Barton Springs
Edwards Aquifer
CONSERVATION DISTRICT

Habitat Conservation Plan and Incidental Take Permit

Annual Report for Fiscal Year 2025

September 1, 2024 – August 31, 2025

Photo of Austin blind salamanders

Permit # TE 10607- 0

Endangered Species Act Section l0(a)(1)(B) Permit for the Incidental Take of the Barton Springs Salamander *(Eurycea sosorum)* and Austin Blind Salamander *(Eurycea waterlooensis)* for Managed Groundwater Withdrawals from the Barton Springs Segment of the Edwards Aquifer

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1.0 Introduction and Background

The Barton Springs-Edwards Aquifer Conservation District's ("District") Habitat Conservation Plan (HCP) and Incidental Take Permit (ITP) require the District to report annually on the status of the District's program implementation and achievement of conservation measures and objectives. This document is the Annual Report for Fiscal Year 2025, covering the period September 1, 2024 – August 31, 2025 (reporting period).

According to the Incidental Take Permit, the Annual Report shall cover:

1. Descriptions of Covered Activities undertaken;
2. Reported groundwater withdrawals from permitted wells;
3. Reference well levels;
4. Springflow at Barton Springs;
5. Total Aquifer discharge, measured for permitted wells, estimated for exempt wells, gaged/measured for Barton Springs, and estimated for Cold & Deep Eddy Springs;
6. Drought-stage management reductions;
7. Estimated actual take, if any, for the annual reporting period, and total cumulative take for the ITP term;
8. Minimization measures and actions taken during the prior year;
9. Mitigation actions taken during the year and updates on any ongoing mitigation actions;
10. An evaluation of the effectiveness of the avoidance, minimization, and conservation measures;
11. Adaptive management activities undertaken during the year or indicated as prudent by outcomes of the conservation program;
12. Expenditures by the District on implementation activities;
13. Any species-specific or aquifer research compiled or completed during the prior year;
14. Proposed activities for the next year;
15. Recommendations for improvement; and
16. Any other appropriate information documenting Permittee's compliance with the Permit.

This introduction section provides an overview of the District's application of its authority to manage groundwater resources within the District, as well as the fundamental management concepts and strategies that guide the District's regulatory and permitting program. Included as part of the introduction is background information and an overview of the following:

1.1 General Information about the District
1.2 Management of Groundwater Resources in the District
1.3 Implementation of Management Plan and Habitat Conservation Plan
1.4 Background on District's Incidental Take Permit (ITP)

Other major report sections that follow include a summary of the District's minimization measures and mitigation actions taken during the reporting year, a review of drought management activities, and aquifer status, and an outlook for planned activities.

Additionally, included as Appendix D of this annual report, is a summary of the meeting discussion and comments received from the HCP Management Advisory Committee (MAC). The District established an HCP MAC to advise and assist the Board in coordination of conservation activities affecting Covered Species at Barton Springs, and in monitoring and helping the Board improve implementation of the District HCP. The MAC provides an additional measure to ensure continued improvement of the HCP and compliance with the ITP, and ensures the Board is aware of stakeholder concerns regarding execution of and revisions to the HCP. The primary purpose of the MAC is to review and comment on the District's HCP annual reports, or on selected aspects of those reports, in its role to provide continuing improvement recommendations. At the Board's discretion, the MAC may also be requested to:

- Provide a forum for exchange of information relative to Covered Species,
- Provide ad hoc advice on Covered Species management activities,
- Advise the District on priorities for conservation actions, as warranted, and
- Provide input and recommendations, as warranted, on the development and implementation of actions through the adaptive management program.

The MAC was appointed by the District Board in early 2013 and includes independent, volunteer representatives with biological or natural-resource management responsibilities from designated interest groups. MAC composition focused on perspectives useful to the active management of the Aquifer and habitat of Covered Species at Barton Springs. The U.S. Fish and Wildlife Service (Service) was also requested to provide a non-voting representative to be liaison between the District, the Service, and the MAC. The MAC will convene in some manner appropriate to the purpose of each meeting and no less frequently than annually, and at such other times as they decide or as requested by the Board.

1.1 General Information about the District

1.1.1 Background

Since 1904, the legal framework applied to groundwater resources in Texas has been the common law "Rule of Capture." Although the Rule of Capture remains in effect today, groundwater conservation districts (GCDs), such as the District, have been established across the state and authorized to modify how the Rule of Capture shall be applied within their boundaries as part of a comprehensive, approved groundwater management plan.

In 1997, the Texas Legislature codified the commitment to GCDs in Chapter 36, Section 36.0015 of the Texas Water Code (TWC) by designating GCDs as the preferred method of groundwater

management. This section of Chapter 36 also establishes that GCDs will manage groundwater resources in order to protect property rights, balance the conservation and development of groundwater to meet the needs of this state, and use the best available science through rules developed, adopted, and promulgated in accordance with Chapter 36. As the overarching statute governing GCDs, Chapter 36 gives specific directives to GCDs and the statutory authority to carry out such directives. It provides the so-called "toolbox" that enables GCDs to promulgate appropriate rules needed to protect and manage groundwater resources within their boundaries given consideration to conditions and factors unique to each GCD.

In addition to Chapter 36 authority, the District has powers expressly granted by Chapter 8802 of the Special District Local Laws Code ("the District Enabling Legislation"). Applied together, these statutes provide the District with the authority to serve the statutory purpose to provide for the conservation, preservation, protection, recharging, and prevention of waste of groundwater, and of groundwater reservoirs or their subdivisions, and to control subsidence caused by withdrawal of water from those groundwater reservoirs or their subdivisions.

1.1.2 Authority and Purpose

The District was created in 1987 by the 70th Texas Legislature, under Senate Bill 988. Its statutory authorities include Chapter 52 (later revised to TWC, Chapter 36), applicable to all GCDs in the state, and the District's enabling legislation, now codified as Chapter 8802, Special District Local Laws Code. 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 management of groundwater resources as directed by the Board. The District is not a taxing authority. Its only sources of income are groundwater production fees, the annual City of Austin water use fee, export fees, administrative fees, and occasional grants from various local, state, and federal programs for special projects.

1.1.3 Jurisdictional Area

Upon creation in 1987, the District's jurisdictional area encompassed approximately 255 square miles including parts of four counties: northwestern Caldwell, northeastern Hays, southeastern Travis Counties, and a small territory in western Bastrop County. In 2011, that small part of Bastrop County was de-annexed from the District and is now in Lost Pines GCD's sole jurisdiction. The jurisdictional area 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, Goforth Special Utility District, and SouthWest Water Company/Texas Water Utilities (formerly 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 as show in Figure 1. The newly annexed area, designated as "Shared Territory," excludes the Edwards Aquifer and includes all other aquifers, including the underlying Trinity Aquifer. The District's jurisdictional area including the Shared Territory encompasses approximately 420 square miles and includes both urban and rural areas. The District shares boundaries with adjacent GCDs to the west, south, and east including the Hays Trinity GCD, Comal Trinity GCD, EAA, Plum Creek GCD, and Lost Pines GCD, respectively. The District participates in joint-regional planning with these and other GCDs in Groundwater Management Area (GMA) 10 which are configured generally to encompass the Trinity and Edwards Aquifers, respectively.

1.1.4 Aquifers and Uses

Water from the Barton Springs segment of the Edwards Aquifer serves as the primary water source for public water supply, industrial, and commercial purposes for some parts of the District, and is a source of high-quality base flow to the Colorado River via discharge through the Barton Springs complex. The Barton Springs complex provides habitat for the Barton Springs salamander (*Eurycea sosorum*) and Austin blind salamander (*Eurycea waterlooensis*) which are both federally listed Endangered Species under the Endangered Species Act 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 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.

The area has a long history of farming, ranching, and rural domestic use of groundwater, but over time the region has become more urban in areas of south Austin, Buda, Kyle, and San Marcos. Groundwater use in the area is now primarily for domestic and public water supply purposes, with lesser amounts utilized for commercial, irrigation, and industrial use. See Figure 2 for a general breakdown of the types of wells in the District and percentage of permitted production for each classification category.

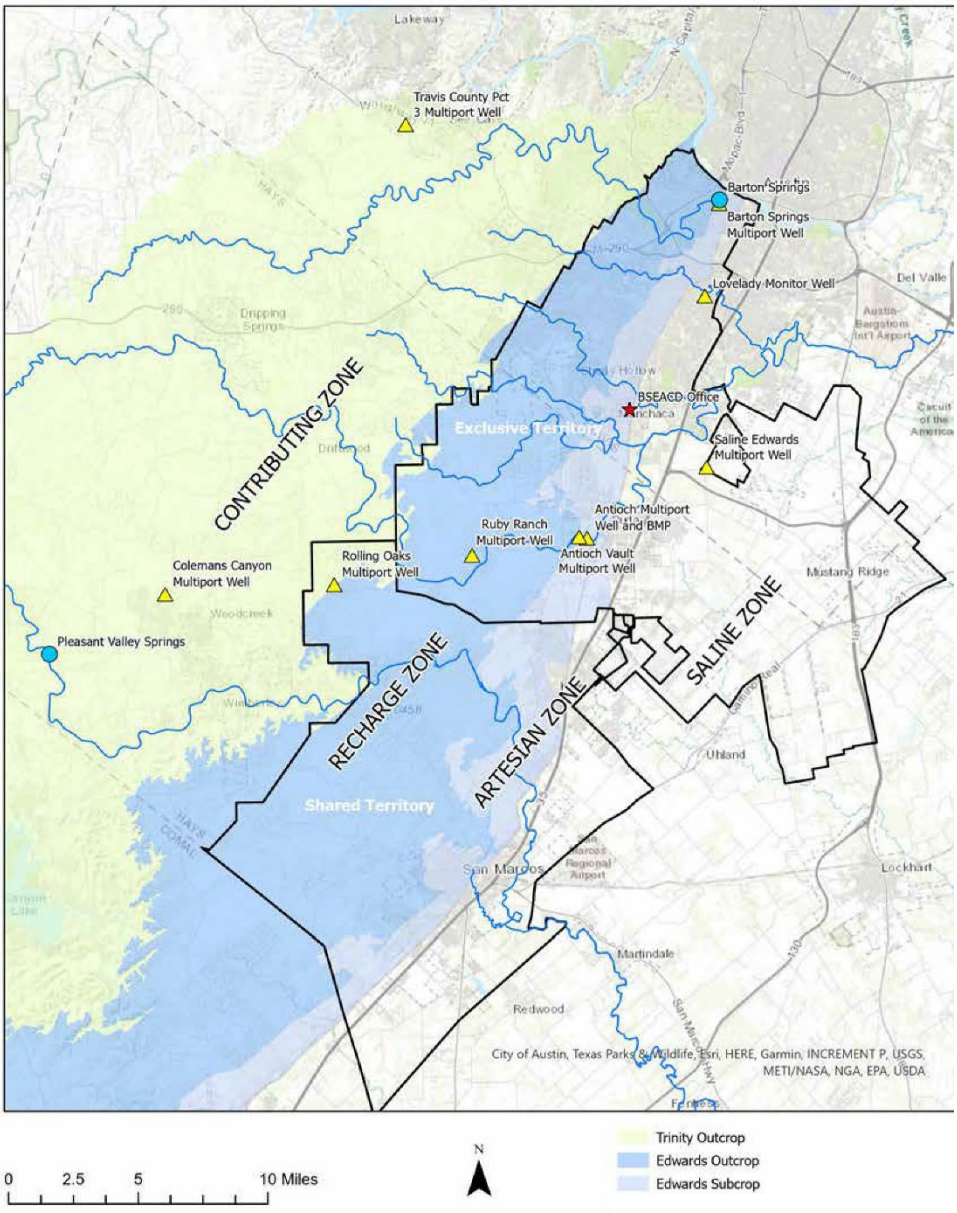


Figure 1. Barton Springs-Edwards Aquifer Conservation District boundaries, major aquifers, hydrogeologic zones, key springs, and select monitoring wells.

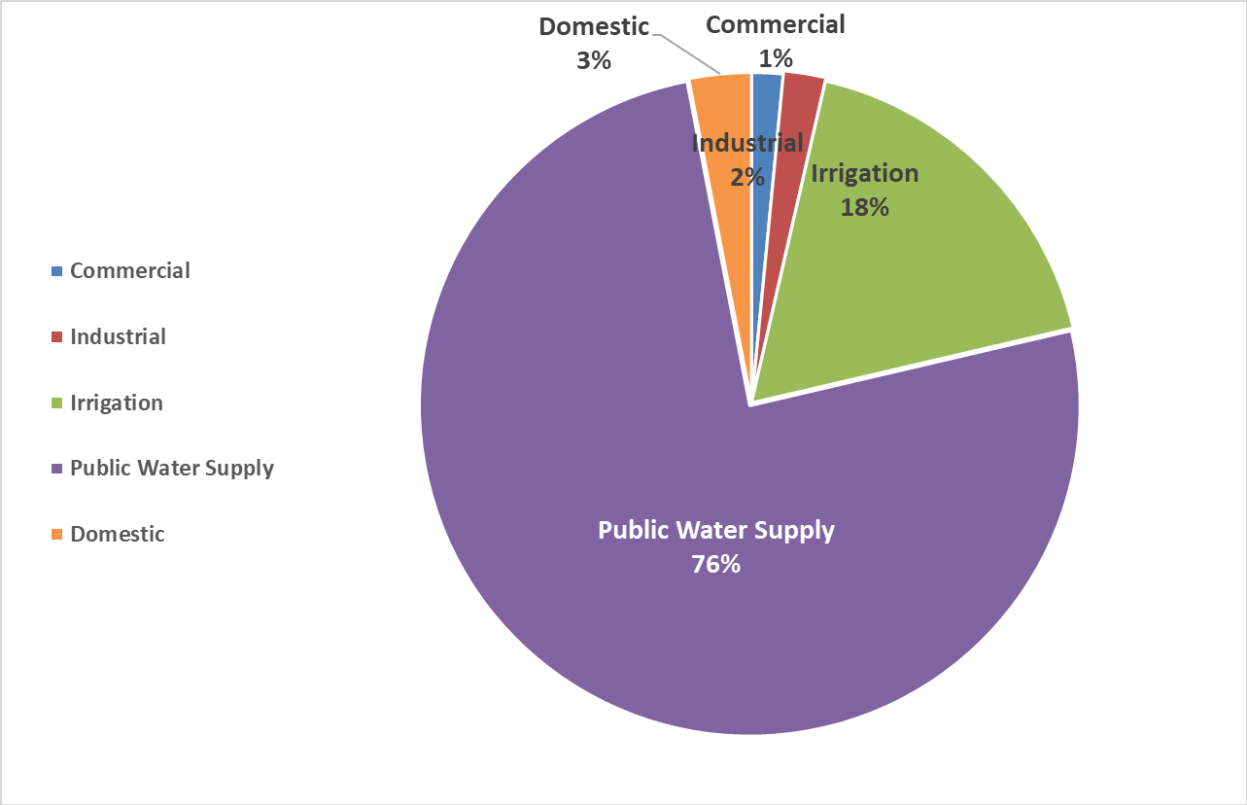


Figure 2. Types of groundwater use and share of total permitted volume for wells in the District.

1.2 Management of Groundwater Resources in the District

Since its creation in 1987, the District has established a precedent of developing policy and management strategies on the basis of statutory compliance, sound science, and stakeholder input. The District established rules through an initial data-driven evaluation of the science to characterize the District's aquifers followed by a thorough vetting by affected stakeholders and the public. This process has served to inform the Board's direction and policy decisions resulting in the current regulatory program that has evolved to address challenges unique to the District. This evolution has been marked by key milestones, producing management strategies that are integrated within the current regulatory approach. The evolution of District policies and strategies has produced a regulatory program that is fair, innovative, and customized to objectively address challenges and management objectives. The District's management approach evolved from an initial focus on permitting for historical use from 1987 until the completion of the sustainable yield study in 2004. On the basis of that study, the District began preparation for management under an HCP to protect the endangered salamanders at Barton Springs.

After the passage of HB 3405 in 2015, the District's attention broadened to include management of the Trinity Aquifer and other non-Edwards aquifers in the Shared Territory, development of a permitting program with a refined interest in management to avoid unreasonable impacts, and an updated definition of sustainable yield. The integration of these strategies collectively produced a program formed on the basis of demand-based permitting coupled with an evaluation of the potential for localized and regional unreasonable impacts. This permitting approach is bolstered by an active drought management program to abate groundwater depletion during District-declared drought. The current permitting and drought management programs are further described below.

*Permitting***.** The current permitting program supported by the District's Management Plan (MP) applies a three-part evaluation to affirm beneficial use in accordance with demand-based permitting standards, and to evaluate the full range of potential impacts for each production permit request. The three-part permit evaluation involves an assessment of reasonable nonspeculative demand, local scale evaluations, and aquifer scale evaluations. The extent of the evaluation scales with the magnitude of the requested production volume, and more comprehensive evaluations are reserved for more complex, larger-scale projects that show greater potential to cause unreasonable impacts. More information on the District's permitting program can be found on the District's website here: www.bseacd.org/regulatory/permit-process/

Drought Management. A principal responsibility central to the District's mission is to manage groundwater production during drought conditions when aquifers are most stressed. After creation of the District in 1987 and until 2004, the District implemented its initial permitting program and drought management program with a network of drought indicator wells and curtailments linked to percentiles of monthly flow at Barton Springs. With a burgeoning regional population and increasing demand on District aquifers coupled with the findings of the

sustainable yield study, the District recognized a need to improve the drought management program. Significant droughts in 2006, 2008–09, and 2011 provided further impetus for a series of amendments to implement more effective science-based drought trigger methodology and expand permit-based drought rules and enforcement protocol. The amendments facilitated milestones in the District's regulatory approach (e.g., conditional permitting, Extreme Drought Withdrawal Limits, the Ecological Flow Reserve, and Management Zones) that were the product of numerous scientific studies conducted by the District's hydrogeologists, vetted through technical consultants and advisors, reviewed and commented on by stakeholders and the public, and approved by the Board.

The current drought management program supported by the District's MP is implemented through User Drought Contingency Plans (UDCPs) that are an integral component required of each production permit. Drought declarations involve continuous evaluation of aquifer conditions as measured at the drought indicators for the Edwards Aquifer, and which are indicative of regional drought conditions for all District aquifers. When designated aquifer conditions are met, permittees must implement prescribed measures of the UDCPs requiring mandatory curtailments of permitted groundwater production based on permit type (Table 1) and aquifer management zones.

The various types of wells are defined below:

Conditional Production Permit - an authorization issued by the District allowing the withdrawal of a specific amount of Edwards groundwater from a nonexempt well for a designated period of time, generally in the form of a specific number of gallons per District fiscal year, which is subject to complete cessation, temporary curtailment, or reduction of the amount of groundwater that may be withdrawn during District-declared drought stages. Conditional Production Permits are classified as Class A, Class B, Class C, or Class D.

Exempt Well - a well whose use and characteristics do not require a permit for the production of groundwater within the District.

Historical Production Permit - an authorization with Historic Use Status issued by the District for a designated period of time allowing the withdrawal of a specific amount of groundwater from a nonexempt well.

Limited Production Permit (LPP) - a permit issued for nonexempt groundwater use associated primarily with domestic or livestock uses authorized under District (a nonexempt well.)

Nonexempt Well - a well required to obtain a well drilling authorization for well drilling or modification and a permit for the production of groundwater from within the District.

Table 1. Fresh Edwards permit types issued by the District.

Permit Type	Use Type	Description
[IPP] NE- Class A Conditional Fresh Edwards	Various Uses: Commercial, Institutional, Industrial, Agricultural, Irrigation, Public Water Supply	This permit applies to the Eastern and Western Fresh Edwards Management zones and is for those registered nonexempt wells approved by the District prior to September 2004. These permits are subject to drought restrictions. These permits have a max curtailment of up to 50%.
[IPP] NE- Class B Conditional Fresh Edwards	Various Uses: Commercial, Institutional, Industrial, Agricultural, Irrigation, Public Water Supply	This permit type applies to the Eastern and Western Fresh Edwards Management zones and is for those registered nonexempt wells approved after April 2007. Wells that have been issued this permit are interruptible and are subject to drought restrictions of up to 100% curtailment during a Stage IV Exceptional Drought.
[IPP] NE- Class C Conditional Fresh Edwards	Various Uses: Commercial, Institutional, Industrial, Agricultural, Irrigation, Public Water Supply, Domestic	This permit type applies to the Eastern and Western Fresh Edwards Management zones and is for those registered nonexempt wells approved after March 2011. Wells that have been issued this permit are interruptible and are subject to drought restrictions of up to 100% curtailment during a Stage IV Exceptional Drought.
[IPP] NE- Class D Conditional Fresh Edwards	Aquifer Storage and Recovery (ASR)	This permit applies to groundwater productions associated with Aquifer Storage and Recovery projects where stored water is recovered and used to supplement or substitute Freshwater Edwards supplies during District Declared Drought.
[IPP] NE – Historical Fresh Edwards	Various Uses: Commercial, Institutional, Industrial, Agricultural, Irrigation, Public Water Supply, Domestic	This permit applies to the Eastern and Western Fresh Edwards Management zones and is for those registered nonexempt wells approved by the District prior to September 2004. **This permit type is no longer issued for new nonexempt wells.** These permits are subject to drought restrictions of up to 50% curtailment during a Stage IV Exceptional Drought

During District-declared drought, curtailments are implemented on a monthly basis and increase with drought severity, with maximum curtailments reserved for an Emergency Response Period as shown in Table 2. Curtailments are derived on the basis of a pumping profile representing the average monthly distribution of the demand-based annual permit volume for each groundwater use type and calculated as a percentage reduction from the monthly baseline amount as shown in the example drought target chart in Figure 3. Authorized permit volumes based on reasonable non-speculative demand, monthly reporting of actual groundwater production by permittees, and active enforcement of monthly curtailments are integral to effective drought management to ensure immediate and consistent relief in actual pumping pressure to sustain spring flows and existing water supplies during District-declared drought until drought conditions recede and aquifers recover.

Table 2. Mandatory pumpage curtailments with each stage of drought.

Curtailments established for different well permit types, aquifers, and drought conditions. (Curtailment expressed as percentage of authorized monthly groundwater production in designated drought stage. For example, freshwater Edwards Aquifer historical permittees would be required to curtail their authorized monthly withdrawal by 30% during Stage III Critical Drought.)

Drought Curtailment Chart											
Aquifer Management Zone / Permit Type		Edwards Aquifer						Trinity Aquifer			
		Eastern/Western Freshwater					Saline	Lower	Middle	Upper	Outcrop
		Historical	Conditional				Hist.	Hist.	Hist.	Hist.	Hist.
			Class A	Class B	Class C	Class D					
Drought Stages	No Drought	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Water Conservation (Voluntary)	10%	10%	10%	10%	10%	0%	10%	10%	10%	10%
	Stage II Alarm	20%	20%	50%	100%	100%	0%	20%	20%	20%	20%
	Stage III Critical	30%	30%	75%	100%	100%	0%	30%	30%	30%	30%
	Stage IV Exceptional	40%	50%[1]	100%	100%	100%	0%	30%	30%	30%	30%
	Emergency Response Period	50%[3]	>50%[2]	100%	100%	100%	0%	30%	30%	30%	30%
Percentages indicate the curtailed volumes required during specific stages of drought.											

1 Only applicable to Limited Production Permits (LPPs) and existing unpermitted nonexempt wells after A to B reclassification triggered by Exceptional Stage declaration.

2 Curtailment > 50% subject to Board discretion.

3 Emergency Response Period (ERP) (50%) curtailments become effective October 11, 2015. ERP curtailments to be measured as rolling 90-day average after first three months of declared ER

Drought Target Chart

Historic Edwards Production Permit -	Permittee						
Water Use:	Public Water Supply						
Permitted Pumpage (GPY):	20,000,000					UDCP Approved in Fiscal Year:	FY 2020

		Fresh Edwards Management Zone Pumpage Volume Targets During Drought Stages					
	Monthly Volume Allocation	No Drought Baseline	Stage I Water Con. Period (Voluntary)	Stage II Alarm (Mandatory)	Stage III Critical (Mandatory)	Stage IV Exceptional (Mandatory)	Emergency* Response Period (Mandatory)
Fiscal Year		No Reduction	10% Reduction	20% Reduction	30% Reduction	40% Reduction	50% Reduction*
September	10.00%	2,000,000	1,800,000	1,600,000	1,400,000	1,200,000	1,000,000
October	8.30%	1,660,000	1,494,000	1,328,000	1,162,000	996,000	830,000
November	7.00%	1,400,000	1,260,000	1,120,000	980,000	840,000	700,000
December	6.30%	1,260,000	1,134,000	1,008,000	882,000	756,000	630,000
January	6.30%	1,260,000	1,134,000	1,008,000	882,000	756,000	630,000
February	6.50%	1,300,000	1,170,000	1,040,000	910,000	780,000	650,000
March	6.60%	1,320,000	1,188,000	1,056,000	924,000	792,000	660,000
April	7.40%	1,480,000	1,332,000	1,184,000	1,036,000	888,000	740,000
May	8.00%	1,600,000	1,440,000	1,280,000	1,120,000	960,000	800,000
June	9.50%	1,900,000	1,710,000	1,520,000	1,330,000	1,140,000	950,000
July	12.10%	2,420,000	2,178,000	1,936,000	1,694,000	1,452,000	1,210,000
August	12.00%	2,400,000	2,160,000	1,920,000	1,680,000	1,440,000	1,200,000
Annual Totals:	100.00%	20,000,000	18,000,000	16,000,000	14,000,000	12,000,000	10,000,000

** ERP(50%) ERP curtailments to be measured as a rolling 90 day average after the first three months of declared ERP.*

Template Updated: 022819

District Representative | Date

Permittee Signature | Date

Figure 3. Example of a permittee drought target chart.

1.3 Implementation of Management Plan and Habitat Conservation Plan

Provisions of the District's MP and HCP will be implemented and used by the District as a guide to determine the direction or priority for all District activities. All operations of the District, agreements entered into by the District, District policies and programs, and any additional planning efforts in which the District may participate will be consistent with the provisions of the District's MP and HCP. The District will encourage cooperation and coordination with relevant entities to implement these plans.

The District adopted and implemented rules necessary to support its mission including permitting of wells, production and transport of groundwater, and drought management. Rules and policies established by the District are consistent with the provisions of these plans and are adopted on the basis of the best available science, public and stakeholder input, and recommendations of competent professionals. Further, the rules comply with TWC Chapter 36 and the District's enabling legislation. All rules are enforced in a manner that is fair and objective. A copy of the Rules can be found on the District's website here: https://bseacd.org/governingdocuments/.

In order to achieve the goals, management objectives, and performance standards adopted in these plans, the District continually develops, maintains, reviews, and updates rules, policies, and procedures for the programs and activities described within the MP and HCP. To monitor performance, the District implements various goals, management objectives, and performance standards adopted in these plans. The District develops annual reports for the MP and HCP that document progress made towards implementation and achievement of the goals and objectives.

All specific activities undertaken by the District in this FY 2025 reporting period, whether considered as direct or indirect management of the Aquifer are described in more detail in the latest "FY 2025 Management Plan Annual Report," which can be viewed and downloaded at: https://bseacd.org/governingdocuments/

1.4 Background on District's Incidental Take Permit (ITP)

The District is charged with the management of the Barton Springs segment of the Edwards Aquifer ("Aquifer"), which is the primary water supply for more than 60,000 people in the region and the source water for the Barton Springs complex. The District manages this resource by a production permit-based regulatory program for larger, non-exempt wells, and these regulatory program elements constitute the Covered Activities described in the HCP. The overarching strategic purpose of the District is to optimize sustainable uses of groundwater for these users and other community interests.

However, the 2004 Sustainable Yield of the Barton Springs Segment report established that during drought conditions large amounts of groundwater withdrawals (pumping) will contribute to diminished flow through the Aquifer, smaller springflow rates at Barton Springs, and associated adverse effects to some Aquifer users. The report can be viewed at https://bseacd.org/uploads/HR_SustYield_BSEACD_report_2004_web.pdf. The Aquifer and its associated spring outlets are the sole habitat of the federally protected Barton Springs salamander (BSS) and Austin blind salamander (ABS). The federal Endangered Species Act prohibits the harassment or harm of the salamanders (termed "take") that may incidentally occur as an effect of pumping on decreasing water levels and spring flows unless exempted under a federal ITP.

District activities that create the need for an HCP and an ITP relate to the District's following programmatic functions for managing groundwater production:

- Adopt, implement, and enforce regulations and management programs that protect existing groundwater supplies, improve aquifer demand management, provide Aquifer and spring flow protection during droughts, promote and improve aquifer recharge, and carry out other beneficial management strategies; and
- Avoid, or minimize, and mitigate negative impacts upon federally listed species dependent upon spring flow from Barton Springs through adoption and implementation of regulations,

management programs, scientific research programs, conservation education programs, and collaborative efforts with other governmental entities.

These activities directly and indirectly affect withdrawals (groundwater production) from the Aquifer. In turn, because of the hydrology of the groundwater system, such withdrawals lower the water levels in the Aquifer, which consequently reduces the discharge (springflow or flow) at Barton Springs. There is a well-established relationship, within the observed data range between the flow issuing from the outlets of Barton Springs and the chemistry of the water. As flow decreases, the dissolved oxygen (DO) concentration of the water, which is required by the Covered Species for survival, decreases, and the concentration of dissolved solids increases. This natural variation in water chemistry derives from the physical system of the Aquifer, and it occurs regardless of whether Aquifer water-levels and spring flow decreases are due to drought, withdrawals by wells, or both.

During normal and high-flow conditions in the Aquifer, the combined flow of the natural outlets at Barton Springs are minimally affected by the total volume of water that is withdrawn by wells in the Aquifer. Under these conditions, the District's program elements principally address the long-term sustainability of the Aquifer as a water supply. Under these high-flow conditions, the amount of water withdrawn from the Aquifer by pumping wells and the provisions of the District's regulatory program are believed to have essentially no effect on the chemistry of the spring flow. This is because the physical and chemical characteristics of the spring flow are mostly attributable to meteorologically-induced stormflows and seasonal factors, and occasionaly, other external factors.

Accordingly, essentially no incidental take is attributable to the Covered Activities (lawfully conducted withdrawals from District permitted wells, see HCP Section 4.1, Proposed Covered Activities) when water levels in the Aquifer are above a certain elevation, which determines the flow above 40 cubic feet per second at the Aquifer's major outlet, Barton Springs.

But during drought, and especially prolonged severe or Extreme Drought, the amount of water naturally discharging from the springs complex (the natural spring outlets taken together) is much smaller, similar in magnitude to the amount of water withdrawn from wells. During these drought conditions, the District's groundwater drought management program is key to preserving groundwater levels in the Aquifer and spring flow. The joint and regional water planning conducted by the State, with which the District's MP is integrated, uses a recurrence of the drought of record (DOR) from the 1950s as the planning objective, and the DOR is also the framework for the District's drought management program. The District's integrated regulatory program is designed to protect the water supply of Aquifer users who are most vulnerable to supply interruption during periods of Extreme Drought and to conserve flows at Barton Springs for both ecological and recreational purposes.

During drought periods with low recharge rates, groundwater pumping contributes to diminished rates of spring flow at Barton Springs. During these drought periods groundwater levels and

spring flows decline sufficiently to create conditions in which District-managed activities may create incidental take and the programmatic need for the HCP and the ITP. Circumstances that give rise to such incidental take are discussed in detail in HCP Section 5.2.2, Spatial and Temporal Extent of Take, and HCP Section 5.2.3, Consideration of Take and Jeopardy.

The cumulative withdrawals of all operating wells in the Aquifer can have significant impact on springflow during drought conditions and can increase the likelihood of low-flow conditions. Since June 2008, despite increased demand for water supplies in the District, withdrawals generally have been reduced as a result of groundwater management policies and regulations of the District and of responses by its permittees to projected shortfalls during severe droughts. As demand for groundwater has increased, the District has gradually changed its drought management and regulatory program to improve the effectiveness of Aquifer and spring flow protection, supported by studies and planning for the ongoing HCP development.

The HCP specifies the District's commitment to a set of conservation (avoidance, minimization, and mitigation) measures consistent with statutory authorities of the District and that are based on sound science and effective groundwater management practices. The District's HCP has been formulated and framed in collaboration with other conservation efforts affecting the Covered Species and their respective habitats; that is, the HCP of the City of Austin (COA) for operation and maintenance at Barton Springs Pool and surrounding area, including individual spring outlets (Barton Springs Pool HCP). Well owners and users, especially the District's permittees (the regulated groundwater community), and all citizens who consider Barton Springs an ecological, recreational, and aesthetic resource, are key additional stakeholders for this HCP.

2.0 Descriptions of the Covered Activities Undertaken

The District's ITP allows for continued managed pumping (the covered activity) of the Aquifer by District permittees, provided the proposed HCP measures minimize and mitigate incidental take and avoids jeopardy of salamanders. Ultimately, the HCP measures safeguard continued sustainable use of the Aquifer and survival of the endangered salamanders.

The ITP identifies two categories of Covered Activities: groundwater withdrawals from the Aquifer by nonexempt permittees, and actions necessary to manage potential habitat of the Covered Species in the ITP Area.

2.1 Managing Groundwater Withdrawals

Managing groundwater in its jurisdictional area is the primary purpose of a GCD and managing withdrawals of groundwater in accordance with its authority is a primary activity of a GCD. The District employs a set of groundwater-management activities that relate directly to management of groundwater withdrawals from the Aquifer (and from all aquifers). These aquifer-management activities are an essential to the District's groundwater management scheme and generally recur every year, to include:

- Renewal of existing production permits
- Processing of new permit applications
- Installation and operation of wells to monitor groundwater levels and quality
- Participation in joint groundwater planning with other GCDs in relevant groundwater management areas, and monitoring desired future condition (DFC) efficacy and compliance
- Monitoring groundwater drought status and informing the District Board of Directors of changes in drought status and need for responsive action
- Using well site inspections and actual production reports to evaluate compliance with applicable rules and need for potential enforcement actions
- Evaluating permittees' long-term actual withdrawals compared to authorized amounts and recommending conservation credit awards
- Assessing the efficacy of existing rules to protect groundwater systems, to promote conservation measures, achieve and maintain applicable DFCs, and as warranted, recommending possible regulatory improvements for Board consideration. (In this reporting period, the Rules were not required to be amended.)

In addition to the recurring activities above, many other important activities conducted are considered as *indirect* management of the Aquifer. Those indirect activities include:

- Program-supporting scientific investigations and monitoring, educational and outreach programs, internal and external communications and coordination, and legal support actions;
- Initiatives that improve the efficiency and effectiveness of other programs; and
- Activities required for governance and administration of a public agency.

Generally, such activities differ in specifics from year to year. Successful groundwater management of the Aquifer under the HCP requires operation and maintenance of a fully functioning GCD in compliance with all applicable statutes and rules in its entire jurisdictional area.

All specific activities undertaken by the District during this reporting period, whether considered as direct or indirect management of the Aquifer, are described in greater detail in Appendix C of this report. Appendix C is intended to reflect detailed progress, activities, and actions implemented by the District to achieve the HCP minimization measures. Appendix C is an excerpt from the FY 2022-2027 Management Plan Annual Report referred to as, *"Appendix B - Assessment of Progress toward Management Plan Goals and Objectives."*

The FY 2022-2027 Management Plan Annual Report comprises a supporting complement to this stand-alone "Habitat Conservation Plan Annual Report" and can be viewed in full and downloaded at: https://bseacd.org/governingdocuments/

2.2 Managing Potential Habitat of Covered Species

Covered Activities related to managing groundwater withdrawals described above are, by design, intended to protect potential habitat of the Covered Species throughout the Aquifer in an ongoing basis, but especially during critical drought periods when the endangered species are under additional stress. Covered Activities directly related to management of potential habitat by the District involve decision-making and actions that support the general Biological Goals and the more explicit, quantitative Biological Objectives expressed in the District's HCP report Section 6.1. (https://bseacd.org/uploads/BSEACD_FinalHCPVol.1-Final-for-Submission-to-FWS-4.19.18.pdf). These measures are intended to ensure that reduction in springflow is minimized and corresponding dissolved oxygen (DO) concentrations in perennial spring outlets do not fall below specified minimum values under various springflow conditions. Drought indices of Barton Springs coupled with the Lovelady monitor well are the principal tools utilized to guide management of pumping during drought and thereby preserving habitat.

Both Barton Springs springflow and DO are measured and reported in real-time by the U.S. Geological Survey (USGS). These data can be found online at:
https://waterdata.usgs.gov/tx/nwis/uv/?site_no=08155500&agency_cd=USGS&amp

Lovelady water levels are measured and reported in real-time by the USGS. These data can be found online at:
https://waterdata.usgs.gov/tx/nwis/uv/?site_no=301237097464801&PARAmeter_cd=72019

Table 3 provides a summary of monthly historic DO concentration and monthly historic mean flow measured and reported by the USGS. The FY25 Flow column reflects monthly averages of manual Barton Springs measurements in cubic feet per second (cfs) made by District COA and USGS staff, rather than USGS gauge data, due to reduced accuracy at low flows caused by pool operations (e.g. plates installed in spillways). The FY25 DO column reflects monthly averages in milligrams per liter (mg/L). DO results are above the minimum concentrations (4.0 mg/L) specified in the Biological Objectives. No unanticipated adverse effects of HCP-related activities on water chemistry were documented in the reporting year. Consequently, no extraordinary District actions, beyond those in the Covered Activities and HCP Conservation Measures, were required to actively manage the potential habitat and comply with the Biological Goals and Objectives.

Table 3. Mean Monthly Averages for Dissolved Oxygen and Barton Springs flow for FY 2025 (USGS 08155500).

Month	Historic Mean DO (mg/L)	FY25 DO (mg/L)	Historic Mean Flow (cfs)	FY25 Flow (cfs)
Sep-24	5.5	4.5	57	21
Oct-24	5.5	4.3	55	19
Nov-24	5.7	4.2	57	18
Dec-24	5.8	4.2	58	16
Jan-25	6.0	4.3	60	16
Feb-25	6.1	4.6	63	19
Mar-25	5.9	4.5	64	18
Apr-25	5.8	4.5	66	18
May-25	5.7	4.4	67	19
Jun-25	5.6	4.3	70	18
Jul-25	5.6	4.7	66	27
Aug-25	5.5	4.4	60	24
Mean annual	**5.8**	**4.4**	**62**	**19**

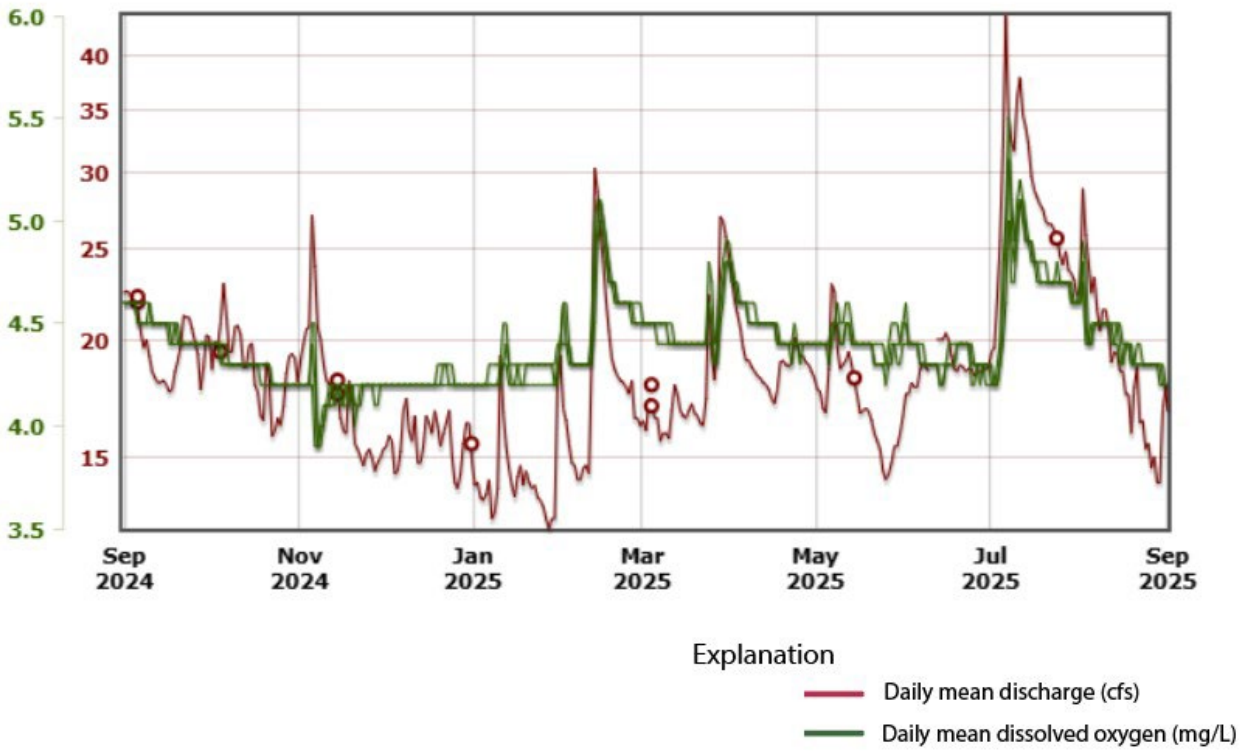


Figure 4. USGS hydrograph of mean daily spring flow and DO values of Barton Springs in FY 2025.

In addition to considerations arising from the HCP Biological Goals and Objectives, there were two additional activities that specifically relate to management of potential habitat in the reporting period.

1. The District's Validation Monitoring Protocol is used annually to determine if new information suggests that the District's take estimate methodology should be re-evaluated. The results of this evaluation will be part of each HCP Annual Report, Section 16.0 Recommendations for Improvement. The current Validation Monitoring Protocol is included in this Annual Report in Appendix A.

2. In FY 2019, The District and the COA executed an Interlocal Agreement (ILA) to facilitate data and information sharing between the parties and collaboration on activities directly related to habitat characterization and protection. The ILA enables more efficient implementation of beneficial HCP Conservation Measures, especially Mitigation Measures. The ILA is included in this Annual Report in Appendix B.

3.0 Reported Groundwater Withdrawals from Permitted Wells

The actual volume of groundwater withdrawn from non-exempt wells (i.e., wells with permits issued by the District) is shown in Table 4, along with the authorized permitted production amounts. These volumes do not reflect any reductions due to drought-related curtailments.

Table 4. Actual and permitted nonexempt production by management zone.

Table 4a. Individual Production Permits:

FY 2025 Production from Individual Production Permits		
Production Zone	Actual Production	Permitted Production
Edwards	1,535,887,998 gpy	2,814,270,604 gpy
Trinity	278,983,148 gpy	629,294,517 gpy
Austin Chalk or Alluvial	500 gpy	2,500,000 gpy
Total (Gallons)	**1,814,871,646**	**3,446,065,121**
Total (Acre Feet)	5,570	10,576

Table 4b. Limited Production Permits:

FY 2025 Production from Limited Production Permits		
Production Zone	Actual Production*	Permitted Production
Edwards	14,326,501 gpy	68,500,000 gpy
Trinity	7,424,683 gpy	34,500,000 gpy
Austin Chalk or Alluvial	0	0
Total (Gallons)	**21,751,187**	**102,750,000**
Total (Acre Feet)	68	319

In this reporting period, the volume of groundwater actually withdrawn from the Aquifer was 47 percent below the permitted volume. In aggregate, the amount of groundwater withdrawal from the Edwards Aquifer by permitted wells in the reporting period was 1,550,214,499 gallons compared to the overall permitted volume of 2,951,020,604 gallons.

A summary of the **permitted production volumes** for each Management Zone is provided below in Table 5.

Table 5. Permitted production by management zone.

FY 2025 Permitted Production 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)	505,188,008	2.14	1,550
Conditional (LPP)	68,500,000	0.29	210
Total Conditional	*570,938,008*	*2.42*	*1,752*
Total Edwards Aquifer	**2,882,520,604**	**12.22**	**8,855**

Trinity MZs	**Gallons**	**cfs**	**acre-feet**
Historical (Individual)	629,294,517	2.67	1,931
Historical (LPP)	34,500,000	0.15	106
Total Trinity Aquifer	**663,794,517**	**2.81**	**2,307**

Other Aquifers MZs	**Gallons**	**cfs**	**acre-feet**
Historical (Individual)	2,500,000	0.01	8
Historical (LPP)	0	0	0
Total Other Aquifers	**2,500,000**	**0.01**	**8**

Total Permitted (All Aquifers)	**3,551,565,121**	**15.06 cfs**	**10,889 acre-feet**

A summary of the **estimated exempt use production volumes** for the Edwards is provided below in Table 6.

Table 6. Exempt production by management zone.

Edwards Aquifer - Estimated Exempt Wells Production	
Estimated Volume of Exempt Well Production (gpy)*	**106,455,314**
Estimated volume in cfs	***0.45***
Estimated number of exempt wells	1018

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

4.0 Reference Well Levels

The primary reference well that the District uses to gauge overall groundwater levels in the Aquifer, determine drought stages that trigger various elements of the District's drought management program, and estimate take of Covered Species, is the Lovelady well, near the intersection of Stassney Lane and South First Street in South Austin. The hydrograph of this well for the reporting period is shown below in Figure 5.

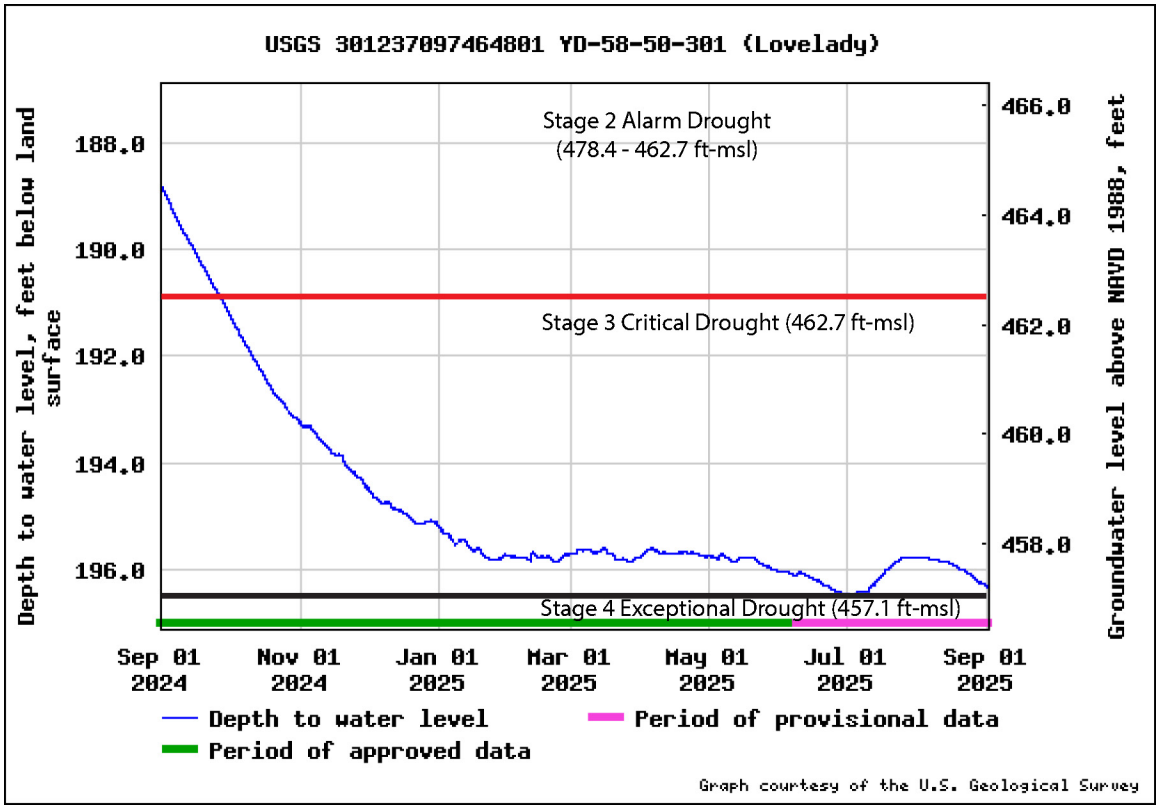


Figure 5. Hydrograph of the Lovelady water level shown as depth to water and elevation.

Data from Barton Springs and the Lovelady well informs the drought management determinations by the District's Board. Following the Drought Trigger Methodology, drought is declared when either Lovelady or Barton Springs reaches their respective thresholds. Non-drought conditions are declared when both Barton Springs and Lovelady well have recovered above the respective drought trigger thresholds. Section 7 describes the drought stage management for this reporting year.

5.0 Springflow at Barton Springs

The hydrograph of the combined springflow at Barton Springs, as indicated by the USGS gage, for the reporting period is shown in Figure 6. The USGS gauge 08155500 at Barton Springs provides real-time flow data at 15-minute intervals. To calibrate the Barton Springs rating curve, USGS staff use an Acoustic Doppler Velocimeter (ADV) for field measurements every 8 weeks. In August 2023, the USGS gauge began reporting springflow below 14 cubic feet per second (cfs) or the Stage IV Exceptional Drought threshold. These unusually low flows pose a challenge, as there are few historical data points to effectively calibrate the gage. This combined with City of Austin staff activities managing water output at the pool to protect the endangered Barton Springs and Austin blind salamanders has resulted in inaccuracies in the gage's data on spring flow. In response, District staff, in collaboration with the City of Austin and USGS staff, initiated monthly field measurements of Barton Springs flow. This increased frequency aims to ensure a more regular verification of gauge accuracy. In addition to measurements with an ADV during periods of low flow, BSEACD staff employed a SonTek RS5 Acoustic Doppler Current Profiler (ADCP), to explore enhanced techniques for precisely gauging the flow of Barton Springs. Additional testing and measurements are needed; however, the District could acquire instrumentation to enhance measurement accuracy and capability for future measurements.

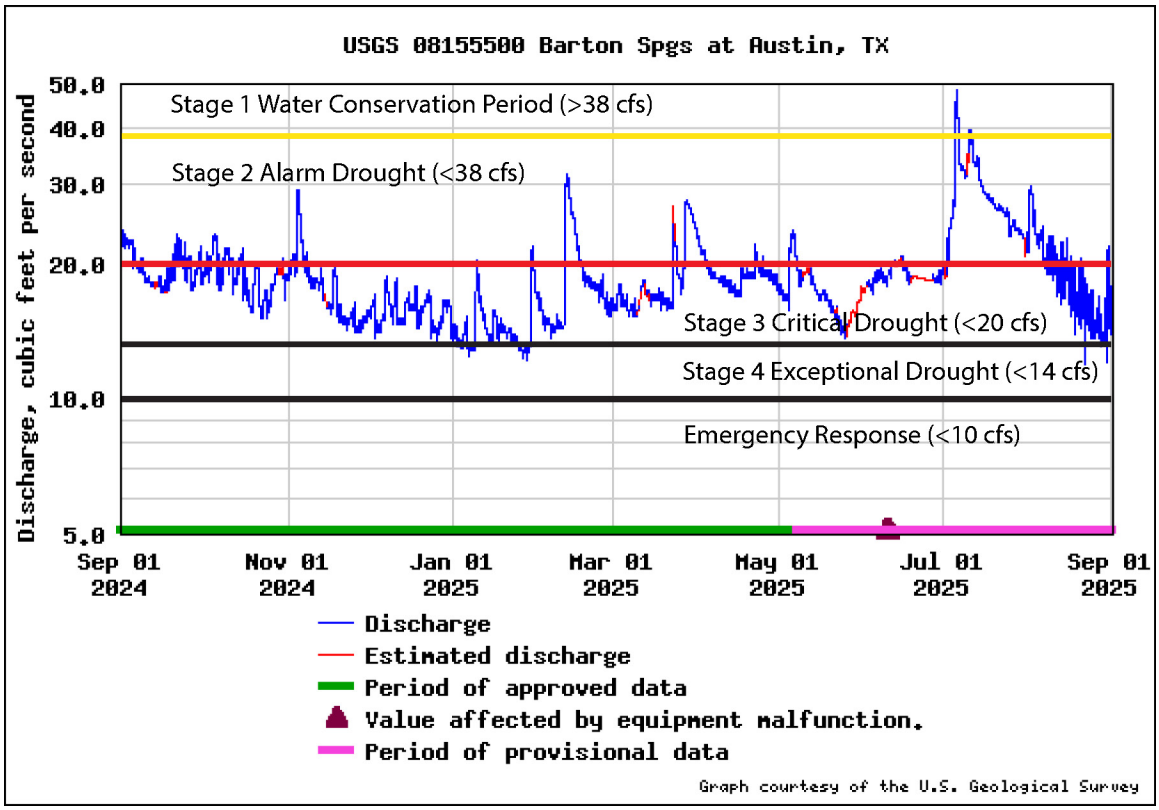


Figure 6. Hydrograph of daily mean Barton Springs flow.

Other statistics concerning spring flows during the reporting period are:

Maximum daily discharge: 30 cfs (2/12/2024)
Minimum daily discharge: 15 cfs (9/23/2025)
Mean daily discharge: 19 cfs (9/1/2024 - 8/31/2025)

6.0 Total Aquifer Discharge

The determination of total aquifer discharge in any reporting year requires consideration of measured (metered) discharges from permitted wells, the prevailing estimate of use by exempt wells, gaged measurements of combined discharge at Barton Springs, and an estimate of discharge at Cold and Deep Eddy Springs. There is a large degree of uncertainty regarding the amount of discharge that may flow south into the San Antonio segment of the Edwards Aquifer during high-flow conditions; however, because no high-flow conditions occurred during this reporting period, any such loss is considered negligible. The total actual discharge from the Aquifer by source during FY 2025 is estimated in Table 7.

Table 7. Estimated total discharge from the Barton Springs segment of the Edwards Aquifer.

Discharge Source	FY 2025 Actual Volume (gpy)	Equivalent Monthly Mean Flow Rate (cfs)	Percentage of Total Aquifer Discharge	Comment
Individual Production Permits	1,535,887,998	6.51	15.80%	Monthly meter measurements; see Section 3 above
Limited Production Permits by Rule	14,326,501	0.06	0.15%	See Section 3 above
Exempt Wells	106,455,314	0.45	1.10%	See Section 3 above
Discharge at Barton Springs	4,576,570,000	19.4	47.10%	Table 2. Mean daily discharge (USGS)
Discharge at Cold & Deep Eddy Springs	3,490,000,000	15.00	35.90%	Estimated Mean; cited in Hunt et al., 2019
Total Aquifer Discharge	**9,723,239,813**	**41.2**	--	--

7.0 Drought-stage Management Reductions

The District implements a drought management program that requires mandatory monthly pumpage curtailments during District-declared drought stages for all non-exempt permitted wells with individual production permits.

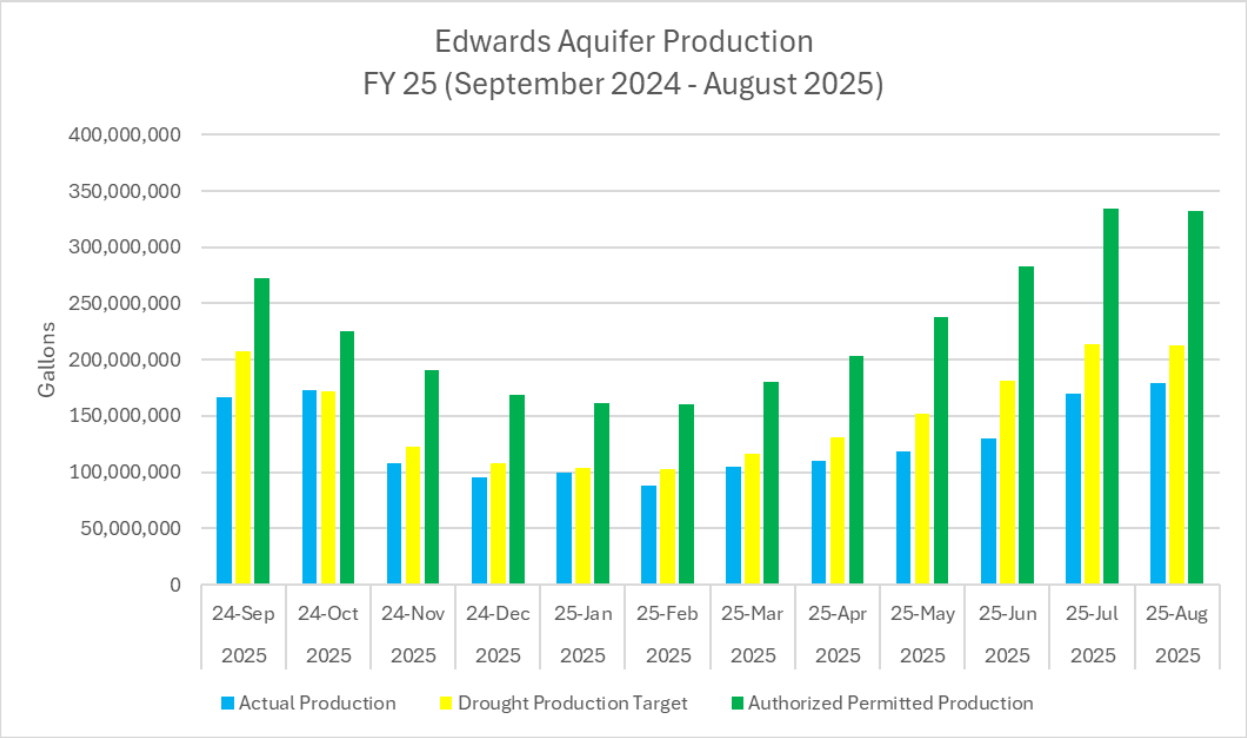


Figure 7. Hydrograph of monthly production limits and monthly actual use.

The District was in Stage II Alarm Drought status from September 2024 until Stage III Critical Drought status was declared on November 1, 2024. The District remained in Stage III Critical Drought through the end of FY25. Figure 7 and Figure 8 reflect the overall trend that collective permittee actual production was on average lower than authorized permitted production allocations, by about 1,270,000,000 gallons, even during Critical drought.

It should be noted that other factors such as climatic conditions, seasonal trends, and alternative supply sources can contribute to lower actual use trends even in non-drought conditions. However, as stated in the HCP, the District has demonstrated effective drought curtailments and compliance that correspond to longer and more severe drought conditions, such as in 2009 and 2011.

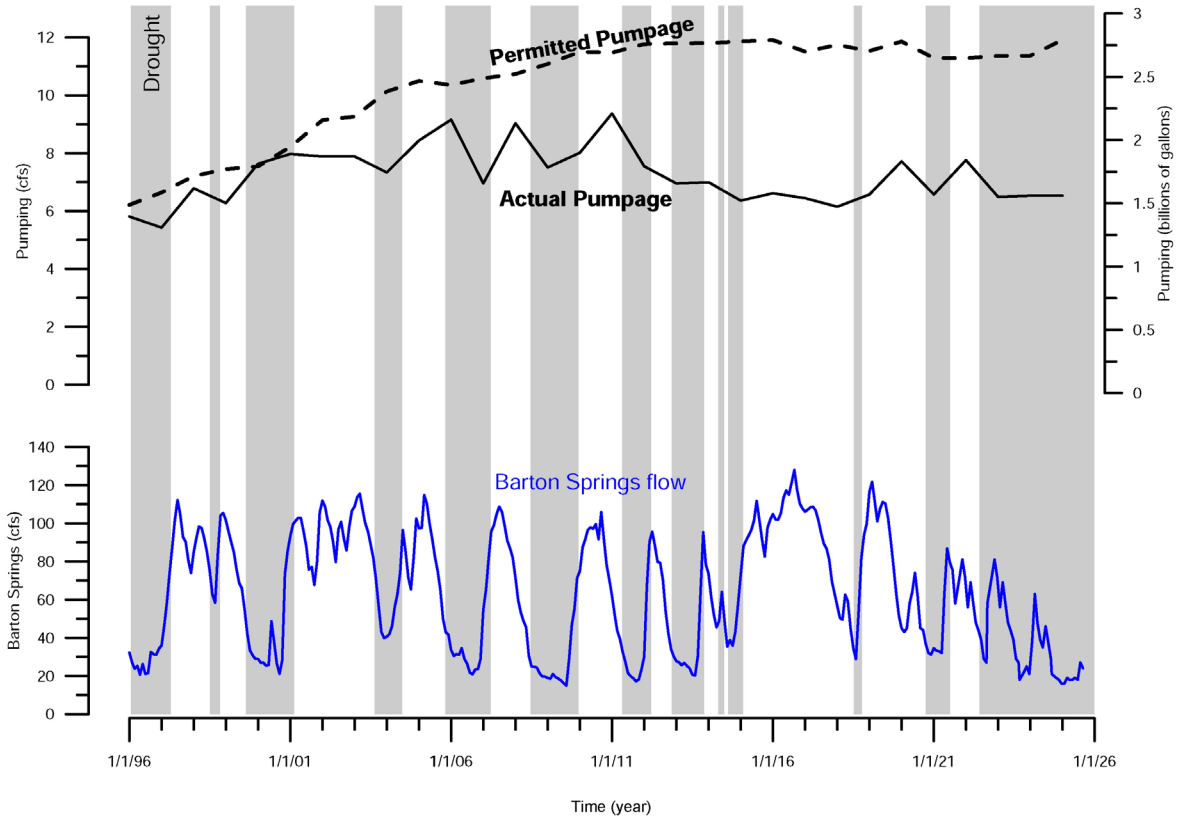


Figure 8. Hydrographs of Authorized Edwards Aquifer production and Barton Springs flow.
(permitted pumpage does not reflect drought-related curtailments)

Figure 8 reflects production and spring flow since 1996. The data indicates there has been a trend over the past 20 years of lower total actual production than authorized production in the Edwards Aquifer. This overall trend is likely the result of the District's efforts in public awareness and drought conservation, promotion and support of public water suppliers' diversification of source supplies, improved water use efficiencies, and key milestones in the District's science and regulatory framework. Some of those milestones include:

- 2004: Sustainable Yield Study and Conditional Production Permits
- 2005: Drought Trigger Methodology
- 2007: Extreme Drought Withdrawal Limitation (EDWL)
- 2009: Ecological Flow Reserve and Management Zones

8.0 Estimated Annual Take for Reporting Period (if any) and Total Cumulative Take for the ITP Term

The actual annual springflow-related take estimate to be included in the District's Annual Report to the Service involves a straight-forward procedure outlined in Appendix A that indicates the relative percentage of time during which Barton Springs flow is below a given spring flow threshold.

- Circumstance A: Occurs when spring flow is below 40 cfs.
- Circumstance B: Occurs when spring flow is between 20 and 30 cfs.
- Circumstance C: Occurs when spring flow is below 20 cfs.

Estimated take under Circumstances A, B, and C is tied directly to Barton Springs discharge. Hydrographs and data presented in Section 2 (Figures 4–6) indicate that spring flow remained below the 40 cfs take threshold for the entirety of FY 2025 (365 days; 12.0 months). Within this period, spring flow was between 30 and 20 cfs for 121 days (3.98 months) and fell below 20 cfs for 244 days (8.02 months).

Under Circumstance A, an estimated 15 Barton Springs salamander (BSS) per month are taken when Barton Springs flow reaches or falls below 40 cfs (Table 8). Because flows remained at or below this threshold throughout the reporting period, take under Circumstance A is attributed to the full reporting year. This take is primarily associated with cessation of flow at Upper Barton Springs, which is linked to negative behavioral responses in salamanders.

Additional take of both species is estimated under Circumstance B, which is triggered when spring flow ranges between 20 and 30 cfs (Table 8). Spring flow remained within this range for 121 days (3.98 months) during the reporting period.

Circumstance C is triggered when spring flow falls below 20 cfs (Table 8). These conditions persisted for 244 days (8.02 months) during the reporting period and are expected to result in additional take.

Table 8. Summary of FY25 estimated take.

CIRCUMSTANCE	NO. DAYS	NO. MONTHS1	BSS TAKE FACTOR	ABS TAKE FACTOR	BSS SUM TAKE	ABS SUM TAKE	COMMENT
A (<40 CFS)	365	12.0	15	0	**180**	**0**	Did Occur
B (30-20 CFS)	121	3.98	174	36.6	**692**	**146**	Did Occur
C (<20 CFS)	244	8.02	174	36.6	**1,396**	**294**	Did Occur
SUM	730	24.00			**2,268**	**439**	2025 total
					20,200	**4,260**	permitted take over 20-yrs
					967	193	Previous year take
					14,532	3,146	Balance on permit
					28.1%	**26.2%**	% of total allowed

BSS: Barton Springs salamander; ABS: Austin blind salamander.

The USFWS Permit spans from 2018 to 2038. Estimated take for the reporting period (September 1, 2024–August 31, 2025) was calculated by multiplying the cumulative months of qualifying flow conditions (24.00 months) by the species-specific take factors in Table 8 (Circumstances A–C). This total reflects 12.0 months under Circumstance A (flow ≤ 40 cfs), 3.98 months under Circumstance B (20–30 cfs), and 8.02 months under Circumstance C (< 20 cfs).[1] Using this prescribed methodology, estimated take during the reporting period is 2,268 Barton Springs salamanders (BSS) and 439 Austin blind salamanders (ABS). The estimated take is assumed to result primarily from behavioral effects associated with low-flow conditions.

These estimated take amounts were added to the previously reported cumulative totals for each year since FY 2019, resulting in updated cumulative take totals of 5,668 BSS and 1,114 ABS.

For context, the authorized cumulative take over the 20-year permit term is 20,200 BSS and 4,260 ABS. The current cumulative totals therefore represent approximately 28.1% of the authorized take for BSS and 26.2% for ABS, based on the first six years of the permit term. Annual take estimates from FY 2019 through FY 2025 are presented in Figure 9.

[1] Months are summed across circumstances for take-calculation purposes. Circumstances B and C represent subsets of time that also meet the Circumstance A flow criterion (≤ 40 cfs), so overlapping months are counted separately when applying species-specific take factors.

There was no incidental take associated with the DO augmentation mitigation measure during the reporting period. Activities related to this mitigation measure did not commence until late July 2024 and were limited to initial data collection at a newly drilled monitoring well located at Garrison Park in South Austin. The well is open to the Edwards Aquifer and is equipped with an In-Situ Aqua TROLL 600. A dissolved oxygen profile was collected across the full open-hole

interval of the well in December 2025. These data will be used to inform future DO augmentation feasibility and study efforts.

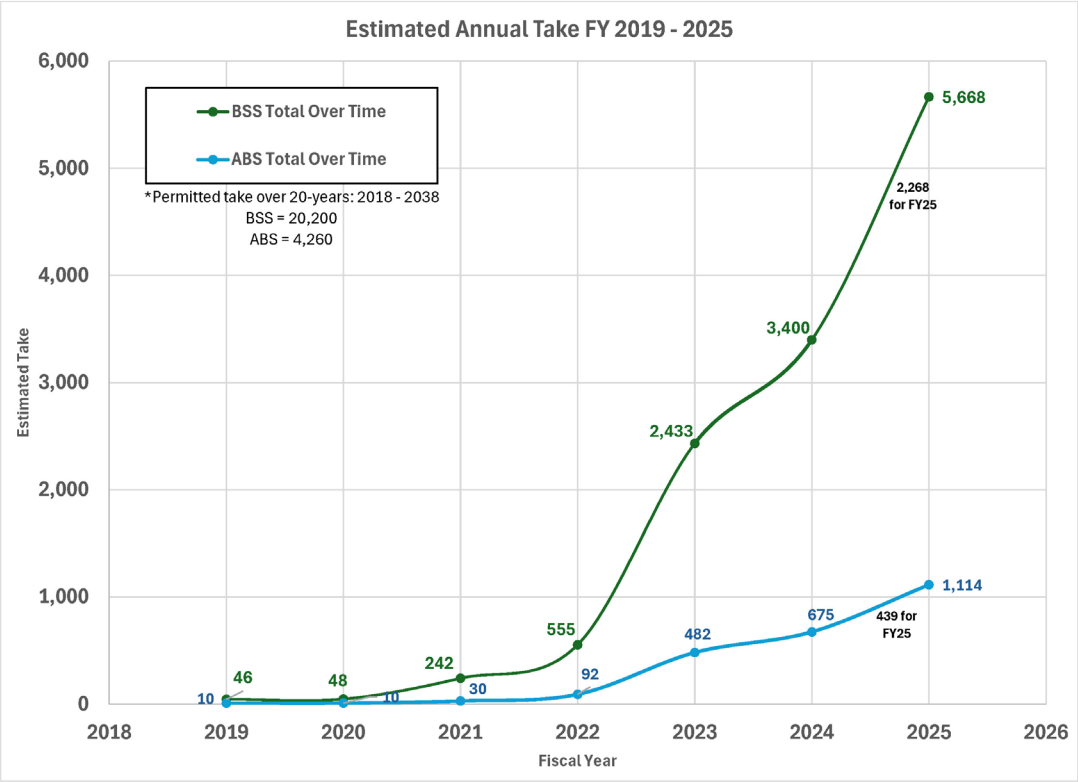
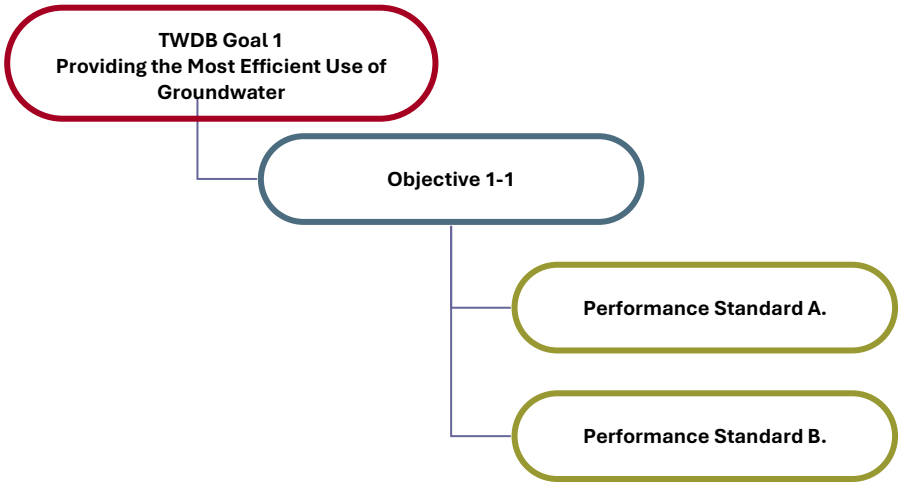


Figure 9. Cumulative take amounts for BSS and ABS from FY 2019 to FY 2025.

9.0 Minimization Measures and Action Taken During the Prior Year

Conservation measures to avoid, minimize, and mitigate take by the District are by necessity rooted in the statutory and regulatory requirements for all GCDs in Texas. The Texas Water Development Board (TWDB) has set eight over-arching goals for all GCDs, and in this District, these goals have also been designated as categories of Minimization Measures in its ITP issued by the Service. The TWDB eight over-arching goals can be viewed in the BSEACD Management Plan in Section 3.3 here.

Each GCD establishes a hierarchy of objectives and performance standards to achieve its goals that reflect local groundwater management priorities and to ensure its continuing operation as a sustainable organization. The hierarchy is depicted schematically below:



- **Goals** are set by the TWDB. These 8 goals are addressed in the District's Management Plan.
- **Objectives** are set by District Staff/Board. These objectives are the same objectives for the HCP.
- **Performance Standards** are set by District Staff/Board. These performance standards are the same reporting standards that must be completed for the HCP. Many of these standards have been reported in previous Management Plan Annual Reports.

The GCDs' selected objectives and standards are documented in the GCDs' adopted MPs and approved by the TWDB every five years.

As a result of its HCP planning, in its current MP, the District prioritized its objectives and performance standards such that HCP Conservation Measures now coincide with the regular and ongoing groundwater and habitat management activities, i.e., the Covered Activities. Thus, by design and with the TWDB approval of the 2022 Management Plan, the District MP's objectives and performance standards are now aligned with and identical to the District HCP's conservation measures and their performance standards approved by the Service.

A comprehensive, detailed description of the progress, activities and actions taken by the District in the reporting year for each of the HCP Objectives and Conservation Measures is included in Appendix C of this HCP Annual Report.

The FY 2025 Management Plan Annual Report can also be viewed here.

On December 11, 2025, the District's Board of Directors determined that satisfactory progress had been made in FY 2025 toward all goals and objectives of the MP using the relevant performance standards for each.

10.0 Mitigation Actions Taken During the Year, and Updates on Any Ongoing Mitigation Measures

In its HCP, the District identified five mitigation measures intended to offset unavoidable take and to minimize take further. These are characterized in Table 9 below, along with the progress made for each, as of the end of the reporting period.

Most of these mitigation measures require concurrence and/or involvement of other parties, especially the COA.

The District and the COA finalized and executed an ILA in FY 2019. This ILA, provided in Appendix B, will be instrumental in more robustly pursuing certain aspects of the mitigation measures in the upcoming years. Several of the activities characterized in Appendix C, describing progress toward the over-arching HCP goals, also relate to preparation for mitigation action

Table 9. Summary of progress on mitigation measures during FY 2025.

HCP ID No.	HCP Section 6.2.2.2 Mitigation Measures	Progress or Status as of End of FY 2025
M-1	The District commits to supporting the operations of an existing refugium with facilities capable of maintaining backup populations of the Covered Species to preserve the capacity to re-establish the species in the event of the loss of population due to a catastrophic event such as an unexpected cessation of spring flow or a hazardous materials spill that decimates the species habitat. Such supplemental support would be provided through a commitment of in-kind, contracted support, and/or cash contributions that would contribute to: a. Continuing the study of salamander physiology and/or behavior, and b. Conserving field and captive populations.	Under ILA Section VII.E, the City and District agreed that the District would periodically analyze the water chemistry of the source water for the refugium. A groundwater sample was collected from the well at the Nature Center in February 2026 for chemical analysis.
M-2	The District, in cooperation with the City, commits to participating in conducting feasibility studies and as warranted, pilot and implementation projects to evaluate the potential for beneficial subsurface DO augmentation of flow in the immediate vicinity of the spring outlets and improved surface DO augmentation in the outlets (only) during Extreme Drought conditions. In-kind, contracted support, and/or cash contributions, phased during the term of the permit, may be authorized for feasibility studies and, if a project is feasible, for the pilot study and implementation of the augmentation project.	ILA Section VII.A describes the provisions under which these studies will be conducted. No other progress was made in the reporting year.

M-3	The District commits to extending the currently committed time period to operate the Antioch Recharge Enhancement Facility to continue after the 319(h) grant commitments (September 2014 or later), thereby improving recharge water quality and reducing nonpoint-source pollution at the outlets from runoff events during that time.	The facility continues to be operated by the District. Some upgraded controllers were installed in FY 2021 to ensure more responsive operation during variable creek flow conditions. No other progress was made in the reporting year.
M-4	The District commits to establishing a new reserve fund for plugging abandoned wells to eliminate high-risk abandoned wells as potential conduits for contaminants from the surface or adjacent formations into the aquifer, with priority given to problematic wells close to the Barton Springs outlets and/or associated with water chemistry concerns under severe drought conditions. This reserve fund, which like others under state law has restrictions on its funding and use, would be established within the first year after issuance of the ITP by closing the existing Drought Reserve Account, whose stipulated purpose has been legal defense for drought management, and then by utilizing its current balance to initially fund a new Aquifer Protection Reserve Account. The new account would exist solely to fund plugging of abandoned wells and would be replenished after the first year with any collected enforcement penalties, any drought management fees imposed on larger nonexempt permittees that do not meet their drought curtailments, and an annual budgeted supplement at the discretion of the Board.	District Rule 3-7.11. Special Reserve Accounts for Aquifer Protection, was amended in October 2023 to create two accounts, one of which is titled, Aquifer Protection Reserve Account – Well Plugging. This account exists solely to support the funding of plugging abandoned wells. A companion account was created and titled, Aquifer Protection Reserve Account – Drought Management. The purpose of this latter account is described in the rule. Both Reserve Accounts are funded by regulatory fees stemming from permittee noncompliance during drought and/or for over pumping an annual permitted volume. No other progress was made in the reporting year.

M-5	For the term of the ITP, the District commits to provide leadership and technical assistance to other government entities, organizations, and individuals when prospective land-use and groundwater management activities in those entities' purview will, in the District's assessment, significantly affect the quantity or quality of groundwater in the Aquifer. The District will respond actively and appropriately to legislative initiatives or projects that affect Aquifer characteristics, provided such actions are consistent with established District rules, ongoing initiatives, or existing agreements.	The District has been actively engaged in activities that relate to this mitigation measure during the reporting period: • Advancing the District's Trinity Aquifer Sustainability Model (TAS). • District staff continue to serve as technical advisors, when appropriate, for development of the Texas Water Development Board's Southern Trinity Groundwater Availability Model. • The District, in partnership with the City of Austin and OneOk (formerly Magellan Partners), installed two new monitoring wells in city parks in 2024 to advance understanding of aquifer characteristics including water quality near the Barton Springs complex. • The District worked with the City of Buda in crafting public comments, submitted to the TCEQ by both entities, objecting to a draft TLAP issued to Milestone Community Builders for the proposed Hays Commons development in FY 2025. • In September 2025 the District reviewed and submitted comment in opposition to the Madelynne Estates TCEQ TPDES permit (Permit No. WQ0016475001), located in the Onion Creek catchment in the contributing zone.

11.0 Evaluation of the Effectiveness of the Avoidance, Minimization, and Other Conservation Measures

Fiscal Year 2025 (September 1, 2024 through August 31, 2025) began with the District in Alarm Drought status under District Rules. Due to rapidly worsening hydrologic conditions during late summer and early fall, the Board declared Stage 3 Critical Drought on October 3, 2024. The District remained in Critical Drought for much of FY 2025 as precipitation remained below average and groundwater levels at the Lovelady monitor well continued a declining trend toward the Exceptional Drought threshold. Periods of rainfall during winter and spring 2025 resulted in only limited and temporary stabilization of groundwater levels and spring flow and did not result in sustained hydrologic recovery during the reporting period.

During FY 2025 drought response periods, dissolved oxygen (DO) concentrations measured at Barton Springs outlets were generally consistent with values expected based on observed spring flow volumes. Observed DO concentrations were between 4.0 and 5.5 mg/L shown in Figure 4. These DO conditions are consistent with the assumptions underlying the District's drought-stage pumpage reduction requirements implemented under District Rules. These observations indicate that required pumpage reductions during FY 2025 were consistent with the intended protective function of the drought response measures for spring flow-dependent water quality, as anticipated in the Habitat Conservation Plan.

City of Austin presents data in its 2025 HCP annual report below in Figure 10 showing that the salamander populations are sustaining in the Eliza pool and stream, despite the ongoing drought conditions during this reporting period (City of Austin, 2025 Annual Report to Fish and Wildlife Service, January 2025). Flow has stopped at Sunken Garden and Upper Barton Spring has been dry for over a year. Counts are lower within Barton Springs Pool as well, a likely consequence of the ongoing drought.

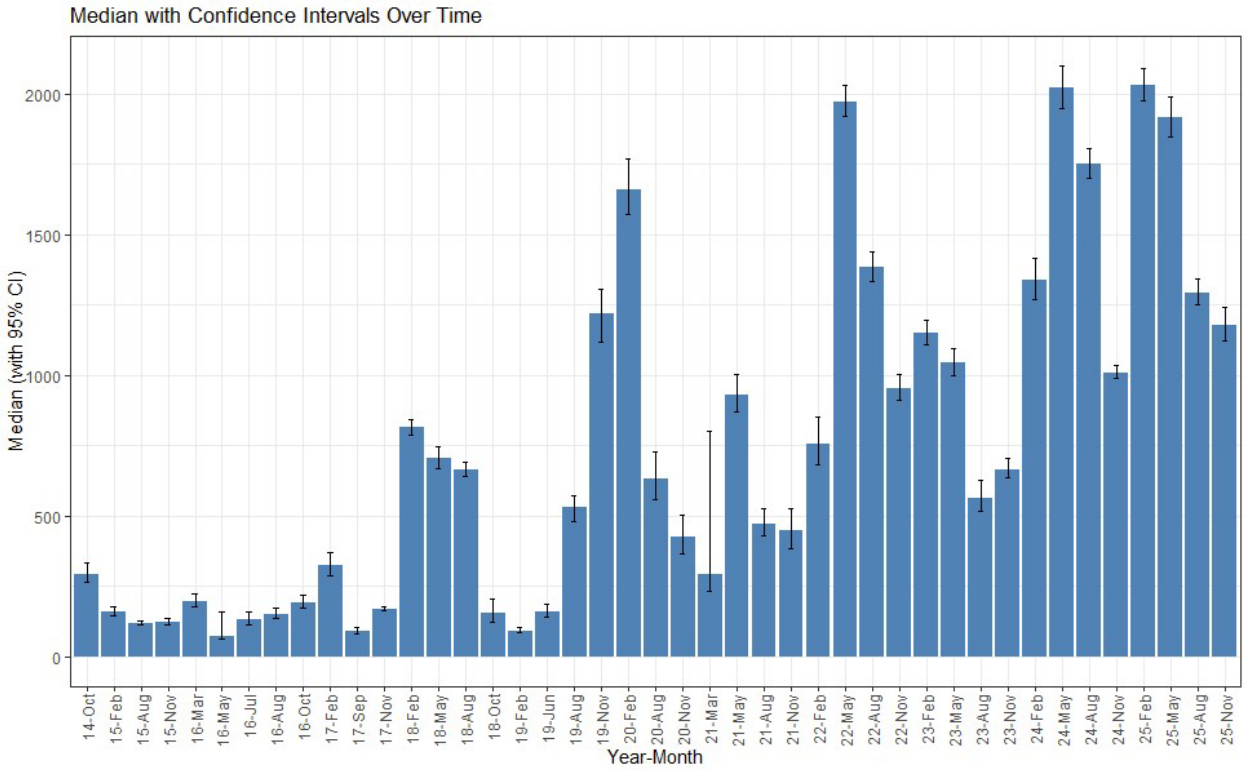


Figure 10. Barton Springs Salamander populations in Eliza pool and stream over time.

As noted in Section 9 above, the District's Board of Directors determined that satisfactory progress was made in FY 2025 toward all HCP MP goals and objectives, using the relevant performance standards for each.

12.0 Adaptive Management Activities Undertaken During the Year, or Indicated as Prudent by Outcomes of the Conservation Program

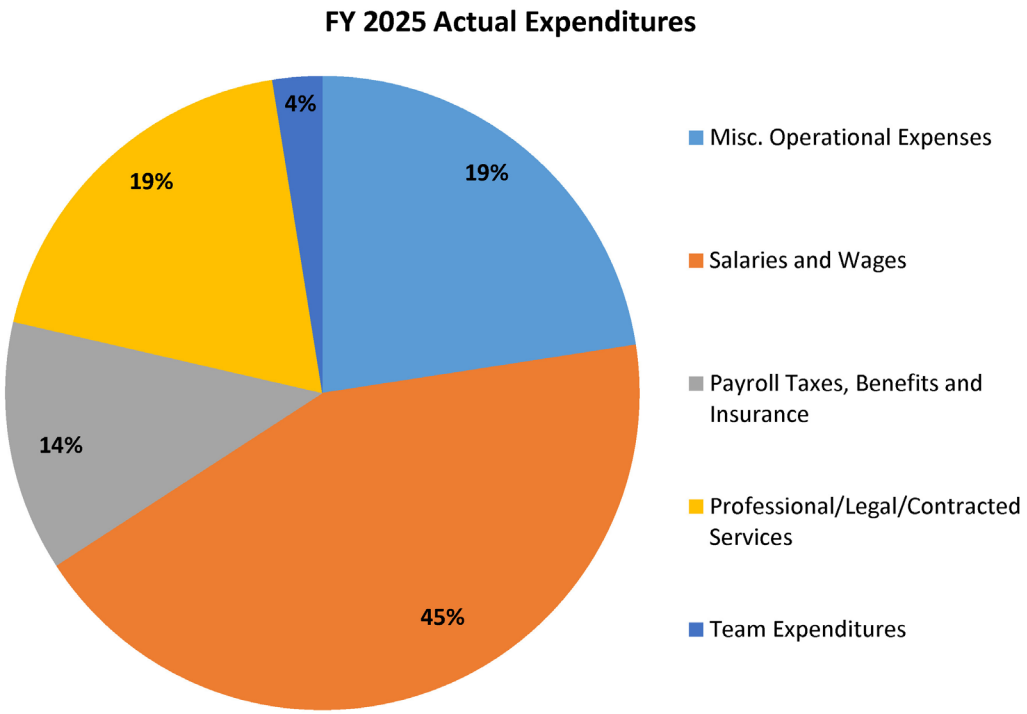
This reporting period was the seventh for the District's ITP. No adaptive management activities were identified as needed, and none were undertaken.

13.0 Expenditures by BSEACD on Implementation Activities

By approval of the MP Annual Report, the District's Board of Directors warrants that there were no FY 2025 expenses incurred that were not directly or indirectly related to the execution of this HCP.

Therefore, 100% of the District expenses shown on the accompanying pie chart were considered HCP expenses and satisfies the minimum commitment funding of no less than 60% of each year's annual budget.

The District's HCP implementation, which integrates the conservation measures and the District's groundwater management program, expended a total of $1,429,705 in FY 2025. The breakdown of these expenses is shown in Figure 9 below.



A.	Misc. Operational Expenses	$264,682	19%
B.	Salaries and Wages	$638,845	45%
C.	Payroll Taxes, Benefits and Insurance	$197,880	14%
D.	Professional/Legal/Contracted Services	$274,937	19%
E.	Team Expenditures	$53,362	4%
		$1,429,705	**100.00%**

Figure 11. Pie chart of FY 2025 actual expenditures with table of source values.

14.0 Species-Specific or Aquifer Research Compiled or Completed During the Prior Year

The District did not conduct species-specific research in the reporting period. It continues to monitor the ongoing salamander-related studies and assessments by the COA, as documented in its own HCP Annual Report. At this time, no additional cooperatively-funded, species-specific research needs have been identified.

In FY 2025 the District completed two dedicated monitoring wells with funding contributions from the CoA salamander protection grant and OneOK inc. One of the wells is a multiport well located just south of Barton Springs Pool. The Barton Spring Multiport Well penetrates a full section of the Edwards Aquifer and portions of the Upper Trinity Aquifer, with 14 multiport zones placed throughout the borehole. The second well is a standard open hole Edwards Aquifer monitoring well in Garrison Park just south of Manchaca and Stassney. Preliminary investigations from these wells were conducted in FY 2025, and included hydraulic head profiles, geochemical sampling, hydraulic conductivity testing (slug testing), aquifer core recovery and XRD analysis in Watson, J.A. and J. Camp, 2025. A water quality sonde has been deployed in the Garrison Well that provides real-time telemetry data on water level, conductivity, dissolved oxygen, and chloride. This is the first dataset of its kind to be collected from the Barton Springs segment of the Edwards Aquifer and will provide valuable insight into how water quality fluctuates over time in the aquifer.

The District is also engaged in active research on the Trinity Aquifer both inside and outside the ITP Area. The Trinity is directly or indirectly hydraulically connected to the Barton Springs segment of the Edwards Aquifer and improved knowledge of the Trinity Aquifer supports decision-making for managing the Edwards. Thus, Trinity research is relevant to the HCP. Published papers and District documents from FY 2018 through FY 2025 are listed below:

- Watson, J.A. and J. Camp, 2025, Preliminary Data Report on Two Monitoring Wells Installed in the Barton Springs Segment of the Edwards Aquifer, Austin, Texas, BSEACD Report of Investigations 2024-1202, December 2024.

- Cosino, Xiomara,2025, Capstone Final Paper Report for EVS 371: Research Experience Course at the Jackson School of Geosciences, University of Texas at Austin, XRD Analysis of the Barton Springs Multiport Well Core, April 28, 2025, 32p.

- Watson, J. A. and J. Camp, 2024, September 2023 Potentiometric Study of the Middle Trinity Aquifer, Central Texas, BSEACD Report of Investigations 2024-0220, February 2024.

- Watson, J.A. and B.A. Smith, 2023, The BSEACD Trinity Aquifer Sustainability Model: A Tool for Evaluating Sustainable Yield of the Trinity Aquifer in Hays County, Texas, BSEACD Report of Investigations 2023-0717, July 2023, 100p.

- Watson, J. A., Smith, B.A., and J. Camp, 2022, Preliminary Results and Insights from the BSEACD In-house Trinity Model: BSEACD Technical Memo 2022-0520 draft report.

- Smith, B.A., Watson, J.A., and J. Camp, 2022, Preliminary Report on the Installation of Two Multilevel Monitor Wells Near Jacob's Well: BSEACD Technical Memo 2022-0831, 80 p.

- Watson, J.A., 2022, Review of Copper Hills Well No. 5 Tier 1 Hydrogeologic Report: BSEACD Memo to File, Jul 23, 2021, 3 p.

- Hunt, B.B. and Smith, B.A., 2021, Same Aquifer, but Different Source of Water: Contrasting the Middle Trinity Aquifer in Central Texas: GeoGulf Transactions, v. 71, p.133-139.

- Smith, B.A., Hunt, B.B., Posso, K., and others, 2021, Highway Construction in the Faulted, Karstic, Cretaceous Edwards Limestone of Southwest Austin, Texas: Association of Environmental and Engineering Geologists, Karst Hazards Forum, Austin, Texas, March 23 to April 1, 2021, abstract.

- Hunt, B.B. and Smith, B.A., 2020, Development of a Steady-State Numerical Model Tool, versions 1.0 and 2.0, Middle Trinity Aquifer, Central Texas: BSEACD Technical Memo 2020-0930.

- Camp, Justin P., Hunt, Brian B., Smith, Brian A., 2020, Evaluating the Potential Groundwater Availability Within A Lower Trinity Aquifer Well Field, Balcones Fault Zone, Hays County, Central Texas: 2020 Abstracts with Programs, Geological Society of America, South-Central Meeting, March 9-10, 2020, Fort Worth, Texas.

- Cockrell, L.P., Gary, R.H., Hunt, B.B., and Smith, B.A., 2020, Data Compilation and Database Structure for the Geodatabase Accompanying the Hydrogeologic Atlas of Southwest Travis County, Central Texas: Barton Springs/Edwards Aquifer Conservation District (BSEACD) Data Series Report 2020-0721, July 2020, 15 p. + digital geodatabase.

- Smith, B.A., Hunt, B.B., Gary R.H., Wierman, D.A. and Watson, J.A., 2020, Springshed Delineation in a Karst Aquifer in Hays County, Central Texas: 16th Sinkhole Conference, NCKRI Symposium 8.

- Tian, L., Smith, B.A., Hunt, B.B., Doster, J.D., Gao, Y., 2020, Geochemical Evaluation of Hydrogeologic Interaction Between the Edwards and Trinity Aquifers Based on Multiport Well Assessment in Central Texas: 16th Sinkhole Conference, NCKRI Symposium 8.

- Cockrell, L.P., Hunt, B.B., Gary, R., Vay, J., Camp. J, and Kennedy, V., 2020, Hydrogeologic Atlas of Southwestern Travis County, Central Texas: Geological Society of America Abstracts with Programs, Vol. 52, No. 1.

- Gary, R.H., Hunt, B.B., and Cockrell, L.P., 2019, Estimating the Number of Trinity Aquifer Exempt Wells in a Recently Annexed Groundwater Conservation District Territory: Geological Society of America Abstracts with Programs, Vol. 51, No. 5.

- Zappitello, S.J., Johns, D.A., and Hunt, B.B., 2019, Summary of Groundwater Tracing in the Barton Springs Edwards Aquifer from 1996 to 2017: City of Austin, Watershed Protection, DR-19-04.

- Hunt, B.B., Smith, B.A., and Hauwert, N.M., 2019, Barton Springs segment of the Edwards (Balcones Fault Zone) Aquifer, central Texas, in Sharp, J.M., Jr., Green, R.T., and Schindel, G.M., eds., The Edwards Aquifer: The Past, Present, and Future of a Vital Water Resource: Geological Society of America Memoir 215, p. 75-100, https://pubs.geoscienceworld.org/books/book/2156/The-Edwards-Aquifer-The-Past-Present-and-Future-of

- Gary, M.O., Hunt, B.B., Smith, B.A., Watson, J.A., and Wierman, D.A., 2019, Evaluation for the Development of a Jacob's Well Groundwater Management Zone Hays County, Texas. Technical Report prepared for the Hays Trinity Groundwater Conservation District, Hays County, Texas. Meadows Center for Water and the Environment, Texas State University at San Marcos, TX. Report: 2019-05. July 2019. 58 p. https://bseacd.org/uploads/JW-Mgmt-Zone-Report_7.30.19.pdf

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- Hunt, Brian B., Brian A. Smith, Robin Gary, and Justin Camp, 2019, March 2018 Potentiometric Map of the Middle Trinity Aquifer, Central Texas. BSEACD Report of Investigations 2019-0109. 28 p. https://bseacd.org/uploads/BSEACD_RI_2019-0109_PotMap_FINAL.pdf

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- 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. https://link.springer.com/chapter/10.1007/978-3-319-51070-5_35

- Cockrell, L., B.B. Hunt, R. Gary., B.A. Smith, 2018, Regional Geologic Geodatabase Project, Central Texas. Barton Springs Edwards Aquifer Conservation District. Data Series Report 2018-1211. December 2018. 14 p. https://bseacd.org/uploads/Cockrell-et-al.-2018_Geology_Geodatabase.pdf

- Wierman, D.A., B.B. Hunt, 2018, Groundwater Level Monitoring Results for HTGCD Transducer Wells and Wimberley Valley Public Water Supply Wells, Hays County, TX. Meadows Center for Water and the Environment, Texas State University at San Marcos, TX. https://bseacd.org/uploads/Wierman-and-Hunt-2018-TSU-Water-Levels_revised.pdf

- 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. https://bseacd.org/uploads/BSEACD_Tech-Note-2018-0829_DTM-MiddleTrinity.pdf

- 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. https://bseacd.org/uploads/BSEACD_techmemo_2018_0831_JWS_dyetrace.pdf

- 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

- Watson, J.A., A.S. Broun, B. B. Hunt and D.A. Wierman, 2018, Geologic Mapping of the Upper Glen Rose Unit 3 (Lower Cretaceous) in the Onion Creek Basin, Western Hays County, Texas: Implications for Recharge to the Trinity Aquifer. GCAGS Journal, v. 7 (2018), p. 107–120. https://bseacd.org/uploads/Watson.et_.al2018.GCAGS_.Journal.v7.07.p107-120.pdf

- 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 Potion of the Trinity Aquifer. Letter dated August 31, 2018. 22 p. (comments at end of the GAM report in link below) http://www.twdb.texas.gov/groundwater/models/gam/trnt_h/ConceptualModelReport.pdf?d=4146.700000001147

15.0 Proposed Activities for Next Year

Activities proposed to take place next year generally relate to a continuation of those organizational activities necessary for the District to meet its ongoing obligations as a GCD and its current commitments, as well as its planned direct and indirect groundwater management initiatives. In prospect, some of these include:

- Completion of the Lower Trinity Aquifer characterization study.
- Data collection and scientific investigations using the new Barton Springs Multiport Well, which was completed in FY 25. These studies will improve our understanding of spring flow dynamics and chemistry in the vicinity of the Barton Springs complex. Slug test and geochemistry data collected in FY 25 will be analyzed and published in FY 26 in collaboration with WPD staff.
- Data collection and scientific investigation using telemetered water quality measurements, including dissolved oxygen, conductivity and turbidity along with continuous water level logging at the Garrison Park open-hole Edwards monitor well drilled in early 2024. Down-borehole dissolved oxygen profiles were collected in December 2025 with plans to publish this data in 2026.
- Continuation of Joint Planning Efforts in GMA 10, working with a consultant to produce explanatory reports and new DFCs to be adopted.
- Continuation of numerical groundwater model development – Planning is underway to secure a TWDB grant to fund development of a Trinity Aquifer model to inform water resource planning decisions.
- Continuation of risk and hazard indices development for the abandoned well assessment project. Due to the data complexities of the Slovene modeling approach, and to maintain project progress, a phased project plan will be implemented. This begins with a modified Karst Aquifer Vulnerability Assessment (KAVA) Index—a streamlined model designed for urban karst aquifers—to establish a foundation for a financial assistance program. This foundation allows for the launch of an official abandoned well assistance program for the 2026 Habitat Conservation Plan (HCP) report. Once launched, the program will be refined over time using the more rigorous Slovene methodology.
- Continuation of Trinity Sustainable Yield Study and implementation of a rules/policy framework for managing the Trinity Aquifer.
- Ongoing enhancement of the District's new database including completion of Phase.
- Utilization of contractual support associated with various technical and professional services, including:
    - technical services to support prospective special projects including 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.

- technical and consulting services relating to permitting and when necessary, rulemaking efforts.

Even if some of these are not directly or indirectly related to the HCP, they will affect the financial resources that will be available to conduct special projects. However, none of these prospective activities will impede the implementation of work to comply with the HCP.

16.0 Recommendations for Improvement

The District has not identified any changes needed to improve implementation of the HCP or compliance with the ITP provisions at this time, with the exception of working more closely with the City of Austin and the U.S. Geological Survey (USGS) to manually measure low flows more frequently below the Barton Springs pool. This enhanced discharge-monitoring effort was implemented throughout FY 24, is ongoing, and is helping to recalibrate the USGS stage-discharge rating curve to more accurately reflect low flows.

The Validation Monitoring Program (specified in HCP Section 6.3.1 and included in this Annual Report in Appendix A) anticipates eventual improved take estimate protocol for future use, based on then-new information and/or analyses concerning gaged spring flows, water chemistry, and salamander counts. These characteristics form the basis for the take estimate methodology. In the current reporting period, the District has not identified any new information or analysis that would indicate the need for modification of the basis of the take estimate methodology.

17.0 Other Appropriate Information Documenting Compliance with the Permit

None required.

Appendix A

Description of District's Validation Monitoring Protocol

Barton Springs
Edwards Aquifer
CONSERVATION DISTRICT

1124 Regal Row
Austin, TX 78748
Tel. (512) 282-8441
www.bseacd.org

July 16, 2019

Ms. Tanya Sommer
U.S. Fish and Wildlife Service
Austin Ecological Services Field Office
I 0711 Burnet Rd., Suite 200
Austin, Texas 78758

Subject: Proposed Validation Monitoring Protocol for HCP under Endangered/Threatened Wildlife Incidental Take Permit # TE10607C-0

Dear Ms. Sommer:

Per the District's HCP, Section 6.3.1, the Barton Springs/Edwards Aquifer Conservation District is submitting its proposed protocol of the Validation Monitoring Program for review and approval by the Service. This protocol provides a framework that the District will utilize for the following: to document the conformance of the District's groundwater management program with the expected outcomes in the ITP, to assess the amount of take that occurs during the ITP term, and to evaluate impacts of any new relevant information on the take estimate methodology. Such findings would be a precursor to proposing modifications of its groundwater management actions, as necessary.

Should you have any questions about this proposed protocol, please contact me by phone at 512-282-8448 or by email at areinmund@bseacd.org. We would appreciate your expeditious review, comments, and concurrence.

Sincerely,

Alicia Reinmund-Martinez
General Manager

cc: David A. Johns P.G.
Program Manager/Geologist
City of Austin

Proposed Protocol for the District's Validation Monitoring Program

The District's HCP Section 6.3.1 requires the formulation and approval of a "validation monitoring program" and subsequently its recurrent use to inform annual reporting under the HCP. The purpose of this program is "to measure future success of Aquifer-management activities, and to modify management actions on the basis of new information." Among other things, the program requires the District, in the first year of the ITP term, to "collaborate with the COA to formulate a methodology for monitoring and evaluating take associated with the District's Covered Activities." The program also involves an annual re-examination of "[information from] existing springflow gaging, water chemistry monitoring, and salamander censuses, supplemented by new data collection and analyses by the COA", which in aggregate serve as the basis for the take estimate methodology.

During the extended time required to develop the HCP and in particular the lengthy time between developing the preliminary draft HCP and finalizing the final HCP, the District and COA were able to collaborate on a workable approach to an initial and continuing take estimate methodology that related specifically to the District's Covered Activities and to the cryptic characteristics of these Covered Species. This methodology is synopsized in the "Take Logic Diagram" in the Final HCP (Figure 5-8) and reproduced in this document. The take estimate methodology uses the three elements identified above, viz., gaged springflow, monitored water chemistry, and salamander surveys and censuses, in defining take categories and their estimated amounts. This methodology was used for estimating the total amount of take that was permitted in the initial ITP.

The validation monitoring program requires a re-examination of the take logic methodology as significant new information on these three elements becomes available. Further, the approved Interlocal Agreement between the District and the City's Watershed Protection Department specifically authorizes and requires, among other things, the sharing of new information that will inform this recurrent re-examination process. But until revisions are identified as needed and ultimately approved, the annual reporting of take estimates will utilize the methodology and parameters described in the approved HCP.

Re-examination of Basis for Take Estimate Methodology

At least once per year, nominally beginning two months before the District HCP's annual report is submitted to the Service, the District will explicitly assess whether or not new information indicates that the take estimate methodology needs to be modified to account for factors that would change the Take Logic Diagram. This annual re-examination of the basis for the take estimates will involve considering the following questions related to the three elements used to develop the Take Logic:

1. Does new information indicate that the size and/or distribution of the populations of either Covered Species, whether in the near-field or far-field, is substantively statistically different than that characterized in the HCP and used in estimating take?
2. Does new information indicate that the dissolved-oxygen concentration thresholds for the onset of behavioral and/or physiological effects on the Covered Species are substantively statistically different than those used in the Take Logic Diagram?
3. Does new information indicate that the relationship between sustained dissolved-oxygen concentrations and springflow discharges are substantively statistically different than those used in the Take Logic Diagram?

4. Does new information indicate that there are substantive antagonistic or synergistic effects on the Covered Species that are not adequately included in estimating take, e.g., impacts of other springflow-related water chemistry components on the Covered Species by the District's Covered Activities or Conservation Measures?
5. Does new information indicate that there are new and/or different adverse effects on the Covered Species from non-springflow related activities associated with the District's Covered Activities or Conservation Measures?
6. Does new information indicate that the relationship between groundwater withdrawals and combined springflow during drought periods, e.g., changes in other parameters in the water balance, is significantly different than that used in estimating take during the term of the ITP?

This re-examination will be made by the District's Aquifer Science team and will utilize then-existing data and information provided to the District by the City of Austin under the ILA, public scientific data and reports from the US Geological Survey, other scientific reports and studies, as well as the District's own data collection and analysis activities. New information may arise during the course of each year of the ITP term from new hydrological or biological modeling results, new salamander survey or census data and estimates, or new groundwater sampling and analysis. Any affirmative responses to the questions enumerated above will be elaborated and documented as part of the District's annual reporting to USFWS, including possible recommendations for additional investigations in subsequent years to further assess changes in the take estimate logic and basis. It seems likely that there will be no significant changes to the take estimate basis during the early years of the ITP term. By the same token, it may require multiple years to confirm that some such changes have occurred on a sustained basis and/or additional research to demonstrate how such changes can be best accommodated in revising future take estimates.

Estimation of Take during Each Reporting Period

The actual annual springflow-related take estimate to be included in the District's Annual Report to the Service involves a rather straight-forward procedure:

1. The daily hydrograph from the USGS gage, converted to indicate the calibrated spring flows at Barton Springs, is produced for the 365 days that comprise the current reporting period by the District's Aquifer Science team. The hydrograph may be modified by the District on the basis of manual measurements to supplement the USGS data.
2. The District's Aquifer Science team will disaggregate the hydrograph and identify the cumulative number of days during that reporting period that are in each of the following: No Take, Take Category A, Take Category B, and Take Category C, as defined in the Take Logic Diagram (referring to rate of springflow).
3. The number of months, to two decimal places, that are in each of those four categories is calculated.
4. Category A, regardless of number of months, is assigned a take estimate of a) 15 for the Barton Springs salamander, and b) 0 for the Austin blind salamander.
5. The number of total months assigned to the Categories B and C is multiplied by a) the monthly Take Factor shown in the Take Logic Diagram for the Barton Springs salamander (174/month), and b) the monthly Take Factor for the Austin blind salamander (36.6/month).
6. The estimated springflow-related take of BSS for the reporting period is the sum of the results of Steps 4(a) plus 5(a).

7. The estimated springflow-related take of ABS for the reporting period is simply 5(b), since the take of ABS in Category A is zero (because ABS habitat is not recognized at Upper Barton Springs).

As necessary, the District's Aquifer Science team will also estimate whether and what take of one or both endangered species was generated by occasional, non-springflow-related District activities (like well construction *per se*),and add the springflow and non-springflow take for annual reporting.

The calculated results of this procedure inform and are input into the HCP Annual Report, Section 7 and will be summarized as follows:

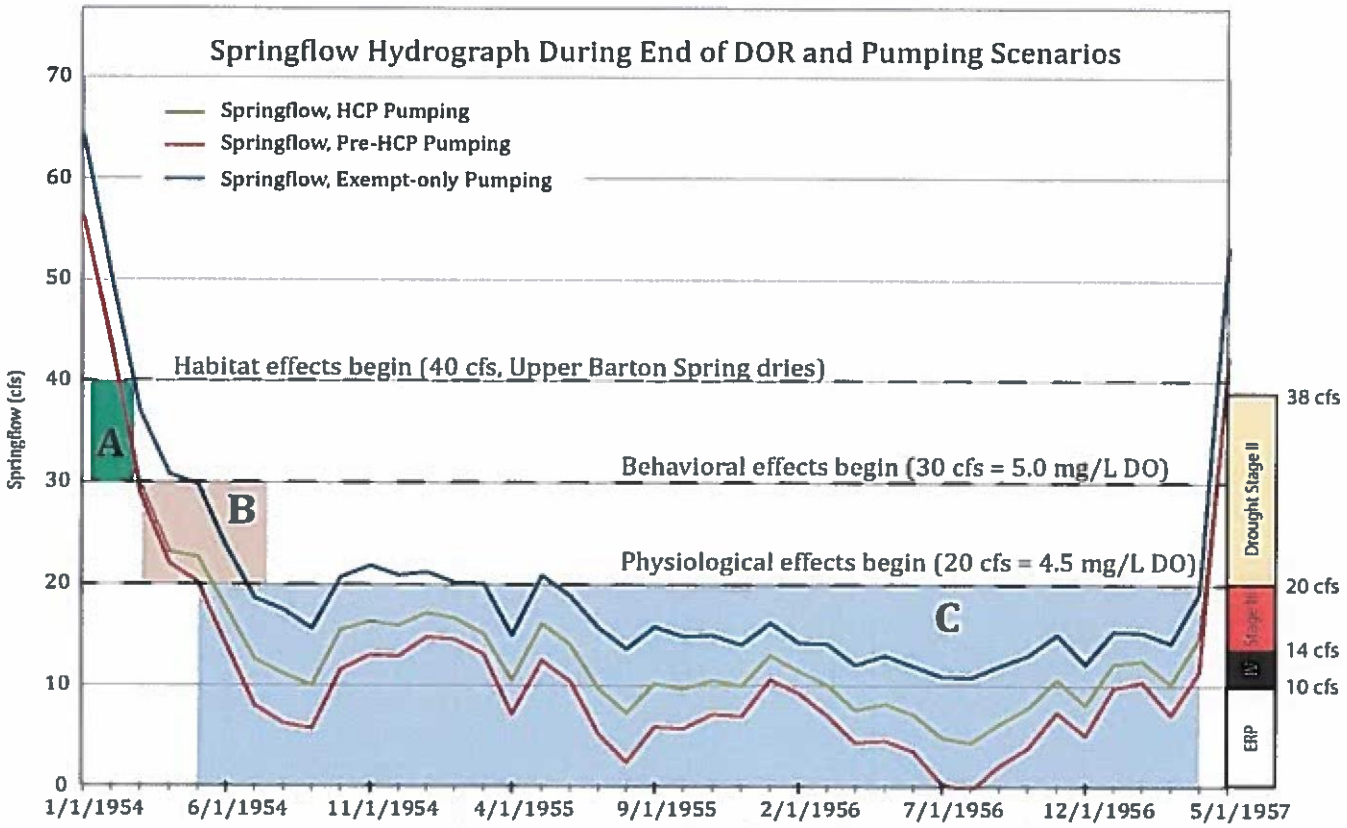
Take Type	Take Category	Inclusive Dates	No. of Months*	BSS Take Factor	Estimated BSS Take	ABS Take Factor	Estimated ABS Take
Springflow-Related	A #1	TBD-TBD	2.25	-	15	0	0
	A #2	TBD-TBD	0.60		15	0	0
	B	TBD-TBD; TBD-TBD	6.45	174	1122	36.6	236
	C	TBD-TBD	2.45	174	426	36.6	90
Occasional, Other	-	MM/DD/YYYY	N/A	N/A	1	N/A	0
Totals			**11.75**		**1579**		**326**

** The values shown for "number of months" are fictitious and are provided for illustrative purposes only. The actual values will be based on the disaggregation of the actual Barton Springs hydrograph for each reporting period by the District's Aquifer Science team.*

During this reporting period, which was nominally in some degree of drought for almost the entire time, the take of Barton Springs salamander would have been estimated to be 1579 and take of Austin blind salamander estimated to have been 326, using the prescribed methodology. These amounts of take would be added to the previously reported cumulative take amounts, resulting in new cumulative take amounts of ____ for BSS and ____ for ABS. (For comparison, the authorized total cumulative take estimates for BSS and ABS during the 20-year permit term are 20,200 and 4,260, respectively.)

Monthly "Take Factor" Logic Diagram

We conservatively estimate total incidents of take from a 37-month period at the end of the Drought of Record. During the springflow recession we qualitatively estimate take relating to various habitat, behavioral, and physiological effects and thresholds. From this discrete drought a monthly take factor was developed to estimate potential monthly take each time springflows is less than 30 cfs (~5.0 mg/L DO), the take initiation threshold.



Species	Stipulated Population	Take Circumstance			Total Take (A+B+C)	Months below 30 cfs	Take Factor (monthly below 30 cfs)
		A	B	C			
		Upper BS	Behavioral Effects	Physiological Effects			
BSS	4988	15	4988	29% x 4998 = 1447	6450	2 + 35 = 37	6450/37 = 174
ABS	1050	0	1050	29% x 1050 = 305	1355	2 + 35 = 37	1355/37 = 36.6

A: Entire stipulated population at Upper Barton Spring experiences mostly sub-lethal take because pumping hastens drying of habitat.

B: Springflow ≤30 cfs (≤ 5.0 mg/L DO): Up to 100% of the stipulated population potentially experiences take because decreased DO from pumping causes adverse behavioral effects that are mostly sub-lethal during these two months.

C: Springflow ≤20 cfs (≤ 4.5mg/L DO): Up to 29% of stipulated population potentially experiences take because decreased DO from pumping contributes to the adverse physiological effects ranging from sub-lethal to lethal as the depth and duration of drought increases. 29% derived from ratio of average permitted pumping to average total discharge over the 35months (4.8 cfs/16.7 cfs = 29%). Note: average DO at Main Springs for the period is 3.7 mg/L.

Take Factor will be used to estimate potential take of the BSS and ABS each month springflow is ≤ 30 cfs, the take initiation threshold.

Appendix B

Interlocal Agreement Between the District and City of Austin

Available upon request of the District

Appendix C

Assessment of Progress on HCP Minimization Measures (Appendix A of Management Plan Annual Report FY 2025)

FY 2025

Appendix A

Assessment of Progress Toward Management Plan Goals and Objectives

Board-approved on December 11, 2025

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

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

   In FY 2024, the District amended MP by Board Resolution in August 2023. The amended plan was approved by the Texas Water Development Board (TWDB) on August 15, 2024. Updates reflected a new Groundwater Availability Model (GAM) run/report by the TWDB.

   In order to achieve the goals, management objectives, and performance standards adopted in the MP, on December 12, 2024, the District's Board of Directors (Board) evaluated progress made, and approved the District's FY 2024 Annual Report and Appendix A (Assessment of Progress toward Management Plan Goals and Objectives). Appendix B (the annual financial audit) was also presented at the December 12, 2024 Board Meeting.

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 Annual Report.

   During FY 2025, public hearings were held on:
   - November 7, 2024, in which the Board of Directors acted to amend District Rules 3-7.8.
   - April 10, 2025, in which the Board of Directors acted to amend District Rules 3-1.24, 3-1.25, 3-1.4, 3-1.6, and 3-1.9.
   - August 14, 2025, in which the Board of Directors acted to amend District Rules 2-1, 3-1.18, 3-1.20, 3-1.23, 3-1.24, 3-3.7, 3-7.3, 3-7.5, 3-7.6, 3-7.7, and 3-7.10.

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 Standards

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 (MZ) and permit type will be provided in the Annual Report.

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

FY 2025 Production from Individual Permittees		
Production Zone	**Actual Production**	**Permitted Individual Production**
Edwards	1,535,887,998	2,882,520,604
Trinity	278,983,148	621,294,517
Austin Chalk or Alluvial	500	2,500,000
Total (gallons)	**1,814,871,646**	**3,446,065,121**
	(5,569.64ac ft)	10,575.59 ac ft)

FY 2025 Production from Limited Production Permits		
Production Zone	**Actual Production***	**Permitted Limited Production**
Edwards	14,326,501	68,500,000
Trinity	7,424,683	34,500,000
Austin Chalk or Alluvial	0	0
Total (gallons)	**21,751,187**	**103,000,000**
	(67.75 ac ft)	(319.16 ac ft)
**Actual production is a volume estimate calculation described in the findings and conclusions of the BSEACD Staff Report 2010. Average Annual exempt well production is approximately 104,573 gpy*		

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

Performance Standards

Provide an estimate of groundwater withdrawn by exempt wells in the District using Texas Department of Licensing and Regulation 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, Communications and Outreach, and Regulatory Compliance groups.

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

Summary tables of the estimated exempt well production volumes for the Edwards and Trinity MZs are provided in the next page.

Edwards Aquifer – Estimated Exempt Wells Production	
Average Annual Volume per Exempt Well (gpy)	104,573
Total Est Volume of Exempt Well Production (gpy)*	**106,455,314**
Estimated number of wells	1018
Cubic Feet Per Second	0.45
% of Permitted Edwards Production	3.61%
% of Actual Edwards Production	6.87%
Permitted Edwards Production(gpy)	2,950,770,604
**2010 BSEACD Staff Report – Avg Exempt Well Use=104,573 gpy*	

Trinity Aquifer – Estimated Exempt Wells Production	
Average Annual Volume per Exempt Well (gpy)	104,573
Total Est Volume of Exempt Well Production (gpy)*	**121,722,972**
Estimated number of wells	1164
Cubic Feet Per Second	0.52
% of Permitted Trinity Production	18.56%
% of Actual Trinity Production	42.49%
Permitted Trinity Production (gpy)	655,794,517
**2010 BSEACD Staff Report – Avg Exempt Well Use=104,573 gpy*	

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

Performance Standards

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

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

Publicizing District Drought Trigger Status - Newsletter and Drought Updates

Throughout the fiscal year, the District distributed bi-monthly newsletters to more than 2,300 subscribers. Each issue featured updates on drought conditions, the state of the aquifers, aquifer research, informational articles, and upcoming community events.

To broaden outreach, newsletters were also shared on the District's website and posted across all social media platforms.

During months of drought, the District published monthly Drought Updates to keep the community informed. These updates provided data on drought trigger status, rainfall, Barton Springs flow, the status of groundwater levels in Lovelady, and regional water supply conditions, along with water conservation tips. Drought Updates were included in newsletters or sent as standalone emails, featured on the website, and shared on social media channels.

FY 2025 Newsletters and Drought Updates can be viewed below:

- 09/2024 - August Drought Update
- 10/2024 - September and October Newsletter
- 11/2024 - October Drought Update
- 12/2024 - November and December Newsletter
- 01/2025 - December Drought Update
- 02/2025 - January and February Newsletter
- 03/2025 - February Drought Update
- 04/2025 - March and April Newsletter
- 05/2025 - April Drought Update
- 06/2025 - May and June Newsletter
- 07/2025 - June Drought Update
- 08/2025 - July and August Newsletter

Sharing Drought Trigger Status on the District's Website
The District's updated drought chart is continuously displayed on the home page of the website at www.bseacd.org. As part of the navigation bar, there is a button that displays the current stage of drought at the top of every page. Additionally, the opening slide on the home page displays the current drought status and a link to a related article about the most recent declaration.

The drought status and additional related information can be seen at www.bseacd.org/droughtstatus. Other than the website's home page, the Drought Status page is the most visited portion of the website, receiving thousands of views per year.

Relevant Outreach Efforts

- **Kent Butler Scholarship** – After being cancelled in 2023, the Kent Butler Scholarship was reinstated by the District for 2024 and continued in 2025. In partnership with the Edwards Aquifer Research and Data Center, the District provided $6,000 to support five students (ages 9–14) attending the Center's five-day, overnight Aquatic Science Adventure Camp, as well as one student attending a $500 week-long day camp. The District values this scholarship as an important investment in cultivating future water professionals and fostering stewardship of local surface and groundwater resources.

Applicants submitted a one-page statement outlining what they hoped to learn, accompanied by related artwork. Staff promoted the opportunity across all school districts within our service area—including Wimberley, Austin, San Marcos, Hays, Eanes, and Del Valle—and received seven applications from students of various ages.

- **Groundwater to the Gulf** – The annual Groundwater to the Gulf program—a three-day, field-based educational event led by the Colorado River Alliance—was held June 10–12, 2025. This program equips educators with water-conservation curriculum, resource materials, and hands-on learning activities for use in classrooms and community outreach. This collaborative event is made possible through support from numerous local water-focused organizations, including the Lower Colorado River Authority, the City of Austin, the Texas Parks and Wildlife Department, Wild Basin, and others. The District led an engaging session on springflow at Barton Springs, where staff introduced the District's mission, programs, and methods for determining drought stages. Participants then conducted a hands-on springflow measurement activity at Barking Springs using oranges as float gauges. District Staff also assisted with additional educational sessions and captured photos that were shared widely among program partners. More than 34 educators participated in this year's program, which the District highlighted across its social media channels to showcase the event's success and partnerships.
- **Barton Springs University** – The District participated in Save Our Springs' Barton Springs University event on October 28, 2025. District representatives Shay Hlavaty and Jacob Newton led an interactive, hands-on activity focused on conductivity and total dissolved solids of water from the tap, rainwater, Trinity Aquifer, Edwards Aquifer, and seawater. During their session, they provided an overview of the District's mission, key programs, relationship between surface water and groundwater, Barton Springs Salamander habitat conservation, and an update on current drought conditions. Approximately 700 students attended Barton Springs University, with nearly 60 participants engaging directly with District Staff. The event and the District's involvement were featured on social media and included in a Board Report to share outcomes and community impact.
- **Salamander Communications** – To help educate the community about the District's efforts to conserve the habitat of the Barton Springs Salamander, the District collaborated with the City of Austin Watershed Protection Department and KVUE News. An article was published on the District's website, social media channels, and in the monthly newsletter, highlighting the District's work to protect the groundwater habitats the salamanders depend on, as well as the population monitoring conducted by the City of Austin. In addition, KVUE News conducted an on-site interview at Eliza Springs, where Shay Hlavaty and City of Austin salamander biologists discussed how the ongoing drought conditions are affecting the species and its habitat.

    - *Protecting Salamanders and Springflow,* Shay Hlavaty, BSEACD, 4/2/2025
    - *Barton Springs Salamanders Help Track Drought,* Grace Thornton, KVUE, 5/26/2025

- **Four Rivers Association of Realtors Speaker Series** – Shay Hlavaty participated as a panelist in the Four Rivers Association of Realtors Speaker Series, joining general managers from the Hays Trinity, Guadalupe County, Comal County, and Plum Creek groundwater conservation districts. The first session, held on August 12, 2025, focused on general hydrogeology and an overview of groundwater conservation districts and their operations, including drought management. The second session, on September 2, 2025, covered topics related to well drilling, permitting, and regulation. Approximately 50 realtors attended each event and were actively engaged in discussions throughout the sessions.

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

Performance Standards

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

The Board expects to receive and approve the FY 2025 Annual Financial Audit report provided by the District's financial auditor at its Board Meeting on December 11, 2025. It will be included in the Annual Report as Appendix B.

Timely develop and approve fiscal-year budgets and amendments.

During FY 2025, there were two FY 2026 budget versions brought before the Board of Directors. The preliminary budget was presented in a properly-noticed public hearing held on June 12, 2025 where it was approved. The Board approved a final FY 2026 Budget on August 14, 2025.

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 Texas Public Information Act (PIA), any training provided to staff or directors, or any claims of violation of the PIA will be provided in the Annual Report under the General Management Team Highlights.

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

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

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

The Administration Team developed, posted, and distributed all materials and backup documentation for all 10 District Regular Meetings and one Special Called Meeting held in FY 2024. There were also seven Public Hearings. All meeting minutes were approved by the Board at a subsequent meeting. Administrative staff maintained the officials records of each meeting on the District's website and in the District's digital library.

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

Performance Standards

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

The District holds elections no more often than every two years during even-numbered years, but during an odd-numbered fiscal year .

Three candidates filed for the November 5, 2024 (FY 2025) election but were unopposed at the end of the filing deadline. The elections, therefore, were cancelled. Two candidates were running for reelection (precincts 3 and 4) and one candidate will be new (Precinct 1) since the incumbent chose not to run for reelection after one term.

GOAL 2
CONTROLLING AND PREVENTING WASTE OF GROUNDWATER

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

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

Performance Standard

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

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

A summary of the processed permitting applications in FY 2025 is provided in the table on the next page.

Processed Permit Applications	FY 2023	FY 2024	FY 2025
Minor Amendment	1	0	1
Major Amendments	0	0	0
New Exempt Well	8	4	8
Limited Production Permit (Nonexempt Domestic Wells)	19	7	5
Individual Production Permit	1	3	2
Individual Well Drilling Authorizations or Well Modification	0	4	0
Test Well	0	2	0
Well Plugging	5	3	15
Replacement Well	1	0	4
TOTAL	**35**	**23**	**35**

A summary of the individual production permits processed in FY 2025 is provided in the table below.

Annual Volume (gpy)	Production Permits Processed	Permit Type	Use Type	Aquifer
1,500,000	Far South Mining	Historic Trinity	Irrigation	Middle Trinity
770,000	Prominence Midtown, LP	Conditional Class C Edwards	Commercial	Edwards

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

Performance Standards

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

During FY 2025, Staff conducted a number of inspections relating to the processing of permit applications. Staff completed two inspections related to special investigations and one permittee site inspection. Staff collected 15 water quality samples during routine neighborhood site visits for domestic users. There were three formal enforcement actions initiated in FY 2025. All these actions were for non-compliance of meeting monthly drought target volumes. All these actions were for non-compliance of meeting monthly drought target volumes.

Inspections/ Investigations/ Visits	FY 2023	FY 2024	FY 2025
Exempt Well Inspections	2	3	0
Limited Production Permit Inspections	4	7	0
Individual Production Permit Inspections	0	1	1
Test Well Inspections	0	0	0
Plugging Inspections	1	1	1
Special Investigation Inspections	1	3	2
Other Permittee Meetings/Visits *	6	20	14
**Multiple meetings were held with some permittees.*			
TOTAL	**28**	**25**	**24**

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

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

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

Performance Standards

A. 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.

During FY 2025, the Texas State Legislature met. No bills were filed specific to the District.

- HB 1633 amends Chapter 36 of the Water Code to require a groundwater conservation district to consider if an applicant's proposed use of water unreasonably affects wells that are registered with the District and exempt from permitting before granting or denying a permit or permit amendment.
- HB 5560 amends Chapter 36 of the Water Code to provide that in an enforcement action brought by a district, the court may assess a penalty greater than the maximum authorized (increased by the bill from $10,000 per day to $25,000 per day) if the court determines the person gained an economic benefit as a result of the violation that was greater than the maximum penalty. A penalty assessed under the new subsection must be in an amount determined by the court to be necessary and appropriate to outweigh the economic benefit gained by the violator and discourage future violations.
- HJR 7 (passed by the citizens of Texas as Prop 4 in the October election) amends the Texas Constitution to provide that the net revenue from state sales taxes above $48 billion be deposited in the Texas Water Fund until 2035 for water infrastructure.

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

Development Activities Over Recharge and Contributing Zones:

No new development activities moved forward during the fiscal year.

The District continues to monitor as many proposed/new developments as possible and Texas Pollutant Discharge Elimination System (TPDES) permits in the contributing and recharge zones of the Barton Springs segment of the Edwards Aquifer. Additionally, the District continues to track legislation regarding wastewater discharges in the Edwards Aquifer Contributing Zone.

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

Performance Standard

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

To ensure that all firm-yield production permits are evaluated with consideration given to the District's demand-based and nonspeculative permitting standards, Staff completed comprehensive administrative and technical reviews of permit application requests.

A summary of the number and type of applications processed and approved for authorizations, permits, and permit amendments including approved use types and commensurate permit volumes for production permits and amendments is provided below.

A summary of the processed permitting applications in FY 2025 is provided in the table below.

Processed Permit Applications	FY 2023	FY 2024	FY 2025
Minor Amendment	1	0	1
Major Amendments	0	0	0
New Exempt Well	8	4	8
Limited Production Permit (Nonexempt Domestic Wells)	19	7	5
Individual Production Permit	1	3	2
Individual Well Drilling Authorizations or Well Modification	0	4	0
Test Well	0	2	0
Well Plugging	5	3	15
Replacement Well	1	0	4
TOTAL	**35**	**23**	**35**

A summary of the individual production permits processed in FY 2025 is provided in the table below.

Annual Volume (gpy)	Production Permits Processed	Permit Type	Use Type	Aquifer
1,500,000	Far South Mining	Historic Trinity	Irrigation	Middle Trinity
770,000	Prominence Midtown, LP	Conditional Class C Edwards	Commercial	Edwards

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).

The District has two active aquifer storage and recovery (ASR) permits operating Middle Trinity injection wells: Ruby Ranch Water Supply Corporation (RRWSC), and the City of Buda. These permits are among the first of their kind in the state and represent an innovative groundwater management approach for relieving demand pressure on the District's managed aquifers. In FY 2025, District Staff continued to collaborate with these ASR permittees to collect water quality and monitoring well data to evaluate potential impacts of ASR operations on the Middle Trinity Aquifer.

In FY 2025, the District hired LRE Water to conduct a Lower Trinity Aquifer water availability study. This study will supplement previous investigations by District Staff in quantifying water storage and recharge in the Lower Trinity and help determine its potential as an alternative supply source to the Edwards and Middle Trinity aquifers. The Lower Trinity Aquifer water availability study has an expected completion date in December 2025.

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).

From FY 2021-2023 Staff worked with the City of Buda to facilitate development and testing of a Middle Trinity ASR test well. Aquifer Science Staff cooperated with Staff and consultants with the City of Buda to collect comprehensive data during multiple ASR injection and recovery cycles. Data was evaluated to quantify aquifer impacts and ensure the feasibility of the project. In FY 2024, after completion of the multi-year pilot project, the City of Buda applied for and was granted an ASR permit by the District and the Buda ASR system is now operational. In FY 2025 Staff continue to collect and evaluate hydrogeologic data to better understand how the Trinity Aquifer responds to permitted ASR injection and withdrawal operations over longer timeframes and thus increase our understanding of the feasibility of ASR projects as an alternate water supply strategy for District permittees.

In FY 2025 the Aquifer Science team continued to collect and evaluate water level and water chemistry data collected from the Lower Trinity Aquifer, to assess the viability of the Lower Trinity Aquifer as an alternative supply for District Permittees. Currently the District maintains two Lower Trinity monitoring wells. One of these monitoring wells is the Bliss Spillar Lower Trinity production well, the District's second Lower Trinity non-exempt permit which was issued in FY 2023. Data collected from this well will provide valuable insight on how the Lower Trinity responds to production over time.

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.

Relevant Outreach Events

- **Antioch Tour** – In February 2025, District Staff led a tour of the innovative infrastructure over Antioch Cave, a key recharge site for the Barton Springs segment of the Edwards Aquifer. Located within the creekbed of Onion Creek, just over a mile from downtown Buda, Antioch Cave is the largest recharge feature on the creek, which serves as the primary contributor of recharge to the Barton Springs segment. During the tour, Staff educated attendees about the innovative structure, research results, as well as the interactions between groundwater and surface water. Participants on the tour included representatives from the District Staff and Board, City of Buda, City of Kyle, Hays Trinity

Groundwater Conservation District, and the Watershed Association. An article entitled "Antioch Cave – Protecting Recharge in the District" was published on our website, social media, and monthly newsletter.

- **Meteorological Society Chapter Meeting** – Bob Rose, meteorologist for LCRA, invited the District to provide an aquifer status update at the April meeting for the local Meteorological Society Chapter. On April 2, Jeff presented drought conditions, the status of the Edwards and Trinity aquifers, and discussed surface and groundwater interactions. During the event, Shay Hlavaty collected contact information from several network meteorologists throughout the area to support sharing future drought communications with the media.
- **LCRA Tour** – On July 1, 2025, District Staff, along with team members from the Hays Trinity Groundwater Conservation District, toured the Tom Miller Dam and River Operations at LCRA near Red Bud Isle. Presenters Bob Rose, meteorlogist for LCRA, and Dan Yates, Director of River Operations at LCRA, discussed the history of the Highland Lakes, past droughts and floods, and the status of surface water in the region at that time. This tour helped both District and LCRA staff better understand the interconnectivity of the surface and groundwater our organizations oversee.

Relevant Articles and Webpages

- *Little Bear Recharge Enhancement Project – How it impacts the District*, Shay Hlavaty, BSEACD, 11/13/2024
- *Extensive Sampling at the Barton Springs Multiport Monitor Well*, Shay Hlavaty, BSEACD, 5/20/2025
- GMA 10 and Region K webpage

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 2025, Staff attended meetings of the Lower Colorado Regional Water Planning Group (Region K) and reported on any key updates at the Board Meetings. The GM and the alternate served as the Groundwater Management Area (GMA) 10 representatives through August 31, 2025 and continue to serve as liaisons.

Region K Meetings attended include:

- October 16, 2024
- December 6, 2024
- January 15, 2025

- February 20, 2025
- May 14, 2025
- July 2, 2025
- August 27, 2025

GMA-10 Meetings attended include:

- September 23, 2024
- December 9, 2024
- March 17, 2025
- May 19, 2025

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 Standard

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

Staff visits approximately 50 monitor wells quarterly, in addition to numerous other wells throughout the year, including eight multiport monitor wells. Data is collected and organized into individual spreadsheets and databases. Staff also regularly samples wells and springs for detailed geochemical analyses as a cooperator for the TWDB (11 sites in FY 2025). All data has been compiled in the TWDB database that is publicly available. No significant changes in water-quality data were observed during FY 2025.

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.

In FY 2025, Staff attended technical advisory stakeholder meetings for the TWDB Southern Trinity Groundwater Availability Model (STGAM). Draft model files were released in August 2025 and Staff has been working closely with TWDB modeling staff to provide input and feedback for the model. The STGAM will likely be used to guide development of the

Since FY 2020, District Staff have worked in-house to develop new numerical groundwater models to simulate groundwater flow, springflow, and storage under different pumping and drought scenarios. These modeling efforts resulted in publication of the Trinity Aquifer Sustainability Model (TAS) in FY 2023, which has improved our understanding of the impacts of pumping in the District on springflow and water levels. In FY 2025, pumping scenarios from the TAS model were used to inform policymaking efforts for the Trinity Sustainable Yield project, a key District priority. A summary report of the TAS model can be found at the following link: Trinity Aquifer Sustainability Model.

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.

Staff continue to work with permit applicants and their consultants to plan and execute aquifer tests that meet the District's high standards for test design and data quality and ensure that submitted hydrogeologic reports provide adequate data to perform evaluations for unreasonable impacts. In November 2024 District Staff cooperated with consultants to perform an aquifer test for a new well in the Sierra West Water Supply Corp system. This well was completed in the Middle Trinity Aquifer. Prior to the test, District Staff worked closely with consultants to design and plan the aquifer test. 13 different wells were monitored by District Staff during the test. Data from the test was evaluated by District Staff to better understand likely drawdowns due to pumping in this area, and to estimate local hydrogeologic characteristics which can be used in future modeling efforts.

In December 2025, the District completed its well impact analysis project, which was subcontracted to LRE Water. The project delivered a robust database of known exempt and non-exempt wells within the District. This dataset will provide a valuable tool for evaluating future non-exempt permits for the potential for unreasonable impacts to existing wells.

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

Performance Standard

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

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

- The Aquifer Science Team collected 11 samples from sample sites including wells and springs from the Edwards and Trinity Aquifers for major ions and isotopes.
- The Regulatory Compliance Team collected 15 water quality samples during routine neighborhood site visits.

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

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

A summary of the processed permitting applications in FY 2025 is provided in the table below.

Processed Permit Applications	FY 2023	FY 2024	FY 2025
Minor Amendment	1	0	1
Major Amendments	0	0	0
New Exempt Well	8	4	8
Limited Production Permit (Nonexempt Domestic Wells)	19	7	5
Individual Production Permit	1	3	2
Individual Well Drilling Authorizations or Well Modification	0	4	0
Test Well	0	2	0
Well Plugging	5	3	15
Replacement Well	1	0	4
TOTAL	**35**	**23**	**35**

A summary of the individual production permits processed in FY 2025 is provided in the table below.

Annual Volume (gpy)	Production Permits Processed	Permit Type	Use Type	Aquifer
1,500,000	Far South Mining	Historic Trinity	Irrigation	Middle Trinity
770,000	Prominence Midtown, LP	Conditional Class C Edwards	Commercial	Edwards

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.

Staff attended 100% of the GMA 10 meetings that were held in FY 2025: September 23, 2024; December 9, 2024; March 17, 2025; and May 19, 2025. The GMA discussions included the following topics:

- GMA 10 members finalized an Interlocal Agreement that designated the Plum Creek Conservation District as the Administrative Coordinator to engage in a contract with Collier Consulting.
- Working through the DFC planning schedule with the consultant.
- Report that the pending completion of the new Trinity Aquifer Groundwater Availability Model may be completed in time for use in this planning cycle.
- Discussion of potential DFC scenarios on a per-district and/or per-GMA-wide basis.

Objective 4-5. Implement the measures of the Habitat Conservation Plan (HCP) and Incidental Take Permit (ITP) from the United States Fish and Wildlife Service (USFWS) for the Covered Species and covered activity to support the biological goals and objectives of the HCP.

Performance Standard

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

The USFWS approved the District's HCP in July 2018 and published the Record of Decision and the final Environmental Impact Statement (EIS). On September 20, 2018, the USFWS issued a 20-year ITP. On April 11, 2019, the Board approved an Interlocal Agreement (ILA) between the District and the City of Austin (CoA) to collaborate and coordinate routine and planned activities relative to each entity's respective HCP.

The District and the CoA meet annually to discuss their efforts, independent and joint, related to the HCP. The first annual meeting to discuss their respective HCP-related activities was held on December 10, 2019. The second annual meeting was held via Zoom during the pandemic on December 16, 2020. The third meeting was held on December 6, 2021, and a fourth meeting was held on December 12, 2022. The fifth meeting was conducted on December 12, 2023. And the sixth meeting was conducted on November 22, 2024.

On February 10, 2024, a meeting was held with the District HCP Management Advisory Committee (MAC) to discuss the District's HCP-related activities for FY 2024. On February 27, 2025, the sixth HCP/ITP Annual Report was submitted to the USFWS.

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: flow measured at/near the Barton Springs Pool and water levels measured at the Lovelady monitor well; plus numerous other indicators of drought conditions relating to the Edwards Aquifer. The District contracts with the United States Geological Survey (USGS) for the Lovelady well to maintain equipment, collect, and host as real-time data on their website. The CoA contracts with the USGS to maintain the data for Barton Springs.

Barton Springs flow monitoring during persistent drought conditions in FY 2025 presented measurement challenges. Two drought stage declarations within a twelve-month period (October 2024 – September 2025) required several manual measurements to verify flow conditions. Pool maintenance activities, coupled with USGS gauge maintenance, introduced significant uncertainty in the USGS real-time gauge readings. To validate discharge measurements as springflow approached newer drought thresholds, Staff conducted manual flow measurements in collaboration with CoA and USGS. This supplemental data collection ensured optimal measurement accuracy for making drought decisions.

In FY 2025, 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 updated reports of aquifer conditions at each Board meeting. Data from Trinity monitor wells were also collected and evaluated at these times.

In 2018, 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 District's established Edwards Aquifer triggers are indeed representative of drought conditions, regardless of the aquifer. In FY 2025, Staff continued to monitor Trinity Aquifer water-level drops in response to

the ongoing drought and evaluate whether the established Edwards drought triggers are still representative of Trinity Aquifer conditions. To date, the established triggers appear to be adequate. Staff will continue to evaluate Trinity Aquifer water levels as drought conditions persist. If Trinity Aquifer behavior deviates significantly from the Edwards, a reevaluation of established drought triggers may be warranted.

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

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

Performance Standard

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

The District implements a drought management program that requires mandatory monthly pumpage curtailments during District-declared drought stages. The District began FY 2025 in Stage II Alarm drought. The District declared Stage III Critical Drought on and remained in this stage until November 1, 2024 and remained in this stage until the end of FY 2025. 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 from the beginning of FY 2024 through November 2024 with Stage III Critical enforcement measures being assessed for the remainder of FY 2025. Monthly drought compliance reports for all individual permittees were provided to the Board each month of FY 2025 during District-declared drought, and those reports can be found on the drought management website pages.

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. 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.

Publicizing Declared Drought Stages

- **Newsletters, Drought Updates, and Website** – Declared drought stages are publicized in the District's newsletters, Drought Updates, and across the website. Additional information on these resources can be found in Objective 1-4 of this report.
- **Drought Press Coverage** – As the region entered its third consecutive year of drought, the District continued to receive significant press coverage throughout FY 2025. In October 2024, Staff distributed a press release announcing the Stage III Critical Drought declaration to more than 25 media contacts statewide and strengthened relationships with key outlets, including KXAN, KVUE, and the *Austin Chronicle*. Below is a summary of drought-focused communications sent to permittees and newsletter subscribers, as well as press releases shared with media contacts and posted on the District website. Also included are the resulting news articles and broadcast segments published online and in print.
    - *September and October Newsletter: District Declares Stage III Critical Drought,* 10/3/2025
    - *District Declares Stage III Critical Drought*, Shay Hlavaty, BSEACD, 10/3/2024
    - *Stage III Drought for Barton Springs-Edwards Aquifer Conservation District* – Spectrum News, Link unavailable online
    - *Barton Springs-Edwards Aquifer Conservation District declines into Stage III Drought* – Wimberley View, 10/9/24
    - *Barton Springs-Edwards Aquifer Conservation District Now Under Stage III Restrictions*, Hays Free Press, 10/9/24
    - *Lack of Rainfall Having Major Impact on Barton Springs*, CBS Austin, 11/18/24
    - *How much rain would it take to get out of drought conditions?*, Angela Shen, Fox7 News, 5/5/2025
    - *Aquifers Close to Stage IV Drought*, Freddy Vela, KXAN, 5/12/2025
    - *Barton Springs salamanders help track drought*, Grace Thornton, KVUE, 5/26/25

Drought Stage Outreach

- **Neighborhood Well Visits** – The District conducted 11 Neighborhood Well Visits in the River Mountain Ranch neighborhood, located just east of Woodcreek, on November 12, 13, and 20, 2025. Each visit lasted approximately 30 minutes. Shay Hlavaty, Justin Camp, Jacob Newton, and Erin Swanson met with well owners to measure wells, test water quality, collect samples, and distribute Well Owner Welcome Kits containing information on well maintenance, drought stages, and District programs.

These visits strengthened community relationships, improved awareness of the District's mission, provided insight on current drought conditions and status, and enhanced the dataset on existing wells in the area.

- River Mountain Ranch was selected for this outreach effort because:
    - It is located within the Shared Territory, where many well owners are not yet familiar with the District, making in-person engagement valuable.
    - The neighborhood relies on Trinity Aquifer wells, providing an opportunity to collect additional data on aquifer conditions.
    - Many wells were drilled prior to 2015, before the area was incorporated into the Shared Territory, and had not previously been visited by District Staff.
- **Well Water Checkups** – The District had 69 well owners participate in the 2025 Well Water Checkup—more than double the number of participants in 2023 and 2024. District Staff shared basic information with participants about the District, our territory, and the current drought stage. An educational well owner program was held on April 8, where the Texas Well Owners Network presented on well maintenance, well logs, and interpreting water sample test results. A webpage for the event can be viewed here. This event was a collaborative effort between Texas A&M AgriLife, Hays Trinity Groundwater Conservation District, Southwest Travis County Groundwater Conservation District, and the District. Data collected from participants will be added to the District's database to support ongoing groundwater monitoring and research.

Relevant Articles

In the District News portion of the website, articles were shared providing insight on the ongoing drought, the status of the aquifers, and ways to actively conserve water. Some of these articles are "Messages from the General Manager", which are shared quarterly and include drought insight from Tim Loftus. These articles were shared across the District's social media platforms, newsletters, and Drought Updates.

- *Post Construction Well Inspection – Why it Matters*, Shay Hlavaty, BSEACD, 9/27/2025
- *Message from the General Manager – October 2024*, Tim Loftus, BSEACD, 10/3/2024
- *Protecting Your Wells and Pipes from Freezing Temperatures*, Shay Hlavaty, BSEACD, 1/3/2025
- *Message from the General Manger – February 2025,* Tim Loftus, BSEACD, 2/10/2025
- *2025 Well Water Checkup,* Shay Hlavaty, BSEACD, 3/4/2025

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

Performance Standards

Require an updated User Conservation Plan and User Drought Contingency Plan (UCP/UDCP) from Permittees within one year of each five-year MP Adoption.
In FY 2025, Staff worked to update 152 permit records in order to incorporate updated drought planning documents into their records. According to the District MP, all permittees must update their UDCP and UCP plans at least every five years. Therefore, since all UDCPs were updated in FY 2025, Staff in FY 2030 will again work to update these templates to get all UDCPs updated.

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

After notice and an opportunity for a hearing, the Board may renew a permit with a reduced amount of the authorized production if the authorized withdrawal volume is no longer commensurate with reasonable non- speculative demand, or actual production from a well is substantially less than the authorized permit amount for multiple years without any rationale that reasonably relates to efforts to utilize alternative water supplies, conserve, or improve water use efficiency. Staff typically conducts an overpumpage analysis every few years, and conducted the analysis in FY 2019, therefore Staff did not conduct an overpumpage analysis in FY 2025.

The District has been actively encouraging alternative source projects to reduce the dependency on the aquifers during drought. Staff have collaborated with water suppliers on aquifer storage and recovery (ASR) projects in providing regulatory and technical guidance. The Ruby Ranch ASR project was approved and has been in operation since the summer of FY 2021 and the City of Buda ASR project was approved in the summer of FY 2024. In FY 2025, Staff began preliminary discussions with consultants for a potential third ASR project to be completed within the District's boundaries in the coming years.

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

A summary of the actual versus permitted production volumes for each MZ is provided in Objective 1-2. The amount of Historic Use groundwater (i.e., permitted fresh Edwards volume) that has been retired (i.e., held under the District's Conservation Permit) and placed into the Ecological Flow Reserve since 2009 is 82,305,124 gallons or 0.35 cfs. Ecological Flow Reserve is a protected volume and not subject to further permitting. Additionally, 1,200,000 gallons per year of Historical Trinity Aquifer permitted water has been retired; no Fresh Edwards/Conditional A permitted water has been retired.

GOAL 6
ADDRESSING CONSERVATION AND RAINWATER HARVESTING WHERE APPROPRIATE AND COST-EFFECTIVE

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

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

Performance Standards

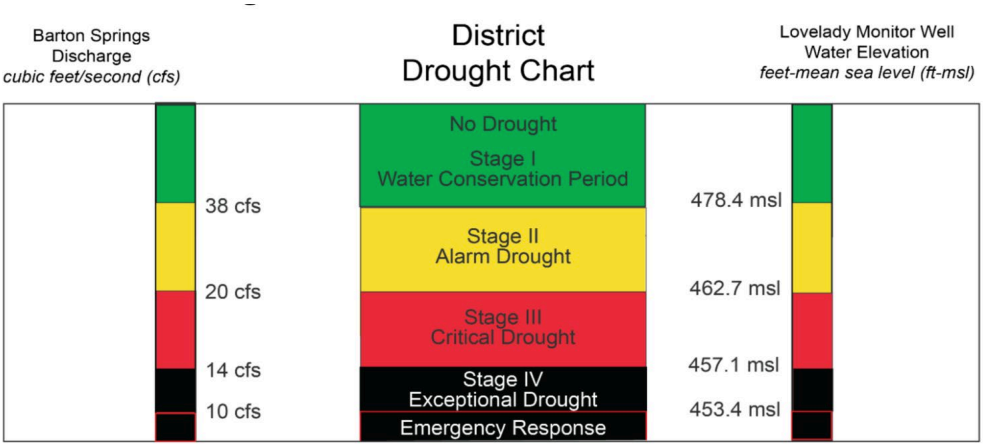
A summary of efforts to assist permittees in developing drought and conservation messaging strategies will be provided in the Annual Report.

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

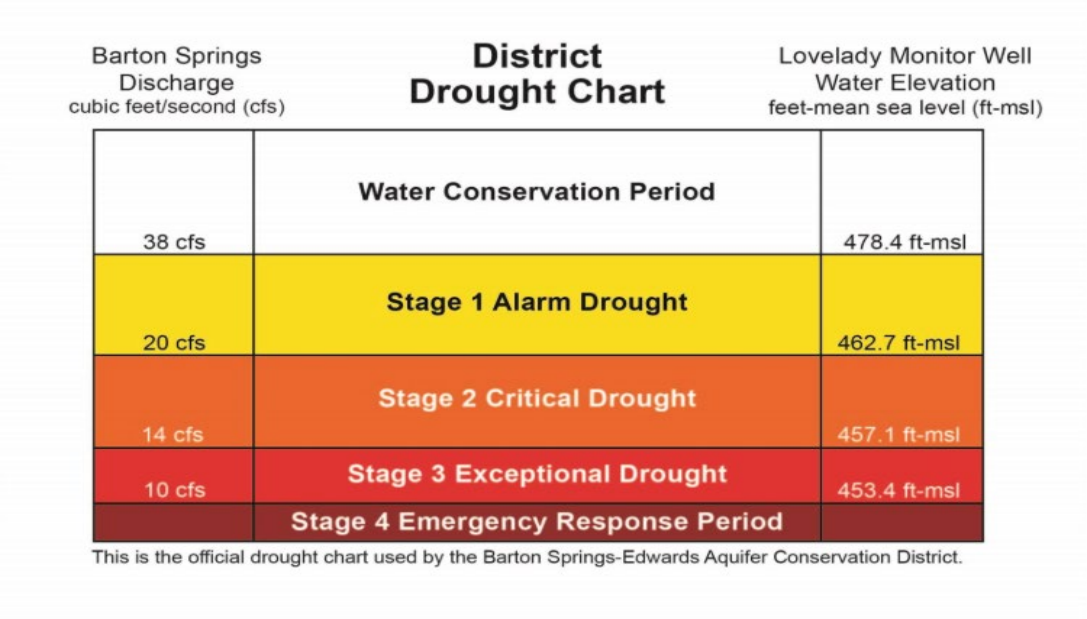
Permittee Communications

- **Drought Chart Updates** – In FY 2025, the Communications and Outreach team proposed and planned updates to the District's official Drought Chart to improve public understanding and provide greater clarity for permittees. Throughout the year, Shay Hlavaty gathered input from District Staff, Board Members, and several major permittees, including the City of Buda, City of Kyle, Creedmoor-Maha Water Supply Corp., Goforth, Ruby Ranch, and Aqua Texas. Based on this feedback, the following updates were Board approved to take effect on September 1, 2025.
    - Change "Stage I No Drought" to "Water Conservation Period."
    - Rename "Stage II Alarm Drought" to "Stage 1 Alarm Drought," with subsequent stage numbers adjusted accordingly.
    - Replace Roman numerals with standard numbers to align with common conventions used by permittees.
    - Update chart colors to more effectively convey the severity of each drought stage.
- These revisions were designed to ensure consistency across all District communications and to make the drought chart more intuitive for both the public and permit holders. The following article and emails were shared with relevant audiences at the end of FY 2024 leading to the implementation of the changes including permittees, District newsletter subscribers, and the general public:
    - Updates to District's Drought Chart: Effective September 1, 2025, Shay Hlavaty, BSEACD, 8/19/2025
    - District Permittee Updates – August 2025, 8/25/2025
    - Drought Chart Update, 8/28/2025

Pictured below is the District's drought chart through the end of FY 2025.



Pictured below is the District's drought chart, which was approved by the Board to be implemented at the beginning of FY 2026.



Permittee Outreach

- **Creedmoor Maha Water Supply Corp Water Conservation Program** – In 2024, Creedmoor Maha Water Supply Corp (CMWSC) launched a Water Conservation Program aimed at reducing groundwater use from the District. Shay Hlavaty attended several CMWSC meetings throughout the year to support their efforts along with representatives from the cities of Mustang Ridge and Creedmoor. The program's

primary focus was hosting a community water conservation event, while also exploring additional strategies such as rainwater barrel implementation, incentives for residents who report leaks, and encouraging new developments to incorporate drought-tolerant landscaping.

- **Buda Arbor Day** – The District participated in the City of Buda's Arbor Day event on November 8, 2024, at Green Meadows Park. The invitation came from Blake Neffendorf, Director of Public Works at the City of Buda. Shay Hlavaty presented to nearly 200 fifth-grade students, teaching them about local groundwater resources, the connection between their homes and the Barton Springs Salamander, the impacts of drought, and the importance of water conservation. The educational program developed for this event was replicated for other fourth to sixth grade students across the District.
- **Creedmoor Elementary** – Following the Buda Arbor Day event, the District was invited by Matt Pickle with Creedmoor Maha to present an educational program at Creedmoor Elementary's after-school program on November 8, 2024. Shay Hlavaty delivered the same presentation used for Buda students earlier in the day and collaborated with the Colorado River Alliance to bring their Mobile River exhibit to the school. The Mobile River, a trailer equipped with interactive games, videos, and activities, helped engage students in learning about water resources and conservation throughout the remainder of the program. This event included about 50 students ranging from kindergarten through fifth grade.
- **Discovery Day at the Lady Bird Johnson Wildflower Center** – On June 8, 2025, Shay Hlavaty represented the District at the Lady Bird Johnson Wildflower Center's Discovery Day. The event drew nearly 1,000 attendees, with over 100 participants visiting the District's table. Shay Hlavaty engaged attendees in discussions about drought conditions, groundwater monitoring, and the role of a groundwater conservation district. Conversations also highlighted the District's programs and their connection to protecting the habitat of the Barton Springs Salamander.
- **Well Owner Spotlight: Travis and Victoria Cox** – The Well Owner Spotlight series was started in August 2025 to highlight the conservation efforts of District permittees. The series started by highlighting Travis and Victoria Cox who have a permit with the District for 8,000,000 gallons per year in the Driftwood area. The Coxes have exemplified water conservation through rainwater capture, water reuse, and native landscaping. The article, as seen here, was published in the District's August newsletter, on the website, and across social media outlets. Following the publishing of the Well Owner Spotlight, the Coxes were named one of Texas Water Development Board's 2025 Texas Rain Catcher Award recipients.

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.

Conservation-Based Rate Structures Page – The District updated a webpage on its website to provide more comprehensive resources on conservation-based rate structures. The page explains:

- What these rate structures are and the different types
- Why they are beneficial
- Offers several relevant references and tools for permittees.

This resource was also shared in an email distributed by the Regulatory Compliance team during the summer of 2025, in a message with information about the updated UDPs and UDCPs.

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.

Hot Science Cool Talks: The Future of Texas Water – For the District's second annual Groundwater Symposium, the District partnered with the University Texas (UT) and their Hot Science – Cool Talks series. This event on March 28, 2025 brought together more than 455 attendees and 21 conservation-focused organizations for an evening of learning and engagement. The District hosted an exhibit table, where Staff members Shay Hlavaty and Bri Moore engaged with approximately 30 participants. Conversations focused on the connection between surface and groundwater, the District's drought management stages, and ongoing efforts to protect the Barton Springs Salamander. The highlight of the event was a presentation by Dr. Robert Mace of Texas State University's Meadows Center for Water and the Environment. He discussed the current Central Texas drought, the relationship between surface and groundwater systems, and practical water conservation strategies, including rainwater harvesting, air-conditioning condensate reuse, and water reclamation. As an official event partner, the District received recognition throughout the evening, with its name and logo prominently featured in event materials and announcements. This event was promoted on the District's website, social media outlets, and newsletter along with UT's communications outlets.

Rainwater Harvesting

- **Webpage** – A new rainwater harvesting webpage was developed and added to the District website. The page features key resources, introductory guidance for those getting started, and a list of local retailers. Its content was created with assistance from staff at Harvest Rain.
- **Resource Sharing** – The Hill Country Alliance updated their "Rainwater Harvesting Issue Paper". This document is included on the District's rainwater harvesting page, shared in a social media post, published in a newsletter, and included as a resource in the folders handed out during the Neighborhood Well Visits.

GOAL 7
ADDRESSING RECHARGE ENHANCEMENT WHERE APPROPRIATE AND COST-EFFECTIVE

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

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

Performance Standard

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

Antioch Cave is a recharge feature on District property that is capable of contributing a significant amount of water to the Edwards Aquifer when Onion Creek is flowing. A vault constructed over the cave entrance, and automated valves allow for clean creek water to enter the cave, and contaminated stormwater to be kept out. This system was maintained by Staff in FY 2025 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.

The operational equipment and hardware at Antioch Cave to improve the operation and performance of the BMP are fully functional and in good working order. In-situ 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 (ASR), effluent reclamation and re-use, and recharge enhancement of surface water (including floodwater) to increase the options for water-supply substitution and reduce dependence on the Aquifer.

Performance Standard

Assess progress toward enhancing regional water supplies.

In FY 2025, the District worked with other entities in the area, such as the City of Buda and RRWSC, to evaluate the potential for the Trinity Aquifers as reservoirs for ASR facilities.

Preliminary discussions were held between City of Kyle consultants and then-General Manager Tim Loftus regarding a prospective ASR program. See above section: Objective 3-2 for a summary of Staff's work with Buda WSC and RRWSC on their ASR projects.

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 (MZ) and permit type will be provided in the Annual Report.
A summary of the actual versus permitted production volumes for each MZ is provided in Objective 1-2.

A. Upon Incidental Take Permit (ITP) issuance, the Habitat Conservation Plan (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 submitted its sixth annual report to USFWS on February 27, 2025.

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

   FY 2025 began with the District in Alarm Stage II drought and remained that way until October 3, 2024, when General Manager Dr. Tim Loftus, after being granted the authority from the Board, declared Stage III Critical drought, effective November 1, 2024. The District remained in Critical Stage III through the remainder of the fiscal year that ended August 31, 2025.

   Discharge at Barton Springs was 21.8 cfs on September 1, 2024, and 20.3 cfs on August 31, 2025, an decrease in flow of 1.5 cfs. The depth to water level (feet below land surface) at the Lovelady monitoring well began the fiscal year at 188.88 feet and ended the fiscal year at 196.20, a decrease of 7.32 feet.

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

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

B. 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 submitted its sixth annual report to USFWS on February 27, 2025.

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 Annual Report.

   Please see Objective 8-1 above.

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

Performance Standard

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

District-adopted DFC for each relevant aquifer indicating aquifer conditions relative to the DFC, and provide in the Annual Report.

For the Trinity Aquifer in GMA 10, to determine compliance with the Trinity Aquifer DFC, the data must show that the average regional well drawdown does not exceed 25 feet during average recharge conditions including exempt and nonexempt use. GMA 10 is without a means to monitor "average regional drawdown across the planning area. The District made progress in FY 2023 with an in-house numerical model that will help to inform drawdown (within the District) under a variety of conditions.

Phase 2 of the modeling effort got underway in FY 2024. The work is ongoing with the aim of developing a more useful (to the District) DFC for the Middle Trinity Aquifer. Any change from the status quo will, of course, require agreement among the participating GCDs in GMA 10 and approval by the Texas Water Development Board.

The DFC expression is:

> "Springflow at Barton Springs during average recharge conditions shall be no less than 49.7 cfs averaged over an 84-month (7-year) period; and during extreme drought conditions including those as severe as a recurrence of the 1950's drought of record, springflow at Barton Springs shall be no less than 6.5 cfs average on a monthly basis."

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

For a summary of aquifer conditions, see Objective 8-1 above.

Performance Standards and Objectives

General Management (9 objectives)	Administration (3 objectives)	Education & Outreach (6 objectives)	Aquifer Science (8 objectives)	Regulatory Compliance (7 objectives)

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.	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 annual report. 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 annual report.
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 annual report.
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.	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. 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 annual report.
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.	A. Publicize District drought trigger status (Barton Springs 10-day average discharge and Lovelady monitor ell water level) in monthly eNews bulletins and continuously on the District website. 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. C. A summary of outreach activities and estimated reach will be provided in the annual report.
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.	A. Receive a clean financial audit each year. A copy of the auditor's report will be included in the annual report. 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.

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.	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 annual report. 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 annual report.
1-7	Manage and coordinate electoral process for Board members.	Ensure elections process is conducted and documented in accordance with applicable requirements and timelines. Elections documents will be maintained on file and a summary of elections-related dates and activities will be provided in the annual report for years when elections occur.

GOAL 2 - Controlling and Preventing Waste of Groundwater

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

	Management Plan Objectives	Performance Standards
2-1	Require all newly drilled exempt and nonexempt wells, and all plugged wells to be registered and to comply with applicable District Rules, including Well Construction Standards.	A summary of the number and type of applications processed and approved for authorizations, permits, and permit amendments including approved use types and commensurate permit volumes for production permits and amendments will be provided in the annual report.
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.	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 annual report. 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 annual report.
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.	A. 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. B. Provide a summary of District activity related to other land use activities affecting groundwater in the annual report.
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 annual report.

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: 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 annual report.
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: 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 annual report.
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 annual report.
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 annually report 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	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.	A. Review water-level and water-quality data that are maintained by the District and/or TWDB, or other agencies, on a regular basis. B. Improve existing analytical or numerical models or work with other organizations on analytical or numerical models that can be applied to the aquifers in the District. C. A review of the data mentioned above will be assessed for significant changes and reported in the annual report.
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.	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: 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. A list of permit applications that are determined to have potential for unreasonable impacts will be provided in the annual report.
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.	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 annual report. 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 annual report.
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 HCP.	Attend at least 75% of the GMA meetings and annually report on meetings attended, GMA decisions on DFCs, and other relevant GMA business.

4-5	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.	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.

GOAL 5 - Addressing Drought Conditions

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

	Management Plan Objectives	Performance Standards
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 DO concentration trends at the spring outlets, as warranted.	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. B. A summary of the drought indicator conditions and any declared drought stages and duration will be provided in the annual report.
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.	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.
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.	A. During District-declared drought, publicize declared drought stages and associated demand reduction targets in monthly eNews bulletins and continuously on the District website. 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 annual report.

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.	A. Require an updated UCP/UDCP from Permittees within one year of each five-year Management Plan Adoption. 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 annual report.
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.	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.

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

GOAL 7 - Addressing Recharge Enhancement where Appropriate and Cost-Effective

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

	Management Plan Objectives	Performance Standards
7-1	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.	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.
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.	Assess progress toward enhancing regional water supplies in the annual report.

GOAL 8 - Addressing the Desired Future Conditions of the Groundwater Resources

31TAC (a)(1)(H)/TWC §36.1071(a)(8)

	Management Plan Objectives	Performance Standards
8-1	**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.	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 annual report. B. 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. 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 annual report.
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).	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 annual report. B. 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. 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 annual report.
8-3	Implement appropriate rules and measures to ensure compliance with District-adopted DFCs for each relevant aquifer or aquifer subdivision in the District.	D. 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.

Appendix D

FY25 Management Advisory Committee Meeting Minutes

Barton Springs/Edwards Aquifer Conservation District
Management Advisory Committee Meeting and Comments Summary
HCP Annual Report Review Meeting

February 2, 2026, 1-2:30 pm via Zoom

Management Advisory Committee (MAC) members present at commencement: Nathan Bendik (CoA), Blake Neffendorf (City of Buda), Benjamin Hutchins (TXST), Kristy Smith (EAA), Susan Meckel (LCRA). Staff present included: Charlie Flatten, Justin Camp, Shay Hlavaty, Erin Swanson, Bri Moore, Jeff Watson, Jacob Newton, and Alyssa Garcia.

These minutes represent a summarized version of the meeting and feedback/comments from the MAC.

Note: Section 6 of the Habitat Conservation Plan (HCP) details the roles of the plan participants, and includes, in Section 6.5.1.2, the development of a District HCP Management Advisory Committee (MAC) to advise and assist in the coordination of conservation activities affecting Covered Species at Barton Springs, and to monitor the implementation of the District HCP, both for the District and for the USFWS, as an additional measure of ensuring continued implementation of the HCP and compliance with the ITP.

Meeting Overview

Justin Camp led the presentation, providing an overview of the background and timeline of the District's Habitat Conservation Plan (HCP). He explained how the District's Management Plan and HCP align in their goals of ensuring the sustainable use of the aquifer while protecting the endangered salamanders. Groundwater withdrawals are managed, particularly during drought conditions, to safeguard both well owners and the aquifer. Of the 33 objectives outlined in the Management Plan, 25 are directly related to the HCP, further demonstrating their alignment.

Erin Swanson presented on the regulatory aspects, noting that the majority of permitting is allocated to public water suppliers. She also discussed the District's shift to conditional permitting in 2004 following a sustainable yield study, which revealed overallocation in the Edwards Aquifer and necessitated stronger curtailments during drought. A graph illustrating Edwards Aquifer production was presented, showing that actual water use remains lower than permitted amounts, a trend likely influenced by the District's education efforts, climatic conditions, and seasonal variations.

The discussion on drought management highlighted that in FY 2025, the District experienced 32 days in Alarm Stage and 333 days in Critical Stage. Updates on the status of the aquifer included conditions at Lovelady and Barton Springs, along with an analysis of the estimated annual take for FY 2025, particularly regarding the impact of drought on salamander populations. Mitigation and research efforts were also reviewed, with notable updates including work on a multiport well near Barton Springs to continue to expand monitoring and collect additional water quality samples. Other efforts, such as addressing abandoned wells, were also mentioned.

Comments and Feedback – Q&A

Blake Neffendorf encouraged the District to explore dissolved oxygen (DO) enhancements, automation, or expanded monitoring, citing the December downhole DO profile and asking how additional data can be collected during low aquifer conditions.

Justin emphasized the data are preliminary but useful, and staff plans to repeat DO profiles after recharge and in multiple confined and unconfined wells.

Jeff noted the profile reflects an extreme low-flow condition and emphasized interest in how DO changes with recharge, adding that staff is exploring multiport well methods for discrete vertical DO data.

Kristy Smith suggested focusing on minimum daily DO rather than mean daily values, noting that daily averages can mask drops below 4.0. She recommended using minimum daily DO and percent saturation to better reflect potential DO concerns.

Susan Meckel questioned whether Section 1.1.4 (Aquifer and Uses) should explicitly include Barton Springs and the Barton Springs Complex, and whether Onion Creek should be identified as providing high-quality flow to the Colorado River, particularly in the context of proposed wastewater discharges.

Justin agreed it would be appropriate to acknowledge Onion Creek's role, noting it is already addressed in the management plan as a recharge feature, and said he would follow up as needed.

For Section 1.1.3 (Jurisdictional Area), Susan Meckel suggested clarifying entity names from the 2011 District creation, noting that Monarch is now Southwest Water. Justin agreed a clarifying note should be added, and Susan will provide a marked-up version.

Clarifications on Permitted Pumpage

Charlie Flatten asked whether exempt well pumpage is included in the permitted pumpage hydrographs. Erin noted that the graphs show permitted allocations only, with exempt pumpage addressed elsewhere in the report.

Jeff explained that including exempt pumpage would shift the Edwards Aquifer graph up only slightly, since exempt pumpage is about 5% of total pumpage, compared to 25–30% in the Trinity Aquifer.

Clarifications on Estimated Annual Take

Susan Meckel requested that Table 8 be retitled to clearly indicate it reflects the 2025 Plan Year only, as the estimates presented apply solely to that year. She also asked that the note referencing "permitted take over 20 years through 2038" include a clear end date (2038) to better frame the timeframe and current position within the permit period. Additionally, she recommended revising Figure 9 to make the cumulative take at permit expiration (2038) more prominent and visually clear.

Benjamin Hutchins asked whether there are estimated population sizes for the salamanders to provide context for the estimated take. He noted that if approximately 2,200 Barton Springs salamanders are estimated to be taken in a given year, it would be helpful to understand what proportion of the total population that represents.

It was clarified that the estimates are not intended to place heavy emphasis on biological population impacts, but rather to follow the required analytical process. Additional data provided by Nate were incorporated into Section 11, Figure 10 to help add context.

Document Formatting and Presentation

Justin concluded by noting that all comments should be submitted by Wednesday, as the document needs to be ready for our Board members for the meeting next week. The finalized copy will be sent at the end of the month to U.S. Fish and Wildlife.