



**Barton Springs
Edwards Aquifer**
CONSERVATION DISTRICT

District Management Plan

Appendix B

District Progress Towards Achieving Goals and Objectives

November 16, 2017

Record of Board Assessment of District Objectives (November 16, 2017)

Objective	Board Motion (Vote)	Mover	Second
Objective 1. Assure the long-term sustainability of the District to carry out its mission as a GCD with excellence.			
Objective 2. Promulgate a fair and efficient regulatory program.			
Objective 3. Develop and implement an effective drought management program that achieves the adopted Desired Future Conditions (DFCs) of each relevant aquifer in the District.			
Objective 4. Demonstrate leadership in external communication, collaboration, coordination and joint planning with respect to groundwater and related resources.			
Objective 5. Extend current groundwater supplies by encouraging supply-side and demand-side improvements.			
Objective 6. Increase understanding of all District aquifers so that appropriate policy and regulatory decisions are made.			

Staff Assessment of Performance Standards and Metrics

Met	Partially Met	Not Met
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Performance Standards	Metrics Met*	Staff Score
Objective 1		
PS 1-1: Hire, equip, train, evaluate, and motivate appropriate staff to achieve the District’s mission within budgetary constraints.	3 of 3	
PS 1-2: Align District plans, policies and programs with the District’s mission and vision, and regularly review and revise them, as warranted, to respond to changing circumstances that affect their need, effectiveness or implementation.	3 of 3	
PS 1-3: Ensure the District has the near-term and long-term financial basis and contractual wherewithal to support its mission.	4 of 4	
PS 1-4: Provide efficient administrative support and infrastructure, such that District operations are executed reliably and accurately, meet staff and local stakeholder needs, and conform to District policies and with federal and state requirements.	2 of 2	
PS 1-5: Provide mechanisms to align District <i>Rules</i> , policies, and programs with the will of its collective and precinct-level constituencies, within the constraints of statutes governing the District.	3 of 3	
PS 1-6: Provide leadership in promoting legislation and regulations that benefit the protection of the District’s groundwater resources and opposing legislation and regulations that harm those resources.	2 of 2	
Objective 2		
PS 2-1: Review and modify the <i>Rules</i> as warranted to provide and maintain a sound statutory basis for continued District operations and to ensure consistency with both District authority and programmatic needs.	N/A	
PS 2-2: Process and review all well registrations, permit renewals, and applications for permits, permit amendments, and authorizations in accordance with the <i>Rules, Well Construction Standards</i> , and other District	1 of 1	

guidelines in accordance with specified procedural timeframes.		
PS 2-3: Monitor existing District wells for compliance with the <i>Rules</i> , and <i>Well Construction Standards</i> .	1 of 1	
P-S 2-4: Efficiently process permittee meter readings, water use fee invoices and payments, conservation credits, permit renewals and related communications.	1 of 1	
Objective 3		
PS 3-1: Assist permittees in developing drought and conservation planning strategies, permit conversion strategies, pricing strategies, and enforce compliance with drought management rules during District-declared drought to achieve DFCs during extreme drought.	N/A	
PS 3-2: Monitor and declare drought stages on the basis of the analysis of data from the District's defined drought triggers and in accordance with the adopted drought trigger methodology.	1 of 1	
PS 3-3: Inform and educate permittees and the public about declared drought stages and the severity of drought, and encourage practices and behaviors to reduce water use.	2 of 2	
Objective 4		
PS 4-1: Cultivate and communicate effectively and routinely with stakeholders of all types that affect and are affected by the District's programs and policies.	1 of 1	
PS 4-2: Collaborate with joint Groundwater Management Area (GMA) and regional water planning efforts on policies, regulations, and activities affecting water quality or desired future conditions of the aquifers managed by the District.	3 of 3	
PS 4-3: Provide technical assistance as warranted to federal, state and local entities; organizations; and individuals on the geology, hydrogeology, and karst features impacted by groundwater-utilizing land use activities.	1 of 1	
PS 4-4: Through education and public outreach, inform groundwater users and the general public of the connectivity of recharge and discharge, importance of water quality protection, and the relationship between surface water and groundwater.	4 of 4	
PS 4-5: Prepare, submit, and maintain a draft and final Habitat Conservation Plan (HCP) and provide support of related National Environmental Policy Act documentation and processes for obtaining an Incidental Take Permit from	2 of 2	

the US Fish & Wildlife Service (FWS) for the endangered species at Barton Springs.		
Objective 5		
PS 5-1: On at least a bi-annual basis, assess the availability and feasibility of regional alternative water supplies and encourage District permittees to diversify their water supplies by fostering arrangements with available water suppliers.	1 of 1	
PS 5-2: Conduct investigations and, as warranted and feasible, physically alter discrete recharge features that will lead to an increase in recharge to the Edwards Aquifer.	2 of 2	
PS 5-3: Conduct investigations, as warranted and feasible, to evaluate the potential for the saline zone of the Edwards Aquifer to provide water for a desalination facility, and to evaluate the potential for the Edwards saline zone and the Trinity aquifers beneath the freshwater Edwards as reservoirs for an Aquifer Storage and Recovery (ASR) system.	2 of 2	
PS 5-4: Maintain and develop programs that inform and educate District groundwater users and area residents of all ages about water conservation practices and resources and use of alternate water sources including gray water/condensate reuse and rainwater harvesting.	1 of 1	
Objective 6		
PS 6-1: Assess aquifer conditions by sampling and collecting groundwater data from selected wells.	1 of 1	
PS 6-2: Conduct scientific studies to better determine groundwater availability, to understand and prevent threats to water quality, to minimize impacts to water-supply wells and springs, and to provide sound science on which to base District policy.	2 of 2	

* refers to the number of metrics completely satisfied relative to the number of currently applicable metrics for each performance standard.

Objectives with Performance Standards, Metrics Scoring, and Example Activities

Teams	General Management	Administration	Education & Outreach	Aquifer Science	Reg Compliance
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Objective 1 – Assure the long-term sustainability of the District to carry out its mission as a GCD with excellence.

Note: The ‘example activities’ for directors and staff listed below are intended by the Management Plan and therefore in this annual assessment to be only illustrative ones for this Objective and Performance Standard, and should not be construed as restrictive or mandatory in each or any one year. In addition, all are subject to the Board’s actions indicating the District’s current intent as to their scope and their priority with respect to other activities.

General Management					
Performance Standard 1-1:	Hire, equip, train, evaluate, and motivate appropriate staff to achieve the District’s mission within budgetary constraints.				
Metric	Frequency	Score	Documentation		
1. Overall score of General Manager’s annual performance review for fiscal year	Annual	Met satisfactory review (8/10/17)	<ul style="list-style-type: none"> GM annual performance review on file Reports of unresolved issues referenced to Board on file, if applicable. 		
2. Number of instances of unresolved issues referred to the Board	Annual	Met 0	<ul style="list-style-type: none"> Calculated annual turnover rate on file Annual FY Budgets on website and file Staff performance evaluations and salary adjustments on file 		
3. Staff turnover rate net of reductions-in-force	Annual	Met 10% Reduction			
Example Board-Level Activities			Example Staff-Level Activities		
a. Hire, evaluate, and fairly compensate an effective General Manager.	a. Assign and supervise staff in roles that utilize their strengths and promote teamwork.				
b. Address appropriately unresolved personnel issues between the General Manager and staff members, or upon request by the General Manager.	b. Evaluate staff performance regularly and constructively.				
c. Budget sufficient funds for salaries, wages, and benefits that will attract and maintain a staff that is sufficient to carry out the District’s mission according to the prevailing <i>Management Plan</i> .	c. Develop and administer a staff compensation program that equitably rewards individual and team performance that advances the mission of the District.				
d. Communicate perceived concerns about staff performance issues and other personnel matters to the General Manager.	d. Provide opportunities for staff training and professional development.				
	e. Maintain and improve staff morale and commitment to their job and the District.				

General Management

<p>Performance Standard 1-2:</p>	<p>Align District plans, policies and programs with the District’s mission and vision, and regularly review and revise them, as warranted, to respond to changing circumstances that affect their need, effectiveness or implementation.</p>		
<p>Metric</p>	<p>Frequency</p>	<p>Score</p>	<p>Documentation</p>
<p>1. Satisfactory progress toward or timely completion of revisions to the District’s <i>Management Plan</i> that are approved by TWDB</p>	<p>Every 5-years or as needed</p>	<p>Met Draft MP approved by Board 8/24/17</p>	<ul style="list-style-type: none"> • Director job descriptions on file • District strategic plan on file • Approved Management Plan on file • Current Rules and Bylaws on website and file • Roster of PAC • Agendas of PAC Meetings • Minutes approving annual budget • Resolution approving annual Fee Schedule • <i>Contingency & Risk Management Plan</i> on file
<p>2. Establish a Contingency and Risk Management Plan and update it within one year of each <i>Management Plan’s</i> approval, at least once every two years thereafter</p>	<p>Biannual (Due: Jan, 2014)</p>	<p>Met Through HCP contingency response commitments</p>	
<p>3. Timely budgeting and amendments</p>	<p>Annual</p>	<p>Met</p>	
<p align="center">Example Board-Level Activities</p>			
<p>a. Develop and be guided by a “Director Job Description” that sets forth the roles, responsibilities, and expectations of a District Director.</p>	<p align="center">Example Staff-Level Activities</p>		
<p>b. Participate in development and updating of District strategic planning initiatives between approved revisions of management plans, including risk management and contingency planning.</p>	<p>a. Participate in development and updating of District strategic planning initiatives between approved revisions of management plans, at Board’s discretion and direction.</p>		
<p>c. Participate in developing and updating and then approve District <i>Management Plan</i>, and <i>Rules & Bylaws</i>.</p>	<p>b. Participate in developing recommendations as to approaches and content of the District’s <i>Management Plan</i> and <i>Rules & Bylaws</i>, and their revisions and amendments.</p>		
<p>d. Provide liaison to staff concerning policy-level guidance and requests of individual staff through the General Manager.</p>	<p>c. Provide liaison between Board policy-level guidance/requests and staff direction.</p>		
<p>e. Establish and effectively utilize standing and <i>ad hoc</i> public advisory groups.</p>	<p>d. Help identify and recruit members of standing and <i>ad hoc</i> public advisory groups and administer their use.</p>		
	<p>e. Provide quality assurance of District work product and deliverables.</p>		
	<p>f. Establish and maintain a continuous improvement ethos and program.</p>		

Administration			
Performance Standard 1-3: Ensure the District has the near-term and long-term financial basis and contractual wherewithal to support its mission.			
Lead Team	General Services	Metric	
	Metric	Frequency	Score
	Documentation		
1. A clean financial audit report each year; and	Annual	Met	<ul style="list-style-type: none"> • Copy of Final Audit Report that is presented to the Board.
2. Absence of vendor problems and contractual disputes	Annual, if applicable	Met None	<ul style="list-style-type: none"> • Minutes of the meeting where the audit was presented (audio also being available). • Copies of grant submissions; grant invoicing and quarterly reports if there is a current grant in progress.
3. Amount of activity concerning grant proposals and projects	Annual, if applicable	Met TWDB RFP grant extended to 12/31/17	<ul style="list-style-type: none"> • Copy of PFIA certificate. • Proof of audit submission (transmittal letters) to TPRB and TCEQ annually (they send receipt letters). TPRB within 210 days after end of FY, and TCEQ within 135 days after end of FY. • Budgets and financial reports published on web-site.
4. Biannual receipt of official Public Funds Investment Act (PFIA) certificate for completing required training	Bi-Annual "Within each two-year period after the first year"	Met Completed April, 2017	
Example Board-Level Activities			
a. Proactively develop and support legislative and other initiatives that attach a more realistic value to the groundwater resources within the District, especially in comparison to the costs of other local water resources.			
b. Participate in developing and then approve fiscal-year budgets, including use of reserve funds and approval of budget amendments.			
c. Specify various financial-impact scenarios that should be included in contingency planning.			
d. Authorize and receive results of annual financial audits, and institute accepted recommendations on financial controls or procedures.			
Example Staff-Level Activities			
a. Maintain finances in a manner that maximizes liquidity while maintaining the greatest return on District fund balances by investing in securities or investment pools that operate in low risk investments and are backed by the state and/or federal government.			
b. Provide effective and efficient accounting and financial records management and necessary investment training, in accordance with federal and state law, the <i>Rules</i> , and Board direction.			
c. Develop recommended elements and budgetary estimates for fiscal-year budgets and amendments.			
d. Contract for and participate in conducting an independent financial audit annually, including provision of financial records			

- e. Help identify and approve appropriate use of grant funding and resource commitments that will substantially enable progress toward District objectives.
- f. Establish purchasing policy and review and approve all contracts in accordance with the policy and upon legal review and approval as to form.

- e. Help identify appropriate grant funding and resource commitments and utilize grant resources to leverage existing resources substantially with minimum opportunity costs.
- f. Publish budgets, current-period, year-to-date summary financial information and transaction-level information on the District website as part of the Open Government initiative.
- g. Acquire and manage projects in accordance with good project accounting and management practice and in conformance with sponsoring agency requirements.
- h. Obtain contracts for services in accordance with established District standards, and coordinate acquisition activities ensuring cost-effectiveness and quality by utilizing purchasing procedures that meet both District policy, state law, and the *Rules*.

- f. Perform cost-benefit analyses on all District insurance and employee-benefit policies before renewal, and acquire or renew all District policies in a timely fashion.
- g. Maintain District vehicles in good operational condition.
- h. Maintain and evaluate needed enhancements to the District computer system and network to facilitate District productivity and to support District programs and projects.

Administration

Performance Standard 1-5: Provide mechanisms to align District *Rules*, policies, and programs with the will of its collective and precinct-level constituencies, within the constraints of statutes governing the District.

Metric	Frequency	Score	Documentation
1. Maintaining a full Board; properly conducted director elections	Annual	Met Precincts 1,3, and 4 incumbent Directors ran unopposed	<ul style="list-style-type: none"> Board communications documentation required under PS 4-1 Directors' Board meeting attendance reports Copy of election documents (only required to retain for 2 years)
2. Effective participation in Board activities and representation of constituents by each of the five (5) Board members	Annual	Met	
3. Properly conducted director elections	Biennial, if at all	Met Incumbents ran unopposed, Elections cancelled	

Example Board-Level Activities	Example Staff-Level Activities
<p>a. Regularly visit with a spectrum of stakeholder interests in the single-member precincts and with the legislative community being represented by the directors as to their needs and concerns.</p> <p>b. Solicit candidate(s) to campaign every four (4) years for each director precinct place on Board, authorize or cancel an election, and canvass election results, as warranted.</p> <p>c. Authorize and participate in decennial and other re-districting, ensuring Department of Justice (DOJ) pre-clearances and conformance with statutory requirements.</p> <p>d. Utilize advisory groups to calibrate stakeholder inputs and possible responses, as needed.</p>	<p>a. Support District's general counsel in re-districting director precincts the year after each decennial census, including timely submission of all DOJ-required data and documents for successful pre-clearance, as necessary.</p> <p>b. Make internal preparations for and conduct elections for the two or three directorships up for election biennially in even-numbered years in concert with county election offices, and in accordance with state and federal election laws, and as required by TWC Chapter 36.</p> <p>c. Prepare all election contracts with associated entities including election services contracts and joint election agreements, and all necessary orders and notices to conduct or to cancel an election.</p>

General Management

Performance Standard 1-6: Provide leadership in promoting legislation and regulations that benefit the protection of the District's groundwater resources and opposing legislation and regulations that harm those resources.

Metric	Frequency	Score	Documentation
1. Preparation of a <i>Legislative Agenda</i> report before the end of each even-numbered fiscal year that reflects the consensus of the Board concerning the next session	Bi-Annual, even # years (Due: 2016)	N/A	<ul style="list-style-type: none"> • <i>Legislative Agenda Report</i> on file • <i>Legislative Debriefing Report</i> on file • Minutes of the Board meeting(s) where collective judgments were made on file
2. Preparation of a <i>Legislative Session De-briefing</i> report before the end of each odd-numbered fiscal year that assesses specific legislation that affects the District, both individually and as a GCD political subdivision, that passed and did not pass, and generally why that occurred	Bi-Annual, odd # years	Met Report provided on 6/22/17	
3. Collective judgment of the Board as to appropriateness of what was pursued legislatively, what actions were taken, and what outcomes were achieved	Bi-Annual, odd # years	Met Approved by Board on 6/22/17	
4. Collective judgment of the Board as to appropriateness of what litigation or contested-cases were pursued, what actions were taken, and what outcomes were achieved	Annual	N/A No new litigation	

Example Board-Level Activities	Example Staff-Level Activities
<p>a. Propose and support legislation and regulatory initiatives that control and prevent point/nonpoint-sources of pollution and cross-formational contamination of the aquifers managed by the District.</p> <p>b. Oppose legislation or regulatory initiatives that don't ensure protection of groundwater quantity and quality, including non-compliance with DFCs.</p> <p>c. Meet with local legislators and relevant committee members to foster an effective working relationship.</p> <p>d. Seek legal remedies as warranted and feasible to minimize or avoid impacts on groundwater quantity and quality of aquifers in the District.</p>	<p>a. Support District's general counsel in re-districting director precincts the year after each decennial census, including timely submission of all DOJ-required data and documents for successful pre-clearance, as necessary.</p> <p>b. Make internal preparations for and conduct elections for the two or three directorships up for election biennially in even-numbered years in concert with county election offices, and in accordance with state and federal election laws, and as required by TWC Chapter 36.</p>

c. Prepare all election contracts with associated entities including election services contracts and joint election agreements, and all necessary orders and notices to conduct or to cancel an election.

Objective 2 – Promulgate a fair and efficient regulatory program.

Note: The ‘example activities’ for directors and staff listed below are intended by the Management Plan and therefore in this annual assessment to be only illustrative ones for this Objective and Performance Standard, and should not be construed as restrictive or mandatory in each or any one year. In addition, all are subject to the Board’s actions indicating the District’s current intent as to their scope and their priority with respect to other activities.

Regulatory Compliance			
Performance Standard 2-1:	Metric	Frequency	Score
<p>Review and modify the <i>Rules</i> as warranted to provide and maintain a sound statutory basis for continued District operations and to ensure consistency with both District authority and programmatic needs.</p>			Documentation
1.	Rulemaking process is initiated and conducted in accordance with all statutory requirements and required timeframes	Annual, if applicable	<p>N/A</p> <p>Rules not amended</p>
2.	Rules are in alignment with District policies and objectives as determined by the Board with PAC input in even-numbered years	Bi-Annual, even # years (Due: 2016)	<ul style="list-style-type: none"> • Rule concepts and draft rule documents on file • Hearing notices (published, county, mailed/e-mailed, etc.) for rulemaking on file • Audio of hearing maintained on file • Minutes of meetings approving rules on file • Adopted rules on website <p>N/A</p>
Example Board-Level Activities			
a.	Provide direction and input to staff to guide the development of proposed rule concepts and draft rules.	Periodically review and provide proposed rule concepts to the Board to address necessary updates and revisions.	a.
b.	Appoint and convene <i>ad hoc</i> policy advisory committees to review and comment on District policies and proposed rules revisions as warranted.	Consider rule updates and revisions needed to address specific needs of separate management zones for the different areas and aquifers within the District.	b.
c.	Conduct public hearings for proposed rule changes.	Upon direction by the Board, prepare draft rules based on vetted rule concepts and Board input.	c.
d.	Adopt necessary rule updates and revisions as warranted.	Schedule and provide required notification of public hearings for proposed <i>Rule</i> changes.	d.
		Make the adopted revised <i>Rules</i> available to the public after adoption by the Board.	e.
Example Staff-Level Activities			

Regulatory Compliance

Performance Standard 2-2:

Process and review all well registrations, permit renewals, and applications for permits, permit amendments, and authorizations in accordance with the *Rules, Well Construction Standards*, and other District guidelines in accordance within specified procedural timeframes.

Metric	Frequency	Score	Documentation
1. Requests for permits and authorizations are processed in accordance with all statutory requirements and required timeframes.	Annual	Met	<ul style="list-style-type: none"> • Permit and registration applications and associated documents maintained on file • Hearing notices (published, county, mailed/e-mailed, etc.) for permits on file, if applicable • Audio of hearing maintained on file • Minutes of meetings approving permits on file, if applicable • Hydrogeological reports maintained on file, if applicable • Permit application fact sheets maintained on file, if applicable • Minutes from Board meetings approving permit renewals

Example Board-Level Activities

- a. Conduct public hearings for certain permits and authorizations.
- b. Take appropriate action on certain requested permits and authorizations presented to the Board considering application information, staff recommendations, and the District *Rules and Bylaws*.

Example Staff-Level Activities

- a. Register all new wells.
- b. Review and process well registration forms, plugging authorizations, and permit-by-rule authorizations.
- c. For all other applications, review and make determinations of administrative completeness.
- d. Require and receive results of aquifer tests for certain production permits and amendments.
- e. Assist applicants with planning and execution of all aquifer tests in accordance with the District's Aquifer Test Guidelines.
- f. Evaluate complete production and transport permit applications on the basis of: beneficial use, non-speculative needs, reasonable demand, the ability to comply with drought management requirements, and the ability to conform to management zone requirements.
- g. Evaluate all complete permit and authorization requests on the basis of potential for impact to sustainable groundwater

- quantity and quality, public health and welfare, contribution to waste, unreasonable well interference.
- h. Provide recommendation formed on the basis of staff evaluation for Board or General Manager consideration of certain permits and authorizations.
 - i. Schedule and provide required notification of public hearings for certain requested permits and authorizations.
 - j. Perform well site inspections before and after the drilling of each new well.
 - k. Prior to permit renewal, review all permits for compliance with District Rules and Bylaws.

Regulatory Compliance

Performance Standard 2-3: Monitor existing District wells for compliance with the *Rules*, and *Well Construction Standards*.

Metric	Frequency	Score	Documentation
1. Specified minimum number of permittee inspections completed or exceeded each year;	Annual	Met 39 inspections/site visits conducted	<ul style="list-style-type: none"> • Routine inspection documentation maintained on file • Database report of reported and collected meters readings • Enforcement plan on website • Minutes of Board-approved enforcement actions on file • Investigations reports on file • NOAVs and enforcement orders on file
2. The majority of all documented violations are brought into compliance or are addressed by a Board Order within six (6) months of the staff-established compliance deadlines;	Annual, if applicable	N/A No formal enforcement actions taken	
3. During drought, all required meter readings are submitted or collected each month.	Annual, if drought declared	N/A no drought declared	

Example Board-Level Activities	Example Staff-Level Activities
<p>a. Provide direction to staff for enforcement of unresolved violations of the <i>Rules</i> as warranted.</p>	<p>a. Register all newly identified unregistered wells.</p> <p>b. Conduct inspections of at least ten selected permittee systems (not including NDUs) each fiscal year for compliance with the <i>Rules</i>.</p> <p>c. Identify and notify individual permittees of any rule violations and take appropriate steps to ensure compliance.</p> <p>d. Notify abandoned well owners and monitor to ensure wells are properly plugged or brought into compliance.</p> <p>e. Perform well site inspections before each well plugging.</p> <p>f. Obtain meters readings by site inspections from individual permittees who fail to submit after late submittal notification has been provided.</p> <p>g. Monitor usage of individually permitted wells monthly and NDUs at least annually.</p> <p>h. Provide compliance updates and enforcement recommendations to the Board as warranted in accordance with the adopted enforcement plan.</p>

Administration

Performance Standard 2-4:

Efficiently process permittee meter readings, water use fee invoices and payments, conservation credits, permit renewals and related communications.

Metric	Frequency	Score	Documentation
1. Timely processing of permit renewals, conservation credits, and meter readings within timeframes specified in <i>Rules</i> or policies.	Annual	Met	<ul style="list-style-type: none"> • Annual conservation credit spreadsheet and minutes from Board meeting where presented. • Database reports. • Copy of permittee mailing lists. • Copy of underpumpage analysis spreadsheet and minutes from Board meeting where presented. • Copy of permittee billings spreadsheets and minutes from Board meeting where permits are conditionally renewed.

Example Board-Level Activities

a. Issue conservation credits annually based on the annual conservation credit audit and staff recommendations.

Example Staff-Level Activities

- a. Require timely-submitted monthly readings from individually permitted wells, enter all meter readings into the database, and file all monthly meter reading forms.
- b. Maintain permittee mailings lists and contact information in database.
- c. Annually renew compliant production and transport permits by September 1 of each year.
- d. Perform annual underpumpage analysis as warranted and provide recommendations for Board consideration.
- e. Perform annual conservation credit audit.

Objective 3 – Develop and implement an effective drought management program that achieves the adopted Desired Future Conditions (DFCs) of each relevant aquifer in the District.

Note: The ‘example activities’ for directors and staff listed below are intended by the Management Plan and therefore in this annual assessment to be only illustrative ones for this Objective and Performance Standard, and should not be construed as restrictive or mandatory in each or any one year. In addition, all are subject to the Board’s actions indicating the District’s current intent as to their scope and their priority with respect to other activities.

Regulatory Compliance			
Metric	Frequency	Score	Documentation
<p>Performance Standard 3-1: Assist permittees in developing drought and conservation planning strategies, permit conversion strategies, pricing strategies, and enforce compliance with drought management rules during District-declared drought to achieve DFCs during extreme drought.</p> <p>1. Achieve overall monthly pumpage reductions within 10% of the aggregate pumpage reduction (volumetric) goal of the prevailing drought stage.</p>	Annual, during declared drought	N/A No Drought Declared	<ul style="list-style-type: none"> Database drought analysis reports UDCP templates and/or guidance documents on website and file Drought notifications sent to permittees on file Overpumpage notices sent to permittees on file Enforcement plan on website Written correspondence, memos to Board, and other pertinent documentation related to pre-enforcement and enforcement activity on file Annual Drought Compliance Report, with monthly “horseblankets” in appendix, on file
Example Board-Level Activities			
<p>a. Provide direction to staff for enforcement and fee assessment for permittee violations of the <i>Rules</i> and applicable provisions of permittee’s User Drought Contingency Plans (UDCPs).</p>			<p>Example Staff-Level Activities</p> <ol style="list-style-type: none"> Assist and support permittees with the development, implementation, and interpretation of User Conservation Plans (UCPs) and UDCPs in accordance with the <i>Rules</i> and as warranted. Review and approve submitted UCPs and UDCPs in accordance with the <i>Rules</i>. Require that all outdated UCPs and UDCPs are updated prior to annual permit renewal in accordance with the <i>Rules</i>. Upon declaration of drought, send notification to all permittees of requirement to implement and comply with all applicable provisions of their prevailing UDCP.

- e. Perform monthly evaluation of individual permittee compliance with monthly pumpage limits in accordance with the adopted enforcement plan.
- f. Send notices of overpumpage to all noncompliant permittees each month.
- g. Evaluate, stipulate, and enforce conservation-tier pricing for water-provider permittees to reduce demand by end-users. ***Directors note that by rulemaking the Board has restricted the scope of this activity to providing information and incentives to help permittees develop and deploy conservation-oriented water pricing structures and not include enforcement of a particular pricing structure. This comprises a possible future correcting amendment of the Management Plan.***
- h. Identify occurrences of noncompliance that warrant possible enforcement action and are subject to assessment of drought management fees.
- i. Provide compliance updates and enforcement recommendations to the Board in accordance with the adopted enforcement plan.

Aquifer Science			
Performance Standard 3-2:		Monitor and declare drought stages on the basis of the analysis of data from the District's defined drought triggers and in accordance with the adopted drought trigger methodology.	
Metric	Frequency	Score	Documentation
1. Acceptable-to-Board proportion of timely updates of all drought related information during drought.	Annual	Met	<ul style="list-style-type: none"> Copies of Drought Chart for periods of declared drought
Example Board-Level Activities		Example Staff-Level Activities	
<p>a. Make drought declarations considering the current aquifer conditions relative to defined drought triggers, the adopted drought trigger methodology, and staff recommendations.</p>		<p>a. Review relevant aquifer data on a monthly basis when not in drought.</p> <p>b. Periodically provide updates to the Board on current aquifer conditions and provide recommendations of drought declarations as warranted.</p> <p>c. Confirm drought flows from Barton Springs that are indicated by monitoring well data with in-stream discharge (e.g., flow-meter) measurements sufficient to produce or verify a reliable stage-discharge relationship.</p> <p>d. When any drought trigger drops below average levels, monitoring will be done biweekly, and estimates will be made as to when either indicator will reach drought levels.</p> <p>e. Produce and update charts showing the status of the defined triggers on a biweekly basis during a District-declared drought.</p> <p>f. Produce and update charts showing the status of the defined triggers on a weekly basis during an Emergency Response Period.</p> <p>g. Collect and evaluate data for the assessment of the Middle and Lower Trinity Aquifers and how they might be impacted and regulated by drought.</p>	

Education & Outreach

Performance Standard 3-3:

Inform and educate permittees and the public about declared drought stages and the severity of drought, and encourage practices and behaviors to reduce water use.

Metric	Frequency	Score	Documentation
1. Timeliness and adequacy of response to requests for information.	Annual	Met 14 TPIA requests received and processed	<ul style="list-style-type: none"> • Record of newsletter, press releases, and drought updates sent to Press, Permittees, and email subscribers. • Availability of drought stage road signs and bill inserts for permittee use.
2. Absence of complaints received concerning water utility permittees' unwarranted actions.	Annual	Met No complaints	<ul style="list-style-type: none"> • Public information requests and responses on file. • Responses to residents' inquiries about drought restrictions or inappropriate water use.

Example Board-Level Activities

a. Authorize and participate in efforts to disseminate information related to aquifer conditions during drought and practices that could facilitate demand reduction.

Example Staff-Level Activities

- a. Provide public awareness of declared drought stages and drought severity by at least monthly communications which may include written and electronic correspondence, newspaper articles and advertisements, press releases, the District website, District newsletter, and special permittee newsletters.
- b. Support permittees' efforts to inform their end users of drought stages and water conservation measures with by creating general drought stage information and informational materials on water conservation.

Objective 4. Demonstrate leadership in external communication, collaboration, coordination and joint planning with respect to groundwater and related resources.

Note: The 'example activities' for directors and staff listed below are intended by the Management Plan and therefore in this annual assessment to be only illustrative ones for this Objective and Performance Standard, and should not be construed as restrictive or mandatory in each or any one year. In addition, all are subject to the Board's actions indicating the District's current intent as to their scope and their priority with respect to other activities.

General Management			
Performance Standard 4-1: Cultivate and communicate effectively and routinely with stakeholders of all types that affect and are affected by the District's programs and policies.			
Metric	Frequency	Score	Documentation
1. Collective judgment of the Board once each quarter as to whether communications between the District and its stakeholder community, including constituents and other public officials, are providing an effective basis for District decision-making and for identifying any needed remedial actions.	Quarterly	Met	<ul style="list-style-type: none"> Directors' compensation forms Directors' correspondence logs (if available) Minutes of activity reported in the Directors' Reports as reported in each regular Board meeting Minutes of Board action providing collective judgment
Example Board-Level Activities			
<ul style="list-style-type: none"> a. Cultivate balanced relationships with and among stakeholders, precinct residents, and policy makers to promote the District's mission. b. Represent the District with legislative community, other political subdivisions, and related groups. 			
Example Staff-Level Activities			
<ul style="list-style-type: none"> a. Cultivate balanced relationships between District staff and stakeholders. b. Represent the District with legislative community, other political subdivisions, and related groups. c. Represent the District in alliances and other organizations with common interests. 			

Regulatory Compliance

Performance Standard 4-2:

Collaborate with joint Groundwater Management Area (GMA) and regional water planning efforts on policies, regulations, and activities affecting water quality or desired future conditions of the aquifers managed by the District.

Metric	Frequency	Score	Documentation
1. Percent of GMA meetings attended;	Annual	Met GMA 9 - 100% attendance GMA 10 - 100% attendance	<ul style="list-style-type: none"> Region K and L attendance reports GMA 9 and 10 attendance reports GMA GCD management plan reviews on file Minutes of Board meetings where GMA (or RWPG, if applicable) representatives were appointed. Minutes of Board meetings where GMA/RWPG issues where considered Notices of DFC hearings conducted/attended
2. Timely provision of responsive comments on management plans of other GCDs in GMA 9 and 10;	Annual, if applicable	N/A	
3. Participation in public hearings on DFCs and management plans	Annual, if applicable	Met	
4. Timely discussion and voting on GMA items	Annual, if applicable	Met	

Example Board-Level Activities

- Utilize the data, results, and staff recommendations associated with water quality and/or desired future conditions to direct staff and develop policy in accordance with the District's mission.
- Designate a District representative to participate in and serve as a voting member of GMA 9 and GMA 10.
- Review and comment on management plans of other GMA member districts for consistency with DFCs of shared or hydrologically connected aquifers.

Example Staff-Level Activities

- Provide information and input to current and proposed rules, standards, and planning efforts related to regional development and water/wastewater management.
- Apply standards specified in the Regional Water Quality Protection Plan (2005) where applicable. *Directors note that "standards" here do not refer to enforceable regulatory standards but are interpreted to be in the sense of consensus "principles".*
- Provide recommendations to the Board on management plans of other GMA member districts for consistency with DFCs of shared or hydrologically connected aquifers.
- Develop and implement a cost-effective method for evaluating and demonstrating compliance with the DFCs of the relevant aquifers in the District, in collaboration with other GCDs in the GMAs.
- Support by attendance and in-kind consultation services in meetings of GMAs 9 and 10, as appropriate.

- f. Seek public inputs on concerns that help articulate DFCs.
- g. Vote on applicable items requiring GMA joint planning approvals.

Aquifer Science

Performance Standard 4-3: Provide technical assistance as warranted to federal, state and local entities; organizations; and individuals on the geology, hydrogeology, and karst features impacted by groundwater-utilizing land use activities.

Metric	Frequency	Score	Documentation
1. Qualitative judgment by the Board as to how well the District's directors are promoting groundwater protection with other entities.	Annual	Met	<ul style="list-style-type: none"> • Quarterly Director Activity Reports on file • WPAP reviews and comments on file

Example Board-Level Activities			
a. Establish standards and criteria specified in the Regional Water Quality Protection Plan to be used by District staff in evaluating deleterious impacts to recharge water quality.			
Example Staff-Level Activities			
			<p>a. Provide information to developers, roadway contractors, the regulated community, and local and state agency personnel about the locations and sources of vulnerability of the District's groundwater resources, and the steps they can take to mitigate the threats of contamination.</p> <p>b. Apply standards and criteria specified in the Regional Water Quality Protection Plan (2005), as applicable and warranted, for the evaluation of various land uses requiring or affecting groundwater supplies and the associated potential for recharge water quality degradation or waste.</p> <p>c. Review and provide comments, where applicable, for Water Pollution Abatement Plans or other environmental site assessments associated with any permits or authorizations submitted to the TCEQ, COA, small cities, counties, or other political jurisdictions in order to mitigate potential degradation of the District's groundwater resources.</p>

Education & Outreach

Performance Standard 4-4:

Through education and public outreach, inform groundwater users and the general public of the connectivity of recharge and discharge, importance of water quality protection, and the relationship between surface water and groundwater.

Metric	Frequency	Score	Documentation
1. Number of workshops/seminars with acknowledged District participation;	Annual	Met	<ul style="list-style-type: none"> Documentation in monthly team activity reports. Database tracking for Friends of the Aquifers email subscriptions. Summary list of outreach activities.
2. Number of District-sponsored outreach meetings and info distribution events;	Annual	Met	
3. Trends in number of page views and amount of "click-throughs" for District website;	Annual	Met	
4. Number of new subscriptions to the Friends of the Aquifers email contact list.	Annual	Met	

Example Board-Level Activities

- Communicate with constituents of their respective single-member precincts to ensure fair representation.
- Facilitate dissemination of education and public outreach information within respective single-member precincts.
- Help promote and/or participate in District-sponsored events.

Example Staff-Level Activities

- Offer and/or recommend workshop(s) and/or presentations that educate local residents on the District, its management, District aquifers, Texas groundwater and surface resources, and indoor/outdoor water conservation practices.
- Use electronic and printed media and in-person visits to deliver accurate and timely information to community groups that are interested in and/or affect the groundwater resource and its use, both upon request and on a proactive basis.
- Organize and conduct events that allow the District to work cooperatively with area residents, including youth, in demonstrating the important relationships between surface and groundwater quality.
- Maintain up-to-date District and aquifer information and literature that are available to the public via the website, print materials, and an electronic newsletter.

General Management

Performance Standard 4-5:

Prepare, submit, and maintain a draft and final Habitat Conservation Plan (HCP) and provide support of related National Environmental Policy Act documentation and processes for obtaining an Incidental Take Permit from the US Fish & Wildlife Service (FWS) for the endangered species at Barton Springs.

Metric	Frequency	Score	Documentation
1. Satisfactory progress toward completion of the HCP that is acceptable to FWS, as judged by the Board and with the use of an annual HCP Status Report prepared by District Staff near the end of each fiscal year;	Annual, if and when applicable	Met dHCP/dEIS published for comment on 7/18/17	<ul style="list-style-type: none"> • HCP Annual Report on file • Incidental Take Permit on file • MAC's Annual HCP Progress Report, on file • Minutes of MAC meetings • Rules & Bylaws that reduce permitted withdrawals during Emergency Response Period droughts to requisite amounts
2. Upon its receipt, success in maintaining a Section 10(a) Incidental Take Permit;	Annual, if and when applicable	N/A	
3. Establishment and convening meetings at least annually of an HCP Management Advisory Committee;	Annual, if and when applicable	N/A	
4. Promulgation of a regulatory program that achieves the Extreme Drought Withdrawal Limitation that is based on the MAG for the prevailing drought DFC for the Freshwater Edwards Aquifer.	Annual	Met	

Example Board-Level Activities

- a. Assess and authorize needed measures within the District's authority, on a continuing basis, to minimize take and prevent jeopardy of the endangered species that are specified in the HCP.
- b. Fund on a continuing basis the primary and adaptive management measures to minimize take and prevent jeopardy of the endangered species in the HCP.

Example Staff-Level Activities

- a. Prepare a draft HCP, respond to public comments, and prepare and submit a final HCP that are acceptable to FWS.
- b. Establish, periodically convene, and utilize an HCP Management Advisory Committee to assess independently the effectiveness of the HCP measures and recommend changes necessary to improve effectiveness, if warranted.
- c. Employ an adaptive management strategy to respond effectively to unforeseen and/or changed circumstances.

Objective 5. Extend current groundwater supplies by encouraging supply-side and demand-side improvements.

Note: The 'example activities' for directors and staff listed below are intended by the Management Plan and therefore in this annual assessment to be only illustrative ones for this Objective and Performance Standard, and should not be construed as restrictive or mandatory in each or any one year. In addition, all are subject to the Board's actions indicating the District's current intent as to their scope and their priority with respect to other activities.

Regulatory Compliance			
Metric	Frequency	Score	Documentation
<p>Performance Standard 5-1:</p> <p>1. A report completed in odd-numbered years summarizing the above activities, grant activities, and active alternative supply projects in the District, and making recommendations.</p>	<p>Bi-Annual odd # years (Due: 2017)</p>	<p>Met</p> <p>Regular monthly reporting at Board meetings</p>	<ul style="list-style-type: none"> Alternative Water Supply Status Report on file
Example Board-Level Activities		Example Staff-Level Activities	
<p>a. Provide input to District staff about policy considerations of alternative water supplies.</p> <p>b. Provide active leadership in promoting and pursuing alternative water supplies, including but not limited to participating in speakers' bureaus, working with water providers, legislative community and agencies such as TWDB and TCEQ, and assessing political and economic efficacy and paths.</p>	<p>a. Identify available alternative water resources and supplies (e.g., saline Edwards desalination, ASR, reuse, rainwater, etc.).</p> <p>b. Evaluate viability of alternative water sources by considering:</p> <ul style="list-style-type: none"> available/proposed infrastructure financial factors logistical/engineering factors potential secondary impacts (development density/intensity or recharge water quality). <p>c. Develop relationships/agreements with area surface water providers and encourage service to District permittees during extreme drought where appropriate.</p> <p>d. Explore possible incentives to District permittees to implement the use of alternative water supplies through pricing, permit terms, and other mechanisms where appropriate. <i>Directors note that exploration of these incentives requires Board authorization and involvement.</i></p>		

This comprises a possible future correcting amendment of the Management Plan.

- e. Remove/reduce institutional barriers to use of alternative sources as feasible.
- f. Produce a bi-annual report for the Board to serve as a summary of regional alternative supplies and activities [related to this objective]

Aquifer Science

Performance Standard 5-2: Conduct investigations and, as warranted and feasible, physically alter discrete recharge features that will lead to an increase in recharge to the Edwards Aquifer.

Metric	Frequency	Score	Documentation
1. Annual oral presentation in even-numbered years on progress in these activities, to enable the Board to assess the progress;	Bi-Annual even # years (Due: 2016)	N/A	<ul style="list-style-type: none"> Alternative Water Supply Status Report on file Minutes of Board meeting in which oral presentation on this topic was made. Photographs of work being conducted in these recharge features
2. Inclusion of these activities in the biennial Alternative Water Supplies Report in odd-numbered years;	Bi-Annual odd # years (Due: 2017)	Met Regular monthly reporting at Board meetings	
3. Number of excavations conducted in caves, sinkholes, or recharge features annually (with at least one being satisfactory).	Annual	Met (1 – Antioch Cave)	

Example Board-Level Activities	Example Staff-Level Activities
<p>a. Participate in discussions about activities related to recharge enhancement.</p> <p>b. Establish policies concerning recharge enhancement projects.</p> <p>c. Fund approved projects, including seeking external funding partners.</p>	<p>a. Determine locations, cost-effective methods, and efficacy of potential recharge maintenance and enhancement for at least one additional recharge feature during the five-year term of this Plan.</p> <p>b. Seek both internal and external funding to study and construct BMPs that are capable of diverting surface waters into the District aquifers.</p> <p>c. Excavate sediment and other material from at least one recharge feature, such as caves, sinkholes, and BMPs, each year so that the capacity of the feature to recharge the aquifer will be at least maintained if not increased.</p> <p>d. Identify and pursue grant funding, as appropriate, Board-authorized and available pertaining to recharge enhancement and nonpoint source pollution, and manage grant projects in accordance with grant requirements and good project management practice to meet milestones on budget and schedule.</p>

Aquifer Science

Performance Standard 5-3:

Conduct investigations, as warranted and feasible, to evaluate the potential for the saline zone of the Edwards Aquifer to provide water for a desalination facility, and to evaluate the potential for the Edwards saline zone and the Trinity aquifers beneath the freshwater Edwards as reservoirs for an Aquifer Storage and Recovery (ASR) system.

Metric	Frequency	Score	Documentation
1. Annual oral presentation in even-numbered years on progress in these activities to enable the Board to assess the progress;	Bi-Annual even # years (Due: 2016)	Met	<ul style="list-style-type: none"> • Alternative Water Supply Status Report on file • Minutes of Board meeting in which oral presentation on this topic was made • Abstracts, reports, or publications summarizing results of these studies
2. Inclusion of these activities in the biennial Alternative Water Supplies Report in odd-numbered years.	Bi-Annual odd # years (Due: 2017)	Met Regular monthly reporting at Board meetings	

Example Board-Level Activities

- a. Provide input of the extent of investigations of the saline zone and the level of interest of the Board on desalination and ASR.
- b. Assist in developing and approve a business plan if and as necessary for co-funded investigations.
- c. Authorize funding for a portion or all of investigations on the Edwards saline zone.

Example Staff-Level Activities

- a. Install monitor well in saline zone for sampling and aquifer parameter testing.
- b. Cooperate with other organizations for installing a test well in the saline zone and for evaluating the feasibility of desalination and/or ASR in the saline zone.
- c. Conduct aquifer tests of Trinity aquifers to determine if they could serve as reservoirs for an ASR system.

Education & Outreach

Performance Standard 5-4: Maintain and develop programs that inform and educate District groundwater users and area residents of all ages about water conservation practices and resources and use of alternate water sources including gray water/condensate reuse and rainwater harvesting.

Metric	Frequency	Score	Documentation
1. Preparation and dissemination of material shared with District groundwater users and area residents that will inform them about water conservation and alternate water sources.	Annual	Met	<ul style="list-style-type: none"> • Social media posts, newsletter articles, and email bulletins highlighting upcoming events. • Monthly team activity status report documentation of permittee communications about conservation credits and education events (via mail or email). • High volume private well owner list updates and tracking of materials sent.

Example Staff-Level Activities

Example Board-Level Activities	Example Staff-Level Activities
<p>a. Provide direction and input to staff on messages that the Board would like to convey to the public about water conservation and alternate water sources.</p>	<p>a. Support and publicize other local-area water conservation initiatives using print and presentation opportunities.</p> <p>b. Maintain up-to-date water conservation and alternate water source information and literature that is available to the public via the website and print materials.</p> <p>c. Provide District groundwater permittees and end-users with water conservation and alternate water source presentations upon request where possible.</p> <p>d. Offer and/or recommend educational events annually that address topics such as leak detection, water audits, irrigation audits, indoor water conservation, water use behavior, native landscaping, or rainwater harvesting.</p> <p>e. Engage and solicit participation of permittees and other stakeholders on the District’s conservation credit policy.</p>

Objective 6. Increase understanding of all District aquifers so that appropriate policy and regulatory decisions are made.

Note: The 'example activities' for directors and staff listed below are intended by the Management Plan and therefore in this annual assessment to be only illustrative ones for this Objective and Performance Standard, and should not be construed as restrictive or mandatory in each or any one year. In addition, all are subject to the Board's actions indicating the District's current intent as to their scope and their priority with respect to other activities.

Regulatory Compliance			
Performance Standard 6-1:	Metric	Frequency	Score
Assess aquifer conditions by sampling and collecting groundwater data from selected wells.			
1. Information collected on wells within the District entered into District database		Annual	Met <ul style="list-style-type: none"> • Annual well sampling tracking spreadsheet • Database reports
Example Board-Level Activities			
a. Provide direction and input to staff about how the Board would like to have data collected, maintained, and reported.			<p>Example Staff-Level Activities</p> <ul style="list-style-type: none"> a. Collect water-quality and groundwater-level information annually from: <ul style="list-style-type: none"> - All individually permitted wells (except for public supply wells) scheduled for routine compliance inspections - All newly drilled wells - Abandoned wells where sample collection is possible prior to District-authorized plugging - Five (5) other selected wells of interest. b. Record data in District databases and use to assess groundwater quality and quantity.

Aquifer Science

Performance Standard 6-2:

Conduct scientific studies to better determine groundwater availability, to understand and prevent threats to water quality, to minimize impacts to water-supply wells and springs, and to provide sound science on which to base District policy.

Metric	Frequency	Score	Documentation
1. An annual report of publications produced by the District that affects or will affect current or future Board decision-making	Annual	Met	<ul style="list-style-type: none"> Compendium of publications and presentations by District staff and directors on file Abstracts, reports, or publications summarizing results of these studies
2. Qualitative judgment by Board as to adequacy of the type of scientific information provided to them	Annual	Met	

Example Board-Level Activities

- Provide guidance on policy issues that involve scientific evaluation.
- Authorize funding for a portion or all of investigations related to aquifer science.

Example Staff-Level Activities

- Collect, maintain, and interpret relevant data such as water levels, water quality, stream flow, rainfall, and aquifer properties, including water-level information from at least ten (10) monitor wells and stream or spring flow measurements at least three (3) times annually.
- Periodically and regularly measure and evaluate the accuracy and precision of the discharges at the Barton Springs complex, and promote improvements in the reliability of such measurements.
- Identify and pursue grant funding, as appropriate and available to conduct aquifer studies, and manage grant projects in accordance with grant requirements and good project management practice to meet milestones on budget and schedule.
- Assess effects of "urban leakage" and its consequences for groundwater model calibration and outputs.
- Collaborate on aquifer studies with other agencies and institutions by participating in at least five meetings each year with other groundwater scientists and engineers to discuss topics of current and direct interest to the District staff.
- Evaluate the various groundwater models to determine which ones best suit the needs of the District for groundwater availability analyses, or consider other model software that has not yet been applied to District studies.

- g. Prepare presentations, abstracts, and papers to present at scientific meetings and conferences or for publication by the District or other scientific organizations.
- h. Appoint and convene when appropriate an *ad hoc* technical advisory committee to review and comment on District investigations and analyses. ***Directors note that only the Board may appoint and convene advisory committees, and that staff involvement will be in administering and utilizing outputs of such committees. This comprises a possible future correcting amendment of the Management Plan.***

Basis for Board of Directors'

Evaluation of Progress on Objectives and Performance Standards

Basis for Evaluation of Progress on Objectives and Performance Standards

Teams:	General Management	Administration	Education & Outreach	Aquifer Science	Regulatory Compliance
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Objective 1. Assure the long-term sustainability of the District to carry out its mission as a Groundwater Conservation District with excellence.

PS 1-1: Hire, equip, train, evaluate, and motivate appropriate staff to achieve the District's mission within budgetary constraints.

- The Board conducted the General Manager's FY 2017 performance review and objectives assessment at its regularly scheduled meeting on August 10, 2017. The Board took action determining that the General Manager's performance in FY 2017 was satisfactory and that the FY 2017 District Goals and General Manager (GM) objectives were met or exceeded. The Board went further to award a cost of living salary increase, a performance bonus, and the incentive compensation for achieving the objectives.
- There were no instances of unresolved personnel issues and none were referred to the Board.
- The District had one resignation in FY 2017 therefore the net turnover rate was 9%. The position of Regulatory Compliance Technician was vacated with the resignation in January of 2017. The vacant position was upgraded and posted as a Regularly Compliance Specialist which was then filled with the hiring of Zachery Garza in February of 2017. The Regulatory Compliance Team managed the temporary reduction in staff and subsequent training of the new hire with limited disruption.
- Annual performance and salary reviews were completed for all regular staff in FY 2017. On the basis of the reviews, staff was collectively awarded a 2.95% raise in salaries which was within the FY 2017 budgeted amount for salaries and wages. Incentive compensation for completed projects was also awarded according to the incentive compensation plan
- Collectively, staff attended approximately ten courses for purposes of directed training and professional development in FY 2017. This support is in addition to more than 19 technical/policy conferences, seminars, workshops, webinars, and symposia in which one or more District staff members and directors participated. There was one out-of-state conference attended in Nevada. In all, approximately \$16,501 was spent on professional development, training, tuition, and career advancement for staff members and directors in FY 2017.
- The District has implemented a regular schedule of spring and fall staff-only retreats involving field trips and excursions in and around the District's area, and team building exercises to build relationships and maintain staff morale. Staff morale was maintained and generally good throughout the year.

PS 1-2: Align District plans, policies, and programs with the District's mission and vision, and regularly review and revise them, as warranted, to respond to changing circumstances that affect their need, effectiveness, or implementation.

- Staff continued to operate in accordance with the objectives of the 2013 Management Plan (MP) and the methodology developed for measuring progress towards satisfying the plan objectives. Staff also invested substantial effort in preparing an updated MP in anticipation of the 2013 plan's expiration in January of 2018. The initial project tasks involved forming up guiding principles and a conceptual approach to be presented to the appointed Board committee (Mary Stone and Craig Smith) for approval. The guiding principles included:
 - Utilize a framework consistent with the Texas Water Development Board (TWDB) goal structure.
 - Incorporate the Habitat Conservation Plan (HCP) conservation measures as baseline objectives to provide a direct link between the HCP and the 2018 MP.
 - Expand the scope of the baseline HCP measures to include core administrative functions, the shared territory, and management of non-Edwards aquifers (primarily the Trinity aquifers).
 - Streamline by removing any non-essential content, objectives, standards, and activities.
 - Should be sufficiently comprehensive to maintain current authority and emphasize key management strategies.

The Board committee held two meetings on March 20 and May 23, 2017 to develop the guidelines for the revision and provide input into the content, objectives, and performance standards in accordance with those guidelines. The draft content was initially presented to the full Board on May 25 and then work-shopped at the June 23rd regular Board meeting. On July 13, 2017, the Board approved the preliminary draft for submittal to the TWDB for pre-review. The TWDB conducted their pre-review and provided minimal comments that required only minor edits which were approved by the Board on August 24, 2017. The Board set and held a public hearing on the draft MP on September 28th, 2017 and then approved the plan with minor revisions to be submitted to the TWDB for final review and approval.

- The District did not formally initiate rulemaking in FY 2017 but made substantial progress towards developing rule concepts related to the District's authority to permit and regulate Aquifer Storage and Recovery (ASR) systems. The ASR rule concepts were presented by the Regulatory Compliance Team to the Board at the August 10th Board meeting. The Board Rules Committee (Bob Larsen and Blayne Stansberry) has been engaged, and a process to vet the concepts through a Technical Advisory Committee (TAC) and develop the draft rules will continue through FY 2018.
- The MP requirement to develop a Contingency and Risk Management Plan (CRMP) is satisfied through the commitment to measures of the draft HCP which specifies pre-determined responses to the certain Changed and Unforeseen Circumstances. The Board has determined in the three previous annual reports that these HCP measures serve the same function as a CRMP; therefore, a unique plan is not needed, and is judged by staff to be "met."

- The District timely completed and the Board approved its annual budget and fee schedule for FY 2017 on July 21, 2016 and approved subsequent budget revisions on January 12, 2017 and June 22, 2017. The staff developed and the Board approved the proposed FY 2018 budget in late FY 2017 on August 10, 2017. The FY 2018 fee schedule was approved by the Board on July 13, 2017.
- The Board continued the convention of strategic planning through the setting of annual goals by adopting its FY 2017 goals on October 6, 2016. These annual goals provide policy-level direction to the GM and staff, and serve to guide the District's expenditure of staff time and resources. The Board conducted the end-of-year assessment of the FY 2017 goals at their regular Board meeting on August 10, 2017 and judged that the District demonstrated sufficient progress towards achievement of the goals.
- The Board convened and actively engaged the Management Advisory Committee (MAC), which serves as the principle advisory group, to assist in the development of the District HCP and the Incidental Take Permit (ITP) application which was filed with the U.S. Fish and Wildlife Service (USFWS) in late 2013. There has been little activity to necessitate convening the MAC to support additional HCP activities since the ITP has been in review by the USFWS and is pending. Staff does intend to convene a TAC in FY 2018 to assist with and vet ASR rules.

PS 1-3: Ensure the District has the near-term and long-term financial basis and contractual wherewithal to support its mission.

- District Board and staff members maintained their financial resources in a manner that maximizes liquidity while maintaining the greatest return on District fund balances by investing in securities or investment pools that operate in low risk investments and are backed by the state and/or federal government.
- The District developed, implemented and modified, as needed, a balanced FY 2017 annual budget that the Board initially approved on July 21, 2016, and then revised on January 12, 2017, and again on June 22, 2017.
- The District successfully operated within its budgeted operating expenses, although the District Board did approve the use of reserve funds (\$215,000 in Budget Revision 2) to balance the budget.
- The District obtained new contracts for services in accordance with established District standards that meet or exceed the requirements of state law and the District's Rules and Bylaws; this includes the second round of Master Services Contracts that administration has engaged in.
- The District submitted an application to the TWDB for a Regional Facility Planning Grant on January 28, 2015 to assess the Saline Edwards Aquifer as a potential water supply. The District was awarded grant funding in the amount of \$240,000 to support the District's grant project. The contract with TWDB for the grant project was approved by the Board and executed on

August 27, 2015. The actual well drilling site work did not begin until August 2016. The grant contract was amended in October 2017 with a new expiration date of December 31, 2017.

- The District's investment officer, Dana Christine Wilson, completed the official Public Funds Investment Act (PFIA) training on October 10, 2016 (completed earlier than April which is the usual timing), a biennial requirement, and will be renewing this requirement in April 2018.

PS 1-4: Provide efficient administrative support and infrastructure, such that District operations are executed reliably and accurately, meet staff and local stakeholder needs, and conform to District policies and with federal and state requirements.

- A cost-benefit analyses was performed on all District insurance and employee-benefit policies before renewal; and the District acquired, amended and renewed all District benefit policies in a timely fashion.
- All District records were maintained, retained, and controlled in accordance with the Texas State Library and Archives Commission-approved District Records Retention Schedule to allow for safekeeping and efficient retrieval of any and all records. Records are audited for effective management of use, maintenance, retention, preservation and disposal of the records' life cycle as required by the Local Government Code.
- Maintained and upgraded (e.g. remodeling projects) the office building and the grounds, office equipment, and supplies to provide an efficient work environment that meets the needs of the staff and stakeholder community. Facilities upgrades for FY 2017 were a shelving addition to the library space to improve function and efficiency, and to allow more space for records storage.
- District Board agendas and pertinent meeting materials and backup documentation were developed, posted, and distributed in a timely manner. Select documents that were pertinent and necessary, were posted on the District. Official records, files, and minutes of Board meetings were also appropriately maintained and made available for public viewing on the District website.

PS 1-5: Provide mechanisms to align District Rules, policies, and programs with the will of its collective and precinct-level constituencies, within the constraints of statutes governing the District.

- Effective participation may be demonstrated by the documentation of Board activity communications described under PS 4-1. This process and methodology was developed during FY 2013. The formal judgment of the effectiveness of the Board's communications was available for the entire FY 2017. The efforts of each Director to engage the full spectrum of stakeholder interests was observed and demonstrated by their attendance in the majority of all Board meetings, work sessions, stakeholder meetings, District-sponsored activities, and individual communications.

- District elections occur every two years. An election was held in November 2016 (our FY 2017) without the District's participation as the three board members that were up for re-election, were unopposed for Precincts 1, 3, and 4. The election processes were conducted in accordance with newly redistricted precinct boundaries, State and Federal law, and as required by Chapter 36 of the Texas Water Code, and the rules set forth in the Texas Election Code.

PS 1-6: Provide leadership in promoting legislation and regulations that benefit the protection of the District's groundwater resources and opposing legislation and regulations that harm those resources.

- The GM served as the primary point of contact, and coordinated with Brian Sledge of Sledge Law, the District's legislative consultant, and the appointed Board committee members (Blayne Stansberry and Bob Larsen) to monitor bills of interest to the District including two bills that were filed on the District's behalf (HB 2424 and HB 3071). Efforts included bill tracking and analysis, meeting and providing information to legislators, and providing testimony at legislative committee hearings on certain bills. The following is a synopsis of the fate of certain priority bills of direct interest to the District:
 - **HB 2424** by Howard (District annexation bill). HB 2424 was filed to align the District's boundaries with the boundaries of the aquifer. The bill was filed but was never referred to committee and therefore, did not pass.
 - **HB 3071** by Rodriguez (District fee equalization bill). HB 3071 was a cleanup bill to reconcile fee structure inequity between the exclusive and annexed shared territory created by HB 3405 in 2015. The Board President, Blayne Stansberry, testified in support of the bill at the House Natural Resource Committee (NRC) hearing on April 19, 2017. The bill passed the House but did not receive a hearing by the Senate Intergovernmental Relations Committee and therefore, did not pass.
 - **HB 4121** by Kacal (Transfer of groundwater conservation district territory). HB 4121 was filed to authorize a process to allow the transfer of parcels of land located in two or more groundwater conservation districts (GCDs) into one GCD. The GM provided testimony against the bill at the House NRC hearing on April 5, 2017. The substituted version of the bill passed the House and was referred out of the Senate Agriculture, Water, and Rural Affairs Committee (AWRAC) but did not pass the Senate.
 - **HB 922** by Workman (Southwestern Travis County GCD bill). HB 922 failed to pass but the language of the House and Senate versions of the bill were added to HB 4345 (related to creation of the Rio de Vida MUD) which passed. The GCD is created on September 1, 2017, the effective date of the bill, and is subject to a confirmation election in May of 2018.
 - **SB 862** by Perry (GCD attorney's fees bill). HB 862 was filed to remove the liability protection afforded to GCDs for legal costs associated with certain legal proceedings. Board President, Blayne Stansberry, testified against the bill at the Senate AWRAC on April 3, 2017. The substituted bill passed the Senate but did not get out of the House NRC and therefore, did not pass.

- **SB 1392** by Perry (Omnibus GCD bill). HB 1392 was filed as a comprehensive overhaul of Chapter 36 that would have had significant impacts on the District. The GM and Board President, Blayne Stansberry, testified against the bill at the Senate AWRAC hearing on April 10, 2017.
- A legislative debriefing report was provided by Sledge Law at the June 22, 2017 Board meeting. The Board adopted the report and accepted the report as satisfying this performance standard.
- With the concurrence of the Board and advice of its counsel, the District did not enter into any new litigation or contested-cases with and for other jurisdictions in FY 2017.

Objective 2. Promulgate a fair and efficient regulatory program.

PS 2-1: Review and modify the *Rules* as warranted to provide and maintain a sound statutory basis for continued District operations and to ensure consistency with both District authority and programmatic needs.

- In FY 2017, Rules were not amended; however, the District continued its ongoing initiatives associated with development of alternative water supplies for the District. Staff held multiple meetings with Texas Commission on Environmental Quality's (TCEQ) staff and management team to better understand the interpretation of state rules and to understand the authority limitations resulting from legislative changes. These discussions helped inform the further development of ASR Rule Concepts.
- During FY 2017, the USFWS officially posted the notice for the District's draft HCP and the USFWS's draft Environmental Impact Statement (EIS) listing in the Federal Register, and announced the 60-day public comment period. Written comments were received by September 18, 2017. A public meeting hosted by the Service was held on August 22, 2017 at the District office. Only three comments were received before the comment period closed, and the District prepared responses to those. The HCP and associated documents, an overview of the development process, and more information are available on the [District HCP website](#). The HCP is currently under USFWS review, and an ITP has not been issued. Upon approval and issuance of an ITP, staff will propose rule changes necessary to address the efforts of the HCP and ITP.

PS 2-2: Process and review all well registrations, permit renewals, and applications for permits, permit amendments, and authorizations in accordance with the *Rules*, *Well Construction Standards*, and other District guidelines in accordance within specified procedural timeframes.

- During FY 2017, the District continued with an online registration system to receive well registration applications from well owners. The online registration system was implemented in June 2015 in response to recent annexation efforts associated with the passage of HB 3405. Approximately <10 registration surveys were received and processed. Additionally, all newly drilled or modified wells were registered at the time of application.
- As reported in the "District Programs-Team Highlights" section of the Annual Report, the following applications were received and processed in FY 2017. All applications were processed in conformance with the District's information requirements, procedural requirements, and time frames. All current production and transport permits were renewed at the end of the respective permit terms as well.

TOTAL Permit Applications		FY16	FY 17
Minor Amendment		1	4
Major Amendments		0	0
New Exempt Well		5	9
Limited Production Permit (Nonexempt Domestic Wells)		13	22
Individual Production Permit		6	4
New Individual Well Drilling Authorizations /Modification		3	5
Test Well		2	0
Well Plugging		12	10
Replacement Well		2	0
Temporary Permit		21	NA
Regular Permit (Temporary Permit Conversion)		16	NA
TOTAL		81	54

TOTAL New Wells		FY16	FY 17
New Exempt Wells		5	9
Nonexempt Domestic Wells (LPPs)		13	22
Individual Wells		2	4
Test Wells		6	0
Replacement Wells		2	0
TOTAL		22	35

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

PS 2-3: Monitor existing District wells for compliance with the *Rules*, and *Well Construction Standards*.

- During FY 2017, the Regulatory Compliance Team conducted a number of inspections relating to the processing of permit applications. The following is a list of those activities.

TOTAL Inspections/ Investigations/ Onsite Visits	39
Exempt Well Inspections	6
Limited Production Permit Inspections	14
Individual Production Permit Inspections	5
Test Well Inspections	0
Plugging Inspections	10
Special Investigation Inspections	0
Other Permittee Inspections	0

- There were no formal enforcement actions initiated in FY 2017.
- Monthly meter readings were collected from all individual permittees each month with the large majority reported in a timely manner. Permittees failing to submit timely reports were provided with notices of the District’s intent to collect meter readings. Most delinquent permittees were generally responsive once the notice was received. Meter readings not received after the notice was provided were collected by staff and a fee was assessed to those permittees, in accordance with the Rules.
- The annual meter reading requirement for all Limited Production Permits were due in August 2017. Email correspondence and notifications were provided to the nonexempt domestic users in an effort to ensure compliance, however, approximately 10% did not timely submit a meter reading. This compliance effort will be carried over into FY 2018.

P-S 2-4: Efficiently process permittee meter readings, water use fee invoices and payments, conservation credits, permit renewals and related communications.

- District production permits are effective for the duration of the District fiscal year (September 1st to August 31st) and are generally automatically renewed by the Board, contingent on absence of compliance issues, unpaid balances, etc., at the end of each fiscal year for the following fiscal year. The Board approved conditional renewal of all District production permits for FY 2018 during its regular meeting on July 13, 2017.
- District Rule 3-6.4 requires that an audit be conducted in the first quarter of each fiscal year to determine eligibility for conservation credits and the amount of credits earned by permittees in the preceding fiscal year. The audit for FY 2017 was completed and then reported to the Board at the regular Board meeting on September 28, 2017 where the directors approved issuance of \$23,297 (which was \$9,086 less than the previous year of FY 2016 where there was \$32,383

in earned credits). Permittees received \$14,561 in credits, and the City of Austin received their 60% share of \$8,737.

- A staff-initiated under-pumpage analysis was not performed in FY 2017. Such analysis was judged by the GM not to be warranted this fiscal year.
- In FY 2017, all permittee water use fee invoices and payments and meter readings were processed in accordance with specified procedures and timeframes. This included the temporary production permits that became permanent production permits, stemming from the District annexation of the new Shared Territory as required from HB 3405.

Objective 3. Develop and implement an effective drought management program that achieves the adopted Desired Future Conditions of each relevant aquifer in the District.

PS 3-1: Assist permittees in developing drought and conservation planning strategies, permit conversion strategies, pricing strategies, and enforce compliance with drought management rules during District-declared drought to achieve desired future conditions (DFCs) during extreme drought.

- The majority of permittees have current User Drought Contingency Plans (UDCPs) on file and are currently compliant with District Rules. Permittees have the option to revise drought charts no more than once per year but must update their plans at least every five years.
- The District declared No-Drought status on January 29, 2015 and remained in No-Drought status throughout FY 2017.
- In FY 2017, the Regulatory Compliance Team did not have to conduct any pre-enforcement meetings for non-compliance.

PS 3-2: Monitor and declare drought stages on the basis of the analysis of data from the District's defined drought triggers and in accordance with the adopted drought trigger methodology.

Staff monitored the District's two drought trigger sites (Barton Springs and Lovelady monitor well) plus numerous other indicators of drought conditions relating to the Edwards Aquifer within and nearby the District. The United States Geological Survey (USGS) is responsible for the equipment, and maintaining data on their website. District staff frequently verified water-level values that were measured by the equipment at the Lovelady monitor well. During periods of District-declared drought and during times preceding potential drought, staff provided timely updated reports of aquifer conditions at each Board meeting. Data from Trinity monitor wells were also collected and evaluated at these times. There were no District-declared droughts in FY 2017.

PS 3-3: Inform and educate permittees and the public about declared drought stages and the severity of drought, and encourage practices and behaviors to reduce water use.

- eNews Bulletins: Nine monthly eNews and one summer eNews were released to subscribers. The list of subscribers increased through the fiscal year ending at 2,996 in August 2017. Additionally, three press releases announced the cancelling of Director elections, beginning of the Water Conservation Period, and the HCP public comment period. Two announcements were sent to alert well owners to a sewage spill and to remind well owners of the well water checkup event.
- Mass Communication Efforts: The website template and content management system continue to facilitate access from various devices, including mobile phones and tablets. Graphics and

organization of the District website were adjusted to reflect programing changes and additional projects.

- Drought Stage Road Signs and Bill Inserts: not applicable since we did not enter into a drought stage in FY 2017.
- Public Information Requests: 15 public information requests were received and tracked. All 14 were answered satisfactorily and in a timely fashion.
- Residents' Inquiries About Drought Restrictions: The District did not receive any email/phone call concerns from area residents regarding water restrictions or reports of water waste.

Objective 4. Demonstrate leadership in external communication, collaboration, coordination and joint planning with respect to groundwater and related resources.

PS 4-1: Cultivate and communicate effectively and routinely with stakeholders of all types that affect and are affected by the District's programs and policies.

Evidence to support progress towards this standard is provided through Directors' Reports provided monthly at regular Board meetings, and through modified Director's Compensation forms that provide documentation of activities, correspondence, events attended, and other communications. For FY 2017, the Board reviewed the reported activities and correspondence of each individual Director, and formally approved the demonstration of effective communication for each quarter of the year.

PS 4-2: Collaborate with joint Groundwater Management Area (GMA) and regional water planning efforts on policies, regulations, and activities affecting water quality or desired future conditions of the aquifers managed by the District.

Joint Regional Groundwater Planning

The District has jurisdictional area and therefore designated voting representatives in both GMA 9 (Hill Country Trinity Aquifer) and GMA 10 (Edwards Aquifer). The District actively participated in the joint regional groundwater planning process by providing in-kind consultation services and by participating in voting on posted agenda items affecting the respective GMAs.

Groundwater Management Area 9

The designated District representative (Brian Hunt) and GM John Dupnik attended two of two GMA 9 meetings and workshops (100%) in FY 2017. They actively participated in meetings, providing technical review and input, and voting on posted agenda items affecting the GMA. Because in FY 2016 the DFC was adopted and the Explanatory Report (ER) submitted to the TWDB, there was very little activity in GMA 9 during FY 2017. Staff reported news and activities to the Board of Directors. Meeting activity of GMA 9 in FY 2017 included:

- GMA 9 Meeting. March 27, 2017 Dripping Springs

The meeting agenda was focused on filed legislation. There was a full GMA 9 group and many elected officials including Representative Kyle Biedermann, County Commissioner Ray Whisenant, and a few GCD board members.

- GMA 9 General Managers Meeting. July 24, 2017 Boerne

The primary discussion topic was proactive measures that GCDs could be taking to prepare for legislative charges that would look at inconsistency in rules among GCDs over shared aquifers. Most could be attributed to differences in statutory authority, which was a creation of the legislature. Some rule differences were more related to localized aquifer conditions. The result

of all this was that it was agreed to form a committee that would work on a report that would provide a rule comparison of GCDs in GMA 9 and some adjacent GMAs.

In response to questions by the District Board and others in GMA 9 regarding the actual physical status of the DFC, the District wrote a technical memo (2016-0415) outlining a method and preliminary results for monitoring the DFC for the middle Trinity Aquifer. As of writing this report, GMA 9 is waiting on TWDB to process the DFC and ER.

Groundwater Management Area 10

The designated District representative for GMA 10 is John Dupnik. In FY 2017, Mr. Dupnik attended five of five GMA 10 meetings (100%). GMA 10 continued progress from FY 2016 towards completing the second round joint planning. Noteworthy activity:

- Public comments on the proposed DFCs were reviewed and considered by the GMA 10 planning group. A response to comments document was prepared and approved by GMA 10 to be included with the explanatory report.
- After public comments were considered, the draft explanatory report supporting the proposed DFCs was completed.
- On June 26, 2017, the GCD representatives of GMA 10 approved the comment summaries and responses, considered and adopted the proposed DFCs by Resolution, approved the explanatory report, and authorized the chairman to formally submit the DFCs and required documentation to the TWDB.

With the conclusion of the second round of joint regional planning, GMA 10 will shift emphasis in the initial year of the planning cycle from DFC planning towards other groundwater management initiatives utilizing the framework of the GMA. Such initiatives would likely involve more coordinated planning, data sharing, and collaboration to better understand each District's management approach, compare rules and policies, and explore opportunities to utilize similar rules where warranted.

Regional Water Planning Groups

The District has jurisdictional area in both Region K (Lower Colorado River Regional Water Planning Group) and Region L (South Central Texas Regional Water Planning Group); therefore, the District Board and staff continued to actively participate in the regional water planning processes of both Region K and Region L, which are engaged in a multi-year re-evaluation of water demand, water supplies and resources, and water management strategies. The District provided input to both of these regional water planning groups.

Region K

John Dupnik GM, and Robin Gary, Senior Staff, served as the Region K voting member and the designated alternate, respectively, for Region K. The District representatives to Region K attended

three of four meetings (75%) in FY 2017. Region K finalized the 2017 Regional Water Plan in December of 2016.

Other noteworthy activity of Region K in FY 2016 included:

- John Dupnik, GM, was nominated and appointed to serve on the executive committee.
- Tracked progress of an amendment to the plan to include a conservation project sponsored by Creedmoor-Maha Water Supply Corporation (WSC), a District permittee.
- Initiated review of draft population, municipal, and non-municipal demand projections.
- Considered new categories of water user groups and reporting units.
- Consideration of bills passed in the 85th legislative session that affected regional water planning, specifically SB 347 related to public notification of meetings, and SB 1511 related to implementation and feasibility of water supply strategies in the state water plan.

Region L

Brian Smith, District Principal Hydrogeologist, tracked the activity of Region L and attended two of four meetings (50%) in FY 2017, and Zachery Garza attended one meeting. Noteworthy activity of Region L in FY 2017 included:

- With the Initially Prepared Region Water Plan having been submitted to TWDB in FY 2016, Region L conducted fairly routine business, similar to Region K.
- Black & Veatch started as the contractor to work with Region L.
- Some items being considered are the Guadalupe-Blanco River Authority (GBRA) Mid-Basin ASR Project, the Texas Water Alliance Carrizo Project, and weather modification.

PS 4-3: Provide technical assistance as warranted to federal, state and local entities; organizations; and individuals on the geology, hydrogeology, and karst features impacted by groundwater-utilizing land use activities.

In FY 2017, staff reviewed 21 Water Pollution and Abatement Plans (WPAPs) that were received at the District to determine which development sites are relevant to the District's interests in protecting groundwater resources. Those plans that were determined to be of interest were reviewed in detail, and if it was appropriate, the sites were visited by staff. Sites of significant interest whose plans were reviewed in detail and visited by staff include: Centex Materials (Quarry), Sunset Valley Police Department, FM 1626 (at Onion Creek), MOPAC expansion, and State Highway 45.

PS 4-4: Through education and public outreach, inform groundwater users and the general public of the connectivity of recharge and discharge, importance of water quality protection, and the relationship between surface water and groundwater.

- The District participated in approximately 31 outreach events including field trips, conferences, workshops, meetings, and festivals. These presentations, events, and field trips reached more than 2,047 adults and 2,135 students.
- The District hosted or co-hosted Groundwater to the Gulf, the Kent Butler Symposium, 6th Annual Central Texas Water Conservation Symposium “Conservation Works: Building Programs from Simple to Sophisticated,” Rainwater Revival, Water Well Checkup, and 30th Anniversary Celebration.
- The District website has received 28,711 visits from 8,340 unique visitors. Facebook 'likes' increased from 512 to 605. The Twitter followers increased from 434 to 511.
- There were 127 new contacts added to the subscriber list. Additions include Permittees, Homeowner Association (HOA) contacts, and concerned residents and well owners in the Shared Territory.

PS 4-5: Prepare, submit, and maintain a draft and final HCP and provide support of related National Environmental Policy Act (NEPA) documentation and processes for obtaining an ITP from the USFWS for the endangered species at Barton Springs.

- The draft HCP and ITP application was submitted to the USFWS in December of 2014. In FY 2017, the GM continued to coordinate the work of the District’s HCP consultant and staff to work closely with USFWS staff to facilitate their review of the application. The bulk of this effort has involved responding to comments from the USFWS regional office in Albuquerque, New Mexico.
- The District addressed all comments in May and June of 2017 at which time the application was submitted and approved by the solicitor general for publication of the notice of availability in the Federal Register. The notice was published on July 18, 2017 initiating a 60-day comment period that expired on September, 18, 2017. During the comment period, the District also assisted the USFWS Austin office by hosting a public meeting on the draft HCP and EIS on August 22, 2017. The remainder of the process, which is largely the responsibility of the USFWS, will carry over into FY 2018 and FY 2019 and is anticipated to conclude with the issuance of an ITP in or around November of 2018.

Objective 5. Extend current groundwater supplies by encouraging supply-side and demand-side improvements.

PS 5-1: On at least a bi-annual basis, assess the availability and feasibility of regional alternative water supplies and encourage District permittees to diversify their water supplies by fostering arrangements with available water suppliers.

- The District continued its ongoing initiatives associated with development of alternative water supplies for the District and its region throughout FY 2017. A grant was awarded by the TWDB in FY 2015 to do an engineering evaluation of desalination and ASR and to install a multiport well to help characterize the saline Edwards Aquifer. In FY 2017, the District completed field collection of data from its newly installed multiport monitor well (in FY 2016). District staff worked with Carollo Engineers who conducting the feasibility portion of this study. Staff completed a draft hydrogeologic report for the study. Expected completion of the overall feasibility report is in early FY 2018.
- A regular reporting item has been added to the GM report special topics list to provide a monthly oral update on these and other Aquifer Science activities, and satisfies this reporting requirement. The Aquifer Science team also provided presentations at regular Board meetings on September 8, 2016, January 12, May 11, 2017, providing updates on various projects including projects related to development of alternative water supplies.

PS 5-2: Conduct investigations and, as warranted and feasible, physically alter discrete recharge features that will lead to an increase in recharge to the Edwards Aquifer.

- Antioch Cave is a recharge feature on District property that is capable of contributing a significant amount of water to the Edwards Aquifer when Onion Creek is flowing. A vault constructed over the cave entrance and automated valves allow for clean creek water to enter the cave and for contaminated storm water to be kept out. This system was maintained by District staff in FY 2017 so that the amount of clean creek water entering the cave was maximized.
- A regular reporting item has been added to the GM report special topics list to provide a monthly oral update on these and other Aquifer Science activities, and satisfies this reporting requirement. The Aquifer Science team also provided presentations at regular Board meetings on September 8, 2016; January 12, 2017; and May 11, 2017, providing updates on various projects including projects related to development of alternative water supplies.
- In FY 2017, District staff replaced operational equipment and hardware at Antioch Cave to improve the operation and performance of the best management practice (BMP).

PS 5-3: Conduct investigations, as warranted and feasible, to evaluate the potential for the saline zone of the Edwards Aquifer to provide water for a desalination facility, and to evaluate the potential for the Edwards saline zone and the Trinity aquifers beneath the freshwater Edwards as reservoirs for an ASR system.

- The District continued its ongoing initiatives associated with development of alternative water supplies for the District and its region throughout FY 2017. A grant was awarded by the TWDB in FY 2015 to do an engineering evaluation of desalination and ASR and to install a multiport well to help characterize the saline Edwards Aquifer. In FY 2017, the District completed field collection of data from its newly installed multiport monitor well (in FY 2016). District staff worked with Carollo Engineers who conducting the feasibility portion of this study. Staff completed a draft hydrogeologic report for the study. Expected completion of the overall feasibility report is in early FY 2018.
- In FY 2017, the District has been working with other entities in the area, such as City of Buda, City of Kyle, Edwards Aquifer Authority (EAA), and Ruby Ranch WSC to evaluate the potential for the Trinity Aquifers as reservoirs for ASR facilities. District staff worked cooperatively with the Ruby Ranch WSC to conduct two phases of ASR pilot testing. A status report was written and submitted to the TCEQ. A final phase of the testing is being done in early FY 2018.
- A regular reporting item has been added to the GM report special topics list to provide a monthly oral update on these and other Aquifer Science activities, and satisfies this reporting requirement. The Aquifer Science team also provided presentations at regular Board meetings on September 8, 2016, January 12, May 11, 2017, providing updates on various projects including projects related to development of alternative water supplies.

PS 5-4: Maintain and develop programs that inform and educate District groundwater users and area residents of all ages about water conservation practices and resources and use of alternate water sources including gray water/condensate reuse and rainwater harvesting.

- Through eNews articles and activities such as the Water Conservation Toss, Build A Rain Barrel, and the Rainwater Harvesting Challenge, staff stressed the importance of water conservation and alternate supplies. By teaching teachers to incorporate pertinent and easy-to-use activities into their classroom and making the Water Conservation Toss available for youth groups to use at festivals and events, the District magnifies its ability to communicate this message. Events such as trainings, festivals, and workshops were posted on Facebook and promoted through eNews and on the website.
- In FY 2017, the District continues to research the feasibility of desalination and ASR technologies to supplement existing water supplies with saline Edwards water resources through grant research and ongoing collaboration with TDS. Additionally two ASR injection/withdrawal step tests were completed in collaboration with the Ruby Ranch WSC.

Objective 6. Increase understanding of all District aquifers so that appropriate policy and regulatory decisions are made.

PS 6-1: Assess aquifer conditions by sampling and collecting groundwater data from selected wells.

- The Aquifer Science Team collected 124 samples from sample sites including wells and springs from the Edwards and Trinity aquifers for major ions and isotopes.
- The Regulatory Compliance Team collected 22 water quality samples during routine permit inspections or from new well construction inspections.
- The District, in collaboration with Texas Well Owners Network and Texas AgriLife, offered a free water well screening for private wells in the area. Well owners collected their own samples and dropped them off at the District office to be taken for analysis; approximately 40 wells were sampled during Water Well Checkup.

PS 6-2: Conduct scientific studies to better determine groundwater availability, to understand and prevent threats to water quality, to minimize impacts to water-supply wells and springs, and to provide sound science on which to base District policy.

Some of the key activities of the Aquifer Science Team for FY 2017 under this performance standard include the following:

- Performed studies with the City of Austin and the Hays Trinity GCD and other independent geologists to characterize surface and groundwater interactions along Onion Creek. A paper was published of the findings at the Fall 2016 Gulf Coast Association of Geological Societies (GCAGS) conference. An additional paper was published in the South Texas Geological Society Bulletin (see Publications).
- Coordinated and participated in an aquifer test for the Electro Purification application in Central Hays County. This included establishing a well monitor network of period and continuous data collection and water quality sampling (with the EAA) over a period of months.
- Maintained a monitor well network of about 35 wells with instruments that collect hourly data. The District's weather station at the District office also collects hourly data. The District routinely measures water levels in the six existing multiport monitor wells that were completed in the Edwards and Trinity aquifers.
- Collected water quality data (major ions and isotopes) from about 125 sample locations in FY 2017 (TWDB partnership).
- Supported dye trace studies of the City of Austin by establishing monitoring sites in wells. Deployed the District's portable fluorimeter at Barton Springs. Results expected in early FY 2018.

- Developed, in cooperation with Magellan Pipeline Company, an annual sampling program in advance of operation of the Longhorn Pipeline that transports crude oil. In April 2017, staff sampled eight spring and well sites for hydrocarbon contaminants using a screening test of BTEX and TPH.
- Participated with Southwest Research Institute (SWRI), TWDB, Hays Trinity GCD, EAA, Travis County, and Blanco-Pedernales GCD staff to continue collecting hydrogeologic data regarding the Trinity Aquifer. These efforts are to improve the conceptual model of the Trinity Aquifer, a TWDB-funded grant project awarded to SWRI, and expected completion in FY 2019.
http://www.twdb.texas.gov/groundwater/models/gam/trnt_h/trnt_h.asp
- Continued development and data collection of a geologic database of the Edwards and Trinity Aquifers in central Texas. Outlined studies and data that will inform the conceptual model for the Trinity Groundwater Availability Model (GAM). These include the planned installation of additional multiport monitor wells in Hays and Travis Counties in FY 2017. Established traditional monitor wells and surface stream gaging sites in Hays and Travis Counties.
- Staff from the Aquifer Science Team gave technical presentations to a variety of audiences including: South-Central Geological Society of America (see Abstracts), Barton Springs University, Gulf Coast Association of Geological Societies, Texas Hydrogeology Workshop, University of Texas at San Antonio, South Central Water Resource Interest Group, and Texas A&M Kingsville,
- Drilled and installed two multiport monitor wells in cooperation with Hays and Travis Counties. Conducted water quality sampling and began permeability testing at the Hays and Travis County multiport wells.
- Assisted with the geologic mapping of the Mountain City Quadrangle by Dr. Thomas Grimshaw. Expected publication in FY 2018.
- Participated and provided data in the TWDB-funded study titled: Potential Brackish Groundwater Production Areas – Trinity Aquifer. The study was conducted by Southwest Research Institute. Final report anticipated early FY 2018.
http://www.twdb.texas.gov/innovativewater/bracs/projects/HB30_Trinity/index.asp.
- Aquifer Science (and other) Team members published technical papers and abstracts (see Publications).

FY 2017 Published Reports:

Hunt, B. B., B.A. Smith, M.O. Gary, A.S. Broun, D.A. Wierman, J. Watson, and D.A. Johns, and, 2017, Surface-water and Groundwater Interactions in the Blanco River and Onion Creek Watersheds: Implications for the Trinity and Edwards Aquifers of Central Texas. *South Texas Geological Society Bulletin*, v. 57, no. 5, January 2017, p. 33-53.

Hunt, B. B., A. S. Broun, D. A. Wierman, D. A. Johns, and B. A. Smith, 2016, Surface-water and groundwater interactions along Onion Creek, Central Texas: *Gulf Coast Association of Geological Societies Transactions*, v. 66, p. 261–282.

Smith, B.A., B.B. Hunt, and J. Camp, 2017, 30 years of Aquifer Science. BSEACD Fact Sheet 0817.

<http://bseacd.org/uploads/30-years-AS-brochure_final_rev2_small.pdf>

FY 2017 Abstracts:

Hunt, B.B., B.A. Smith, M.O. Gary, A.S. Broun, and D.A. Wierman, 2017, An Evolving Conceptual Model of the Middle Trinity Aquifer, Hays County, Central Texas. *Geological Society of America Abstracts with Programs*. Vol. 49, No. 1, South-Central Section Meeting, San Antonio, Texas, March 2017.

Hunt, B.B., and B.A. Smith, 2017, Model then Measure: Assessing and Monitoring the Potential for Unreasonable Impacts from a Pumping Well—Example from the Middle Trinity Aquifer, Hays County, Texas. *Geological Society of America Abstracts with Programs*. Vol. 49, No. 1, South-Central Section Meeting, San Antonio, Texas, March 2017.

Smith, B.A. and B.B. Hunt, 2017, Desalination and Aquifer Storage and Recovery Potential of the Saline Edwards Aquifer, Central Texas. *Geological Society of America Abstracts with Programs*. Vol. 49, No. 1, South-Central Section Meeting, San Antonio, Texas, March 2017.

Smith, B.A. B.B. Hunt, V. Escobar, K. Bell-Enders, and J. Dupnik, 2017, Considering Unreasonable Impacts in the Groundwater Production Permitting Process. *Geological Society of America Abstracts with Programs*. Vol. 49, No. 1, South-Central Section Meeting, San Antonio, Texas, March 2017.

Watson, J.A., A.S. Broun, B.B. Hunt, D.A. Wierman, and B.A. Smith, 2017, Mapping the Upper Glen Rose Unit 3 Aquitard: Implications for Recharge to the Middle Trinity aquifer, Hays County, Texas. *Geological Society of America Abstracts with Programs*. Vol. 49, No. 1, South-Central Section Meeting, San Antonio, Texas, March 2017.