at the Forefront” in collaboration with the water providers and non-profits participating in the CTWEN.
- Co-hosted the 14th Annual Groundwater to the Gulf Summer Institute for Educators in collaboration with other state, local, and non-profit water educators, which trained 33 teachers and educators who in turn reach over 8,000 students annually.
- Co-hosted the Austin Cave Festival at the Lady Bird Johnson Wildflower Center, which attracted record attendance.
- Sponsored the 2018 Rainwater Revival and Hill Country Living event that brings rainwater harvesting system installers, suppliers, water haulers and other experts together to serve as a resource for homeowners and businesses that are interested in using rainwater as an alternate supply.
- Awarded two \$2,500 college scholarship to Ian McIntosh from Liberal Arts & Science Academy for his essay titled “The Impact of Water on the Arthropods of Bull Creek,” and Emma Cook from Hays High School for her essay titled “Expanding the Clean Water Act to Better Protect Groundwater Resources” with the support from District permittees’ FY 2018 conservation credit donations.
- Provided 20 scholarships for students ages 9-15 to attend Aquatic Science Adventure Camp hosted by the Edwards Aquifer Research and Data Center, with the support from District permittees’ FY 2018 conservation credit donations.

2.5 Regulatory Compliance Team

The Regulatory Compliance Team consists of two Regulatory Compliance Coordinators and one Regulatory Compliance Specialist who are responsible for a wide range of District responsibilities including drought management, pumpage tracking/compliance assessment, rulemaking, rule and well construction standard interpretation, permitting, enforcement, well inspections, well pluggings, and drilling oversight. Vanessa Escobar, Senior Regulatory Compliance Coordinator, serves as the Team Leader; with Kendall Bell-Enders, Senior Regulatory Compliance Coordinator; and Erin Swanson, Regulatory Compliance Specialist, completing the team. Regulatory Compliance Team members have also actively attended and participated in community outreach and regional development and planning groups, and served as District liaisons to local municipalities, political subdivisions, permittees, and licensed drillers and pump installers in the area.

In FY 2019, some highlights of the Regulatory Compliance Team included:

- Development Activities Over Recharge & Contributing Zones - On November 13, 2018, staff participated in a wastewater meeting with Guadalupe Blanco River Authority (GBRA) and multiple other agencies (CoA, City of San Marcos, Save Barton Creek Association (SBCA), Clearwater Water Supply Corp, EAA, New Braunfels Utility, and League of Women Voters) to discuss water quality concerns and legislation regarding wastewater discharges in the Edwards Aquifer Contributing Zone.

Staff provided written comments to TCEQ on the Sawyer-Cleveland application for a proposed Texas Pollutant Discharge Elimination System (TPDES) permit (No. WQ0015594001) into Long Branch Tributary in the Barton Creek Watershed. The District expressed concern about potential impacts on downstream water quality in the contributing and recharge zones of the Barton Springs segment of the Edwards Aquifer, as well as requested subsequent correspondence on the permit application.

District staff, along with City of Austin staff, met with the GM and a Board member from Clearwater UWCD to discuss wastewater issues and TPDES permits.

- Roadway Projects (SH 45 SW and MoPac Intersections) – SH 45 SW was completed and opened for public usage in June 2019. The roadway construction efforts for SH 45 SW began November 2016 and throughout the duration of the construction project staff coordinated 24 site visits of which four were conducted in FY 2019. For each site visit inspection reports were developed, and District recommendations were provided. Staff continued to actively participate in site inspections and technical discussions with the Central Texas Regional Mobility Authority (CTRMA) project team, TxDOT representatives, and the Environmental Compliance Manager (Hicks and Co). The District continued to work with storm water consultant, David Fowler – Alan Plummer Associates Inc., on the technical evaluation of stormwater control designs in accordance with the consent decree. The District will be working on developing a summary write up that captures the accomplishments of this joint interagency effort.

In January 2018, the roadway construction efforts for the Slaughter and LaCrosse intersections began. TxDOT hired ACI Environmental to be the environmental storm water inspector on the project and to monitor the status of temporary and permanent storm controls. The Regulatory Compliance Team has performed periodic environmental and storm water inspections, and the Aquifer Science Team has performed numerous geologic site visits and inspections to assess discovered features and provide input on proposed mitigation measures.

- EP Applications – In July 2017, EP submitted a Production Permit application, a Hydrogeologic Report, and seven Well Modification applications. District staff reviewed the applications and all

supporting documents and requested additional information from the applicant. Through a comprehensive review, the District determined that the proposed production had the potential to cause unreasonable impacts to existing wells. In February 2018, the District provided EP with notice of the GM's Preliminary Finding on the Production Permit application. The applicant was granted a 90-day extension to the application review period to provide additional application requirements and/or options such as a Compliance Monitoring Plan and Mitigation Plan. After extensive review of the additional submitted plans, the District determined the application administratively complete and issued a General Manager's Statement of Position (draft permit) on May 21, 2018. On June 18, 2018, District staff held a public information session on the draft permit for EP at the Wimberley Community Center. During the 20-day comment period, the District received 12 requests for a contested case hearing and 312 comment letters on the application. In July 2018, the Board referred the permit application to the State Office of Administrative Hearings (SOAH) to conduct the contested case hearing. A SOAH preliminary hearing was held on September 17, 2018 to determine standing.

The original dates for the hearing on the merits of the application were scheduled for late spring 2019. Given that schedule the parties, including the protestants, the District, and the applicant, met in Austin for a SOAH ordered mediation in March 2019. The parties were unable to reach agreement on any issues pertaining to the draft permit and discontinued mitigation discussions. After an attempted mediation in March 2019, stakeholder discussions, and additional staff research, District staff continued to move forward with improvements and revisions to the 2018 draft permit and issued a May 2019 Revised Draft Permit. On June 12, the District submitted prefiled testimony in response to the applicant's and the protestant's previously filed testimonies. The hearing on the merits was then rescheduled for September 19-27, 2019.

On June 26, 2019, EP and Trinity Edwards Springs Protection Association (TESPA) asked to modify the hearing schedule to allow them to adjust their testimonies to address the updated special provisions. The District had no objection to the modified hearing schedule. On July 2, 2019, the Administrative Law Judge (ALJ) granted the modified schedule, reset the prehearing conference to April 24, 2020 at 10:00 am, and reset the hearing on the merits to convene at 9:00 am on April 27 – May 5, 2020 at SOAH, 300 W. 151h Street, Fourth Floor, Austin, Texas.

On September 25, 2019 the Protestants filed a Motion for Summary Disposition that asked the ALJs to dismiss EP's application on the basis that (1) the phase-in of production volumes should not be permitted without notice and an opportunity for a hearing, and (2) the application is not supported by reasonable non-speculative demand. Before responses to the Motion were due, EP requested and the ALJs granted a schedule abatement because the properties for which EP seeks a production permit are subject to a condemnation proceeding by Permian Highway Pipeline, which may result in EP withdrawing its application. The ALJs have set a deadline of November 22, 2019 for the parties to respond to the Motion for Summary Disposition and to propose a new schedule for the proceeding.

- Needmore Water, LLC Application – At the beginning of FY 2016, staff issued an administrative completeness letter to the applicant for the conversion of a Temporary Production Permit (HB 3405) to a Regular Permit. The GM developed a Preliminary Decision which entailed information on the technical evaluation of the aquifer test data. The application was contested and sent to SOAH. In March 2018, a contested case hearing was held on the limited motion for summary disposition filed by the protestant (TESPA). In June 2019, the ALJ ruled on the matter and granted Needmore's motion. On July 23, 2018, the ALJ issued a proposal for decision (PFD) agreeing with the District and Needmore. However, the PFD didn't include a recommendation for permit issuance.

In October 2018, the Board of Directors remanded the issue back to SOAH requesting the PFD to include a recommendation for the permit issues based on findings of fact and conclusion of law. On April 10, 2019 the District received the ALJ's response, which describes that SOAH does not have jurisdiction to issue a revised PFD on whether the Board should issue the Needmore permit, and the ALJ did not weigh in on the uncontested portions of the permit. A public hearing was held on July 29, 2019, for the Board to consider the application for conversion of a Temporary Production Permit to a Regular Historic Production Permit to authorize the withdrawal of an annual permitted volume of 289,080,000 gallons/year from the Middle Trinity Aquifer for agricultural uses. The Board voted to grant Needmore Water LLC a Regular Permit with special provisions. In August 2019, TESPA requested a finding of facts and conclusions of law, which the Board issued. TESPA then filed a motion for rehearing.

- Management Plan – Per statutory requirements, the District staff and programmatic teams actively worked towards implementing the objectives of the management plan. In November 2017, the Board adopted the updated MP, and in January 2018, the TWDB approved the plan. During the spring of 2019, the District received notice from the State Auditor's Office (SAO) that the SAO would be conducting an official audit of the District's MP and fiscal operations. The regulatory team and the administrative team supported the audit process in providing requested information and details to the auditing team. The final report from the SAO regarding its evaluation of the BSEACD and six other GCDs audited their 1) achievement of selected groundwater management plan goals, and 2) compliance with selected statutory requirement for each District's fiscal year 2018. Their evaluation of BSEACD concluded that the BSEACD fully or partially achieved all of its MP Goals, fully complied with a majority of the Statutory Requirements, and is a Low Risk – meaning that the audit identified strengths that support the audited entity's ability to administer the programs/functions or the issues identified do not present significant risks.
- Database Development and Upgrade – Throughout the fiscal year, staff actively coordinated the technical discussions and conceptual designs for a database management and reporting system. Staff internal discussions were held to identify the scope elements, and a Board subcommittee was involved in the procurement and contract negotiation process. The project is scheduled to be completed in FY 2020. The project team has made significant progress on the data management system. The Intera team provided a staff demonstration and update in June 2019. Follow-up module meetings and discussions took place throughout the summer of 2019 - 2020. Additional work remains to be completed on the various meter reading, hydrogeological data components, and reporting elements of the database system. The expected database deployment is December 2019 – February 2020.
- External Communication and Coordination – Work groups and projects involving regulatory staff participation included:
 - SH 45 SW and Mopac: Coordination with TxDOT and CTRMA on project
 - Water Pollution Abatement Plan (WPAP) Wastewater Permit Reviews
 - Wastewater TPDES reviews
 - ASR Technical Discussions and Workgroups
 - SH 45 SW Technical Workgroups
 - Edwards Aquifer recharge and contributing zone development activity coordination
 - Regular meetings of the Regional Water Quality Protection Plan workgroup
 - Well permitting and registration efforts in the shared territory
 - Texas Department of Licensing and Registration (TDLR) - Well Construction Standards
 - Texas Alliance of Groundwater Districts (TAGD)
 - Texas Water Conservation Association (TWCA) – Groundwater Subcommittee
 - GMA 10 Similar Rule Review

- Rulemaking Activity - During FY 2019, the District adopted amendments and revisions to the Rules and Bylaws. A quorum of the Board voted unanimously to adopt the proposed revisions at its regular meeting on March 28, 2019. The rule making process was formally initiated in February 2019 as part of an ongoing effort to implement ASR projects. There was a 20-day public comment period to provide an opportunity for rule review and to submit comments or formal protests on the proposed rules. The adopted rule amendments focused overall on:
 - Definitions
 - Application Checklist (Well Drilling and Source & Recovery Permits)
 - Hydrogeologic Report and Observation Wells
 - Permit Amendments
 - Saline Zone Requirements
 - ASR Pilot Test
 - Saline Edwards Modeled Available Groundwater/Desired Future Conditions
 - Class D Conditional Permits
 - ASR

Staff will periodically review and modify the Rules as warranted to provide and maintain a sound statutory basis for continued District operations and to ensure consistency with both District authority and programmatic needs.

- Implementation and Compliance of Existing Rules - Staff reviews permit compliance of each permittee, and monitors existing wells for compliance with the Rules, and Well Construction Standards. Through required meter readings reports, performing regular inspections of wells, and reviewing pumpage compliance at regular intervals, staff is able to ensure permitted wells and well systems are operated as intended. Staff also maintains an open dialogue with a Permittee when compliance matters arise, and facilitate solutions through pre-enforcement discussions.
 - Inspections and Investigations - During FY 2019, the Regulatory Compliance Team conducted a number of inspections relating to the processing of permit applications. Staff completed a total of 29 inspections related to special investigations, site permittee inspections, and well permit applications. The Regulatory Compliance Team collected 23 water quality samples during routine permit inspections or from new well construction inspections There were no formal enforcement actions initiated in FY 2019.

Barton Springs Pool Plume Event - Between December 18-20, 2018, three separate, discrete, and visible discharges of turbidity from Barton Springs into Barton Springs Pool were observed. The unusual turbidity caused the CoA to close Barton Springs pool as a precaution on December 19, 2018. CoA staff worked with District staff to identify the likely source of turbidity as sediment produced from the drilling of boreholes for a geothermal system in the Barton Hills area about ¾ of mile (4,000 ft) SSW from Barton Springs. The District and CoA staff gathered additional geologic site data and interviewed the drillers about activities on the site. Once additional information was gathered, CoA staff, District staff, and the driller worked together to modify the drilling protocols for the remaining boreholes of the project. These boreholes were permitted by the District, and standard drilling procedures and practices were followed; thus no District rules were violated in the installation of the boreholes. However, the CoA and the District worked together to develop additional drilling protocols within proximity to Barton Springs to minimize future turbidity plumes related to drilling activities.

Inspections/ Investigations/ Visits	FY 18	FY 19
Exempt Well Inspections	4	6
Limited Production Permit Inspections	14	17
Individual Production Permit Inspections	3	0
Test Well Inspections	2	0
Plugging Inspections	8	5
Special Investigation Inspections	2	2
Other Permittee Meetings/Visits *	7	5
<i>*Multiple meetings were held with some permittees.</i>		
TOTAL	43	35

- Meter Reporting - Monthly meter readings were collected from all individual permittees each month with the large majority reported in a timely manner. Permittees failing to submit timely reports were provided with notices of the District's intent to collect meter readings. Most delinquent permittees were generally responsive once the notice was received. Meter readings not received after the notice was provided were collected by staff, and a fee was assessed to those permittees, in accordance with the Rules.

The annual meter reading requirement for all Limited Production Permits (LPPs) were due in September 2019. Email correspondence and notifications were provided to the nonexempt domestic users in an effort to ensure compliance; however, approximately 10% did not timely submit a meter reading.

- Conservation Credits - The District issued a total of \$19,148.06 in credits in FY 2019 with \$11,967.54 being issued to 23 permittees, and \$7,180.52 being issued to the City of Austin. Permittees donating credits back to the District's camp scholarship fund included Cook-Walden/Forest Oaks (\$54.15), Creedmoor-Maha WSC (\$1,373.61), and Goforth SUD (\$749.00). The City of Austin also donated their \$7,180.52 credit to the District's camp scholarship fund. Total donations combined equal \$9,357.28.
- Right Sizing and Alternative Sources
After notice and an opportunity for a hearing, the Board may renew a permit with a reduced amount of the authorized production if the authorized withdrawal volume is no longer commensurate with reasonable non-speculative demand, or actual production from a well is substantially less than the authorized permit amount for multiple years without any rationale that reasonably relates to efforts to utilize alternative water supplies, conserve, or improve water use efficiency. Staff conducted an underpumpage analysis and determined that while many permittees actual production was less than the authorized permitted amount, it was typically due to bringing on alternative supplies or water conservation; therefore, authorized permitted volumes were not reduced in FY19.

The District has been actively encouraging alternative source projects to reduce the dependency on the aquifers during drought. District staff has collaborated with water suppliers on ASR projects in providing regulatory and technical guidance. Staff has been working with Ruby Ranch WSC the and City of Buda on ASR feasibility and expects that each entity will submit an ASR Operational Permit in FY 2020.

- **Drought and Conservation Plans** – During the spring and summer 2019 the regulatory staff work with interns to update 136 permit records in order to incorporate updated drought planning documents into their records. According to the District’s management plan, all permittees shall have current User Drought Contingency Plans (UDCPs) and User Conservation Plans (UCPs) on file that are updated in accordance with District rules. Permittees have the option to revise drought target charts no more than once per year but must update their UDCP and UCP plans at least every five years. Staff completed a full update for all permittees to ensure that each file included updated drought templates (Drought Target Chart, UDCP, UCP).
- **Drought Compliance** - The District implements a drought management program that requires mandatory monthly pumpage curtailments during District-declared drought stages. The District declared Stage II Alarm Drought on July 12, 2018 and remained in Stage II status throughout October 11, 2018. The District has implemented all drought-related rules and curtailments in accordance with the District’s enforcement plan and drought management protocols. Drought enforcement measures were assessed for Stage II Alarm Drought for the entire duration of the drought. A monthly drought compliance report for all individual permittees was provided during the months of August 2018 – September 2018 to the Board during District-declared drought and those reports are found on the drought management website pages. After lifting drought in October, the District was in No-Drought status the remainder of FY 2019.
- **Well Registration** - Staff processed and reviewed all well registrations, permit renewals, and applications for permits, permit amendments, and authorizations in accordance with the Rules, Well Construction Standards, and other District guidelines in accordance with specified procedural timeframes. All newly drilled or modified exempt and nonexempt wells were automatically registered at the time of application and were in compliance with District Rules, including Well Construction Standards.

During FY 2019, the District continued with an online registration system to receive well registration applications from well owners. The online registration system was implemented in June 2015 in response to recent annexation efforts associated with the passage of HB 3405. Staff received and processed 25 online registration forms in FY 2019.

- **Application Reviews** - To ensure that all firm-yield production permits are evaluated with consideration given to the District’s demand-based and non-speculative permitting standards, staff completed comprehensive administrative and technical reviews of permit application requests. A summary of the number and type of applications processed and approved for authorizations, permits, and permit amendments including approved use types and commensurate permit volumes for production permits and amendments is provided below.

A summary of the new wells drilled in FY 2019 is provided in the table below.

New Wells Drilled	FY 17	FY 18	FY 19
New Exempt Wells	9	4	10
Limited Production Permits (Nonexempt Domestic Wells)	22	14	15
Individual Wells	2	4	1
Test Wells	0	0	0
Replacement Wells	0	1	0
TOTAL	33	23	26

A summary of the processed permitting applications in FY 2019 is provided in the table below.

Processed Permit Applications	FY17	FY18	FY19
Minor Amendment	3	6	5
Major Amendments	0	7	0
New Exempt Well	9	4	10
Limited Production Permit (Nonexempt Domestic Wells)	22	14	16
Individual Production Permit	4	4	3
Individual Well Drilling Authorizations or Well Modification	3	3	8
Test Well	0	2	1
Well Plugging	10	8	5
Replacement Well	0	1	0
TOTAL	51	49	48

A summary of the individual production permits processed in FY 2019 is provided in the table below.

	Annual Volume (gpy)	Production Permits Processed	Permit Type	Use Type	Aquifer
1	1,600,000	BGSIX Holdings LLC	Historical Trinity	Irrigation	Trinity
2	100,000	Hays County	Historical Trinity	Industrial	Trinity
3	179,965,440	Needmore Water LLC	Historical Trinity	Agricultural Livestock	Trinity
4	912,500,000*	<i>Electro Purification*</i>	<i>Historical Trinity</i>	<i>Wholesale PWS</i>	<i>Trinity</i>

** This application was processed as administratively complete and is currently pending at the State Office of Administrative Hearings (SOAH). Final permit action and Board Decision has not taken place.*

2.5.1 Permit Summary:

A summary of the active individual production permits to date in FY 2019 is provided in the table below.

Active Individual Permits	FY 17	FY 18	FY 19
Conditional A Edwards	20	22	22
Conditional B Edwards	2	2	2
Conditional C Edwards	4	4	4
Historical Edwards	76	74	74
Historical Trinity	27	29	31
Historical Chalk or Alluvial	2	2	2
Transport Permits	2	2	2
Total	131	135	137

A summary of the active general permits to date in FY 2019 is provided in the table below.

Active General Permits	FY 17	FY 18	FY 19
Limited Production Permits (LPP)	129	141	156
Test Permits	1	2	1
Monitoring Permits	0	0	0
Total	130	143	157

2.5.2 Production Summary and Exempt Estimates:

Staff monitors annual withdrawals from all nonexempt wells through required monthly or annual meter reports to ensure that groundwater is used as efficiently as possible for beneficial use. A summary of the volume of aggregate groundwater withdrawals permitted and actually produced from permitted wells for each Management Zone is provided below.

A summary of the permitted production volumes for each Management Zone is provided below.

FY 2019 Permitted Pumpage by Management Zone			
Edwards MZs	gallons	cfs	acre-feet
Historical (Individual)	2,309,082,596	9.79	7,086
Historical (LPP)	2,500,000	0.011	8
Total Historical	2,311,582,596	9.80	7,094
Conditional (Individual)	351,694,948	1.49	1,079
Conditional (LPP)	56,000,000	0.24	172
Total Conditional	407,694,948	1.73	1,251
Total Edwards	2,719,277,544 gal	11.53 cfs	8,345 ac ft

Trinity MZs	gallons	cfs	acre-feet
Historical (Individual)	506,381,557	2.15	1,554
Historical (LPP)	19,500,000	0.08	60
Total Trinity	525,881,557 gal	2.23 cfs	1,614 ac ft

Other Aquifers MZs	gallons	cfs	acre-feet
Historical (Individual)	2,500,000 gal	0.01 cfs	8 ac ft
Historical (LPP)	0	0	0
Total Other Aquifers	2,500,000 gal	0.01 cfs	8 ac ft

Total Permitted	3,247,659,101 gal	13.77 cfs	9,967 ac ft
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A summary of the actual versus permitted production volumes for each Management Zone is also provided below.

FY 2019 Production from Individual Permittees		
Production Zone	Actual Production	Permitted Individual Production
Edwards	1,550,915,519	2,660,777,544
Trinity	200,300,364	506,381,557
Austin Chalk or Alluvial	174,450	2,500,000
Total (Gallons)	1,751,390,333	3,169,659,101
	(5,374.81 ac ft)	(9,727.31 ac ft)

FY 2019 Production from Limited Production Permits		
Production Zone	Actual Production*	Permitted Limited Production
Edwards	12,235,041	58,500,000
Trinity	4,078,347	19,500,000
Austin Chalk or Alluvial	0	0
Total (Gallons)	16,313,338	78,000,000
	(50.06 ac ft)	(239.37 ac ft)
<i>*Actual production is a volume estimate calculation described in the findings and conclusions of the BSEACD Staff Report 2010. Average annual exempt well production is approximately 104,473 gpy</i>		

A summary and description of the estimated exempt well production volumes for the Edwards and Trinity Management Zones is also provided below.

**Edwards Aquifer –
Estimated Exempt Wells Production**

Average Annual Volume per Exempt Well (gpy)	104,573
Total Est Volume of Exempt Well Production (gpy) *	105,514,157
<i>Est # of wells</i>	1009
<i>cfs</i>	0.45
<i>% of Permitted Production</i>	4.26%
<i>Permitted Edwards Production (gpy)</i>	2,719,277,544

*2010 BSEACD Staff Report – Avg Exempt Well Use=104,573 gpy

**Trinity Aquifer –
Estimated Exempt Wells Production**

Average Annual Volume per Exempt Well (gpy)	104,573
Total Est Volume of Exempt Well Production (gpy) *	120,258,950
<i>Est # of wells</i>	1150
<i>cfs</i>	0.51
<i>% of Permitted Trinity Production</i>	23%
<i>Permitted Trinity Production (gpy)</i>	525,881,557

*2010 BSEACD Staff Report – Avg Exempt Well Use=104,573 gpy

Edwards Aquifer Exempt Use Estimates

The most current estimate for Edwards exempt well production is described in a 2010 District report (Banda et al., 2010). The methodology findings are fully described and involve using GIS to count the total number of potential exempt water wells within the District, and determine how to add them to existing databases of wells. A volume of annual estimated production from exempt wells was based upon water-use profiles and metered data. The 2010 report's findings conclude that the estimated production volumes for Edwards Exempt wells was 104,050,000 gal (0.44 cfs) and the estimated number of exempt wells was 995. This volume was approximately equal to 5% of the permitted volume at that time, and was thought to be a proportion that could be applied going forward. However, considering the current estimate of exempt Edwards wells is about 1009, the number, and therefore volumetric use of exempt Edwards is relatively constant and substantiate the use of the 0.44 cfs.

Trinity Aquifer Exempt Use Estimates

Very few exempt Trinity wells existed in the District prior to the HB 3405 annexation. After annexation of a large portion of Hays County, the total number of exempt Trinity wells within the District was largely unknown due to the complexity of geology, aquifer completion, and lack of available information. In 2019, District staff developed a method to help estimate the number of exempt wells completed in the Trinity Aquifer in the District that focused on the annexation area. The results of the methodology are briefly described in BSEACD Staff Report 2019 (Gary et al., 2019). The methodology estimates the number of exempt Trinity wells using GIS, and considers existing well completions, water service areas, geology, and County Appraisal District information. Results estimated that the number of exempt wells was 1150 wells. Considering meter data and average annual household use, the estimated production volumes for Trinity Exempt wells are approximately 120,260,000 gal (0.51 cfs).

3.0 REQUIRED DATA AND INFORMATION

The District Bylaws, and MP require a number of specific items to be included in the Annual Report. This information is included in the following subsections of the Annual Report.

3.1 Aquifer Status

FY 2019 began with a status of Stage II Alarm Drought declared by the Board on July 12, 2018. An average of 13 inches of rain in September to October provided much needed recharge to the Edwards and Trinity aquifers. These rains revived aquifer water levels and Barton Springs flow, elevating to above Stage II Alarm drought warning levels. The Board subsequently updated the drought status from Stage II Alarm Drought to NO Drought on October 11, 2018. The calendar year ended with some of the wettest December weather ever recorded. By New Year's Eve, six inches of rain had fallen in Austin and the Hill Country for the month of December, more than two times the average. January 2019 provided about three additional inches, exceeding its historical average of 1.9 inches.

A combined 14 inches of spring rain fell in May and June 2019 providing even more recharge. Barton Springs flow quickly responded to the fall 2018 rains and additional spring 2019 rains to maintain an average daily spring flow of 100 cfs throughout FY 2019. On June 14, 2019, water level measurements in the Lovelady monitor well had risen to surpass the third highest peak recorded in 2003 (536.0 ft-msl or 117.4 ft-dtw).

Summer came with a drying trend. Below-average rainfall initiated a rapid decline at the Lovelady well beginning July 15, 2019. This decrease has continued through a dry fall season and is projected through the winter.

To summarize, the Austin/Hill Country area has received an average 27 inches of rainfall so far in 2019, producing significant recharge for local aquifers. However, official forecasts point toward drier and milder-than-normal conditions across Central Texas, which will likely result in further declines as 2020 gets underway. It is anticipated that spring will bring its usual upward swing of recharge to keep the aquifers well-supplied.

3.2 Grant Programs

During FY 2019, Aquifer Science staff have worked on a grant from Travis County to study the hydrogeology of southwest Travis County. The District was awarded \$100,000 by Travis County which paid for one year of a full-time hydrogeologist (Lane Cockrell) and a half-time education specialist (Jackie Vay), in addition to paying for supplies, sample analyses, and geophysical logging of wells, among other items. A significant amount of data has been collected in FY 2019, and a draft report is being compiled to summarize the data along with interpretations of the data. A final report will be completed in FY 2020.

A second grant of \$75,000 has been awarded to the District to do similar work in FY 2020.

3.3 Professional Services

The District expended \$213,667 for professional services in FY 2019.

This amount included legal fees of \$169,793 for general counsel support provided by Bickerstaff, Heath, Delgado & Acosta LLP of Austin, and included involvement of the District and its attorneys in the following billing categories: Needmore \$58,690; Dripping Springs TPDES \$1,033; General Matters/Personnel \$36,371; and EP \$73,700.

There were no legal services associated uniquely with grant projects as grant-billable costs.

Additional professional services for FY 2019 also reported in the above amount include the District's third-party retirement plan administrator, The Standard, for \$23,554; \$5,800 for the database project, and \$2020 in the Elections category.

The District retained Montemayor Britton Bender PC early in 2016 to perform its annual financial audits. The fee for these professional services is \$13,000 for FY 2019, and is also included in the professional services total above.

Not included in the professional services total above, the District expended \$36,000 for the lobbying services of SledgeLaw Group for the 86th Legislative Session. The District has changed the timing of when legislative issues are addressed from a biennial expense to an ongoing expense according to a new term of agreement dated July 1, 2016, being a flat-fee structure bifurcated between legislative session months and legislative interim months spread across 24 months. During legislative months – November of even-numbered years through June of odd-numbered years, the fee will be \$4,000 per month. During legislative interim months – July of odd-numbered years through October of even-numbered years, the fee will be \$1,000 per month, therefore one year there will be \$36,000 in legislative expenses, and the following year there will be \$12,000 in legislative expenses.

These professional services do not include the contracted labor that comprises programmatic support to various team initiatives and that is budgeted as part of the individual team budgets.

3.4 Capital Projects

There were no District capital projects in FY 2019.

3.5 Financial Report

As authorized in the District Bylaws, the Board utilizes the Texas Treasury Safekeeping Trust Company (commonly referred to as "TexPool") as a depository for its funds not required by its current operations. There are several built-in controls and safeguards in the TexPool account mechanisms. The District has established and maintains funds in three TexPool accounts to further minimize risk and to partition funds designated for certain potential uses. To facilitate payments and timely deposits, the District also maintains both checking and payroll accounts with Branch Banking and Trust Company - BB&T, which are FDIC-insured. Monies are moved electronically between these BB&T accounts and the TexPool accounts, generally keeping funds not required by current operations in TexPool, and therefore the cash balances in the operating bank accounts as small as prudently feasible. The District has no additional monetary investments other than its cash fund accounts.

End-of-the-year cash and account balances and an independent assessment of financial controls will be found in the Annual Audit Report, to be included here as Appendix A, upon completion of the financial audit.

3.6 Evaluation of District's Long-Range Plan Pursuant To §36.1071

3.6.1 Background

TWC §36.1071 requires all GCDs to establish and maintain a long-range comprehensive plan for groundwater management in the District. This long-range plan is a ten-year plan called the District Management Plan (MP). The MP must be reviewed, revised as necessary, readopted, and reapproved at least once each five years. The current plan was adopted in November of 2017. Pursuant to the code provisions, all GCDs are required to assess progress quantitatively toward the objectives in their prevailing MP at least annually. This assessment is summarized in the following Section 3.6.2, and elaborated on in Appendix B of this Annual Report.

3.6.2 Board Evaluation of Goals, Objectives, and Progress Assessment

Section 2.0 of this report highlights some activities for each of the operational teams. A more comprehensive and detailed listing of the activities of the District is included in Appendix B, which was prepared by the staff to assist the Board's evaluation of the progress made in FY 2019 toward the goals, objectives, and performance standards identified in the prevailing District MP.

On December 12, 2019, the Board reviewed the information in Appendix B, discussed its conformance with the plan objectives and their subsidiary performance standards, and then took action to evaluate progress made by the District toward these strategic objectives, as specified in the metrics for each of the objectives. Following a proper motion and second, and discussion in a properly noticed Open Meeting, the Board unanimously approved the progress toward each and all objectives in FY 2019 as being satisfactory. The basis for that decision-making is included in this Annual Report as Appendix B.

This assessment for FY 2019 measured the progress towards the goals and objectives of the current MP, which was approved by the TWDB on November 21, 2017, and will serve as the basis for the Board's next evaluation of the plan's objectives in FY 2020.

APPENDIX A

Independent Annual Financial Audit Report

(Board-approved December 12, 2019)



Montemayor Britton Bender PC

CERTIFIED PUBLIC ACCOUNTANTS

**BARTON SPRINGS/ EDWARDS AQUIFER
CONSERVATION DISTRICT**

**INDEPENDENT AUDITOR'S REPORT
AND
FINANCIAL STATEMENTS**

31 AUGUST 2019

**BARTON SPRINGS/EDWARDS AQUIFER
CONSERVATION DISTRICT**

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Montemayor Britton Bender PC
CERTIFIED PUBLIC ACCOUNTANTS

Board of Directors
Barton Springs/Edwards Aquifer Conservation District

INDEPENDENT AUDITOR'S REPORT

We have audited the accompanying financial statements of Barton Springs/Edwards Aquifer Conservation District (District) as of and for the year ended 31 August 2019, and the related notes to the financial statements, which collectively comprise the District's basic financial statements as listed in the table of contents.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with the accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgement, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the District's internal control. Accordingly we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.



Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the District as of 31 August 2019, and the changes in financial position and cash flows for the year then ended in accordance with accounting principles generally accepted in the United States of America.

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis on pages 3 through 8 be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board, who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiring of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Montemayor Britton Bender PC

7 December 2019
Austin, Texas

Barton Springs / Edwards Aquifer Conservation District

Management Discussion and Analysis

Fiscal Year Ending August 31, 2019

The following **Management Discussion and Analysis** narrative provides an overview and summary-level analysis of the significant activities and situations that have financial reporting consequence for the fiscal year. This information is provided in conjunction with our financial statements that follow. The percentages shown in the Management Discussion & Analysis narrative are based on the comparisons of the Statements of Revenues, Expenses and Changes in Net Position.

OVERVIEW OF THE FINANCIAL STATEMENTS

Since the activities of the District are financed primarily by fees charged to external parties, such activities are reported as an enterprise fund and are considered a "business-type activity." The financial statements required for an enterprise fund are the Statement of Net Position; the Statement of Revenues, Expenses, and Changes in Net Position; and the Statement of Cash Flows.

The Statement of Net Position presents the District's assets and liabilities, with the difference between the two reported as net position, as of the end of the fiscal year. Over time, increases or decreases in net position are one indicator of whether the financial position of the District is improving or deteriorating.

The Statement of Revenues, Expenses, and Changes in Net Position presents information showing the operating revenues and expenses of the District for the fiscal year, using the accrual basis of accounting. Therefore, revenues are recognized when earned, and expenses are recognized when incurred, regardless of when cash is received or paid.

The Statement of Cash Flows provides information about the cash receipts and cash payments of the District during the fiscal year, summarized by operating, capital and related financing, and investing activities.

Notes to the Financial Statements provide additional information that is essential to a full understanding of the data provided in the financial statements.

CONDENSED FINANCIAL INFORMATION

The following table presents comparative condensed financial information on assets, liabilities and net position.

Condensed Statement of Net Position August 31, 2019, 2018, and 2017

	<u>2019</u>	<u>2018</u>	<u>2017</u>
Current assets	\$1,052,553	\$1,266,839	\$1,378,323
Capital assets	456,188	494,337	449,070
Total assets	<u>\$1,508,741</u>	<u>\$1,761,176</u>	<u>\$1,827,393</u>
Total liabilities	<u>\$209,109</u>	<u>\$282,171</u>	<u>\$292,746</u>
Net position:			
Net investment in capital assets	456,188	494,337	449,070
Unrestricted	<u>843,444</u>	<u>984,668</u>	<u>1,085,577</u>
Total net position	<u>1,299,632</u>	<u>1,479,005</u>	<u>1,534,647</u>
Total liabilities, and net position	<u>\$1,508,741</u>	<u>\$1,761,176</u>	<u>\$1,827,393</u>

The following table presents comparative condensed financial information on revenues, expenses, and changes in net position.

Condensed Statement of Revenues, Expenses and Changes in Net Position Years Ended August 31, 2019, 2018, and 2017

	<u>2019</u>	<u>2018</u>	<u>2017</u>
Operating revenues	\$1,695,028	\$1,772,448	\$1,661,528
Operating expenses	<u>1,903,511</u>	<u>1,845,398</u>	<u>1,723,925</u>
Operating income	<u>(208,483)</u>	<u>(72,950)</u>	<u>(62,397)</u>
Non-operating revenues(expenses)			
Interest income	29,110	17,308	8,023
Interest expense	<u>0</u>	<u>0</u>	<u>0</u>
Total non-operating rev/(exp)	<u>29,110</u>	<u>17,308</u>	<u>8,023</u>
Change in net position	(179,373)	(55,642)	(54,374)
Beginning net position	<u>1,479,005</u>	<u>1,534,647</u>	<u>1,589,021</u>
Net position end of year	<u>\$1,299,632</u>	<u>\$1,479,005</u>	<u>\$1,534,647</u>

FINANCIAL HIGHLIGHTS OF CHANGES IN OPERATING REVENUES

The discussion that follows is based on August 31, 2019 (FY 2019) preliminary financial reports.

Permittees' Production Fees and Annual Permit fees, Transport (export) fees, and City of Austin/Austin Water Utility Water Use fees (exclusive of conservation credits), together decreased by \$125,915 in FY 2019 from the prior year to \$1,567,280 from \$1,693,195. This decrease is directly attributed to the City of Austin Water Use Fee that was assessed in the amount of \$870,501 for FY 2019 but was assessed in the amount of \$1,000,000 (the HB 3405 statutory cap) for FY 2018 (12.9% reduction). The City of Austin fee was calculated for FY 2019 based on an extensive analysis of the projected permitted pumping in accordance with the statutory formula.

Included in the production revenue above are transport permit fees. There continue to be two District transport permits that generated \$124,000 in transport fees revenue in both FY 2019 and FY 2018.

All "Other Fees" includes revenue derived from variable sources such as well development fees, well application and inspection fees, well pluggings, meter reading and late fees, and drought management fees (fees applicable only during a District-declared drought). Revenue from Other Fees was budgeted to be \$9,800. Actual Other Fees earned at fiscal year-end were \$14,297 which was a \$169 (1.17%) decrease from the previous year of \$14,466. This similarity is coincidental as these fees are generally random.

Drought management fees (mentioned above) are assessed for permittee noncompliance only during a District-declared drought of three months or longer. The District declared Stage II Alarm Drought on July 12, 2018 which means the three-month period to begin assessing drought management fees would begin with August 1, 2018. Stage II Alarm Drought ended on October 11, 2018 (the beginning of FY2019) so no drought management fees were assessed or collected for FY 2018. The District was in No Drought status for the entire FY 2019, therefore there were no drought management fees assessed or collected for FY 2019.

Interest income in FY 2019 as expected continues to be minimal but is a substantial increase (68.19%) from the prior year. Actual interest income received for FY 2019 was \$29,110 as compared to \$17,308 in FY 2018 (a difference of \$11,802).

There was no grant revenue in FY 2019. All grant revenue (that offset much of the grant expense incurred in both FY 2016 and FY 2017 for the TWDB regional facilities grant project) was realized through reimbursement from the TWDB in FY 2018 (\$226,157).

In August of FY 2018, there was a Board-approved ILA signed with Travis County for the Southwestern Travis County Hydrogeologic Project for work to be done throughout the entire year of FY 2019. This project generated \$100,000 in revenue, although this was spent on the project.

Two numbers showing up in deferred revenue are deposits for two separate contested case hearings that have been referred to the State Office of Administrative Hearings (SOAH). In FY 2018, Electro Purification (EP) deposited \$70,000; in FY 2017, TESPAs deposited \$31,000 with the District. These funds are to pay the SOAH invoices that are charged to the District. These funds are to pay the SOAH invoices that are charged to the District. Any funds not used will be returned to the applicants.

The EP deposit held in a sub – category of the TexPool General Fund, and has been reduced by \$8,440 (the total paid to SOAH for FY 2019) and currently has a balance of \$61,560.

The TESPAs deposit balance of \$22,456 was refunded on June 3, 2019.

FINANCIAL HIGHLIGHTS OF CHANGES IN OPERATING EXPENSES

The discussion that follows is based on FY 2019 financial reports.

Expenses for personnel salaries and wages for FY 2019 were \$998,485 which is \$157,000 more than the previous year's expense of \$841,485 (an approximate 19% increase, that also affected the payroll taxes with an increase of 18%, from \$64,359 to \$75,917; and an approximate 14% increase to the District's retirement contribution, from \$55,727 in FY 2018 to \$63,745 in FY 2019). The higher salaries in FY 2019 were a result of planned staffing, salary survey adjustments, and COLA and merit adjustments.

Actual expenses for employee group insurance benefits in FY 2019 were \$153,038 which is \$27,311 more than the FY 2018 expense of \$125,727. This includes employee premiums, 25% of employee dependent premiums, family dental, employee life insurance, and employee vision. This line item usually increases annually. The area it increased the most was employee health premiums, due to a new full-time employee hired in FY 2019, and increased premium rates.

Actual expense for directors' compensation for meetings in FY 2019 is \$35,300 which is barely less than the FY 2018 actual expenses of \$35,700 (a 1.1% decrease). In this category, the statutory maximum annual amount, which has not increased, of \$9,000 per director per fiscal year, was always budgeted at the full amount of \$45,000 for the five directors. (However, that changed in the budgeting process for FY 2020 where the budget was reduced to a lesser amount than the maximum allowed.)

Direct expenses associated with the ongoing work of the various programmatic teams (Aquifer Science, Education and Outreach, and Regulatory Compliance) are not meaningfully comparable on a year-on-year basis, because the work programs of each vary and also cross over fiscal years. These teams' efforts were judged by the Board to have made sufficient progress towards achieving the District's Management Plan goals (Appendix B of the draft Annual Report) and within their budget and schedule constraints, which are the more meaningful management measures.

Since the District holds elections no more often than every two years (in odd-numbered fiscal years, if and when election contests warrant), the Elections account typically shows large percentage differences from year to year. Similarly, the majority of expenses for legislative support services tend to be biennial with the Texas Legislative Regular Sessions in odd-numbered fiscal years. So, year-on-year expenses will vary.

The majority of election expenses are incurred in the fiscal year building up to November elections in even-numbered calendar years. The District cancelled the November 2018 since there was no opposition to incumbent directors for precinct 2 and precinct 5. Although the November 2018 election day is actually in FY 2019, the \$2,974 in expenses occurred in FY 2018. The final payment for the election for FY 2018 was paid out in FY 2019 for an additional \$2,020. The election expense is included in the Professional Services expenses.

Regarding expenses for legislature support services, the District has changed the timing of when such services are needed from a biennial expense to an ongoing expense according to the new term of agreement dated July 1, 2016. The new agreement establishes a flat-fee structure bifurcated between legislative session months and legislative interim months spread across 24 months. During legislative months (November of even-numbered years through June of odd-numbered years), the fee will be \$4,000 per month. During legislative interim months (July of odd-numbered years through October of even-numbered years), the fee will be \$1,000 per month. So, legislative support service expenses will cycle biennially with \$36,000 incurred in the year with legislative months and \$12,000 in the following year with legislative interim months. Therefore, in 2019, legislative expenses were \$36,000 compared to the \$13,000 in FY 2018.

In FY 2019, actual Professional Services expenses (excluding legal expenses which are characterized below) were \$38,579 as compared to \$54,709 in FY 2018 (which is a 29.5% decrease). These professional services include the annual financial audit, the Standard retirement plan administration, and incidental election expenses. In addition, there was a Salary Survey project completed for \$14,500. This expense category should discontinue after the project reaches completion.

Other professional services are team-specific and are included in team budgets as contracted support expenses.

Legal Services expenses continue to increase. Actual expenses for FY 2019 were \$152,237 compared to \$138,092 in FY 2018; an increase of 10.2% or \$14,145. This level of expense is due to ongoing efforts associated with the HB 3405 annexation of the Shared Territory, prospective contested case hearings, and other extraordinary legal matters.

Several expense accounts or sub-accounts showing large percentage changes reflect small dollar amounts in one or both years leading to relatively large proportional changes.

KEY FACTORS INFLUENCING CAPITAL ASSETS

Capital assets subject to depreciation include building, vehicles, and equipment with an original cost that is greater than \$5,000 and with a life exceeding one year. Land is not depreciated.

There were no facilities upgrades in FY 2019. In FY 2018, there was one capital improvement project in Facilities Upgrades that was initiated and completed for \$6,750 to replace the back deck.

In Facilities Repairs and Maintenance for FY 2019, \$5,000 was spent on a new HVAC unit. In FY 2018, \$3,598 was spent, of which \$2,584 was for vine removal. The rest of the balance was for a few small repairs such as lighting fixtures, and HVAC repairs.

KEY FACTORS INFLUENCING CHANGES IN CASH FUNDS

The available cash funds (two BB&T accounts and one TexPool General account, excluding the contingency, and reserve funds) at the end of FY 2019 totaled \$226,024 which is \$122,025 less than the prior year's total of \$348,049. Differences in these funds are mostly attributable to the timing of receipts of water use fee payments from permittees and the City of Austin and their resulting deposits. But in this instance, it is directly attributable to the cash flow deficit (due to unrealized projected revenues) that occurred in FY 2019.

In July 2019, the District cancelled all further FY 2019 expenses except for those necessary. This included some major budget cuts for FY 2019. This was due to the growth projections and projected new permits not being realized, a process that has been an issue for several years. From this issue, a new process was born, and the budgeted projected income at the beginning of the year are now reduced by those projected amounts.

ANTICIPATED CHANGES FOR FY 2020:

The following events and initiatives affecting the revenue, cost, and financial management have not occurred yet or have not yet substantially impacted the financial performance of the District, but are expected or potentially expected to occur and be potentially significant to financial performance and/or condition in FY 2020.

- Completion of the Southwestern Travis County Hydrogeologic Project Phase II.
- Installation (completion) of Hays County multiport wells – Jacobs Well Project.
- Creation of a Board three-year fiscal policy.
- Continuation of one contested case/legal challenges associated with a controversial permit applications in the Shared Territory – Electro Purification.
- Elimination of the objectives-based incentive compensation salary program (which was 5% per employee).
- Reduction of FY 2019 COLA and merit raise percentages.
- Elimination of District-paid dependent dental premiums.
- Temporary elimination of the annual senior discretionary funds.
- Budget reduced to bare bones, reduced by over \$300,000.
- Contracting with a Meeting Facilitator.

CONTINGENCY PLANNING ASSETS

The cash assets include \$716,588 designated by the Board for certain unanticipated legal expenses and other contingencies. This was the balance of the Contingency Account at the end of FY 2019. In FY 2018, the balance of this account at the end of the year was \$792,189, so there was a decrease of approximately \$76,000 due to the cash flow deficit in the 4th quarter of FY 2019, and money was transferred from the Contingency Fund into the General Fund to pay for operating expenses.

The Texas Legislature has by statute declared Groundwater Conservation Districts (GCD) as the preferred method of groundwater management in the state (Texas Water Code, §36.0015(b)). Chapter 36 also affirms that groundwater is private property. The common law further affirms that groundwater, as private property in place, is constitutionally protected from regulatory takings and that any lawful GCD action that is determined by a court to be a taking of private property will require just compensation.

While taking claims are very fact-specific and complex to litigate, the possibility exists that the District may take a lawful action that limits a landowners access to their private property (groundwater) that may be determined by a court to be a regulatory takings. Such a determination will require substantial expense to litigate and/or pay for such just compensation to remedy the takings. This potential legal risk is relatively low but is planned for by the Board by reserving certain funds as a contingency for this scenario or other matters that may require substantial expense by the District.

Additionally, annexation of the Shared Territory in Hays County resulting from HB 3405 has increased the District's jurisdictional area and the number of permits that are process and issued by the District. The increase number of permits also increases the probability of potential contested cases and the associated legal expenses.

BARTON SPRINGS/EDWARDS AQUIFER CONSERVATION DISTRICT
STATEMENT OF NET POSITION PROPRIETARY FUND
31 AUGUST 2019

ASSETS

Current assets

Cash	\$108,619
Short-term investments (including \$716,588 designated by the Board for future legal expenses)	941,588
Other	<u>2,346</u>
	<u>1,052,553</u>

Noncurrent assets

Nondepreciable capital assets	296,774
Depreciable capital assets	<u>159,414</u>
	<u>456,188</u>
	<u>1,508,741</u>

LIABILITIES

Current liabilities

Accounts payable	9,152
Conservation credits payable (Note 5)	21,502
Accrued payroll	66,819
Amounts held for others (Note 11)	61,560
Unearned permit and fee revenue	<u>50,076</u>
	<u>209,109</u>

NET POSITION

Net investment in capital assets	456,188
Unrestricted	<u>843,444</u>
	<u>\$1,299,632</u>

The accompanying notes are an integral part of this financial statement presentation.

**BARTON SPRINGS/EDWARDS AQUIFER CONSERVATION DISTRICT
 PROPRIETARY FUND
 STATEMENT OF REVENUE, EXPENSES, AND CHANGES IN FUND NET POSITION
 YEAR ENDED 31 AUGUST 2019**

OPERATING REVENUE	
Water permits and fees	\$1,581,577
Travis County inter local agreement	100,000
Other	<u>13,451</u>
	<u>1,695,028</u>
OPERATING EXPENSES	
Personnel and related	1,303,623
Legal	152,237
Depreciation and amortization	43,949
Projects	38,741
Professional services	38,579
Aquifer science	38,042
Legislation	36,000
Director compensation	35,300
General management	33,259
Education and outreach	22,885
Utilities	20,531
Regulatory compliance	17,141
Maintenance	16,992
IT monthly maintenance	12,000
Other	<u>94,232</u>
	<u>1,903,511</u>
OPERATING INCOME	<u>(208,483)</u>
NONOPERATING REVENUE	
Interest income	<u>29,110</u>
CHANGE IN NET POSITION	(179,373)
BEGINNING NET POSITION	<u>1,479,005</u>
ENDING NET POSITION	<u>\$1,299,632</u>

The accompanying notes are an integral part of this financial statement presentation.

BARTON SPRINGS/EDWARDS AQUIFER CONSERVATION DISTRICT
PROPRIETARY FUND STATEMENT OF CASH FLOWS
YEAR ENDED 31 AUGUST 2019

CASH FLOWS FROM OPERATING ACTIVITIES

Receipts from water permit and other use fees	\$1,552,714
Other cash receipts	81,900
Payments to employees for services	(1,330,428)
Payments to suppliers for goods and services	<u>(541,546)</u>
	<u>(237,360)</u>

CASH FLOWS FROM CAPITAL AND RELATED FINANCING ACTIVITIES

Purchase of capital assets	<u>(5,800)</u>
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CASH FLOWS FROM INVESTING ACTIVITIES

Purchases from sale of investments	205,899
Interest received on investments	<u>29,110</u>
	<u>235,009</u>

NET CHANGE IN CASH	(8,151)
BEGINNING CASH	<u>116,770</u>
ENDING CASH	<u>\$108,619</u>

Reconciliation of operating income to net cash provided by operating activities:

Net operating income	(\$208,483)
Depreciation and amortization	43,949
Change in accounts receivable	35
Change in prepaid expense	201
Change in accrued payroll liabilities	8,495
Change in accounts payable	(21,108)
Change in unearned fees related to water fees	<u>(60,449)</u>
	<u>(\$237,360)</u>

The accompanying notes are an integral part of this financial statement presentation.

BARTON SPRINGS/EDWARDS AQUIFER CONSERVATION DISTRICT

NOTES TO FINANCIAL STATEMENTS

NOTE 1: ORGANIZATION

The Barton Springs/Edwards Aquifer Conservation District (District) is a Groundwater Conservation District created in 1986 by the Texas Water Commission, validated in 1987 by the 70th Legislature of the State of Texas (Senate Bill 988), and confirmed by the voters on 8 August 1987. As a Groundwater Conservation District, the District's statutory purpose and adopted mission is to conserve, preserve, protect, enhance recharge, and prevent waste of groundwater and preserving all aquifers within the District.

Upon creation, the District's jurisdictional area encompassed approximately 255 square miles and was generally defined to include all the area within the Barton Springs segment of the Edwards Aquifer with an extended utility service area to the east. In 2015, the 84th Texas Legislature (House Bill 3405) expanded the District's jurisdictional area to include the portion of Hays County located within the boundaries of the Edwards Aquifer Authority excluding the overlapping area in the Plum Creek Conservation District. The newly annexed area, designated as "Shared Territory," excludes the Edwards Aquifer and includes all other aquifers, including the underlying Trinity. The District's jurisdictional area now encompasses approximately 420 square miles and includes both urban and rural areas in southern Travis County, central and eastern Hays County, and portions of northwestern Caldwell County.

The District's statutory authority is derived primarily from the enabling legislation creating the District, Senate Bill 988, 70th RS, now codified at Special District Local Laws Code Chapter 8802, and Chapter 36 of the Texas Water Code. The enabling legislation creating the District provides that the District may assess fees "on an annual basis, based on the size of column pipe used in the wells, the production capacity of the well, or actual, authorized, or anticipated pumpage." The House Bill 2294 in the 74th Legislative Session further provided that the City of Austin can be required to pay a water use fee not exceeding 60% of the sum of (1) the total production fees received from all permitted users, and (2) the water use fee of the City of Austin. House Bill 3405 (HB 3405) further amended the District's enabling legislation by setting limits on the total annual water use fee assessed to the City of Austin.

The financial statements of the District are prepared in accordance with generally accepted accounting principles (GAAP). The Governmental Accounting Standards Board (GASB) is responsible for establishing GAAP for state and local governments through its pronouncements (Statements and Interpretations). Governments are also required to follow the pronouncements of the Financial Accounting Standards Board (FASB) issued through 30 November 1989 (when applicable) that do not conflict or contradict GASB pronouncements. Although the District has the option to apply FASB pronouncements issued after that date, the District has chosen not to do so. The more significant accounting policies established in GAAP and used by the District are discussed below.

BARTON SPRINGS/EDWARDS AQUIFER CONSERVATION DISTRICT

NOTES TO FINANCIAL STATEMENTS

NOTE 2: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

MEASUREMENT FOCUS AND BASIS OF ACCOUNTING

The District's business-type activities are presented on the accrual basis of accounting. Fees and charges and other exchange revenues are recognized when earned and expenses are recognized when incurred.

REPORTING ENTITY

These financial statements present the operations of the District alone, and include no component units. As defined by GASB Statement No. 14 the *Financial Reporting Entity*, and GASB Statement No. 39, *an Amendment to Statement No. 14*, component units are legally separate entities that would be included in the District's reporting entity because of the significance of their operating or financial relationships with the District. Based on the specific criteria in the Statements, the District has no component units and is not a component unit of any other reporting entity as defined by the Statements.

GOVERNMENT-WIDE AND FUND FINANCIAL STATEMENTS

Basic financial statements of a governmental entity normally include both government-wide and fund financial statements. However, because the District only has one fund, only fund financial statements are presented.

The District's operations are accounted for in the proprietary fund type called an enterprise fund. Enterprise funds are required to be used to account for business-type operations for which a fee is charged to external users for goods or services. The focus of proprietary fund measurement is upon determination of operating income, changes in net position, financial position, and cash flows.

CAPITAL ASSETS

Capital assets purchased or acquired with an original cost of \$5,000 or more are reported at historical cost or estimated historical cost. Additions, improvements and other capital outlays that significantly extend the useful life of an asset are capitalized. Other costs incurred for repairs and maintenance are expensed as incurred.

Well monitoring access rights are capitalized at costs incurred by the District and amortized on a straight line basis over the useful life stated in the well right agreement. Well monitoring access rights with an indefinite life are not amortized; however, they are evaluated for impairment annually. The well monitoring access rights will enable the District to perform tests and collect data on the saline portion of the Edwards aquifer that will assist in evaluating the effects of pumping, and inform its feasibility as an alternative water supply.

BARTON SPRINGS/EDWARDS AQUIFER CONSERVATION DISTRICT

NOTES TO FINANCIAL STATEMENTS

NOTE 2: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

CAPITAL ASSETS

Depreciation/amortization on all assets is provided on the straight-line basis over the following estimated useful lives:

<u>Description</u>	<u>Years</u>
Building and improvements	25-30
Office furniture and equipment	3-10
Field equipment	5-7
Vehicles and finite life well monitoring access rights	5

UNEARNED REVENUE

Unearned revenue consists of water permit fees received in the current fiscal year which are applicable to the succeeding fiscal year. These fees will be recognized as revenue in the fiscal year to which they apply.

OPERATING REVENUE AND EXPENSES

The District proprietary fund type distinguishes between operating and nonoperating revenues and expenses. Operating revenues and expenses consist of charges for services (consisting of fees assessed for permittees' permitted pumpage) and the costs of providing those services, including depreciation. All other revenues and expenses are reported as nonoperating. There were no significant nonoperating revenues or expenses during the year.

NET POSITION

Net position represents the difference between assets, liabilities, and deferred inflows. Net investment in capital assets consists of capital assets, net of accumulated depreciation, reduced by the outstanding balances of any borrowing used for the acquisition, construction or improvements of those assets.

ESTIMATES

The preparation of financial statements in conformity with U.S. generally accepted accounting principles require management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

BARTON SPRINGS/EDWARDS AQUIFER CONSERVATION DISTRICT

NOTES TO FINANCIAL STATEMENTS

NOTE 2: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

ACCRUED PAYROLL

The District accrues accumulated unpaid vacation leave and the related payroll taxes and retirement contributions earned by the employee.

NOTE 3: DEPOSITS AND INVESTMENTS

At 31 August 2019, the carrying amount of the District's cash deposits was \$108,619, and the bank balance was \$85,054. Short-term investments of \$941,588 are invested with TexPool. TexPool investments are carried at amortized cost, which approximates fair value.

Chapter 2256 of the Texas Government Code (the Public Funds Investment Act) authorizes the District to invest its funds in a manner that primarily emphasizes safety of principal and liquidity, addresses investment diversification, yield, and maturity and addresses the quality and capability of investment personnel.

TexPool is a local government investment pool. These investments are carried at amortized cost, which approximates fair value. The State Comptroller oversees TexPool, with Federated Investors managing the daily operations of the pool under a contract with the State Comptroller. TexPool allows shareholders the ability to deposit or withdraw funds on a daily basis. Such funds seek to maintain a constant net asset value of \$1.00, although this cannot be fully guaranteed. TexPool is rated AAAM (the highest rating a local government investment pool can achieve) and must maintain a dollar weighted average maturity not to exceed 60 days, which is the limit. At 31 August 2019, the TexPool portfolio had a weighted average maturity of 38 days. However, the District considers the holdings in this fund to have a one day weighted average maturity because the share position can usually be redeemed each day at the discretion of the shareholder, unless there has been a significant change in value.

The District has adopted an investment strategy to pursue limited investment risk, the objectives of which are safety of principal, maintenance of adequate liquidity, maximization of return on investments and maintain public trust from prudent investment activities. The District is authorized to invest in its depository accounts with banks or invest in TexPool. During the year, the District complied with its investment policy.

NOTE 4: RISK MANAGEMENT

The District is exposed to various risks of loss including general liability, property damage, and workers' compensation. The District insures against risk through commercial insurance.

BARTON SPRINGS/EDWARDS AQUIFER CONSERVATION DISTRICT

NOTES TO FINANCIAL STATEMENTS

NOTE 5: CONSERVATION CREDITS PAYABLE

The District supports and encourages a permittee's efforts to conserve water and to reduce annual pumpage as a result of conservation efforts by providing a credit to the permittee's account for the ensuing fiscal year. To be eligible for the credit, the permittee's reported pumpage volume must be less than the maximum amount pumped on an annual basis in the last three fiscal years, and the permittee must meet other requirements regarding submission of timely payments and meter readings. Conservation credits awarded for fiscal year ending 31 August 2019 amounted to \$21,502.

NOTE 6: CONCENTRATION

51% of the District's total revenue for the year is from the City of Austin.

NOTE 7: RETIREMENT PLAN

Effective 1 September 1991, the District's Board of Directors established a defined benefit contribution retirement plan, which is a money purchase pension plan and trust, known as the Barton Springs/ Edwards Aquifer Conservation District Retirement Plan and Trust (the Plan). The Plan is administered by Standard Retirement Services, Inc. and provides retirement benefits for all full-time employees who are at least twenty-one years of age and have twelve months of service.

The administrator separately accounts for each employee participant's interest in individual accounts, and investments are participant directed. The required employee contribution rate is 7.5% and is matched by the District in the same amount. Upon entry to the Plan, employees are 50% vested in the District's contributions. After two years of service, eligible employees become 100% vested. Forfeitures are allocated first to pay Plan administrative expenses, then used to reduce employer contributions. For fiscal year ended 31 August 2019 the District's contribution to the Plan was \$63,745.

NOTE 8: OPERATING LEASE

The District has entered into leases for equipment which expire in 2021. For the fiscal year ended 31 August 2019 rent expense was approximately \$10,600. Future minimum lease payments for the operating leases are \$9,170 for the fiscal year ending 31 August 2020 and \$7,782 for the fiscal year ending 31 August 2021.

BARTON SPRINGS/EDWARDS AQUIFER CONSERVATION DISTRICT

NOTES TO FINANCIAL STATEMENTS

NOTE 9: CAPITAL ASSETS

	<u>Beginning Balance</u>	<u>Increase</u>	<u>Decrease</u>	<u>Ending Balance</u>
Capital assets not depreciated/amortized:				
Land	\$165,415	\$0	\$0	\$165,415
Well monitoring access rights, indefinite life	36,343	0	0	36,343
Database	<u>89,216</u>	<u>5,800</u>	<u>0</u>	<u>95,016</u>
	<u>290,974</u>	<u>5,800</u>	<u>0</u>	<u>296,774</u>
Depreciable/amortizable assets:				
Building and improvements	268,588	0	0	268,588
Office furniture and equipment	33,252	0	0	33,252
Field equipment	386,708	0	0	386,708
Vehicles	78,339	0	0	78,339
Well monitoring access rights, finite life	127,705	0	0	127,705
Accumulated depreciation/amortization:				
Building and improvements	(160,569)	(10,926)	0	(171,495)
Office furniture and equipment	(33,252)	0	0	(33,252)
Field equipment	(367,987)	(7,482)	0	(375,469)
Vehicles	(78,339)	0	0	(78,339)
Well monitoring access rights, finite life	<u>(51,082)</u>	<u>(25,541)</u>	<u>0</u>	<u>(76,623)</u>
	<u>203,363</u>	<u>(43,949)</u>	<u>0</u>	<u>159,414</u>
	<u>\$494,337</u>	<u>(\$38,149)</u>	<u>\$0</u>	<u>\$456,188</u>

NOTE 10: LITIGATION

The District was not actively involved in any litigation during FY 2019. However, there were other legal matters beyond general matters (discussed below) that required material expenditures for legal services in FY 2019.

BARTON SPRINGS/EDWARDS AQUIFER CONSERVATION DISTRICT

NOTES TO FINANCIAL STATEMENTS

NOTE 10: LITIGATION

- A. With the passage of HB 3405 in the 2015 legislative session, the District expanded its boundaries to include previously unregulated portions of the Trinity Aquifer (and other non-Edwards aquifers) in Hays County. The bill also required the issuance of temporary permits and subsequently, the conversion of those temporary permits into regular permits for existing well owners. In FY 2019, the District continued the implementation of HB 3405 requiring substantial legal expense primarily related to the conversion of the temporary permit into a regular permit for Needmore Water, LLC. In FY 2017, this permit conversion was contested and referred by the Board to the State Office of Administrative Hearings (SOAH) to conduct a contested case hearing. In FY 2018, the SOAH Administrative Law Judge issued a ruling dismissing the protestant's Motion for Summary Disposition in the contested case, granting Needmore and BSEACD's Motions and cancelling the Hearing on the Merits. In FY 2019, the Board again referred the case to the SOAH for further determination on the merits of the case and the Judge provided her decision. Based upon this decision, in July 2019, the Board conducted a hearing on the permit and subsequently approved it. Since then, the protestant's requested a rehearing. Because of this request, the District anticipates additional legal expenses associated with ongoing activities related to the Needmore Water LLC permit in FY 2020.
- B. In FY 2019, the District revised its recommended draft proposed permit for the Electro Purification LLC application. In July 2018, the Board referred the case to the SOAH to conduct a contested case hearing. In March 2019, the District, protestants, and Electro Purification convened with SOAH judges to mediate a solution. The mediation was not successful triggering the continuation of the contested case proceedings including the District submitting its pre-filed testimonies from its two expert witnesses. The date for the hearing has been postponed to a date yet to be determined, but it is expected to not be re-scheduled until late FY 2020 or early FY 2021. With that stated, in FY 2020, the District anticipates legal expenses to continue with this contested case, unless Electro Purification LLC withdraws its application.

NOTE 11: AMOUNTS HELD FOR OTHERS

The District received a \$70,000 payment from Electro Purification as a deposit in the amount of \$70,000 to cover the costs of the SOAH hearing (see NOTE 10 paragraph B). Any portion of the deposit not spent will be refunded to Electro Purification. The unspent balance held as of year-end is \$61,560.

APPENDIX B

Assessment of Progress toward Management Plan Goals and Objectives

(Board-approved December 12, 2019)

2019

Appendix B

**Assessment of Progress Toward
Management Plan Goals and Objectives**

Board-approved December 12, 2019

GOAL 1 - PROVIDING THE MOST EFFICIENT USE OF GROUNDWATER

31 TAC 356.52(A)(1)(A)/TWC §36.1071(A)(1)

Objective 1-1. Provide and maintain on an ongoing basis a sound statutory, regulatory, financial, and policy framework for continued District operations and programmatic needs.

Performance Standards

Develop, implement, and revise as necessary, the District Management Plan (MP) in accordance with state law and requirements. Each year, the Board will evaluate progress towards satisfying the District goals. A summary of the Board evaluation and any updates or revisions to the MP will be provided in the Annual Report.

In FY 2019, the District continued to implement its MP that was approved by the Texas Water Development Board (TWDB) on November 21, 2017. No revisions or amendments were presented or made.

In order to achieve the goals, management objectives, and performance standards adopted in the MP, on December 12, 2019, the District's Board of Directors (Board) evaluated progress made, and approved the District's FY 2019 Annual Report, including Appendix A (the annual financial audit), and Appendix B (Assessment of Progress toward Management Plan Goals and Objectives).

Review and modify District Rules as warranted to provide and maintain a sound statutory basis for continued District operations, and to ensure consistency with both District authority and programmatic needs. A summary of any rule amendments adopted in the previous fiscal year will be included in the Annual Report.

During FY 2019, the District adopted amendments and revisions to the Rules and Bylaws. A quorum of the Board voted unanimously to adopt the proposed revisions at its regular meeting on March 28, 2019. The rulemaking process was formally initiated in February 2019 as part of an ongoing effort to implement Aquifer Storage and Recovery (ASR) projects. There was a 20-day public comment period to provide an opportunity for rule review and to submit comments or formal protests on the proposed rules. The adopted rule amendments focused overall on:

- **Definitions**
- **Application Checklist (Well Drilling and Source & Recovery Permits)**
- **Hydrogeologic Report and Observation Wells**
- **Permit Amendments**
- **Saline Zone Requirements**
- **Aquifer Storage and Recovery Pilot Test**
- **Saline Edwards Modeled Available Groundwater/Desired Future Conditions**
- **Class D Conditional Permits**
- **Aquifer Storage and Recovery (new section)**

Objective 1-2. Monitor aggregated use of various types of water wells in the District, as feasible and appropriate, to assess overall groundwater use and trends on a continuing basis.

Performance Standard

Monitor annual withdrawals from all nonexempt wells through required monthly or annual meter reports to ensure that groundwater is used as efficiently as possible for beneficial use. A summary of the volume of aggregate groundwater withdrawals permitted and actually produced from permitted wells for each Management Zone and permit type will be provided in the Annual Report.

A summary of the actual versus permitted production volumes for each Management Zone is also provided below.

FY 2019 Production from Individual Permittees		
Production Zone	Actual Production	Permitted Individual Production
Edwards	1,550,915,519	2,660,777,544
Trinity	200,300,364	506,381,557
Austin Chalk or Alluvial	174,450	2,500,000
Total (Gallons)	1,751,390,333	3,169,659,101
	(5,374.81 ac ft)	(9,727.31 ac ft)

FY 2019 Production from Limited Production Permits		
Production Zone	Actual Production*	Permitted Limited Production
Edwards	12,235,041	58,500,000
Trinity	4,078,347	19,500,000
Austin Chalk or Alluvial	0	0
Total (Gallons)	16,313,338	78,000,000
	(50.06 ac ft)	(239.37 ac ft)

**Actual production is a volume estimate calculation described in the findings and conclusions of the BSEACD Staff Report 2010. Average Annual exempt well production is approximately 104,473 gpy*

Objective 1-3. Evaluate quantitatively at least every five years the amount of groundwater withdrawn by exempt wells in the District to ensure an accurate accounting of total withdrawals in a water budget that includes both regulated and non-regulated withdrawals, so that appropriate groundwater management actions are taken.

Performance Standards

Provide an estimate of groundwater withdrawn by exempt wells in the District using Texas Department of Licensing and Regulation (TDLR) and TWDB databases, and District well records, and update the estimate every five years with the District’s MP updates.

This is a joint effort between the Aquifer Science, Education and Outreach, and Regulatory Compliance teams. The next estimation of exempt wells is expected to take place with the next update of the District’s Management Plan (2022).

In the interim years between MP updates, the most current estimates of exempt well withdrawals will be included in a summary of the volume of aggregate groundwater withdrawals permitted and actually

produced from permitted wells for each Management Zone (MZ) and permit type that will be provided in the annual report.

A summary table of the estimated exempt well production volumes for the Edwards and Trinity Management Zones is also provided below.

**Edwards Aquifer –
Estimated Exempt Wells Production**

Average Annual Volume per Exempt Well (gpy)	104,573
Total Est Volume of Exempt Well Production (gpy) *	105,514,157
<i>Est # of wells</i>	1009
<i>cfs</i>	0.45
<i>% of Permitted Production</i>	4.26%
<i>Permitted Edwards Production(gpy)</i>	2,719,277,544

*2010 BSEACD Staff Report – Avg Exempt Well Use=104,573 gpy

**Trinity Aquifer –
Estimated Exempt Wells Production**

Average Annual Volume per Exempt Well (gpy)	104,573
Total Est Volume of Exempt Well Production (gpy) *	120,258,950
<i>Est # of wells</i>	1150
<i>cfs</i>	0.51
<i>% of Permitted Trinity Production</i>	23%
<i>Permitted Trinity Production (gpy)</i>	525,881,557

*2010 BSEACD Staff Report – Avg Exempt Well Use=104,573 gpy

Objective 1-4. Develop and maintain programs that inform and educate citizens of all ages about groundwater and springflow-related matters, which affect both water supplies and salamander ecology.

Performance Standards

Publicize District drought trigger status (Barton Springs ten-day average discharge and Lovelady Monitor Well water level) in monthly eNews bulletins and continuously on the District website.

The drought stage graphic on the District home page was updated frequently to indicate drought trigger levels and associated drought conditions. The dynamic graphics shown on the Aquifer Data page were live, and viewed approximately 1,335 times throughout the fiscal year.

The District declared alarm stage drought on July 12, 2018, and lifted the drought declaration on October 15, 2018. The drought status change was publicized through drought stage icons and spotlights on the District website, a press release, eNews articles, and road signs and mailers were made available for use by Permittees.

Provide summaries of associated outreach and education programs, events, workshops, and meetings in the monthly team activity reports in the publicly-available Board backup.

This information was presented in the monthly status report section of the Board backups, generally in the first meeting of the month. Visit <https://bseacd.org/transparency/agendas-backup/>, click on the Agenda hyperlink beneath the month of interest; the page number of the Status Report is listed under the General Manager Report section of the meeting agenda.

Protect Your Groundwater Day	September	Target: All residents, permittees, well owners & groundwater users District promotes the National Groundwater Association's awareness campaign,
Rainwater Revival	October	Target: residents, well owners & groundwater users District sponsors and attends this alternate water supply focused educational event.
Teacher Wishlist Materials	October	Target: teachers and informal educators. District educators apply for a chance to receive free water science teaching materials and technology to augment their programs and classes.
Imagine a Day Without Water	October	Target: All residents National awareness media campaign to remind everyone to think about how important water is to our everyday lives and consider what it would be like to not have access to clean, reliable drinking water.
Water Conservation Symposium	January	Target: permittees, policy leaders, water operators, and conservation managers. District is a member and sponsor of the Central Texas Water Efficiency Network—the group that hosts the symposium.
Austin Cave Festival	February	Target: families & residents. District hosts and sponsors Cave Festival at the Wildflower Center with City of Austin Wildlands, Watershed Protection, and Parks and Rec.
Groundwater Awareness Week	March	Target: All residents, permittees District helps promote the National Groundwater Association Groundwater Awareness campaign.
Fix-A-Leak Week	March	Target: Well owners, permittees, and groundwater users District helps promote the US EPA Water Sense water conservation awareness campaign.
Camp scholarships due & chosen	March	Target: students ages 9-15. District collaborates with permittees funds the program. Promotion starts at the beginning of the calendar year.
College scholarship essay contest	March	Target: high school juniors, seniors, and immediate grads in the 8 school districts that cross the District's boundary. Kent Butler Groundwater Stewardship Scholarship as an essay contest. Promotion starts at the beginning of the calendar year.
Well Water Checkup	April	Target: well owners, permittees Well owners can bring in a water sample and have it analyzed for TDS, Nitrate, pH, and bacteria for free.
Endangered Species Day	May	Target: all residents, permittees District helps promote US FWS Endangered Species day and highlights habitat and groundwater management in place to protect the endangered salamanders in the District.
Water Conservation Period	May	Target: well owners, permittees, and groundwater users Runs from May 1 to Sept 31 when the District is not in Drought. Voluntary 10% reduction in pumpage.
Neighborhood Site Visits	May (variable)	Target: well owners in selected neighborhoods.

		Staff measure water levels (if possible), basic field parameters, and nitrate for free.
National Cave and Karst Day	June	Target: all residents, permittees District highlights role of caves and karst, surface water and groundwater interaction, and endangered species protection.
Groundwater to the Gulf	June	Target: teachers and informal educators. District is a lead organizer for the training and coordinates with 13 other agencies to put on the training. Provides teachers with hands-on activities to use in the classroom to highlight groundwater, surface water, and habitats.
WFC Nature Nights	June	Target: residents and families The District participates in the WFC program with an activity about water conservation and/or recharge water quality protection.

In FY 2019, some highlights of the Education and Community Outreach Team included:

- Participated in more than 30 outreach events (including field trips, presentations, and events) that reached approximately 3,800 adults and 4,200 children - a significant increase from last year.
- eNews bulletins were opened over 13,400 times from over 2,900 subscribers. Facebook posts were viewed 27,900 times. Twitter posts made 17,800 impressions. The web pages were viewed 39,700 times.
- Collaborated with Aquifer Science staff on the Travis County Groundwater Study. The Travis County Groundwater Project Group (including staff from the Aquifer Science and Education Outreach Teams) organized neighborhood site visits to collect water data in five different areas within the southwest Travis County study area. The visits took place in Hamilton Pool/Pedernales, Spicewood/Briarcliff, Lakeway/The Hills/Hudson Bend, Bee Cave, and Westlake/Lost Creek/Oak Hill areas. Approximately 50 well owners participated in the site visits and approximately 50 additional field measurements were taken. Water level and water quality analysis was collected from the over 100+ data collection points. Presentations were made to the Travis County Commissioners and the Southwestern Travis County Groundwater Conservation District (SWTCGCD) Board.
- Approximately 47 well owners in the District brought in water samples for the free water well screening for common contaminants during the Well Water Checkup.
- Co-hosted the 9th Annual Central Texas Water Conservation Symposium “Integrated Water: Keeping Conservation at the Forefront” in collaboration with the water providers and non-profit organizations participating in the Central Texas Water Efficiency Network (CTWEN).
- Co-hosted the 14th Annual Groundwater to the Gulf Summer Institute for Educators in collaboration with other state, local, and non-profit water educators, which trained 33 teachers and educators who in turn reach over 8,000 students annually.
- Co-hosted the Austin Cave Festival at the Lady Bird Johnson Wildflower Center, which attracted record attendance.

- Sponsored the 2018 Rainwater Revival and Hill Country Living event that brings rainwater harvesting system installers, suppliers, water haulers and other experts together to serve as a resource for homeowners and businesses that are interested in using rainwater as an alternate supply.
- Awarded two \$2,500 college scholarships to Ian McIntosh from Liberal Arts & Science Academy for his essay titled “The Impact of Water on the Arthropods of Bull Creek,” and Emma Cook from Hays High School for her essay titled “Expanding the Clean Water Act to Better Protect Groundwater Resources” with the support from District permittees’ FY 2018 conservation credit donations.
- Provided 20 scholarships for students ages 9-15 to attend Aquatic Science Adventure Camp hosted by the Edwards Aquifer Research and Data Center, with the support from District permittees’ FY 2018 conservation credit donations.

Objective 1-5. Ensure responsible and effective management of District finances such that the District has the near-term and long-term financial means to support its mission.

Performance Standards

Receive a clean financial audit each year. A copy of the auditor’s report will be included in the Annual Report (as Appendix A).

The Board received and approved the FY 2019 Annual Financial Audit report provided by the District’s financial auditor at its meeting on December 12, 2019. It is included with this Annual Report as Appendix A.

Timely develop and approve fiscal-year budgets and amendments.

For FY 2019, there were four budget versions. The initial budget was brought before the Board in a properly-noticed public hearing held on August 9, 2018 where it was approved. The Board approved Budget Revision 1 on March 14, 2019; Budget Revision 2 on June 27, 2019; and Budget Revision 3 on July 25, 2019.

Objective 1-6. Provide efficient administrative support and infrastructure, such that District operations are executed reliably and accurately, meet staff and local stakeholder needs, and conform to District policies and with federal and state requirements.

Performance Standards

Maintain, retain, and control all District records in accordance with the Texas State Library and Archives Commission-approved District Records Retention Schedule to allow for safekeeping and efficient retrieval of any and all records, and annually audit records for effective management of use, maintenance, retention, preservation and disposal of the records’ life cycle as required by the Local Government Code. A summary of records requests received under the Public Information Act (PIA), any training provided to staff or directors, or any claims of violation of the PIA will be provided in the Annual Report.

Administrative staff is responsible for proper maintenance, management, retention, and disposition of all District records; inventory of District property (asset management); and capital depreciation. Administration preserved and protected all public documents in accordance with state and federal laws, the adopted District Records Retention Schedule, and with the Texas State Library regulations; and maintained the District’s reference material library.

District records were maintained effectively, and there were no violations of the PIA.

Develop, post, and distribute District Board agendas, meeting materials, and backup documentation in a timely and required manner; post select documents on the District website, and maintain official records, files, and minutes of Board meetings appropriately.

Administrative staff developed, posted and distributed all materials and backup documentation for all 19 District Board meetings held in FY 2019. All meeting minutes meeting were approved by the Board at each meeting. Administrative staff maintained the officials records of each meeting on the District's website and in the District's library.

Objective 1-7. Manage and coordinate electoral process for Board members.

Performance Standard

Ensure elections process is conducted and documented in accordance with applicable requirements and timelines. Election documents will be maintained on file, and a summary of elections-related dates and activities will be provided in the Annual Report for years when elections occur.

The District holds elections no more often than every two years (in odd-numbered fiscal years, if and when election contests warrant).

There was no election in FY 2019.

GOAL 2 - CONTROLLING AND PREVENTING WASTE OF GROUNDWATER

31 TAC 356.52(A)(1)(B)/TWC §36.1071(A)(2))

Objective 2-1. Require all newly drilled exempt and nonexempt wells, and all plugged wells to be registered and to comply with applicable District Rules, including Well Construction Standards.

Performance Standard

A summary of the number and type of applications processed and approved for authorizations, permits, and permit amendments including approved use types and commensurate permit volumes for production permits and amendments will also be provided in the Annual Report.

To ensure that all firm-yield production permits are evaluated with consideration given to the District's demand-based and non-speculative permitting standards, staff completed comprehensive administrative and technical reviews of permit application requests. A summary of the number and type of applications processed and approved for authorizations, permits, and permit amendments including approved use types and commensurate permit volumes for production permits and amendments is provided below.

A summary of the processed permitting applications in FY 2019 is provided in the table below.

Processed Permit Applications	FY17	FY18	FY19
Minor Amendment	3	6	5
Major Amendments	0	7	0
New Exempt Well	9	4	10
Limited Production Permit (Nonexempt Domestic Wells)	22	14	16
Individual Production Permit	4	4	3
Individual Well Drilling Authorizations or Well Modification	3	3	8
Test Well	0	2	1
Well Plugging	10	8	5
Replacement Well	0	1	0
TOTAL	51	49	48

A summary of the individual production permits processed in FY 2019 is provided in the table below.

	Annual Volume (gpy)	Production Permits Processed	Permit Type	Use Type	Aquifer
1	1,600,000	BGSIX Holdings LLC	Historical Trinity	Irrigation	Trinity
2	100,000	Hays County	Historical Trinity	Industrial	Trinity
3	179,965,440	Needmore Water LLC	Historical Trinity	Agricultural Livestock	Trinity
4	912,500,000*	<i>Electro Purification*</i>	<i>Historical Trinity</i>	<i>Wholesale PWS</i>	<i>Trinity</i>
<i>This application was processed as administratively complete and is currently pending at the State Office of Administrative Hearings (SOAH). Final permit action and Board Decision has not taken place.</i>					

Objective 2-2. Ensure permitted wells and well systems are operated as intended by requiring reporting of periodic meter readings, making periodic inspections of wells, and reviewing pumpage compliance at regular intervals that are meaningful with respect to the existing aquifer conditions.

Performance Standards

Inspect all new wells for compliance with the Rules, and Well Construction Standards, and provide a summary of the number and type of inspections or investigations in the Annual Report.

During FY 2019, the Regulatory Compliance Team conducted a number of inspections relating to the processing of permit applications. Staff completed a total of 30 inspections related to special investigations, site permittee inspections, and well permit applications. The Regulatory Compliance Team collected 23 water quality samples during routine permit inspections or from new well construction inspections. There were no formal enforcement actions initiated in FY 2019.

FY 2019 Inspections/ Investigations/ Visits	
Exempt Well Inspections	6
Limited Production Permit Inspections	17
Individual Production Permit Inspections	0
Test Well Inspections	0
Plugging Inspections	5
Special Investigation Inspections	2
Other Permittee Meetings/Visits *	5
<i>*Multiple meetings were held with some permittees.</i>	
TOTAL	35

Provide a summary of the volume of aggregate groundwater withdrawals permitted and actually produced from permitted wells for each MZ and permit type in the Annual Report.

A summary of the actual versus permitted production volumes for each MZ is provided above in the Objective 1-2 Performance Standard update.

Objective 2-3. Provide leadership and technical assistance to government entities, organizations, and individuals affected by groundwater-utilizing land use activities, including support of or opposition to legislative initiatives or projects that are inconsistent with this objective.

Performance Standards

In even-numbered fiscal years, provide a summary of interim legislative activity and related District efforts in the Annual Report. In odd-numbered fiscal years, provide a legislative debrief to the Board on bills of interest to the District and provide a summary in the Annual Report.

The GM served as the primary point of contact, and coordinated with Brian Sledge of SledgeLaw Group PLLC, the District's legislative consultant, and the appointed Board Legislative Committee members (Blayne Stansberry and Dr. Robert D. Larsen) to monitor bills of interest to the District. Efforts included bill tracking and analysis, and meeting and providing information to legislators.

The following is a synopsis of the fate of certain priority bills of direct interest to the District:

- **HB 478 by Phelan. Relating to the funding of flood planning, mitigation, and infrastructure projects. Did not pass out of House Natural Resources Committee.**
- **HB 720 by Larson and Perry. Relating to appropriations of water for use in aquifer storage and recovery projects. Passed. Effective date June 10, 2019.**
- **HB 721 by Larson and Perry. Relating to the duty of the Texas Water Development Board to conduct studies of and prepare and submit reports on ASR. Passed. Effective date June 14, 2019.**
- **HB 722 by Larson and Perry. Relating to the development of brackish groundwater. Passed. Effective date September 1, 2019.**
- **HB 726 by Larson. Groundwater omnibus bill. Did not pass out of the Senate Water and Rural Affairs Committee.**
- **HB 790 by Davis. Relating to recovery of attorney's fees in certain civil cases. Did not pass to a Senate Committee.**
- **HB 807 by Larson and Buckingham. Relating to the state and regional water planning process. For a regional water planning area with significant identified water needs, the potential for ASR must be assessed. Passed. Effective date June 10, 2019.**

- **HB 817 by King.** Relating to a restriction on permits authorizing direct discharges of waste or pollutants into water in certain areas of the Edwards Aquifer. Did not pass out of the House Natural Resources Committee.
- **HB 1066 by Ashby and Perry.** Relating to extensions of an expired permit for the transfer of groundwater from a groundwater conservation district. Passed. Effective date September 1, 2019.
- **HB 1304 by Zwiener.** Relating to the Hays Trinity Groundwater Conservation District. Did not pass out of the House Natural Resources Committee.
- **SB 483 by Campbell and Zwiener.** Relating to permits for certain injection wells that transect a portion of the Edwards Aquifer. Passed. Effective date June 10, 2019.
- **SB 520 by Campbell and Kuempel.** Relating to the storage and recovery of water in a portion of the Edwards Aquifer. Passed. Effective date September 1, 2019.
- **SB 669 by Buckingham and Goodwin.** Relating to the date for the confirmation election for the Southwestern Travis County Groundwater Conservation District. Passed. Effective date May 20, 2019
- **SB 1010 by Perry.** Relating to rules adopted by groundwater conservation districts overlying a common aquifer. Did not pass out of the House Natural Resources Committee.

The SledgeLaw Group provided a legislative debriefing report to the Board at the June 13, 2019 meeting. The Board accepted the report as presented – satisfying this performance standard.

Provide a summary of District activity related to other land use activities affecting groundwater in the Annual Report.

District staff actively participated in the following land-use activities that have the potential to affect groundwater resources:

- **Wastewater Meeting with multiple agencies** – attended meeting with the Guadalupe Blanco River Authority (GBRA), City of Austin (CoA), City of San Marcos, Save Barton Creek Association (SBCA), Clearwater Water Supply Corporation and the Edwards Aquifer Authority (EAA) to discuss water quality concerns and potential legislation.
- **State Highway 45 SW Roadway Project** – coordinated site visits with consultant in the evaluation of the stormwater control structures, and reviewed and approved inspection reports.
- **MoPac Intersections Roadway Project** – performed periodic site inspections, provided guidance on mitigating karst features, and performed periodic inspections on environmental and stormwater control structures.

- **Proposed Sawyer-Cleveland Wastewater Treatment Plant (WWTP) – submitted letter to Texas Commission on Environmental Quality (TCEQ) on behalf of the District, stating the reasons why the District opposed the proposed WWTP in the Barton Creek watershed.**
- **Kinder Morgan LLC Permian Highway Natural Gas Pipeline – presented at several public events on the possible impacts to the groundwater resources in Hays County, organized a technical discussion between Kinder Morgan officials and groundwater conservation districts (GCDs), submitted a formal request for technical information to Kinder Morgan, and submitted an official request to the Railroad Commission of Texas for a meeting to receive information on the Commission’s oversight of oil and gas pipelines.**

Objective 2-4. Ensure all firm-yield production permits are evaluated with consideration given to the demand-based permitting standards including verification of beneficial use that is commensurate with reasonable non-speculative demand.

Performance Standard

A summary of the number and type of applications processed and approved for authorizations, permits, and permit amendments including approved use types and commensurate permit volumes for production permits and amendments will be provided in the Annual Report.

To ensure that all firm-yield production permits are evaluated with consideration given to the District’s demand-based and non-speculative permitting standards, staff completed comprehensive administrative and technical reviews of permit application requests. A summary of the number and type of applications processed and approved for authorizations, permits, and permit amendments including approved use types and commensurate permit volumes for production permits and amendments is provided below.

A summary of the processed permitting applications in FY 2019 is provided in the table below.

Processed Permit Applications	FY17	FY18	FY19
Minor Amendment	3	6	5
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Individual Well Drilling Authorizations or Well Modification	3	3	8
Test Well	0	2	1
Well Plugging	10	8	5
Replacement Well	0	1	0
TOTAL	51	49	48

A summary of the individual production permits processed in FY 2019 is provided in the table below.

	Annual Volume (gpy)	Production Permits Processed	Permit Type	Use Type	Aquifer
1	1,600,000	BGSIX Holdings LLC	Historical Trinity	Irrigation	Trinity
2	100,000	Hays County	Historical Trinity	Industrial	Trinity
3	179,965,440	Needmore Water LLC	Historical Trinity	Agricultural Livestock	Trinity
4	912,500,000*	<i>Electro Purification*</i>	<i>Historical Trinity</i>	<i>Wholesale PWS</i>	<i>Trinity</i>
<i>This application was processed as administratively complete and is currently pending at the State Office of Administrative Hearings (SOAH). Final permit action and Board Decision has not taken place.</i>					

GOAL 3 -ADDRESSING CONJUNCTIVE SURFACE WATER MANAGEMENT ISSUES

31 TAC 356.52(A)(1)(D)/TWC §36.1071(A)(4)

Objective 3-1. Assess the physical and institutional availability of existing regional surface water and alternative groundwater supplies, and the feasibility of those sources as viable supplemental or substitute supplies for District groundwater users.

Performance Standard

A summary of District activity related to this objective will be provided in the Annual Report.

Identify available alternative water resources and supplies that may facilitate source substitution and reduce demand on the Edwards Aquifer while increasing regional water supplies; and evaluate feasibility by considering available/proposed infrastructure, financial factors, logistical/engineering factors, and potential secondary impacts (development density/intensity or recharge water quality).

Worked cooperatively and closely with the Ruby Ranch Water Supply Corporation (WSC) and their consultants to conduct phase four of ASR pilot testing initiated in 2017 and ending in 2019 with an ASR application to the TCEQ (the 4th in Texas). The District assisted with hydrogeologic evaluations, and water level and water chemistry sampling throughout all phases of pilot testing.

https://bseacd.org/uploads/RubyRanchASR_Status-Report_FINAL.pdf

Objective 3-2. Encourage and assist District permittees to diversify their water supplies by assessing the feasibility of alternative water supplies and fostering arrangements with currently available alternative water suppliers.

Performance Standard

A summary of District activity related to this objective will be provided in the Annual Report.

Identify available alternative water resources and supplies that may facilitate source substitution and reduce demand on the Edwards Aquifer, while increasing regional water supplies; and evaluate feasibility by considering available/proposed infrastructure, financial factors, logistical/engineering factors, and potential secondary impacts (development density/intensity or recharge water quality).

Staff met several times with City of Buda staff and their consultant as they prepared a permit application for an ASR system.

Staff met with Creedmoor-Maha WSC board and staff to discuss the potential for desalination and ASR as potential sources of water.

Regulatory Compliance and Aquifer Science Teams had discussions with Bill Walters (Gragg Tract) on the pilot-testing of the Lower Trinity Aquifer. District staff sampled the initial test production well (5850755) and helped plan an aquifer test (for FY 2020) of two additional potential supply wells in the Lower Trinity Aquifer.

Objective 3-3. Demonstrate the importance of the relationship between surface water and groundwater, and the need for implementing prudent conjunctive use through educational programs with permittees and public outreach programs.

Performance Standards

Provide summaries of associated outreach and education programs, events, workshops, and meetings in the monthly team activity reports in the publicly-available Board backup.

This information was presented in the monthly status report section of the Board backups, generally in the first meeting of each month. Visit <https://bseacd.org/transparency/agendas-backup/>, click on the Agenda hyperlink beneath the month of interest, the page number of the Status Report is listed under the General Manager Report section of the meeting agenda. Please see table in Objective 1-4 for a schedule of events and programs.

Summarized outreach activities and estimate reach is in the Annual Report.

Please see Section 1-4 Highlights.

Objective 3-4. Actively participate in the regional water planning process to provide input into policies, planning elements, and activities that affect the aquifers managed by the District.

Performance Standard

Regularly attend regional water planning group meetings, and annually report on meetings attended.

In FY 2019, District staff attended all four meetings of the Lower Colorado Regional Water Planning Group (LCRWPG) – October 24, 2018, January 9, 2019, April 24, 2019, and July 10, 2019 and attended the Unique Stream Segments Committee Meeting held on April 11, 2019. Highlights from these four meetings of the LCRWPG include the following:

October 24, 2018 – consultants made presentations on the Water Management Strategies Committee meeting and the strategies that were scoped for evaluation during the 2016 planning cycle. LCRWPG approved the notice to proceed for the partial scope of work for the consultants.

January 9, 2019 – besides committee update reports, the consultants made a presentation on the overall progress of the planning process and the updates to non-Modeled Available Groundwater availability – the non-relevant groundwater sources. The LCRWPG created the Unique Stream Segment Committee.

April 24, 2019 – the Committees provided update reports, and the consultants presented progress to date and a summary of Chapter 2, which was available for review. Also, the TWDB presented an overview of the Brackish Resources Aquifer Characterization System study.

July 10, 2019 – the TWDB presented a summary of the bills that were approved in the 86th legislative session; and the consultant provided a summary of the LCRWPG committees, including Water Management, Legislative/Policy and Water Modeling Committees. The consultant presented the comments received to date on Chapter 2, and informed the planning group of the availability of Chapters 1 and 3 in October.

GOAL 4 - ADDRESSING NATURAL RESOURCE ISSUES WHICH IMPACT THE USE AND AVAILABILITY OF GROUNDWATER, AND WHICH ARE IMPACTED BY THE USE OF GROUNDWATER

31 TAC 356.52 (A)(1)(E)/TWC §36.1071(A)(5)

Objective 4-1. Assess ambient conditions in District aquifers on a recurring basis by (1) sampling and collecting groundwater data from selected wells and springs monthly, (2) conducting scientific investigations as indicated by new data and models to better determine groundwater availability for the District aquifers, and (3) conducting studies as warranted to help increase understanding of the aquifers and, to the extent feasible, detect possible threats to water quality and evaluate their consequences.

Performance Standards

Review water-level and water-quality data that are maintained by the District and/or TWDB, or other agencies, on a regular basis.

Staff visits approximately 32 monitor wells quarterly, in addition to numerous other wells throughout the year, including six multiport monitor wells. Data is collected and organized into individual spreadsheets and databases. Staff also regularly samples wells and springs for detailed geochemical analyses as a cooperator for the TWDB (32 sites in FY 2019). All data has been compiled in the TWDB database that is publicly available. In addition, staff has repeatedly visited and sampled numerous wells in areas reporting or anticipating problems such as the Electro Purification LLC (EP) and Summer Mountain Ranch areas.

Improve existing analytical or numerical models or work with other organizations on analytical or numerical models that can be applied to the aquifers in the District.

District staff have refined analytical models for use in the evaluation of the potential for unreasonable impacts. These include analytical modeling for the EP permit request, and a potential Phase I that has low potential for unreasonable impacts.

District staff provided key technical support in the development of a conceptual model for the aquifers of the Blanco River watershed. That report (Martin et al., 2019¹) was published at the end of FY 2019. The next step is to develop a numerical model from the conceptual model in FY 2020.

District staff compiled and collected new hydrogeologic data in a cooperative study with Travis County on the groundwater resources of Southwestern Travis County. Results provide key insights into the Middle and Lower Trinity Aquifers within and adjacent to the District. These studies will help inform conceptual and numerical models of the region.

- <https://bseacd.org/2019/11/blanco-river-aquifer-assessment-tool-a-tool-to-assess-how-the-blanco-river-interacts-with-its-aquifers-creating-the-conceptual-model/>
- <https://bseacd.org/projects/travis-county-groundwater-study/>

A review of the data mentioned above will be assessed for significant changes and reported in the Annual Report.

No significant changes were observed in water-level and water-quality data during FY 2019, although water levels in the Edwards and Trinity Aquifers started dropping due to a very dry summer. The exception is the significant decline in Trinity water levels over time west and adjacent to the District within Southwestern Travis County. These data indicate the need for additional Trinity monitoring data in the northern portion of the District.

Objective 4-2. Evaluate site-specific hydrogeologic data from applicable production permits to assess potential impact of withdrawals to groundwater quantity and quality, public health and welfare, contribution to waste, and unreasonable well interference.

Performance Standard

This involves evaluations of certain production permit applications for the potential to cause unreasonable impacts as defined by District rule. To evaluate the potential for unreasonable impacts, staff will (1) perform a technical evaluation of the application, aquifer test, and hydrogeological report; (2) use best available science and analytical tools to estimate amount of drawdown from pumping and influence on other water resources; and (3) recommend proposed permit conditions to the Board for avoiding unreasonable impacts if warranted.

- Aquifer Science staff are continuing to collect data in the EP and Needmore areas and are working with Hays County and HTGCD to install additional monitor wells near Jacobs's Well and west of EP. As additional data become available, further analyses will be conducted.
- As indicated above, development of numerical models is underway to assist in the evaluations of potential impacts.
- Aquifer Science staff discussed and presented suggested revisions to the Trinity desired future condition (DFC) to increase the ability to accurately monitor and assess its compliance considering large permit requests.

Objective 4-3. Implement separate MZs and, as warranted, different management strategies to address more effectively the groundwater management needs for the various aquifers in the District.

Performance Standards

Increase the understanding of District aquifers by assessing aquifer conditions, logging wells, and collecting water quality data. A summary of the number of water quality samples performed will be provided in the Annual Report.

To increase the understanding of District aquifers and water level conditions, staff collects groundwater data from selected wells and performs field assessments such as logging wells, and collecting water quality samples.

- The Aquifer Science Team collected 32 samples from sample sights including wells and springs from the Edwards and Trinity Aquifers for major ions and isotopes.

- The Regulatory Compliance Team collected 23 water quality samples during routine permit inspections or from new well construction inspections.
- All teams worked in collaboration with the Texas State Edwards Aquifer Research and Data Center (EARDC) laboratory to offer a free water well screening for private wells in the area. Well owners collected their own samples and dropped them off at the District office to be screened for common contaminants; approximately 47 well owners participated during the 2019 Water Well Checkup (April 2019).

A summary of the volume of aggregate groundwater withdrawals permitted and actually produced from permitted wells for each MZ and permit type is provided in the Annual Report.

To ensure that all firm-yield production permits are evaluated with consideration given to the District's demand-based and non-speculative permitting standards, staff completed comprehensive administrative and technical reviews of permit application requests. A summary of the number and type of applications processed and approved for authorizations, permits, and permit amendments including approved use types and commensurate permit volumes for production permits and amendments is provided below.

A summary of the processed permitting applications in FY 2019 is provided in the table below.

Processed Permit Applications	FY17	FY18	FY19
Minor Amendment	3	6	5
Major Amendments	0	7	0
New Exempt Well	9	4	10
Limited Production Permit (Nonexempt Domestic Wells)	22	14	16
Individual Production Permit	4	4	3
Individual Well Drilling Authorizations or Well Modification	3	3	8
Test Well	0	2	1
Well Plugging	10	8	5
Replacement Well	0	1	0
TOTAL	51	49	48

A summary of the individual production permits processed in FY 2019 is provided in the table below.

	Annual Volume (gpy)	Production Permits Processed	Permit Type	Use Type	Aquifer
1	1,600,000	BGSIX Holdings LLC	Historical Trinity	Irrigation	Trinity
2	100,000	Hays County	Historical Trinity	Industrial	Trinity
3	179,965,440	Needmore Water LLC	Historical Trinity	Agricultural Livestock	Trinity
4	912,500,000*	<i>Electro Purification*</i>	<i>Historical Trinity</i>	<i>Wholesale PWS</i>	<i>Trinity</i>
<i>This application was processed as administratively complete and is currently pending at the State Office of Administrative Hearings (SOAH). Final permit action and Board Decision has not taken place.</i>					

Objective 4-4. Actively participate in the joint planning processes for the relevant aquifers in the District to establish and refine DFCs that protect the aquifers and the Covered Species of the District Habitat Conservation Plan (HCP).

Performance Standard

Attend at least 75% of the GMA (groundwater management area) meetings, and annually report on meetings attended, GMA decisions on DFCs, and other relevant GMA business.

District staff attended 100% of the GMA 9 and GMA 10 meetings that were held in FY 2019. Following is a summary of these meetings:

GMA 9

District staff attended all four GMA 9 general meetings as well as a technical committee meeting held in FY 2019. The first meeting on November 5, 2018 was held in Dripping Springs. At this meeting, the committee discussed a resolution regarding portions of the northern Medina County and the annual review of individual GCD management plans. The second meeting was held on February 4, 2019 in Kerrville. At this meeting, discussions on possible revisions to the GMA 9 DFCs as well as standardization of monitor well analysis and reporting occurred. The technical committee meeting of March 12, 2019 was hosted by the Cow Creek GCD in Boerne. The technical subcommittee, including District staff, discussed further the standardization of monitor well analysis and reporting to aid monitoring of DFCs. The third general meeting hosted by the SWTCGCD in Bee Caves on April 22, 2019 concentrated on TWDB updates. There is a new water services boundary viewer that links to the TCEQ database which allows access to information about wells, depths, pumping rates, volumes for customers, etc. TWDB also presented on an upcoming brackish groundwater study for the Trinity Aquifer south of the Colorado River. The fourth general meeting for GMA 9 took place June 17, 2019 in Boerne. It concentrated on administrative work and the selection of Blanton & Associates to compile the next Explanatory Report for GMA 9.

GMA 10

District staff attended all three GMA 10 meetings held in FY 2019. All meetings were held at the EAA in San Antonio. The first meeting was held on October 18, 2018. At this meeting, the Committee approved the reassignment of the Medina County GCD solely to GMA 10, and had preliminary discussions on the District's proposal to establish a new DFC for the Trinity Aquifer. The second meeting was held on January 7, 2019, where the Committee appointed Alicia Reinmund-Martinez as the GMA 10 representative to the Regional Water Planning Group K. Also, the Committee discussed in more detail the District's proposal to amend the DFC for the Trinity Aquifer. The third meeting was held on April 8, 2019, where the Committee had a general discussion on the GMA 10 evaluation needs for the development of the 2022 DFCs as well as a summary of approved bills from the 86th legislative session. On August 8, 2019, the District hosted a meeting with representatives from the Plum Creek CD and the Comal Trinity GCD to obtain initial feedback on the District's proposal to modify the DFC expression for the Trinity Aquifer. With this feedback, District staff presented a final proposal at the September 16, 2019 general meeting of the GMA 10 Joint Planning Committee.

Objective 4-5. Implement the measures of the District HCP and Incidental Take Permit (ITP) from the U.S. Fish & Wildlife Service (USFWS) for the covered species and covered activity to support the biological goals and objectives of the HCP.

Performance Standard

Prior to ITP permit issuance, a progress report summarizing activities related to the USFWS review of the ITP application will be provided in the Annual Report. Upon ITP issuance, the HCP annual report documenting the District's activities and compliance with ITP permit requirements will be incorporated into the Annual Report by reference.

The USFWS approved the District's HCP in July 2018 and published the Record of Decision and the final Environmental Impact Statement (EIS). On September 20, 2018, the USFWS issued a 20-year ITP. To celebrate the event, the District and USFWS held a signing celebration to acknowledge the contributions and persistence of the advisory committee, stakeholders, staff, Directors, consultants, and researchers that helped develop the HCP over the years. On April 11, 2019, the Board approved an Interlocal Agreement between the District and the CoA to collaborate and coordinate on routine and planned activities relative to each entity's respective HCP. The first HCP Annual Report will be submitted to the USFWS by February 28, 2020.

GOAL 5 - ADDRESSING DROUGHT CONDITIONS

31 TAC 356.52 (A)(1)(F)/TWC §36.1071(A)(6)

Objective 5-1. Adopt and keep updated a science-based drought trigger methodology, and frequently monitor drought stages on the basis of actual aquifer conditions, and declare drought conditions as determined by analyzing data from the District's defined drought triggers and from existing and such other new drought-declaration factors, especially the prevailing dissolved oxygen (DO) concentration trends at the spring outlets, as warranted.

Performance Standards

During periods of District-declared drought, prepare a drought chart at least monthly to report the stage of drought and the conditions that indicate that stage of drought. During periods of non-drought, prepare the drought charts at least once every three months.

Staff monitored the District's two drought trigger sites (the Barton Springs and Lovelady monitor wells) plus numerous other indicators of drought conditions relating to the Edwards Aquifer. The District contracts with the United States Geological Survey (USGS) for the Lovelady Well to maintain equipment, collect, and host as real-time data on their website. The CoA contracts with the USGS to maintain the data for Barton Springs.

District staff frequently verified water level values measured by the equipment at the Lovelady monitor well (which has recorded data since 1949) and verified discharge measurements made at Barton Springs. During periods of District-declared drought, and preceding potential drought, staff provided timely updated reports of aquifer conditions at each Board meeting. Data from Trinity monitor wells were also collected and evaluated at these times.

Staff evaluated the current drought trigger methodology as it relates to the Middle Trinity Aquifer. Results were published in a memo and found that the triggers are indeed representative of drought conditions, regardless of the aquifer.

A summary of the drought indicator conditions and any declared drought stages and duration will be provided in the Annual Report.

FY 2019 began with a status of Stage II Alarm Drought declared by the Board on July 12th, 2018. An average of 13 inches of rain in September to October provided much needed recharge to the Edwards and Trinity Aquifers. These rains revived aquifer water levels and Barton Springs flow, elevating to above Stage II Alarm drought warning levels. The Board subsequently updated the drought status from Stage II Alarm Drought to NO Drought on October 11th, 2018. The calendar year ended with some of the wettest December weather ever recorded. By New Year's Eve, six inches of rain had fallen in Austin and the Hill Country for the month of December, more than two times the average. January 2019 provided about 3 additional inches, exceeding its historical average of 1.9 inches.

A combined 14 inches of spring rain fell in May and June 2019 providing even more recharge. Barton Springs flow quickly responded to the fall 2018 rains and additional spring 2019 rains to maintain an average daily spring flow of 100cfs throughout FY 2019. On June 14th, 2019, water

level measurements in the Lovelady monitor well had risen to surpass the third highest peak recorded in 2003 (536.0 ft-msl or 117.4 ft-dtw).

Summer came with a drying trend. Below-average rainfall initiated a rapid decline at the Lovelady monitor well beginning July 15, 2019. This decrease has continued through a dry fall season and is projected through the winter.

To summarize, the Austin/Hill Country area has received an average 27 inches of rainfall so far in 2019, producing significant recharge for local aquifers. However, official forecasts point toward drier and milder-than-normal conditions across Central Texas, which will likely result in further declines as 2020 gets underway. We hope spring will bring its usual upward swing of recharge to keep our aquifers well-supplied.

Objective 5-2. Implement a drought management program that step-wise curtails freshwater Edwards Aquifer use to at least 50% by volume of 2014 authorized aggregate monthly use during Extreme Drought, and that designs/uses other programs that provide an incentive for additional curtailments where possible. For all other aquifers, implement a drought management program that requires mandatory monthly pumpage curtailments during District-declared drought stages.

Performance Standard

During District-declared drought, enforce compliance with drought management rules to achieve overall monthly pumpage curtailments within 10% of the aggregate curtailment goal of the prevailing drought stage. A monthly drought compliance report for all individual permittees will be provided to the Board during District-declared drought, and a summary will be included in the Annual Report.

The District implements a drought management program that requires mandatory monthly pumpage curtailments during District-declared drought stages. The District declared Stage II Alarm Drought on July 12, 2018 and remained in Stage II status throughout October 11, 2018. The District has implemented all drought-related rules and curtailments in accordance with the District's enforcement plan and drought management protocols. Drought enforcement measures were assessed for Stage II Alarm Drought for the entire duration of the drought. A monthly drought compliance report for all individual permittees was provided during the months of August 2018 – September 2018 to the Board during District-declared drought, and those reports are found on the [drought management website pages](#). After lifting drought in October, the District was in No-Drought status the remainder of FY 2019.

Objective 5-3. Inform and educate permittees and other well owners about the significance of declared drought stages and the severity of drought, and encourage practices and behaviors that reduce water use by a stage-appropriate amount.

Performance Standards

During District-declared drought, publicize declared drought stages and associated demand reduction targets in monthly eNews bulletins and continuously on the District website.

The District declared alarm stage drought on July 12, 2018, and lifted the drought declaration on October 15, 2018. The drought status change was publicized through drought stage icons and spotlights on the District website, a press release, eNews articles, and road signs and mailers were made available for use by Permittees.

Articles included:

- **August/September 2018:** Trinity Aquifer Trends
- **October:** Aquifer District Lifts Drought Restrictions
- **January:** Recharge in Action
- **January:** Climate Change and the Edwards Aquifer
- **March:** Save Water... Fix Leaks
- **April:** Use Water Wisely (Water Conservation Period)
- **April:** Aquifer Status/Predictions
- **June:** Aquifer Status

A summary of drought and water conservation related newsletter articles, press releases, and drought updates sent to Press, Permittees, Well Owners and eNews subscribers will be provided in the Annual Report.

eNews: Trinity Aquifer Trends (August/September 2018)
Press release: Aquifer District Lifts Drought Declaration (October 2018)
eNews: Recharge in Action (January 2019)
eNews/event: Water Conservation Symposium (January 2019)
eNews: Save Water... Fix Leaks (March 2019)
eNews: Use Water Wisely (April 2019)
Press release: Aquifer District Enters Water Conservation Period (May 2019)

Objective 5-4. Assist and, where feasible, incentivize individual freshwater Edwards Aquifer historic-production permittees in developing drought planning strategies to comply with drought rules, including (1) pumping curtailments by drought stage to at least 50% of the 2014 authorized use during Extreme Drought, (2) “right-sizing” authorized use over the long term to reconcile actual water demands and permitted levels, and (3) as necessary and with appropriate conditions, source substitution with alternative supplies.

Performance Standards

Require an updated User Conservation Plan and User Drought Contingency Plan (UCP/UDCP) from Permittees within one year of each five-year MP Adoption.

During the spring and summer 2019, the regulatory staff work with interns to update 136 permit records in order to incorporate updated drought planning documents into their records. According to the District MP, all permittees shall have current UDCPs and UCPs on file that are updated in accordance with District rules. Permittees have the option to revise drought target charts no more than once per year but must update their UDCP and UCP plans at least every five years. Staff completed a full update for all permittees to ensure that each file included updated drought templates (Drought Target Chart, UDCP, UCP).

Provide a summary of any activity related to permit right sizing or source substitution with alternative supplies that may reduce demand on the freshwater Edwards Aquifer in the Annual Report.

After notice and an opportunity for a hearing, the Board may renew a permit with a reduced amount of the authorized production if the authorized withdrawal volume is no longer commensurate with reasonable non- speculative demand, or actual production from a well is

substantially less than the authorized permit amount for multiple years without any rationale that reasonably relates to efforts to utilize alternative water supplies, conserve, or improve water use efficiency. Staff conducted an underpumpage analysis and determined that while many permittees' actual production was less than the authorized permitted amount, it was typically due to bringing on alternative supplies or water conservation. Therefore, authorized permitted volumes were not reduced in FY 2019.

Objective 5-5. Implement a Conservation Permit that is held by the District and accumulates and preserves withdrawals from the freshwater Edwards Aquifer that were previously authorized with historic-use status and that is retired or otherwise additionally curtailed during severe drought, for use as ecological flow at Barton Springs during Extreme Drought and thereby increase springflow for a given set of hydrologic conditions.

Performance Standard

A summary of the volume of aggregate groundwater withdrawals permitted and actually produced from permitted wells for each MZ and permit type including the volume reserved in the freshwater Edwards Conservation Permit for ecological flows will be provided in the Annual Report.

A summary of the actual versus permitted production volumes for each MZ is provided above in the Objective 1-2 Performance Standard update. The amount of historical Edwards Aquifer permitted water that has been retired since 2009 is 82,025,125 gallons per year that can be targeted for a conservation permit. Additionally, 1,200,000 gallons per year of Historical Trinity Aquifer permitted water has been retired, and no Conditional A permitted water has been retired.

GOAL 6- Addressing Conservation and Rainwater Harvesting where Appropriate and Cost-Effective

31TAC 356.52 (a)(1)(G)/TWC §36.1071(a)(7)

Objective 6-1. Develop and maintain programs that inform, educate, and support District permittees in their efforts to educate their end-user customers about water conservation and its benefits, and about drought-period temporary demand reduction measures.

Performance Standards

A summary of efforts to assist permittees in developing drought and conservation messaging strategies will be provided in Annual Report.

Each permittee is required to have an approved UDCP that outlines conservation actions to be taken under each drought stage.

District staff provides bill inserts and road signs to all permittees upon drought declaration to help them comply with messaging requirements set forth in the UDCP.

District staff actively promotes aquifer status through eNews, press releases, and the District website. Permittees are encouraged to share this information with their end users.

Publicize declared drought stages and associated demand reduction targets monthly in eNews bulletins and continuously on the District website.

The District declared alarm stage drought on July 12, 2018 and lifted the drought declaration on October 15, 2018. The drought status change was publicized through drought stage icons and spotlights on the District website, a press release, eNews articles, and road signs and mailers were made available for use by Permittees.

Articles included:

- **eNews: Trinity Aquifer Trends (August/September 2018)**
- **Press Release: Aquifer District Lifts Drought Declaration (October 2018)**
- **eNews: Recharge in Action (January 2019)**
- **eNews/event: Water Conservation Symposium (January 2019)**
- **eNews: Save Water... Fix Leaks (March 2019)**
- **eNews: Use Water Wisely (April 2019)**
- **Press Release: Aquifer District Enters Water Conservation Period (May 2019)**

Objective 6-2. Encourage use of conservation-oriented rate structures by water utility permittees to discourage egregious water demand by individual end-users during declared drought.

Performance Standard

On an annual basis, the District will provide an informational resource or reference document to all public water supply permittees to serve as resources related to conservation best management strategies and conservation-oriented rate structures.

The District is part of the CTWEN and sponsors the annual Water Conservation Symposium. Permittees are encouraged to attend. This year the theme was: “Integrated Water: Keeping Conservation at the Forefront.” The symposium is structured to provide information about conservation-oriented strategies (including conservation-oriented rate structures) for mayors, city councils, board members of Municipal Utility Districts (MUDs), Regional Water Authorities, City Managers, Water Utility directors and staff, water conservation managers, program staff and other relevant staff, CFOs, finance directors, sustainability directors, business and community leaders, consultants, and advocates.

Objective 6-3. Develop and maintain programs that educate and inform District groundwater users and constituents of all ages about water conservation practices and the use of alternate water sources such as rainwater harvesting, gray water, and condensate reuse.

Performance Standard

Summarize water conservation related newsletter articles, press releases, and events in the Annual Report. Summary will describe the preparation and dissemination of materials shared with District groundwater users and area residents that inform them about water conservation and alternate water sources.

The District sponsors and supports a number of events promoting water conservation and alternate water sources such as the Rainwater Revival and Hill Country Living Festival, the Central Texas Water Conservation Symposium, Austin Cave Festival, LBJ Wildflower Center (LBJWFC) Nature Nights Rocks-Water-Mud, and Groundwater to the Gulf: A Summer Institute for Educators.

This fiscal year approximately seven press releases and eNews articles discussed aspects of water conservation and alternate water supply.

GOAL 7 - ADDRESSING RECHARGE ENHANCEMENT WHERE APPROPRIATE AND COST-EFFECTIVE

31TAC 356.52 (A)(1)(G)/TWC §36.1071(A)(7)

Objective 7-1. Improve recharge to the freshwater Edwards Aquifer by conducting studies and, as feasible and allowed by law, physically altering (cleaning, enlarging, protecting, diverting surface water) discrete recharge features that will lead to an increase in recharge and water in storage beyond what otherwise would exist naturally.

Performance Standard

Maintaining the functionality of the Antioch system will be the principal method for enhancing recharge to the freshwater Edwards Aquifer. Additional activities may be excavating sinkholes and caves within the District. A summary of all recharge improvement activities will be provided in the Annual Report.

Antioch Cave is a recharge feature on District property that is capable of contributing a significant amount of water to the Edwards Aquifer when Onion Creek is flowing. A vault constructed over the cave entrance, and automated valves allow for clean creek water to enter the cave and contaminated stormwater to be kept out. This system was maintained by District staff in FY 2019 so that the amount of clean creek water entering the cave was maximized. A regular reporting item has been added to the GM Report special topics list to provide a monthly oral update on these and other Aquifer Science activities, and satisfies this reporting requirement.

Operational equipment and hardware at Antioch Cave to improve the operation and performance of the BMP are fully functional and in good performance. Equipment is collecting water-quality readings every 15 minutes and reporting to an organized database via telemetry.

Objective 7-2. Conduct technical investigations and, as feasible, assist water-supply providers in implementing engineered enhancements to regional supply strategies, including desalination, ASR, effluent reclamation and re-use, and recharge enhancement of surface water (including floodwater) to increase the options for water-supply substitution and reduce dependence on the Aquifer.

Performance Standard

Assess progress toward enhancing regional water supplies.

In FY 2019, the District has worked with other entities in the area, such as City of Buda, City of Kyle, EAA, and Ruby Ranch WSC, to evaluate the potential for the Trinity Aquifers as reservoirs for ASR facilities. District staff worked cooperatively with the Ruby Ranch WSC to conduct a fourth and final phase of ASR pilot testing. A status report is currently being prepared.

GOAL 8 - ADDRESSING THE DESIRED FUTURE CONDITIONS OF THE GROUNDWATER RESOURCES

31TAC (A)(1)(H)/TWC §36.1071(A)(8)

Objective 8-1. Freshwater Edwards Aquifer All-Conditions DFC: Adopt rules that restrict, to the greatest extent practicable, the total amount of groundwater authorized to be withdrawn annually from the Aquifer to an amount that will not substantially accelerate the onset of drought conditions in the Aquifer; this is established as a running seven-year average springflow at Barton Springs of no less than 49.7 cfs during average recharge conditions.

Performance Standards

A summary of the volume of aggregate groundwater withdrawals permitted and actually produced from permitted wells for each MZ and permit type will be provided in the Annual Report.

A summary of the actual versus permitted production volumes for each MZ is provided above in the Objective 1-2 Performance Standard update.

Upon ITP issuance, the HCP annual report documenting the District's activities and compliance with ITP permit requirements will be incorporated into the Annual Report by reference.

The USFWS issued the District's ITP in September 2018. The District will submit its first annual report to USFWS in February 2020.

Upon ITP issuance, compile a summary of aquifer data including: 1) the frequency and duration of District-declared drought, 2) levels of the Aquifer as measured by springflow and indicator wells (including temporal and spatial variations), and 3) total annual and daily discharge from Barton Springs will be provided in the Annual Report.

FY 2019 began with a status of Stage II Alarm Drought declared by the Board on July 12, 2018. An average of 13 inches of rain in September to October provided much needed recharge to the Edwards and Trinity Aquifers. These rains revived aquifer water levels and Barton Springs flow, elevating to above Stage II Alarm drought warning levels. The Board subsequently updated the drought status from Stage II Alarm Drought to NO Drought on October 15, 2018. The calendar year ended with some of the wettest December weather ever recorded. By New Year's Eve, six inches of rain had fallen in Austin and the Hill Country for the month of December, more than two times the average. January 2019 provided about 3 additional inches, exceeding its historical average of 1.9 inches.

A combined 14 inches of spring rain fell in May and June 2019 providing even more recharge. Barton Springs flow quickly responded to the fall 2018 rains and additional spring 2019 rains to maintain an average daily spring flow of 100cfs throughout FY 2019. On June 14, 2019, water level measurements in the Lovelady monitor well had risen to surpass the third highest peak recorded in 2003 (536.0 ft-msl or 117.4 ft-dtw).

Summer came with a drying trend. Below-average rainfall initiated a rapid decline at the Lovelady well beginning July 15, 2019. This decrease has continued through a dry fall season and is projected through the winter. The total annual discharge is 19,920 cfs or average daily discharge of 54.58 cfs.

Objective 8-2. Freshwater Edwards Aquifer Extreme Drought DFC: Adopt rules that restrict, to the greatest extent practicable and as legally possible, the total amount of groundwater withdrawn monthly from the aquifer during Extreme Drought conditions in order to minimize take and avoid jeopardy of the Covered Species as a result of the Covered Activities, as established by the best science available. This is established as a limitation on actual withdrawals from the aquifer to a total of no more than 5.2 cfs on an average annual (curtailed) basis during Extreme Drought, which will produce a minimum springflow of not less than 6.5 cfs during a recurrence of the drought of record (DOR).

Performance Standards

A summary of the volume of aggregate groundwater withdrawals permitted and actually produced from permitted wells for each MZ and permit type will be provided in the Annual Report.

A summary of the actual versus permitted production volumes for each MZ is provided above in the Objective 1-2 Performance Standard update.

Upon ITP issuance, the HCP annual report documenting the District's activities and compliance with ITP permit requirements will be incorporated into the Annual Report by reference.

The USFWS issued the District's ITP in September 2018. The District will submit its first annual report to USFWS in February 2020.

Upon ITP issuance, compile a summary of aquifer data including: 1) the frequency and duration of District-declared drought, 2) levels of the Aquifer as measured by springflow and indicator wells (including temporal and spatial variations), and 3) total annual and daily discharge from Barton Springs will be provided in the Annual Report.

Please see Objective 8-2 above.

Objective 8-3. Implement appropriate rules and measures to ensure compliance with District-adopted DFCs for each relevant aquifer or aquifer subdivision in the District.

Performance Standard

Develop and implement a cost-effective method for evaluating and demonstrating compliance with the DFCs of the relevant aquifers in the District, in collaboration with other GCDs in the GMAs. Prior to method implementation, provide a summary of activities related to method development in the Annual Report. Once developed, provide a summary of data for each District-adopted DFC for each relevant aquifer indicating aquifer conditions relative to the DFC, and provide in the Annual Report.

For the Trinity Aquifer in GMA 9, in FY 2019 a technical subcommittee, including District staff, prepared a proposed common methodology to track water levels for DFC compliance. The proposed methodology will require each GCD to maintain a summary spreadsheet for each aquifer. It was further proposed that every five years, in the GMA 9 Explanatory Report, the GCDs could combine

these individual results by using the location of each well to produce a grid of the monitored drawdowns resulting in an average monitored drawdown throughout GMA 9 for each aquifer. A summary of these drawdowns will be provided to each GCD.

For the Trinity Aquifer in GMA 10, to determine compliance with the Trinity Aquifer DFC, the data must show that the average regional well drawdown does not exceed 25 feet during average recharge conditions including exempt and nonexempt use. In FY 2019, District staff developed and discussed a proposal to modify this DFC expression with the goal to establish a means for measuring compliance. The District presented and discussed this proposal at three GMA 10 meetings, a District-hosted meeting with neighboring GCDs, and with the TWDB. District staff will present the proposal to the Board in early FY 2020, and could potentially refine the DFC expression.

For the Freshwater Edwards, Northern Subdivision in GMA 10, in the beginning of the fiscal year about 13 inches of rain between September 1, 2018 and October 30, 2018 provided much needed recharge to the Edwards and Trinity Aquifers. These rains revived aquifer water levels and Barton Springs flow, elevating to above Stage II Alarm drought warning levels. The Board subsequently updated the drought status from Stage II Alarm Drought to NO Drought on October 11, 2018. The calendar year ended with some of the wettest weather ever recorded and by New Year's Eve, six inches of rain had fallen in Austin - more than two times the average. An additional three inches of rain fell in January 2019 exceeding its historical average of 1.9 inches.

A combined 14 inches of spring rain fell in May and June 2019 providing even more recharge. Barton Springs flow quickly responded to the fall 2018 rains and additional spring 2019 rains to maintain an average daily spring flow of 100cfs throughout FY 2019. On June 14, 2019, water level measurements in the Lovelady monitor well had risen to surpass the third highest peak recorded in 2003 (536.0 ft-msl or 117.4 ft-dtw). Summer came with a drying trend and below-average rainfall initiated a rapid decline at the Lovelady well beginning July 15. This decrease has continued through a dry fall season and is projected through the winter.

With this stated, the average daily springflow at Barton Springs over the 84 months from September 1, 2013 to August 31, 2019 was 82 cfs. The DFC expression is springflow at Barton Springs during average recharge conditions shall be no less than 49.7 cfs over an 84-month period.

For the Saline Edwards, Northern Subdivision, the DFC expression is no more than 75 feet of regional average potentiometric surface drawdown due to pumping when compared to pre-development conditions. Currently, there are no approved permits in the Saline Edwards.

Performance Standards and Objectives

General Management (9 objectives)	Administration (3 objectives)	Education & Outreach (6 objectives)	Aquifer Science (8 objectives)	Regulatory Compliance (7 objectives)
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GOAL 1 - Providing the Most Efficient Use of Groundwater – 31 TAC 356.52(a)(1)(A)/TWC §36.1071(a)(1)

	Management Plan Objectives	Performance Standards
1-1	Provide and maintain on an ongoing basis a sound statutory, regulatory, financial, and policy framework for continued District operations and programmatic needs.	<p>A. Develop, implement, and revise as necessary, the District Management Plan in accordance with state law and requirements. Each year, the Board will evaluate progress towards satisfying the District goals. A summary of the Board evaluation and any updates or revisions to the management plan will be provided in the <u>annual report</u>.</p> <p>B. Review and modify District Rules as warranted to provide and maintain a sound statutory basis for continued District operations and to ensure consistency with both District authority and programmatic needs. A summary of any rule amendments adopted in the previous fiscal year will be included in the <u>annual report</u>.</p>
1-2	Monitor aggregated use of various types of water wells in the District, as feasible and appropriate, to assess overall groundwater use and trends on a continuing basis.	Monitor annual withdrawals from all nonexempt wells through required monthly or annual meter reports to ensure that groundwater is used as efficiently as possible for beneficial use. A summary of the volume of aggregate groundwater withdrawals permitted and actually produced from permitted wells for each Management Zone and permit type will be provided in the <u>annual report</u> .
1-3	Evaluate quantitatively at least every five years the amount of groundwater withdrawn by exempt wells in the District to ensure an accurate accounting of total withdrawals in a water budget that includes both regulated and non-regulated withdrawals, so that appropriate groundwater management actions are taken.	<p>A. Provide an estimate of groundwater withdrawn by exempt wells in the District using TDLR and TWDB databases and District well records, and update the estimate every five years with the District's management plan updates.</p> <p>B. In the interim years between management plan updates, the most current estimates of exempt well withdrawals will be included in a summary of the volume of aggregate groundwater withdrawals permitted and actually produced from permitted wells for each Management Zone and permit type that will be provided in the <u>annual report</u>.</p>
1-4	Develop and maintain programs that inform and educate citizens of all ages about groundwater and springflow-related matters, which affect both water supplies and salamander ecology.	<p>A. Publicize District drought trigger status (Barton Springs 10-day average discharge and Lovelady Monitor Well water level) in monthly eNews bulletins and continuously on the District website.</p> <p>B. Provide summaries of associated outreach and education programs, events, workshops, and meetings in the monthly team activity reports in the publicly-available Board backup.</p> <p>C. A summary of outreach activities and estimated reach will be provided in the <u>annual report</u>.</p>

1-5	Ensure responsible and effective management of District finances such that the District has the near-term and long-term financial means to support its mission.	<p>A. Receive a clean financial audit each year. A copy of the auditor's report will be included in the annual report.</p> <p>B. Timely develop and approve fiscal-year budgets and amendments. The dates for public hearings and Board approval of the budget and any amendments will be provided in the annual report.</p>
1-6	Provide efficient administrative support and infrastructure, such that District operations are executed reliably and accurately, meet staff and local stakeholder needs, and conform to District policies and with federal and state requirements.	<p>A. Maintain, retain, and control all District records in accordance with the Texas State Library and Archives Commission-approved District Records Retention Schedule to allow for safekeeping and efficient retrieval of any and all records, and annually audit records for effective management of use, maintenance, retention, preservation and disposal of the records' life cycle as required by the Local Government Code. A summary of records requests received under the PIA, any training provided to staff or directors, or any claims of violation of the Public Information Act will be provided in the <u>annual report</u>.</p> <p>B. Develop, post, and distribute District Board agendas, meeting materials, and backup documentation in a timely and required manner; post select documents on the District website, and maintain official records, files, and minutes of Board meetings appropriately. A summary of training provided to staff or directors or any claims of violation of the Open Meetings Act will be provided in the <u>annual report</u>.</p>
1-7	Manage and coordinate electoral process for Board members.	Ensure elections process is conducted and documented in accordance with applicable requirements and timelines. Elections documents will be maintained on file and a summary of elections-related dates and activities will be provided in the <u>annual report</u> for years when elections occur.

GOAL 2 - Controlling and Preventing Waste of Groundwater – 31 TAC 356.52(a)(1)(B)/TWC §36.1071(a)(2)

	Management Plan Objectives	Performance Standards
2-1	Require all newly drilled exempt and nonexempt wells, and all plugged wells to be registered and to comply with applicable District Rules, including Well Construction Standards.	A summary of the number and type of applications processed and approved for authorizations, permits, and permit amendments including approved use types and commensurate permit volumes for production permits and amendments will be provided in the <u>annual report</u> .
2-2	Ensure permitted wells and well systems are operated as intended by requiring reporting of periodic meter readings, making periodic inspections of wells, and reviewing pumpage compliance at regular intervals that are meaningful with respect to the existing aquifer conditions.	<p>A. Inspect all new wells for compliance with the Rules, and Well Construction Standards, and provide a summary of the number and type of inspections or investigations in the <u>annual report</u>.</p> <p>B. Provide a summary of the volume of aggregate groundwater withdrawals permitted and actually produced from permitted wells for each Management Zone and permit type in the <u>annual report</u>.</p>
2-3	Provide leadership and technical assistance to government entities, organizations, and individuals affected by groundwater-utilizing land use activities, including support of or opposition to legislative initiatives or projects that are inconsistent with this objective.	<p>A. In even-numbered fiscal years, provide a summary of interim legislative activity and related District efforts in the <u>annual report</u>. In odd-numbered fiscal years, provide a legislative debrief to the Board on bills of interest to the District and provide a summary in the annual report.</p> <p>B. Provide a summary of District activity related to other land use activities affecting groundwater in the <u>annual report</u>.</p>
2-4	Ensure all firm-yield production permits are evaluated with consideration given to the demand-based permitting standards including verification of beneficial use that is commensurate with reasonable non-speculative demand.	A summary of the number and type of applications processed and approved for authorizations, permits, and permit amendments including approved use types and commensurate permit volumes for production permits and amendments will be provided in the <u>annual report</u> .

GOAL 3 - Addressing Conjunctive Surface Water Management Issues – 31 TAC 356.52(a)(1)(D)/TWC §36.1071(a)(4)

	Management Plan Objectives	Performance Standards
3-1	Assess the physical and institutional availability of existing regional surface water and alternative groundwater supplies and the feasibility of those sources as viable supplemental or substitute supplies for District groundwater users.	Identify available alternative water resources and supplies that may facilitate source substitution and reduce demand on the Edwards Aquifer, while increasing regional water supplies, and evaluate feasibility by considering: <ol style="list-style-type: none"> 1. available/proposed infrastructure, 2. financial factors, 3. logistical/engineering factors, and 4. potential secondary impacts (development density/intensity or recharge water quality). A summary of District activity related to this objective will be provided in the <u>annual report</u> .
3-2	Encourage and assist District permittees to diversify their water supplies by assessing the feasibility of alternative water supplies and fostering arrangements with currently available alternative water suppliers.	Identify available alternative water resources and supplies that may facilitate source substitution and reduce demand on the Edwards Aquifer, while increasing regional water supplies, and evaluate feasibility by considering: <ol style="list-style-type: none"> 1. available/proposed infrastructure, 2. financial factors, 3. logistical/engineering factors, and 4. potential secondary impacts (development density/intensity or recharge water quality). A summary of District activity related to this objective will be provided in the <u>annual report</u> .
3-3	Demonstrate the importance of the relationship between surface water and groundwater, and the need for implementing prudent conjunctive use through educational programs with permittees and public outreach programs.	A. Provide summaries of associated outreach and education programs, events, workshops, and meetings in the monthly team activity reports in the publicly-available Board backup. B. Summarize outreach activities and estimate reach in the <u>annual report</u> .
3-4	Actively participate in the regional water planning process to provide input into policies, planning elements, and activities that affect the aquifers managed by the District.	Regularly attend regional water planning group meetings and <u>annually report</u> on meetings attended.

GOAL 4 - Addressing Natural Resource Issues which Impact the Use and Availability of Groundwater, and which are Impacted by the Use of Groundwater – 31 TAC 356.52 (a)(1)(E)/TWC §36.1071(a)(5)

	Management Plan Objectives	Performance Standards
4-1	<p>Assess ambient conditions in District aquifers on a recurring basis by:</p> <ol style="list-style-type: none"> 1. sampling and collecting groundwater data from selected wells and springs monthly; 2. conducting scientific investigations as indicated by new data and models to better determine groundwater availability for the District aquifers; and 3. conducting studies as warranted to help increase understanding of the aquifers and, to the extent feasible, detect possible threats to water quality and evaluate their consequences. 	<ol style="list-style-type: none"> A. Review water-level and water-quality data that are maintained by the District and/or TWDB, or other agencies, on a regular basis. B. Improve existing analytical or numerical models or work with other organizations on analytical or numerical models that can be applied to the aquifers in the District. C. A review of the data mentioned above will be assessed for significant changes and reported in the <u>annual report</u>.
4-2	<p>Evaluate site-specific hydrogeologic data from applicable production permits to assess potential impact of withdrawals to groundwater quantity and quality, public health and welfare, contribution to waste, and unreasonable well interference.</p>	<p>This involves evaluations of certain production permit applications for the potential to cause unreasonable impacts as defined by District rule. To evaluate the potential for unreasonable impacts, staff will:</p> <ol style="list-style-type: none"> A. Perform a technical evaluation of the application, aquifer test, and hydrogeological report; B. Use best available science and analytical tools to estimate amount of drawdown from pumping and influence on other water resources; and C. Recommend proposed permit conditions to the Board for avoiding unreasonable impacts if warranted. <p>A list of permit applications that are determined to have potential for unreasonable impacts will be provided in the <u>annual report</u>.</p>
4-3	<p>Implement separate management zones and, as warranted, different management strategies to address more effectively the groundwater management needs for the various aquifers in the District.</p>	<ol style="list-style-type: none"> A. Increase the understanding of District aquifers by assessing aquifer conditions, logging wells, and collecting water quality data. A summary of the number of water quality samples performed will be provided in the <u>annual report</u>. B. A summary of the volume of aggregate groundwater withdrawals permitted and actually produced from permitted wells for each Management Zone and permit type will be provided in the <u>annual report</u>.

4-4	<p>Actively participate in the joint planning processes for the relevant aquifers in the District to establish and refine Desired Future Conditions (DFCs) that protect the aquifers and the Covered Species of the District HCP.</p>	<p>Attend at least 75% of the GMA meetings and annually report on meetings attended, GMA decisions on DFCs, and other relevant GMA business.</p>
4-5	<p>Implement the measures of the District Habitat Conservation Plan (HCP) and Incidental Take Permit (ITP) from the U.S. Fish & Wildlife Service (USFWS) for the covered species and covered activity to support the biological goals and objectives of the HCP.</p>	<p>Prior to ITP permit issuance, a progress report summarizing activities related to the USFWS review of the ITP application will be provided in the <u>annual report</u>. Upon ITP issuance, the <u>HCP annual report</u> documenting the District's activities and compliance with ITP permit requirements will be incorporated into the <u>annual report</u> by reference.</p>

GOAL 5 - Addressing Drought Conditions – 31 TAC 356.52 (a)(1)(F)/TWC §36.1071(a)(6)

	Management Plan Objectives	Performance Standards
5-1	<p>Adopt and keep updated a science-based drought trigger methodology, and frequently monitor drought stages on the basis of actual aquifer conditions, and declare drought conditions as determined by analyzing data from the District’s defined drought triggers and from existing and such other new drought-declaration factors, especially the prevailing DO concentration trends at the spring outlets, as warranted.</p>	<p>A. During periods of District-declared drought, prepare a drought chart at least monthly to report the stage of drought and the conditions that indicate that stage of drought. During periods of non-drought, prepare the drought charts at least once every three months.</p> <p>B. A summary of the drought indicator conditions and any declared drought stages and duration will be provided in the <u>annual report</u>.</p>
5-2	<p>Implement a drought management program that step-wise curtails freshwater Edwards Aquifer use to at least 50% by volume of 2014 authorized aggregate monthly use during Extreme Drought, and that designs/uses other programs that provide an incentive for additional curtailments where possible. For all other aquifers, implement a drought management program that requires mandatory monthly pumpage curtailments during District-declared drought stages.</p>	<p>During District-declared drought, enforce compliance with drought management rules to achieve overall monthly pumpage curtailments within 10% of the aggregate curtailment goal of the prevailing drought stage. A monthly drought compliance report for all individual permittees will be provided to the Board during District-declared drought, and a summary will be included in the <u>annual report</u>.</p>
5-3	<p>Inform and educate permittees and other well owners about the significance of declared drought stages and the severity of drought, and encourage practices and behaviors that reduce water use by a stage-appropriate amount.</p>	<p>A. During District-declared drought, publicize declared drought stages and associated demand reduction targets in monthly eNews bulletins and continuously on the District website.</p> <p>B. A summary of drought and water conservation related newsletter articles, press releases, and drought updates sent to Press, Permittees, Well Owners and eNews subscribers will be provided in the <u>annual report</u>.</p>

5-4	<p>Assist and, where feasible, incentivize individual freshwater Edwards Aquifer historic-production permittees in developing drought planning strategies to comply with drought rules, including:</p> <ol style="list-style-type: none"> 1. pumping curtailments by drought stage to at least 50% of the 2014 authorized use during Extreme Drought, 2. "right-sizing" authorized use over the long term to reconcile actual water demands and permitted levels, and 3. as necessary and with appropriate conditions, the source substitution with alternative supplies. 	<p>A. Require an updated UCP/UDCP from Permittees within one year of each five-year Management Plan Adoption.</p> <p>B. Provide a summary of any activity related to permit right sizing or source substitution with alternative supplies that may reduce demand on the freshwater Edwards Aquifer in the <u>annual report</u>.</p>
5-5	<p>Implement a Conservation Permit that is held by the District and accumulates and preserves withdrawals from the freshwater Edwards Aquifer that were previously authorized with historic-use status and that is retired or otherwise additionally curtailed during severe drought, for use as ecological flow at Barton Springs during Extreme Drought and thereby increase springflow for a given set of hydrologic conditions.</p>	<p>A summary of the volume of aggregate groundwater withdrawals permitted and actually produced from permitted wells for each Management Zone and permit type including the volume reserved in the freshwater Edwards Conservation Permit for ecological flows will be provided in the <u>annual report</u>.</p>

GOAL 6 - Addressing Conservation and Rainwater Harvesting where Appropriate and Cost-Effective – 31TAC 356.52 (a)(1)(G)/TWC §36.1071(a)(7)

	Management Plan Objectives	Performance Standards
6-1	Develop and maintain programs that inform, educate, and support District permittees in their efforts to educate their end-user customers about water conservation and its benefits, and about drought-period temporary demand reduction measures.	<p>A. A summary of efforts to assist permittees in developing drought and conservation messaging strategies will be provided in annual report.</p> <p>B. Publicize declared drought stages and associated demand reduction targets monthly in eNews bulletins and continuously on the District website.</p>
6-2	Encourage use of conservation-oriented rate structures by water utility permittees to discourage egregious water demand by individual end-users during declared drought.	On an annual basis, the District will provide an informational resource or reference document to all Public Water Supply permittees to serve as resources related to conservation best management strategies and conservation-oriented rate structures.
6-3	Develop and maintain programs that educate and inform District groundwater users and constituents of all ages about water conservation practices and the use of alternate water sources such as rainwater harvesting, gray water, and condensate reuse.	Summarize water conservation related newsletter articles, press releases, and events in the annual report. Summary will describe the preparation and dissemination of materials shared with District groundwater users and area residents that inform them about water conservation and alternate water sources.

GOAL 7 - Addressing Recharge Enhancement where Appropriate and Cost-Effective – 31TAC 356.52 (a)(1)(G)/TWC §36.1071(a)(7)

	Management Plan Objectives	Performance Standards
7-1	<p>Improve recharge to the freshwater Edwards Aquifer by conducting studies and, as feasible and allowed by law, physically altering (cleaning, enlarging, protecting, diverting surface water to) discrete recharge features that will lead to an increase in recharge and water in storage beyond what otherwise would exist naturally.</p>	<p>Maintaining the functionality of the Antioch system will be the principal method for enhancing recharge to the freshwater Edwards Aquifer. Additional activities may be excavating sinkholes and caves within the District. A summary of all recharge improvement activities will be provided in the <u>annual report</u>.</p>
7-2	<p>Conduct technical investigations and, as feasible, assist water-supply providers in implementing engineered enhancements to regional supply strategies, including desalination, aquifer storage and recovery, effluent reclamation and re-use, and recharge enhancement of surface water (including floodwater) to increase the options for water-supply substitution and reduce dependence on the Aquifer.</p>	<p>Assess progress toward enhancing regional water supplies in the <u>annual report</u>.</p>

GOAL 8 - Addressing the Desired Future Conditions of the Groundwater Resources – 31TAC (a)(1)(H)/TWC §36.1071(a)(8)

	Management Plan Objectives	Performance Standards
8-1	<p>Freshwater Edwards Aquifer All-Conditions DFC: Adopt rules that restrict, to the greatest extent practicable, the total amount of groundwater authorized to be withdrawn annually from the Aquifer to an amount that will not substantially accelerate the onset of drought conditions in the Aquifer; this is established as a running seven-year average springflow at Barton Springs of no less than 49.7 cfs during average recharge conditions.</p>	<p>A. A summary of the volume of aggregate groundwater withdrawals permitted and actually produced from permitted wells for each Management Zone and permit type will be provided in the <u>annual report</u>.</p> <p>B. Upon ITP issuance, the <u>HCP annual report</u> documenting the District’s activities and compliance with ITP permit requirements will be incorporated into the <u>annual report</u> by reference.</p> <p>C. Upon ITP issuance, compile a summary of aquifer data including: 1) the frequency and duration of District-declared drought, 2) levels of the Aquifer as measured by springflow and indicator wells (including temporal and spatial variations), and 3) total annual and daily discharge from Barton Springs will be provided in the <u>annual report</u>.</p>
8-2	<p>Freshwater Edwards Aquifer Extreme Drought DFC: Adopt rules that restrict, to the greatest extent practicable and as legally possible, the total amount of groundwater withdrawn monthly from the Aquifer during Extreme Drought conditions in order to minimize take and avoid jeopardy of the Covered Species as a result of the Covered Activities, as established by the best science available. This is established as a limitation on actual withdrawals from the Aquifer to a total of no more than 5.2 cfs on an average annual (curtailed) basis during Extreme Drought, which will produce a minimum springflow of not less than 6.5 cfs during a recurrence of the drought of record (DOR).</p>	<p>A. A summary of the volume of aggregate groundwater withdrawals permitted and actually produced from permitted wells for each Management Zone and permit type will be provided in the <u>annual report</u>.</p> <p>B. Upon ITP issuance, the <u>HCP annual report</u> documenting the District’s activities and compliance with ITP permit requirements will be incorporated into the <u>annual report</u> by reference.</p> <p>C. Upon ITP issuance, compile a summary of aquifer data including: 1) the frequency and duration of District-declared drought, 2) levels of the Aquifer as measured by springflow and indicator wells (including temporal and spatial variations), and 3) total annual and daily discharge from Barton Springs will be provided in the <u>annual report</u>.</p>
8-3	<p>Implement appropriate rules and measures to ensure compliance with District-adopted DFCs for each relevant aquifer or aquifer subdivision in the District.</p>	<p>Develop and implement a cost-effective method for evaluating and demonstrating compliance with the DFCs of the relevant aquifers in the District, in collaboration with other GCDs in the GMAs. Prior to method implementation, provide a summary of activities related to method development in the <u>annual report</u>. Once developed, provide a summary of data for each District-adopted DFC for each relevant aquifer indicating aquifer conditions relative to the DFC and provide in the <u>annual report</u>.</p>

