



Barton Springs Edwards Aquifer

CONSERVATION DISTRICT

ANNUAL REPORT FISCAL YEAR 2018

Board-approved December 13, 2018

BOARD OF DIRECTORS (August 31, 2018)

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, 2018

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 Intern

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

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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 2018, covering the period from September 1, 2017 to August 31, 2018.

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 2018; 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; 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 2018, there was no District election held (there was no opposition for District Director Precincts 2 and 5). 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 2017 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.

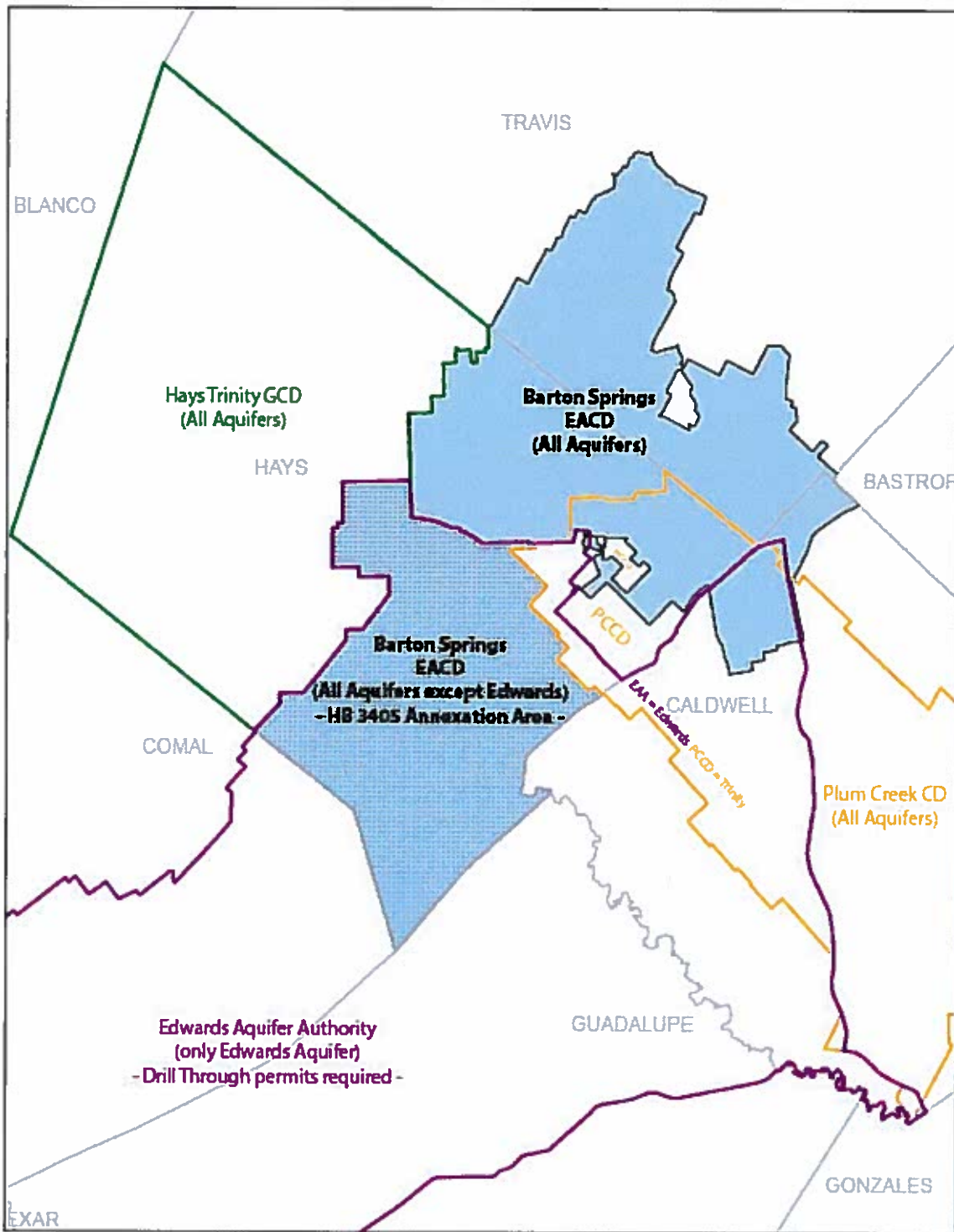


Figure 1 - The District's territory including the expanded Shared Territory and the adjacent Groundwater Conservation Districts and their respective jurisdiction over aquifers.

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 2018

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 2018, 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

Mr. John Dupnik served as the District's GM until his resignation in February 2018. Kirk Holland of Holland Groundwater Management Consultants (and a previous District GM), was retained from early February through May 2018 as the interim GM, while the District went through the process of hiring a new GM. Alicia Reinmund-Martinez started as the District's new GM on May 29, 2018. Holland Groundwater Management Consultants has a contract to offer 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 2018, some highlights for the office of the GM:

- Coordinated the conduct of all of the District's FY 2018 business within FY 2018 budget constraints with two budget amendments to adjust to the evolving work load and priorities. The initial annual budget was Board-approved on August 10, 2017. The first budget amendment was Board-approved on February 8, 2018; and the second budget amendment was Board-approved on June 14, 2018.
- Maintained a productive, efficient, and motivated staff by providing ongoing direction through regular meetings with team leaders, and end-of-year performance evaluations of all staff, and holding a fall staff retreat to encourage team building and to maintain staff morale.
- Served as the primary point of contact, and coordinated with Brian Sledge of SledgeLaw Group, PLLC, the District's legislative consultant, to follow interim session groundwater issues with the House

Natural Resource Committee, and the Senate Committee on Agriculture, Water, and Rural Affairs. At the end of the year, the GM, along with SledgeLaw Group, prepared an agenda for Board discussion on possible groundwater legislation to be proposed at the upcoming 86th Legislative session.

- In July 2017, the U.S. Fish and Wildlife Service (USFWS) officially posted the notice for the District's draft Habitat Conservation Plan (HCP), listed the draft Environmental Impact Statement (EIS) in the Federal Register, and announced the 60-day public comment period. The USFWS held a public meeting on August 22, 2017 at the District office.

In response to comments received, the District submitted the final draft HCP to the USFWS in April 2018 for processing and publication. During the summer of 2018, the District facilitated the review of the final draft HCP and the Incidental Take Permit (ITP) application including responding to all comments from the USFWS Austin field office and regional office in Albuquerque. As a result, the USFWS approved the District's HCP in July 2018, and published the Record of Decision and the final 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.

The HCP and associated documents, an overview of the development process, and more information are available on the [District HCP website](#).

- Participated actively in the joint groundwater planning processes of Groundwater Management Area (GMA) 9, and served as the District Representative to GMA 10, including related interfaces with the Texas Water Development Board (TWDB). This year, discussions at meetings included desired future conditions (DFC) monitoring activities, compliance with the District's MP, and preliminary discussions on round three of DFC planning.
- Participated actively in regional water planning group activities, including serving as the GMA 10's voting representative to Region K, and monitoring Region L groundwater-related planning activities. Region K activities included drafting the scope of work for the next round of developing water management strategies.
- Finalized the Evergreen Solutions consulting firm survey of the salaries of the District's full-time positions. Work included revising salary comparison spreadsheets, and job descriptions for each position. Results were presented to the Board Personnel and Budget Committees, and new salaries were incorporated into the FY 2019 budget.
- Worked with the Personnel Committee of the Board on the revisions to the Employee Policy Manual to ensure complete and equitable benefits for all employees. The proposed revisions are being reviewed by a human resource consultant and will be presented to the full Board for approval in FY 2019.
- Organized a public information session at the Wimberley Community Center for the proposed permit for Electro Purification LLC (EP). The purpose of this town hall meeting was to ensure that the community had the correct information regarding the proposed permit through formal presentations and a Question & Answer session.

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 2018, 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 (see Appendix A).
- 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 Employee Policy Manual and sub-policies.
- Supported the continuing phases of annual office updating/remodeling/repairs (see Capital Projects on page 22).
- Assisted the District's information technology (IT) consultant in making improvements to the IT infrastructure to standardize productivity tools and improved security, resolving various staff IT issues, and adding two new employee computer hard drives per year, as warranted. In FY 2018, the District upgraded to Office 365, and purchased a new plotter.
- 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.
- Made internal preparations for conducting an election for the two directorships up for election in FY 2018/2019 (even-numbered years), in concert with county election offices and in accordance with state and federal election laws, and as warranted by TWC Chapter 26; prepared all election contracts with associated entities including election services contracts and joint election agreements, and all necessary orders and notices standard to conducting or cancelling an election.

Started the November 2018 election process with an Order Calling Election approved by the Board on August 9, 2018, but the election was cancelled on September 13, 2018 due to there being no opposition for the incumbent directors in Precincts 2 and 5.

There was a Hays County coding issue on voter registration cards that was addressed in FY 2018 and will need to be addressed again.

- Conducted the TWDB RFP Grant financial administration in accordance with Uniform Grant Management Standards (UGMS) produced by the Governor's Office of Budget and Planning to include specific compliance with OMB Circular A-102 Grants and Cooperative Agreements with State and Local Governments; OMB Circular A-133 Audits of States, Local Governments, and Non-Profit Organizations; OMB Circular A-87 Cost Principles for State, Local, and Indian Tribal Governments; and Local Government Code CH 783 Uniform Grant and Contract Management. First (and final) grant invoice was submitted for payment to TWDB on Friday, March 30, 2018. Received (and deposited) TWDB payment for \$226,157 on July 27, 2018.
- As the investment fiduciary for the District's retirement plan, discussed with our relationship manager from the Standard (our third party retirement plan administrator) and District staff, some potential fund options to add to the District Retirement Funds portfolio, and held a staff meeting for the explanation of the new target funds that were added.

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 (one-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 2018, 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:

- Sinkhole Conference (April 2-6, 2018; West Virginia). See Published Papers.
- South Central Texas Water Research Interest Group bi-annual meetings (Guadalupe-Blanco River Authority (GBRA), Seguin, December 6, 2017 and June 5, 2018 Canyon Lake)
- EAA Distinguished Lecturer: Dr. Charles Kreitler (December 1, 2017; Southwest Research Institute (SWRI), San Antonio)
- 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 Interocal Agreement (ILA) (July 3, 2018)
 - Barton Springs University (September 26, 2017)
 - Hydrogeo Workshop, Cave Without A Name (October 6-7, 2018)
 - Texas A&M Kingsville (March 27, 2018)
 - 9th Grade Geology Lecture (January 18, 2018)
 - Brown bag presentations to University of Texas Jackson School hydrogeology students and faculty (November 17, 2017 and February 6, 2018)
 - Austin chapter of the American Society of Civil Engineers (June 15, 2018)

In FY 2018, 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 multiport monitor wells that are completed in the Edwards and Trinity Aquifers.
- Analyzed the results of an aquifer test and other data for the EP application in Central Hays County. This includes modeling and the publication of three technical memos (see Published Papers).
- Field staff visited about 55 wells in the EP area and about six wells in the Summer Mountain Ranch area for water levels and field parameter measurements. Many sites were visited multiple times. About 25 sites were sampled for lab analyses. The District hired Daniel Smith-Salgado as a part-time hydrogeologic technician to assist other staff.
- Determined and documented drought status, including keeping the District's drought monitor blog up to date. The Board declared Stage II Alarm Drought on July 12th, 2018. Thirteen weeks later on October 11th, 2018 the Board declared the District out of drought with a No-Drought status.
- Participated with GMA 9 and GMA 10 in technical discussions. Attended GMA 9 meeting in Bulverde (January 29, 2018), and GMA 10 meeting at the EAA (March 26, 2018).

- Worked cooperatively with the Ruby Ranch WSC to conduct phase three of aquifer storage and recovery (ASR) pilot testing. A status report was produced (September 2017) and is listed in the Published Papers. An additional status report for phase three is in preparation for early FY 2019.
- 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. A report is pending for early FY 2019.
- Performed studies with the HTGCD, City of Austin (CoA), and Texas State University (TSU) to characterize surface and groundwater interactions along Onion Creek, and included a dye trace in early FY 2018.
- In December 2017, District staff assisted the CoA (and St. Edwards University) with dye traces in Crooked Oak Cave (Onion Creek), Fenceline Sink (Bear Creek), and Borheim-Fields Quarry (Little Bear Creek). All traces detected at Barton Springs. A report by the CoA is pending.
- Performed dye trace study with Wimberley Valley Watershed Association (WVWA), HTGCD, EAA, Hays County Parks Department, and Zara Environmental to evaluate the hydrogeologic connection of Raccoon Cave with Jacob's Well and other area wells. See Published Papers.
- 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.
- Development of a geologic database of the Edwards and Trinity Aquifers in central Texas in cooperation with the EAA and the HTGCD. This was the summer intern project by Lane Cockrell; report pending in early 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. Updated equipment was installed in FY 2017 by District staff to improve the operation and performance of the Antioch recharge system.
- 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 2018, 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 2018 in cooperation with the TWDB.
- Cooperated with Travis County to develop an ILA for a hydrogeologic study of western Travis County. The ILA was approved July 3, 2018, and project scoping and data compilation was initiated in August 2018.
- Intern Nick Kerans conducted a stratigraphic study of the Trinity Aquifer using cuttings, thin sections, and geophysical logs. Nick presented a poster at the 2018 Geological Society of America (GSA) Annual Conference in Indianapolis.
- Installed a weather station on October 4, 2018 in cooperation with Travis County and the Shield Ranch staff. Also planned the installation of a Barton Creek flow station for early FY 2019.
- 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.

- Reviewed the drought trigger methodology and whether it is representative for the Middle Trinity Aquifer. See Published Papers.
- Visited and assessed potential sensitive karst features along SH 45 SW and MoPac construction projects with CoA and TxDOT staff. These include several caves and other karst features.
- Brian Smith has continued to serve on the CoA Environmental Commission.

Published Papers and District Documents:

- BSEACD, 2017, Hydrogeologic Setting and Data Evaluation: 2016 Electro Purification Aquifer Test, Cow Creek Well Field: Hays County, Texas. BSEACD, Technical Memo 2017-1010, 39 p.
- BSEACD, 2018, Aquifer Parameter Estimation for the EP Well Field, Hays County, Texas. BSEACD, Technical Memo 2018-0213, 28 p.
- BSEACD, 2018, Evaluation of the Potential for Unreasonable Impacts from the EP Well Field, Hays County, Texas. BSEACD Technical Memo 2018-0219. February 2018. 13 p.
- Hunt, B.B., B.A. Smith, and J. Camp, 2018, Is the BSEACD's Drought Trigger Methodology Representative of the Middle Trinity Aquifer? BSEACD Technical Memo 2018-0829. August 2018. 12 p.
- Hunt, B.B., B.A. Smith, and J. Camp, 2018, Dye Trace at Raccoon Cave near Jacob's Well Spring, Hays County, Texas. BSEACD Technical Memo 2018-0831. August 2018.
- Hunt, B.S. Smith, B.A., Gary, M.O., Watson, J., Broun, A., Wierman, D.A., and Fieseler, R., 2018, Technical Review and Comments: Conceptual Model Update for the Hill Country Portion of the Trinity Aquifer. Letter dated August 31, 2018. 22 p.
- Smith, B.A., B.B. Hunt, J. Camp, and B.K. Darling, 2017, Status Report for Aquifer Storage and Recovery Pilot Project, Ruby Ranch WSC, Hays County, Central Texas. BSEACD Technical Note 2017-0930 (September 2017).
- Smith, B.A., B.B. Hunt, and B.K. Darling, 2017a, Hydrogeology of the Saline Edwards Zone, Southeast Travis County, Central Texas. BSEACD Report of Investigations 2017 1015. 66 p. (October 2017)
- Smith B.A., Hunt B.B. (2018) Recharge and Water-Quality Controls for a Karst Aquifer in Central Texas. In: White W., Herman J., Herman E., Rutigliano M. (eds) Karst Groundwater Contamination and Public Health. Advances in Karst Science. Springer, Cham https://link.springer.com/chapter/10.1007/978-3-319-51070-5_35
- Smith, B.A., B.B. Hunt, D.A. Wierman, and M.O. Gary, 2018, Groundwater Flow Systems of Multiple Karst Aquifers of Central Texas. In I.D. Sasowsky, M.J. Byle, and L. Land (Eds). Proceedings of the 15th Multidisciplinary Conference on Sinkholes and the Engineering and Environmental Impacts of Karst and the 3rd Appalachian Karst Symposium, National Cave and Karst Research Institute (NCKRI) Symposium 6, p 17-29.
- Watson, J., A.S. Broun, B.B. Hunt, B.A. Smith, D.A. Johns, J. Camp, and D.A. Wierman, 2018, Summary of Findings: Upper Onion Creek Dye Trace, Hays County, Texas, Winter 2017. Interagency Memo. May 18, 2018. 19 p. http://bseacd.org/uploads/Upper-Onion-trace-memo_05182018.pdf
- Interagency Memo, 2018, Update on Current Dye-Trace Studies in the Upper Onion Creek watershed, Hays County, Texas. January 10, 2018. 5 p.

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 January 2018, Ms. Jackie Vay joined the team as a half-time Outreach Specialist. 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 2018. 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 2,800 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), TWDB, University of Texas's Bureau of Economic Geology, and UT Jackson School of Geosciences.

In FY 2018, some highlights of the Education and Community Outreach Team included:

- Continued eNews bulletin with automated subscribe/unsubscribe capabilities.
- Participated in approximately 30 outreach events (including field trips, presentations, and events) that reached approximately 3,412 adults and 2,909 children.
- Piloted a new Neighborhood Site Visit program in conjunction with the 2018 Well Water Checkup. Approximately 20 well owners in the District brought in water samples for free water well screening for common contaminants during the Well Water Checkup. Approximately 30 well owners participated in the new Neighborhood Site Visit program to collect water levels and basic water quality analysis in two different areas within the District. The two weeks of visits took place in Hugo Lane, Falconwood, Summer Mountain Ranch of RR12 and the North Hilliard Lane area, and staff were able to measure water levels in 25 of the wells.

- Finalized the augmented reality endangered species and macroinvertebrates Creek Quest game and application.
- Co-hosted the eighth annual Water Conservation Symposium: “Future Focused Water Conservation, Past to Present: What’s Next on the Horizon?” in collaboration with the water providers and non-profits participating in the CTWEN.
- Co-hosted the 13th Annual Groundwater to the Gulf Summer Institute for Educators in collaboration with other state, local, and non-profit water educators, which trained 29 teachers who in turn reach over 3,000 students annually.
- Co-hosted the Austin Cave Festival at the Lady Bird Johnson Wildflower Center.
- Sponsored the 2017 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 business owners that are interested in using rainwater as an alternate supply.
- Awarded a \$2,500 college scholarship to Elizabeth Beggs of Dripping Springs High School for her winning essay, titled “Protect the Future.”
- Provided 18 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 2017 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 2018, some highlights of the Regulatory Compliance Team included:

- Dripping Springs TPDES Permit Application – Staff participated actively in technical discussions and analysis of the Dripping Springs application for a proposed TPDES permit (No. WQ0014488003). Staff attended multiple stakeholder meetings to propose alternatives in order to reach a settlement agreement with the applicant. In December 2017, the District requested a contested case hearing on the application before the State Office of Administrative Hearings (SOAH). On May 21, 2018, SOAH held a preliminary hearing to decide who will be the effected parties. District staff provided testimony at that hearing and ultimately the administrative law judge (ALJ) granted the District standing in the contested case. After further negotiations, the District (along with all other protestants except the Save Our Springs Alliance) finally reached a settlement agreement with the City of Dripping Springs, and withdrew as a party to the contested case hearing.
- Roadway Projects (SH 45 SW and MoPac Intersections) – In November 2016, the roadway construction efforts for SH 45 SW began. Staff coordinated five site visits in FY 2018 for which 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.

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 five storm water inspections, and the Aquifer Science Team has performed approximately 10-15 geologic inspections.

- 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 General Manager'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 SOAH to conduct the contested case hearing. A SOAH preliminary hearing was held on September 17, 2018 to determine standing. The application is currently pending at SOAH.

- 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, 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. The Board 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.
- Management Plan – Per statutory requirements, the District actively worked towards updating its MP. The plan was scheduled to expire in January 2018 and the District was required to submit an updated plan for preliminary review in July 2017. The plan was updated to reflect recent legislative changes and rule making efforts that took place since the 2015 annexation. In November 2017, the Board adopted the updated MP, and in January 2018, the TWDB approved the plan.
- 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 2019. The project team has made significant progress on the data management system. The Intera team developed a partial “alpha” version, and staff reviewed the alpha system with the project team in June – August 2018. Follow-up meetings were held with smaller groups of District staff to receive feedback on the system and to compile a list of changes. There was a significant amount of time spent on the prototype design as well as the design framework of the permitting workflows. Additional work remains to be completed on the various meter reading, hydrogeological data components, and reporting elements of the database system.
- External Communication and Coordination – Work groups and projects involving staff participation included:
 - ASR Technical Discussions and Workgroups,
 - SH 45 SW Technical Workgroups,
 - Edwards Aquifer recharge and contributing zone development activity coordination,
 - Water Conservation Advisory Council,
 - Regular meetings of the Regional Water Quality Protection Plan workgroup,
 - Well permitting and registration efforts in the shared territory,
 - GCD Roundtable Discussions,
 - Texas Alliance of Groundwater Districts; and
 - Texas Water Conservation Association.
- Rulemaking Activity - 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.

In FY 2018, the Rules were not amended; however, the District continued its ongoing initiatives associated with development of alternative water supplies for the District. District staff developed rule concepts for guiding and regulating ASR systems within the District. Prior to drafting concepts, staff held multiple meetings with the TCEQ, and held an ASR stakeholder meeting on December 13, 2017. ASR rule concepts were presented to the Board on August 10, 2018. Staff is continuing to meet with the Rules subcommittee and will start drafting rule language soon.

- **Implementation and Compliance of Existing Rules** - Staff reviews permit compliance and monitors existing wells for compliance with the Rules, and Well Construction Standards. By requiring reporting of periodic meter readings, performing inspections of wells, and reviewing pumpage compliance at regular intervals, staff is able to ensure permitted wells and well systems are operated as intended.
 - **Inspections & Investigations** - During FY 2018, the Regulatory Compliance Team conducted a number of inspections relating to the processing of permit applications. Staff completed a total of 43 inspections related to special investigations, site permittee inspections, and well permit applications. The Regulatory Compliance Team collected 24 water quality samples during routine permit inspections or from new well construction inspections. There were no formal enforcement actions initiated in FY 2018.

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

- **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 2018. 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 \$21,502.03 in credits in FY 2018 with \$13,438.77 being issued to 20 permittees, and \$8,063.26 being issued to the CoA. Permittees donating credits back to the District's camp scholarship fund include Goforth SUD (\$700.00), Slaughter Creek Acres WSC (\$86.72), Creedmoor-Maha WSC (\$924.93), Centex (\$1,359.67), and Texas Lehigh Cement Company (\$258.74 plus an additional donation of \$1,200.00 for a total of

\$1,458.74). The CoA also donated their \$8,063.26 credit to the District's camp scholarship fund. Total donations combined equal \$11,393.32.

- Drought and Conservation Plans - The majority of permittees have current User Drought Contingency Plans (UDCPs) and User Conservation Plans (UCPs) on file and are compliant 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 is currently working to update drought templates (Drought Target Chart, UDCP, UCP) so that Permittees can have their files updated in early 2019 for the five-year update.
- 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 report are found on the [drought management website pages](#).
- 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 2018, 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. Approximately 192 registration surveys were received and processed in FY 2018.
- 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 2018 is provided in the table below.

New Wells Drilled	FY16	FY 17	FY 18
New Exempt Wells	5	9	4
Limited Production Permits (Nonexempt Domestic Wells)	13	22	14
Individual Wells	2	2	4
Test Wells	6	0	0
Replacement Wells	2	0	1
TOTAL	22	33	23

A summary of the processed permitting applications in FY 2018 is provided in the table below.

Processed Permit Applications	FY16	FY 17	FY18
Minor Amendment	1	3	6
Major Amendments	0	0	7
New Exempt Well	5	9	4
Limited Production Permit (Nonexempt Domestic Wells)	13	22	14
Individual Production Permit	6	4	4
New Individual Well Drilling Authorizations /Modification	3	3	3
Test Well	2	0	2
Well Plugging	12	10	8
Replacement Well	2	0	1
Temporary Permit	21	NA	NA
Regular Permit (Temporary Permit Conversion)	16	NA	NA
TOTAL	81	51	49

A summary of the individual production permits processed in FY 2018 is provided in the table below.

	Annual Volume	Production Permits Processed	Permit Type	Use Type	Aquifer
1	4,200,000	Trinity Episcopal School	Historical Trinity	Irrigation	Trinity
2	1,000,000	Feldner CND LLC	Historical Trinity	Irrigation	Trinity
3	900,000	Matthew Goebler	Conditional Edwards Class A	Commercial	Edwards
4	912,500,000	Electro Purification*	Historical Trinity	Wholesale PWS	Trinity
<i>*This application was processed as administratively complete but a Board Decision has not been made as of the date of this report.</i>					

A summary of the individual production permits that were retired in FY 2018 is provided in the table below.

	Annual Volume	Retired Production Permits	Permit Type	Aquifer
1	0	JL Smith Academy Austin LLC	Commercial	Edwards
2	2,000,000	Malone Addition Water Supply (J.D. Malone)	PWS	Edwards

2.5.1 Permit Summary:

A summary of the active individual production permits to date in FY 2018 is provided in the table below.

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

A summary of the active general permits to date in FY 2018 is provided in the table below.

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

2.5.2 Production Summary:

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 actual versus permitted production volumes for each Management Zone is also provided below.

FY 2018 Production from Individual Permittees		
Production Zone	Actual Production	Permitted Production
Edwards	1,454,868,858	2,714,777,544
Trinity	218,818,539	518,481,557
Austin Chalk or Alluvial	702,730	2,500,000
Total (Gallons)	1,674,390,127 gal	3,235,759,101
	(5,138.51 ac ft)	(9,930 ac ft)

FY 2018 Production from Limited Production Permittees (LPP)		
Production Zone	Actual Production*	Permitted Production
Edwards	13,500,000	54,000,000
Trinity	4,125,000	16,500,000
Austin Chalk or Alluvial	0	0
Total (Gallons)	17,625,000	70,500,000 gal
	(54.09 ac ft)	(216.4 ac ft)
<i>*Actual production is a volume estimate calculated from available meter reading data in annual meter reports.</i>		

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

FY 2018 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)	51,500,000	0.22	158
Total Conditional	403,194,948	1.71	1,237
Total Edwards	2,714,777,544 gal	11.51 cfs	8,331 ac ft

Trinity MZs	gallons	cfs	acre-feet
Historical (Individual)	501,981,557	2.13	1,541
Historical (LPP)	16,500,000	0.07	51
Total Trinity	518,481,557 gal	2.20 cfs	1,591 sc 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	3,235,759,101 gal	13.72 cfs	9,930 ac ft
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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 2018 began with a status of No Drought for District aquifers following a trend which began back in September 2014 when water levels began to rise after above-average rainfall. Steady recharge throughout 2015 and 2016 continued to increase aquifer water levels as well as Barton Springs flow. In January 2015, the Board updated the drought status from Stage II Alarm Drought to No Drought. After two consecutive years of average rainfall in 2017 and 2018, water levels and Barton Springs flow fell below their respective drought thresholds. On July 12th, 2018, the Board declared Stage II Alarm Drought, ending a 3-year and 6-month period with no declared drought.

Measurements began to decline in April 2017 and eventually crossed below drought warning levels in July 2018. Then an average of 12 inches of rain in September and October 2018 produced much needed recharge, resulting in rising aquifer levels. They rose above the Stage II Alarm Drought threshold in early October and the Board declared No-Drought at the October 11th, 2018 Board Meeting.

Austin has received an overall 28" of rainfall so far in 2018, producing significant recharge for local aquifers. While levels continue to climb from additional rainfall, much more recharge is needed to bolster against another decline in water levels in the District's aquifers.

Official forecasts favor the formation of a weak El Niño in the Pacific, which is likely to result in wet conditions through the winter and into Spring 2019.

3.2 Grant Programs

The District continued its ongoing initiatives associated with development of alternative water supplies for the District and its region throughout FY 2017. On January 28, 2015, the District submitted an application to the TWDB Board for a Regional Facility Planning Grant to assess the saline Edwards Aquifer as a potential source of water for a desalination plant and as a reservoir for ASR. The District was awarded grant funding in the amount of \$240,000 to support the District's grant project. The contract with TWDB for the grant project was approved by the Board and executed on August 27, 2015. After the selection of Carollo Engineers as a subcontractor for the grant project, a kickoff meeting was held on February 25, 2016. Work continued on the grant throughout FY 2017, and a final report was delivered to TWDB in December 2017.

3.3 Professional Services

The District expended \$267,508 for professional services in FY 2018. This amount included legal fees of \$127,645 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 \$39,490; SOAH \$3,280 (to be offset by a deposit that TESPAs has deposited with the District to cover such fees); Dripping Springs TPDES \$35,119; General Matters/Personnel \$22,672; and EP \$26,958.

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

Additional professional services for FY 2018 also reported in the above amount include the District's third party retirement plan administrator, The Standard, for \$22,173; costs associated with Elections (\$2,975) that were minimal due to no opposition and the cancellation of the District election; salary survey specialist Evergreen for \$14,500; and Intera's database project for \$89,216.

The District retained Montemayor Britton Bender PC early in 2016 to perform its annual financial audit for FY 2015, and future audits going forward. The fee for these professional services was \$11,000 for FY 2017, and will be \$12,500 for FY 2018, and are also included in the professional services total above.

Not included in the professional services total above, the District expended \$13,000 for the lobbying services of SledgeLaw Group for the 86th Interim 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. So 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

The District completed two small capital projects in FY 2018. The outside deck was replaced, and cabinets were installed in the library for a total of \$7,900.

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 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 2018 toward the goals, objectives, and performance standards identified in the prevailing District MP.

On December 13, 2018, 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 of Directors unanimously approved the progress toward each and all objectives in FY 2018 as being satisfactory, and directed the staff to include a record of these actions and their basis in this Annual Report. That record and the basis for that decision-making are included as Appendix B.

This assessment for FY 2018 measured 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 that plan's objectives in FY 2019.

APPENDIX A

Independent Annual Financial Audit Report

(Board-approved December 13, 2018)



Montemayor Britton Bender PC

CERTIFIED PUBLIC ACCOUNTANTS

**BARTON SPRINGS/ EDWARDS AQUIFER
CONSERVATION DISTRICT**

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

31 AUGUST 2018

**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 2018, 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 2018, 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 9 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

11 December 2018
Austin, Texas

Barton Springs / Edwards Aquifer Conservation District

Management Discussion and Analysis

Fiscal Year Ending August 31, 2018

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 before any adjusting journal entries in the current year.

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, 2018, 2017, and 2016

	<u>2018</u>	<u>2017</u>	<u>2016</u>
Current assets	\$1,266,839	\$1,378,323	\$1,714,993
Capital assets	<u>494,337</u>	<u>449,070</u>	<u>454,053</u>
Total assets	<u>\$1,761,176</u>	<u>\$1,827,393</u>	<u>\$2,169,046</u>
Total liabilities	<u>\$282,171</u>	<u>\$292,746</u>	<u>\$580,025</u>
Net position:			
Net investment in capital assets	494,337	449,070	454,053
Unrestricted	<u>984,668</u>	<u>1,085,577</u>	<u>1,134,968</u>
Total net position	<u>1,479,005</u>	<u>1,534,647</u>	<u>1,589,021</u>
Total liabilities, deferred inflows of resources, and net position	<u>\$1,761,176</u>	<u>\$1,827,393</u>	<u>\$2,169,046</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, 2018, 2017, and 2016

	<u>2018</u>	<u>2017</u>	<u>2016</u>
Operating revenues	\$1,772,448	\$1,661,528	\$2,003,708
Operating expenses	<u>1,845,398</u>	<u>1,723,925</u>	<u>1,791,213</u>
Operating income	<u>(72,950)</u>	<u>(62,397)</u>	<u>212,495</u>
Non-operating revenues(expenses)			
Interest income	17,308	8,023	3,638
Interest expense	<u>0</u>	<u>0</u>	<u>0</u>
Total non-operating rev/(exp)	<u>17,308</u>	<u>8,023</u>	<u>3,638</u>
Change in net position	(55,642)	(54,374)	216,133
Beginning net position	<u>1,534,647</u>	<u>1,589,021</u>	<u>1,372,888</u>
Net position end of year	<u>\$1,479,005</u>	<u>\$1,534,647</u>	<u>\$1,589,021</u>

FINANCIAL HIGHLIGHTS OF CHANGES IN OPERATING REVENUES

The discussion that follows is based on FY 2018 preliminary financial reports before adjustments and reclassifications in the audit process.

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 increased by \$147,479 in FY 2018 from the prior year to \$1,693,195 from \$1,545,716. This increase is directly attributed to the City of Austin Water Use Fee that was assessed in the amount of \$1,000,000 (the HB 3405 statutory cap) for FY 2018 but was assessed in the amount of \$850,846 for FY 2017 (17.5% increase). The City of Austin fee was calculated for FY 2018 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 2018 and FY 2017.

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 \$12,950. Actual Other Fees earned at fiscal year-end was \$14,466 which was a 34.8% decrease from the previous year of \$22,192.

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 so no drought management fees were assessed or collected for FY 2018. The District was in No Drought status for the entire FY 2017, therefore there were no drought management fees assessed or collected for FY 2017.

Interest income in FY 2018 as expected continues to be minimal but is a substantial increase (115.7%) from the prior year. Actual interest income received for FY 2018 is \$17,308 as compared to \$8,023 in FY 2017 (a difference of \$9,285).

Grant revenue was accrued in FY 2017 however due to the project being delayed the grantor did not pay grant revenue until FY 2018. Grant expenses for FY 2017 were \$123,282 and FY 2018 were \$118,268. The new grant amendment expired in December 2018, therefore, all grant revenue that will offset much of the grant expense incurred in both FY 2016 and FY 2017 for this project will be realized through reimbursement from the TWDB in FY 2018.

The first (and final) grant invoice was submitted for payment on March 30, 2018 and payment of \$226,157 was received and deposited on July 27, 2018, and the grant has been completed.

There were two additional projects completed in FY 2017 that generated \$100,000 each. There was a Travis County Trinity Modeling project, and also a Hays County Trinity Modeling project.

A third project for conducting investigations and offering educational support related to groundwater use in Southwest Travis County began in July of FY 2018 where payment of \$100,000 was expected but not received. The project runs through August 31, 2019 and the payment of \$100,000, all project-related expenses, and most of the work will occur in FY 2019.

In FY 2017, there was \$22,450 revenue received from the selling of access easements on the Antioch property to allow for the installation and future maintenance of a water pipeline for the Alliance Regional Water Authority. This was a one-time transaction that will not reoccur so there is no comparable revenue source for FY 2018.

FINANCIAL HIGHLIGHTS OF CHANGES IN OPERATING EXPENSES

The discussion that follows is based on FY 2018 preliminary financial reports before final auditor adjustments and reclassifications in the audit process, although several of the year-end adjustments have already been posted.

Expenses for personnel salaries and wages for FY 2018 is \$841,485 which is \$21,871 higher than the previous year's expense of \$819,614. The increase in FY 2018 salaries was due to the four senior-level increases awarded, the expense that would have gone to the GM salary was used from the GM team budget to hire an Interim Acting GM for \$22,800 before the new and current GM was hired in June 2018. This isn't an exact comparison due to the GM position being vacant approximately four months where a consultant was utilized.

Actual expenses for employee payroll taxes and retirement benefits for FY 2018 are \$120,086 which is less than the previous year's expense of \$121,847. This small decrease of \$1,761 is directly attributed to the four months that the District was without a GM.

Actual expenses for employee group insurance benefits in FY 2018 is \$125,727 which is \$7,920 more than the FY 2017 expense of \$117,897 (a 6.7% change). This includes employee premiums, 25% of employee dependent premiums, family dental, employee life insurance, and employee vision. This line item usually increases annually. The two areas it increased the most was employee premiums, and the 25% of employee dependent premiums, as employee elections changed (by adding dependents that were not on the plan in FY 2017).

Actual expense for directors' compensation for meetings in FY 2018 is \$35,700 which is barely less than the FY 2017 actual expenses of \$36,400 (a 1.9 % decrease). This account was almost maximized for the past two years. In this category, the statutory maximum annual amount, which was not increased, of \$9,000 per director per fiscal year, is always budgeted at the full amount of \$45,000 for the five directors.

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 Board-adopted FY 2018 Goals and the District's Management Plan objectives (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. This cannot really be compared to the previous

year's total expenses of \$1,912 that was the final payment for the FY 2016 election, which was also cancelled. The final payment for the election for FY 2018 was paid out in FY 2019 for an additional \$1,940. 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.

In FY 2018, actual Professional Services expenses (excluding legal expenses which are characterized below) were \$54,709 as compared to \$31,359 in FY 2017 (which is a 74% increase). These professional services include the annual financial audit, the Standard retirement plan administration, and incidental election expenses. In addition, there was a new category included for FY 2018 that was not a part of FY 2017. There was a Salary Survey completed for \$14,500. The 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 expense in FY 2018 was \$138,092 which is \$36,227 more than the previous year's expense of \$101,865 (a 35.6% increase). This level of expense is due to ongoing efforts associated with HB 3405 annexation of the Shared Territory, prospective contested case hearings, and other extraordinary legal matters.

Occasionally the District is involved in Special Projects. In FY 2017, the District entered into two interlocal funding agreements for a multiport Trinity Aquifer monitor well in Travis County, and a second multiport well in Hays County. Travis County paid \$100,000 for their well, and Hays County also paid \$100,000 for their well. The District completed the two projects and provided an additional \$50,000 towards the projects that were completed in FY 2017 in accordance with interlocal agreements with both counties.

In FY 2018, there were expenses of \$11,500 in the Facilities Upgrades and Facilities Repairs accounts for vine removal on the side lot, and for library shelving. This is a substantial increase from the previous year where only \$1,672 was expended. There were no large repair or upgrade needs for FY 2017. See key factors influencing capital assets.

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.

In FY 2017, there was \$1,672 spent on a library shelving project. The other half of that project was paid in October 2018 for \$1,150. 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 Repair and Maintenance for 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.

The District capitalized the database project for \$89,216 that will continue on into FY 2019 where it should be completed. In FY 2017 the District capitalized \$10,305 for field equipment.

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 2018 totaled \$348,049 which is \$97,578 more than the prior year's total of \$250,471. 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 previously unreimbursed grant revenue previously mentioned, that was received in July 2018.

ANTICIPATED CHANGES FOR FY 2019

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 to occur and be potentially significant to financial performance and/or condition in FY 2019:

- Completion of the Southwest Travis County ILA Project
- Contracting with an HR Consulting Firm
- Continuation of two contested case/legal challenges associated with controversial permit applications in the Shared Territory – Electro Purification, and Needmore
- Contracting with Intera for litigation support
- Reassessment of the District Fee Schedule Excess Pumpage Fees tier calculations
- Installation of an additional Shared Territory monitor well
- Larger amounts of contractual funding associated with various technical and professional services, including:
 - technical services to support prospective special projects including ASR pilot projects, continued aquifer characterization, new monitor well installation, and HCP-related projects;
 - technical and consulting services to support prospective implementation of the HCP including initial annual reporting and mitigation measures; and
 - engineering services associated with continued monitoring and review of major roadway projects including SH 45 SW.

CONTINGENCY PLANNING ASSETS

The current cash assets include \$792,189 designated by the Board for certain unanticipated legal expenses and other contingencies. This was the balance of our Contingency Account at the end of FY 2018. At the end of FY 2017 the balance was \$737,766.

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 2018

ASSETS

Current assets

Cash	\$116,770
Short-term investments (including \$792,189 designated by the Board for legal and other contingencies)	1,147,487
Other	<u>2,582</u>
	<u>1,266,839</u>

Noncurrent assets

Nondepreciable capital assets	290,974
Depreciable capital assets	<u>203,363</u>
	494,337
	<u>1,761,176</u>

LIABILITIES

Current liabilities

Accounts payable	30,260
Conservation credits	21,502
Accrued payroll	58,324
Amounts held for others (Note 11)	93,184
Unearned permit and fee revenue	<u>78,901</u>
	<u>282,171</u>

NET POSITION

Net investment in capital assets	494,337
Unrestricted	<u>984,668</u>
	<u>\$1,479,005</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 2018**

OPERATING REVENUE	
Water permits and fees	\$1,707,661
Grant	59,987
Other	<u>22,108</u>
	<u>1,789,756</u>
OPERATING EXPENSES	
Personnel and related	1,088,660
Legal	138,092
Grant	118,268
General management team	66,590
Aquifer science	65,037
Professional services	54,709
Depreciation and amortization	43,949
Director compensation	35,700
Regulatory compliance	31,750
Education and outreach	22,932
Utilities	22,252
Maintenance	16,231
Legislation	13,000
IT monthly maintenance	12,000
Office supplies	10,512
Leases	9,723
Other	<u>95,993</u>
	<u>1,845,398</u>
CHANGE IN NET POSITION	<u>(55,642)</u>
BEGINNING NET POSITION, as previously stated	1,561,911
Prior period adjustment	<u>(27,264)</u>
BEGINNING NET POSITION, as restated	<u>1,534,647</u>
ENDING NET POSITION	<u>\$1,479,005</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 2018

CASH FLOWS FROM OPERATING ACTIVITIES

Receipts from water permit and other use fees	\$1,633,377
Other cash receipts	317,612
Payments to employees for services	(1,130,255)
Payments to suppliers for goods and services	<u>(671,503)</u>
	<u>149,231</u>

CASH FLOWS FROM INVESTING ACTIVITIES

Purchases from sale of investments	(118,454)
Purchase of capital assets	<u>(89,216)</u>
	<u>(207,670)</u>

NET CHANGE IN CASH	(58,439)
BEGINNING CASH	<u>175,209</u>
ENDING CASH	<u>\$116,770</u>

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

Change in net position	(\$55,642)
Depreciation and amortization	43,949
Change in accounts receivable	169,524
Change in prepaid expense	1,975
Change in accrued payroll liabilities	(5,895)
Change in accounts payable	3,611
Change in deposits for SOAH hearing	65,920
Change in deferred inflows related to water fees	(72,415)
Change in conservation credits	<u>(1,796)</u>
	<u>\$149,231</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 Statement, the District has no component units and is not a component unit of any other reporting entity as defined by the Statement.

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

DEFERRED INFLOWS

Deferred inflows 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

COMPENSATED ABSENCES

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 2018, the carrying amount of the District's cash deposits was \$116,770, and the bank balance was \$69,778. Short-term investments of \$1,147,487 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 2018, the TexPool portfolio had a weighted average maturity of 28 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

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 2018 amounted to \$21,502.

NOTE 6: CONCENTRATION

56% of the District's revenue is from the City of Austin as required by the District's enabling legislation.

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 2018 the District's contribution to the Plan was \$55,727.

NOTE 8: OPERATING LEASE

The District has entered into leases for equipment which expire in 2021. For the fiscal year ended 31 August 2018 rent expense was approximately \$9,700. Future minimum lease payments for the operating lease are \$9,170 a year for the fiscal years ending 31 August 2019 through 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>0</u>	<u>89,216</u>	<u>0</u>	<u>89,216</u>
	<u>201,758</u>	<u>89,216</u>	<u>0</u>	<u>290,974</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	(149,643)	(10,926)	0	(160,569)
Office furniture and equipment	(33,252)	0	0	(33,252)
Field equipment	(360,505)	(7,482)	0	(367,987)
Vehicles	(78,339)	0	0	(78,339)
Well monitoring access rights, finite life	<u>(25,541)</u>	<u>(25,541)</u>	<u>0</u>	<u>(51,082)</u>
	<u>247,312</u>	<u>(43,949)</u>	<u>0</u>	<u>203,363</u>
	<u>\$449,070</u>	<u>\$45,267</u>	<u>\$0</u>	<u>\$494,337</u>

NOTE 10: LITIGATION

The District was not actively involved in any litigation during FY 2018. However, there were other legal matters beyond general matters (discussed below) that required material expenditures for legal services in FY 2018.

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. The implementation of HB 3405 continued from FY 2016 and FY 2017 into FY 2018 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. The District anticipates additional legal expenses associated with ongoing activities related to this contested case preparations including possible depositions, legal briefing, and the possible actual hearing on the merits. Trinity Edwards Springs Protection Alliance (TESPA) paid the District \$31,000 to cover the District's future legal fees related to this case of which \$23,184 has not been spent. At the end of this case any unspent amounts will be refunded to TESP.
- B. In FY 2018, the District reviewed the well modification and production permit applications filed by Electro Purification, LLC in FY 2017 and recommended a draft proposed permit in May 2018. The public submitted more than 300 comment letters or emails, including twelve comment letters requesting a contest case hearing. In July 2018, the Board referred the case to the SOAH to conduct the contested case hearing, which has been scheduled to be held in September 2019. With that stated, in FY 2019, the District anticipates legal expenses associated with the contested case. Electro Purification paid the District \$70,000 to cover the District's future legal fees related to this case. At the end of this case any unspent amounts will be reimbursed to Electro Purification.
- C. Beginning in FY 2017 and continuing into FY 2018, the District was actively involved in the analysis of the Texas Pollution Discharge Elimination System (water-quality discharge) permit application filed by the City of Dripping Springs to authorize an unprecedented direct discharge of treated effluent into Onion Creek above the recharge zones of the Trinity and Edwards Aquifers. This involved expenditures for legal services to discuss possible settlement terms and confer with the applicant and other affected parties. The District's stated opposition to the draft permit warranted legal expenses in FY2017 and FY2018. In June 2018, the District, along with several other parties, reached a settlement agreement with the City of Dripping Springs, that provides significant measures to protect the recharge features in the Onion Creek watershed.

BARTON SPRINGS/EDWARDS AQUIFER CONSERVATION DISTRICT

NOTES TO FINANCIAL STATEMENTS

NOTE 11: AMOUNTS HELD FOR OTHERS

Electro Purification (NOTE 10 paragraph B)	\$70,000
TESPA (NOTE 10 paragraph A)	<u>23,184</u>
	<u>\$93,184</u>

NOTE 12: PRIOR PERIOD ADJUSTMENT

As of 31 August 2017, the liability for amounts held for others in the statement of net position proprietary fund was understated by \$27,264, which resulted in the net position being overstated by the same amount at 31 August 2017. Additionally, water permit and fee revenue in the proprietary fund statement of revenue, expenses and changes in fund net position, as well as the change in net position was overstated by \$27,264 for the year ended 31 August 2017. Accordingly, a prior period adjustment was recorded to restate the beginning net position.

APPENDIX B

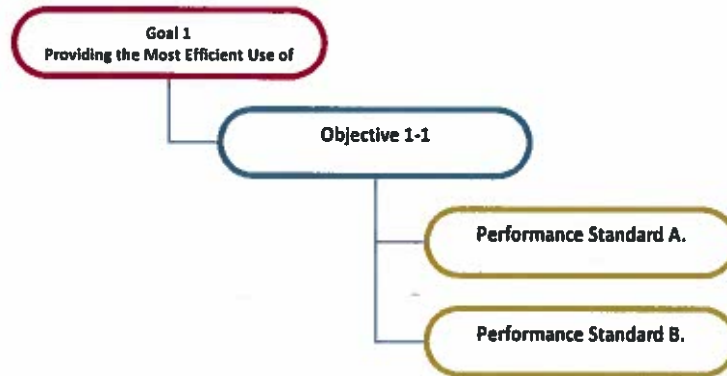
Assessment of Progress toward Management Plan Goals and Objectives

(Board-approved December 13, 2018)

Staff Guidance – 2018 Annual Report /Appendix B

When completing your written update for each objective, please try to include a few sentences on what the proposed future actions will be for that specific objective. Staff need to address how each performance standard was met or the current status of that performance standard.

- **Goals** are set by the TWDB. These 8 goals are captured in our Mgmt Plan.
- **Objectives** are set by BSEACD Staff/Board. These objectives are the same objectives for the HCP.
- **Performance Standards** are set by BSEACD Staff/Board. These performance standards are the same reporting standards that have to be completed for the HCP. Many of these standards have always been reported on in previous Annual Reports.



Use the following table for staff assignment purposes. Each team is responsible for completing the content of their designated performances standards.

General Mgmt (9 objectives)	Administration (3 objectives)	Education & Outreach (6 objectives)	Aquifer Sci (8 objectives)	Reg. Compliance (8 objectives)
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Goal 1 Objectives	Goal 2 Objectives	Goal 3 Objectives	Goal 4 Objectives	Goal 5 Objectives	Goal 6 Objectives	Goal 7 Objectives	Goal 8 Objectives
1-1	2-1	3-1	4-1	5-1	6-1	7-1	8-1
1-2	2-2	3-2	4-2	5-2	6-2	7-2	8-2
1-3	2-3	3-3	4-3	5-3	6-3		8-3
1-4	2-4	3-4	4-4	5-4			
1-5			4-5	5-5			
1-6							
1-7							

2018 Appendix B

Assessment of Progress Toward Management Plan Goals and Objectives

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 early FY 2018, the District updated its MP; the Board approved the updated plan on September 28, 2017, and the Texas Water Development Board (TWDB) approved it on November 21, 2017. In order to achieve the goals, management objectives, and performance standards adopted in the Plan, the Board evaluated the progress towards maintaining the newly adopted goals at its December 13, 2018 when it reviewed and approved the District Annual Report, along with Appendix A (the annual financial audit), and Appendix B (Assessment of Progress toward Management Plan Objectives). No revisions were presented or were made to the plan.

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.

No rule amendments were adopted in FY 2018.

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.

See 2.5.2 Regulatory Compliance Team, Production Summary in the Annual Report, page 19.

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 in the District is scheduled for FY 2020.

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 and permit type that will be provided in the annual report.

See 2.5.2 Regulatory Compliance Team, Production Summary in the Annual Report, page 19.

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 775 times throughout the fiscal year.

The District declared alarm stage drought on July 12, 2018. The drought status change was publicized through drought stage icons and spotlights on the District website, a press release, eNews articles, and with road signs and mailers 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 is presented in the status report section of the Board backups.

A summary of outreach activities and estimated reach will be provided in the annual report.

See 2.4 Education and Community Outreach Team in the Annual Report, page 12.

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.

See Annual Report, Appendix A, page 24.

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.

See 2.1 General Management Team in the Annual Report, page 5.

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 PIA, any training provided to staff or directors, or any claims of violation of the Public Information Act will be provided in the Annual Report.

District records were maintained effectively, and there were no violations of the Public Information Act.

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.

This performance standard has been effectively met.

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. Elections 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.

See 2.2 Administration Team in the Annual Report, page 7.

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 be provided in the Annual Report.

See 2.5 Regulatory Compliance Team, Well Registration and Application Reviews in the Annual Report, page 17.

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.

See 2.5 Regulatory Compliance Team, Implementation and Compliance of Existing Rules in the Annual Report, page 16.

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 Annual Report.

See 2.5.2 Regulatory Compliance Team, Production Summary in the Annual Report, page 19.

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.

In FY 2018, the District amended its agreement with SledgeLaw Group PLLC to provide legislative consulting services through June 30, 2020. With consultant input, the District followed interim session groundwater issues with the House Natural Resource Committee and the Senate Committee on Agriculture, Water, and Rural Affairs. Interim groundwater issues included consistency in

aquifer-wide management and permitting practices, groundwater ownership and regulation, improvement to the existing groundwater permitting process, designation of brackish groundwater production zones, examining the status of water markets, and the hazards of abandoned groundwater wells.

Additionally, the District staff attended the Texas Alliance of Groundwater District's (TAGD) Legislative Committee meetings in May and August. Both meetings included discussions on legislation of interest to groundwater conservation districts that did not pass in the 85th session and would likely be re-introduced in the 86th session – including recovery of attorney fees legislation.

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

District staff actively participated in the Dripping Springs TPDES Permit Application, and the SH 45 SW and MoPac intersections roadway projects.

See 2.5 Regulatory Compliance Team highlights in the Annual Report, page 14.

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.

See 2.5 Regulatory Compliance Team, Well Registration and Application Reviews in the Annual Report, page 17.

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).

See 2.3 Aquifer Science Team in the Annual Report, page 9.

Also see BSEACD report Hunt, et al., 2017, Hydrogeology of the Saline Edwards Zone, Southeast Travis County, Central Texas; and BSEACD Report of Investigations 2017-1015, 66 p., October 2017.

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).

See 2.3 Aquifer Science Team in the Annual Report, page 9.

Also see BSEACD report Smith, et al., 2017, Status Report for Aquifer Storage and Recovery Pilot Project, Ruby Ranch Water Supply Corporation, Hays County, Central Texas; and BSEACD Technical Note 2017-0930, September 2017.

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 is presented in the status report section of the Board backups.

Summarize outreach activities and estimate reach in the Annual Report.

See 2.4 Education and Community Outreach Team in the Annual Report, page 12.

See 2.3 Aquifer Science Team in the Annual Report, page 9.

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 2018, District staff attended all four meetings of the Lower Colorado Regional Water Planning Group (LCRWPG) – October 11, 2017, January 10, 2018, July 11, 2018, and August 29, 2018. Highlights from these four meetings include the following: 1) October 11, 2017 – consultants made presentations on the revisions to the population and municipal demand and other committee update reports; 2) January 10, 2018 – besides committee update reports, the LCRWPG approved the updates to the assumptions incorporated in the Region K Cutoff Model for the 2021 Plan; 3) July 11, 2018 – consultants explained that the Potentially Feasible Strategies Survey was sent out to municipal Water User Groups, and the LCRWP Group approved that LCRA and West Travis County Public Utilities Agency as the major water providers for Region K; and 4) August 29, 2018 – consultants presented the draft Region K Technical Memorandum which identified water management strategies. LCRWPG approved the memorandum. Additionally, the LCRWPG approved the scope of work for the consultant who will evaluate the water management strategies.

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 to 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 sampled wells and springs for detailed geochemical analyses as a cooperator for the TWDB. 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 developed analytical models for use in the evaluation of the potential for unreasonable impacts. In addition, the District contracted with Intera Incorporated to develop an additional analytical tool for the evaluation of specific permits in central Hays County.

District staff are working to refine the conceptual model of the Trinity Aquifer systems, and provided critical review of the draft report on the conceptual model of the Hill Country Trinity groundwater availability model (GAM), (Southwest Research Institute report contracted by TWDB). That report is anticipated to inform a revised GAM numerical model in the future.

District staff have attended numerical and analytical modeling trainings and are currently developing a numerical model internally, and are also participating in the development of a conceptual and numerical model for the Blanco River watershed by a group of geoscientists and agencies.

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.

For a summary of FY 2018 data, see 2.3 Aquifer Science Team in the Annual Report, page 9.

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.

A list of permit applications that are determined to have potential for unreasonable impacts will be provided in the Annual Report.

The General Manager issued a preliminary decision on the application by EP to pump 2.5 MGD in central Hays County. Site-specific evaluations are described in detail in the three technical memorandums:

- **BSEACD, 2017, Hydrogeologic Setting and Data Evaluation: 2016 EP Aquifer Test, Cow Creek Well Field: Hays County, Texas. Barton Springs Edwards Aquifer Conservation District, Technical Memo 2017-1010, 39 p.**
- **BSEACD, 2018, Aquifer Parameter Estimation for the EP Well Field, Hays County, Texas. Barton Springs Edwards Aquifer Conservation District, Technical Memo 2018-0213, 28 p.**
- **BSEACD, 2018, Evaluation of the Potential for Unreasonable Impacts from the EP Well Field, Hays County, Texas. BSEACD Technical Memo 2018-0219. February 2018. 13 p.**

Objective 4-3. 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.

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.

See 2.3 Aquifer Science Team Highlights in the Annual Report, page 9, and Education Team highlights in the Annual Report, page 12.

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.

See 2.5.2 Regulatory Compliance Team, Production Summary in the Annual Report, page 19.

Objective 4-4. 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 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 10 meetings that were held in FY 2018. Following is a summary of these meetings:

GMA 9

District staff attended the only GMA 9 meeting held in FY 2018. The meeting was in Bulverde (New Comal County GCD hosted) on January 29, 2018. In that meeting, staff presented the District's Management Plan (MP).

Staff worked on a master spreadsheet that summarizes the rules of all the GCDs in GMA 9. Also, staff provided an update to an evaluation of the DFC in GMA 9.

GMA 10

District staff attended all six GMA 10 meetings held throughout FY 2018. Like GMA 9 efforts, District staff along with consultant, Kirk Holland, participated in a GMA 10 Joint Planning Committee to establish a rule comparison framework. As in GMA 9, the committee created a detailed rule comparison spreadsheet and prepared a narrative describing general areas of similarities and differences in the rules of member GCDs. The narrative and spreadsheet data are intended to be used to inform GCD boards of other potential regulatory approaches that might be feasible, as part of regional collaboration in the joint planning process. Additionally, staff spoke at the March 26 meeting in San Antonio on an approach to DFC monitoring using GMA 9 as an example.

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.

In July 2017, the USFWS officially posted the notice for the District's draft HCP, listed the draft Environmental Impact Statement (EIS) in the Federal Register, and announced the 60-day public comment period. The USFWS held a public meeting on August 22, 2017 at the District office.

In response to comments received, the District submitted the final draft HCP to the USFWS in April 2018 for processing and publication. During the summer 2018, the District facilitated the

review of the final draft HCP and the ITP application including responding to all comments from the USFWS Austin field office and regional office in Albuquerque. As a result, the USFWS approved the District's HCP in July 2018, and published the Record of Decision and the final 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.

The HCP and associated documents, an overview of the development process, and more information are available on the District HCP website, including the District's responses to Public Comments, and links to federal review documents on the USFWS website.

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 City of Austin contacts 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.

See Hunt, B.B., B.A. Smith, and J. Camp, 2018, Is the BSEACD Drought Trigger Methodology Representative of the Middle Trinity Aquifer? BSEACD Technical Memo 2018-0829. August 2018. 12 p.

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

The District Board declared Stage II Alarm Drought at the July 12th, 2018 Board Meeting. The 10-day average discharge at Barton Springs, one of the two drought trigger sites, passed below the Stage II Alarm Drought threshold of 38 cubic feet per second. Lovelady monitor well, the second drought-trigger site, was less than one-foot above its drought threshold. Only one of the two drought stage triggers needed to be reached for an official drought declaration to be made.

After 13 weeks and an average of 12 inches of rain in the Hill Country, Lovelady water levels and Barton Springs discharge rose above their respective Stage II Alarm thresholds. At the October 11th, 2018 board meeting, the District's Board of Directors declared a No-Drought condition for

the aquifers within the District. As both drought indicators were above their respective drought thresholds.

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.

See 2.5 Regulatory Compliance, Drought and Conservation Plans, and Drought Compliance in the Annual Report, page 17.

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. The drought status change was publicized through drought stage icons and spotlights on the District website, a press release, eNews articles, and with road signs and mailers available for use by Permittees.

Articles included:

- May/June 2018 eNews: Stage I Water Conservation period declaration & drought prediction
- July 2018 press release: Aquifer District Declares Stage II Alarm Drought
- July 2018: Stage II Alarm Drought
- August 2018: Trinity Aquifer Trends

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: Celebrating 30 Years (September 2017)

Press release: Aquifer District Announces 2017 Groundwater Stewardship Award Winners (January 2018)

eNews: Aquifer Status and Drought Prediction (February 2018)

eNews: Aquifer Status and Drought Prediction (March 2018)

eNews: Stage I Water Conservation Period (May/June 2018)

Press release: Aquifer District Declares Stage II Alarm Drought (July 2018)

eNews: Stage II Alarm Drought Declared (July 2018)

eNews: Trinity Aquifer Trends (August 2018)

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, the 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 Management Plan Adoption.

See 2.5 Regulatory Compliance, Drought and Conservation Plans, and Drought Compliance in the Annual Report, page 17.

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.

See 2.5 Regulatory Compliance Team, Well Registration and Application Reviews in the Annual Report, page 17.

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 Management Zone and permit type including the volume reserved in the freshwater Edwards Conservation Permit for ecological flows will be provided in the Annual Report.

The following table summarizes the aggregate actual and permitted production for each of the District’s production zones by individual permittees and limited production permittees. The amount of historical Edwards permitted water that has been retired is 102,125,125 gallons per year that can be targeted for a conservation permit. Additionally, 1,200,000 gallons per year of Conditional A permitted water has been retired.

FY 2018 Production from Individual Permittees		
Production Zone	Actual Production	Permitted Production
Edwards	1,454,868,858	2,714,777,544
Trinity	218,818,539	518,481,557
Austin Chalk or Alluvial	702,730	2,500,000
Total (Gallons)	1,674,390,127 gal	3,235,759,101

FY 2018 Production from Limited Production Permittees (LPP)		
Production Zone	Actual Production*	Permitted Production
Edwards	13,500,000	54,000,000
Trinity	4,125,000	16,500,000
Austin Chalk or Alluvial	0	0
Total (Gallons)	17,625,000	70,500,000 gal
<i>*Actual production is a volume estimate calculated from available meter reading data in annual meter reports.</i>		

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. The drought status change was publicized through drought stage icons and spotlights on the District website, a press release, eNews articles, and with road signs and mailers available for use by Permittees.

Articles included:

- **May/June 2018 eNews: Stage I Water Conservation period declaration and drought prediction**
- **July 2018 press release: Aquifer District Declares Stage II Alarm Drought**
- **July 2018: Stage II Alarm Drought**
- **August 2018: Trinity Aquifer Trends**

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 Central Texas Water Efficiency Network and sponsors the annual Water Conservation Symposium. They symposium is structured to provide information about conservation-oriented strategies for mayors, City Councils, Board Members of 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, WFC Nature Nights Rocks-Water-Mud, and Groundwater to the Gulf: A Summer Institute for Educators.

This fiscal year approximately eight 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 to) 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 2018 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, 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.

Performance Standard

Assess progress toward enhancing regional water supplies in the Annual Report.

In FY 2018, the District has worked with other entities in the area, such as City of Buda, City of Kyle, Edwards Aquifer Authority (EAA), and Ruby Ranch Water Supply Corporation, to evaluate the potential for the Trinity Aquifers as reservoirs for aquifer storage and recovery (ASR) facilities. District staff worked cooperatively with the Ruby Ranch Water Supply Corporation to conduct a third and final phase of ASR pilot testing. A status report is in preparation.

Smith, B.A., B.B. Hunt, J.Camp, and B.K. Darling, 2017, Status Report for Aquifer Storage and Recovery Pilot Project, Ruby Ranch Water Supply Corporation, Hays County, Central Texas. BSEACD Technical Note 2017-0930 (September 2017).

In FY 2018, the District completed a TWDB grant and partnered with Texas Disposal Systems to evaluate the potential for ASR and desalination within the Edwards Limestone units east of IH-35.

Smith, B.A., B.B. Hunt, and B.K. Darling, 2017a, Hydrogeology of the Saline Edwards Zone, Southeast Travis County, Central Texas. BSEACD Report of Investigations 2017 1015. 66 p. (October 2017).

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 Management Zone and permit type will be provided in the Annual Report.

FY 2018 Production from Individual Permittees		
Production Zone	Actual Production	Permitted Production
Edwards	1,454,868,858	2,714,777,544
Trinity	218,818,539	518,481,557
Austin Chalk or Alluvial	702,730	2,500,000
Total (Gallons)	1,674,390,127 gal	3,235,759,101

FY 2018 Production from Limited Production Permittees (LPP)		
Production Zone	Actual Production*	Permitted Production
Edwards	13,500,000	54,000,000
Trinity	4,125,000	16,500,000
Austin Chalk or Alluvial	0	0
Total (Gallons)	17,625,000	70,500,000 gal
<i>*Actual production is a volume estimate calculated from available meter reading data in annual meter reports.</i>		

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 the Service 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.

The Service issued the District's ITP in September 2018. The compilation of aquifer data will be included in the District's FY 2019 Annual Report, and its annual report to USFWS in February 2020.

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 Management Zone and permit type will be provided in the Annual Report.

FY 2018 Production from Individual Permittees		
Production Zone	Actual Production	Permitted Production
Edwards	1,454,868,858	2,714,777,544
Trinity	218,818,539	518,481,557
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The USFWS issued the District's ITP in September 2018. The District will submit its first annual report to the Service 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.

The USFWS issued the District's ITP in September 2018. The compilation of aquifer data will be included in the District's FY2019 Annual Report and its annual report to the Service in February 2020.

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 Aquifers, no guidance in method or approach for monitoring the DFC is provided. However, using a methodology similar to the DFC for the Trinity Aquifers in GMA 9, District staff proposed a similar approach for the Trinity Aquifers in GMA 10 and presented it to the Committee at its March 26 meeting in San Antonio.

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.	<p>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.</p>

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 <u>annual report</u>.</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. 	<p>A. Review water-level and water-quality data that are maintained by the District and/or TWDB, or other agencies, on a regular basis.</p> <p>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.</p> <p>C. A review of the data mentioned above will be assessed for significant changes and reported in the <u>annual report</u>.</p>
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>	<p>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>.</p> <p>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>.</p>

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 <u>annual report</u>.</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.	<p><u>On an annual basis</u>, 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.</p>
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.	<p>Summarize water conservation related newsletter articles, press releases, and events in the <u>annual report</u>. 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.</p>

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
8-4	<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>
8-5	<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>Implement appropriate rules and measures to ensure compliance with District-adopted DFCs for each relevant aquifer or aquifer subdivision in the District.</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>
8-6	<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>