

## NOTICE OF OPEN MEETING

Notice is given that a **Regular Meeting and Public Hearing** of the Board of Directors of the Barton Springs/Edwards Aquifer Conservation District will be held at the **District office**, located at 1124 Regal Row, Austin, Texas, on **Thursday, December 14, 2017**, commencing at **6:00 p.m.** for the following purposes, which may be taken in any order at the discretion of the Board.

Note: The Board of Directors of the Barton Springs/Edwards Aquifer Conservation District reserves the right to meet in Executive Session at any time during the course of this meeting to discuss any of the matters listed on this agenda, as authorized by the Texas Government Code Sections §551.071 (Consultation with Attorney), 551.072 (Deliberations about Real Property), 551.073 (Deliberations about Gifts and Donations), 551.074 (Personnel Matters), 551.076 (Deliberations about Security Devices), 551.087 (Economic Development), 418.183 (Homeland Security). No final action or decision will be made in Executive Session.

1. **Call to Order.**
2. **Citizen Communications (Public Comments of a General Nature).**
3. **Routine Business.**
  - a. **Consent Agenda.** *(Note: These items may be considered and approved as one motion. Directors or citizens may request any consent item be removed from the consent agenda, for consideration and possible approval as a separate item of Regular Business on this agenda.)*
    1. Approval of Financial Reports under the Public Funds Investment Act, Directors' Compensation Claims, and Specified Expenditures greater than \$5,000. **Not for public review**
    2. Approval of minutes of the Board's November 16, 2017 regular Meeting. **Not for public review at this time**
  - b. **General Manager's Report.** *(Note: Topics discussed in the General Manager's Report are intended for general administrative and operational information-transfer purposes. The Directors will not take any action unless the topic is specifically listed elsewhere in this agenda.)*
    1. **Standing Topics.**
      - i. Personnel matters and utilization
      - ii. Upcoming public events of possible interest
      - iii. Aquifer conditions and status of drought indicators
    2. **Special Topics.** *(Note: Individual topics listed below may be discussed by the Board in this meeting, but no action will be taken unless a topic is specifically posted elsewhere in this agenda as an item for possible action. A Director may request an individual topic that is presented only under this agenda item be placed on the posted agenda of some future meeting for Board discussion and possible action.)*
      - i. Review of Status Update Report – at directors' discretion **Pg. 27**
      - ii. Update on GMA and regional water planning



- iii. Update on regulatory and enforcement activities
- iv. Update on District grant projects and other Aquifer Science Team projects
- v. Update on the HCP/ITP application and the associated draft EIS
- iv. Update on Board committee activity

#### **4. Presentation.**

Presentation by the District's financial auditor on the FY 2017 Annual Financial Audit Report.

#### **5. Public Hearing**

The Board will hold a Public Hearing on an application filed by Trinity Episcopal School, 3901 Bee Caves Road, Austin, Texas 78746, for a Production Permit application to withdraw up to 4,200,000 gallons of water annually from the Middle Trinity Aquifer from a new well located at 3901 Bee Caves Road (30.279142°, -97.809654°) to be used to irrigate the property including the sports fields.

#### **6. Discussion and Possible Action.**

- a. Discussion and possible action related to receipt and approval of the FY 2017 Annual Financial Audit report provided by the District's financial auditor. **NBU**
- b. Discussion and possible action related to an application filed by Trinity Episcopal School, 3901 Bee Caves Road, Austin, Texas 78746, for a Production Permit application to withdraw up to 4,200,000 gallons of water annually from the Middle Trinity Aquifer from a new well located at 3901 Bee Caves Road (30.279142°, -97.809654°) to be used to irrigate the property including the sports fields. **Pg. 43**
- c. Discussion and possible action related to receiving committee recommendations and selecting the Groundwater Stewardship Award winners and approving the staff's selection for Permittee of the Year. **Pg. 55**
- d. Discussion and possible action related to approving the District's FY 2017 Annual Report and submitting it to the TCEQ. **Pg. 93**
- e. Discussion related to the District's award of accreditation through the State comptroller's Transparency Star program. **Pg. 121**
- f. Discussion and possible action related to the City of Dripping Springs TPDES permit application to authorize direct discharge of treated wastewater to Onion Creek in the contributing zone of the Barton Springs segment of the Edwards Aquifer. **NBU**
- g. Discussion and possible action related to the annual election of the officers of the BSEACD Board of Directors. **NBU**



**7. Directors' Reports.** *(Note: Directors' comments under this item cannot address an agenda item posted elsewhere on this agenda and no substantive discussion among the Board Members or action will be allowed in this meeting. Communications reported under this item may be used to support Performance Standard 4-1 of the District's Management Plan related to demonstration of effective communication with District constituents.)*

Directors may report on their involvement in activities and dialogue that are of likely interest to the Board, in one or more of the following topical areas:

- Meetings and conferences attended or that will be attended;
- Committee formation and updates;
- Conversations with public officials, permittees, stakeholders, and other constituents;
- Commendations; and
- Issues or problems of concern.

**8. Adjournment.**

**Please note:** This agenda and available related documentation have been posted on our website, [www.bseacd.org](http://www.bseacd.org). If you have a special interest in a particular item on this agenda and would like any additional documentation that may be developed for Board consideration, please let staff know at least 24 hours in advance of the Board Meeting so that we can have those copies made for you.

The Barton Springs/Edwards Aquifer Conservation District is committed to compliance with the Americans with Disabilities Act (ADA). Reasonable accommodations and equal opportunity for effective communications will be provided upon request. Please contact the District office at 512-282-8441 at least 24 hours in advance if accommodation is needed.



## **Item 1**

### **Call to Order**





## **Item 2**

### **Citizen Communications**



## **Item 3**

### **Routine Business**

#### **a. Consent Agenda**

*(Note: These items may be considered and approved as one motion. Directors or citizens may request any consent item be removed from the consent agenda, for consideration and possible approval as a separate item of Regular Business on this agenda.)*

- 1. Approval of Financial Reports under the Public Funds Investment Act, Directors' Compensation Claims, and Specified Expenditures greater than \$5,000.**
- 2. Approval of minutes of the Board's November 16, 2017 regular Meeting.**



## **Item 3**

### **Routine Business**

- b. General Manager's Report.** *(Note: Topics discussed in the General Manager's Report are intended for general administrative and operational information-transfer purposes. The Directors will not take any action unless the topic is specifically listed elsewhere in this agenda.)*

#### **1. Standing Topics.**

- i. Personnel matters and utilization**
- ii. Upcoming public events of possible interest**
- iii. Aquifer conditions and status of drought indicators**

- 2. Special Topics.** *(Note: Individual topics listed below may be discussed by the Board in this meeting, but no action will be taken unless a topic is specifically posted elsewhere in this agenda as an item for possible action. A Director may request an individual topic that is presented only under this agenda item be placed on the posted agenda of some future meeting for Board discussion and possible action.)*

- i. Review of Status Update Report – at directors' discretion**
- ii. Update on GMA and regional water planning**
- iii. Update on regulatory and enforcement activities**
- iv. Update on District grant projects and other Aquifer Science Team projects**
- v. Update on the HCP/ITP application and the associated draft EIS**
- iv. Update on Board committee activity**



| STATUS REPORT UPDATE FOR DECEMBER 14, 2017 BOARD MEETING                         |                       |           |   |   |
|--|-----------------------|-----------|---|---|
| Prepared by District Team Leaders  |                       |           |   |   |
|  | Leader, Staff         | Date      | PROJECT / ACTIVITY DESCRIPTION                            | STATUS/COMMENTS   |
| <b>GENERAL MANAGEMENT TEAM</b>   |                       |           |   |   |
|  | John Dupont           |           |   |   |
|  | JD                    | 12/7/17   | Meetings, Training, Presentations, and Conferences        | External Meetings Attended: CapCOG water exploratory committee; RWQIP work group meeting; GMA 10 rules committee (on call); RFP grant stakeholders meeting; GMA 10; Briefing to Rep. Larson; Other meetings: Dripping Springs permit committee meeting; HCP committee; Budget and Finance committee meeting; Presentations: None Conferences/Seminars: None   |
| Summary of Significant Ongoing Activities  | JD                    | 12/7/17   | Ongoing Special Projects, Committees, and Workgroups      | Ongoing Special Projects: TWDB RFP grant; Dripping Springs TMDIS permit; Database project; Salary study project; Ruby Ranch ASR pilot project; HCP comments and responses; SH 45/Mopac intersection and Consent Decree compliance; ASR rules; SW Travis Co. GCD; Kent Butler Summit planning. Committees and Workgroups: Region K (voting member); Region K executive committee; GMA 10 (coordinator/voting member); Regional WQ Plan workgroup; Region K Legislation and Policy committee; Region K water supply strategy committee; TAGD legislative committee (regional planning); ASR, brackish gw; TWCA groundwater committee; Hill Country Conservancy Trust organizing group; CAPCOG water exploratory committee; Kent Butler Summit planning committee.   |
|  | JD                    | 12/7/17   | Routine Activities and Day-to-Day operations              | Routine Activities/Day-to-Day Operations: provided general oversight of staff incentive projects and activities, and oversight of day-to-day operations; approved purchase orders and expenditures; approved timesheets; prepared agendas and backup for and attended Board meetings; prepared GM report and assigned tasks in response to Board commitments; held regular one-on-one meetings with Team Leaders; presided over Planning Team meetings; serve as liaison between Board and staff; support Board committees; respond to media requests; disseminate media reports and journal articles of possible interest. Consultation with Attorney on: Dripping Springs TMDIS permit, agenda review. Needmore Contested Case: contract reviews, EIP application review, ASR rules; Director residential requirements; Other Activities: Needmore contested case; Database project implementation; finalize Annual Report; GMA 10 coordination; GMA rules review and comparison method; coordinate HCP comment responses; Dripping Springs RTC review/settlement review. EIP application review; salary study coordination; Consent Decree - oversee roadway project design review/inspections; Kent Butler Summit planning; financial audit - MD&A; ASR rulemaking; support of SW Travis County GCD; E&O position interviews; |
| <b>ADMINISTRATION TEAM</b>   |                       |           |   |   |
|  | Data Christine Wilson |           |   |   |
| Accounts Receivable - A  | DCW                   | 12/7/2017 | Permittee accounts carrying a past due balance;           | Currently there are a couple past due account balances: Jackie's, Stripes, Malone.  |
| Accounts Receivable - B  | DCW                   | 12/7/2017 | December Monthly Billings                                 | November 16th statement date for December monthly invoices, and 2nd quarter invoices (Dec/Jan/Feb). Payments are due on December 5th and considered late on December 16th.  |
| Annual Report compilation  | DCW                   | 12/7/2017 | Annual Report finalization with Appendix A and Appendix B | Appendix A is the Annual Audit Financial Report, and Appendix B is the Management Plan objectives and goals.  |
| Audit - Annual Financial including the MD&A (Management Discussion and Analysis) | DCW                   | 12/7/2017 | Montenayor and Co.  | Fieldwork began on October 10th. Audit Finance Committee to meet with Archie on December 5, and audit presentation to Board at the December 14th Board meeting.   |
| Financial Reporting - Website  | DCW                   | 12/7/2017 | Most current, available financial reports to be posted.   | Balance Sheet, Profit and Loss Statements, and Check Registers through October 2017 have been posted.   |





|   | Leader, Staff | Date      | PROJECT / ACTIVITY DESCRIPTION  | STATUS/COMMENTS  |
|---|---------------|-----------|---|--|
| Financial Reporting - Website - B   | TR/DWC        | 12/7/2017 | Transparency Star received  | Financial Star awarded by the Comptroller's office. Web page creation is now complete but constantly evolving so it remains very dynamic, and open to change and/or suggestions.   |
| Grant Reporting   | DCW           | 12/7/2017 | TWDB RFP Grant  | Budget amendment, and grant invoice currently in process.  |
| The Standard (third-party administrator for the BSEACD Retirement Plan and Trust) | DCW           | 12/7/2017 | Met with Eddie Garza on adding some new funds to our portfolio options. | As the investment fiduciary for the District's "Plan," John and I, along with Eddie Garza, the relationship manager with the Standard, discussed the potential fund options to add to our portfolio, and we are now in the process of adding them. This takes a couple months. Then Eddie will come out to meet with staff to go over these new possibilities.   |
| <b>REGULATORY COMPLIANCE/TEAM</b><br>Vanessa Escobar                              |               |           |   |  |
| Needmore Water LLC  | KBE, VE       | 12/8/17   | Conversion of a Temporary Permit to a Regular Permit                    | Needmore Water LLC is currently a Temporary Permit that has been determined to be administratively complete. Public notice was published on 11/29/16 and comment period closed on 12/19/16. The District received a request for a contested case hearing from both the applicant and TESPA. TESPA requested the hearing to go before the State Office of Administrative Hearings (SOAH). BSEACD Board decided that the preliminary hearing to determine party status will be heard by SOAH. The General Manager has provided a Preliminary Decision with recommended Special Provisions, and a Technical Evaluation, that is available on the website www.bseacd.org. A preliminary hearing on party standing was held on 7/31/17 at SOAH. TESPA was granted party status. A hearing on the merits of the permit application is scheduled to take place in March 2018. |
| Electro Purification  | KBE, VE       | 12/8/17   | Production Permit   | EP has submitted 7 modification applications and 1 production permit application on 7/13/17. The production request is for 912,500,000 million gallons a year (2.5 MGD) to be produced from the Middle Trinity Aquifer for the purposes of Wholesale Public Water Supply. The application and hydroreport are under review.  |
| Industrial Asphalt  | KBE, VE       | 12/8/17   | Permit Amendment  | Industrial Asphalt has a current Middle Trinity Production Permit for 2,000,000 gallons per year. They have recently submitted a permit amendment application requesting an increase for a new permit volume of 4,000,000 gpyr. The applicant performed an aquifer test within the last 6 months and has submitted a Hydrogeological Report with the application materials. The application is currently under review.   |
| Trinity Episcopal School  | KBE, VE       | 12/8/17   | Production Permit   | The applicant previously obtained a drilling authorization to drill a Middle Trinity well. The well has been drilled and they have now submitted a production permit application requesting 4,200,000 gallons per year for sports field irrigation. They have recently performed an aquifer test to support the production request. The application is complete and the public comment period ends on 12/12. A public hearing and Board action will take place on 12/14.   |
| ASR Rulemaking  | KBE, VE       | 12/8/17   | Rule Making /Technical Workgroup  | The Regulatory staff and Aquifer Science staff are coordinating a technical workgroup meeting to take place in early December 2017. This meeting will be a discussion amongst technical ASR experts, interested ASR users, and District Technical staff. The discussion will focus on regulatory and permitting concepts along with a brief update on current ASR activity within the District.  |
| Database Development  | KBE, VE       | 12/8/17   | Inter Contract - Database Development                                   | A project kick off meeting was held on 11/8/17 and discussions focused on an overview of the project scope, specific functional requirements, project schedule, roles and processes (e.g. communication frequency and points-of-contact).  |
| General Manager Approved Permits  | KBE, VE       | 12/8/17   | Individual Permits < 2,000,000 gal/yr                                   | NA   |
| Drought Stage- No-Drought   | KBE, VE       | 12/8/17   | Drought Compliance Monitoring and Enforcement                           | No new update. No-drought was declared on January 29, 2015.  |
| <b>EDUCATION &amp; OUTREACH</b><br>Robin Gary                                     |               |           |   |  |



|   | Leader, Staff | Date    | PROJECT / ACTIVITY DESCRIPTION                         | STATUS/COMMENTS   |
|---|---------------|---------|--|---|
| Austin Cave Festival                          | RG            | 12/7/17 | Sat., Feb 10: Wildflower Center                        | Austin Cave Festival is coming back! This year it will be held as a free event at the Wildflower Center. Participating agencies include: BSEACD, CoA Wildlands, CoA Watershed Protection, CoA Parks and Recreation, Texas Cave Management Association, UT Grotto, and Texas Speleological Association. The Aquifer District will host the welcome table. Activities planned include caving in Wildflower and LaCrosse Cave, rope climbing, cave obstacle course, cave critter artwork, presentations, and booths. More info to come.  |
| Kent Butler Summit                            | RG, JD        | 12/7/17 | Wed., Apr. 4: Texas State LBJ Auditorium               | John and Robin have attended preliminary planning meetings for the April 2018 Kent Butler Summit. It will be hosted at the LBJ Auditorium on Texas State campus in San Marcos.  |
| Augmented Reality Water Quality Teaching Tool | RG            | 12/7/17 | Benthic macroinvertebrates                             | Phase II of the augmented reality water quality indicator game has begun. Staff has met with and solicited review comments from 7 different agencies and have prioritized suggestions/edits according to what is financially feasible and what best supports the District's teaching objectives. This year's tasks include adding two new characters (dehsonfly, scud), editing the aquatic and riparian habitat cards to include native vegetation examples, creating an aquifer habitat card that shows the inside of a groundwater well with fault and solution cavity, developing a menu of all characters with links to 3D video, adding info button, and adding a photo option. |
| Groundwater Stewardship Awards                | RG            | 12/7/17 | Nominations  | The deadline to submit nominations for this year's Groundwater Stewards was Tuesday, November 7. Submissions have been compiled and are included in Board backup. The Awards subcommittee will meet to review and come up with a recommendation for winners. The full Board will nominate the official winners in the December Board meeting.   |
| Enews Blast                                   | RG            | 12/7/17 | October eNews  | The Nov/Dec eNews was released on Dec. 7, so there are no statistics to report. Topics included: Senate recognition, dye trace study update, SW Travis Co. GCD update, and update on Dripping Springs Wastewater Permit.  |
| Internet Traffic Report                       | RG            | 12/7/17 | Page views and visits to the District Website          | There were 2,435 total page views by 1,988 unique visitors. Top sites in order of number of views are the home page (637), Outreach Specialist job posting (117), Maps (117), Staff (116), Scientific Reports (64). The District Facebook page now has 609 'Likes' and responses to posts have been very positive.  |
| <b>AQUIFER SCIENCE</b>                        |               |         |  |   |
| Dye Tracing                                   | BS, BH        | 12/7/17 | Dye tracing  | Several traces were conducted in October in the lower Onion Watershed (Edwards Recharge Zone) in a cooperative effort with City of Austin and several St. Edwards students. A traces were conducted in the upper Onion Creek watershed (Dripping Springs area) in early December.   |
| Central Hays County Groundwater Evaluation    | BH, BS, JC    | 12/7/17 | Well and hydrogeology characterization                 | AS staff are evaluating the EP hydrogeologic report among other data. Permeability testing commences at the Hays County multiport well in late September.   |
| Antioch Cave                                  | BS, BH, JC    | 12/7/17 | Onion Creek Recharge Enhancement Project               | New equipment to control the Antioch valve were installed in March 2017.  |
| Water-Quality Studies                         | BS, BH, JC    | 12/7/17 | Sampling and analysis of groundwater and surface water | District staff completed sampling on behalf of the TWDB in August.  |
| Saline Zone Studies                           | BS, BH        | 12/7/17 | Saline Zone report                                     | Carollo Engineers has completed a draft final report for the RFP grant, which was submitted to TWDB on October 31. Aquifer Science staff completed a report of the multiport well testing and sampling that is a part of the RFP grant report. A final stakeholder meeting was held on November 28.   |



|   | Leader, Staff | Date     | PROJECT / ACTIVITY DESCRIPTION                                 | STATUS/COMMENTS   |
|---|---------------|----------|--|---|
| Drought and Water-Level Monitoring      | BH, BS, JC    | 12/7/17  | Drought status, monitor wells, and synoptic water level events | As of December 7, the water level in the Lovelady well was at 508.1 ft above msl, and Barton Springs was flowing at 63 cfs. Hurricane Harvey brought about 10 inches of rain near the District office but only 3 to 5 inches over much of the contributing zone. This rain led to some increased creek flow, increases in water levels and springflow but not a very significant impact overall.  |
| Information Transfer                    | BS, BH, JC    | 12/7/17  | Presentations, conferences, reports, and publications          | District staff presented five papers at the Southeast Geological Society of America meeting in San Antonio in mid-March. Brian Hunt spoke about the hydrogeology of the Blanco River at a book launch in Kyle (4/8/17). Brian Smith gave a presentation to the Texas Aquifers Conference on Antioch Cave, and he gave a presentation to the Jackson School (UT) on the District's saline Edwards studies. Brian Smith attended the Geological Society of America Annual Meeting in Seattle in October and gave a presentation about Dr. Sharp's studies of the aquifers of central Texas. |
| Aquifer Testing                         | BS, BH, JC    | 12/7/17  | Planning, participation, and review of aquifer tests           | EP aquifer testing finished in January 2017. District staff received an application and hydrogeologic report from EIP. Staff completed a technical review of EIP's production application in October. EIP's consultant is working on revising the hydrologic report.  |
| AD-HOC TEAMS                            |               |          |  |   |
| Technical Team                          | HAS           | 12/7/17  | Current areas of discussion                                    | Topics of discussion at the technical team meeting in December were the RFP grant, dye trace studies, ASR rules, and the EIP application.   |
| Planning Team                           | JD            | 12/7/17  | Strategic and tactical planning and discussion topics          | New Business: FY17 annual report planning, District staffing, staff training, Transparency star program, salary study update; database project update; District milestones and accolades  |
| UPCOMING ITEMS OF INTEREST              |               |          |  |   |
| District Holiday Party                  |               | 12/8/17  | 6pm, Blythe's House  |   |
| Only December Board Meeting             |               | 12/14/17 |  |   |
| CAPCOG Water Exploratory Workgroup      |               | 12/20/17 | 10am, CapCOG offices   |   |
| Christmas Eve Holiday observed          |               | 12/25/17 | District Holiday - offices closed                              |   |
| Christmas Day Holiday observed          |               | 12/26/17 | District Holiday - offices closed                              |   |
| Christmas Day after Holiday observed    |               | 12/27/17 | District Holiday - offices closed                              |   |
| New Years Day Holiday                   |               | 1/1/18   | District Holiday - offices closed                              |   |
| 1st January Board meeting               |               | 1/11/18  |  |   |
| MLK Day Holiday                         |               | 1/15/18  | District Holiday - offices closed                              |   |
| RWQ Protection Plan Workgroup           |               | 1/19/18  | 11am, NNNW, Slaughter Lane and Mopac                           |   |
| 2nd January Board meeting               |               | 1/25/18  |  |   |
| Groundwater Stewardship Awards Luncheon |               | 1/26/18  | 11am, Bowie High School  |   |
| 1st February Board meeting              |               | 2/8/18   |  |   |
| 2nd February Board meeting              |               | 2/22/18  |  |   |



## **Item 4**

### **Presentation**

**Presentation by the District's financial auditor on the FY 2017 Annual Financial Audit Report.**





## **Item 5**

### **Public Hearing**

**The Board will hold a Public Hearing on an application filed by Trinity Episcopal School, 3901 Bee Caves Road, Austin, Texas 78746, for a Production Permit application to withdraw up to 4,200,000 gallons of water annually from the Middle Trinity Aquifer from a new well located at 3901 Bee Caves Road (30.279142°, -97.809654°) to be used to irrigate the property including the sports fields.**



## **Item 6**

### **Board Discussions and Possible Actions**

- a. Discussion and possible action related to receipt and approval of the FY 2017 Annual Financial Audit report provided by the District's financial auditor.**



## **Item 6**

### **Board Discussions and Possible Actions**

**b. Discussion and possible action related to an application filed by Trinity Episcopal School, 3901 Bee Caves Road, Austin, Texas 78746, for a Production Permit application to withdraw up to 4,200,000 gallons of water annually from the Middle Trinity Aquifer from a new well located at 3901 Bee Caves Road (30.279142°, -97.809654°) to be used to irrigate the property including the sports fields.**



## **Application Summary and Staff Recommendations**

### **DESCRIPTION OF APPLICATION**

**Applicant:** Trinity Episcopal School

**Type of Application:** Production Permit in the Middle Trinity Management Zone

**Request:** Approval of a new Historical Middle Trinity Production Permit to withdraw up to 4,200,000 gallons/year for the purposes of irrigating athletic fields and landscape irrigation on the school campus. The Production Permit, if approved, would be subject to the rules related to pumpage from wells completed in the Middle Trinity management zone.

### **REASON FOR REQUEST**

Trinity Episcopal School's campus consists of approximately 15 acres, roughly half of which is natural greenspace. The campus also includes two sports fields and other minor turf areas as well as planted landscape beds surrounding six buildings, two parking lots, and one outdoor pavilion. The school uses five different irrigation controllers to provide water to all of the developed areas spread out across the campus and they typically follow the Travis County watering guidelines to ensure they are staying within county requirements. Their current water source is Travis Co WCID 10 and there are no other sources for irrigation. The school decided to utilize Middle Trinity aquifer groundwater as a more affordable alternative to the WCID.

The school is also nearing completion of their master plan, which is intended to accommodate growth for the next ten years. As part of the plan they will construct new buildings and landscape beds that will include native plants and a variety of new trees. The requested volume of 4,200,000 gallons per year is expected to accommodate their growth and they do not expect to expand their irrigation needs beyond that volume.

Trinity Episcopal School filed a drilling authorization application with the District in December 2016 for a new nonexempt Trinity well. The drilling authorization was approved by the Board in April 2017 and the well was drilled and completed in June 2017. The school plans to use the water produced from this well solely to irrigate and maintain athletic fields as well as turf and landscape areas on campus.

### **WELL RECEIVING AREA & LOCATION**

The Trinity Episcopal School irrigation well is located in Travis County at 3901 Bee Caves Hills in Westlake Hills (Attachment A). The well is located on the 15-acre campus property near the front of the property (30.279142°,-97.809654°). The school does not intend to provide water for any other location other than the main campus.

### **WATER DEMAND AND PERMIT VOLUME CALCULATIONS**

The total calculated irrigation demand for the landscape and athletic field areas is 4,200,000 gallons/year (Attachment B). The irrigated demand volume was calculated based on the Board-

approved irrigation demand methodology that was the product of the most current research, accepted industry standards, and plant demand data specific to the our region. The methodology serves as an objective and science-based tool to ensure that permitted volumes for requested irrigation permits are reasonable and commensurate with actual plant water demands.

#### **USER CONSERVATION PLAN (UCP)/USER DROUGHT CONTINGENCY PLAN (UDCP)**

The applicant submitted a complete UCP and UDCP on 9/8/17. The plan contains the required elements in accordance with applicable District Rule 3-6.3 and is consistent with District guidelines.

#### **AQUIFER TEST AND HYDROGEOLOGICAL REPORT**

The pump test for the hydrogeological report required pursuant to District Rule 3-1.4.D was conducted over September 14-16, 2017. The pump test was conducted in accordance with the District's *Guidelines for Hydrogeologic Reports and Aquifer Testing (dated May 2016)*.

For the aquifer test the well was pumped at an actual sustained rate of approximately 47 gpm over the duration of 24 hrs. Aquifer Science staff reviewed the hydrogeologic report and aquifer test data submitted in support of this production permit request. The volume requested falls within the Tier 1 (abbreviated) category of report and test requirements.

Aquifer Science determined that the report submitted satisfies the standards and requirements outlined in the District's Guidelines for Hydrogeologic Reports and Aquifer Testing. Accordingly, the report and test data provided baseline information on aquifer parameters, water quality, and extent of potential well interference. Staff's assessment of the report and aquifer test indicate very little to no potential for unreasonable impacts associated with this well and pumping volume.

#### **APPLICATION REVIEW**

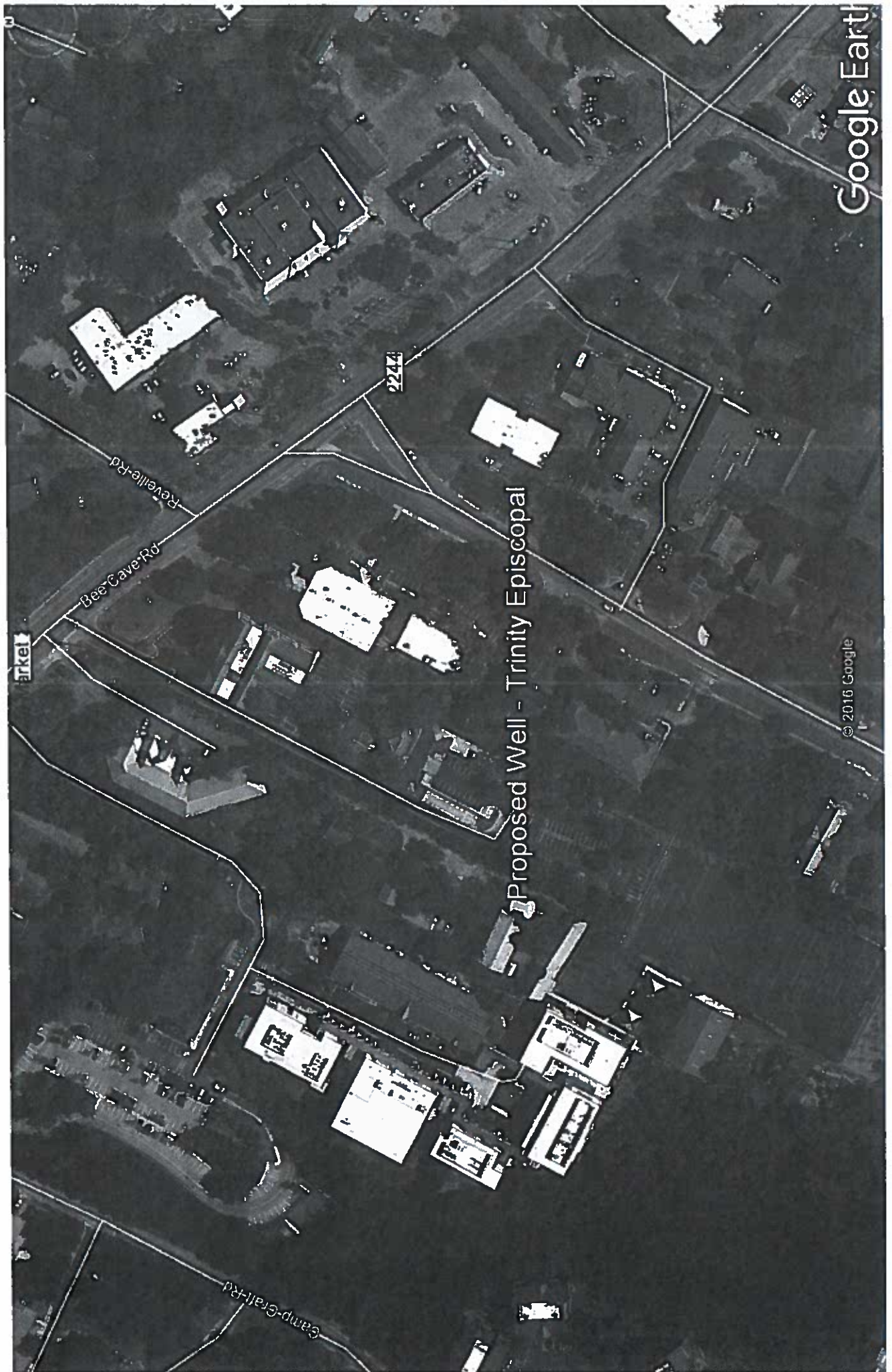
- Staff has reviewed the application and has determined that the application has satisfied all the requirements pursuant to District Rule 3-1.4.A and that the required documentation and payment of fees have been satisfied.
- Staff has determined that the applicant has sufficiently addressed the criteria and considerations for Board action in accordance with District Rule 3-1.6(A).
- Staff has confirmed that the applicant filed proper notice and the required 20-day public comment period has expired in accordance with District Rule 3-1.4.B. (Attachment C).

#### **STAFF RECOMMENDATIONS**

Staff recommends approval of the above-referenced Middle Trinity Production Permit for a total annual volume not to exceed 4,200,000 gallons/year.



## **Appendix A Well Location Map**



© 2016 Google

Google Earth

## **Appendix B**

### **Volume Calculation**

## Worksheet - Golf Courses/Sports Fields (Trinity Aquifer)

### Outdoor Volume Calculator

#### Warm-Season Turfgrass (Roughs and Fairways)

|   |         |                |
|---|---------|----------------|
| Proposed Irrigated Area                   | 0 sq ft | 0 acres        |
| Maximum Application Rate (see appl. rate) |         | 1.32 feet      |
| Total Outdoor Water Use                   |         | 0 gallons/year |

#### Warm-Season Turfgrass (Tees, Greens, Sports Fields)

|   |         |                |
|---|---------|----------------|
| Proposed Irrigated Area                   | 0 sq ft | 0.000 acres    |
| Maximum Application Rate (see appl. rate) |         | 2.06 feet      |
| Total Outdoor Water Use                   |         | 0 gallons/year |

#### Warm-Season Turf/Overseeded Turfgrass (Tees, Greens, Sports Fields)

|   |               |                        |
|---|---------------|------------------------|
| Proposed Irrigated Area                   | 152,342 sq ft | 3.497 acres            |
| Maximum Application Rate (see appl. rate) |               | 2.37 feet              |
| Total Outdoor Water Use                   |               | 2,696,454 gallons/year |

#### Overseeded Turfgrass (Fairways)

|   |         |                |
|---|---------|----------------|
| Proposed Irrigated Area                   | 0 sq ft | 0.0 acres      |
| Maximum Application Rate (see appl. rate) |         | 1.57 feet      |
| Total Outdoor Water Use                   |         | 0 gallons/year |

#### Mixed Landscape Beds

|   |             |                      |
|---|-------------|----------------------|
| Proposed Irrigated Area                   | 11991 sq ft | 0.3 acres            |
| Maximum Application Rate (see appl. rate) |             | 1.60 feet            |
| Total Outdoor Water Use                   |             | 143,270 gallons/year |

#### Vegetable Garden

|   |          |                    |
|---|----------|--------------------|
| Proposed Irrigated Area                   | 50 sq ft | 0.001 acres        |
| Maximum Application Rate (see appl. rate) |          | 3.65 feet          |
| Total Outdoor Water Use                   |          | 1,364 gallons/year |

#### Irrigated Trees (Isolated outside of irrigated turf areas)

|                         |   |                |
|-------------------------|---|----------------|
| Fruit Trees (Deciduous) | Number of Trees                           | 0 qty          |
|                         | Tree area (canopy) per tree               | 0 sq. ft       |
|                         | Tree area (canopy) total                  | 0 sq. ft       |
|                         | Tree area (canopy) total                  | 0.000 acres    |
|                         | Maximum Application Rate (see appl. rate) | 0.00 feet      |
|                         | SubTotal                                  | 0 gallons/year |

|                         |   |                |
|-------------------------|---|----------------|
| Fruit Trees (Evergreen) | Number of Trees                           | 0 qty          |
|                         | Tree area (canopy) per tree               | 0 sq. ft       |
|                         | Tree area (canopy) total                  | 0 sq. ft       |
|                         | Tree area (canopy) total                  | 0.000 acres    |
|                         | Maximum Application Rate (see appl. rate) | 0.00 feet      |
|                         | SubTotal                                  | 0 gallons/year |

|             |                             |             |
|-------------|-----------------------------|-------------|
| Large Trees | Number of Trees             | 0 qty       |
|             | Tree area (canopy) per tree | 1100 sq. ft |
|             | Tree area (canopy) total    | 0 sq. ft    |

|              |                             |            |
|--------------|-----------------------------|------------|
| Medium Trees | Number of Trees             | 0 qty      |
|              | Tree area (canopy) per tree | 300 sq. ft |
|              | Tree area (canopy) total    | 0 sq. ft   |

|                          |                             |             |
|--------------------------|-----------------------------|-------------|
| Small Trees/Large Shrubs | Number of Trees             | 70 qty      |
|                          | Tree area (canopy) per tree | 90 sq. ft   |
|                          | Tree area (canopy) total    | 6300 sq. ft |

Total Tree Area (Lar, Med, Sm Trees) 6300 sq ft

|                        |   |                     |
|------------------------|---|---------------------|
|                        | Maximum Application Rate (see appl. rate) | 0.145 acres         |
|                        |   | 1.60 feet           |
| All Lar, Med, Sm Trees | SubTotal                                  | 75,273 gallons/year |

|   |                        |
|---|------------------------|
| TOTAL IRRIGATION                                | 2,916,362 gallons/year |
| TOTAL IRRIGATION (with distribution uniformity) | 4,166,232 gallons/year |

|                             |                                   |                    |
|-----------------------------|-----------------------------------|--------------------|
| Water Features              |                                   |                    |
|                             | Pool/HotTub/Ponds/Fountain area   | 276 sq. ft.        |
|                             | Net Evaporation (see appl. rate)  | 33 gallons/year    |
| Pool/HotTub/Ponds/Fountains | Total Calculated Evaporation Loss | 8,999 gallons/year |

|                                    |                        |
|------------------------------------|------------------------|
| TOTAL OUTDOOR WATER USE            | 4,175,231 gallons/year |
| CALCULATED ANNUAL PERMITTED VOLUME | 4,180,000 gallons/year |

**Attachment C**  
**Proof of Public Notice**

# Austin American-Statesman

statesman.com | austin360.com

Trinity Episcopal School, (3901 Bee Caves Road, Austin, Texas 78746) filed a well drilling application on December 8, 2016, with the Barton Springs/Edwards Aquifer Conservation District (District) for a new nonexempt well. The proposed Lower Trinity well will be used to irrigate the property including the sports fields. A separate Production Permit Application will be required in order to operate and produce from this well in the future. The proposed well is located in Travis County at 3901 Bee Caves Road (30.279142°, -97.809654°).

Publication of this notice begins a 20-day public response period for which comments, written formal protests and requests for a public hearing will be accepted by the District. Parties interested in formally participating in a hearing on a contested application should refer to District Rule 4-9.13. For further information, please contact the District, 1124 Regal Row, Austin, Texas 78748, (512) 282-8441, [bseacd@bseacd.org](mailto:bseacd@bseacd.org). You may also contact the applicant's representative, Dale Blankenship of Trinity Episcopal School at (512) 472-9525 ext. 225.  
2-24/2017 #

## STATE OF TEXAS COUNTY OF TRAVIS

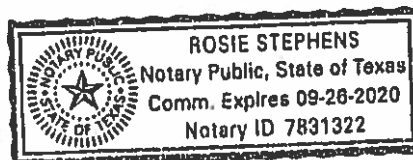
Before me, the undersigned authority, a Notary Public in and for the County of Travis, State of Texas, on this day personally appeared Alejandro Cado. Advertising Agent of the Austin American-Statesman, a daily newspaper published in said County and State that is generally circulated in Bastrop, Bell, Blanco, Brazos, Burleson, Burnet, Caldwell, Colorado, Comal, Coryell, Fayette, Gillespie, Gonzales, Guadalupe, Hays, Kerr, Lampasas, Lee, Llano, Milam, Nueces, San Saba, Travis, Washington and Williamson Counties, who being duly sworn by me, states that the attached advertisement was published at the lowest published rate for Classified advertising in said newspaper on the following date(s), to wit: TRINITY EPISCOPAL SCHOOL, First date of Publication 02/24/2017, Last date of Publication 02/24/2017, Web and print times Published 2, Legal Notices, 1 X 32, and that the attached is a true copy of said advertisement.  
WELL DRILLING APPLICATION

Ad ID: 1398982

Ad Cost: 412.16

SWORN AND SUBSCRIBED TO BEFORE ME, on  
02/27/2017

Notary Public







## **Item 6**

### **Board Discussions and Possible Actions**

**c. Discussion and possible action related to receiving committee recommendations and selecting the Groundwater Stewardship Award winners and approving the staff's selection for Permittee of the Year.**





# Groundwater Stewardship Award

## Nominations by category

The Barton Springs/Edwards Aquifer Conservation District will be presenting stewardship awards to deserving individuals, organizations, companies or agencies that have invested exemplary effort towards the protection and conservation of water resources in the Barton Springs/Edwards Aquifer Conservation District. The Stewardship Awards happen every other year.

An individual, group, company or agency may be nominated in any one category, and anyone can nominate a deserving entity. The District's Board of Directors will select the recipients. An Award Subcommittee of the Board will meet in advance of the Board meeting to come up with a recommendation for the full Board.

There is a limit of 40 people for the awards luncheon on Friday, January 26. Typically, each winner is invited to bring 2-3 guests (possibly more if it is a group). The Board may choose to award multiple winners in one particular category, awards may not be given every year in every category, and categories may be added if needed.

### Aquifer Advocate:

- Will Conley
- Karen Kocher

### Education/Research:

- City of Austin, PARD, Sheffield Education Center
- Peter Sprouse, Zara Environmental/Texas Speleological Society
- Dr. Jack Sharp (lifetime achievement?)

### Innovation:

- CoA Education Cave Restoration Team

### Water Quality Protection:

- No submissions



**Barton Springs  
Edwards Aquifer  
CONSERVATION DISTRICT**

## 2017 GROUNDWATER STEWARDSHIP AWARDS

### NOMINATION FORM

**Nominator (person filling out this form)**

Name: Blaine Stansberg  
Organization (optional): \_\_\_\_\_  
Address (include City and Zip): \_\_\_\_\_  
Email and Phone Number: \_\_\_\_\_  
How did you hear about the Stewardship Awards? \_\_\_\_\_

**Nominee (individual or group being nominated for award)**

Name: Commissioner Will Conley  
Organization (optional): \_\_\_\_\_  
Address (include City and Zip): \_\_\_\_\_  
Email and Phone Number: \_\_\_\_\_

**Award Category (please select the one that best applies)**

- |  |   |
|--|---|
| <input checked="" type="checkbox"/> Aquifer Advocate | <input type="checkbox"/> Research/Education       |
| <input type="checkbox"/> Innovation                  | <input type="checkbox"/> Water Quality Protection |

**Reason for Nomination (please feel free to include additional pages, materials, or CDs with photos and/or PowerPoint presentations)**

Strong advocate of science based management  
of the aquifer as a shared resource for  
the community.  
Proponent of new monitor well for furthering  
scientific understanding of Trinity Aquifer  
Political leader of passage of HB3405.

Please submit this form and additional materials by **Tues., Nov. 7, 2017** by:

**Mail:** BSEACD, Attn: Awards, 1124 Regal Row, Austin, TX 78748.

**Fax:** (512) 282-7016

**E-mail:** rhgary@bseacd.org



**Barton Springs  
Edwards Aquifer**  
CONSERVATION DISTRICT

## 2017 GROUNDWATER STEWARDSHIP AWARDS

### NOMINATION FORM

**Nominator (person filling out this form)**

Name: Staff  
Organization (optional): BSEACD  
Address (include City and Zip): \_\_\_\_\_  
Email and Phone Number: \_\_\_\_\_  
How did you hear about the Stewardship Awards? \_\_\_\_\_

**Nominee (individual or group being nominated for award)**

Name: Karen Kocher  
Organization (optional): Living Springs Interactive Documentary series  
Address (include City and Zip): \_\_\_\_\_  
Email and Phone Number: Karen.Kocher@austin.utexas.edu

**Award Category (please select the one that best applies)**

- |  |   |
|--|---|
| <input checked="" type="checkbox"/> Aquifer Advocate | <input type="checkbox"/> Research/Education       |
| <input type="checkbox"/> Innovation                  | <input type="checkbox"/> Water Quality Protection |

**Reason for Nomination (please feel free to include additional pages, materials, or CDs with photos and/or PowerPoint presentations)**

Karen Kocher has collaborated with the Save Barton Springs Association and Texas Film Project to develop the interactive Living Springs Documentaries. Each video segment tells the story of the Springs from a different perspective. The most recent segment features the Wildlands and discusses the evolution of the Water Quality Protection Lands program. These videos beautifully present the science, culture, and history and involve the key players in management and protection of Barton Springs.

The Living Springs documentaries are compelling, inspirational, and accessible. Karen Kocher has been the driving force behind the research, videoing, editing, hosting, and promoting this project.

Please submit this form and additional materials by **Tues., Nov. 7, 2017** by:

**Mail:** BSEACD, Attn: Awards, 1124 Regal Row, Austin, TX 78748.

**Fax:** (512) 282-7016

**E-mail:** rhgary@bseacd.org



## ABOUT LIVING SPRINGS

Living Springs is an interactive documentary series. What does that mean? Just like a traditional documentary, there is video, and LOTS of it. If fact, if you viewed every video, it would be almost twice the length of a feature length film. But instead of being presented as one long film, with one single story, there will be several dozen videos that tell the story of the Springs from many different perspectives.

Using the power of this multi-linear approach you navigate a virtual underwater environment, meeting artists and scientists, historic figures, poets and preschoolers who share their stories and their thoughts about Austin's most beloved natural resource.

Interactive documentary also means that YOU participate. Not only can you control the path through this story, but you may submit your own videos and still images for inclusion in the project. In this way this documentary, like Springs, evolves over time from a variety of perspectives.

Because it lives on the web, Living Springs will be available 24/7, around the globe, to any person with an internet connection. Locally, we are already working with teachers to build the project into the science and humanities curriculum throughout central Texas. Finally, a high-resolution version of the project will be installed as part of a permanent exhibit at the Barton Springs Education Center where over 150,000 visitors come each year.

### DONATE

[TAKE US TO THE DONATION PAGE](#)

### SIGN UP FOR OUR NEWSLETTER

Our newsletter will keep you up to date on our progress, and events.

EMAIL

[TWEET ME THIS](#)

### TWITTER

Tweets by @l documentary



Karen Koehler  
@l documentary

Living Springs Documentary: This Saturday @ 7:30 Barton Springs South Side Free Living Springs Screening Event NEW YORK!

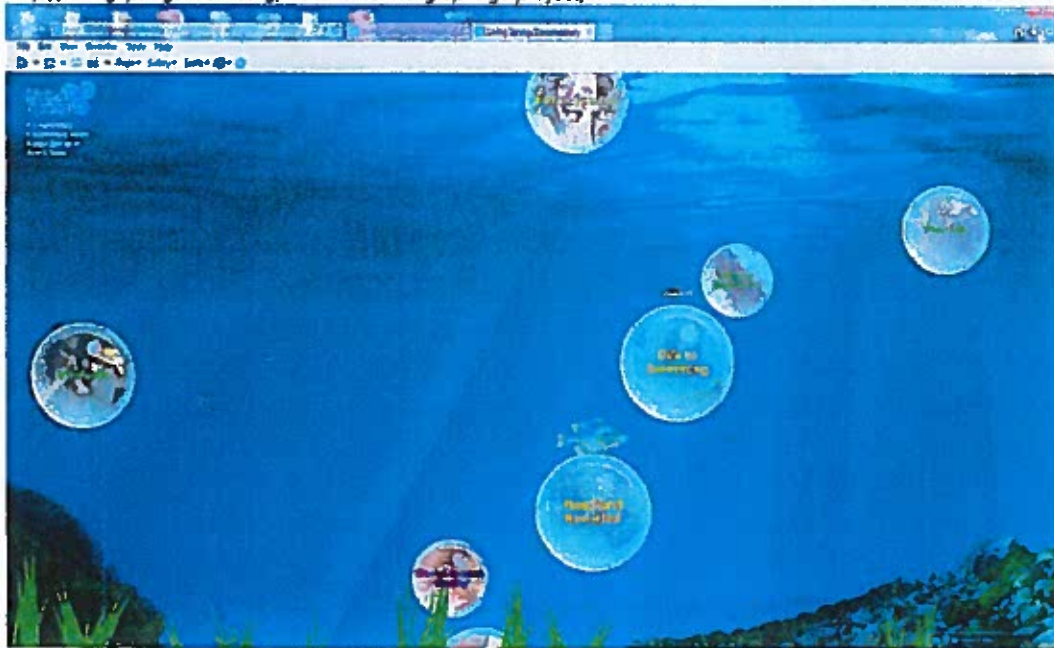


Aug 28, 2011



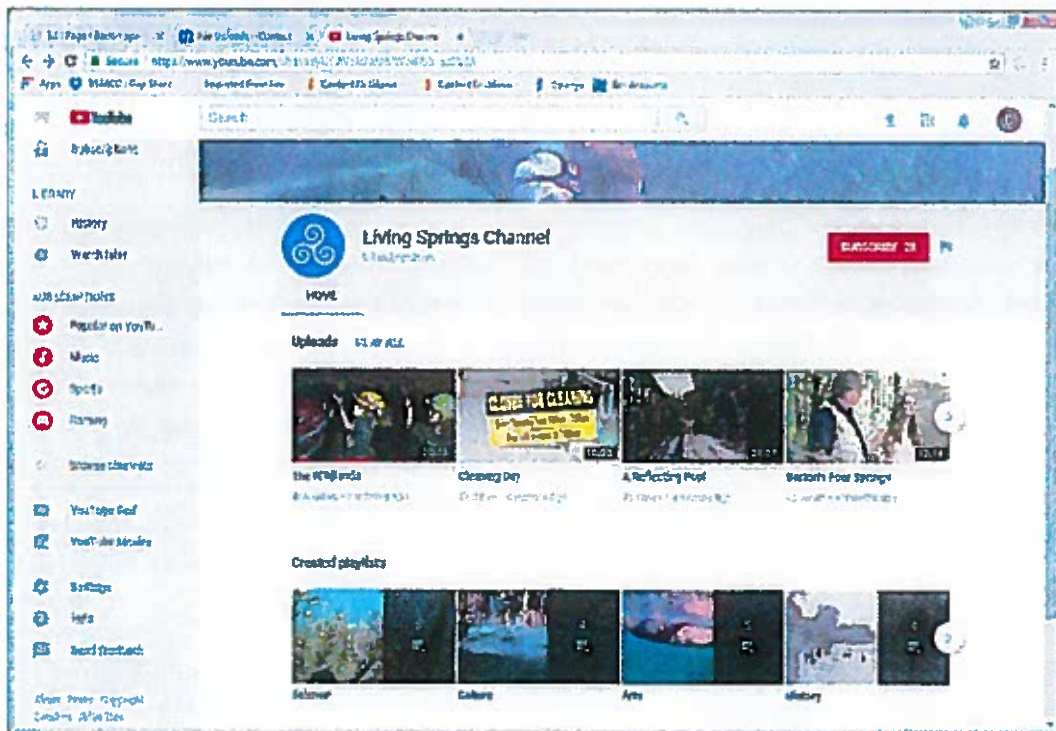
### Living Springs Interactive Flash Player

<http://livingspringsaustin.org/watch-the-living-springs-project/>



### Living Springs YouTube Channel

<https://www.youtube.com/channel/UCAVt4rZaMMWveIRRoncON0A>





**Barton Springs  
Edwards Aquifer  
CONSERVATION DISTRICT**

## 2017 GROUNDWATER STEWARDSHIP AWARDS

### NOMINATION FORM

**Nominator (person filling out this form)**

Name: Staff  
Organization (optional): BSEACD  
Address (include City and Zip): \_\_\_\_\_  
Email and Phone Number: \_\_\_\_\_  
How did you hear about the Stewardship Awards? \_\_\_\_\_

**Nominee (individual or group being nominated for award)**

Name: City of Austin PARD, Sheffield Education Center  
Organization (optional): Contacts: Michael Adair, Jodi Jay, Kimberly McNeeley, Margaret Russell  
Address (include City and Zip): \_\_\_\_\_  
Email and Phone Number: Margaret.Russell@ci.austin.tx.us; Adair, Michael.Adair@austintexas.gov

**Award Category (please select the one that best applies)**

- |   |  |
|---|--|
| <input type="checkbox"/> Aquifer Advocate | <input checked="" type="checkbox"/> Research/Education |
| <input type="checkbox"/> Innovation       | <input type="checkbox"/> Water Quality Protection      |

**Reason for Nomination (please feel free to include additional pages, materials, or CDs with photos and/or PowerPoint presentations)**

The City of Austin PARD, Sheffield Education Center located at Barton Springs hosts an engaging visitor's center, active education program, and strong community partnerships. Significant upgrades to the Splash! Exhibit include a big-screen theater, watershed interactive upgrade, well water, and endangered species displays. Educational programs focus on endangered species, amphibians, insects, and the Splash Lab to reinforce the importance of water quality and land management decisions. Partnerships with City of Austin departments, Living Springs, Barton Springs Conservancy, and Helping Hands has expanded programming to include movie releases, art displays, Earth Camp students, and volunteer-guided weekend educational programs.

Please submit this form and additional materials by **Tues., Nov. 7, 2017** by:

**Mail:** BSEACD, Attn: Awards, 1124 Regal Row, Austin, TX 78748.

**Fax:** (512) 282-7016

**E-mail:** rhgary@bseacd.org



# Sheffield Education Center

BUDGET YEAR 2016-2017

**Total Visitors:** 85,507

**Public program:** participants 284

**Special Event:** participants 956

**School program participants** 5247

## **Special events:**

Our desired future film screening and exhibit opening.

Earth Day Celebration

Barton Springs art show opening

West Austin Studio tour

Springs of Texas Book signing

Ground Water to Gulf

Living Springs Screenings

Masters of the Night Exhibit Opening (Austin Museum Day)

Mother Earth Day Celebration

National Chemistry Week

Barton Springs University (our site was a listed station)

## **Partnerships**

The Watershed Protection Dept

Living Springs (Karen Kocher)

Bill Oliver (Mother Earth Day)

The Barton Springs Conservancy

The S.O.S Alliance

American Chemical Society

Our Desired Future (Documentary)

Literacy First

National Instruments

## **Volunteer Organizations**

The Austin Charity League

U.T Business Computer Technology class

## **Exhibit updates**

Exhibit Computer platform update

Barton Springs Flow data display added

Find Your Watershed Kiosk update

Watershed Model upgrade

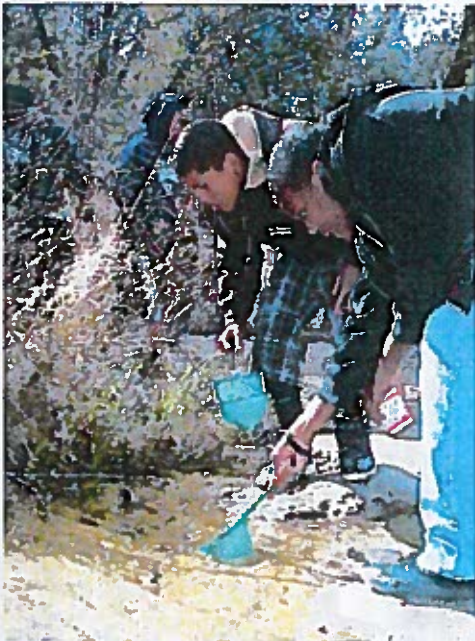
Invertebrate section added to the Salamander Springs exhibit.

# SPLASH! INTO THE EDWARDS AQUIFER EXHIBIT: TEACHER GUIDE



2201 Barton Springs Rd.  
Austin, TX 78746  
(512) 481-1466

Tues-Sat: 10am-5pm  
Sun: 12pm- 5pm  
Closed Mondays



## Why Visit the Sheffield Education Center

- Students will engage in learning about the Edwards Aquifer and Austin's local water cycle and ecology, in the dynamic field trip setting of Zilker Park.
- Students see live animals, including the endangered Barton Springs salamanders.
- The topics covered in the Splash! Exhibit align with TEKS Standards and serve as an ideal supplement to classroom learning.
- It's **FREE** as an On-Your-Own tour. If you plan to bring more than 30 students, please call the Austin Nature & Science Center at (512) 974-3888 for scheduling.
- We also offer a hands-on, interpreter-led aquatic science program for grades 4-12. Call (512) 481-1466 for details.



## Interpreter-led field trips

- Splash Lab (Grades 4-8)
- **NEW** Aquatic Science for High Schoolers (Grades 9-12)
- Texas Endangered Animals (Grades 4-6)
- Amphibians Abound (Grades 4-6)
- Incredible Insects (Grades 2-3)

## On Your Own Tours

The exhibit has two main components: the cave and the front gallery. The cave accommodates groups of 15 students at a time; the front gallery can hold up to 35 students. While small groups rotate through the cave, other students can engage with interactive elements in the front gallery space. In all, the Splash! Exhibit can take up to an hour.

There are restrooms and water fountains directly adjacent to the Splash! Exhibit.

*Please see the following page for a guide to visiting the exhibit with your students.*



## On Your Own Tour Discussion Points

### Introduction

Since the exhibit is designed to look like an actual limestone cave, challenge younger students to imagine that they are a drop of water entering into the aquifer. For older students, point out the "Aquifer Recharge Zone" at the entrance of the exhibit and ask if they have seen these signs around Austin. Explain that this sign helps people become aware of those parts in central Texas, where we are living on top of the aquifer. Define "aquifer" and other key terms that you may have already introduced in the classroom.

### AquaTheater

Choose the "Carved in Stone" movie from the menu. This 4-minute movie illustrates the geologic processes that formed the aquifer, as well as the watershed system of which Barton Springs and the Colorado River are each a part. Discuss the large span in geologic time and how Austin used to look.

### Strata Cave

This passageway shows the rock layers of the aquifer that actually exist below us in Central Texas. Encourage students to touch the layers, and to describe the differences between each layer. Challenge the students to connect how the physical make-up of each rock layer impacts the movement of water through the aquifer.

### Watershed Model and Aquaria

The watershed model demonstrates the movement of water from the Texas Hill Country through the Austin area, as well as identifying the different zones of the aquifer. Each aquarium houses aquatic animals from different zones of our local watershed. Emphasize the singularity of the Barton Springs salamander, an endangered species in our own backyard.

**Pollution Tubes** (a great place to gather your group before releasing them to try out games in the Water Science Room).

These tubes represent the different kinds of impacts human actions can have upon waterways. Discuss with students causes and effects of each type of pollution, especially in regard to the aquatic critters that live in Austin's creeks.

### Water Science Room

Scientists have many different ways to measure the quality of water in creeks and the aquifer. Encourage students to report back a new scientific test or fact about water they learned in this room.

## Other Places to Visit in Zilker Park

- An overlook at Barton Springs Pool is steps away from the Splash! Exhibit. This is a great space to challenge students to tie together what they have learned about water and the aquifer, while viewing one of Austin's natural treasures.
- There are many picnic tables, some of which can be reserved, and shaded grassy areas next to the Splash! Exhibit in Zilker Park for students to have lunch. There is also a large playground area within a 2-min walk from the exhibit.
- The Austin Nature & Science Center is a 3-min bus ride away; schedule an On-Your-Own tour of the live animal exhibits, Dino Pit, and Naturalist Workshop for only \$1.00 per visitor (call 974-3888 to reserve a time slot). The Nature Center also offers structured, staff-led environmental education programs; visit <http://austintexas.gov/departments/austin-nature-and-science-center> for more information.

## Bus Parking

We recommend that busses drop off students and park in the parking lot closest to the playground.



## Background Information and Curriculum Resources

### Edwards Aquifer:

<http://www.edwardsaquifer.net/intro.html>

<http://www.esi.utexas.edu/outreach/caves/edwardsaquifer.php>

<http://www.bseacd.org/aquifer-science/about-the-aquifers/>

### Water and the Austin Watershed:

<http://www.austintexas.gov/watershed/YouthEd>

<http://www.twdb.state.tx.us/Kids/>

### Barton Springs:

<http://www.edwardsaquifer.net/barton.html>

<http://austintexas.gov/department/barton-springs-pool>

### Barton Springs Salamander:

<https://tpwd.texas.gov/huntwild/wild/species/bartonsprings salamander/>

Salamander Activity for High School students:

<http://www.austintexas.gov/department/salamanders>

### Films:

*Living Springs*- a documentary series on Barton Springs' history, ecology, and culture  
[livingspringsaustin.org](http://livingspringsaustin.org)

*Austin Underground*- videos on Geology, Hydrogeology, Salamanders, and Threats and Solutions  
<https://www.youtube.com/watch?v=il5hjmJ6O1E&list=PL4DE9788E1378D157>

We look forward to seeing you!



**Barton Springs  
Edwards Aquifer**  
CONSERVATION DISTRICT

## 2017 GROUNDWATER STEWARDSHIP AWARDS

### NOMINATION FORM

#### Nominator (person filling out this form)

Name: Krista McDermid  
Organization (optional): Zara Environmental LLC  
Address (include City and Zip): 1707 W. FM 1626, Manchaca, Texas 78652  
Email and Phone Number: krista@zaraenvironmental.com (512) 757-7676  
How did you hear about the Stewardship Awards? BSEACD e-news

#### Nominee (individual or group being nominated for award)

Name: Peter Sprouse  
Organization (optional): Zara Environmental LLC  
Address (include City and Zip): 1707 W. FM 1626, Manchaca, Texas 78652  
Email and Phone Number: peter@zaraenvironmental.com (512) 415-2994

#### Award Category (please select the one that best applies)

- |   |  |
|---|--|
| <input type="checkbox"/> Aquifer Advocate | <input checked="" type="checkbox"/> Research/Education |
| <input type="checkbox"/> Innovation       | <input type="checkbox"/> Water Quality Protection      |

Reason for Nomination (please feel free to include additional pages, materials, or CDs with photos and/or PowerPoint presentations)

As the owner of Zara Environmental, Mr. Sprouse performs professional surveys of groundwater features including caves, springs, and wells. However we are nominating him not for the work he gets paid to do, but for the immense amount of volunteer time he puts into enhancing our knowledge of groundwater features and fauna of central Texas and the surrounding areas. The volunteer studies include pedestrian surveys of karst areas to find new springs, sinkholes and caves, the intense sampling of known features to find new species and new records for groundwater fauna, and the detailed documentation of these features and fauna through photography, videos, and GPS points that are submitted to the Texas Memorial Museum and Texas Speleological Survey for long-term specimen and data curation. Examples of new sites include a recent discovery of springs that were exposed due to extremely low lake levels, and also of a cave he has been excavating and leading volunteer crews to work on near Jacob's Well in Wimberley. He has discovered many tens of new species, and has 12 named in his honor.

Beyond the work itself, what is remarkable about Mr. Sprouse's volunteer contributions is how he pulls people from different agencies and backgrounds into these studies. Mr. Sprouse has involved BSEACD

staff, City of Austin staff, Travis County staff, University students and professors, recreational cavers, and numerous other volunteers and collaborators to excavate caves and trap and survey springs, caves, and wells. His enthusiasm for the topic of groundwater and aquatic fauna is infectious, resulting in a highly respected and admired natural resource steward that is deserving of this award.

Please submit this form and additional materials by **Tues., Nov. 7, 2017** by:

**Mail:** BSEACD, Attn: Awards, 1124 Regal Row, Austin, TX 78748.

**Fax:** (512) 282-7016

**E-mail:** rhgary@bseacd.org



**Barton Springs  
Edwards Aquifer  
CONSERVATION DISTRICT**

## 2017 GROUNDWATER STEWARDSHIP AWARDS

### NOMINATION FORM

**Nominator (person filling out this form)**

Name: Staff  
Organization (optional): BSEACD  
Address (include City and Zip): \_\_\_\_\_  
Email and Phone Number: \_\_\_\_\_  
How did you hear about the Stewardship Awards? \_\_\_\_\_

**Nominee (individual or group being nominated for award)**

Name: Jack Sharp  
Organization (optional): UT Jackson School of Geosciences  
Address (include City and Zip): \_\_\_\_\_  
Email and Phone Number: jsharp@jsg.utexas.edu

**Award Category (please select the one that best applies)**

- |   |  |
|---|--|
| <input type="checkbox"/> Aquifer Advocate | <input checked="" type="checkbox"/> Research/Education |
| <input type="checkbox"/> Innovation       | <input type="checkbox"/> Water Quality Protection      |

**Reason for Nomination (please feel free to include additional pages, materials, or CDs with photos and/or PowerPoint presentations)**

Dr. Sharp has been teaching for 32 years at the University of Texas, and in the course of his tenure  
he has researched and published landmark concepts in Edwards Aquifer-related hydrogeology,  
founded courses to introduce students to groundwater issues in Central Texas, supervised over  
40 undergraduates, 60 masters, and 25 doctoral students--many of whom chose to research  
topics that provided valuable insight into groundwater dynamics pertinent to the Aquifer District.

Please submit this form and additional materials by **Tues., Nov. 7, 2017** by:


**Mail:** BSEACD, Attn: Awards, 1124 Regal Row, Austin, TX 78748.

**Fax:** (512) 282-7016

**E-mail:** rhgary@bseacd.org



**Journal articles (continued):**

- Sharp, J.M., Jr., and Clement, T.J., 1988, Hydrochemical facies as hydraulic boundaries in karstic aquifers - the Edwards aquifer, U.S. A.: in Proceedings of the 21st I. A. H. Congress, Karst Hydrogeology and Karst Environment Protection, Guilin, People's Republic of China, Geological Publishing House, Beijing, v. 2, p. 841-845.
- Brown, T.J., and Sharp, J.M., Jr., 1989, Modeling the effect of aerosol dispersal on groundwater systems: Geol. Soc. America, Abs. with Programs (Ann. Mtg.), v. 21, p. A96.
- Pfeiffer, D.S., and Sharp, J.M., Jr., 1989, Subsurface temperature distributions in South Texas: Trans., Gulf Coast Assoc. Geol. Societies, v. 39, p. 231-246.
- Sharp, J.M., Jr., and McBride, E.F., 1989, Sedimentary petrology: A guide to paleohydrogeologic analyses, example of sandstones from the northwest Gulf of Mexico: Jour. Hydrology, v. 108, p. 367-386.
- Sharp, J.M., Jr., 1989, Major advances in ground-water hydrology in the 1970s and 1980s: in Recent Advances in Ground-Water Hydrology ( Moore, J.E., Zaporozec, A.A., Csallany, C.S., and Varney, T.C., eds.), American Inst. Hydrology, p. vii-xii. \*
- Sharp, J.M., Jr., 1989, U.S. national issues on environmental hydrology and hydrogeology - local and emerging global perspectives: Hydrological Science and Technology, v. 5, p. 32-36. \* [Reprinted in 1991]
- Germiat, S.J., and Sharp, J.M., Jr., 1990, Assessment of future coastal land loss along the upper Texas Gulf Coast: Bull., Assoc. Engineering Geologists, v. 27, p. 263-280.
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**Barton Springs  
Edwards Aquifer**  
CONSERVATION DISTRICT

## 2017 GROUNDWATER STEWARDSHIP AWARDS

# NOMINATION FORM

### Nominator (person filling out this form)

Name: Jessica Wilson  
Organization (optional): City of Austin Watershed Protection Department  
Address (include City and Zip): P.O. Box 1088, Austin, TX 78767  
Email and Phone Number: Jessica.Wilson@austintexas.gov; 512-974-2446  
How did you hear about the Stewardship Awards? BSEACD eNews

### Nominee (individual or group being nominated for award)

Name: Education Cave Restoration Team  
Organization (optional): City of Austin Watershed Protection Department  
Address (include City and Zip): P.O. Box 1088, Austin, TX 78767  
Email and Phone Number: Jessica.Wilson@austintexas.gov; 512-974-2446

### Award Category (please select the one that best applies)

- |  |   |
|--|---|
| <input type="checkbox"/> Aquifer Advocate      | <input type="checkbox"/> Research/Education       |
| <input checked="" type="checkbox"/> Innovation | <input type="checkbox"/> Water Quality Protection |

### Reason for Nomination (please feel free to include additional pages, materials, or CDs with photos and/or PowerPoint presentations)

The City of Austin Watershed Protection Department's Education Cave Restoration Team is deserving of a  
Groundwater Stewardship Award for Innovation for its creative approach improving existing education caves and  
and excavating new education caves to effectively enhance communication about the importance of protecting  
groundwater resources and foster partnerships that work together to utilize these transformative underground  
classrooms to educate students, teachers, and the general public about the environmentally sensitive Edwards Aquifer  
Recharge Zone and inspire them to be environmental stewards. Please see the attached document with additional  
information and photos.

Please submit this form and additional materials by **Tues., Nov. 7, 2017** by:

**Mail:** BSEACD, Attn: Awards, 1124 Regal Row, Austin, TX 78748.

**Fax:** (512) 282-7016

**E-mail:** rhgary@bseacd.org



**Education Cave Restoration Team**  
City of Austin, Watershed Protection Department

**Groundwater Stewardship Innovation Award**

The City of Austin Watershed Protection Department's Education Cave Restoration Team is deserving of the Barton Springs Edwards Aquifer Conservation District's Groundwater Stewardship Innovation Award for their creative approach to improving access to caves for use by public education to effectively enhance communication about the importance of protecting groundwater resources. The Education Cave Restoration Team also fosters partnerships that work together to utilize these transformative underground classrooms to education students, teachers, and the general public about the environmentally sensitive Edwards Aquifer Recharge Zone. Through this innovative Capital Improvement Program Project, the Watershed Protection Department has devoted over \$100,000 for educational cave restoration. These groundbreaking efforts have included excavation and improvements to nine caves in Austin: Bowie, Grassy Cove, Hideout, Live Oak, Millennium, Wade Sink, Whirlpool, and Wildflower.

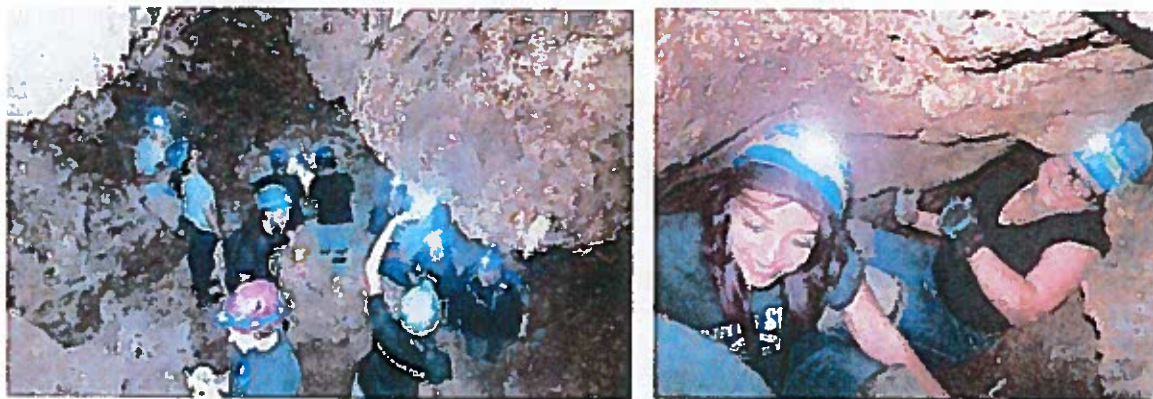


Figure 1. First group of students to use LaCrosse Cave after it Education Cave Restoration Team made the cave available for educational tours.

**Purpose**

The Education Cave Restoration Team has found, excavated, and modified new caves and maintained existing caves for expanded use by public education programs. Expanding the number of caves available for educational tours has enabled outreach to an increased number of students, teachers, and members of the public participating in education programs focused on the environmentally sensitive Edwards Aquifer Recharge Zone.

**Need and Benefits**

The Watershed Protection Department youth educators reach thousands of students annually with hands-on lessons about environmental science, water quality, and stewardship. As the city continues to grow, the youth education programs plan to grow too so we can continue to reach a high percentage of students. Improving existing caves and creating new education caves has enabled growth programs that provide people with a direct experience in the underground world where they can see firsthand how water enters the aquifer. Increasing the number of students reached means that more sites are needed so programs can run simultaneously. Austin has a limited number of entry level educational caves. Expanding the number of caves available for educational outreach also reduces the impact of student traffic on Balcones Canyonlands Conservation Plan caves. There are also environmental benefits of removing trash and

**Education Cave Restoration Team**  
City of Austin, Watershed Protection Department

enhancing recharge. Table 1 provides an overview of caves and modifications that the Education Cave Restoration has made to make the cave suitable for education.

**Scope**

A team of staff who are trained cavers conducted the hand excavations and cave restoration. They also worked on the Blowing Sink Tract and dye trace studies. They have a very specific skill set and received extensive safety training. In order to make additional caves stable for public use, the project included installing appropriate structures like gates, non-obtrusive stairs, and Bowie Cave had a grate installed over a drop-off to improve safety. Most of the caves that the Education Cave Restoration Team worked on are on park land. One of the caves is on the campus of Bowie High School and two of the caves are located at the Lady Bird Johnson Wildflower Center so the Watershed Protection Department had interlocal agreements with the Austin Independent School District and the University of Texas at Austin.

**Table 1: Summary of Education Cave Restoration Efforts**

| <b>Name of Cave</b> | <b>Description of Improvements for Groundwater Education</b>  |
|---------------------|---|
| Bowie               | Excavation, auto-belay system for ladder, staircase, platforms, and grate over drop-off to provide safety                                 |
| Grassy Cove         | Excavation, gate, and air quality monitoring  |
| Hideout             | Excavation and gate   |
| LaCrosse            | Excavation, gate, internal welding, staircase and rail leading two cave entrance, dry-stack staircase inside cave, optional crawl-through |
| Live Oak            | Add a second gate for safety and a crawl-through experience   |
| Millennium          | Improve gate and plan to build platform to minimize impact to cave  |
| Wade Sink           | Excavation and gate   |
| Whirlpool           | Collaborated with multiple organization to replace old gate with a safer gate that also was also designed to improve cave habitat         |
| Wildflower          | Excavation and repairs  |

**Outreach and Groundwater Stewardship Collaborations**

In the past year, over 2,000 students participating in one of the Watershed Protection Department's youth education programs have been given the opportunity to explore the underground world through caves that the Education Cave Restoration Team has worked on improving for groundwater education. Additionally, the caves have been used for many other programs, including the Groundwater to Gulf Summer Science Institute for Teachers; the Lady Bird Johnson Wildflower Center Family Caving Days, Nature Nights, and summer camps; the Austin Nature and Science Center's programs; Austin Wildlands Division; Austin Park Rangers; Grow Green Professional Landscape Training; and the Cave Collaboration Committee's Cave Guide Trainings. The Education Cave Team worked closely with numerous organizations, including the Austin Independent School District, Austin Parks and Recreation Department, Austin Science and Nature Center, Austin Wildlands Division, Lady Bird Johnson Wildflower Center, and the University of Texas at Austin. This innovative work has resulted in furthering how people can communicate about surface-groundwater interactions and led to the expansion of programs that inspire the next generation of groundwater stewards.



**Education Cave Restoration Team**  
City of Austin, Watershed Protection Department



Figure 1. The Education Cave Restoration Team gave the Watershed Protection Department's Mission Integration and Prioritization Team a tour of the improvements that were made to the cave at Bowie High School, including an auto-belay system, ladder, rails, and platform for added safety.



Figure 2. Evaluating the potential of re-opening Grassy Cove Cave in 2014; student standing on new cate; and student caving.



Figure 3. Entrance of LaCrosse Cave in 1994 and LaCrosse Cave excavation in 2013-2015.



**Education Cave Restoration Team**  
City of Austin, Watershed Protection Department



Figure 4. Addition of stairs, rails, and cave gate to LaCrosse Cave.



Figure 5. LaCrosse Cave has been used for many education programs, including Groundwater to the Gulf Summer Institute for teachers, Grow Green Professional Landscape Training, and multiple generations celebrating International Mud Day.









**Barton Springs  
Edwards Aquifer**  
CONSERVATION DISTRICT

**MEMORANDUM**

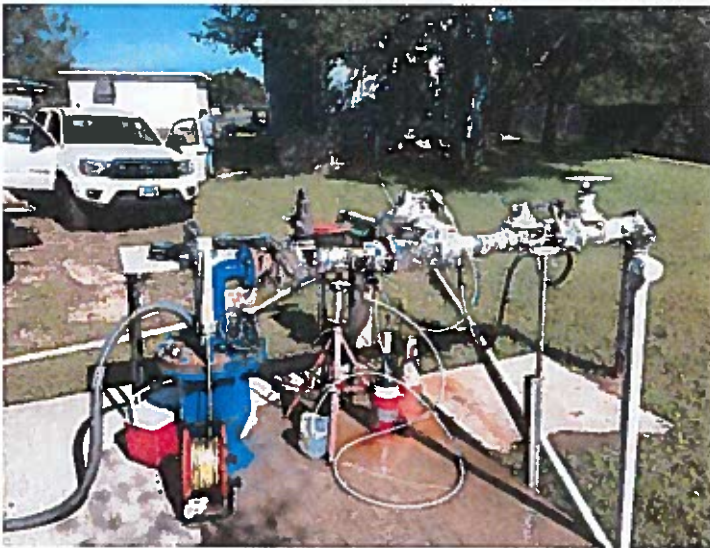
**Date:** 12/6/17

**To:** Board of Directors

**From:** Staff Evaluation Team (John Dupnik, Vanessa Escobar and Brian Smith)

**Re:** Staff Recommendation for 2017 Permittee of the Year

---



Ruby Ranch Water Supply Corporation (RRWSC) is a public water supply provider that serves the Ruby Ranch neighborhood in Buda, TX. Throughout the years, the Ruby Ranch team has been a collaborative partner with District staff in working on local groundwater issues and finding solutions to technical problems.

This year has been especially notable for the RRWSC team, as they have embarked on an innovative Aquifer Storage and Recovery (ASR) project in an effort to learn more about the feasibility of utilizing this alternative supply strategy in their long-term water supply portfolio. Due to the unique situation of having an Edwards and Trinity well pair, RRWSC was enthusiastic about the idea of conducting ASR pilot testing at their well field. District staff was able to provide guidance on the hydrogeologic and regulatory aspects of ASR projects. After a few planning and technical discussions, RRWSC took the initiative to submit an ASR experimental test application to Texas Commission on Environmental Quality (TCEQ).

In March 2017, the TCEQ authorized experimental testing and granted RRWSC permission to conduct an ASR pilot project to test the Middle Trinity Aquifer as a reservoir for storage and recovery of fresh Edwards Aquifer groundwater. Together with District staff, they designed a phased step test/cycle testing program with increasing volumes of injected water to evaluate the responses of the aquifers. Two phases of injection and extraction have been conducted as a partnership between RRWSC and the District. The RRWSC has both a Trinity well and multiple Edwards wells that they





produce from under their Edwards and Trinity Permits. Currently they must blend the Edwards and Trinity water to satisfy quality standards and could use additional permitted

Edwards water. By injecting fresh Edwards water that can be permitted by the District when there is no District-declared drought, RRWSC can have a greater quantity of water available for summer-time usage by their customers and potentially to use during drought. The project is in Phase 3 of the testing program and a status report has been developed ([Ruby Ranch ASR Status Report](#)) that describes the results of Phases 1 and 2. More testing is to come and more will be learned.

The District encourages permittees to consider these types of projects and strategies, and has actually set aside 2cfs (472 MG/yr) of Fresh Edwards for ASR projects. The District has been working within its statutory authority and regulatory purview to find ways to reduce dependence on the Barton Springs segment of the Edwards Aquifer particularly during drought.

RRWSC is the first Permittee within the District, and the 4<sup>th</sup> entity within Texas, to move forward with conducting an ASR pilot test project. As a groundwater district, we are



proud to cooperate on new and informative projects like this. Dale Olmstead and Thomas Doebner led their leadership efforts, in consultation with Joe Vickers and technical staff. The RRWSC team has always been receptive to District staff, and their ongoing cooperation on a variety of groundwater planning issues has enabled them to have an excellent compliance record overall and has enabled them to contribute to sound policy and science within the District.



District staff feels that this permittee continues to demonstrate their commitment to the responsible use of groundwater resources and has proven to be a model permittee in many ways. The staff of the BSEACD seeks to recognize and commend their efforts by awarding Ruby Ranch Water Supply Corporation "Permittee of the 2017 Year" Award.



## **Item 6**

### **Board Discussions and Possible Actions**

- d. Discussion and possible action approving the District's FY 2017 Annual Report and submitting it to the TCEQ.**







**Barton Springs  
Edwards Aquifer**  
CONSERVATION DISTRICT

**DRAFT ANNUAL REPORT**  
**FISCAL YEAR 2017**

To be approved December 14, 2017

**BOARD OF DIRECTORS (August 31, 2017)**

|                                   |            |                               |
|-----------------------------------|------------|-------------------------------|
| Blayne Stansberry, President      | Precinct 2 | November 2014 – November 2018 |
| Craig Smith, Vice President       | Precinct 5 | May 1998 - November 2018      |
| Blake Dorsett, Secretary          | Precinct 3 | November 2012 - November 2020 |
| Mary Stone, Director              | Precinct 1 | February 2008 - November 2020 |
| Robert D. Larsen, Ph.D., Director | Precinct 4 | May 2003 - November 2020      |

**DISTRICT STAFF**  
**August 31, 2017**

|                     |   |
|---------------------|---|
| John Dupnik         | General Manager   |
| Dana Wilson         | Senior Administrative Manager<br>Administrative Team Leader                   |
| Tammy Raymond       | Administrative Assistant – Personnel  |
| Shannon DeLong      | Administrative Assistant – Accounting   |
| Brian Smith         | Principal Hydrogeologist<br>Aquifer Science Team Leader                       |
| Brian Hunt          | Senior Hydrogeologist   |
| Justin Camp         | Hydrogeologist Technician   |
| Robin Gary          | Senior Environmental Educator<br>Education and Community Outreach Team Leader |
| Vanessa Escobar     | Regulatory Compliance Coordinator<br>Regulatory Compliance Team Leader        |
| Kendall Bell-Enders | Regulatory Compliance Coordinator   |
| Zachery Garza       | Regulatory Compliance Specialist  |

## Table of Contents

|   |   |    |
|---|---|----|
| 1.0   | Background .....  | 1  |
| 1.1   | General Information about the District .....                        | 1  |
| 1.2   | District Mission and Vision Statements.....                         | 4  |
| 1.3   | District Critical Success Factors.....                              | 4  |
| 2.0   | District Program Areas and Team Highlights for 2014.....            | 5  |
| 2.1   | General Management Team.....  | 5  |
| 2.2   | Administrative Team .....   | 6  |
| 2.3   | Aquifer Science Team.....   | 7  |
| 2.4   | Education and Community Outreach Team.....                          | 11 |
| 2.5   | Regulatory Compliance Team .....                                    | 13 |
| 3.0   | Required Data and Information .....                                 | 18 |
| 3.1   | Aquifer Status .....  | 18 |
| 3.2   | Grant Programs .....  | 18 |
| 3.3   | Professional Services .....   | 18 |
| 3.4   | Capital Projects .....  | 19 |
| 3.5   | Financial Report.....   | 19 |
| 3.6   | Evaluation of District's Long-range Plan Pursuant to §36.1071 ..... | 20 |
| 3.6.1   | Background.....   | 20 |
| 3.6.2   | Board Evaluation of Objectives and Progress Assessment.....         | 20 |
| Appendix A: Independent Annual Financial Audit Report.....                |   | 21 |
| Appendix B: Assessment of Progress toward Management Plan Objectives..... |   | 22 |
| Record of Board Assessment of District Objectives                         |   |    |
| Staff Assessment of Performance Standards and Metrics                     |   |    |
| Basis for Evaluation of Progress on Objectives and Performance Standards  |   |    |

## **1.0 BACKGROUND**

The Barton Springs/Edwards Aquifer Conservation District (“District”) Bylaws require the District Board President or General Manager to report on the status of the District and its programs annually to the Board and to the Texas Commission on Environmental Quality (TCEQ). This document is the Annual Report for Fiscal Year 2017, covering the period from September 1, 2016 to August 31, 2017.

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

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

This introductory section provides an overview of the District, and summarizes the mission and vision of the District, and its Board-established critical success factors. Other major report sections that follow include a summary of the active programs in FY 2017; a recap of other specific information required by statute, including an assessment of performance in terms of objectives and performance standards identified in the prevailing Management Plan; and a financial summary. The annual audit report conducted by an independent audit firm is included in its entirety as Appendix A. The Board’s assessment of progress toward the Management Plan’s objectives by performance standards and the basis for that assessment are included as Appendix B.

### **1.1 General Information about the District**

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

Upon creation in 1987, the District's jurisdictional area encompassed approximately 255 square miles and was generally defined to include all the area within the Barton Springs segment of the Edwards Aquifer with an extended area to the east to incorporate the service areas of the Creedmoor-Maha Water Supply Corporation (WSC), Goforth Special Utility District (SUD), and Monarch Utilities. In this area, designated as the "Exclusive Territory," the District has authority over all groundwater resources. In 2015, the 84<sup>th</sup> Texas Legislature House Bill 3405 expanded the District's jurisdictional area to include the portion of Hays County located within the boundaries of the Edwards Aquifer Authority (EAA) excluding the overlapping area in the Plum Creek Conservation District (see Figure 1). The newly annexed area designated as "Shared Territory," excludes the Edwards Aquifer and includes all other aquifers, including the underlying Trinity. The District serves southern Travis County, central and eastern Hays County, and portions of northwestern Caldwell County. The District's jurisdictional area including the Shared Territory encompasses approximately 420 square miles and includes both urban and rural areas.

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

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

In FY 2017, there was no District election held. District elections occur every two years. The next election is set to be held in November of 2018 for District Precincts 2 and 5.

In accordance with District Bylaws, the Board elects its officers for one-year terms in December of each year. The elected officers in December 2016 were Blayne Stansberry, President; Craig Smith, Vice President; and Blake Dorsett, Secretary. As a local political subdivision of the State of Texas, all meetings of the Board are conducted in accordance with the Open Meetings Act, and the District's business is subject to the Texas Public Information Act.

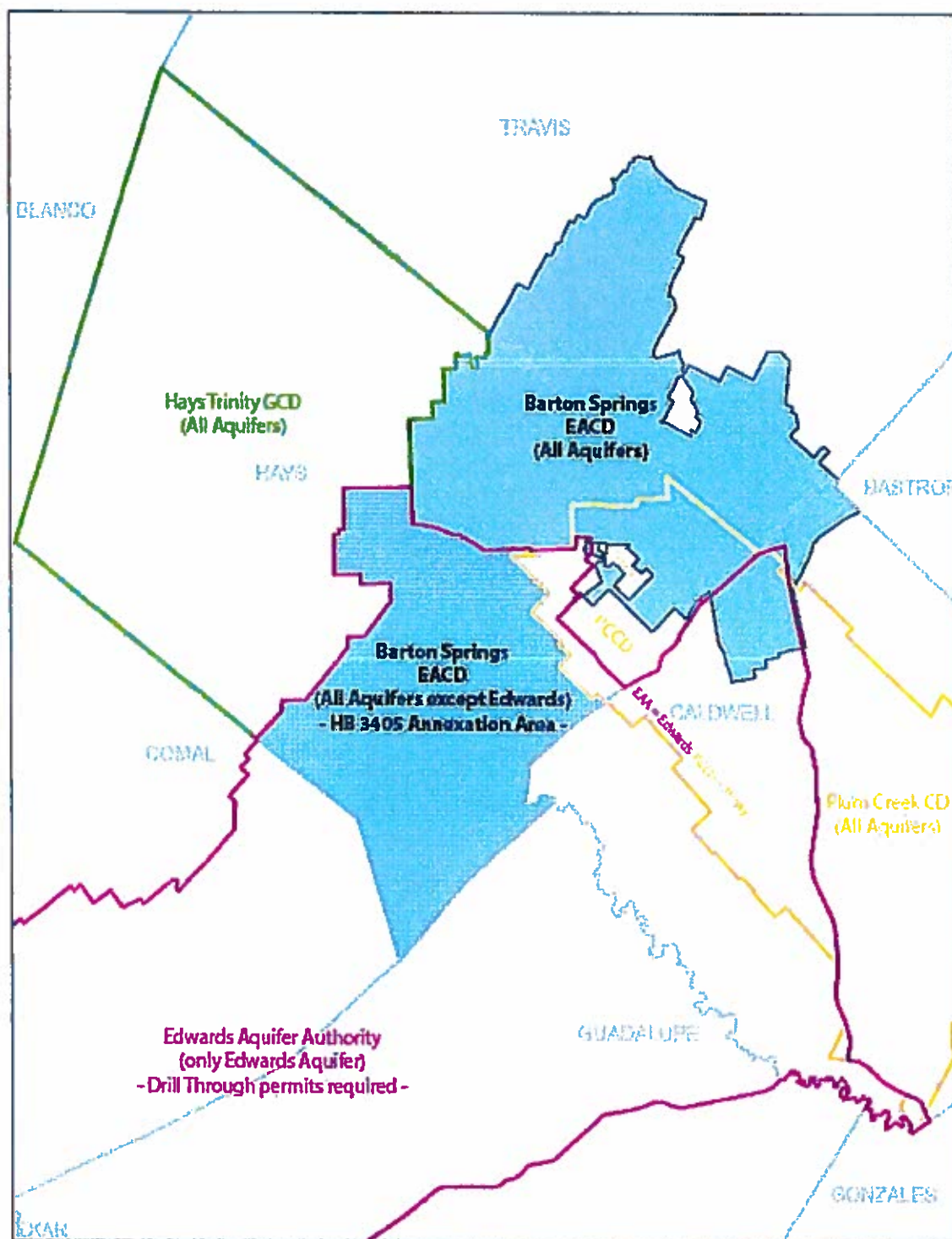


Figure 1 - The District's territory including the expanded Shared Territory and the adjacent Groundwater Conservation Districts and their respective jurisdiction over aquifers.

## 1.2 District Mission and Vision Statements

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

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

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

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

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

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

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

## 1.3 District Critical Success Factors

The District has established a set of continuing "critical success factors" that flow from and are generally consistent with the goals and objectives that are in the Management Plan (MP). These critical success factors include:

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

## **2.0 DISTRICT PROGRAM AREAS AND TEAM HIGHLIGHTS FOR 2017**

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

This section of the report summarizes the operational teams that existed throughout FY 2017 and provides some highlights and notable achievements for each. Appendix B contains more information and details on the work undertaken by these teams in support of the various goals, objectives, and performance standards identified in the applicable 2014 District MP.

### **2.1 General Management Team**

Mr. John Dupnik served as the District's General Manager (GM). The GM is responsible for the day-to-day business of the District, and is an *ex-officio* member of all the other teams. The key areas of functional responsibilities for the GM include staff management and development, programmatic planning and execution, stakeholder relationship development and cultivation, and financial administration of the District. The GM:

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

In FY 2017, some highlights for the office of the GM:

- Coordinated the conduct of all of the District's FY 2017 business within FY 2017 budget constraints with two mid-year budget amendments to adjust with the evolving work load and objectives.
- Maintained a productive, efficient, and motivated staff by providing ongoing direction through regular meetings with Team Leaders and end-of-year performance evaluations of all staff, and by holding spring and fall staff retreats to encourage team building and to maintain staff morale.
- Served as the primary point of contact, and coordinated with Brian Sledge of Sledge Law, the District's legislative consultant, and the appointed Board committee members (Blayne Stansberry and Bob Larsen) to monitor bills of interest to the District in the 85<sup>th</sup> Legislative session, including two bills that were filed on the District's behalf (HB 2424 and HB 3071).



Efforts included bill tracking and analysis, meeting and providing information to legislators, and providing testimony at legislative committee hearings on certain bills.

- Coordinated the work of the District's Habitat Conservation Plan (HCP) consultant and staff to facilitate the U.S. Fish and Wildlife Service (USFWS) review of the Incidental Take Permit (ITP) application including responding to all comments from the USFWS Austin field office and regional office in Albuquerque, New Mexico to their satisfaction such that the draft HCP and Environmental Impact Statement (EIS) were submitted to the solicitor general, and approved for public notification of availability.
- Continued to ensure compliance with the District Consent Decree with the Texas Department of Transportation (TxDOT) applicable to construction of certain area roadway projects. Activity included ongoing review of stormwater plans, evaluation of significant geologic features and periodic site inspections of stormwater Best Management Practices (BMPs) by District staff after construction on State Highway 45 Southwest (SH 45 SW) commenced.
- Participated actively in the joint groundwater planning processes of Groundwater Management Area (GMA) 9 and served as the District Representative to GMA 10, including related interfaces with the Texas Water Development Board (TWDB), other GCDs in the two GMAs, and stakeholder meetings. This year's efforts wrapped up the GMA's second round of planning with the final adoption of the desired future conditions (DFCs) by the GMA, and completion of the explanatory report.
- Participated actively in regional water planning group activities, including serving as the GMA 10's voting Representative to Region K, and monitoring Region L groundwater-related planning activities. Efforts involved activity associated with the beginning stages of the next round of planning including implementation of new legislation and rules affecting planning and evaluation of population and demand projections.
- Coordinated the update and revision of the District's MP with the oversight of the Board MP Committee (Mary Stone and Craig Smith) and submitted the Board-approved draft MP within the TWDB-prescribed deadlines.
- Continued to participate in the review of the Dripping Springs Texas Pollutant Discharge Elimination System (TPDES) permit application and draft permit which involved preparation of written and oral comments during the comment period, technical review of discharge/beneficial reuse scenarios, and ongoing settlement discussions.

## **2.2 Administrative Team**

Ms. Dana Wilson serves as the Leader of the Administrative Team, with Ms. Tammy Raymond and Ms. Shannon DeLong as team members for administrative programs support. Ms. DeLong continued to work on a three-quarter time basis throughout FY 2017, including telecommuting one day per week.

The Administrative Team is responsible for banking, accounting, timekeeping and payroll administration, records retention and management, facilities and vehicle fleet management,

personnel and human resources administration, contracts administration, director compensation and reimbursement administration, and state/federal grant administration.

In FY 2017, some highlights for the Administrative Team included:

- Maintaining the financial records to receive a clean financial audit (see Appendix A);
- Continuing the process of electronically scanning historical hard-copy records for archival purposes;
- Supporting the revisions of various parts of the Employee Policy Manual and subpolicies;
- Supporting the continuing phases of annual office updating/remodeling;
- Assisting the District's information technology (IT) consultant in making improvements to the IT infrastructure and resolving various staff IT issues, and adding two new employee computer hard drives per year, as warranted;
- Supporting District transparency efforts, specifically in the finance areas, by applying for and achieving a Financial Transparency Star Award from the Texas Comptroller's office; and

## 2.3 Aquifer Science Team

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

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

In FY 2017, some highlights for the Aquifer Science Team included:

- Developed new technical reports, presented numerous technical talks with published abstracts, published technical papers, and attended technical conferences including:
  - Gulf Coast Association of Geological Societies (Corpus Christi, 9/18-20/16)
  - South Central Texas Water Research Interest Group (Texas A&M San Antonio, 12/1/16)
  - Underground Injection Control National Meeting (Austin, 2/23/17)
  - Interinformational Flows Workshop (EAA, 3/1/17)
  - South-Central Geological Society of America (San Antonio, 3/12-14/17)
  - Texas Water Research Network (UT, 5/8-9/17)
  - Trinity Conceptual Model (SWRI, 6/5/17)
  - South Central Texas Water Research Interest Group (Austin 6/2/17)
- Presented technical information and studies to the public and students:
  - Travis County Commissioners Court (9/13/16)
  - Barton Springs University (9/28/16)
  - Hydrogeo Workshop, Cave Without A Name (10/1-2/16)
  - Sierra Club and Texas Disposal Systems (11/5/16)
  - Hydrogeology class at UTSA (12/1/16)
  - Ecological Restoration Journal Review Group (12/9/16)
  - Texas A&M Kingsville (3/24/17)
  - Sunset Valley City Council (3/7/17)
  - Blanco River book release (Kyle, 4/8/17)
  - Travis County Commissioners Court (6/20/17)
- Maintained a monitor well network of about 35 wells with instruments that collect hourly data. The District's weather station at the District office also collects hourly data. The District routinely measures water levels in the six multiport monitor wells that are completed in the Edwards and Trinity aquifers.
- Coordinated and participated in an aquifer test for the Electro Purification (EP) application in Central Hays County. This included establishing a well monitor network of periodic and continuous data collection and water-quality sampling (with the EAA) over a period of months.

- Determined and documented drought status, including keeping the District's drought monitor blog up to date. There were no District-declared droughts in FY 2017.
- Participated with GMA 9 and GMA 10 in technical discussions.
- Completed field collection data from the newly installed multiport monitor well in the saline Edwards (in FY 2016). District staff worked with Carollo Engineers who conducted the feasibility portion of this study. Staff completed a draft hydrogeologic report for the study. Expected completion of the overall feasibility report is in early FY 2018.
- Worked cooperatively with the Ruby Ranch WSC to conduct two phases of Aquifer Storage and Recovery (ASR) pilot testing. A status report was written and submitted to the TCEQ in August 2017. A final phase of the testing is being done in early FY 2018.
- Performed studies with the City of Austin and the Hays Trinity GCD (HTGCD) and other independent geologists to characterize surface and groundwater interactions along Onion Creek (see Publications).
- Continued development and data collection of a geologic database of the Edwards and Trinity Aquifers in central Texas in cooperation with the EAA and the HTGCD.
- Maintained the Antioch Cave Recharge Enhancement Project as an ongoing part of a 319(h) grant from the Environmental Protection Agency (EPA) and TCEQ. In FY 2017, District staff replaced operational equipment and hardware at Antioch Cave to improve the operation and performance of the best management practice.
- Implemented, in cooperation with Magellan Pipeline Company, an annual sampling program related to the operation of the Longhorn Pipeline that transports crude oil. In March 2017, staff sampled about eight springs and well sites for hydrocarbon contaminants as a screening test for BTEX and TPH. Staff also worked on locations for the installation of two new monitor wells anticipated in FY 2018.
- Collected water-quality data (major ions and isotopes) from about 125 sample locations in FY 2017, in cooperation with the TWDB.
- Cooperated with Travis County on various groundwater studies including installing a multiport monitor well and sampling of groundwater.
- Supported research in conjunction with a graduate student at the University of Texas at San Antonio.
- Brian Smith has continued serving on the City of Austin Environmental Commission.

- **Published papers:**

- Hunt, B. B., B.A. Smith, M.O. Gary, A.S. Broun, D.A. Wierman, J. Watson, and D.A. Johns, and, 2017, Surface-water and Groundwater Interactions in the Blanco River and Onion Creek Watersheds: Implications for the Trinity and Edwards Aquifers of Central Texas. *South Texas Geological Society Bulletin*, v. 57, no. 5, January 2017, p. 33-53.
- Hunt, B. B., A. S. Broun, D. A. Wierman, D. A. Johns, and B. A. Smith, 2016, Surface-water and groundwater interactions along Onion Creek, Central Texas: *Gulf Coast Association of Geological Societies Transactions*, v. 66, p. 261–282.
- Smith, B.A., B.B. Hunt, and J. Camp, 2017, 30 years of Aquifer Science. *BSEACD Fact Sheet 0817*.
- Smith, B.A. and B.B. Hunt, 2017, Recharge and Water-Quality Controls for a Karst Aquifer in Central Texas, in *Karst Groundwater Contamination and Public Health*, ed. W.B. White, J.S. Herman, E.K. Herman and M. Rutigliano, Springer International Publishing, *Advances in Karst Science*, February 2017, p. 299-317.

- **FY 2017 Abstracts:**

- Hunt, B.B., B.A. Smith, M.O. Gary, A.S. Broun, and D.A. Wierman, 2017, An Evolving Conceptual Model of the Middle Trinity Aquifer, Hays County, Central Texas. *Geological Society of America Abstracts with Programs*. Vol. 49, No. 1, South-Central Section Meeting, San Antonio, Texas, March 2017.
- Hunt, B.B., and B.A. Smith, 2017, Model then Measure: Assessing and Monitoring the Potential for Unreasonable Impacts from a Pumping Well—Example from the Middle Trinity Aquifer, Hays County, Texas. *Geological Society of America Abstracts with Programs*. Vol. 49, No. 1, South-Central Section Meeting, San Antonio, Texas, March 2017.
- Smith, B.A. and B.B. Hunt, 2017, Desalination and Aquifer Storage and Recovery Potential of the Saline Edwards Aquifer, Central Texas. *Geological Society of America Abstracts with Programs*. Vol. 49, No. 1, South-Central Section Meeting, San Antonio, Texas, March 2017.
- Smith, B.A. B.B. Hunt, V. Escobar, K. Bell-Enders, and J. Dupnik, 2017, Considering Unreasonable Impacts in the Groundwater Production Permitting Process. *Geological Society of America Abstracts with Programs*. Vol. 49, No. 1, South-Central Section Meeting, San Antonio, Texas, March 2017.
- Watson, J.A., A.S. Broun, B.B. Hunt, D.A. Wierman, and B.A. Smith, 2017, Mapping the Upper Glen Rose Unit 3 Aquitard: Implications for Recharge to the Middle Trinity aquifer, Hays County, Texas. *Geological Society of America Abstracts with Programs*. Vol. 49, No. 1, South-Central Section Meeting, San Antonio, Texas, March 2017.

## **2.4 Education and Community Outreach Team**

Ms. Robin Havens Gary serves as the leader of the Education and Community Outreach Team. Ms. Gary is the District's Environmental Educator, GIS Specialist, and Public Information Coordinator, and is the primary member and team lead for the Education and Community Outreach Team in FY 2017. Ms. Gary collaborates regularly with other members of the staff, including interns, to maintain a diverse and effective Education and Outreach program.

The District continues its active, multi-dimensional educational program that emphasizes awareness of the finite and fragile aspects of the groundwater resources in the District. To increase awareness of District programs and roles, staff applied a multi-faceted approach. The District celebrated its 30<sup>th</sup> year anniversary with several special projects. Interns helped prepare videos and marketing info-graphics that were highlighted through the eNews and frequently on social media. Public radio sponsorships ran announcements focused on the importance of local voice in groundwater management during the month of August. An augmented reality teaching tool was prototyped to increase visibility of water quality indicators. A timeline of significant legislation, research, and events was created, and the Lovelady Monitor Well hydrograph and Board Members were also incorporated. A celebration where all these special projects were showcased was held at the Wildflower Center for 150 stakeholders, permit holders, well owners, researchers, and past and present Board and staff.

The digital newsletter continued circulation in FY 2017. Feedback and metrics show that the more frequent updates in the mobile-friendly, digital format has been highly popular. Subscribers receive regular updates on permitting, aquifer science, events, and programs. Each monthly eNews was opened/accessed over 1,000 times. Social media posts increased distribution of announcements and news and received high view rates. The 2017 Well Water Check-up and Open House provided an opportunity for well owners, particularly those in the newly annexed area, a chance to meet staff and have their water analyzed for free. Over 2,000 postcards were mailed to homeowners in the shared territory in neighborhoods that have a high density of Trinity wells.

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

In FY 2017, some highlights of the Education and Community Outreach Team included:

- Continuing eNews bulletin with automated subscribe/unsubscribe capabilities,
- Participating in approximately 31 outreach events (including field trips, presentations, and events) that reached approximately 2,047 adults and 2,135 children,
- Hosting the sixth annual Water Conservation Symposium: Conservation Works: Building Programs from Simple to Sophisticated" in collaboration with the water providers and non-profits participating in the CTWEN,
- Hosting the 12<sup>th</sup> Annual Groundwater to the Gulf Summer Institute for Educators in collaboration with other state, local, and non-profit water educators, which trained 42 teachers who in turn reach over 4,200 students annually, and
- Providing support for the 2017 Rainwater Revival and Hill Country Living event that brings rainwater harvesting system installers, suppliers, water haulers and other experts together to serve as a resource for homeowners and business owners that are interested in using rainwater as an alternate supply.

## 2.5 REGULATORY COMPLIANCE

The Regulatory Compliance Team consists of two Regulatory Compliance Coordinators and one Regulatory Compliance Specialist who are responsible for a wide range of the District's responsibilities including drought management, pumpage tracking/compliance assessment, rulemaking, rule and well construction standard interpretation, permitting, enforcement, well inspections, well pluggings, and drilling oversight. Regulatory Compliance Team members have also actively attended and participated in community outreach and regional development and planning groups, and served as District liaisons to local municipalities, political subdivisions, permittees, and licensed drillers and pump installers in the area.

### Highlights of the Regulatory Compliance Team in FY 2017:

- **Dripping Springs TPDES Permit Application** – Staff participated actively in technical discussions and analysis of the Dripping Springs wastewater discharge permit application. Staff attended multiple stakeholder meetings to propose alternatives and to provide technical insight.
- **State Highway 45 Southwest** – In November 2016, the roadway construction efforts began. Staff actively participated in site inspections and technical discussions with the Central Texas Regional Mobility Authority (CTRMA) project team, TxDOT representatives, and the Environmental Compliance Manager. Staff coordinated eleven site visits in FY 2017 for which inspection reports were developed and District recommendations were provided. The District continued to work with an engineering consultant (Tom Hegemier – Doucet and Associates) on the technical evaluation of stormwater control designs in accordance with the consent decree.
- **Electro Purification Applications** – At the beginning of FY 2017, staff approved the test well permit and aquifer test work plan for this project. Staff evaluated the permit application and aquifer testing/well acidizing procedures prior to the test. The aquifer test commenced in October 2016 and was completed in January 2017. During the test, all technical staff conducted site inspections of the pumping wells and monitor wells to collect water level data and water quality samples.
- **Needmore Water, LLC Application** – At the beginning of FY 2017, staff issued an administrative completeness letter to the applicant for the conversion of a Temporary Production Permit (HB 3405) to a Regular Permit. The General Manager developed a Preliminary Decision which entailed information on the technical evaluation of the aquifer test data. At the end of FY 2017, the application remained as pending in the State Office of Administrative Hearings (SOAH) hearing process.
- **Management Plan** – Per statutory requirements, the District actively worked towards updating its MP. The plan was scheduled to expire in January 2018 and the District was required to submit an updated plan for preliminary review in July 2017. The plan was updated to reflect recent legislative changes and rule making efforts that took place since the 2015 annexation.



- **Database Development and Upgrade** – Staff actively coordinated the technical discussions and conceptual designs for a database management and reporting system. Staff internal discussions were held to identify the scope elements, and a Board subcommittee was involved in the procurement and contract negotiation process. The project is scheduled to be completed in late FY 2018.
- **Inspections & Investigations:** Staff completed a total of 39 inspections related to special investigations, site permittee inspections, and well permit applications.

| <b>FY 17 TOTAL Inspections/ Investigations/ Onsite Visits</b> | <b>39</b> |
|---|-----------|
| Exempt Well Inspections                                       | 6         |
| Limited Production Permit Inspections                         | 14        |
| Individual Production Permit Inspections                      | 5         |
| Test Well Inspections   | 3         |
| Plugging Inspections  | 10        |
| Special Investigation Inspections                             | 0         |
| Other Permittee Inspections                                   | 0         |

- **Conservation Credits:** The District issued a total of \$23,297.49 in credits in FY 2017 with \$14,560.93 being issued to 16 permittees, and \$8,736.56 being issued to the COA. Permittees donating credits back to the District's camp scholarship fund included Creedmoor-Maha WSC (\$ 2,087.69), Goforth SUD (\$ 700.00), and Texas Lehigh Cement Company (\$ 441.54).
- **Enforcement:** There were no formal enforcement actions initiated in FY 2017.
- **Rulemaking:** District staff developed rule concepts for guiding and regulating ASR systems within the District. Prior to drafting concepts, staff held multiple meetings with TCEQ and other stakeholders throughout the year. Since the passage of HB 655 and recent changes to TCEQ Rules TAC Chapter 30 Section 331, the District is making a concerted effort to integrate its ASR rules with those of TCEQ. ASR rule concepts were presented to the Board on August 10, 2017. Staff also participated in legislative bill analysis relating to ASR.
- **External Reviews, Coordination, and Outreach.** Workgroups and projects involving staff participation included:
  - Aquifer Storage and Recovery Technical Discussions and Workgroups,
  - SH 45 SW Technical Workgroups,
  - Water Pollution Abatement Plan (WPAP) Wastewater Permit Reviews,
  - Water Conservation Advisory Council,
  - Regular meetings of the Regional Water Quality Protection Plan workgroup, and
  - Well permitting and registration efforts in the shared territory.
- **Drought Management:** The District declared No-Drought status on January 29, 2015 and remained in Non-Drought status throughout FY 2017.

**Permitting Summary:**

A summary of the new wells drilled in FY 2017 is provided in the table below.

| FY 17 TOTAL New Wells           |  | 35 |
|---------------------------------|--|----|
| New Exempt Wells                |  | 9  |
| Nonexempt Domestic Wells (LPPs) |  | 22 |
| Individual Wells                |  | 4  |
| Test Wells                      |  | 0  |
| Replacement Wells               |  | 0  |

A summary of permitting applications that were processed in FY 2017 is provided in the table below.

| FY 17 TOTAL Permit Applications                           |  | 54 |
|---|--|----|
| Minor Amendment   |  | 4  |
| Major Amendments  |  | 0  |
| New Exempt Well   |  | 9  |
| Limited Production Permit (Nonexempt Domestic Wells)      |  | 22 |
| Individual Production Permit                              |  | 4  |
| New Individual Well Drilling Authorizations /Modification |  | 5  |
| Test Well   |  | 0  |
| Well Plugging   |  | 10 |
| Replacement Well  |  | 0  |

A summary of the individual production permits that were processed in FY 2017 is provided in the table below.

| Annual Volume |           | New Production Permits                                      | Permit Type                   | Aquifer |
|---------------|-----------|---|-------------------------------|---------|
| 1             | 150,000   | Deborah Bates   | Conditional Edwards – Class C | Edwards |
| 2             | 150,000   | Driftwood Diesel LLC  | Conditional Edwards – Class A | Edwards |
| 3             | 900,000   | McCollum Savell Holding LLC<br>(dba Jumping Jack Dog Ranch) | Conditional Edwards – Class C | Edwards |
| 4             | 1,240,000 | Eskew Place Ltd   | Conditional Edwards – Class A | Edwards |

A summary of current permitted pumpage is provided in the tables below.

| <b>Total Permits Active to Date</b>              |     |
|--|-----|
| Total Historic Edwards Permits Issued to Date    | 74  |
| Total Conditional Edwards Permits Issued to Date | 28  |
| Total Historic Trinity Permits Issued to Date    | 27  |
| Total Alluvial/Austin Chalk Permits Issued       | 2   |
| Total Individual Permitted Wells to Date         | 190 |
| <b>LPP General Permits</b>                       |     |
| Total Permits Issued                             | 129 |
| Total LPP Permitted Wells                        | 129 |

| <b>Permitted Pumpage</b>  |                      |              |                  |
|---------------------------|----------------------|--------------|------------------|
|                           |                      |              |                  |
| <b>Edwards MZs</b>        | <b>gallons</b>       | <b>cfs</b>   | <b>acre-feet</b> |
| Historical (Ind.)         | 2,311,082,596        | 9.80         | 7,092            |
| Historical (LPP)          | 2,500,000            | 0.011        | 8                |
| Total Historical          | 2,313,582,596        | 9.81         | 7,100            |
|                           |                      |              |                  |
| Conditional (Ind.)        | 351,274,948          | 1.49         | 1,078            |
| Conditional (LPP)         | 49,500,000           | 0.21         | 152              |
| Total Conditional         | 400,774,948          | 1.70         | 1,230            |
|                           |                      |              |                  |
| <b>Total Edwards</b>      | <b>2,714,357,544</b> | <b>11.51</b> | <b>8,330</b>     |
|                           |                      |              |                  |
| <b>Trinity MZs</b>        | <b>gallons</b>       | <b>cfs</b>   | <b>acre-feet</b> |
| Historical (Ind.)         | 495,781,557          | 2.10         | 1,521            |
| LPP                       | 12,500,000           | 0.05         | 38               |
| Total Trinity             | 508,281,557          | 2.15         | 1,560            |
|                           |                      |              |                  |
| <b>Other Aquifers MZs</b> | <b>gallons</b>       | <b>cfs</b>   | <b>acre-feet</b> |
| Historical (Ind.)         | 2,500,000            | 0.01         | 8                |
|                           |                      |              |                  |
| <b>Total Permitted</b>    | <b>3,225,139,101</b> | <b>13.67</b> | <b>9,898</b>     |

|                        | Permitted Transport |      |           |
|------------------------|---------------------|------|-----------|
|                        | gallons             | cfs  | acre-feet |
| FY 2016                | 0                   | 0    | 0         |
| <b>Total Permitted</b> | 400,000,000         | 1.70 | 1,227.55  |

### **3.0 REQUIRED DATA AND INFORMATION**

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

#### **3.1 Aquifer Status**

FY 2017 began in a status of No Drought following a trend which began back in 2014. In September 2014, water levels began to rise after above-average rainfall. Steady recharge throughout 2015 and 2016 continued to increase aquifer water levels as well as Barton Springs flow. In January 2015, the Board updated the drought status from Stage II Alarm Drought to No Drought. While measurements began to decline in October 2016 and have steadily continued down, they remain above drought warning levels. As of December 2017, we maintain a status of No Drought.

Austin has received an overall 34" of rainfall so far in 2017, which has produced little recharge and resulted in aquifer water level decline. While levels are going down, the benefits of previous wet years have provided a bolster against this drop at the Lovelady Monitor Well, which has recorded data since 1949.

The rejuvenating effects of above-average rainfall in 2015 and 2016 well-prepared the region for a somewhat dryer FY 2017. La Niña conditions in the Pacific are likely to result in continued dry weather through the winter and beginning of 2018.

#### **3.2 Grant Programs**

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

#### **3.3 Professional Services**

The District expended \$170,359 for professional services in FY 2017. This amount included legal fees of \$111,000 for general counsel support provided by Bickerstaff, Heath, Delgado & Acosta LLP of Austin, and included involvement of the District and its attorneys in a few new billing categories (Needmore \$19,618; Dripping Springs TPDES \$17,506; and Attorney General (AG) Opinions and Public Information Requests (PIRS) for \$19,696).

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

Additional professional services for FY 2017 also reported in the above amount include the District's third party retirement plan administrator, The Standard, for \$18,447.

The District retained Montemayor Britton Bender PC early in 2016 to perform its annual financial audit for FY 2015 (as the previous auditor no longer participates in governmental entity audit processes). The fees for these professional services were \$11,000 for FY 2017, and are also included in the professional services total above.

Not included in the professional services total above, the District expended \$38,000 for the lobbying services of Sledge Law & Public Strategies for the 85th Legislative Session. The District has changed the timing of when legislative issues are addressed from a biennial expense to an ongoing expense according to the new term of agreement dated July 1, 2016 through June 30, 2018, being a flat-fee structure bifurcated between legislative session months and legislative interim months spread across 24 months. During legislative months – November of even-numbered years through June of odd-numbered years, the fee will be \$4,000 per month. During legislative interim months – July of odd-numbered years through October of even-numbered years, the fee will be \$1,000 per month. So one year there will be \$36,000 in legislative expenses, and the following year there will be \$12,000 in legislative expenses.

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

### **3.4 Capital Projects**

The District completed one small capital project in FY 2017 that remodeled library area shelving cabinets for \$2,484.

### **3.5 Financial Report**

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

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



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

#### **3.6.1 Background**

TWC §36.1071 requires all GCDs to establish and maintain a long-range comprehensive plan for groundwater management in the District. This long-range plan is a ten-year plan called the District MP. The MP must be reviewed, revised as necessary, readopted, and reapproved at least once each five years. The current plan was adopted in January of 2013 and is set to expire in January of 2018. Pursuant to the code provisions, all GCDs are required to assess progress quantitatively toward the objectives in their prevailing MP at least annually. This assessment is summarized in the following Section 3.6.2 and elaborated in Appendix B of this Annual Report.

#### **3.6.2 Board Evaluation of Objectives and Progress Assessment**

Section 2 of this report highlighted some activities for each of the operational teams. A more comprehensive and detailed listing of the activities of the District is included in Appendix B, which was prepared by the staff to assist the Board's evaluation of the progress made in FY 2017 toward the goals, objectives, and performance standards identified in the prevailing District Management Plan.

On November 16, 2017, the Board reviewed the information in Appendix B, discussed its conformance with the plan objectives and their subsidiary performance standards, and then took action to evaluate progress made by the District toward these strategic objectives, as specified in the metrics for each of the objectives. Following a proper motion and second, and discussion in a properly noticed Open Meeting, the Board of Directors unanimously approved the progress toward each and all objectives in FY 2017 as being satisfactory, and directed the staff to include a record of these actions and their basis in this Annual Report. That record and the basis for that decision-making are included as Appendix B.

This assessment for FY 2017 measured progress towards the goals and objectives of the then-current MP approved in January of 2013. An updated MP, which was approved by the TWDB on November 21, 2017, will serve as the basis for the Board's next evaluation of that plan's objectives in FY 2018.

## **APPENDIX A**

### **Independent Annual Financial Audit Report**

(To be Board-approved December 14, 2017)

## **APPENDIX B**

### **Assessment of Progress toward Management Plan Objectives**

(Board-approved November 16, 2017)



## **Item 6**

### **Board Discussions and Possible Actions**

- e. Discussion related to the District's award of accreditation through the State comptroller's Transparency Star program.**







# Transparency Stars

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The Texas Comptroller of Public Accounts  
awards the **Barton Springs/Edwards Aquifer  
Conservation District** the **Traditional Finances Star**

for exemplary efforts in creating financial transparency around public services and spending decisions. The Transparency Stars program recognizes local governments across Texas that are striving to meet a high standard for financial transparency online. These efforts provide citizens with clear, consistent information about public spending in user-friendly formats.



November 14, 2017



## **Item 6**

### **Board Discussions and Possible Actions**

**f. Discussion and possible action related to the City of Dripping Springs TPDES permit application to authorize direct discharge of treated wastewater to Onion Creek in the contributing zone of the Barton Springs segment of the Edwards Aquifer.**



## **Item 6**

### **Board Discussions and Possible Actions**

**g. Discussion and possible action related to the annual election of the officers of the BSEACD Board of Directors.**



## **Item 7**

### **Director's Reports**

**Directors' Reports.** *(Note: Directors' comments under this item cannot address an agenda item posted elsewhere on this agenda and no substantive discussion among the Board Members or action will be allowed in this meeting. Communications reported under this item may be used to support Performance Standard 4-1 of the District's Management Plan related to demonstration of effective communication with District constituents.)*

Directors may report on their involvement in activities and dialogue that are of likely interest to the Board, in one or more of the following topical areas:

- **Meetings and conferences attended or that will be attended;**
- **Committee formation and updates;**
- **Conversations with public officials, permittees, stakeholders, and other constituents;**
- **Commendations; and**
- **Issues or problems of concern.**





## **Item 8**

### **Adjournment**

29-14

28-12

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