

## NOTICE OF OPEN MEETING

Notice is given that a **Regular Meeting** 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, April 14, 2016**, 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 adjourn into 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 March 24, 2016 Regular Meeting and Public Hearing. **Not for public review at this time**
  3. Approval of an Order of Appointment of Records Custodian and Agent for the November 2016 Election. **Pg. 13**
- 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. 18**
- ii. Update on activities related to GMA and regional water planning
- iii. Update on ongoing and prospective District grant projects
- iv. Update on the activities related to the SH 45 SW roadway project
- v. Update on activities related to the HCP and the associated draft EIS
- vi. Update on activities related to the City of Dripping Springs TPDES permit application

4. **Presentations**

Presentation by Peter Sprouse on detection of Barton Springs Salamanders (*Eurycea sosorum*) within the Edwards Aquifer using well sampling. **NBU**

5. **Discussion and Possible Action.**

- a. Discussion and possible action related to public comments received on proposed revisions to the District Rules and Bylaws presented in the public hearing held on March 24, 2016 and the proposed process for possible adoption. **Pg. 24**
- b. Discussion and possible action related to approval of revisions to the District’s guidance document, *Guidelines for Hydrogeologic Reports and Aquifer Testing*. **Pg. 60**
- c. Discussion and possible action related to designating one or more draft redistricting plans as Illustrative Plan(s) to be proposed for public consideration and comment including scheduling one or more public hearings at which to receive public comments. **Pg. 75**

6. **Adjournment.**

Came to hand and posted on a Bulletin Board in the Courthouse, Travis County, Texas, on this, the \_\_\_\_\_ day of April, 2016, at \_\_\_\_\_ .m.

\_\_\_\_\_, Deputy Clerk

Travis County, TEXAS

**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 March 24, 2016 Regular Meeting and Public Hearing.**
- 3. Approval of an Order of Appointment of Records Custodian and Agent for the November 2016 Election.**

## **ORDER OF APPOINTMENT OF RECORDS CUSTODIAN AND AGENT**

**WHEREAS**, the Board of Directors (the "Board") of the Barton Springs/Edwards Aquifer Conservation District ("BSEACD") has the authority to call a General Election on November 8, 2016, for directors to serve for single-member Directors Precincts 1, 3, and 4; and,

**WHEREAS**, the Board also has the authority pursuant to Chapter 31, Texas Election Code, to approve the appointment of a Custodian of Records and an Agent for the election; and

**WHEREAS**, the BSEACD General Manager warrants that the individual staff member named herein has the capacity and capability to serve in the stipulated roles without harming other duties, roles, and responsibilities;

**IT IS, THEREFORE, ORDERED BY THE BOARD OF DIRECTORS OF THE BARTON SPRINGS/EDWARDS AQUIFER CONSERVATION DISTRICT THAT:**

**Section 1. Appointment of Custodian of Records.** The Board appoints Dana Christine Wilson, an employee of BSEACD, as the Custodian of Records ("Custodian") to perform the duties related to the conduct and maintenance of records of the Election as required under the Texas Election Code during the period beginning the fiftieth (50<sup>th</sup>) day before the election and ending not earlier than the fortieth (40<sup>th</sup>) day after the day of the Election. In particular, the Custodian shall provide applications for candidates, accept applications from candidates for a place on the ballot, determine the order in which names will appear on the ballot for the director positions and accept and maintain records regarding campaign expenditures that may be filed with the district.

The Custodian shall maintain an office open for election duties for at least three hours each day, during regular office hours, on regular business days during the period of September 19<sup>th</sup> through December 19<sup>th</sup>. The Custodian shall post notice of the location and hours of her office as required by the Texas Election Code. The Custodian shall maintain in her office, the documents, records and other items relating to the election and shall be the person designated to receive documents on behalf of BSEACD that are required by the Texas Election Code.

**Section 2. Appointment of Agent.** The Secretary to the Board has appointed Dana Christine Wilson as the Secretary's agent ("Agent") to perform the duties of secretary related to the conduct and maintenance of records of the Election as required under the Texas Election Code, Section 31.123 during the period required. Ms. Wilson is authorized to designate staff of BSEACD to perform any or all of the various responsibilities of the Board's Agent.

The Agent shall maintain an office open for election duties for at least three hours each day, during regular office hours, on regular business days during the period of September 19<sup>th</sup> through December 19<sup>th</sup>. The Agent shall maintain the documents, records and other items relating to the election and shall be the Agent designated to receive documents on behalf of BSEACD that are required by the Texas Election Code.

The Agent shall post notice of the location and hours of the office as required by the Texas Election Code.

**Section 3. Authorization to Execute.** The Presiding Officer is authorized to execute and the Secretary of the Board is authorized to attest this Order on behalf of the Board; and the President of the Board is authorized to do all other things legal and necessary in connection with the holding and consummation of the Election.

**Section 4. Effective Date.** This Order is effective immediately upon its passage and approval.

**PASSED AND APPROVED** this 14th day of April, 2016.

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Blayne Stansberry  
Board President

**ATTEST:**

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Blake Dorsett  
Secretary

[SEAL]

## **ORDEN PARA NOMBRAR AGENTE Y GUARDIÁN DE RÉCORDS**

**VISTO QUE**, La Mesa Directiva ("Mesa Directiva") de Barton Springs/Edwards Aquifer Conservation District ("BSEACD") está autorizada para ordenar que se efectué una Elección General el 8 de Noviembre, 2016 para elegir directores para puestos uni-miembro de los Precintos dos (2) y cinco (5); y

**VISTO QUE**, La Mesa Directiva tiene autoridad de acuerdo con el Capítulo 31 del Código Electoral de Texas, para aprobar el nombramiento de un Guardián de Réconds y un Agente de la elección; y

**VISTO QUE**, el/la Gerente General y Funcionario Ejecutivo de Operaciones de BSEACD garantiza que el individuo que es miembro del personal nombrado en lo presente es competente y capaz para cumplir con las obligaciones estipuladas sin afectar a las otras obligaciones, deberes, y responsabilidades;

**POR LO TANTO, LA MESA DIRECTIVA DE BARTON SPRINGS/EDWARDS AQUIFER CONSERVATION DISTRICT ORDENA QUE:**

**Sección 1. Nombramiento de Guardián de Réconds.** La Mesa Directiva nombra a Dana Christine Wilson, una empleada de BSEACD para que sea Guardián de Records ("Guardián") para desempeñar las tareas pertinentes a la administración y mantenimiento de los réconds de la Elección como lo requiere el Código Electoral de Texas, durante el periodo que de inicio el día cincuenta (50) antes de la elección y que termine en una fecha que no sea antes de cuarenta (40) días después del día de la Elección. En particular el/la Guardián proporcionará solicitudes a candidatos, aceptará solicitudes de candidatos para ser incluidos en la boleta, determinará el orden en la cual los nombres aparecerán en la boleta para las posiciones de miembros de la mesa directiva, y aceptará y administrará los archivos tocante gastos de campañas que sean archivados con el distrito.

El/la Guardián de los Réconds tendrá la oficina abierta para desempeñar las tareas de la elección al menos tres horas diarias durante las horas hábiles, en los días hábiles durante el periodo del 19 de Septiembre hasta el 19 de Diciembre. El/a Guardián fijará el aviso del sitio y horas de su oficina de acuerdo con el Código Electoral de Texas. El/la Guardián tendrá en su oficina, los documentos, réconds, y otros artículos relacionados a la elección y será la persona designada para recibir documentos en nombre de BSEACD que el Código Electoral de Texas requiere que sean archivados.

**Sección 2. Nombramiento de Agente.** La Mesa Directiva nombra a Dana Christine Wilson, para que sea Agente del Secretario/a ("Agente") para desempeñar las tareas de secretaria pertinentes a la administración y mantenimiento de los réconds de la Elección como lo requiere el Código Electoral de Texas, Sección 31.123 durante el periodo requerido. Ms. Wilson tiene autoridad de designar personal de BSEACD para desempeñar cualquier o todas las responsabilidades del Agente de la Mesa Directiva.

El/la Agente tendrá la oficina abierta para desempeñar las tareas de la elección al menos tres horas diarias durante las horas hábiles, en los días hábiles durante el período del 19 de Septiembre hasta el 19 de Diciembre. El/a Agente tendrá en su oficina, los documentos, récords, y otros artículos relacionados a la elección y será el/la Agente designado para recibir documentos en nombre de BSEACD que el Código Electoral de Texas requiere.

El/la Agente fijará el aviso del sitio y horas de su oficina de acuerdo con el Código Electoral de Texas.

**Sección 3. Autoridad de Ejecutar.** El Presidente de la Mesa Directiva está autorizado para ejecutar y el/la Secretario/a de la Mesa Directiva está autorizado para Certificar esta Orden en nombre de la Mesa Directiva; y el Presidente de la Mesa Directiva está autorizado para hacer todo lo que sea legal y necesario para efectuar y finalizar la Elección.

**Sección 4. Fecha Efectiva.** Esta Orden tendrá vigor inmediatamente al votarse y aprobarse.

**VOTADO Y APROBADO** este día 14 de April, 2014.

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**Blayne Stansberry**  
**Presidente de la Mesa Directiva**

**CERTIFICO:**

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**Blake Dorsett**  
**Secretario/a, Mesa Directiva**

**(Sello)**

## **Item 3**

### **Routine Business**

#### **b. General Manager's Report.**

Note: Topics discussed in the General Manager's Report are intended for administrative and operational information-transfer purposes. The Directors will not deliberate any issues arising from such discussions and no decisions on them will be taken in this meeting, unless the topic is specifically listed elsewhere in this as-posted 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 activities related to GMA and regional water planning**
- iii. Update on ongoing and prospective District grant projects**
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- v. Update on activities related to the HCP and the associated draft EIS**
- vi. Update on activities related to the City of Dripping Springs TPDES permit application**

**STATUS REPORT UPDATE FOR APRIL 14, 2016 BOARD MEETING**

Prepared by District Team Leaders

		Leader, Staff	Date	PROJECT / ACTIVITY DESCRIPTION	STATUS/COMMENTS
<b>GENERAL MANAGEMENT TEAM</b>					
		John Dupnik			
		JD	4/7/2016	Meetings, Training, Presentations, and Conferences	<p><b>External Meetings Attended:</b> Auditor (preview of auditor report), with Kirk Holland; TAGD legislative subcommittee on regional planning; CTRMA ECM evaluation committee (process overview); USFWS on EIS coordination, with GMA 10 contractor on Trinity Analysis (Telecon); GMA 10 meeting committee (presentation on Trinity Analysis). <b>Other Meetings:</b> with Bickstaff on Rules RTC, Employee Appreciation Lunch; with retirement fund managers (the Standard); Board Rules committee on comments; CTRMA ECM evaluation committee (score proposals). <b>Presentations:</b> None <b>Conferences/Seminars:</b> None</p>
<b>Summary of Significant Ongoing Activities</b>		JD	4/7/2016	Ongoing Special Projects, Committees, and Workgroups	<p><b>Ongoing Special Projects:</b> TDS saline zone investigation, CTRMA ECM proposal evaluation; TWDB RFP grant; HB 3405 implementation; District EIS review; CoA wastewater rulemaking petition; Employee Policy Manual Review; Trinity GAM extension; redistricting; GMA 10 proposed DFCs; <b>Committees and Workgroups:</b> Region K (voting member); GMA 10 (voting member); Regional WQ Plan workgroup; Region K Legislation and Policy committee; Region K strategy prioritization committee; Region K water supply strategy committee; Region K executive committee nomination committee; CTRMA SH 45 Technical work group; Regional Wastewater Technical Work Group; Kent Butler Summit Planning Committee; TAGD legislative committee (regional planning; ASR, brackish gw), CTRMA SH 45 ECM procurement committee.</p>
		JD	4/7/2016	Routine Activities and Day-to-Day operations	<p><b>Routine Activities/Day-to-Day Operations:</b> 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 subcommittees; respond to media requests; disseminate media reports and journal articles of possible interest. <b>Consultation with Attorney on:</b> Redistricting; draft rule comments; notification, third-party rule review by Sledge Law. <b>Other Activities:</b> coordinate GAM extension project; coordinate team tasks for implementing HB 3405; coordinate RFP grant project; GMA 10 2016 regional planning (including public hearing on 2016 proposed DFCs); 2016 Kent Butler Summit planning; work with HCP consultant on EIS completion; redistricting coordination; CTRMA SH45 ECM procurement committee; conduct mid-year incentive project status updates; updates to retirement fund plans (The Standard).</p>
<b>ADMINISTRATION TEAM</b>					
		Dana Christine Wilson			
<b>Accounts Receivable - A</b>		DCW	4/8/2016	Permittee accounts carrying a past due balance:	Currently there are no past due accounts (and there are no more billing cycles left in this fiscal year).
<b>Accounts Receivable - B</b>		DCW	4/8/2016	Billings - April monthly billings have a statement date of April 16th.	\$25,726 is the total for the monthly cycle of April.
<b>Annual Report</b>		DCW	4/8/2016	Annual Report (including Appendix A - Audit Report, and Appendix B - Assessment of Progress toward Management Plan Objectives) has been finalized and is now on the District website.	The Audit Report is included in the Annual Report but also stands alone as a report on our website. The Audit Report has been submitted to TCEQ along with the required Affidavit to satisfy the requirement of Texas Water Code Section 49.194.
<b>Budget Revision 2</b>		DCW	4/8/2016	Revision 2 will be coming in the future.	
<b>Employee Policy Manual</b>		DCW	4/8/2016	Revisions / clean-up / rearrangement coming soon.	

	Leader, Staff	Date	PROJECT / ACTIVITY DESCRIPTION	STATUS/COMMENTS
Financial Reporting - Website	DCW	4/8/2016	Most current, available financial reports are posted.	Profit and Loss Statement, and Balance Sheet through February 2016.
Records Management, Storage, and Retention	DCW	4/8/2016	Working on updating our records management retention schedule to reflect our changing times.	This will need to be approved by the TSLAC (Texas State Library and Archives Commission). Our most recent/current version was approved back in 1994.
The Standard (third-party administrator for the BSEACD Retirement Plan and Trust)	DCW	4/8/2016	Changing out four poorly performing funds that failed the Standard's investment screening process.	As the investment fiduciary for the District's "Plan," John and I, along with Eddie Garza, the relationship manager with the Standard, will discuss the potential replacement options for the failing funds that need to be removed. (John and I have selected the replacement funds, and in the near future will consider adding some tiered-rate funds.)
Tax Reporting		4/8/2016	1st quarter 2016 Quarterly Tax Reporting	941-X with GTLL and C-3 will be submitted before April 30th.
REGULATORY COMPLIANCE TEAM				
Vanessa Escobar				
Temporary/ Regular Permits	KBE, VE	4/7/2016	Conversion of a Temporary Permit to a Regular Permit	Staff has mailed out all Temp Permit Certificates and provided an informative letter with a list of the next steps that the permittees need to complete, and the deadlines. Staff continues to process Part 2 of the application forms and 90-day extension letters have been sent out. Staff also continues to work with Temp Permittees to ensure meters are installed and meter readings are submitted. Hunter Chase Farms, the well owner that missed the Temp Permit deadline, has timely filed a Production Permit that is currently being reviewed. An event center, The Plant at Kyle, also missed the deadline and is in the process of filing a Production Permit application. Staff has completed the application review for all 14 permit applications under 2,000,000 gal/yr. All 14 applications are administratively complete and staff published a consolidated notice on 4/6/16 in the Austin American Statesman and on 4/3/16 in the San Marcos Record; letters to registered well owners were also mailed out. Comments are being accepted through 4/26/16 and a public hearing is scheduled for 4/28/16.
				There are 4 temporary/regular permit applications requesting above 2,000,000 gal/yr and those applications have been reviewed as follows: Texas Old Town (Administratively Complete), Aqua Texas (Administratively Complete), Electro Purification (Withdrawn), Needmore Water LLC (Administratively Complete). Notice publications are underway for Texas Old Town and Notice has not yet been issued for Aqua Texas or Needmore. Public hearings will be scheduled at a future date.
Electro Purification	KBE, VE	4/7/2016	Test Well Permit - General Permit	On 3/15/16 Electro Purification withdrew its Temporary/ Regular Permit application for 30,000,000 gal/yr and submitted a contemporaneous filing of 6 test well permit applications. Staff is reviewing these submittals.
Mike Rutherford	KBE, VE	4/7/2016	Test Well Permit - General Permit	On 3/15/16 Mike Rutherford submitted a test well application to drill a Lower Trinity test well to evaluate production potential of the aquifer. The test well will be located on the Rutherford Ranch west of Buda on FM 967. Staff is currently reviewing the application and expects the application to be administratively complete and approved by the GM before the end of April.

	Leader, Staff	Date	PROJECT / ACTIVITY DESCRIPTION	STATUS/COMMENTS
City of Buda	KBE, VE	4/7/2016	Well Modification Authorization of a Test Well - New Edwards PWS well to be part of Aggregate System	A well modification application was submitted and staff is currently reviewing it. The City of Buda previously completed a test well application for a new PWS well to become part of their aggregate system. There will not be a new production permit associated with the new well, it will be an aggregate. The first test well proved to have sufficient yield, therefore Buda has submitted a well drilling/modification application to complete the well per BSEACD and TCEQ well construction standards. Staff conducted a site inspection to determine the October 2015 flood elevation at well site, the well shall be constructed 2 ft above this elevation. The application has been deemed admin. complete and Buda has published notice. A couple of emailed comments were received and staff corresponded with each of those property owners to address their concerns. Buda will be required to conduct a pump test and complete a hydrogeologic report for this new well as part of a permit condition. The Modification Permit was approved by the Board on 1/28/16. Well Drilling has been completed and the aquifer test will be performed within the next 14 days.
Drought Statue - No-Drought	KBE, VE	4/7/2016	Drought Compliance Monitoring and Enforcement	No new update. No-drought was declared on January 29, 2015. Staff sent out email and letter to all permittees notifying them of no-drought status.
<b>EDUCATION &amp; OUTREACH</b>				
Groundwater to the Gulf	RG	4/7/2016	Canyon Lake Gorge	Several of the G2G partners did a recon trip to Canyon Lake Gorge. It is going to be an excellent visual of the upper and middle Trinity, the power of floods, and management challenges.
Well Water Checkup	RG, JC	4/7/2016	Event planning and promotion	The Well Water Checkup is next week. The event is being promoted through social media, direct mail, email blasts, and the website.
Enews Blast	RG	4/7/2016	April eNews	The April eNews was released on April 6, 2016. After less than 24 hrs it has been opened over 740 times. The articles included info on the Well Water Checkup, Rule Change Status, TWDB funding for the Hill Country GAM update, Permitting Update, Aquifer Status, and Kent Butler Summit update.
Internet Traffic Report	RG	4/7/2016	Page views and visits to the District Website	The District website will be undergoing some changes in the next few months. The webserver is out-of-date and the website content management system needs to be updated. Over the last month, we've had 3,064 page views from 996 visitors. In order of hits the most visited pages were the home page (821), Scholarships (233), Proposed Rule Changes (187) and Well Owner Education (167). On the District Facebook page we have 448 people who have signed up to 'Like' us.
<b>AQUIFER SCIENCE</b>				
Dye Tracing	BS, BH	4/7/2016	Dye tracing	Discussions are underway with the EAA and CoA about potential dye tracings in the upcoming months. The City will inject various locations along SH45.
Central Hays County Groundwater Evaluation	RG, BIL, BAS, JC	4/7/2016	Well and hydrogeology characterization	District staff are establishing a monitoring network of nearby wells to collect data during the EP aquifer test. Revisions are being made to the aquifer test guidelines, and a definition for unreasonable impacts is being developed.
Antioch Cave	BS, BIL, JC	4/7/2016	Onion Creek Recharge Enhancement Project	The Antioch system is open to allow recharge, and there is flow in Onion Creek due to heavy rains in March.
Water-Quality Studies	BS, BIL, JC	4/7/2016	Sampling and analysis of groundwater and surface water	District staff started work with a geochemist to evaluate the years of data we have collected on behalf of the TWDB. Staff have completed sampling wells and springs as part of the Magellan Pipeline monitoring effort.

	Leader, Staff	Date	PROJECT / ACTIVITY DESCRIPTION	STATUS/COMMENTS
Saline Zone Studies	BS, BH	4/7/2016	Installation of multiport monitor well	Plans are moving forward for installation of a saline Edwards multiport well in conjunction with a test well installed by TDS. On July 8, the District was officially notified of an award of a regional planning grant for work on the saline Edwards, and a contract with TWDB was signed on Aug. 27. On January 5 a contract between BSEACD and Carollo Engineers was signed.
Drought and Water-Level Monitoring	BH, BS, JC	4/7/2016	Drought status, monitor wells, and synoptic water level events	January 30, 2015, the District Board declared non-drought conditions. The District had been in drought since August 15, 2014. Because of heavy rains in October and more moderate rains in November and December, and now early March 2016, the water level in the Lovelady well is rising. As of April 7, the water level in the Lovelady well was at 529.6 ft above msl and Barton Springs was flowing at 92 cfs.
Information Transfer	BS, BH, JC	4/7/2016	Presentations, conferences, reports, and publications	Brian Smith attended a conference in San Juan in late January on contamination in karst and public health and is working on a paper to be published in a journal. Staff are working on the results of the Onion Creek gain-loss study from 2015 to be published at the GCAGS conference (Fall 2016). Staff are also working on finalizing some other technical reports and documents.
Aquifer Testing	BS, BH, JC	4/7/2016	Planning, participation, and review of aquifer tests	AS staff were involved in the Needmore aquifer test in January 2016, and are currently evaluating the report submitted by Wetrock. We are also working with Buda on their planned aquifer test of the new well field, scheduled to potentially occur in late March or early April. Staff continue to have discussions with EP regarding their planned aquifer test. Staff have also been working on the revised aquifer test guidelines.
<b>AD-HOC TEAMS</b>				
Technical Team	BAS	4/7/2016	Current areas of discussion	Topics of discussion at the technical team meeting in April were the definition of unreasonable impacts, Needmore permitting, and upcoming aquifer tests.
Planning Team	JD	4/7/2016	Strategic and tactical planning and discussion topics	New Business: Rules update. Status report on FY16 goals
<b>UPCOMING ITEMS OF INTEREST</b>				
RWQPP Workgroup meeting		4/8/2016	11am, LaMadelein's, Sunset Valley	
Well Water Cleanup		4/13/2016		
Region K Quarterly Meeting		4/13/2016	10am, LCRA Dalechau Service Center, Montopolis	
Texas Water Table Roundtable		4/14/2016	2:30pm - 4:30, Betty King room in the Texas Senate.	
1st April Board Meeting		4/14/2016		
Drippings Springs Town Hall meeting		4/22/2016	6pm, Dripping Springs Ranch Park Event Center	
Kent Butler Summit		4/22/2016	8:30am-4pm, Wimberley Community Center	
Earth Day		4/22/2016		
Administrative Professionals Day		4/27/2016		
2nd April Board Meeting		4/28/2016		
1st May Board Meeting		5/12/2016		
GMA 10		5/16/2016	11:30, EAA offices, San Antonio, Texas	
2nd May Board Meeting		5/26/2016		
Memorial Day Holiday		5/30/2016	District Holiday - Offices Closed	
1st June Board Meeting		6/9/2016	may consider alternate dates	
1st June Board Meeting (possible alt. date)		6/19/2016		
2nd June Board Meeting		6/23/2016	may consider alternate dates	
2nd June Board Meeting (possible alt. date)		6/30/2016		
GMA 10 Meeting		6/27/2016	11:30, EAA offices, San Antonio, Texas	

## **Item 4**

### **Presentation**

**Presentation by Peter Sprouse on detection of Barton Springs Salamanders (*Eurycea sosorum*) within the Edwards Aquifer using well sampling.**

## **Item 5**

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

- a. **Discussion and possible action related to public comments received on proposed revisions to the District Rules and Bylaws presented in the public hearing held on March 24, 2016 and the proposed process for possible adoption.**



Barton Springs  
Edwards Aquifer  
COMMITMENT TO PROTECT IT

## BS/EACD

### Public Hearing on Proposed Rules

March 24, 2016



Barton Springs  
Edwards Aquifer  
COMMITMENT TO PROTECT IT

## Drivers for Rules Change

1. **Implement H.B. 3405** – Further explore overarching concepts:  
*Unreasonable Impacts, Maximum Production Capacity, Monitoring, Mitigation etc*
1. **Prospective Large Scale Permit Requests** – *Develop process and requirements for reviewing large permit requests and evaluating potential for unreasonable impacts to existing wells or long-term groundwater supplies.*



Barton Springs  
Edwards Aquifer  
Conservation Authority

## **Application Requirements**

(Large Scale Permit Request - Over 200,000,000 gallons per year)

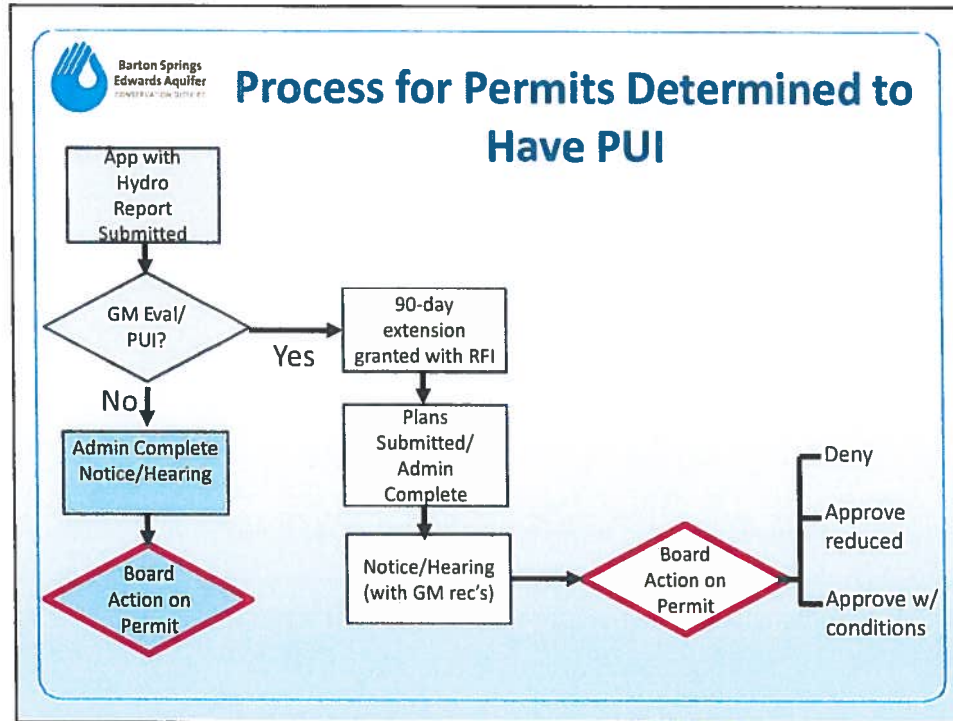
- Expanded Notice Requirements (pg 44, pg 48)
- Additional Application Requirements (pg 48-49)
- Hydrogeological Report and Aquifer Tests (pg 53-57)




Barton Springs  
Edwards Aquifer  
Conservation Authority

## **Unreasonable Impacts**

- Definition of Unreasonable Impacts (pg 26,27)
- Actions on Permits (pg 65,66)
- Determination of Potential for Unreasonable Impacts (pg 49)



 **Applications With PUI (Rule 3-1.4.G)**

- ❖ *"The District seeks to manage total groundwater production over the long term while **avoiding** unreasonable impacts. - Mitigation measures shall be reserved only after all reasonable preemptive measures to avoid and prevent unreasonable impacts have been exhausted."*
- ❖ Possible Measures for Permit Applications with PUI:
  1. Partial permit volume approval
  2. Phase permitting/rate
  3. Index wells and compliance monitoring
  4. Prescribed compliance levels and responses should measured data demonstrate a UI.
  5. Mitigation
- ❖ Anticipated risks – the District will require or seek preemptive avoidance measures to remedy those wells before impacts occur
- ❖ Unanticipated risks – the mitigation plan is relied upon for unanticipated unreasonable impacts.



Barton Springs  
Edwards Aquifer  
COMPLETION PLAN 2015-2018 ETX

## Unreasonable Impacts - Summary

### Primary Rule Drivers:

1. Implement HB 3405
2. Set framework for prospective large-scale permits

### Regulatory Scheme:

- ❖ UIs defined as suite of factors assessed on case-by-case basis
- ❖ Hydrogeological Report and analysis of Aquifer Test data to determine PUI (Not a determination of an UI)
- ❖ Permits with PUI require compliance and mitigation plans
- ❖ Proceed gradually (phased permits)
- ❖ Projected effects balanced with monitoring to assess aquifer response to long-term pumping
- ❖ Require reasonable preemptive measure to avoid UIs
- ❖ Mitigation reserved only for unanticipated UIs.



Barton Springs  
Edwards Aquifer  
COMPLETION PLAN 2015-2018 ETX

## Other Core Topic Areas

1. **Test Well and Aquifer Test General Permit**
2. **Transport**
3. **Use Type Definitions**
4. **Replacement Wells**
5. **Other Changes:**
  - ❖ Authorized Agent documentation
  - ❖ Permit Renewal (*to implement new legislation*)
  - ❖ Permit Amendments
  - ❖ Regulation of Spacing
  - ❖ Aggregation
  - ❖ Fees
  - ❖ Conservation Rate Structure
  - ❖ Conflict of Interest (*to implement new legislation*)
  - ❖ Notice and Hearing (*to implement new legislation*)



Barton Springs  
Edwards Aquifer  
EDWARDS AQUIFER

## Rulemaking Process

- 2-25-16: Rules approved by Board for Public Hearing  
Hearing set for 3-24-16
- 2-26-16: Notice of public Hearing Published
- 3-15-16: Meeting with TESPAs on draft Rules
- 3-22-16: Meeting with Ed McCarthy on draft Rules
- 3-23-16: Comment period on draft rules expires
- 3-24-16: Public Hearing Held

### Comments Received from

1. TESPAs
2. Ed McCarthy
3. SOS
4. City of Buda



P. O. Box 1380 ♦ 121 Main Street  
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(512) 312-0084

Mr. John Dupnik, General Manager  
Barton Springs/Edwards Aquifer Conservation District  
1124 Regal Row  
Austin, Texas 78748

Re: Proposed Rule Changes

March 22, 2016

Dear Mr. Dupnik,

The City of Buda would like to thank the Barton Springs/Edwards Aquifer Conservation District for the opportunity to comment on the proposed rule changes that are to be considered by the District Board on March 24, 2016. The City is cognizant of the time and energy District Staff has invested in this endeavor and would like to commend their efforts. Recognizing that some aspects of the proposed rules are attempted to be defined in a way that will allow collaboration between the District and future applicants, there are some areas that warrant clarification to provide a level of certainty for those considering future large volume permit applications. The City of Buda respectfully submits the following comments for the District's consideration.

#### **Notification Requirements**

In describing the required mailing list, the word "registered" should not be removed as proposed in section 3-1.4,7.g.ii (pg. 44). Besides allowing the District to monitor and manage overall use of groundwater resources, well registration is also a means for the District to help protect existing wells from possible impacts of future permitted projects. If a well owner has not properly registered their well as required by District rules, they are by default forfeiting this level of protection. Therefore, mailing lists for any notification required by the district should be confined to owners of wells that have been properly registered with the District.

Also, the current cost of certified mail with return receipt is approximately \$6.74. The proposed, incrementally expanded notification requirements for permit applications of 200 MGY and above can result in significant cost depending on the density of private wells in the project area. The District may consider relaxing the requirement for return receipts in order to offset some of the costs that may be incurred from expanded notification requirements.

### **Unreasonable Impacts**

In the definition of Unreasonable Impacts (pg. 27), item 6 establishes the “depletion of groundwater supply over a long term basis” as an unreasonable impact. In the absence of defining what “long term” means in the context of a requested permitted volume, virtually any existing large volume permit as well as the aggregated withdrawals of existing exempt wells could be argued to be contributing to the depletion of groundwater supply over a long term basis in some formations. The broadly defined nature of this item makes it problematic to use as an indicator of unreasonable impact.

### **Aquifer Test Plan/Hydrogeological Report**

The proposed revised definition of the required hydrogeological report includes a component to assess the response of an aquifer to pumping over time and the potential for unreasonable impacts as defined in the proposed rules. Depending on the level of analysis required to meet the District’s expectation and standards, this could add appreciable consulting costs to produce a report that will be deemed satisfactory. Determining long ranging temporal effects to the aquifer could be interpreted as requiring advanced research efforts such as numeric modeling. It would be appreciated if the District could more clearly define the level of effort and analysis required to produce the newly defined hydrogeological report.

### **Monitoring Well/Compliance Well Networks**

The necessity to monitor surrounding wells during a required pump test is understood, but the establishment of a permanent monitoring well network could lead to substantial project costs and complexity. By creating a source of data that can be used in long-term project operation, permanent monitor wells can benefit the permittee as well as the District. But the cost can be significant in terms of easement acquisition, drilling, and monitoring equipment purchase. In addition to these fixed costs, additional budget for staff time and water quality sampling will be required for each monitor well required. Some immediate questions that come to mind are:

- Will each monitor well be required to be outfitted with a permanent pump for sampling purposes?
- Will the District require monitor wells in multiple aquifers for a drilling/permit application?
- Will the District require each monitor well to be outfitted with a transducer for capturing water level data, or will manual data collection be acceptable? If a transducer is required, does it need to be compatible with District equipment? Also, will the District require real-time reporting of water level data?
- What is the frequency of water quality sampling that will be required? Will the sampling be required at regular intervals, will it be event-triggered, or both?

In order for a perspective permit applicant to be able to estimate total project costs, greater detail is needed on the minimum construction specifications for required monitor wells, the type of monitoring equipment that will be required, and the frequency and nature of water quality sampling that will be required by the District.

The option to use existing wells in monitoring efforts may be an avenue to offset some drilling costs, but it can also be problematic in some ways. Some existing private wells may not be easily monitored without appreciable effort and expense. Permit applicants are exposed to significant liability when required to monitor private wells, especially if they are required reconfigure these wells to accommodate a transducer for temporary or permanent data collection. The potential exists for private well owners to attribute any future well malfunction to the permit applicant’s monitoring efforts, even

if the well or pumping equipment had existing deficiencies prior to the permit applicant's actions. This could inadvertently create an environment where private well owners expect the permit applicant to provide ongoing service support for normal operation and maintenance issues that would ordinarily be addressed by the well owner.

Section D.3.d (pg. 55) under Hydrogeological reports and Aquifer Testing states that an established monitor well network may be converted to a compliance well network as a permit provision. Permit applicants cannot guarantee the District access to private wells that may fall into this scenario as required in previous section D.3.c) iv. (pg. 55). If a private well owner stops allowing the use of their well for a compliance network purposes, will the permit applicant be required to drill a monitor well to replace the lost data point?

### **Mitigation Plan**

The City of Buda recognizes that private well owners should be able depend on their wells to reliably provide them groundwater and has been a proponent of mitigation planning in the recent past. The City also realizes this type of planning effort represents a monumental effort by all parties involved. However, there are concerns with the amount of future liability that a permit applicant may be exposed to by the mitigation plan requirements that are currently proposed.

Mitigation should only be required for existing wells that are properly registered with the District and in operation at the time the permit application is approved. Upon permit approval, large volume pumping projects become a known factor and influence on an area's water resources. If mitigation is required for wells that are drilled in a project's determined impact area after the permit approval date, permittees are subjected to a constantly moving target for mitigation compliance. Part of the premise for requiring mitigation is to protect existing wells from large volume projects that are permitted later in time. A similar spirit of protection should be provided to permit holders with an approved mitigation plan in the form of shielding from mitigation claims for wells that are drilled after the project is permitted and in operation.

The proposed mitigation requirements dictate a great deal of responsibility for permit applicants, but do not address the expectations of private well owners in distinguishing normal well operation and maintenance problems from alleged impact caused by a permittee's pumping. This potentially sets the stage for private well owners in a defined impact area to have the expectation that permit holders must provide around the clock well and pump service work in perpetuity. For example, if a submersible pump in a private well reaches the end of its normal life cycle and ceases to function, will the permit applicant be expected provide on-demand services to remove the pump and investigate the cause of failure? Permit holders should not be subject to mitigation claims for poorly constructed wells, improperly installed pumping equipment, or poorly maintained systems. Although these situations cannot be predicted, the proposed mitigation requirements should include language recognizing that the mitigation does not obligate permit applicants to become full time well services providers, and that problems attributed to the normal operation and maintenance of private well system are the sole responsibility of the well owner.

As currently proposed the mitigation requirements seem to create a great deal of open-ended liability for applicants even after they have a District-approved mitigation plan in place. Linking required mitigation expectations and efforts to permit approval dates as well as establishing responsibilities for

private well owners in addition to permit applicants would serve to stem at least some of the uncertainty that is implicit with an effort of this nature.

In closing, the City would once again like to thank the District for the opportunity to comment on the proposed rule changes. The City recognizes the District's effort to create rules in a manner that will allow maximum flexibility and collaboration between the District and permit applicants to address the complicated issues that are specific to large volume permit requests. However, the City is hopeful that the District will give serious consideration to the submitted comments and find ways to provide clarity in the areas mentioned. In doing so, potential large volume permit applicants will be better equipped to plan projects in a manner that will meet the applicant's needs while fulfilling the District's efforts to balance beneficial use with the protection and preservation of groundwater resources. If you have any questions regarding these comments, please do not hesitate to call.

Respectfully,

Brian Lillibridge  
Water Specialist  
City of Buda

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March 23, 2016

Board of Directors  
Mr. John Dupnik, General Manager  
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1124 Regal Row  
Austin, Texas 78748

*via E-mail & Regular U.S. Mail*

Re: Preliminary Comments on the District's proposed rule amendments – as posted for  
hearing on March 24, 2016

Dear Board Members & Mr. Dupnik:

I am writing to you on behalf of multiple clients who are groundwater owners and/or lessees whose real property rights became subject to and affected by the District's jurisdiction following the passing of HB 3405. We appreciate this opportunity to review and comment on the Barton Springs/Edwards Aquifer Conservation District's ("BSEACD") proposed rule revisions. We trust that these preliminary comments will be received in the spirit offered, *i.e.*, to assist the District in protecting both the property rights of affected groundwater rights owners and their lessees while preserving to the greatest extent possible the qualitative and quantitative characteristics of the aquifers within the District's jurisdiction, particularly with respect to the Trinity Aquifers; and we look forward to participating at the Public Hearing on March 24<sup>th</sup>.

Our objective in presenting these comments is to assure the adoption of lawful, equitable and defensible amendments to the District's Rules that provide for the sound and fair management of the groundwater resources in the Trinity Aquifers beneath Travis and Hays Counties in a uniform and nondiscriminatory manner that both protects the sustainability of the groundwater resources, and facilitates the maximum beneficial production and use of the same. We appreciate the difficult position that the District finds itself in to implement timely a piece of legislation that was quickly drafted and not thoroughly vetted with respect to the significant adverse impacts and curtailments it had on the constitutional rights of the people and entities who were abruptly subjected to it. The District, however, must find a way to navigate the implementation of the legislation in a manner that balances the mandate of the Conservation Amendment (Tex. Const. Art. XVI, §59) and protects the property rights of landowners.

Early this week I had the opportunity to sit down with Mr. Dupnik and his staff and provide an overview of our concerns with the proposed rules as drafted. I commend your Staff

for being patient, good listeners, as well as for their earnest efforts to meet the challenges presented by HB 3405. I am hopeful that our discussion was fruitful and provided them with an understanding of why the proposed rules, as drafted, do not accomplish the goal of codifying guidelines that all permit applicants and interested persons to know what standards will apply to permit applications and how the interests of existing well owners along with the permittee's property rights will all be protected based upon the "best available science" developed using actual measured data, rather than theoretical methodologies, and sometimes flawed, calculations.

**A. General Comments on BSEACD's proposed rule amendments:**

In submitting these comments we are cognizant of the fact that the Legislature has imposed certain duties and deadlines upon BSEACD in HB 3405. We are also aware that HB 3405 failed to provide BSEACD with specific guidelines and/or direction in fulfilling those duties. For example, HB 3405 articulates as a "standard" for determining whether to grant an applicant a "regular permit" in the "shared territory" the consideration of whether granting a permit for production of the requested volume of water will cause an "unreasonable impact on existing wells." *See* Act of 2015 84<sup>th</sup> Leg, R.S., Ch. 975, § 4.(e)(2) 2015 Tex. Gen Laws 3425, 3427. The Legislature failed, however, to define the term "unreasonable impact."

Assuming that the failure to define the critical standard does not cause the statute to be unconstitutionally vague, whether or not intentional, that legislative failure places the BSEACD in the difficult position of divining a definition for the standard that provides for both (i) the protection of landowners' procedural and substantive due process rights as well as their constitutionally protected property rights in their groundwater (*See* Tex. Water Code § 36.002; *EAA v. Day*, 369 S.W. 814, 831-32 (Tex. 2012)) and (ii) the BSEACD's constitutional duty to provide for the preservation, conservation *and* development of the affected aquifer (Trinity Aquifer) as mandated by Article XVI, § 59, TEX. CONST.

In fulfilling the mandate, the BSEACD should maintain as its guiding beacon the following principles:

1. As a creature of statute, BSEACD is limited to exercising only those powers that have been expressly granted by the Legislature or are necessarily implied pursuant to the express powers granted by the Legislature. *See Tri-City Freshwater Supply District No. 2 v. Mann*, 142 S.W.2d. 945-948 (Tex. 1940); *South Plains La Mesa Railroad v. High Plains UWD No. 1*, 52 S.W.3d. 770 (Tex. App.-Amarillo 2001, no writ). Those powers and authority do not include the adoption of rules and the exercise of powers simply because they are convenient or make it easier for the District to exercise control. Similarly, the Legislature has not authorized the adoption of rules which are clearly contrary to Texas Jurisprudence and mandates of the Texas Water Code. The broad discretion allowed in the BSEACD's proposed rules will very likely lead to discrimination, as different applications are put to different standards, a circumstance explicitly prohibited by the Texas Water Code. Discretion will result in discrimination and, thereafter, litigation – an undesirable result for all affected Parties as well as a waste of their limited resources.

2. In 2011, the Texas Legislature expressly recognized Texas landowners' ownership rights in groundwater underlying their property in amendments to Section 36.002 (*see* SB 332), which fact was expressly noted by the Supreme Court in its *Day* decision. Texas Water Code § 36.002; *see Day*, 369 S.W.3d *supra* at 832, 842. While the amendments to Section 36.002 also acknowledged the authority of groundwater districts like BSEACD to regulate groundwater production (*see* 36.002 (d)(1)), as the Supreme Court reasoned in *Day* with respect to the "tension" between the provisions of subsections (c) and (e) of Section 36.002 relating to the EAA's required authority, the Legislature's recognition of landowners' property rights and the limitations on districts' authority to regulate the same in light of the amendments to subsections (a) and (c) must be balanced in favor of landowners' property rights such that the regulatory authority cannot be exercised in a manner that results in a deprivation or divestiture of those property rights constituting an unlawful taking absent the payment of adequate compensation as constitutionally guaranteed. *Day*, 369 S.W.3d, *supra* at 842-43; *see* TEX. CONST. ART. I § 17; U.S. CONST. Amend 5, 14; Texas Water Code § 36.002 (a), (c).

3. As the Supreme court noted in the *City of Corpus Christi v. City of Pleasanton*, 276 S.W.2d 798 (Tex. 1955):

[U]nder the common-law rule adopted in this state [in *East*] an owner of land could use all of the percolating water he could capture from wells on his land for whatever beneficial purposes he needed it, on or off of the land, and could likewise sell it to others for use off of the land and outside of the basin where produced, just as he could sell any other species of property.

*City of Corpus Christi*, 276 S.W.2d *supra* at 802. This statement of the law quoted from the *Corpus Christi* decision actually dates back to the Supreme Court's 1927 decision in *Texas Company v. Burkett* wherein the court distinguished the characteristics of a landowner's right to the percolating groundwater beneath his property from the rights to surface water, including riparian rights as being his "exclusive property" with "all rights incident to them [the groundwater] that one might have as to any other species of property." *Texas Company v. Burkett*, 296 S.W. 273, 278 (Tex. 1927). This principle was not changed by the 2011 amendments to Section 36.002.

While HB 3405 places the burden on the permitted applicant to show that the District's determination that granting a Regular Permit will cause an "unreasonable impact" on a neighboring well, the burden to provide adequate notice to a permit applicant of the standards and criteria for what constitutes an "unreasonable impact" is on the Legislature operating, at this time, through its delegation of powers to the BSEACD. As presented in the proposed rules, the District will only be required to show a potential for a theoretical unreasonable impact on a neighboring well. There is no measurable criteria presented in the proposed rules as a standard against which an applicant can knowingly measure the impact of its production and determine if the permitted well would cause an unreasonable impact, and/or whether there are ways to manage production that would avoid such an unreasonable impact.

We believe that the District's Staff's intent is to use actual measured conditions in the aquifer to evaluate and determine whether an unreasonable impact has in fact occurred. The rules, however, are drafted in a way that never allows actual measured criteria, or any real scientific data, to establish whether an unreasonable impact has, or has not, occurred. Instead, the rules, as drafted, present a theoretical set of parameters based upon calculations using models, as discussed hereinafter, that are flawed when applied to the characteristics of the aquifer involved, *i.e.*, the Trinity Aquifer.

Having failed to adequately define and provide notice to permit applicants of what constitutes an "unreasonable impact", and applying a theoretical standard based upon a vague set of standards, will more than likely create problems for the District leading to litigation over takings of property rights as well as violations of substantive and procedural due process. We do not believe that that was the District's intent, and we encourage the Board to evaluate the rules in light of this threat and, thereafter, direct the Staff to review, revisit and revise the rules accordingly.

The recent court decisions in *EAA v. Day & McDaniel* and *EAA v. Bragg* have reinforced Texas common-law principles announced more than a century ago in the *East* case that groundwater belongs to the landowner. Moreover, the *Day* and *Bragg* rulings make clear the fact that groundwater conservation districts ("GCDs") cannot deny a landowner the right to produce groundwater under his property outside of the limited authority granted by the Legislature to protect and preserve our aquifers to provide for their long-term development and production.

We have heard that Staff believes these proposed rules are reflective of the principles that provide the foundation for the recent settlement reached by the Lost Pines GCD with permit applicant Forestar. Nothing could be further from the truth as the rules are currently drafted.

The Lost Pines/Forestar settlement is premised upon the legislative mandate expressed in Section 36.1132(b), Texas Water Code, that Districts grant permits, even when the "paper total" of the volumes permitted exceed the MAG (Modeled Available Groundwater) volume and, thereafter, manage actual production from the affected aquifer and the effects of such actual production on the aquifer. Specifically, the Lost Pines/Forestar settlement allows Forestar to produce ever increasing volumes of groundwater while actually monitoring the impacts. If the impacts demonstrate long term negative impacts on the affected aquifer (the Simsboro Aquifer) that will cause the District to be unable to achieve its DFC notwithstanding ongoing active management of the aquifer, including periodic temporary curtailment orders, then Forestar's move to the next stair-stepped increase in production can be delayed or precluded.

The criteria being used in the Lost Pines/Forestar Settlement are based upon actual measured activity in the affected aquifer monitored overtime. The District's proposed rules, however, particularly those rule proposals directed at limiting, if not denying production permits to new (particularly large scale) applicants are based upon (i) theoretical model calculations of long prognosticating of what long term impacts might be using the Theis Equation, and (ii) a

theoretical model which is known to be flawed in its application to the subject aquifer, *i.e.*, the Middle Trinity Aquifer.

The rules can be revised to adopt an “as measured” approach modeled on the Lost Pines/Forestar Settlement. Moreover, the theoretical approach embodied in the present draft rules can be embraced in a revised set of rules. The theoretical components, however, must clearly be positioned to serve as guideposts, rather than determinative criteria. Moreover, actual measured data must be relied upon as the ultimate determining factor of whether production from a specific permit, or set of permits, rather than the overall pumping of the aquifer or other external factors, *e.g.*, prolonged drought, is the cause of an impact to a neighboring well or wells. *See EAA v. Day*, 369 S.W.3d, *supra*, at 843 (“The Legislature’s general approach to such regulation has been to require that *all relevant factors be taken into account*” (emphasis added)).

It is important in crafting rules to implement HB 3405 remember the following admonition of Justice Hecht in the *Day* case:

“The Legislature can discharge its responsibility under the Conservation Amendment without triggering the *Takings Clause*. But the *Takings Clause* ensures that that problems of limited public resources -- the water supply -- are shared by the public, not foisted on a few. ... [T]he burden of the *Takings Clause* on government is no reason to excuse its applicability.

*See EAA v. Day*, 369 S.W.3d, *supra*, at 843-844 (emphasis in the original).

**B. Specific Comments on BSEACD’s proposed rule amendments:**

**1. Proposed amendments to Rule 2-1 (Defined Terms):**

Set forth below are comments on specific definitions being proposed for amendment:

- a. **“Beneficial Use”:** The three subsections for Beneficial Use currently drafted are generally useful; however, they contain several fundamental problems that need to be addressed:

The proposed definitions run afoul of the legislatively mandated definitions of “beneficial purposes” and “waste.” The proposed definitions which generally tracks the definitions found in 36.001, are drafted more narrowly than those prescribed by the Legislature. Accordingly, the District is attempting to impose restrictions and limitations on beneficial use not authorized and/or inconsistent with those allowed by the Legislature. The District lacks authority to do that. In particular, the portion of the definition in subparagraph 3., specifically, the inclusion of the phrase “non-speculative” before the word “purpose” is not contemplated nor authorized by Chapter 36. Additionally, at the end of

subparagraph 3., the addition of the phrase "that does not constitute waste." is unnecessary and suggestive of the exercise of powers beyond those authorized by the Legislature. In subsection 36.001 (8), the Legislature has identified those uses or activities which it believes to constitute waste of groundwater. Such activities are expressly prohibited by Chapter 36. There is no reason for the District to include in its definition of Beneficial Use that the activity does not constitute a waste. By definition, any activity which is a waste and prohibited by law cannot be deemed beneficial. Accordingly, we recommend the deletion of the term "non-speculative" and the phrase "that does not constitute waste."

By excluding what the District might consider to be "speculative" uses, a term which is not defined or included in any definition in Chapter 36, and, therefore, subject to blind discretion and, therefore, discriminatory and abusive in application, the District is attempting to exercise authority commonly known as "*in loco parentis*", which is an authority or level of power not generally given to districts. Moreover, it presumes the District knows better than the landowner how the landowner should beneficially use his own property. That assumption is far beyond a district's regulatory authority. Moreover, it is the equivalent of the District exercising the management and decision making prerogatives of governmental entities and/or retail utilities responsible for the development and provision of water supplies for beneficial use either to wholesale or retail customers. Finally, it constitutes a limitation on an owner's free and lawful use of his property rights.

The fact that a property owner may want to "speculate" in the use of his groundwater is a right he is constitutionally entitled to exercise. Unless that use constitutes (i) "waste," as that term is narrowly defined by the Texas Legislature, or (ii) it violates a permit term or condition, or (iii) a statute, the District has no authority to prohibit or limit a "speculative use."

The fact that the District may believe that a proposed use of water imprudent or risky does not mean that it cannot or should not be permitted. A proposed use of groundwater that otherwise meets the statutory criteria for "beneficial purpose" and/or the District's rules on "beneficial use," and/or which does not violate the statutory definition of "waste," is a lawful use of the property right that the property right owner is entitled to make. Even "stupidity" in the eyes of the District must be permitted so long as it is lawful. Otherwise, the District is violating the property rights of the affected landowner.

The other problem with the use of the term "non-speculative" is that it is an undefined term which has significant impact on a landowner's ability to use his groundwater rights. Based upon historic practice, it is our understanding, that a proposed use of groundwater for a municipal or industrial project, whether wholesale or retail, is considered to be "speculative" by the District if it is (i) not

supported by a contract or (ii) requested by an entity with a Certificate of Convenience and Necessity (CCN) or (iii) other governmental entity who has a governmental duty to provide water services within its jurisdiction to its constituents. While allowing an application for use based upon a projected need, rather than an actual current use, by any of those three types of entities is reasonable and justified, limiting it to those three types of entities is not reasonable, justified nor lawful. Moreover, adopting a rule prohibiting one to "speculate" about the lawful use of his property has not been authorized by the Texas Legislature. As a creature of statute, the District must always remind itself that whether or not it is authorized by the Legislature is the controlling factor, not whether it would be convenient or useful to the District to be able to exercise a particular power.

As an example of a type of project that would be considered "non-speculative," if requested by a municipality or CCN holder, but would likely be considered speculative by an entrepreneurial property owner or groundwater lessee is a large scale groundwater project designed for municipal and industrial water supply purposes requiring the construction and installation of expensive infrastructure with a lifetime of 30 to 50 years minimum. These types of projects are based on long-term planning.

As the District knows, planning for future water needs is one of the most important things that utilities, governmental entities and other water supply entities do. To that end, we believe it would be helpful if conservation of production not currently needed were incorporated into the definition of Beneficial Use. Specifically, by granting larger permits in which the production volumes would be phased-in over time allows for the conservation of the unused portion of the water *and* the ability to finalize and construct the necessary infrastructure to meet the long term demands. We believe that incorporating the long range planning component into the rules and the permitting process is merely a subset of "municipal use." We worry, however, that without a more specific recognition of it in the District's Rules would facilitate the argument that non-use of long term demand in the early years somehow constitutes "waste" because the proposed amendment mandates "use of groundwater." Demonstration that the permitted water has been withdrawn and applied to a physical beneficial use is *not* mandated by statute. The proposed Rule also conflicts with the Texas Water Code in that regard.

Requiring multi-year signed contracts with end-users prior to permit issuance effectively prevents long-term financing of projects because both cities and finance providers need to see a permit before committing to a project. GCDs do not require signed contracts with the end-users of any other product of the use of groundwater in their districts (for example, no signed contract with a purchaser of alfalfa is required to get a permit for irrigation well), which raises equal protection

flags. Because groundwater produced at the surface may be "bartered" like any other species of property, these are impediments to commerce that are likely unconstitutional.

Another issue with this potential change is it prevents any use that may require long-term planning. As you know, many beneficial projects which utilize groundwater are not necessarily "overnight projects," which will see the groundwater produced and immediately used. Longer term projects, including those for municipal use, require planning years in advance in order to secure necessary funding for infrastructure, as well as confirming a secure supply will be available to meet future, growing needs. In fact, this provision could lead to unnecessary production just to meet a quota, again preventing valuable conservation, by creating a new "duty to pump" if someone wants to preserve their legally protected property right. As Justice Hecht wrote in the *Day* case:

"To forfeit a landowner's right to groundwater for non-use would encourage waste."

*Day*, 369 S.W.3d, *supra*, at 842.

"[A] landowner cannot be deprived of all beneficial use of the groundwater below his property merely because he did not use it during an historical period and supply is limited."

*Day*, 369 S.W. 3d, *supra*, at 843.

"[T]he burden of the Takings Clause on government is no reason to excuse its applicability."

*Day*, 369 S.W. 3d, *supra*, at 844.

- b. **"Capped Wells"**: The Texas Department of Licensing and Registration, the State agency governing the standards for water well drillers pursuant to the Texas Occupation code, defines the term "Capped Wells" in Section 76.10(9) (17 TAC). It seems unnecessary to add further requirements for the District itself.
- c. **"Commercial Use"**: At the end of the new definition, the rule states that even if something is defined by the TCEQ as a "public water system," it will not constitute a "public water supply" under the District rules. If the project has already been defined as a public water system by the TCEQ, it should be classified the same by the District.
- d. **"Maximum Production Capacity"**: HB 3405 contains the definition the BSEACD must adopt. How will the District determine from a 36 hour pump test that pumping could eventually cause adverse effects to a pump "after long-term

operation” as described in this definition? This test was employed by the Legislature as a way to maximize a landowner's rights, not the District to limit them. Long range impacts should be "managed" as the Legislature contemplated in the unambiguous language of Section 36.1132(b), based upon actual maximized production from the affected aquifer to achieve the DFCs. The use of this pump test as incorporated in the proposed definition seems purely speculative and a way to limit production capacity without any proof or reason. Further, this definition of Maximum Production Capacity is not based on any industry standard and is arbitrary. In the water utility industry groundwater wells produce for varying hours per day based upon the utility's needs and the production ability of the well. The word "Maximum" on its face infers the highest or largest pumping rate that the well could achieve on an instantaneous basis. HB 3405 states that "it may be based upon a 36-hour pump test." To arbitrarily state that Maximum is actually 20% less than the Maximum disregards the meaning, and arbitrarily robs an applicant of production capacity and the exercise of his property rights.

- e. **“Production Fee”:** Given the District will require reporting and metering, the production fee should only be charged on actual production, not authorized production. This is especially true when production of the full permitted amount may not be utilized due to restrictions or provisions implemented by the District. At the very least, given the District later on proposes the idea of phased production, this fee should at least be limited to the maximum amount a permittee is authorized to produce at a given time, and not the amount eventually authorized when fully phased-in.
- f. **“Public Water Supply Use”:** As discussed in the comments related to “Commercial Use” above, the TCEQ has already defined what a “public water system” is. Public water supply is public water supply, to differentiate between “Retail Public Water Supply” and “Wholesale Public Water Supply” is not only unnecessary, but potentially discriminatory.
- g. **“Substantial Alteration”:** This definition is essentially any alteration in association with “substantial well repairs,” but no definition is given for “substantial well repairs.” Without a definition of “substantial,” there is no way to know whether or not a repair or alteration is substantial. Also, are alterations only those done by choice to an Applicant's own wells, or does this include situations where the District forces an Applicant to do work on another person's well based on a “potential” for impact which are not even proven or have not yet taken place?
- h. **“Sustainable Yield”:** The first issue with this definition is that it includes the provision “without significantly depleting the aquifer,” without a definition given for what constitutes a “significant depletion” of the aquifer. Second, the definition appears to require a calculation adding in an effect at the level of the drought of record, regardless of the actual circumstances at play.

- i. **“Unreasonable Impacts”**: As this is probably the most significant change stemming from HB 3405, this is probably the most important new definition the Board will pass. For that reason, it is imperative that the full implications of each part of the definition must be fully vetted, and special care taken to make sure the definition does not 1) overstep the bounds of the District’s authority; 2) alienate the Constitutionally protected rights of property owners; or 3) lead the District into a situation of enforcing actions which will lead to a taking, embroiling the District in litigation. Before going into the specific subsections, there are a few assumptions behind this definition which are incredibly problematic. The major misconception that is embedded in this definition is the idea that a person has some sort of eternal and inalienable right to the well design, and pump height they chose when a well was first installed. There is nothing in the Texas Water Code which states that a well is guaranteed to work forever, in the same manner in which it was originally installed, or that aquifer levels will be unchanged to the extent that anyone coming later must be punished or responsible if that level changes. In fact, the Rule of Capture, which has been clearly held by the Courts of Texas since the beginning of the 20th Century to be the standard, explicitly argues against this idea. More specifically, Texas Water Code §36.002, as amended in 2011 recognizes a landowner’s property right in the groundwater beneath their surface, specifically states that the ownership rights do not “affect the existence of common law defenses or other defenses to liability under the rule of capture.” Tex. Water Code §36.002(b-1)(2). With this definition being built upon this fundamental misconception, the new rules proposed by the District fly in the face of the Texas Water Code, over a century of Texas Jurisprudence, and the recent affirmation of those ideas by the Supreme Court of Texas. We appreciate the fact that the District had a short period of time mandated by the passage of HB 3405 to try to come up with these rules and definitions. However, we are concerned that based on the faulty assumptions which have been built in to the definitions given, that the Legislature’s mandate may have been unconstitutionally vague, forcing the District out on a limb, as it were. We would suggest either going back to the Legislature for a better explanation of what an unreasonable impact constitutes, while making sure that the definitions do not conflict with the plain language of the Texas Water Code, or the well-established Rule of Capture. Alternatively, we would suggest the District continue this rulemaking process, bringing in educated stakeholders in a more open process that can add to the discussion and make sure all factors are rightfully considered. We would normally like to offer ideas for how the rule should read, but given the problematic assumptions the proposed rules are built on, it is impossible at this time for us to offer suggested language without changing the entire framework. That said, we have the following comments, concerns, or questions about the specific subsections discussed below.
  1. **“well interference related to one or more wells ceasing to yield water at the ground surface”**: We have several questions and concerns about this subsection. First, is this for all wells, only

wells within the same formation as the well in question, only registered wells, only registered wells within the same formation as the well in question, or another limiting definition? This language also assumes that the existing well is in perfect working condition, what if there is an old well with an insufficient pump, motor, or other equipment that fails and leads to a cessation of water yield at the surface? Further, a well owner could have his pump set just below the static water level causing any drawdown to cause the well to cease yielding. There is also no way to tell how natural occurrences such as a drought will be factored in to this review. Most importantly, how is the correlation between wells established? How are effects of specific wells separated from effects of other wells in the area? If a well is at a point where the pump is only a minimal amount of space below the water level before a new well comes online, are other wells factored in to the total drawdown, or is it only the “straw that breaks the camel’s back” that is considered to have an unreasonable impact? Finally, once again, this subsection presupposes that a well owner is guaranteed the same water level that existed at the time the pump is installed *ad infinitum*, a completely unreasonable expectation, and a circumstance that is not protected by any rule, law, or decision by the courts of Texas. More importantly, this directly conflicts with the well-established Rule of Capture recognized by the State of Texas.

2. **“well interference related to a significant decrease in well yields that results in one or more water wells being unable to obtain either an authorized, historic, or usable volume or rate from a reasonably efficient water well”:** This subsection at least requires a “reasonably efficient water well,” yet there is no definition for what constitutes a “reasonably efficient water well.” This subsection still does not define what water wells are eligible (registered vs. unregistered, only those in the same formation, etc.), and without a definition of “reasonably efficient water well” there is no way to tell what this subsection contemplates. Who would decide whether a well is reasonably efficient? When is that determination made? Are wells checked for their efficiency at set intervals? Further, this subsection once again directly conflicts with the Rule of Capture, Texas Water Code §36.002, and the Supreme Court’s ruling in *EAA v. Day, supra*.
3. **“well interference related to the lowering of water levels below a feasible pumping lift or reasonable pump intake level”:** Is this on a “per well” basis or lowered to a level where it is no longer

feasible for anyone? If this is on a “per well” basis, there are a multitude of issues. As with the prior subsections, this flies in the face of the Rule of Capture, Texas Water Code §36.002 and *Day*. Further, there is no definition for how a “reasonable pump intake level” is determined, or what is considered feasible.

4. **“the degradation of groundwater quality such that the water is unusable or requires the installation of a treatment system:”**  
There is no information given for 1) who makes the determination on degradation of groundwater quality; 2) how that determination is made; or 3) what would define degradation. Further, we are unsure how this could be determined for the standpoint used later on in the rules about declaring the potential for unreasonable impacts.
5. **“the Desired Future Condition (DFC) to not be achieved”:**  
Much like subsections above, there is no description of how the production from the well in question is considered compared to all other wells actively producing and their effects on the DFCs. Is this once again an issue of the last well that “breaks the camel’s back” being the only one that is guilty of causing the DFC to not be achieved? All wells have an effect on DFCs, and the last ones through should not be held responsible for all other wells. Further, Texas Water Code §36.1132(b) mandates that a District “manage actual production” from the aquifer in a manner that will allow it to achieve its DFCs. This does not mean that the District should set a cap which once it is hit, would mean no permits could be issued without resulting in the same finding and limitation. Moreover, the DFC is a condition to be achieved 50-years out. With proper aquifer management of actual production as mandated by Section 36.1132(b), BSEACD should be able over time to insure the DFCs are met.
6. **“depletion of groundwater supply over a long-term basis, including but not limited to chronic reductions in storage or overdraft of an aquifer”:** Again, this is far too vague for any permittee to know when this could occur. What constitutes “depletion,” “chronic reductions,” or “overdraft?” As with the earlier subsections, how are all wells taken into account as opposed to just the well in question? What predictions or models are being used, and is recharge of the aquifer being properly taken into account? If the District is just using the Theis Equation, how are the many faulty assumptions built in to the Theis Equation handled? As the district well knows, the Theis Equation assumes a

homogenous aquifer, which the Middle Trinity especially does not fit. The Middle Trinity is a heterogeneous aquifer. Further, during drought or even during normal summers, the water level in the aquifer lowers due to a reduction in precipitation. This could be taken as a chronic reduction in storage or overdrafting. Would the depletion be determined by modeling? If so, the Theis equation has issues with a lack of recharge and problems with the assumptions used in the equation for calculating drawdown. This all seems completely speculative with no real, quantitative analysis.

#### 7. No comment

- j. **"Well Interference"**: The definition includes "measurable drawdown in the water table" on its own, not necessarily drawdown in the water table actually measured at another well. According to this definition, by strict interpretation the District could claim there is well interference whether or not another well even exists, which does not make any sense. For example, the recently drilled Onion Creek well had no wells nearby that could be impacted. Yet under this new definition, because that well undoubtedly had some level of measurable drawdown on the water table, this would now define that well as contributing well interference, even without any wells in the area.
- k. **"Wholesale Public Water Supply Use"**: The definition, as drafted, is too narrow as it excludes sales directly to wholesale customers. Additionally, as drafted, the definition would make more sense if it read "means the use of groundwater by a public or private entity that for compensation supplies water to a municipality, another political subdivision, or a retail water utility for resale to the ultimate retail consumer." Again, if the recommended changes are not adopted then the immediately preceding rewrite would make the definition make more sense. That said, the definition should recognize the ability to have wholesale sales made directly to wholesale customers and/or to other wholesalers who in turn may ultimately sell to the ultimate retailer.
- l. General comment regarding the definitions related to **"Public Water Supply Use," "Retail Public Water Supply Use"** and **"Wholesale Public Water Supply Use"** seem somewhat unnecessary. None of those uses are defined as beneficial. The actual purposes as to which of those kinds of entities put the water are the recognized beneficial uses both by Chapter 36 and the District's rules. The problem with the District's use of the term **"Public Water Supply"** whether retail or wholesale is that it confuses the concept of beneficial use as well as the concept of service areas. Public water supply systems do not necessarily have a service area associated with them, unlike a retail provider which has a CCN. A public water supply entity which is a governmental entity such as a city could have a water supply service area coterminous with its corporate boundaries and/or its

ETJ but, may have neither or only portions thereof. Retail water purveyors who are not governmental entities, as required by Chapter 13, Texas Water Code, are required to have a CCN previously issued by TCEQ and now issued by the Public Utility Commission. That requirement does not exist on a public water supply system if it is not providing retail water. There are rules which relate to public water suppliers with respect to water quality under Chapter 290 and 291 of the TCEQ rules. Again, these are distinct from the service area concept which is an area of confusion in the District's rules. *See* Rule 3-1.4(B)(7)(g)(i). The District should reconsider all of its rules on which the term "**Public Water Supply**" appears and more narrowly use the term to ensure it is not attempting to exercise authority beyond that granted to it by the Legislature and/or interfering with or usurping the authority of either the TCEQ and/or the PUC.

2. **Proposed amendments to Rule 3-1.3.1:** The new addition of 3-1.3.1(B)(3) is an important one to protect the rights of those who saw only part of their property added to the District by HB 3405. However, subsection 3-1.3.1(B)(3)(c) is too limiting. This should include for projects in the planning phase at the time of the addition of the property to the District, or specifically allow for an exception to be granted for a project that was in early planning stages at the time of the District's addition of the property. There should be no additional permitting or fees required for a person using water on their own property. To do so would conflict with the principle of law that a person holds a constitutionally protected property right in groundwater.
3. **Proposed amendments to Rule 3-1.4(A)(7)(g):** There are a few issues with the proposed changes to the notice provision of the Well Application Rule. First, subsection 3-1.4(A)(7)(g)(ii) has removed "registered" and now requires a mailing list of all well owners within a half mile radius of the proposed well. How can an applicant find information about wells that are not registered with the District? This is an incredibly onerous requirement which could be nearly impossible for an Applicant to comply with. Well owners are under no duty to give an Applicant any contact information or well location information, and could outright refuse, making an Applicant unable to comply through no fault of their own. Even more onerous is the new requirement in subsection 3-1.4(A)(7)(g)(iv), requiring notice be sent via certified mail to all landowners within a 1 to 2 mile radius, depending on the anticipated annual pumpage volume. This distance seems arbitrary, and requiring certified mail to that many people is an expensive proposition for any applicant. Further, how is an Applicant supposed to get the addresses for everyone within an up to 2 mile radius? This is expensive, burdensome, and unnecessary.
4. **Proposed amendments to Rule 3-1.4(A)(10):** This rule allows the General Manager to, based solely on a Hydrogeological Report and aquifer test data, unilaterally claim that a well has potential for unreasonable impact, subjecting the Applicant to considerably stricter requirements, with no opportunity to counter or defend against the determination. Further, there is no definition given for when circumstances amount to there being





“Potential for Unreasonable Impacts.” An Applicant should have the ability to challenge the finding that there is “Potential for Unreasonable Impacts.” We also re-urge the many issues with the definition for “unreasonable impact” above, and all of the arguments made there apply to this rule as well. Further, potential is pure speculation, and to require the expensive processes described in the rule based on speculative results that may never come to pass is both unnecessary and beyond the scope of powers given to the District by Chapter 36 of the water code. As a creature of statute, BSEACD is limited to exercising those powers that have been expressly granted by the Legislature or powers necessarily applied pursuant to the express powers granted by the Legislature. *See Tri-City Freshwater Supply District No. 2 v. Mann*, 142 S.W.2d. 945-948 (Tex. 1940); *South Plains La Mesa Railroad v. High Plains UWD No. 1*, 52 S.W.3d. 770 (Tex. App.-Amarillo 2001, no writ). This does not include adoption of rules and the exercise of powers simply because they are convenient or make it easier for the District to exercise control. This vague rule would also leave the General Manager with very broad discretion to determine when “potential” exists. This type of discretion leads to discrimination.

5. **Proposed amendments to Rule 3-1.4(A)(11):** Are the “unreasonable hydrogeologic, social, or economic impacts” listed in this subsection the same as the “unreasonable impacts” definition given above? If so, it would make more sense to use the same wording. If not, then there needs to be more definition given, as there is no way to know what an unreasonable social impact could be, for example.
6. **Proposed amendments to Rule 3-1.4(B)(1):** With this provision requiring public notice in newspapers, there is no need for the expensive and laborious individual notice proposed in Rule 3-1.4(A)(7)(g).
7. **Proposed amendments to Rule 3-1.4(D):** Along with the above concerns related to the underlying issues already raised about Unreasonable Impacts, this rule would require for any permits from 12-200 MGY *may* require installation of monitor wells and above 200 MGY will require one “or more” new monitor wells. Is there a limit to the amount of wells that may be required? How does an applicant know what may be required? Also, if there are sufficient wells for monitoring in the area, why would an Applicant be forced to go to the effort and cost of drilling new monitor wells? In subsection 3-1.4(D)(4), the rule states that an Applicant cannot rely on a previously filed report. If the report covers everything required by the District, there is no reason to not accept the previously filed report.
8. **Proposed amendments to Rule 3-1.4(G):** Again, without an opportunity to contest the decision that there is a “potential for unreasonable impacts,” and with the current unacceptable definition for unreasonable impacts which features assumptions that are not based in fact or law, and frequently contradict the Texas Water Code, the property right owned in groundwater, and the well-established precedent of Texas courts, this rule allowing the District to deny, modify, or reduce permits will result in an unconstitutional taking.

9. **Proposed amendments to Rule 3-1.6(A)(4):** Again, with the current unacceptable definition for "unreasonable impacts" which features assumptions that are not based in fact or law, and frequently contradict the Texas Water Code, the property right owned in groundwater, and the well-established precedent of Texas courts, this rule allowing the District to deny, modify, or reduce permits will result in an unconstitutional taking and unwanted litigation.
10. **Proposed amendments to Rule 3-1.11(B):** While it seems the amount of wells needed for a Compliance Monitoring Well Network would be different for each example, the rule should include some idea of the maximum amount of monitoring wells that an Applicant could be required to install. More importantly, an Applicant should be able to use existing monitor wells within their Monitoring Well Network.
11. **Proposed amendments to Rule 3-1.11(C):** This new mitigation plan rule has several issues. First, as noted above, the current unacceptable definition for unreasonable impacts which features assumptions that are not based in fact or law, and frequently contradict the Texas Water Code, the property right owned in groundwater, and the well-established precedent of Texas courts, this rule allowing the District to deny, modify, or reduce permits will result in an unconstitutional taking. Further, the inability of an Applicant to somehow contest the GM determination that there is potential for unreasonable impact, which would no trigger this mitigation requirement, is unfair and prevents due process. This mitigation plan also completely contradicts the Rule of Capture. As noted above, the State of Texas clearly holds that people have a property right in groundwater. *See Edwards Aquifer Authority v. Day*, 369 S.W.3d 814 (Tex. 2012); Tex. Water Code §36.002. Further, the Rule of Capture and Texas Courts have shown that a person exercising those rights does not owe a duty to others unless waste is shown. There is no legal basis to require mitigation. Further, this proposed rule is not bound by any distance or time period, meaning an Applicant is required to give out not just a blank check, but a blank checkbook to give money to anyone that claims they have an issue after the Applicant's well has been drilled. This rule also does not require any cause be shown by a person seeking money from the mitigation plan to show 1) that the Applicant had any impact on the claimant; 2) that the Applicant is the only responsible party; 3) that the claimant's well was in perfect working order; or 4) that the claimant's well was drilled to a reasonable depth. This rule also does not take into account the effect of any other existing wells, or what happens to this Applicant's mitigation requirements if later wells are drilled and cause some impact on a claimant's well.

#### **Conclusion:**

HB 3405 is a poorly drafted piece of legislation on many levels. In addition to its clear violation of landowner's constitutionally protected property rights, as well as contract rights and due process rights, the legislation provides inadequate guidance both to the District burdened with implementing it, *i.e.*, BSEACD, and landowners burdened with being regulated by it. One of the starkest examples is the failure to define terms like "unreasonable impact" so critical to the implementation of the statute. As provided to the District in HB 3405, the term "unreasonable

impact" is the equivalent of "pornography" under "federal law" which the United States Supreme Court has said it cannot define but recognizes it when it sees it.

Generations of moral fiber ingrained in our DNA seem to "bristle" at the sight of pornography, thereby allowing one to recognize it. The courts, however, do not always agree on what constitutes pornography and, therefore, legislative guidance would be beneficial.

In the instance of the use of the term "unreasonable impact" as it relates to the granting of a permit and the resulting effect on neighboring wells, measurable standards need to be applied, particularly in light of the highly politicized and emotionally charged nature of groundwater. Specifically, an individual landowner who has been operating his well at a particular elevation in the aquifer for a number of years may consider any deviation in the aquifer level as an "unreasonable impact" irrespective of the source of the impact. Whether the effect of production by a newly permitted well is in fact an "unreasonable impact" should be evaluated on the basis of some standardized criteria which is both known and determinable by an applicant, a well owner and the District in advance of when the standard is to be applied.

As examples of why the individual landowner's reaction to a reduction in the aquifer level at his well is not reasonable include the fact that wells are completed at multiple elevations throughout the aquifer. Moreover, small domestic wells frequently are completed and the pump set at the shallowest point possible in the aquifer that the driller and/or landowner believes they will be able to secure water. This is obviously an economic decision driven by the cost of deeper drilling, particularly in a hard rock karst aquifer setting, as well as the lift cost associated with the depth at which the pump is set and water is lifted from the aquifer to the point of use.

That decision, or the circumstances which drive it, however, are not grounds for a subsequent determination of reasonableness. In fact, it is unreasonable for anyone to assume that aquifer levels will remain static, stagnant or stable.

By virtue of the construction of the original well and the placement of the pump and the production of groundwater, that individual has impacted the aquifer and continues to impact the aquifer with all future pumping. The next well owner that comes along and drills a well and sets a pump and begins pumping adds to the impact on the aquifer as well as has some impact on the first well. With each new well the pattern of impacts continues.

Accordingly, the various "shades of grey" that the District has attempted to create as a non-specific, non-standardized metric for determining whether or not a new project or proposed well would constitute an unreasonable impact is not a reasonable approach. The "shades of grey" approach has the effect, particularly with the wide discretion given to the District as the decision maker, in targeting larger projects.

In addition to being discriminatory, that perspective and/or approach violates both the Supreme Court's decisions in the *Day* case and its action in the *Bragg* case and its historic decisions beginning with the *East* case and moving forward through the *Day* decision, as well as

the Legislature's 2011 amendment to Chapter 36 and Senate Bill 332 in which the common law defenses of the Rule of Capture were expressly recognized.

To constitute an "unreasonable impact," absent some other clear legislative guidance to the contrary, the District should be looking at events of a more "catastrophic" character. For example, reductions in aquifer level either due to a reduction in quantity due to production from other wells, and/or reduction in artesian pressure should both be expected and recognized as reasonable. Production at rates or volumes that impair the aquifer's ability to recover during times of reduced pumping or traditional recharge events, *e.g.*, rainfall events. Projects and/or wells which could foul the aquifer, impair its quality and/or make it physically impossible for a well operator to be able to continue to access the aquifer and secure groundwater by either drilling deep or lowering a pump in the well bore, are more in line with what should be considered to be an "unreasonable impact" on the individual neighboring well.

To be honest, with all due respect and compliments to the District Staff's efforts to timely respond to implement this legislation, the District should express its frustration and volley the ball back to the Legislature's side of the court and ask for express guidance. Otherwise, the District is wandering off into the darkness with no light to shine the way. By definition, that is a dangerous activity. The Supreme Court has already indicated in the *Day* decision that crying "the Legislature made me do it" is likely no defense to liability for the District that carried out the directive the Legislature gave it. *See EAA v. Day*, 369 S.W.3d, *supra*, at 843-844.

Overall, the proposed rules as written are somewhat confusing, and contradictory to the provisions of both Chapter 36 and HB 3405. They also exceed the limited grant of authority provided by statute. More importantly, however, the statutory authorization for the proposed amendments discussed above is not apparent, and it appears that the proposed rules both exceed the District's legislative delegation of powers and/or adoption for the District's convenience. The potential adverse impacts to constitutionally protected property rights threatened by the proposed rule amendments are great. As a result, the threat of litigation even greater.

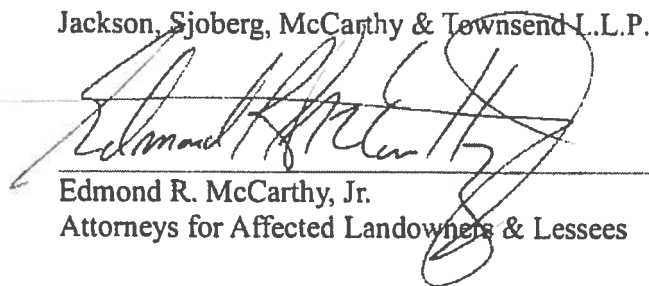
Accordingly, the Board should delay adoption the proposed amendments and direct the General Manager and General Counsel to carefully review the proposed amendments and the statutory enactments that gave rise to the same.

Our comments on the proposed rules are offered to aid the District in its management of the available groundwater while insuring its availability for maximum beneficial use and protection of private property rights. Again, we appreciate the opportunity to comment on proposed Rule amendments, and thank you for your consideration of these comments. If you have any questions, please call me at (512) 225-5606.

March 23, 2016  
Page 19

Sincerely,

Jackson, Sjoberg, McCarthy & Townsend L.L.P.

A handwritten signature in black ink, appearing to read "Edmond R. McCarthy, Jr.", is written over a horizontal line. The signature is stylized with a large, circular flourish at the end.

Edmond R. McCarthy, Jr.  
Attorneys for Affected Landowners & Lessees

ERM/tn

cc: Bill Dugat, BSEACD Counsel



March 23, 2016

John Dupnik  
General Manager  
Barton Springs Edwards Aquifer Conservation District  
1124 Regal Row  
Austin, Texas 78748  
e-mail: john@bseacd.org

*Via Email*

**Re: Barton Springs Edwards Aquifer Conservation District's Draft Rules**

Dear Mr. Dupnik:

Save Our Springs Alliance (SOS) submits these comments regarding the Barton Springs Edwards Aquifer Conservation District's proposed rules. Given the recent enactment of House Bill 3405 expanding the District's jurisdiction and providing other requirements, SOS recognizes the need for the District to revise its rules. SOS appreciates the work of BSEACD staff to compose the draft rules and appreciates your consideration of these comments.

SOS's major concerns are thoroughly described in the comments submitted by the Trinity Edwards Springs Protection Association (TESPA). SOS shares TESPAs concerns that the District's efforts to streamline its procedures may have the effect of nullifying important safeguards in the permitting process for Needmore Water LLC and any other entities in a similar position. Thus, SOS adopts and incorporates TESPAs comments in full.

In addition, SOS has the following comments:

**1. Definition of Sustainable Yield**

"Sustainable Yield" is currently defined as "the amount of water that can be pumped for beneficial use from the Barton Springs segment of the Edwards Aquifer **under a recurrence of the drought of record** conditions after considering adequate water levels in water wells and degradation of water quality that could result from low water levels and low spring discharge." Rule 2-1 (emphasis added).

Under the proposed rules, the definition of "Sustainable Yield" is "the amount of groundwater available for beneficial uses from an aquifer on a long term basis without significantly depleting the aquifer or causing unreasonable impacts, **after taking into account a recurrence of the drought of record**, and historic data on groundwater storage, usage, recharge, water quality, and spring flow of the aquifer." (emphasis added).

*Austin's water watchdog since 1992*

SOS supports adding the language “on a long term basis” and broadening the aquifers in consideration beyond the Barton Springs segment of the Edwards Aquifer. However, SOS is concerned about changing the base standard used to determine sustainable yield—from conditions under a recurrence of the drought of record to a standard which merely *takes into account* a recurrence of the drought of record. Thus, the drought-of-record conditions do not play a central role in the determination of sustainable yield, and are only one factor among historic use and others. The drought of record is the historic worst case scenario. Recent tree ring studies tell us that droughts that preceded record-keeping were more severe. Climate change science suggests that future droughts may also be more severe than the drought of record. While current law is tied to the drought-of-record standard, the District should recognize that this standard is not fully protective of the aquifer, wells, and spring flows as it considers other factors in managing the aquifer. Additionally, in implementing its Habitat Conservation Plan for managing water withdrawals, the District is required by federal law to consider the likely effects of climate change as well as the best available science in assuring protection of endangered species. Therefore, SOS recommends keeping the language “under a recurrence of the drought of record conditions” and adding to the list of considerations to take into account the potential for drought conditions worse than the drought of record.

## **2. Permits and Exemptions – Considering Subsidence**

The introductory paragraph for Rule 3-1.3, “Permits and Exemptions” describes a list of objectives to be achieved in issuing permits and permit amendments. Several of those objectives were deleted and replaced with “unreasonable impacts.” However, among the deleted goals is “to control and prevent subsidence.” Since subsidence is not in the definition of “unreasonable impacts,” deleting its reference here eliminates it as a prominent objective in issuing and amending permits.

SOS acknowledges that subsidence is mentioned in other provisions on issuing permits, however, unlike the rest of the deleted language in Rule 3-1.3, “unreasonable impacts” does not cover subsidence, and its prevention should remain a stated goal at the outset of the permit rules. And while there have not been significant problems with subsidence, subsidence is possible with increased pumping pressures. Therefore, SOS recommends leaving “to control and prevent subsidence” in Rule 3-1.3.

## **3. Notice Requirements**

Under current rules, applicants are required to give public notice of permit applications for “all new nonexempt wells not authorized by a District general permit.” Rule 3-1.4.B. But under the proposed rules, applicants need only give public notice of permit applications seeking to produce more than 2 million gallons annually. SOS understands that the District would still provide notice in a local paper for nonexempt wells under 2 million gallons per year. However, SOS believes all applicants should continue to be responsible for issuing notice instead of, or in addition to, the District. This change should be deleted and the current rule left in place.

#### 4. Application Requirements: Potential for Unreasonable Impacts

The proposed rules require an applicant to submit a mitigation plan if the General Manager determines the proposed production could cause unreasonable impacts and those impacts are “related to groundwater quality degradation **and** well interference.” Rule 3-1.4.A.10(c) (emphasis added). Rule 3-1.11 contains a nearly identical requirement, but uses the conjunctive “or” between these two types of impacts. It is thus unclear whether the unreasonable impacts must relate to both or just one of these effects to warrant submitting a mitigation plan. For consistency, and to ensure mitigation plans are prepared when either type of unreasonable impact is implicated, SOS recommends changing the “and” to “or” between “degradation” and “well interference” in Rule 3-1.4.A.10(c).

#### 5. Replacement Wells

The proposed rules add requirements for applying to drill a replacement well, essentially by moving and modifying those requirements for replacement wells under a Historic Use Status designation. Rules 3-4.6 and 3-1.22. One of the modified requirements under the proposed rules is that “the replacement well will be used to produce the same or less amount of groundwater and for the same **purpose of use** of the original well.”

Rule 3-4.6.A.4. The current rule regarding replacement wells in 3-1.22 framed this requirement as “the replacement well is used for the same **purpose and type of use** as the currently permitted or registered well.” (emphasis added). SOS believes the intent of this requirement was not meant to change under the proposed rules and this may simply be a typographical error. To avoid confusion and ensure replacement wells will only be authorized if the type of use remains constant, SOS recommends adding the language “and type” between the words “purpose” and “of” in the new rule 3-4.6.A.4.

If any of you have any questions about these comments, please contact me at the phone number or email address provided below.

Respectfully submitted,

/s/ Kelly D. Davis

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March 23, 2016

John Dupnik, P.G.  
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Barton Springs Edwards Aquifer Conservation District  
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Austin, Texas 78748  
e-mail: [john@bseacd.org](mailto:john@bseacd.org)

*via email*

**Re: Barton Springs Edwards Aquifer Conservation District's Draft Rules**

Dear Mr. Dupnik:

The Trinity Edwards Springs Protection Association (TESPA), submits these comments regarding the Barton Springs Edwards Aquifer Conservation District's (BSEACD) proposed rules. TESPAs appreciates the work done by BSEACD staff to formulate the draft rules and appreciates your consideration of these comments.

Given the recent expansion of the District's jurisdiction to include the Trinity Aquifer in Hays County, TESPAs recognizes the need for the District to revise its rules to address changing circumstances. Overall, the rules set up a thorough process for the District to use in evaluating applications for Production Permits, given the likely increase in the number of applications the District will encounter as a result of the annexation. TESPAs is concerned, however, that the District's desire to streamline and improve its rules is resulting in eased requirements for Needmore Water LLC (Needmore) at the expense of protections for the aquifer and offers the following comments:

**1. The draft rules carve out an exception to the requirement for Needmore to obtain a Transport Permit.**

The District's current rules (3-1.3.1) require an applicant to obtain a Transport Permit when it seeks to transport groundwater from a well within the District to a location outside of the District. The current rules provide for two exceptions to the requirement to obtain a Transport Permit: (1) transporting of groundwater from the District pursuant to a continuing arrangement that was in effect on or before March 2, 1997, and (2) transporting of groundwater for Incidental Use or sporadic use.

The draft rules create a new exception from the requirement to obtain a Transport Permit for a property owner who transports groundwater from a well on his property that, as a result of a boundary change is now within the District's boundaries, to a location on his property that is outside of the District's boundaries. The property must be contiguous, owned by the same property owner, and the water use type and amount must have existed prior to the boundary change. Currently, the only property in the District's boundaries that would qualify for an exception to the requirement to obtain a Transport Permit under the proposed rules is Needmore Ranch.

The intent of this new, proposed exception is to allow a property owner to continue its existing use and to be able to move groundwater on his private property without the need to obtain a Transport Permit. TESPA agrees with the rationale of permitting a landowner to continue to freely move groundwater around his property if he was doing so before the existence of an artificial boundary line. From conversations with District staff, however, it is TESPA's understanding that the District interprets this new exception to allow Needmore to transport the maximum production capacity of the well, or the permitted amount under its Temporary Permit, as opposed to the far smaller amount of groundwater Needmore was transporting prior to passage of HB 3405 when the boundary line came into existence. Based on the language of the proposed exception, which states that "the water use type and amount must have existed prior to the boundary change," TESPA disagrees with the District's interpretation that this applies to the maximum production capacity of the well on Needmore Ranch. The District granted Needmore a Temporary Permit based on the maximum production capacity in the amount of 179,965,440 million gallons per year *after* the boundary change. Prior to the boundary change, however, Needmore was transporting substantially less groundwater from the well on its property to the lake on its property.

Given the tremendous amount of groundwater that Needmore intends to transport, TESPA is concerned that carving out an exception to the requirement to obtain a Transport Permit in this case removes an added layer of analysis designed to protect the aquifer and the property rights of nearby landowners. Under the District's current rules, before granting a Transport Permit, the District shall consider the following: (1) The availability of water in the District and in the proposed receiving area during the period for which the water supply is requested; (2) The projected effect of the proposed transfer on aquifer conditions, depletion, subsidence, or effects on existing permit holders or other groundwater users within the District; and (3) The approved regional water plan and approved District Management Plan. Rule 3-1.3.1 (F). If Needmore is not required to obtain a Transport Permit, the District loses the opportunity to review these factors.

TESPA urges the District to reconsider its position that under the proposed rules, the District will permit Needmore to transport almost 180,000,000 gallons per year of groundwater on its property without the need to obtain a Transport Permit. Additionally, TESPA recommends that the District further clarify that the exception to the requirement to obtain a Transport Permit applies to an existing use *and amount prior to the existence of a boundary line*.

**2. The new, proposed definition of Agricultural Use would allow Needmore to change the use type under its HB 3405 permit without triggering a permit amendment.**

The proposed rules expand the definition of Agricultural Use to include several types of activities, such as the cultivation of crops for human consumption, the practice of floriculture, and horticulture, and wildlife management, among other uses. Under the current rules, wildlife management falls under the use type Agricultural Livestock. The District granted Needmore's Temporary Permit for the use type Agricultural Livestock, as Needmore claimed it was using the lake on its property to support wildlife management.

The District has maintained that it interprets the intent of the Temporary Permit application process to allow an applicant to maintain an existing use prior to the passage of HB 3405, and consequently, any change in use would result in a permit amendment and would allow the District to consider additional factors beyond the two HB 3405 factors – impacts to existing wells and the DFC. In the new draft rules, the District has clarified this interpretation. The draft rules state that “Amendments to change the use type of a Production Permit will require the recalculation of the permitted volume to be commensurate with the reasonable non-speculative demand of the new use type.” 3-1.9(C)

However, because under the proposed rules the District has expanded the definition of Agricultural Use to include wildlife management, Needmore could engage in any of the activities defined as Agricultural Use without triggering a change in use type and recalculation of the permitted volume as described above in 3-1.9(C).

TESPA recommends that the District define wildlife management, often a less water intensive use, as a separate use type distinct from Agricultural Use.

**3. Rules need to clarify that all seven factors in the definition of Unreasonable Impacts apply to a HB 3405 permit once it has been converted into a regular Production Permit.**

TESPA supports the District's efforts to develop a definition for Unreasonable Impacts, but the draft rules need to clarify that all seven factors in the definition of Unreasonable Impacts apply to a HB 3405 permit once it has been converted into a regular Production Permit. The last sentence at the end of the definition of Unreasonable Impacts states, “For permits issued under 3-1.55.1 and 3-1.55.4 (HB 3405), the District shall consider (1-5) listed above in any determination of unreasonable impacts.” The intent of the sentence is to clarify that the District may only consider (1-5) when converting a Temporary Permit under HB 3405 to a regular Production Permit. However, TESP is concerned that this sentence could be interpreted to mean that the District is limited to analyzing items (1-5) in the future. Although the current rules under 3-1.55.4(D) state that Temporary Permits converted to regular Production Permits “shall be subject to the provisions of Rule 3-1.11 related to Permit Terms and Conditions,” the proposed definition of Unreasonable Impacts makes this unclear.

TESPA recommends that the District clarify that items (1-5) only apply at the time a Temporary Permit is converted to a regular Production Permit and that after a Temporary Permit has been converted, then the District may rely on all seven factors in determining whether an unreasonable impact has occurred.

Finally, TESPAs recommends that under 3-1.55.4(D), the District add the following language:  
“Specifically, Regular Production Permits shall be subject to the provisions of Rule 3-1.11 related to Permit Terms and Conditions *and to the provisions under Rule 3.7 related to Drought.*

Thank you for the opportunity to comment with regard to the draft rules, and feel free to contact me if you have any questions.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Van Puig-Williams", written in a cursive style.

Vanessa Puig-Williams  
Attorney for TESPAs

## **Item 5**

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

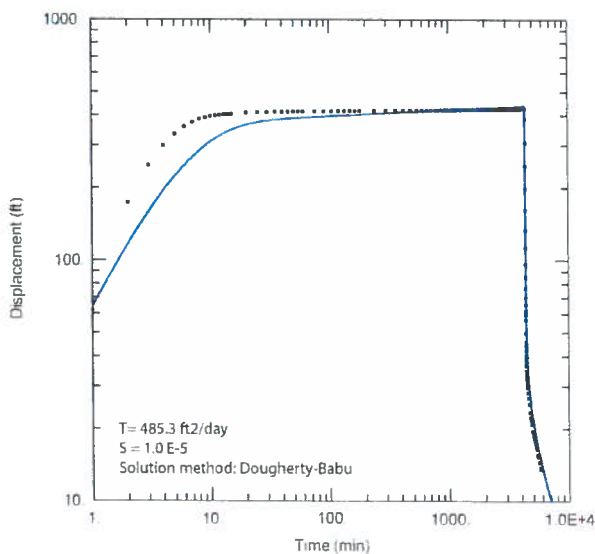
- b. Discussion and possible action related to approval of revisions to the District's guidance document, *Guidelines for Hydrogeologic Reports and Aquifer Testing*.**



# Guidelines for Hydrogeologic Reports and Aquifer Testing

*Barton Springs/Edwards Aquifer  
Conservation District  
Hays, Caldwell, and Travis Counties, Texas*

*March 2016*



# Guidelines for Hydrogeologic Reports and Aquifer Testing

*Barton Springs/Edwards Aquifer Conservation District  
Hays, Caldwell, and Travis Counties, Texas*

*Aquifer Science Staff  
March 2016*

BSEACD General Manager  
John Dupnik, P.G.

BSEACD Board of Directors  
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Blake Dorsett, Secretary  
Precinct 3

Dr. Robert D. Larsen  
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Precinct 5

## Acknowledgments

This document is modified from original guidelines written by former District Hydrogeologist Nico Hauwert, P.G., and later revised by Aquifer Science staff in January 2007. This version of the guidelines were revised by the District's Aquifer Science Team Brian A. Smith, Ph.D., P.G. and Brian B. Hunt, P.G. with reviews also provided by the District's Technical Team. Additional reviews were provided by Joe Vickers, P.G., Douglas A. Wierman, P.G., Alex S. Broun, P.G., and Rene Barker, P.G.

## Cover

Photograph of pumping well in Kingsville City from the Goliad Sands pumping 700 gpm. Photo shows the orifice weir for measuring the flow rate (source: Joe Vickers). Chart is an example of analytical solution used to estimate aquifer parameters for a Middle Trinity irrigation well (Onion Creek Golf Course well; August 2015).

## I. Introduction

In accordance with the Barton Springs/Edwards Aquifer Conservation District's (District) Rules and Bylaws (3-1.4), a hydrogeologic report and aquifer test may be an application requirement for production permits, drilling authorizations, or major amendments. District rules define the Hydrogeologic Report as follows:

*"a report, prepared by a Texas licensed geoscientist or a Texas licensed engineer in accordance with the District's guidance document, Guidelines for Hydrogeologic Reports and Aquifer Testing (Guidelines), which identifies the availability of groundwater in a particular area and formation and assesses the response of an aquifer to pumping over time and the potential for unreasonable impacts."*

Hydrogeologic studies provide essential baseline information for water-resource management for both the District and the permittee. Aquifer tests are a key component of hydrogeologic studies, however as Butler (2009) states, "an assessment of the response of an aquifer to pumping over the long term should not solely depend on information from a pumping test of limited duration; one must use other information on the regional hydrogeology, and so forth, to make that determination." These guidelines are intended to assist professionals involved in planning and conducting the aquifer test and also addressing the key elements of the hydrogeologic report that include other information on the regional hydrogeology.

The hydrogeologic test (aquifer test) and report needs to be prepared by a Texas licensed professional geoscientist or engineer. Planning and implementation of the aquifer test shall be closely coordinated with the District to insure that the proposed study is consistent with District standards and expectations delineated in these guidelines. Prior to the commencement of the aquifer test, the applicant (or applicant's designated representative) shall have a meeting to discuss the proposed work plan (**Appendix A**). A final written work plan must be approved by District staff prior to commencement of the test. Deviation from these guidelines may occur only with prior District approval (see variance section below).

After review of the hydrogeologic report and analyses of the aquifer test data, District staff will evaluate the potential for *unreasonable impacts* of the request (as defined by the District rules (3-1.4G)). Staff may recommend to the Board that the production permit request be granted without condition. However, if there is a potential for unreasonable impact, staff may recommend permit applications be denied, modified, reduced, adjusted, curtailed, or approved with special conditions. Permit applications may be deemed incomplete due to hydrogeologic reports and aquifer tests that do not meet the District standards or deviate significantly from the guidelines outlined below without prior approval.

## II. Purpose and Scope of Hydrogeologic Tests and Reports

Based on the scale of the requested permit volume, the District has established guidelines for tiers of requirements as they pertain to aquifer tests and hydrogeologic reports (**Table 1**). Aquifer tests for Tier 3 require more data collection than tests for Tier 2. Tier 3 aquifer tests will require a monitoring network plan and the installation of one or more monitor wells. Aquifer tests for Tier 1 may consist of abbreviated single well tests (specific capacity), although if nearby wells are available, they should also be measured. For the purpose of these guidelines, well interference is defined as drawdown of the water level in a well attributed to pumping from another well.

**Table 1: Tiered Structure for Aquifer Testing and Hydrogeologic Report Requirements (3-1.4.D).**

Tier	Aquifer Test and Report Requirements	Anticipated Production Volume
0	None	<2,000,000 gallons per year
1	Abbreviated aquifer test and report	>2,000,000 to 12,000,000* gallons per year
2	Hydrogeologic report aquifer test <u>may</u> require installation of new monitor wells if existing wells are not available or adequate for monitoring.	>12,000,000* to 200,000,000 gallons per year
3	Hydrogeologic report and aquifer test will require monitoring well network plan and installation of one or more new monitor wells.	>200,000,000 gallons per year

*\*The 12 MG/Yr value is the same as the drought management tiers. The value triggering a Tier 2 may be higher or lower depending upon the setting and level or risk of unreasonable impacts, as judged by the Aquifer Science Team's professional judgment.*

### Tier 1 Abbreviated Hydrogeologic Test and Report

The purpose of the Tier 1 tests and reports is to establish baseline information on the well and aquifer (yield, parameters, water quality). The Tier 1 tests and reports are intended for those wells that pump a relatively small volume and have a low risk for unreasonable impacts. Key elements of the Tier 1 Abbreviated Hydrogeologic Test and Report include:

1. **Estimated aquifer properties:** Transmissivity needs to be calculated from an aquifer test using the guidelines outlined in this document. Often these will be single-well (specific capacity) tests, but where monitor wells are nearby and readily accessible, they should be included in the testing. Storativity should be calculated if sufficient monitor

well response is measured, or appropriate values cited from the literature or previous tests.

2. **Estimated extent and magnitude of well interference:** The report should address the short and long-term impacts from the anticipated pumping on existing surrounding water wells. This can be done with simple distance-drawdown graphs (e.g. Cooper-Jacob) that project the effects of up to 7 years of pumping.
3. **Water quality:** The report should document and establish water chemistry of the groundwater produced at the end of the test, which at a minimum includes field parameters (conductivity, temperature, pH) and possibly laboratory results (common ions and anions, nutrients).

### Tier 2 and 3 Hydrogeologic Test and Report

Tier 2 and 3 tests and reports are intended for those well systems that have proposed pumping volumes greater than 12 MG/Yr (**Table 1**). Accordingly, the purpose is to make an assessment of the short- and long-term impact to the regional aquifer system and existing surrounding water wells from the proposed pumping. An aquifer test is a key part of that evaluation, but other relevant hydrogeologic data should also be evaluated, if available.

*Note: The difference between Tier 2 and 3 Hydrogeologic Test and Report is related to the aquifer test monitoring plan and installation of monitor wells for the aquifer test. Tier 2 testing will require the installation of monitor wells only if existing wells in the study area are unavailable or inadequate. In contrast, Tier 3 testing requires a monitoring well network be established by the installation of at least one monitor well for a test and identifying a sufficient amount of existing wells adjacent to the well or well field. A second monitor well may be required to measure the effects in different aquifers or in different locations of a widespread wellfield. The Tier 3 requirement is meant to ensure the best possible test and data collected for these large permit requests. The new monitor wells serve as a component of the “monitoring well network plan” submitted with the aquifer test work plan as required by the rules (3-1.4.D).*

Key elements of the Tier 2 and 3 Hydrogeologic Test and Report include:

1. **Estimated aquifer properties:** Hydrogeologic parameters including *transmissivity* and *storativity* need to be calculated from an aquifer test using appropriate published analytical models. Additionally, the report should also identify the presence of boundary conditions such as barriers to groundwater flow, recharge, and other factors inherent to the aquifer or hydrologic conditions that may influence pumping over time.
2. **Estimated extent and magnitude of interference:** The report should address the short and long-term impacts from the pumping on existing surrounding water wells. The report should contain a map of the maximum measured drawdown from the aquifer test for the surrounding monitored wells. In addition, up to 7 years of projected future drawdown from analytical models should be mapped. Results will be used to evaluate the potential for unreasonable impacts to existing surrounding water wells.

3. **Water quality:** The report should document water chemistry and detectable trends during the aquifer testing. The report should discuss the risk of water quality changes due to pumping. In cases where pumping or ASR injection wells are located near the Edwards Aquifer's saline-water boundary, or where significant inter-aquifer flow could induce waters of differing and distinguishable water quality, further evaluations may be required. Results will be used to evaluate the potential for unreasonable impacts to the quality of water in existing surrounding water wells or the aquifer.
4. **Estimated impacts to regional water resources:** Regional water resources include aquifers, springs, and surface streams. The report should attempt to quantify the short- and long-term impacts from the pumping on these resources and Desired Future Conditions (DFCs) for the relevant aquifer(s). Results will be used to evaluate the potential for unreasonable impact to DFCs, regional aquifer conditions, springflows, or base flows to surface streams.

### **Variances to Hydrogeologic Reports and Aquifer Test**

There may be situations where Aquifer Science staff recommend to the Board a variance from conducting an aquifer test or forgoing a Hydrogeologic Report entirely, or conducting a Tier 1 instead of a Tier 2 test, or forgoing the requirement to drill new monitors wells. Technical information and memorandum from a Texas licensed geoscientist or engineer documenting these conditions may be required. Factors that may be considered include:

1. Relatively low requested production volume;
2. Sufficient data exist for the well or vicinity (e.g. existing hydrogeologic reports or aquifer tests);
3. Low potential for unreasonable impacts; and
4. Other relevant factors.

Deviations to the guidelines and the Aquifer Test Design and Operation (**Appendix A**) can occur with approval from Aquifer Science staff, which should be noted and described in the submitted work plan.

### III. Hydrogeologic Report Outline

Below is a suggested outline of topics, tables, and figures that should be included in the hydrogeologic report. Tier 1-3 reports need to address their respective topics described in Section II above. However, the Tier 1 Abbreviated Hydrogeologic Report is, by its nature, a more concise document and does not address all elements outlined below.

#### A. *Summary Results and Conclusions*

- i) Description of the type of permit request, aquifer (target production zone), use type, volume, and other relevant factors.
- ii) Conclusions of the report as they relate to the purpose described in Section II.

#### B. *Description of the Pumping Well Site and Water System*

- i) Description and map of the project area, the location of the well site(s), and system configuration including the location and volume of water-storage facilities.
  - Figure: *sketch (map) of the test site*
    - Note: Describe and map potential inference from nearby pumping wells.
- ii) Description of the current and anticipated annual pumping demands, including typical pumping schedules, such as frequency, duration, peak demand hours, and pumping rates of the pumped well(s).

#### C. *Hydrogeology and Conceptual Model*

The data sources for this section should be the best available information, properly cited from the literature, and integrated with the data collected from this study.

- i) Provide a description of the hydrogeologic conceptual model of the aquifer and well site. Discuss or provide:
  - Relevant hydrogeologic aspects of the aquifer, such as aquifer conditions (e.g. confined, semi-confined, unconfined), porosity, permeability, hydrostratigraphy, faulting, and boundary conditions (recharge or barriers).
  - A map showing wells (exempt and nonexempt), surface ponds or reservoirs, major karst features, springs, or any other source of recharge and discharge for the project well site and surrounding area of influence. Data sources should include all publically available databases coupled with field reconnaissance or survey investigations.
  - Regional hydrogeologic elements such as recharge, flow, and discharge should be addressed in the conceptual model. Concepts such as pumping equilibrium, changes in storage, and capture related to pumping should be discussed.
- Figures: *Regional and local scale geologic and potentiometric maps*
- Figures: *Study area geologic and hydrogeologic cross sections*

- The role of fracturing, faulting and karst in the conceptual model should also be directly discussed, in addition to the heterogeneity and anisotropy of the aquifer and well field.
- ii) Detailed well hydrostratigraphy and completion information need to be presented in the report. This should include geophysical logs of the pumping wells (required), and monitor wells (if available for existing, required for new).
  - *Figures: Pumping and monitor well hydrostratigraphy and well completion diagrams.*
    - Well inventories, drilling and geophysical logs, state well reports, and other relevant records should be included in the appendices of the report.
    - Electronic files (PDF and/or .WCL) of geophysical logs should be made available. Geophysical logs should include gamma ray, resistivity, and caliper.
- iii) Potentiometric maps should be prepared showing the elevations of the potentiometric surface(s) of the aquifer(s) proposed for usage or that could be impacted.
  - Regional potentiometric maps can be based on existing or published data, while more local potentiometric maps should be based on water-level measurements taken prior to the aquifer test for the tested aquifer and, to the extent possible, all relevant aquifers that could be subject to capture.
  - *Figure: Regional and local potentiometric maps*

#### **D. Aquifer Test Plan and Results**

- i) Aquifer Test Plan. Summarize the aquifer test design and operation outlined in **Appendix A** and approved by the District.
  - *Note: Complete time-discharge records of the pumped well and water-level records of the pumped and monitor wells should be put into an appendix (and provided in digital format).*
- ii) Aquifer test results. Discuss pre-test trends and water levels during the pumping and recovery phases as they might relate to influences from recharge, barometric effects, and pumping wells. Any problems or inconsistencies with pumping rates or measurements must be discussed and documented.
  - *Figure: Map of the maximum measured drawdown during aquifer test. If more than one well is pumped, the sum of the maximum drawdown from each test must be presented. Maximum drawdown determinations may need to be adjusted for regional water-level trends (any adjustments to the data need to be described).*
  - *Figures: Annotated hydrographs (arithmetic or non-log) of water-level elevations versus time for all the data from each well.*
  - *Figures: Hydrographs of nearest stream flow, springflow, and rainfall station data covering a period of 3 months prior to the aquifer test through the recovery period.*

#### **E. Analyses of Aquifer Test Data and Parameter Estimation**

- i) This section should describe the methods used and analytical model selected to estimate aquifer parameters.
  - All data manipulation (trend-correction) should be clearly described.

- *Table: Summary of input parameters used in the analytical solutions (pumping rate, aquifer thickness, distances, well construction details etc.).*
- *Figures: Annotated semi-log and log-log graphs of measured drawdown versus time in pumping and monitor wells. Include select theoretical curves (analytical models) used to calculate the parameters.*
  - *Methods should include straight-line (Cooper and Jacobs, 1946) and type curve models such as Theis (1935) or other similar analytical models. If numerous plots are generated they can be put into an appendix.*
- ii) Storativity should only be calculated from monitor well (not pumping well) data. Data from monitor wells farthest out generally result in the best estimates of storativity (Butler and Duffield, 2015; Butler, 2009).
- iii) Deviations from these theoretical curves must be discussed and may include effects from: hydraulic boundaries (recharge and no flow), partial penetration, fluctuating pumping rate, delayed yield, leakage, atmospheric responses, regional water-level trends, and interference from other wells.
  - *Table: Summary table of estimated aquifer parameters and methods. This should provide a range of results based on various selected methods. The preferred or averaged result and model should be indicated. A comparison to other published or nearby aquifer test values should be included.*

#### **F. Potential Unreasonable Impacts Analyses (Tiers 2 and 3 only, except where indicated)**

The effects of pumpage on wells and on the aquifer must be evaluated and discussed in this section as they relate to the potential for unreasonable impacts. Aquifer parameters selected for the evaluation should be representative of the potentially impacted area. Discuss the rational of the parameters selected for the analyses.

##### **Well interference (Tiers 1-3)**

- i) Discuss and map the estimated extent and magnitude of well interference on existing surrounding wells.
  - *Figure: A plan view map of theoretical maximum drawdown for 7 years should be shown on the final maps and cross sections.*
  - *Figure: Chart showing the forecast of distance-drawdown from the pumping well for 1 week, 1 and 7 years. Cooper-Jacob plots are recommended.*

##### **Potential impacts to regional water resources**

- i) Discuss permit in context with the Modeled Available Groundwater (MAG) and the DFC.
- ii) Discuss potential short- and long-term impacts from the pumping on freshwater resources including springs and baseflow to surface streams.
- iii) Discuss regional numerical or other analytical models relevant to the permit.

##### **Changes in water quality**

- i) Document and discuss any water-quality changes that may have occurred due to pumping during the test.
  - Analytical results from the laboratory should be provided as appendices.
  - *Table: Summary of laboratory water-chemistry results. Should include comparison to EPA and TCEQ standards in addition to other regional averages.*
  - *Figure: Plots showing water level, temperature, and conductivity during test. Recommend plotting with pumping well hydrograph.*

#### **G. Supplemental Information**

Due to the test-specific nature of these investigations, additional information can enhance the results and evaluation of the data. Below are some items that could be considered within the scope of work for the hydrogeologic studies and report:

- *Numerical or analytical modeling*
- *Dye tracing*
- *Surface geophysics*
- *Down-hole camera surveys*
- *Other reports or unpublished information or data.*

## **IV. Select References**

Alley, William M., 2009, Update on Guidance for the Preparation, Approval, and Archiving of Aquifer-Test Results. Office of Groundwater Technical Memorandum 2009.01

Butler, J., 2009, Pumping Tests for Aquifer Evaluation—Time for a Change? *Groundwater*, Volume 47, Issue 5, September/October 2009, Pages: 615–617.

Butler, J. and G. Duffield, 2015, Aquifer Testing for Improved Hydrogeologic Site Characterization featuring AQTESOLV and the In-Situ Level TROLL, Course Notes, D. Kelleher (ed), Fort Collins, Colorado, October 27 and 28, 2015, 511 pages.

Cooper, H.H. and C.E. Jacob, 1946, A generalized graphical method for evaluating formation constants and summarizing well field history. *Am. Geophys. Union Trans.* Vol. 27, pp. 526-534.

Driscoll, F.R., 1986, *Groundwater and Wells*. Second Edition. Johnson Screens, St. Paul, Minnesota. Pp. 1089.

Hunt, B.B., B.A. Smith, J. Kromann, D. Wierman, and J. Mikels, 2010, *Compilation of Pumping Tests in Travis and Hays Counties, Central Texas: Barton Springs Edwards Aquifer Conservation District Data Series report 2010-0701*, 12 p. + appendices

Kruseman, G.P., and N.A. de Ridder, 1991, *Analysis and Evaluation of Pump Test Data*, Second Edition, ILRI, Netherlands. Pp. 377

Theis, C.V., 1935, The relation between the lowering of the piezometric surface and the rate and duration of discharge of a well using groundwater storage. Trans. Amer. Geophys. Union, Vol. 16, pp. 519-524.

## Appendix A: Aquifer Test Design and Operation Guidelines

The aquifer test plan submitted to the District prior to the test should briefly address the key aspects outlined below. These guidelines will be used as a checklist during the pre-test meeting with the consultant. The aquifer test work plan must be approved by the District staff.

Aquifer test design and operation should generally follow those discussed in Driscoll (1986) or other published resources.

### 1. Initiation, Duration and Pumping Rate

- a) Aquifer tests for most aquifers (especially the Edwards) should not be conducted during or immediately after significant rain or recharge events, because of the rapid change in water levels that often follows.
  - *Note: aquifer tests may occur during recharge events for deeply confined aquifers if the pre- and post-test data are sufficient to document trends.*
- b) Testing schedules should be coordinated with other area pumping wells to avoid well interference that could result in misleading or uncertain results.
- c) The test shall be designed to pump a minimum of three times the daily equivalent of the requested annual permitted volume (**Table 2**). Longer duration pumping tests (four to five times the daily equivalent) are encouraged and could be required where the risk of unreasonable impacts, or encountering aquifer boundaries, is high.
  - *Note: the duration of the test, rather than the pumping rate, increases the scale of the test (distance of measureable drawdown). The pumping rate has less of an effect on the scale of the test, but increases the ability to distinguish water-level fluctuation noise. In addition, unconfined aquifers generally result in slower response and need longer pumping durations for measured responses in monitor wells (Butler and Duffield, 2015). Longer test durations and larger pumping volumes should be considered if it is anticipated the permit would increase sometime in the future such that the test would not need to be repeated.*

**Table 2. Example duration calculation of aquifer test**

Annual Permit Request (gal)	Daily equivalent (gal)	Pumping target volume (gal)	Testing Rate 380 gpm	Testing Rate 285 gpm
100,000,000	274,000	3 x 274,000 = 822,000	36 hour	48 hour

- d) The aquifer test should be a constant-rate test. Well testing (step tests) should be performed prior to the aquifer test (allowing for recovery) in order to properly size the pump and estimate the optimal well yield for the test. Well testing (step tests) should ideally be done prior to the final work plan.
  - *Note: Pumping rates should be measured frequently to verify that a constant discharge rate is being achieved. If a flow meter is used to measure flow it should be calibrated prior to the test and verified using another calculation method, such as an orifice weir or by the time required to fill a storage vessel of known volume.*
- e) Waste of the discharge should be avoided as much as possible, particularly during drought conditions, and should be routed to storage tanks or to other water systems when possible. If the water must be discharged to surface drainages off-site, the pumped water should be routed so that it does not recharge into the tested aquifer in the vicinity of the pumping or monitor wells during the test. Discharge onto adjoining properties needs to be considered and avoided if possible, especially when it involves flooding and poor quality water.

## **2. Aggregate Well Fields**

- a) If the study involves the assessment of two or more pumping wells, each well may be pumped separately to measure their combined effects. If the wells are sufficiently close, it may be possible to pump the wells simultaneously.

## **3. Well Completion (see rule 3-1.20)**

- a) Pumping wells must be completed before the aquifer test can be conducted.
- b) Temporary test wells may be permitted if the final target production zone can be sufficiently isolated to ensure discrete production solely from that zone during the test. This could be achieved with temporary casing and grout or by the use of packers. The use of test wells must be approved by the District.
  - *Note: If the conversion of the test wells to final production involves significant modifications (well diameter, acidization, etc.) then a special condition of the permit, if granted, may be included to require a re-test of select wells after final completion to demonstrate that the data can be reproduced. If the test of wells after final completion results in significant differences in aquifer parameters and measured response to surrounding wells, the full aquifer test may need to be repeated and the permit subject to staff-initiated amendments based on a new aquifer test.*

## **4. Number and Location of Monitor Wells**

*Note: Detailed description of the monitor wells and elements below will be considered a "monitor well plan" that is part of the overall aquifer test work plan.*

- a) Monitor wells should be selected radially around the pumping well and include wells completed in the same aquifer.
  - *Provide a detailed map of pumping, monitor, and area wells.*
  - *Use analytical models (Cooper-Jacob) to help forecast distance and a potential range of drawdown to monitor wells using published aquifer parameters.*
- b) For Tiers 2 and 3, some monitor wells may be selected that are in different aquifers to evaluate the potential for inter-aquifer communication.
- c) Ultimately, it may be necessary for the Tiers 2 and 3, which could have a significant risk of negative impacts, to install one or more monitor wells in the absence of existing well-suited monitor wells. The aquifer test work plan shall also include a monitoring well network plan and shall contain the minimum requirements of District Rule 3-1.4(D)(3). A monitoring well network shall be established by installing one or more new monitor wells and identifying a sufficient number of existing wells adjacent to the well or well field prior to the commencement of the aquifer test in accordance with the District approved monitoring well network plan.

## 5. Water-Level Data

- a) Pre-aquifer test water-level measurements should be collected starting at least 1 week prior to pumping.
- b) Post-test data collection in all wells should continue through the recovery phase, which should be about as long as the pumping phase.
  - *Note: recovery data often results in the best data for parameter estimation as head loss due to well construction is minimized (Butler and Duffield, 2015).*
- c) Select monitor wells should be measured beyond the recovery period of the pumping phase to establish regional and local water-level trends and to observe any delayed response to pumping.
  - *Note: It is preferable that recovery lasts two to three times the duration of the pumping for complete recovery and also to measure trends.*
- d) All water-level measurements should be within 0.1 feet precision. The use of automated data loggers and vented pressure transducers should be used whenever possible. The automated data should be verified with manual e-line measurements if the risk of hanging up the e-line is low.
  - Care should be exercised to prevent contamination (bacterial and other types) of monitor wells when using elines during the test.
- e) Other means such as airlines or sonic meters, are generally discouraged from use but may be allowed as backup measurements.
- f) All water-level data must be submitted in the report and made available in digital format (spreadsheet).

*Note: The District may be able to provide continuous data from relevant existing monitor wells, and provide logistical support to identify, make introductions, and possibly assist with monitoring if time and resources allow.*

## **6. Water Quality Data**

- a) Samples for major ions, nutrients, and other trace elements at the end of the test.
  - *Note: the list of parameters should be provided in the work plan.*
- b) Field parameters (temperature, conductivity, pH) should be monitored throughout the test with tabular results provided in the appendices.

## **Item 5**

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

**c. Discussion and possible action related to designating one or more draft redistricting plans as Illustrative Plan(s) to be proposed for public consideration and comment including scheduling one or more public hearings at which to receive public comments.**



December 3, 2015

Board of Directors and General Manager  
Barton Springs/Edwards Aquifer  
Conservation District  
1124-A Regal Row  
Austin, TX 78748

Re: 2015 Initial Assessment considering 2010 Census data

Dear Directors and Mr. Dupnik:

This is the Initial Assessment letter for the Barton Springs/Edwards Aquifer Conservation District. Our review of the 2010 Census population and demographic data for the District shows that the District's Board of Directors precincts are out of population balance and you should redistrict. This imbalance occurred due to the addition of territory prescribed by House Bill 3405 and annexations by the City of Austin. We are prepared to meet with the Board of Directors to review the Initial Assessment and to advise the Board on how to proceed to redistrict the director precincts to bring them into balance for use in the 2016 election cycle.

This letter presents a brief overview of basic redistricting principles to assist you in preparing for our presentation on the assessment. Note that this letter includes resolutions for the adoption of redistricting criteria and guidelines. These are matters that should be addressed early in the redistricting process to enable us to proceed efficiently. We will be working with you to develop the appropriate language for your adoption of redistricting criteria and guidelines.

There are three basic federal legal principles that govern the redistricting process: (i) the "one person-one vote" (equal population) principle; (ii) the non-discrimination standard of Section 2 of the Voting Rights Act; and (iii) the *Shaw v. Reno* limitations on the use of race as a factor in redistricting. These principles are discussed in detail in the attachments to this letter, which we urge you to read and review carefully.

It is important to note that on June 25, 2013, the United States Supreme Court decided *Shelby County, Alabama v. Holder*, 133 S.Ct. 2612 (2013) and effectively invalidated Section 5 of the Voting Rights Act that required covered jurisdictions, which includes the State of Texas and all of its political subdivisions, to: (1) obtain preclearance of any change in voting practice, standard, or procedure before it could be implemented, and (2) apply a "retrogression" standard to minority group populations in specific districts. The District adopted its current plan on November 11, 2011 and precleared it on January 26, 2012, recorded as submission number 2011-5220. Preclearance of the District's next plan is not required.

### **The “One Person – One Vote” Requirement: Why You Should Redistrict**

The “one person-one vote” requirement of the United States Constitution that members of an elected body be chosen from districts of substantially equal population has traditionally been viewed as applying to the District in a limited fashion due to the statutory limitation on the number of precincts assigned to the City of Austin. Exact equality of population is not required, but a “total maximum deviation” of no more than ten percent in total population between the most populated and the least populated director precincts based on the most recent census should be achieved. This maximum deviation of ten percent constitutes a rebuttable presumption of compliance with the one person-one vote requirement.

From the District’s outset, the five director precincts, when compared among one and another, have contained disproportionate populations. The director precincts, as established and previously precleared by the Department of Justice (“DOJ”), are not analyzed in the same manner as most governmental districts. Instead, the two precincts located within the City of Austin (“Austin Area”) are drawn to contain approximately equivalent populations and the three precincts located outside of the City of Austin (“Suburban, Rural and Shared Territory Area” or “SRST Area”) are also drawn to contain populations, which are approximately equivalent as among the three SRST AREA Precincts.

This convention tracks the District’s enabling legislation, now codified at § 8802.053 of the Texas Special District Local Laws Code, and §36.059(b) of the Texas Water Code. Section 8802.053 provides:

- (a) The district is divided into five numbered, single-member districts for electing directors.
- (b) The board may revise the single-member districts as necessary or appropriate.
- (c) As soon as practicable after the publication of each federal decennial census, the board shall revise the single-member districts as the board considers appropriate to reflect population changes. When the board revises the single-member districts under this subsection, the board shall place two of the districts:
  - (1) Entirely within the boundaries of the City of Austin, as those boundaries exist, at that time; or
  - (2) Within the boundaries of the City of Austin, as those boundaries exist at that time, but also including unincorporated areas or other municipalities that are surrounded wholly or partly by the boundaries of the City of Austin if the areas or municipalities are noncontiguous to the territory of any other single-member district.

- (d) Changes in the boundaries of the City of Austin between revisions of the single-member districts under Subsection (c) do not affect the boundaries of the single-member districts.
- (e) When the boundaries of the single-member districts are changed, a director in office on the effective date of the change, or elected or appointed before the effective date of the change to a term of office beginning on or after the effective date of the change, is entitled to serve the term or the remainder of the term in the single-member district to which elected or appointed even though the change in boundaries places the person's residence outside the single-member district for which the person was elected or appointed.

Section 36.059(b) of the Texas Water Code provides:

If any part of a municipal corporation is part of one precinct, then no part of the municipal corporation shall be included in another precinct, except that a municipal corporation having a population of more than 200,000 may be divided between two or more precincts. In a multicounty district, not more than two of the five precincts may include the same municipal corporation or part of the same municipal corporation.

This convention is also supported by an exception to the one person-one vote principle established by the United States Supreme Court for special purpose governmental entities exercising narrow governmental functions and operating to the burden or benefit of one group of constituents more than others. *See Ball v. James*, 451 U.S. 355, 370-71 (1981); *Salyer Land Co. v. Tulare Lake Basin Water Storage District*, 410 U.S. 719, 728 (1973). (See Attachment C for a discussion of this exception).

The population and demographics of all of the current director precincts are presented here and in Attachment A.

<b>Barton Springs Edwards Aquifer Conservation District</b>							
<b>2015 Initial Assessment - Benchmark</b>							
Summary 2010 Census Total and Voting Age Population							
Precinct	Persons	Deviation	Hispanic % of Total Population	Non- Hispanic Anglo % of Total Population	Non- Hispanic Black % of Total Population	Non- Hispanic Asian % of Total Population	Non- Hispanic Other % of Total Population
1	15,906	-60.65%	43.20%	51.21%	2.83%	0.97%	1.79%
2	11,001	-72.79%	27.92%	67.46%	1.78%	1.11%	1.69%
3	15,564	-61.50%	64.00%	31.08%	3.03%	0.55%	1.32%
4	97,135	5.43%	37.75%	52.17%	4.29%	3.62%	2.17%
5	87,182	-5.43%	21.19%	68.89%	2.84%	4.67%	2.42%
Unassigned**	78,804		38.46%	53.98%	4.38%	1.27%	1.90%
<b>Totals</b>	<b>305,592</b>		<b>34.48%</b>	<b>56.83%</b>	<b>3.67%</b>	<b>2.93%</b>	<b>2.09%</b>
Ideal Size = 121,275 / 3 = 40,425 per district. (SRST Area Precincts)							
Ideal Size = 184,317 / 2 = 92,183 per district. (Austin Area Precincts)							
Total Maximum Deviation = 167.73% For Districts 1, 2, and 3 (SRST Area Precincts)							
Total Maximum Deviation = 10.86% For Districts 4 and 5 (Austin Area Precincts)							

#### Austin Area Precincts

The tables in Attachment A show that the total population of the Austin Area Precincts (in red above) using Census data from April 1, 2010 to be 184,317 persons. This represents an increase in population after the recent City of Austin annexation of approximately 7.14 percent. The ideal director precinct should now contain 92,183 persons (total population / 2 precincts).

Director Precinct 4 has the largest population, which is approximately 5.43 percent above the size of the ideal precinct. Precinct 5 has the smallest population, which is approximately 5.43 percent below the size of the ideal precinct. The total maximum deviation between the two existing director precincts, therefore, is 10.86 percent. This total maximum deviation does exceed the standard of 10 percent that generally has been recognized by the courts as the maximum permissible deviation. Under the 10-percent rule, it would be prudent to redistrict the Austin Area Precincts to bring them within the constitutional requirement for equal population among director Austin Area Precincts. The precincts must also be redrawn to comply with

§ 8802.053 of the Texas Special District Local Laws Code. That is, the precincts must be redrawn to accommodate the City of Austin annexations.

### SRST Area Precincts

The tables in Attachment A show that the total population of the SRST Area Precincts (in blue above) using Census data from April 1, 2010 was 121,275 persons. This represents a net increase in population of approximately 53.45 percent after losing some population to the Austin Area Precincts and gaining population from the addition of territory from House Bill 3405. The ideal director precinct should now contain 40,425 persons (total population / 3 precincts).

Directors' Precincts 1, 2, and 3 all are underpopulated. Their deviation from the ideal size is -60.65% for Precinct 1, -72.79% for Precinct 2, and -61.50% for Precinct 3. The total overall deviation for the SRST Area Precincts is 167.73%. The three districts exhibit large deviations because the annexed territory has 78,804 persons that have not been assigned to a Director's Precinct but are included in the overall total for the SRST Area precincts. This total maximum deviation exceeds the standard of ten percent that generally has been recognized by the courts as the maximum permissible deviation. Accordingly, it would be prudent for the District to redistrict the SRST Area Precincts to bring its director precincts within the ten percent range.

### Section 2 of the Voting Rights Act: Avoiding discrimination claims

The data in the Population Tables in Attachment A as well as the data in the maps in Attachment B, which show the geographic distribution of the primary minority groups in the District, will also be important in assessing the potential for Voting Rights Act Section 2 liability. (See Attachment C for a discussion of Section 2).

In redistricting the director precincts, the District will need to be aware of the legal standards that apply. We will review these principles in detail with the Board at the presentation of the Initial Assessment. The process we have outlined for the redistricting process and the policies and procedures that we are recommending the Board adopt will insure that the District adheres to these important legal principles and that the rights of protected minority voters in the political subdivision are accorded due weight and consideration.

### Shaw v Reno: Additional equal protection considerations

In order to comply with Sections 2, the District must consider race when drawing precincts. *Shaw v. Reno*, however, limits how and when race can be a factor in the districting decisions. Thus, local governments must walk a legal tightrope, where the competing legal standards must all be met. The *Shaw v. Reno* standard requires that there be a showing that (1) the race-based factors were used in furtherance of a "compelling state interest" and (2) their application be "narrowly tailored," that is, they must be used only to the minimum extent necessary to accomplish the compelling state interest. We will guide the District through proper application of this principle.

### **City of Austin Annexations**

Included in the initial assessment is information showing the current Austin city limit boundary. We have included a drawing in Attachment B that places the two Austin Area Precincts within the boundaries of the City of Austin, as provided in § 8802.053(c)(2) of the Texas Special District Local Laws Code. Attachment A contains a demographic table reflecting the populations when considering the City of Austin annexations.

### **Redistricting guidelines and criteria**

At the initial assessment presentation we will recommend certain guidelines that the Board may wish to adopt to ensure fair and adequate public participation in the redistricting process. We will also recommend certain criteria that the Board may require all redistricting plans to follow. These criteria generally track the legal principles that the courts have found to be appropriate elements in sound redistricting plans. Once redistricting guidelines and criteria are adopted and the Board gives instructions about how it would like plans to be developed considering this Initial Assessment and the applicable legal standards, we can begin to assist the District in the development of plans for your consideration.

### **Conclusion**

We hope this Initial Assessment discussion is helpful to you and that it will guide the Board of Directors as it executes the redistricting process. We look forward to meeting with the Board to review the assessment and to answer any questions you may have concerning any aspect of that process. Please feel free to call me in the interim as we prepare for the presentation and let me know if there is any additional information you may require.

Sincerely,

A handwritten signature in black ink, appearing to read "Bill Dugat III", written in a cursive style.

William D. Dugat III

WDD/dfb  
Attachments

**ATTACHMENT A**  
**INITIAL ASSESSMENT POPULATION TABLES**

## Barton Springs Edwards Aquifer Conservation District

### 2015 Initial Assessment - Benchmark

#### Summary 2010 Census Total and Voting Age Population

Precinct	Persons	Deviation	Hispanic % of Total Population	Non-Hispanic Anglo % of Total Population	Non-Hispanic Black % of Total Population	Non-Hispanic Asian % of Total Population	Non-Hispanic Other % of Total Population
1	15,906	-60.65%	43.20%	51.21%	2.83%	0.97%	1.79%
2	11,001	-72.79%	27.92%	67.46%	1.78%	1.11%	1.69%
3	15,564	-61.50%	64.00%	31.08%	3.03%	0.55%	1.32%
4	97,184	5.43%	37.75%	52.17%	4.29%	3.62%	2.17%
5	87,182	-5.43%	21.19%	68.89%	2.84%	4.67%	2.42%
Unassigned**	78,804	94.94%	38.46%	53.98%	4.38%	1.27%	1.90%
<b>Totals</b>	<b>305,641</b>		<b>34.48%</b>	<b>56.83%</b>	<b>3.67%</b>	<b>2.93%</b>	<b>2.09%</b>

Ideal Size = 121,275/ 3 = 40,425 per precinct.

Ideal Size = 184,317/2 = 92,183 per precinct.

Total Maximum Deviation = 167.73% For Precincts 1, 2, and 3

Total Maximum Deviation = 10.86% For Precincts 4 and 5

Some percentages may be subject to rounding error.

Precinct	Total VAP*		Hispanic % of Total VAP	Non-Hispanic Anglo % of Total VAP	Non-Hispanic Black % of Total VAP	Non-Hispanic Asian % of Total VAP	Non-Hispanic Other % of Total VAP
1	11,353		38.30%	56.36%	2.89%	1.02%	1.44%
2	8,194		24.69%	70.69%	1.86%	1.24%	1.34%
3	10,420		58.14%	36.80%	3.25%	0.60%	1.20%
4	73,988		33.88%	56.64%	4.22%	3.51%	1.77%
5	70,191		18.90%	71.98%	2.66%	4.49%	1.96%
Unassigned**	62,377		34.17%	58.33%	4.44%	1.35%	1.71%
<b>Totals</b>	<b>236,523</b>		<b>30.47%</b>	<b>61.24%</b>	<b>3.63%</b>	<b>2.91%</b>	<b>1.76%</b>

\*Voting Age Population

\*\*Unassigned population is newly annexed territory in Hays County.

Some percentages may be subject to rounding error.

12/1/2015

# Barton Springs Edwards Aquifer Conservation District

## 2015 Initial Assessment - Benchmark

### Detailed 2010 Census Total and Voting Age Population

Precinct	Persons	Ideal Size	Deviation	Hispanic	% of Total Hispanic Population	Anglo	% of Total Anglo Population	Black	% of Total Black Population	American Indian	% of Total American Indian Population	Asian	% of Total Asian Population	Hawaiian-Pacific Islander	% of Total Hawaiian-Pacific Islander Population	Other	% of Total Other Population	Two or More	% of Total Two or More Population
1	15,906	40,425	-60.65%	6,872	43.20%	8,146	51.21%	450	2.83%	37	0.23%	154	0.97%	13	0.08%	19	0.12%	216	1.36%
2	11,001	40,425	-72.79%	3,071	27.92%	7,421	67.46%	196	1.78%	23	0.21%	122	1.11%	12	0.11%	5	0.05%	146	1.33%
3	15,564	40,425	-61.50%	9,961	64.90%	4,837	31.08%	472	3.03%	39	0.25%	85	0.55%	7	0.04%	32	0.21%	127	0.82%
4	97,184	92,183	5.43%	36,689	37.75%	50,698	52.17%	4,174	4.29%	274	0.28%	3,517	3.62%	49	0.05%	163	0.17%	1,627	1.67%
5	87,182	92,183	-5.43%	18,470	21.19%	60,058	68.89%	2,475	2.84%	257	0.29%	4,068	4.67%	45	0.05%	203	0.23%	1,609	1.85%
Unassigned**	78,804	40,425	94.94%	30,310	38.46%	42,540	53.98%	3,450	4.38%	264	0.34%	1,000	1.27%	51	0.06%	107	0.14%	1,077	1.37%
<b>Totals</b>	<b>305,641</b>			<b>105,373</b>	<b>34.48%</b>	<b>173,700</b>	<b>56.83%</b>	<b>11,217</b>	<b>3.67%</b>	<b>894</b>	<b>0.29%</b>	<b>8,946</b>	<b>2.93%</b>	<b>177</b>	<b>0.06%</b>	<b>529</b>	<b>0.17%</b>	<b>4,802</b>	<b>1.57%</b>

\*\*Unassigned population is newly annexed territory in Hays County

Ideal Size = 121,275/ 3 = 40,425 per precinct. For Precincts 1, 2, and 3

Ideal Size = 184,317/2 = 92,183 per precinct. For Precincts 4 and 5

Some percentages may be subject to rounding error

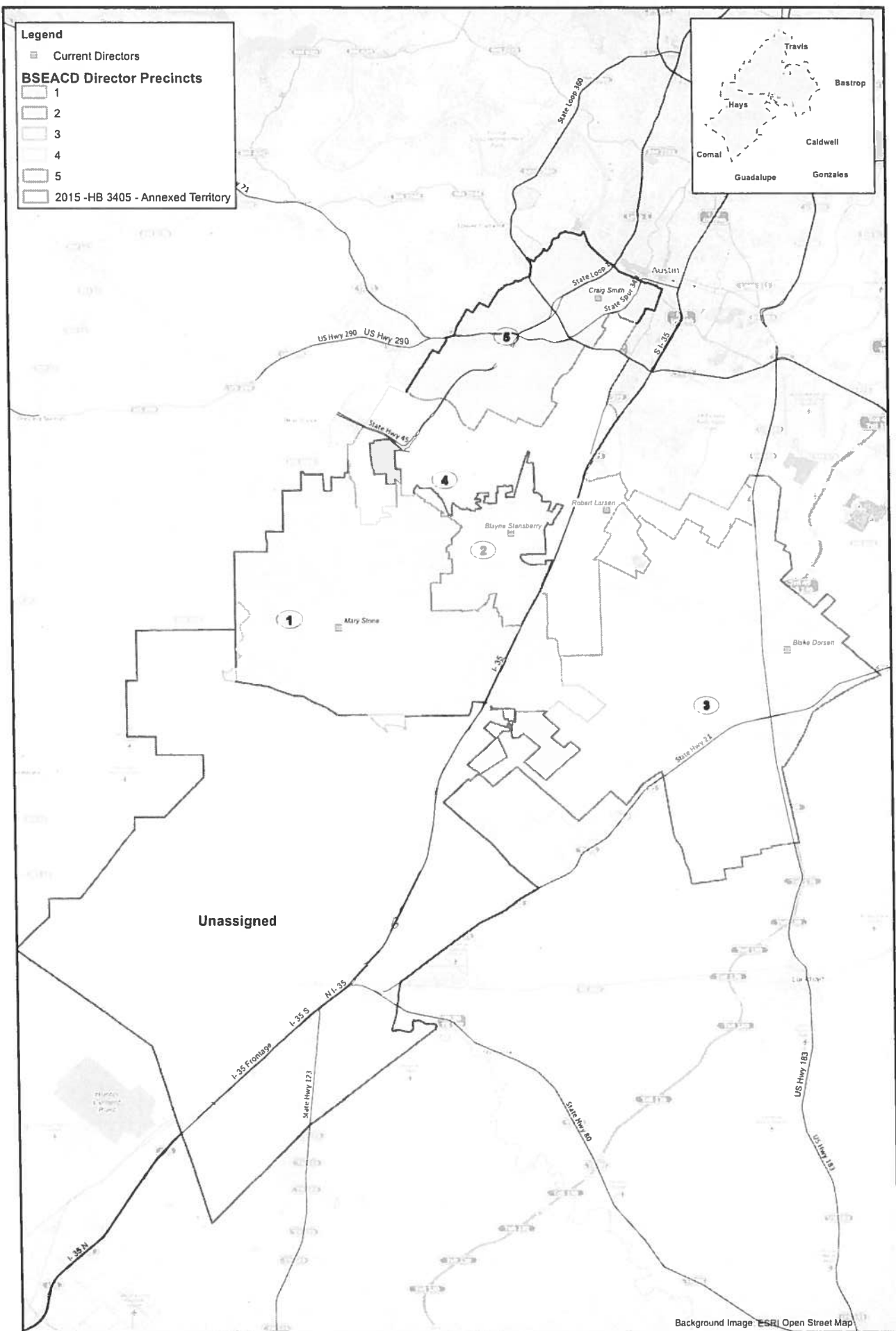
Precinct	Total VAP*	Hispanic VAP	% of Total Hispanic VAP	Anglo VAP	% of Total Anglo VAP	Black VAP	% of Total Black VAP	American Indian VAP	% of Total American Indian VAP	Asian VAP	% of Total Asian VAP	Hawaiian-Pacific Islander VAP	% of Total Hawaiian-Pacific Islander VAP	Other VAP	% of Total Other VAP	Two or More VAP	% of Total Two or More VAP
1	11,353	4,348	38.30%	6,398	56.36%	328	2.89%	29	0.26%	116	1.02%	10	0.09%	14	0.12%	111	0.98%
2	8,194	2,023	24.69%	5,792	70.69%	152	1.86%	22	0.27%	102	1.24%	8	0.10%	4	0.05%	76	0.93%
3	10,420	6,058	58.14%	3,835	36.80%	339	3.25%	31	0.30%	62	0.60%	5	0.05%	21	0.20%	68	0.65%
4	73,988	25,066	33.88%	41,909	56.64%	3,123	4.22%	228	0.31%	2,595	3.51%	38	0.05%	107	0.14%	938	1.27%
5	70,191	13,269	18.90%	50,521	71.98%	1,868	2.66%	220	0.31%	3,154	4.49%	38	0.05%	148	0.21%	972	1.38%
Unassigned**	62,377	21,312	34.17%	36,387	58.33%	2,772	4.44%	215	0.34%	842	1.35%	47	0.08%	78	0.13%	725	1.16%
<b>Totals</b>	<b>236,523</b>	<b>72,076</b>	<b>30.47%</b>	<b>144,842</b>	<b>61.24%</b>	<b>8,582</b>	<b>3.63%</b>	<b>745</b>	<b>0.31%</b>	<b>6,871</b>	<b>2.91%</b>	<b>146</b>	<b>0.06%</b>	<b>372</b>	<b>0.16%</b>	<b>2,890</b>	<b>1.22%</b>

\*\*Unassigned population is newly annexed territory in Hays County

\*Voting Age Population

Some percentages may be subject to rounding error

**ATTACHMENT B**  
**MAPS**

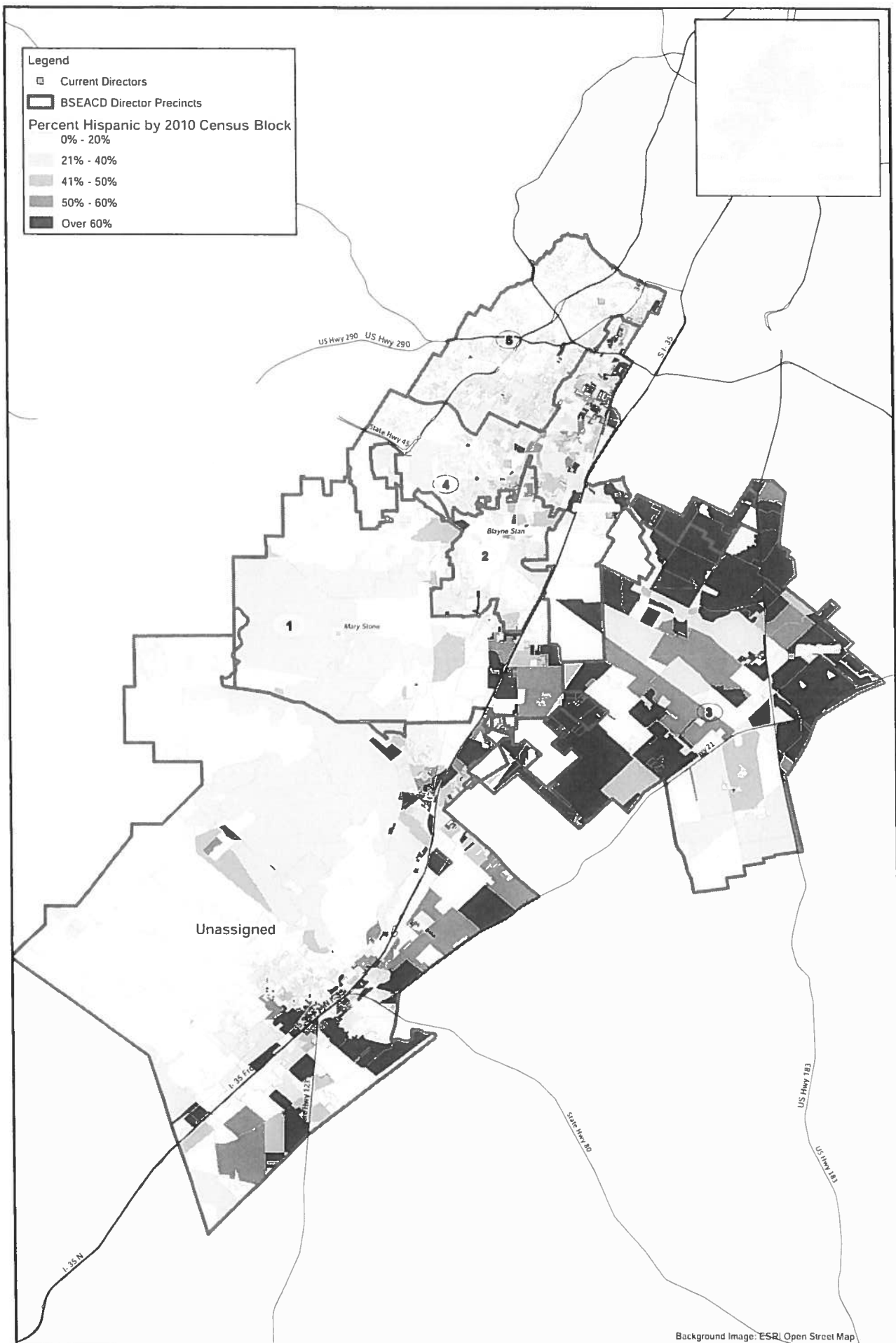


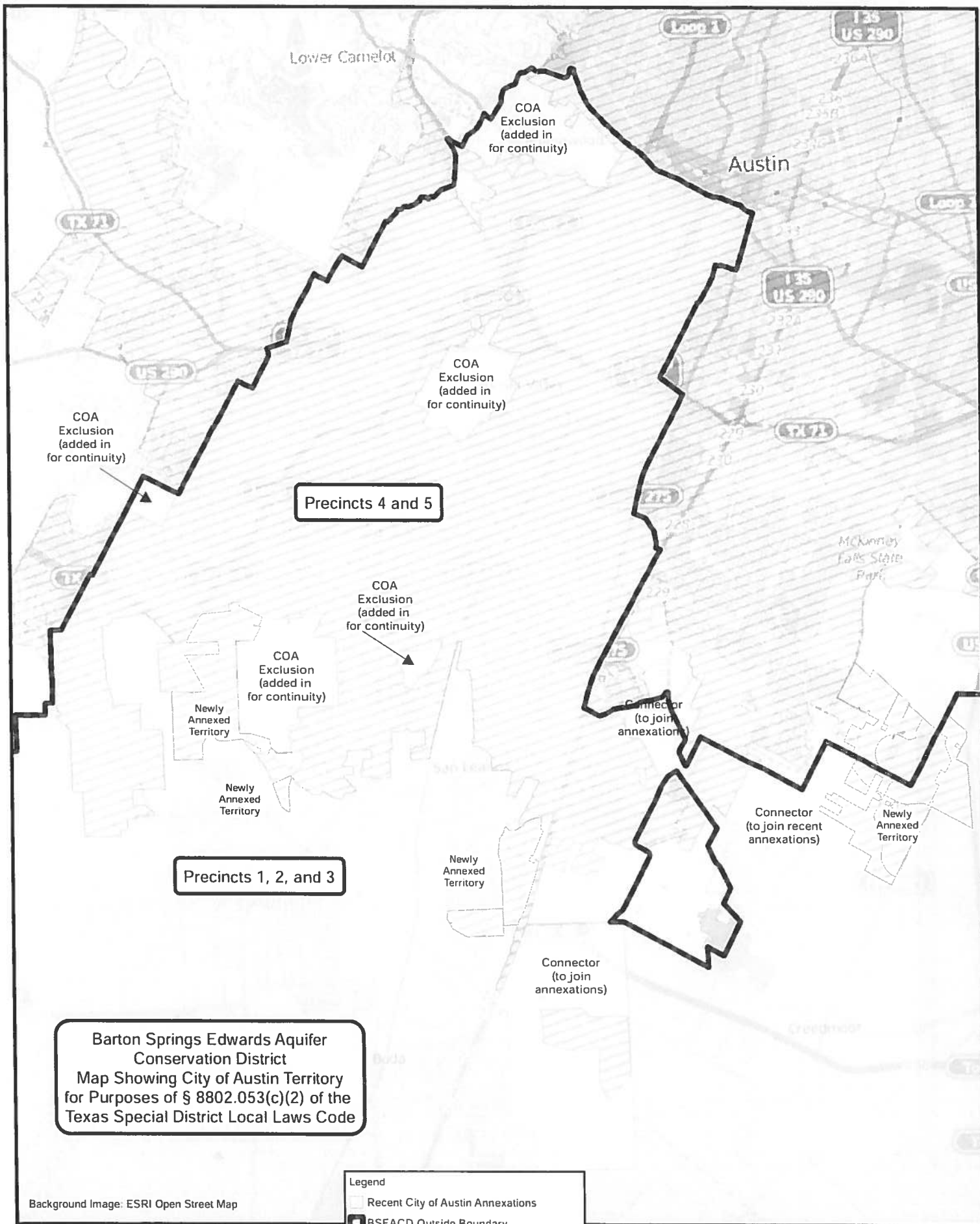
0 2 4 8 Miles  
 Coordinate System: GCS North American 1983  
 Datum: North American 1983 Created: 10/29/2015

**Barton Springs Edwards Aquifer  
 Conservation District  
 2015 Initial Assessment of Directors' Precincts**

© 2015 Bickerstaff Heath Delgado Acosta LLP  
 Data Source: Roads obtained from CAPCOG  
 BSEACD boundary obtained from BSEACD GIS  
 Redistricting performed on 2010 Census PL94-171  
 Redistricting Data File  
 Benchmark Plan adopted November 17, 2011







0 0.5 1 2 Miles

Coordinate System: GCS North American 1983;  
 Datum: North American 1983. Created: 11/2/2015

**Legend**

- Recent City of Austin Annexations
- BSEACD Outside Boundary
- City of Austin - 2015 City Limit Boundary
- Territory for BSEACD Precincts 4 and 5
- Territory for BSEACD Precincts 1, 2, and 3

© 2015 Bickerstaff Heath Delgado Acosta LLP  
 Data Source: City of Austin jurisdictional boundaries  
 obtained from City of Austin GIS; BSEACD boundaries  
 obtained from BSEACD GIS



**ATTACHMENT C**  
**LEGAL PRINCIPLES**

## **LEGAL PRINCIPLES GOVERNING THE REDISTRICTING PROCESS**

There are three basic legal principles that govern the redistricting process: (i) the “one person-one vote” (equal population) principle; (ii) the non-discrimination standard of Section 2 of the Voting Rights Act; and (iii) the *Shaw v. Reno* limitations on the use of race as a factor in redistricting.

The terminology of redistricting is very specialized and includes terms that may not be familiar, so we have included as Attachment D to this Initial Assessment letter a brief glossary of many of the commonly-used redistricting terms.

### **The “One-Person – One-Vote” Requirement**

The “one person-one vote” requirement of the United States Constitution requires that members of an elected body be drawn from districts of substantially equal population. This requirement applies to the single-member districts of “legislative” bodies such as commissioners courts and other entities with single-member districts such as school boards or city councils.

The District’s director precincts have always contained disproportionate populations. The two precincts located within the City of Austin are drawn to contain approximately equivalent populations. The three non-urban precincts also contain populations, which are approximately equivalent as among the three non-urban precincts.

Water Code section 36.059(b) directs that no more than two director precincts may be contained within any one city and then only if that city has a population of more than 200,000. Given this directive, and given the distribution of population within the District, the relative disproportionate population distribution between the urban and non-urban precinct is unavoidable to comply with Texas law.

The establishment of director precincts as described does not implicate one-person – one-vote in this particular instance. The United States Supreme Court has held that where the purpose of the district is specialized and narrow and the voting scheme reflects the narrow purpose for which the District is created, the one-person – one-vote principle of the Fourteenth Amendment is not invoked. See *Ball v. James*, 451 U.S. 355, 370-71 (1981); *Salyer Land Co. v. Tulare Lake Basin Water Storage District*, 410 U.S. 719, 728 (1973). The general rule of one-person – one-vote does not apply when the governmental entity serves a limited purpose and the activities of the unit of government have a disproportionate effect on those who may vote for its officials.

This very issue is currently being litigated with the Edwards Aquifer Authority. LULAC alleges that the EAA Director Districts violate one-person – one-vote and that the Districts are disproportionately weighted towards rural districts in violation of the Fourteenth Amendment instead of being based strictly on population. *LULAC v. EAA*, No. 5:12-cv-620-OLG (Western District of Texas, filed June 21, 2012). The case was argued in June 2014 and has been pending since June 2014.

When balancing for one-person – one-vote, exact equality of population is not required for local political subdivisions. Instead, precincts should have a total population deviation of no more than ten percent between their most populated and least populated precincts. This ten percent deviation is usually referred to as the “total maximum deviation.” It is measured against the “ideal” or target population for the governmental entity based on the most recent census. The ten percent standard is a rebuttable presumption of compliance with the one person-one vote requirement. A hypothetical example of how deviation is calculated is given in Attachment E.

The Census Bureau’s population data for the 2010 Census issued in the analysis of redistricting plans – the so-called “PL 94-171” data. Although several types of population data are provided in the PL 94-171 files, redistricting typically is based upon total population.

Official Census data should be used unless the District can show that better data exists. The court cases that have dealt with the question have made it clear that the showing required to justify use of data other than Census data is a very high one. As a practical matter, therefore, we recommend that the District use the 2010 Census data in their redistricting processes. We have based the Initial Assessment on PL 94-171 total population data; the relevant data are summarized in Attachment A.

In the redistricting process, the Board of Directors will use a broad spectrum of demographic and administrative information to accomplish the rebalancing of population required by the one person-one vote principle. The charts provided with this report not only show the total population of the District but also give breakdowns of population by various racial and ethnic categories for the District as a whole and also for each director precinct.

### **Census geography**

These single-member population data are themselves derived from population data based on smaller geographical units. The Census Bureau divides geography into much smaller units called “census blocks.” In urban areas, these correspond roughly to city blocks. In more rural areas, census blocks may be quite large. Census blocks are also aggregated into larger sets called “voting tabulation districts” or “VTDs” which often correspond to county election precincts.

For reasons concerning reducing the potential for *Shaw v. Reno*-type liability, discussed below, we recommend using VTDs as the redistricting building blocks where and to the extent feasible. In many areas this may not be feasible.

### **Census racial and ethnic categories**

For the 2010 Census, the Census Bureau recognized 126 combinations of racial and ethnic categories and collected and reported data based on all of them. Many of these categories include very few persons, however, and will not therefore have a significant impact on the redistricting process. The charts that accompany this report include only eight racial and ethnic categories that

were consolidated from the larger set. All of the population of the District is represented in these charts. These eight categories are the ones most likely to be important in the redistricting process.

The 2010 Census listed six racial categories. Individuals were able to choose a single race or any combination of races that might apply. Thus, there are potentially 63 different racial combinations that might occur. Additionally, the Census asks persons to designate whether they are or are not Hispanic. When the Hispanic status response is overlaid on the different possible racial responses, there are 126 possible different combinations. The Census tabulates each one separately.

We will also consider data called “voting age population” (or “VAP”) data. It is similarly classified in eight racial and ethnic categories. This information is provided for the limited purpose of addressing some of the specific legal inquiries under the Voting Rights Act that are discussed below. Voting age population is the Census Bureau’s count of persons who identified themselves as being eighteen years of age or older at the time the census was taken (*i.e.*, as of April 1, 2010).

In addition to this population and demographic data, the Board of Directors will have access to additional information that may bear on the redistricting process, such as registered voter information and incumbent residence addresses, etc.

### **Section 2 of the Voting Rights Act – No Discrimination Against Minority Groups**

Section 2 of the Voting Rights Act forbids a voting standard, practice or procedure from having the effect of reducing the opportunity of members of a covered minority to participate in the political process and to elect representatives of their choice. In practical terms, this non-discrimination provision prohibits districting practices that, among other things, result in “packing” minorities into a single director precinct in an effort to limit their voting strength. Also, “fracturing” or “cracking” minority populations into small groups in a number of precincts, so that their overall voting strength is diminished, can be discrimination under Section 2. There is no magic number that designates the threshold of packing or cracking. Each plan must be judged on a case-by-case basis.

The Supreme Court has defined the minimum requirements for a minority plaintiff to bring a Section 2 lawsuit. There is a three-pronged legal test the minority plaintiff must satisfy – a showing that: (1) the minority group’s voting age population is numerically large enough and geographically compact enough so that a director precinct with a numerical majority of the minority group can be drawn (a “majority minority district”); (2) the minority group is politically cohesive, that is, it usually votes and acts politically in concert on major issues; and (3) there is “polarized voting” such that the Anglo majority usually votes to defeat candidates of the minority group’s preference. *Thornburg v. Gingles*, 478 U.S. 30 (1986). In the federal appellate Fifth Circuit, which includes Texas, the minority population to be considered is *citizen* voting age population. In certain cases, a minority group may assert that Section 2 requires that the District draw a new majority minority precinct. The Board of Directors must be sensitive to these Section 2 standards as it redistricts.

In considering changes to existing boundaries, the District must be aware of the location of protected minority populations within its director precincts for the purpose of ensuring that changes are not made that may be asserted to have resulted in “packing,” or in “fracturing” or “cracking” the minority population for purposes or having effects that are unlawful under Section 2. The thematic maps included in Attachment B depict the locations of Hispanic and African-American population concentrations by census block; they are useful in addressing this issue. Voting age population (VAP) data is useful in measuring potential electoral strength of minority groups in individual precincts.

**Shaw v. Reno Standards – Avoid Using Race  
as the Predominant Redistricting Factor**

While satisfying the Section 2 standard requires the District to explicitly consider race to comply with this standard, *Shaw v. Reno* places strict limits on the manner and degree in which race may be a factor. In effect, therefore, the Board of Directors must walk a legal tightrope, where the competing legal standards must all be met.

In the *Shaw v. Reno* line of cases that began in 1993, the Supreme Court applied the Fourteenth Amendment’s Equal Protection Clause of the U.S. Constitution to redistricting plans. Where racial considerations predominate in the redistricting process to the subordination of traditional (non-race-based) factors, the use of race-based factors is subject to the “strict scrutiny” test. To pass this test requires that there be a showing that (1) the race-based factors were used in furtherance of a “compelling state interest” and (2) their application be “narrowly tailored,” that is, they must be used only to the minimum extent necessary to accomplish the compelling state interest.

Complying with Section 2 is a compelling state interest. Thus, the following principles emerge in the post-*Shaw* environment to guide the redistricting process:

- race may be considered;
- but race may not be the predominant factor in the redistricting process to the subordination of traditional redistricting principles;
- bizarrely-shaped precincts are not unconstitutional *per se*, but the bizarre shape may be evidence that race was the predominant consideration in the redistricting process;
- if race is the predominant consideration, the plan may still be constitutional if it is “narrowly tailored” to address compelling governmental interest such as compliance with the Voting Rights Act; and
- if a plan is narrowly tailored, it will use race no more than is necessary to address the compelling governmental interest.

The better course, if possible under the circumstances, is that racial considerations not predominate to the subordination of traditional redistricting criteria, so that the difficult strict scrutiny test is avoided.

Adherence to the *Shaw v. Reno* standards will be an important consideration during the redistricting process. One way to minimize the potential for *Shaw v. Reno* liability is to adopt redistricting criteria that include traditional redistricting principles and that do not elevate race-based factors to predominance.

### **Adoption of Redistricting Criteria**

Adoption of appropriate redistricting criteria – and adherence to them during the redistricting process – is potentially critical to the ultimate defensibility of an adopted redistricting plan. Traditional redistricting criteria that the District might wish to consider adopting include, for example:

- use of identifiable boundaries;
- using whole voting precincts, where possible and feasible; or, where not feasible, being sure that the plan lends itself to the creation of reasonable and efficient voting precincts;
- maintaining communities of interest (*e.g.*, traditional neighborhoods);
- basing the new plan on existing precincts;
- if possible given the state law restrictions adopting precincts of approximately equal size when compared against the other precincts in the category – *i.e.*, comparing a city precinct to the other city precinct and comparing the three suburban/rural precincts to each other;
- drawing precincts that are compact and contiguous;
- keeping existing directors in their precincts; and
- narrowly tailoring to comply with the Voting Rights Act.

There may be other criteria that are appropriate for an individual entity's situation, but all criteria adopted should be carefully considered and then be followed to the greatest degree possible. A copy of a sample criteria adoption resolution is provided as Attachment F. You may wish to include additional criteria, or determine that one or more on that list are not appropriate. We will discuss with you appropriate criteria for your situation.

### **Requirements for Plans Submitted by the Public**

You should also consider imposing the following requirements on any plans proposed by the public for your consideration: (1) any plan submitted for consideration must be a complete plan, that is, it must be a plan that includes configurations for all director precincts and not just a selected one or several. This is important because, although it may be possible to draw a particular precinct in a particular way if it is considered only by itself, that configuration may have unacceptable consequences on other precincts and make it difficult or impossible for an overall plan to comply with the applicable legal standards, and; (2) any plan submitted for consideration must follow the adopted redistricting criteria.

## **ATTACHMENT D**

### **GLOSSARY**

## **GLOSSARY**

**Census blocks, census block groups, census VTDs, census tracts** – Geographic areas of various sizes recommended by the states and used by the Census Bureau for the collection and presentation of data.

**Citizen voting age population (CVAP)** – Persons 18 and above who are citizens. This is a better measure of voting strength than VAP; however, the relevant citizenship data will need to be developed.

**Compactness** – Having the minimum distance between all parts of a constituency.

**Contiguity** – All parts of a district being connected at some point with the rest of the district.

**Cracking** – The fragmentation of a minority group among different districts so that it is a majority in none. Also known as “fracturing.”

**Fracturing** – *See* “cracking.”

**Homogeneous district** – A voting district with at least 90 percent population being of one minority group or of Anglo population.

**Ideal population** – The population that an ideal sized district would have for a given jurisdiction. Numerically, the ideal size is calculated by dividing the total population of the political subdivision by the number of seats in the legislative body.

**Majority minority district** – Term used by the courts for seats where an ethnic minority constitutes a numerical majority of the population.

**One person, one vote** – U.S. Constitutional standard articulated by the U.S. Supreme Court requiring that all legislative districts should be approximately equal in size.

**Packing** – A term used when one particular minority group is consolidated into one or a small number of districts, thus reducing its electoral influence in surrounding districts.

**Partisan gerrymandering** – The deliberate drawing of district boundaries to secure an advantage for one political party.

**PL 94-171** – The Public Law that requires the Census Bureau to release population data for redistricting. The data must be released by April 1, 2011, is reported at the block level, and contains information on:

- Total population
- Voting age population
- By Race
- By Hispanic origin

**Racial gerrymandering** – The deliberate drawing of district boundaries to secure an advantage for one race.

**Section 2 of the Voting Rights Act** – The part of the federal Voting Rights Act that protects racial and language minorities from discrimination in voting practices by a state or other political subdivision.

**Section 5 of the Voting Rights Act** – The part of the federal Voting Rights Act that required certain states and localities (called “covered jurisdictions”) to preclear all election law changes with the U.S. Department of Justice (“DOJ”) or the federal district court for the District of Columbia before those laws may take effect. Due to a recent U.S. Supreme Court case, Section 5 is no longer enforceable and preclearance is no longer required.

***Shaw v. Reno*** – The first in a line of federal court cases in which the U.S. Supreme Court held that the use of race as a dominant factor in redistricting was subject to a “strict scrutiny” test under the Equal Protection Clause of the Fourteenth Amendment of the U.S. Constitution. This case and the line of Supreme Court cases that follows it establishes that race should not be used as a predominant redistricting consideration, but if it is, it must be used only to further a “compelling state interest” recognized by the courts and even then must be used only as minimally necessary to give effect to that compelling state interest (“narrow tailoring”).

**Spanish surnamed registered voters (SSRV)** – The Texas Secretary of State publishes voter registration numbers that show the percentage of registered voters who have Spanish surnames. It is helpful to measure Hispanic potential voting strength, although it is not exact.

**Total population** – The total number of persons in a geographic area. Total population is generally the measure used to determine if districts are balanced for one person, one vote purposes.

**Voting age population (VAP)** – The number of persons aged 18 and above. DOJ requires this to be shown in section 5 submissions. It is used to measure potential voting strength. For example, a district may have 50 percent Hispanic total population but only 45 percent Hispanic voting age population.

**Voter tabulation district (VTD)** – A voting precinct drawn using census geography. In most instances, especially in urban areas, VTDs and voting precincts will be the same. In rural areas, it is more likely they will not be identical.

**ATTACHMENT E**  
**HYPOTHETICAL POPULATION DEVIATION**  
**CALCULATION**

### Hypothetical Population Deviation Calculation

Consider a hypothetical political subdivision with four districts and a total population of 40,000. The “ideal district” for this political subdivision would have a population of 10,000 (total population / number of districts). This is the target population for each district. The deviation of each district is measured against this ideal size.

Suppose the latest population data reveals that the largest district, District A, has 11,000 inhabitants. The deviation of District A from the ideal is thus 1000 persons, or 10 percent. Suppose also that the smallest district, District D, has 8000 inhabitants; it is underpopulated by 2000 persons compared to the ideal size. It thus has a deviation of –20 percent compared to the ideal size. The *maximum total deviation* is thus 30 percent. Since this is greater than the 10 percent range typically allowed by the courts for one person-one vote purposes, this hypothetical subdivision must redistrict in order to bring its maximum total deviation to within the legally permissible limits.

The following table illustrates this analysis:

<u>District</u>	<u>Ideal district</u>	<u>District total pop.</u>	<u>Difference</u>	<u>Deviation</u>
A	10,000	11,000	1000	+ 10.0 percent
B	10,000	10,750	750	+ 7.5 percent
C	10,000	10,250	250	+ 2.5 percent
D	10,000	8,000	- 2000	- 20.0 percent
Totals:	40,000	40,000	net= 0	net= 0 percent

Total maximum deviation = difference between most populous and least populous districts = 10 percent + 20 percent = 30 percent.

## **Item 6**

### **Adjournment**