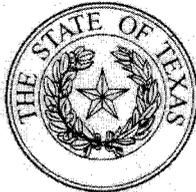


State Office of Administrative Hearings



Cathleen Parsley
Chief Administrative Law Judge

February 25, 2015

Gregory Ellis
Lost Pines Groundwater Conservation District
2104 Midway Court
League City, TX 77573

PICKED UP BY MR. ELLIS

**RE: Docket No. 952-13-5210; Applications of End Op, L.P. for Well
Registration, Operating Permits, and Transfer Permits**

Dear Sir:

Please find enclosed a Proposal for Decision Upon Remand in this case. It contains my recommendation and underlying rationale.

Exceptions and replies may be filed by any party in accordance with 1 Texas Administrative Code § 155.507(c), a SOAH rule which may be found at www.soah.state.tx.us.

Sincerely,

A handwritten signature in black ink that reads "Michael J. O'Malley".

Michael J. O'Malley
Administrative Law Judge

MJO/Ls

Enclosure; Certified Evidentiary Record (1 envelope)

xc: Russell Johnson, McGinnis Lochridge & Kilgore, LLP, 600 Congress Avenue, Suite 2100, Austin, TX 78701 - **VIA REGULAR MAIL**
Michael Gershon, Lloyd, Gosselink, Rochelle & Townsend, 816 Congress Ave., Ste. 1900, Austin, TX 78701 - **VIA REGULAR MAIL**
Robin Melvin, Graves Dougherty Hearon & Moody, 401 Congress Ave., Ste. 2200 Austin, TX 78701 - **VIA REGULAR MAIL**
Stacey Reese, Stacey V. Reese Law PLLC, 2405 W. 9th St., Austin, TX 78703 - **VIA REGULAR MAIL**

APPLICATIONS OF END OP, L.P. FOR § BEFORE THE STATE OFFICE
WELL REGISTRATION, OPERATING § OF
PERMITS, AND TRANSFER PERMITS § ADMINISTRATIVE HEARINGS

REMAND PROPOSAL FOR DECISION

I. INTRODUCTION

Chapter 36 of the Texas Water Code (Code) outlines the process by which landowners obtain the right to produce the groundwater that they own, within groundwater conservation districts with jurisdiction to manage and regulate production from groundwater sources. End Op, L.P. (End Op) has applied for permits to produce groundwater within the Lost Pines Groundwater Conservation District (District) located in Bastrop and Lee Counties. The District's powers include the power to require that a permit be issued before a groundwater well is drilled or operated and before groundwater is transported outside the District boundaries.

End Op currently seeks a permit from the District to withdraw 46,000 acre-feet of groundwater per year from 14 wells located in Bastrop and Lee Counties and to transport that water to Travis and Williamson Counties. End Op has identified the City of Austin, the City of Round Rock, the City of Leander, and the City of Cedar Park as potential municipal customers in Travis and Williamson Counties.¹

II. PROCEDURAL HISTORY AND BACKGROUND

On April 10, 2014, after an evidentiary hearing, the Administrative Law Judge (ALJ) issued a Proposal for Decision (PFD) recommending the District approve End Op's applications for 46,000 acre-feet with the Standard and Special Conditions recommended by the District's

¹ Tr. at 32-33.

General Manager (General Manager or GM) and the Special Conditions in the Settlement Agreement between End Op and Aqua Water Supply Corporation (Aqua).²

On September 10, 2014, the District's Board of Directors held a hearing on End Op's applications. At the meeting, the Board decided to remand the case back to the ALJ to develop additional evidence on beneficial use. On September 30, 2014, the Board issued an order remanding the case to the State Office of Administrative Hearings (SOAH) on: (1) the amount of groundwater that will be put to a beneficial use during the 5-year operating permit term; and (2) the amount of groundwater that will be put to a beneficial use during the 30-year transport permit term.

On November 7, 2014, the ALJ held the remand hearing in Bastrop, Texas. The record closed on January 9, 2015, after End Op and the General Manager filed post-hearing briefs and proposed findings of fact and conclusions of law. Aqua had limited participation at the hearing and did not brief or take a position on the remand issues.

III. APPLICABLE LAW

Chapter 36 of the Code and the District's Rules require the District to consider whether the proposed use of the water is dedicated to a beneficial use.³ End Op proposes to use the water for municipal purposes,⁴ which is considered a beneficial use under Chapter 36 of the Code and the District's Rules.⁵ In the April 10, 2014 PFD, the ALJ found that End Op's proposed use of the water would be dedicated to a beneficial use.

² Proposal for Decision (PFD) at 24.

³ Tex. Water Code (Code) § 36.113(d); District Rule 5.2(C)(3). ("Before granting or denying a permit or permit amendment, the district shall consider whether: . . . (3) the proposed use of water is dedicated to any beneficial use.").

⁴ Tr. at 28.

⁵ Code § 36.001(9); District Rule, Section 1, Definition. Beneficial use under Chapter 36 and the District's Rules means use of water for: (1) agricultural, gardening, domestic, stock raising, municipal, mining, manufacturing, industrial, commercial, recreational, or pleasure purposes; (2) exploring for, producing, handling, or treating oil, gas, sulfur, or other minerals; or (3) any other purpose that is useful and beneficial to the user. The Code refers to "beneficial purpose" (as opposed to beneficial use) but the District's Rules define beneficial use using the same language as the definition of beneficial purpose under Chapter 36.

With regard to the remand issues, End Op argues that there is no requirement or authority⁶ for a groundwater district to require an applicant to demonstrate a particular amount of groundwater that will be put to beneficial use in a 5-year or 30-year permit period. End Op contends that any claim that an applicant must prove an amount, or that the full requested amount, will be put to beneficial use during a 5-year or 30-year permit term as a prerequisite for a permit, fails because Chapter 36 of the Code neither requires such proof, nor does it empower a district to limit permit amounts to actual projected use. Even if the law did permit such a requirement to show actual projected use, End Op argues that the General Manager's proposed Special Condition,⁷ requiring End Op to submit a binding contract to supply the authorized amount within one year of issuance of the permit, directly satisfies any such requirement (*i.e.*, the contract would identify the amount of groundwater End Op would provide and the timeframe within which it would do so).

The Code provides that, before granting or denying a permit, the District "shall consider whether . . . the proposed use of water is dedicated to any beneficial use."⁸ The ALJ agrees that Chapter 36 of the Code does not necessarily require an applicant to demonstrate a particular amount of groundwater that will be put to beneficial use in a 5-year or 30-year permit period; however, the District has requested additional evidence on the amount of water to be put to a beneficial use. The exact amount of groundwater that will be put to a beneficial use during the 5-year operating permit term and the 30-year transport permit term, even with the additional evidence presented at the remand hearing, cannot be predicted with certainty because End Op has not entered into any contracts for the purchase of the water. However, given the demand for water, combined with the population growth in the region and the ongoing drought, End Op should be able to enter into contracts for the beneficial use of its 46,000 acre-feet of groundwater in the 5-year and 30-year permit periods.

⁶ *Guitar Holding Co. v. Hudspeth County Underground Water Conserv. Dist. No. 1*, 263 S.W.3d 910, 918 (Tex. 2008).

⁷ PFD at 14-15.

⁸ Code § 36.113(d)(3).

IV. DISCUSSION OF EVIDENCE

For the most part, the evidence presented at the hearing is not in dispute.⁹ However, the parties reach different conclusions on the evidence. The General Manager concludes that, based on the municipal demand projections for Austin, Round Rock, Leander, and Cedar Park, the future water demands will likely be satisfied with current water supplies available to them, and the municipalities will not have to use groundwater to meet those needs. Conversely, End Op argues that, based on projections for population growth, water demand in Travis and Williamson Counties, and existing drought conditions, the combined municipal water demands for Travis and Williamson Counties in the next 5 years will exceed 46,000 acre-feet requested by End Op, and the combined need in the next 50 years is far greater than the 46,000 acre-feet.

Under Code § 16.053, each regional water planning group established by the Texas Water Development Board (TWDB) must submit a regional water plan to TWDB every five years that provides: information on projected water use and conservation in the regional water planning area, each source of water supply in the regional planning area, and all potentially feasible water management studies. Travis County is in Region K, and the majority of Williamson County is in Region G.

The 2011 Region K Water Plan projected the municipal water demands of all users in Travis County in 2010, 2020, 2030, 2040, 2050, and 2060 and compared the demands to water supplies available to each user.¹⁰ The 2011 Plan identified combined municipal water shortages for water users in Travis County in 2020, 2030, and 2040, with a sizable increase in shortages beginning in 2050:¹¹

⁹ Much of the evidence includes references to numbers, charts, and graphs. A few exhibits that best summarize the evidence, specifically End Op Exs. 56 and 58, will be attached to the Remand PFD. These exhibits summarize the municipal water demands for Williamson and Travis Counties through 2070. End Op Ex. 56 is attached to the Attachment A, and End Op. Ex. 58 is attached as Attachment B.

¹⁰ Because the General Manager relies almost exclusively on the Regional Water Plans to reach his conclusion, the ALJ sets forth this evidence in the Remand PFD to provide the Board with a frame of reference of future predicted water demands in Travis and Williamson Counties. The General Manager did not call any witnesses to testify. As later discussed in the Remand PFD, the ALJ finds other evidence should be considered in reaching a decision on the remand issues.

¹¹ GM Ex. 8 at 4-10 (212). The number in parentheses in citations to the GM Exhibits are the numbers shown on

Year	Shortage in acre-feet per year (afy)
2020	11,053
2030	13,897
2040	16,964
2050	50,264
2060	85,794

TWDB updated 2016 Regional Water Plan municipal water demand projections for Region K, including Travis County, from 2020 to 2070. The new projections show the municipal water demand in Travis County growing more slowly than projected in 2011. Projected Travis County municipal water demand is now lower in each decade than projected in 2011.¹²

Year	2011 Region K Plan (afy)	2016 Region K Plan (afy)	Difference(afy)
2020	237,014	227,879	(9,135)
2030	274,610	266,070	(8,540)
2040	308,229	303,161	(5,068)
2050	342,865	331,059	(11,806)
2060	369,723	354,312	(15,411)

The majority of Williamson County is in the Region G planning area, but a portion is in the Region K planning area. The 2011 Region K Water Plan did not project any municipal water shortage in the portion of Williamson County in Region K.¹³ The 2011 Region G Water Plan predicted a combined 33,797 acre-feet per year municipal water shortage for users in Williamson County in 2030, and a 112,609 acre-feet per year shortage in 2060.¹⁴

TWBD's 2016 municipal water demand projections for Region K and Region G predict that Williamson County municipal water demand will grow more quickly than projected in 2011,

the lower right hand corner of the pages. The municipal shortages on the chart in the text were calculated by subtracting Steam Electric Power shortages from total Travis County needs.

¹² GM Ex. 8 at 2-9 (183); End Op Ex. 56 (graph and chart titled "Travis and Williamson Counties Municipal Demand").

¹³ GM Ex. 8 at 4-11 (213).

¹⁴ GM Ex. 5 at 4A-9 (69). The numbers in the text were calculated by adding the projected shortages for all Williamson County municipal water suppliers.

with an additional 5,723 acre-feet per year of municipal water demand in 2030, and an additional 2,377 acre-feet per year in 2060:¹⁵

Year	2011 Region G/K Plans (afy)	2016 Region G/K Plans (afy)	Difference(afy)
2020	103,470	111,825	8,355
2030	129,948	135,671	5,723
2040	162,280	164,316	2,036
2050	194,116	194,317	201
2060	227,376	229,753	2,377

End Op has identified Austin, Round Rock, Leander, and Cedar Park, as potential municipal customers. For Austin, 2050 is the first year that the 2011 Plan predicts that Austin and its wholesale customers will experience water shortages. The 2011 Plan projected Austin municipal water shortage of 30,459 acre-feet per year in 2050 and 62,934 acre-feet per year in 2060.¹⁶ The 2016 Region K Plan predicts that Austin's municipal water demand will grow more slowly than previously predicted.¹⁷

Year	2011 Region K Plan (afy)	2016 Region K Plan (afy)	Difference (afy)
2020	187,259	165,142	(22,117)
2030	221,824	192,474	(29,350)
2040	253,235	221,814	(31,421)
2050	286,130	244,204	(41,926)
2060	310,788	263,716	(47,072)

Because End Op identified Round Rock, Cedar Park, and Leander as potential customers, the General Manager summarized the evidence for these cities to show demand and shortages in water demands as follows.

The 2011 Region G Plan projected a municipal water shortage for Round Rock and its wholesale customers from 2020 to 2060. The shortages shown in the chart below include the

¹⁵ End Op. Ex. 56 (graph and chart titled "Travis and Williamson Counties Municipal Demand").

¹⁶ GM Ex. 8 at 4-10 (212); *see also* GM Ex. 8 at 4-17 (216) identifying the City of Austin's retail and wholesale commitments and projecting surpluses until 2050.

¹⁷ GM Ex. 8, Appendix 2A at 7 (197) and 9 (199); End Op Ex. 54. Austin total municipal water demands are calculated by adding Austin demands in Travis and Williamson Counties.

projected demand for Round Rock customers located in both the Region G planning area and the Region K planning area:¹⁸

Year	Shortage (afy)
2020	13,598
2030	24,395
2040	36,244
2050	49,294
2060	63,257

The 2016 Region G Plan projects that the municipal water demand of Round Rock and its wholesale customers will grow more slowly than projected in 2011:¹⁹

Year	2011 Region G Plan (afy)	2016 Region G Plan (afy)	Difference (afy)
2020	34,997	26,463	(8,534)
2030	45,588	32,347	(13,241)
2040	57,283	39,871	(17,412)
2050	70,113	48,077	(22,036)
2060	83,858	57,476	(26,382)

Also, one of Round Rock's recommended water management strategies in the 2011 Region K Plan was to partner with the Cedar Park and Leander to construct the Brushy Creek Regional Utility Authority (Brushy Creek RUA) Water Supply Project, which would supply water from the Lake Buchanan and Lake Travis to those cities.²⁰ The Brushy Creek RUA has constructed facilities designed to bring water from Lake Travis to a new water treatment plant, for delivery to Round Rock, Cedar Park, and Leander.²¹

Round Rock also has water supplies other than water from the Highland Lakes—contracts with the Brazos River Authority for water from Stillhouse Hollow Lake and Lake Georgetown

¹⁸ GM Ex. 5 at 4A-29 (75). To calculate these shortages, the Region K demand subtracted from supplies was added to the projected shortages.

¹⁹ GM Ex. 5 at 4A-29 (75); End Op Ex. 56 (chart titled "Municipal Use – WUGs in Travis and Williamson Counties with Wholesale Customers"); End Op. Ex. 54. The 2016 demand is calculated by adding the demand of Round Rock and its two wholesale customers – Williamson County MUD No. 9 and Fern Bluff MUD.

²⁰ GM Ex. 5 at 4A-29 (75) and 4C.38-26 (108).

²¹ Tr. at 143.

and groundwater from the Edwards Aquifer.²² If no Highland Lakes water was available to Round Rock, the reduction in municipal demand projections in the 2016 Plans will decrease Round Rock's projected shortages to the amounts shown on the following chart:²³

Year	Shortage (afy)
2020	5,064
2030	11,154
2040	18,832
2050	27,258
2060	36,875

The 2011 Region G Plan projected a municipal water shortage for Cedar Park and its wholesale customers from 2020 to 2060:²⁴

Year	Shortage (afy)
2020	5,017
2030	7,400
2040	12,278
2050	13,341
2060	14,556

The 2016 Region G Plan projects that the municipal water demands of Cedar Park and its wholesale customers will be higher for the 2020 to 2060 time period than projected in 2011, particularly in 2020 and 2030:²⁵

Year	2011 Region G Plan (afy)	2016 Region G Plan (afy)	Difference (afy)
2020	19,287	25,383	6,096
2030	21,576	26,813	5,237
2040	26,395	28,467	2,072
2050	27,395	28,987	1,592
2060	28,546	29,609	1,063

²² GM Ex. 5 at 4A-29 (75).

²³ These shortages were calculated by subtracting the decreased amount of municipal demand projected in 2016 regional planning from the 2011 projected shortages.

²⁴ GM Ex. 5 at 4A-28 (74).

²⁵ GM Ex. 5 at 4A-28 (74); End Op Ex. 56 (chart titled "Municipal Use – WUGs in Travis and Williamson Counties with Wholesale Customers"); End Op. Ex. 54. The 2016 demand is calculated by adding the demand of Cedar Park and its two wholesale customers – Williamson-Travis MUD No. 1 and Block House MUD.

Cedar Park's sole water source is the Highland Lakes. The 2011 Region G Plan explains that Cedar Park has a contract with the Lower Colorado River Authority (LCRA) for 18,000 acre-feet per year, but that the whole 18,000 acre-feet of water could not be used because the average annual capacity of Cedar Park's existing water treatment plant was only 14,560 acre-feet per year.²⁶ Participation in construction of the Brushy Creek RUA Water Supply Project was also a recommended strategy for Cedar Park and could add 12,620 acre-feet to Cedar Park's municipal water supply.²⁷

Assuming, however, that no more than 18,000 acre-feet per year contract amount (or an additional 3,440 acre-feet per year) is available to Cedar Park from the Highland Lakes, then Cedar Park's projected municipal water demand shortage will be higher in 2020 and 2030, but lower in 2040, 2050, and 2060.²⁸

Year	Shortage (afy)
2020	7,673
2030	9,257
2040	10,910
2050	11,493
2060	12,179

The 2011 Region G Plan projected a municipal water shortage for Leander beginning in 2030 and extending through 2060.²⁹

Year	Shortage (afy)
2030	719
2040	2,628
2050	4,756
2060	7,039

²⁶ GM Ex. 5 at 4A-28 (74).

²⁷ GM Ex. 5 at 4C.38-24 (106).

²⁸ These shortages were calculated by adding the additional municipal demand projected in 2016 regional planning to 2011 predicted shortages, then subtracting 3,440 acre-feet per year.

²⁹ GM Ex. 5 at 4.C.36-16 (93).

The 2016 Region G and K Plans project a greater municipal demand for Leander than was projected in the 2011 Region G Plan, with significant increases beginning in 2030.³⁰

Year	2011 Region G Plan (afy)	2016 Region G Plan (afy)	Difference (afy)
2020	5,380	6,039	659
2030	7,119	11,053	3,934
2040	9,028	18,490	9,462
2050	11,156	27,336	16,180
2060	13,349	33,347	19,998

Leander purchases Highland Lakes water from LCRA. Participation in construction of the Brushy Creek RUA Water Supply Project was also a recommended strategy for Leander and could add 7,039 acre-feet to Leander's municipal water supply.³¹

Assuming that Leander's water supplies are limited to the amounts available when the 2011 Region G Plan was developed, Leander will still have a water supply surplus in 2020, but Leander's municipal demand shortage will increase as shown on the following chart:³²

Year	Shortage (afy)
2030	4,653
2040	12,090
2050	21,556
2060	27,037

Any additional Highland Lakes water from the Brushy Creek RUA Water Supply Project would decrease these shortages.

Assuming that Round Rock does not receive any water from the Highland Lakes, Cedar Park only receives its current contract amount of 18,000 acre-feet per year, and the 2016

³⁰ 2011 Region G Water Plan at 2-31; End Op Ex. 54; End Op Ex. 56 (chart titled "Municipal Use – WUGs in Travis and Williamson Counties with Wholesale Customers").

³¹ GM Ex. 5 at 4C.36-16 (93).

³² These shortages were calculated by adding the additional municipal demand projected in 2016 regional planning to 2011 predicted shortages.

municipal water demand projections, total projected shortages for these three cities from 2020 to 2060 are as follows:

Year	Round Rock (afy)	Cedar Park (afy)	Leander (afy)	Total (afy)
2020	5,064	7,673	0	12,737
2030	11,154	9,257	4,653	25,064
2040	18,832	10,910	12,090	41,832
2050	27,258	11,493	21,566	60,317
2060	36,875	12,179	27,037	76,091

If Round Rock gets the projected amount of water from the Highland Lakes through the Brushy Creek RUA Water Supply Project (20,989 acre-feet per year), Cedar Park gets its full contract amount (18,000 acre-feet per year), and Leander gets the projected additional amount from the Highland Lakes through the Project (7,039 acre-feet per year starting in 2030), then there would be no projected shortages in 2020 and 2030. Instead, projected shortages in the remaining years would decline to: 27,987 acre-feet per year in 2040; 32,289 acre-feet per year in 2050; and 48,063 acre-feet per year in 2060.

Although the projected water demand and shortages provide important information for future water planning, End Op's experts and evidence evaluated not only water demands but population growth, the drought, and other trends that would require use of its 46,000 acre-feet. For example, the population in Travis and Williamson Counties has grown historically and is projected to continue to grow at least until 2070.³³ Paul D. Thornhill, one of End Op's expert witnesses, testified that TWDB's 2016 projection predicts that Travis County's population over the next 50 years is going to increase by 60-70%, and Williamson County's population is projected to almost triple in the same 50-year period.³⁴

Mr. Thornhill indicated that, consistent with the State's 50-year planning period, the appropriate planning horizon for water is at least 50 years.³⁵ Mr. Thornhill testified that a

³³ Tr. at 51; End Op Ex. 52-53.

³⁴ Tr. at 51; End Op Ex. 52-53.

³⁵ Tr. at 30, 49.

planning period of at least 50 years is necessary because it takes years to plan and develop a water project (*i.e.*, identify the need, plan the project, obtain the permits and financing, and build the infrastructure).³⁶ He stated, for example, that the financing for a water project is usually 30 to 40 years because that is the minimum length of time for a project once it is built. Planning for at least a 50-year period, however, gives one the lead time necessary to plan before the need occurs.³⁷ Mr. Thornhill testified that, absent an emergency where a pump breaks, a pipeline bursts, or a dam fails, a water planner would not look to buy water for only a 5-year period.³⁸

After an examination of the water utility groups with the highest percentage of increase in use over the next 50-year period, Mr. Thornhill predicted that Austin, Round Rock, Cedar Park, and Leander are the most likely potential users of End Op's water.³⁹ He also stated that the LCRA, who provides Austin with all of its water and a substantial portion to the others, is a likely wholesale customer.⁴⁰

Mr. Thornhill pointed out that the incremental increase in total combined municipal demand for Travis and Williamson Counties in the next 30 years is 451,000 acre-feet.⁴¹ The incremental increase in total combined municipal demand for Travis and Williamson Counties from 2015-2020 is 31,510 acre-feet.⁴² Mr. Thornhill opined that, although the incremental 5-year increase for total municipal demand in the proposed locations of use is less than 46,000 acre-feet,⁴³ the actual demand or use will exceed 46,000 acre-feet when one considers the reliability of current surface water supplies and the attractive features of End Op's project, such as cost and provisions providing certainty of risks.⁴⁴

³⁶ Tr. at 49.

³⁷ Tr. at 49.

³⁸ Tr. at 50-51.

³⁹ Tr. at 32, 60-61; End Op Ex. 57.

⁴⁰ Tr. at 33.

⁴¹ Tr. at 66; End Op Ex. 58.

⁴² Tr. at 65; End Op Ex. 58.

⁴³ Tr. at 65; End Op Ex. 58.

⁴⁴ Tr. at 65-66.

Mr. Thornhill also indicated that surface water, as a primary or sole water supply source, is potentially subject to interruption or limitations on supply, particularly in times of pervasive drought.⁴⁵ The evidence shows that Texas is faced with an ongoing severe drought.⁴⁶ Mr. Thornhill testified that drought impacts surface water by reducing the firm yield of available water (in this case, water available from the Colorado River and Highland Lakes) and thereby creates a continuing uncertainty that the firm yield supply⁴⁷ will continue to be available and reliable.⁴⁸

Mr. Thornhill and Joseph J. Beal (End Op's other expert witness) opined that, when faced with these risks/uncertainties resulting from the drought, users or providers of surface water, such as the cities identified by End Op as potential customers, will invest in larger scale new water intakes and treatment facilities to access the lake water as levels drop and/or consider diversification of their supply sources by acquiring alternative supplies in advance of actual projected increases in use in the short term.⁴⁹ Mr. Thornhill testified that, because groundwater is more drought resistant than surface water,⁵⁰ water managers will look to diversify their current supplies with groundwater.⁵¹ Mr. Thornhill and Mr. Beal stated that, even if LCRA implements strategies to decrease reliance on the Highland Lakes, the firm yield will still drop below 600,000 acre-feet as soon as next summer,⁵² therefore, LCRA's water supply situation is dire and those reliant upon it will look to LCRA or elsewhere to fill the need.⁵³

Mr. Thornhill testified that because water planners plan over at least a 50-year planning horizon, a permit for the full 46,000 acre-feet is critical to the marketability of End Op's

⁴⁵ Tr. at 68-70; End Op Exs. 60-86.

⁴⁶ Tr. at 34, 69-73, 94-95; End Op Ex. 83.

⁴⁷ The firm yield is used to describe how much water you can dependable use from a reservoir if you had a repeat of the Drought of Record. Tr. at 34.

⁴⁸ Tr. at 34, 69-70.

⁴⁹ Tr. at 34-35, 46, 188-90.

⁵⁰ Tr. at 35.

⁵¹ Tr. at 89-93.

⁵² Tr. at 96-99; End Op Exs. 85, 86.

⁵³ Tr. at 86, 98-102, 177-79, 188-90, 194; End Op Exs. 85, 86.

project.⁵⁴ If End Op obtains a 5-year permit for the full 46,000 acre-feet, the 5-year permit term will not impact End Op's ability to obtain a customer because users understand that reductions can occur within a permit term—a pro-rata cut back that would be applied to all users.⁵⁵

Given the potential customers' need to diversity or supplement their supplies, combined with the cost effective and other attractive contract provisions End Op can offer, End Op contends that LCRA, Austin, Cedar Park, Leander and Round Rock, or any combination thereof, would be very interested and enter into a contract for End Op to provide all 46,000 acre-feet as soon as it becomes available.⁵⁶

V. ANALYSIS

The Board referred two issues: (1) the amount of groundwater that will be put to a beneficial use during the 5-year operating permit term; and (2) the amount of groundwater that will be put to a beneficial use during the 30-year transport permit term. Because End Op has not entered into contracts for its 46,000 acre-feet of groundwater, a precise number cannot be determined in response to the Board's questions. Therefore, End Op and the General Manager presented their evidence as likely scenarios. In general, End Op argues that the evidence shows that, because of the predicted population growth in Travis and Williamson Counties, the impact of the ongoing drought, the demand for water in the region, and other factors, it will be able to sell its 46,000 acre-feet of water in Travis and Williamson Counties. Although the General Manager never specifically states that End Op will not be able to sell its water for beneficial use, he expresses his reservations. For example, the General Manager relies on the municipal water demand and supply from the Region G and Region K planning groups, and that information indicates that Austin, Round Rock, Cedar Park, and Leander will not experience water shortages until 2030. The General Manager, however, recognizes that additional water needs could

⁵⁴ Tr. at 41. If End Op obtains a 5-year permit for something less than 46,000 acre-feet, End Op will be required to start the permitting process over again to obtain the difference, and its applications will be subject to protests/requests for contested case hearings. On the other hand, if End Op obtains an initial permit for the full 46,000 acre-feet, a renewal application cannot be contested. End Op Ex. 38 at Rules 5.7, 14.5.

⁵⁵ Tr. at 41, 176-77.

⁵⁶ Tr. at 34, 47, 65, 119-20, 181-82.

develop if the drought further decreases the water available to these cities from the Highland Lakes and the Colorado River.

As End Op points out, however, there is more to the picture than the predicted demands and shortages. The predicted water demand and shortages are important evidence in that they provide a starting point for End Op to determine who might be potential customers. The Board, however, should evaluate other evidence and not only consider the predicted water demands developed for Region G and K. There are many factors to consider, particularly the severe drought in central Texas. Although the length and severity of the drought cannot be predicted with certainty, there is evidence in the record demonstrating its effects to date and what could happen if the current conditions continue or worsen.⁵⁷ Mr. Beal testified that he believes the drought that we are in today is worse than the drought of the 1950s. He indicated that LCRA, from a surface water standpoint, is in its worst situation ever, and its water supply situation is dire.⁵⁸ Clearly, the drought is a factor to consider when evaluating the Board's remand issues. If the surface water supplies decline, then groundwater becomes a very viable and reasonable alternative.

Furthermore, if the drought continues, LCRA could potentially supplement its future water supplies with groundwater.⁵⁹ End Op's experts testified about specific conversations with LCRA and its interest in End Op's water.⁶⁰ Although End Op's experts have not yet had specific conversations with Austin, Round Rock, Cedar Park or Leander, the discussions with LCRA extend to those cities since LCRA provides Highland Lakes water to those cities (and in some cases, is the city's sole water supply).⁶¹

As the ALJ discussed in the April 10, 2014 proposal for decision, because no contracts exist for the 46,000 acre-feet of water at this time, the General Manager requested that the

⁵⁷ Tr. at 33-34, 66-101, 170-74.

⁵⁸ Tr. at 173-74.

⁵⁹ Tr. at 46, 118-19, 159-60, 170-74.

⁶⁰ Tr. at 183-84.

⁶¹ Tr. at 32-33, 183-84.

Operating Permits contain a Special Condition providing that the authorization for withdrawal of any amount of water will terminate unless End Op demonstrates that the water has been dedicated to a beneficial use within one year of the date of the issuance of the Permits. Specifically, the Special Condition provides:

Within 365 days from the date of issuance of the permit, Permittee shall submit to the District a binding contract to provide water in the full authorized annual withdrawal amount for the authorized purpose of use to one or more End Users in the authorized places of use. For purposes of this section, a “binding contract” means a contract that sets forth in detail the terms, provisions and conditions for the sale and purchase of water produced under this permit and that is binding and will continue in effect for so long as may be agreed to by the parties. If Permittee fails to submit a binding contract or contracts in the aggregated annual withdrawal amount of [permitted amount] per year within 365 days from the date of issuance of this permit, then the aggregated annual withdrawal amount in this permit shall be automatically reduced to the amount for which Permittee has submitted a binding contract or contracts; and the General Manager is authorized to issue an amendment to this permit reflecting the reduced amount.

Although End Op disagrees with the General Manager’s opinion as to whether contracts substantiating the full-authorized amount are legally required, End Op agreed to comply with the Special Condition to demonstrate that the water will be dedicated to a beneficial use within one year of the date of the issuance of the Permits. In his PFD, the ALJ found that the Special Condition to submit binding contracts to supply the requested amount of water for beneficial use within one year following the issuance of the permit was reasonable. This Special Condition provides a level of protection that the Board seems to be seeking—that the 46,000 acre-feet of water will be dedicated to beneficial use.

The regional water plans are important planning tools to calculate water demand predictions and shortages.⁶² The regional water plans evaluated on remand are the same plans the General Manager considered when he made the recommendation in March 2013 that, given certain Special Conditions, End Op had established a beneficial use for the amount of water sought and that the permits should be granted in full. The evidence shows that the combined shortages in Travis and Williamson Counties in 2020 are approximately 43,000 acre-feet, and in

⁶² Tr. at 53-54, 58, 156-57.

2030, the combined shortages exceed 46,000 acre-feet.⁶³ In addition, the 2016 municipal water demand projections for Regions K and G predict that Williamson County municipal water demand will grow more quickly than projected in 2011.⁶⁴ The 2016 municipal water demand projections for Region K predict that the Travis County municipal water demand will grow more slowly than projected in 2011.

Based on the evidence, there will likely be a need for additional water in Travis and Williamson Counties in the next five years that could support delivery of End Op's 46,000 acre-feet of groundwater, especially given the continuing drought. Furthermore, because the combined water shortages in Travis and Williamson Counties are projected to exceed 46,000 acre-feet as early as 2030, End Op's 46,000 acre-feet of groundwater will likely be put to a beneficial use during the 30-year transport permit term.

VI. FINDINGS OF FACT

1. End Op, L.P. (End Op) currently seeks permits from the Lost Pines Groundwater Conservation District (District) authorizing the withdrawal of 46,000 acre-feet of groundwater per year from 14 wells located in Bastrop and Lee Counties and the transportation of that water to Travis and Williamson Counties.
2. On April 10, 2014, Administrative Law Judge Michael J. O'Malley issued a Proposal for Decision recommending the District approve End Op's applications for operating and transfer permits to produce 46,000 acre-feet annually with the Standard and Special Conditions recommended by the General Manager and the Special Conditions in the Settlement Agreement between End Op and Aqua Water Supply Corporation.

⁶³ GM Ex. 5 at 4A-9 (69); GM Ex. 8 at 4-10 (212). The combined total 2020 shortages were calculated by adding 11,053 acre-feet (Travis County 2020 shortage) and 31,897 acre-feet (Williamson County 2020 shortage). Williamson County's 2020 shortage was calculated by subtracting the shortages that were not expected to occur until 2030 (918, 763, 719) on GM Ex. 5 at 4A-9 from the total storage predicted for Williamson County in 2030 (33,797 acre-feet). The calculated shortage predicted to occur in 2020 for Williamson County is an approximation and may be lower if the water user groups that were excluded because they did not predict a shortage until 2030 had a surplus in 2010 or 2020 that is not represented in the chart on GM Ex. 5 at 4A-9.

⁶⁴ End Op Ex. 56.

3. On September 10, 2014, the District's Board of Directors remanded End Op's applications to the State Office of Administrative Hearings for an evidentiary hearing on two issues: (1) the amount of groundwater that will be put to beneficial use during the 5-year operating permit term; and (2) the amount of groundwater that will be put to beneficial use during the 30-year transport permit term.
4. End Op proposes to sell water for municipal purposes to customers located in Travis and Williamson Counties.
5. There are supply deficiencies within Travis and Williamson Counties that could be remedied with End Op's 46,000-acre feet of groundwater.
6. Regional water plans established by the Texas Water Development Board (TWBD) demonstrate the following needs for additional water for municipal purposes within Travis and Williamson Counties.
 - a. The majority of Williamson County is located in Region G. The 2011 Region G plan predicts a 33,797 acre-feet per year municipal water shortage in Williamson County in 2030, and a 112,609 acre-feet per year shortage in 2060.
 - b. Travis County and a portion of Williamson County are located in Region K. The 2011 Region K plan predicts an 11,053 acre-feet per year municipal water shortage in Travis County in 2020, a 13,897 acre-feet per year shortage in 2030, a 16,694 acre-feet per year shortage in 2040, a 50,264 acre-feet per year shortage in 2050, and an 85,794 acre-feet per year shortage in 2060.
 - c. No water shortages are predicted for the portion of Williamson County within Region K between 2020 and 2060.
7. The 2016 Region K municipal demand projections for Travis County are lower than the demand projections in the 2011 Plan: (a) 9,135 acre-feet per year less in 2020; (b) 8,540 acre-feet per year less in 2030; (c) 5,068 acre-feet per year less in 2040; (d) 11,806 acre-feet per year less in 2050; and (e) 15,411 acre-feet per year less in 2060.
8. The 2016 Region K municipal demand projections for Williamson County are higher than the demand projections in the 2011 Plan: (a) 8,355 acre-feet per year greater in 2020; (b) 5,723 acre-feet per year greater in 2030; (c) 2,036 acre-feet per year greater in 2040; (d) 201 acre-feet per year greater in 2050; and (e) 2,377 acre-feet per year greater in 2060.
9. Austin, Round Rock, Cedar Park, and Leander are the most likely users of End Op's water over the next 50 years.
10. For Austin, 2050 is the first date that the 2011 Plan predicts that Austin and its wholesale customers will experience water shortages. The 2011 Plan projected Austin municipal water shortage of 30,459 acre-feet per year in 2050 and 62,934 acre-feet per year in 2060.

11. The 2016 Region K municipal demand projections for Austin are lower than the demand projections in the 2011 Plan: (a) 22,117 acre-feet per year less in 2020; (b) 29,350 acre-feet per year less in 2030; (c) 31,421 acre-feet per year less in 2040; (d) 41,926 acre-feet per year less in 2050; and (e) 47,072 acre-feet per year less in 2060.
12. Between 2020 and 2070, Round Rock's demand is expected to grow by 39,000 acre-feet, Leander's is expected to grow by 34,000 acre-feet, and Cedar Park is expected to grow by about 2,000 acre-feet.
13. The 2011 Region G Water Plan predicted the following municipal water shortages for Round Rock customers in both regional planning areas combined: (a) 13,598 acre-feet per year in 2020; (b) 24,395 acre-feet per year in 2030; (c) 36,244 acre-feet per year in 2040; (d) 49,294 acre-feet per year in 2050; and (e) 63,257 acre-feet per year.
14. The 2016 Region G municipal demand projections for Round Rock are lower than the demand projections in the 2011 Plan: (a) 8,534 acre-feet per year less in 2020; (b) 13,241 acre-feet per year in 2030; (c) 17,412 acre-feet per year in 2040; (d) 22,036 acre-feet per year in 2050; and 26,382 acre-feet per year in 2060.
15. A 2011 Region G Water Plan recommended water management strategy for Round Rock was to partner with the Cedar Park and Leander to construct the Brushy Creek Regional Utility Authority (Brushy Creek RUA) Water Supply Project, which would supply water from the Highland Lakes to those three cities.
16. The Brushy Creek RUA has constructed facilities designed to bring water from Lake Travis to a new water treatment plant, for delivery to Round Rock, Cedar Park, and Leander.
17. The 2011 Region G Water Plan projected that Round Rock could receive up to 20,928 acre-feet per year from the Brushy Creek RUA Water Supply Project.
18. The 2011 Region G Water Plan projected the following municipal water shortages for the Cedar Park and its wholesale customers for the 2020 to 2060 period: (a) 5,017 acre-feet per year in 2020; (b) 7,400 acre-feet per year in 2030; (c) 12,278 acre-feet per year in 2040; (d) 13,341 acre-feet per year in 2050; and (e) 14,556 acre-feet per year in 2060.
19. The 2016 Region G municipal demand projections for Cedar Park are higher than the demand projections in the 2011 Plan: (a) 6,096 acre-feet per year higher in 2020; (b) 5,237 acre-feet per year higher in 2030; (c) 2,072 acre-feet per year higher in 2040; (d) 1,592 acre-feet per year higher in 2050; and (e) 1,063 acre-feet per year higher in 2060.
20. Participation in construction of the Brushy Creek RUA Water Supply Project was also a recommended strategy for Cedar Park and could add 12,620 acre-feet per year to Cedar Park's municipal water supply.

21. The 2011 Region G Water Plan projected that Leander would not experience municipal water shortages in 2020, but would experience the following municipal water shortage in the 2030 to 2060 period: (a) 719 acre-feet per year in 2030; (b) 2,628 acre-feet per year in 2040; (c) 4,756 acre-feet per year in 2050; and (d) 7,039 acre-feet per year in 2060.
22. The 2016 Region G municipal demand projections for Leander are higher than the demand projections in the 2011 Plan: (a) 659 acre-feet per year higher in 2020; (b) 3,934 acre-feet per year higher in 2030; (c) 9,462 acre-feet per year higher in 2040; (d) 16,180 higher in 2050; and (e) 19,998 acre-feet higher in 2060.
23. Participation in construction of the Brushy Creek RUA Water Supply Project was also a recommended strategy for Leander and was could add 7,039 acre-feet per year to Leander's municipal water supply.
24. The incremental increase in total combined municipal demand for Travis and Williamson Counties in the next 30 years is 451,000 acre-feet.
25. The incremental increase in total combined municipal demand for Travis and Williamson Counties from 2015-2020 is 31,510 acre-feet.
26. To determine the amount of groundwater that will be used during a 5-year or 30-year period requires the examination of the population and water demand projections over a significant period of time, the reliability of current supplies for potential customers, and the cost of the proposed supply, among other factors.
27. TWDB's 2016 projection predicts that Travis County's population over the next 50 years is going to increase by 60-70%, and Williamson County's population is projected to almost triple in the same 50-year period.
28. End Op's proposed production of 46,000 acre-feet could be used in the next five years, given the projected increases in population and water demand and the vulnerability of existing supplies to drought.
29. A planning period of at least 50 years is reasonable because it takes years to plan and develop a water project (i.e., identify the need, plan the project, obtain the permits and financing, and build the infrastructure).
30. The financing for a water project is usually 30 to 40 years because that is the minimum length of time for a project once it is built. Planning for at least a 50-year period, however, gives one the lead time necessary to plan before the need occurs.
31. Austin's water supply is surface water from the Colorado River and the Highland Lakes as provided by Lower Colorado River Authority (LCRA).
32. LCRA's Highland Lakes system provides the primary water supply for Round Rock, Cedar Park and Leander, all of which have contracts with LCRA for it to provide surface

water from the Colorado River and the Highland Lakes and while obtaining small amounts of water from Brazos River Authority and a few of their own groundwater wells.

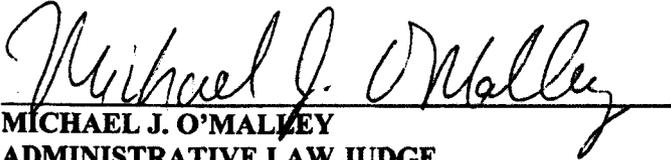
33. Surface water as a primary or sole water supply source is potentially subject to supply limitations, particularly in times of severe drought.
34. Texas is currently in a severe drought.
35. When faced with these risks/uncertainties resulting from drought, users or providers of surface water, such as the potential customers identified by End Op, could seek to diversify their supply sources and acquire alternative supplies.
36. Groundwater from the aquifer from which End Op seeks permits is more drought resistant than surface water.
37. LCRA could look to groundwater to supplement its supplies if the drought persists.
38. Before a buyer will engage in contract negotiations, a seller must demonstrate that it has the water (*e.g.*, groundwater leases) and the permits necessary to supply the proposed amount of water.
39. End Op's groundwater can be supplied economically, making it an attractive supply option.
40. Customers could buy End Op's water without substantially increasing their customers' costs while improving their supplies reliability.
41. Because water planners plan over at least a 50-year planning horizon, a permit for the full 46,000 acre-feet is necessary to assure buyers that they can rely on End Op's project.
42. If End Op obtains a 5-year permit for the full 46,000 acre-feet, the 5-year permit term will not impact End Op's ability to obtain a customer, because users understand that reductions can occur within a permit term—a pro-rata cut back that would be applied to all users.
43. Given the need to supplement water supplies, LCRA, the Austin, Cedar Park, Leander and Round Rock, could potentially enter into a contract for End Op to provide all or a portion of 46,000 acre-feet.
44. A Special Condition exists that requires End Op to submit binding contracts to supply the requested amount within one year following issuance of the permit with an automatic termination of the right to withdraw any amount of water for which a binding contract is not timely submitted. This condition reinforces that the permit amount authorized will be put to a beneficial use.

45. If End Op is successful in signing contracts with Austin, Round Rock, Cedar Park, or Leander, the proposed public water supply will be dedicated to a beneficial use.

VII. CONCLUSIONS OF LAW

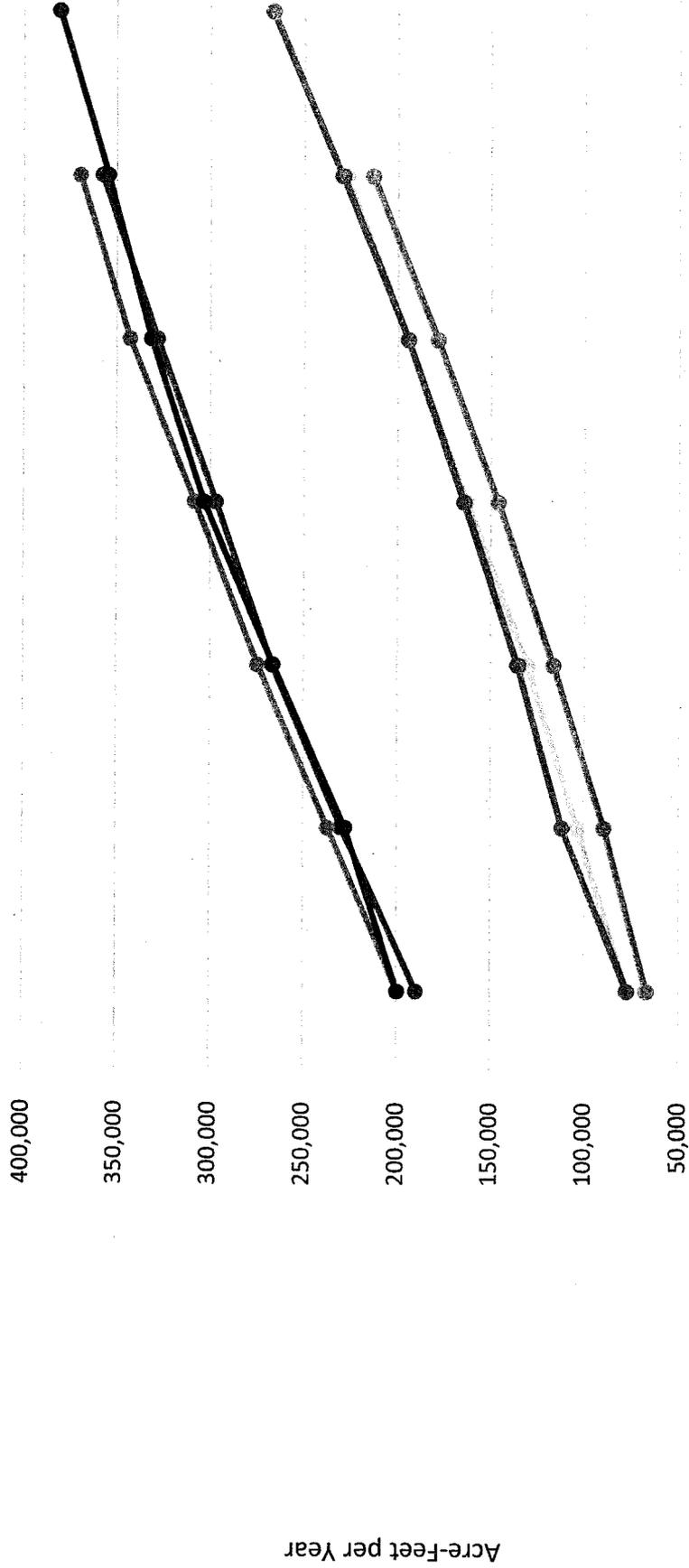
1. The District has jurisdiction to decide the remand issues. Texas Water Code (Code) Ch. 36.
2. The authorized amount of water (46,000 acre-feet per year) could be dedicated to a beneficial use during the term of the permits. Code § 36.113(d)(3).
3. After weighing the factors under section 36.113(d) of the Code, the District should approve End Op's applications with the Standard and Special Conditions recommended by the General Manager and the Special Conditions in the Settlement Agreement reached between End Op and Aqua.

SIGNED February 25, 2015.


MICHAEL J. O'MALLEY
ADMINISTRATIVE LAW JUDGE
STATE OFFICE OF ADMINISTRATIVE HEARING

ATTACHMENT A

Travis and Williamson Counties Municipal Demand



ATTACHMENT B

TWDB Projections of Water Demand in Travis and Williamson Counties

COUNTY	CATEGORY	YEAR										2015-2070 Increase	
		2010 ¹	2015 ²	2015-2020 Increase	2020	2030	2040	2045	2050 Increase	2060	2070		
TRAVIS	MUNICIPAL	199,677	213,778	14,101	227,879	266,070	303,161	482,640	268,862	331,059	354,312	380,499	166,721
TRAVIS	MANUFACTURING	23,002	29,396	6,394	35,790	48,710	63,858	104,920	75,524	72,991	81,781	91,630	62,234
TRAVIS	MINING	1,531	2,517	986	3,502	4,108	4,762	7,755	5,239	5,374	6,046	6,817	4,301
TRAVIS	STEAM ELECTRIC POWER	17,500	18,000	500	18,500	22,500	22,500	34,750	16,750	23,500	24,500	26,500	8,500
TRAVIS	LIVESTOCK	704	704	-	704	704	704	1,056	352	704	704	704	-
TRAVIS	IRRIGATION	1,126	2,724	1,598	4,322	3,975	3,657	5,193	2,469	3,364	3,097	2,885	161
TRAVIS Total		243,940	267,119	23,579	290,697	346,067	398,642	636,313	369,195	436,992	470,440	509,035	241,917
WILLIAMSON	MUNICIPAL	77,008	94,417	17,409	111,825	135,671	164,316	276,475	182,059	194,317	229,753	266,576	172,160
WILLIAMSON	MANUFACTURING	1,587	1,971	384	2,354	2,692	3,032	4,855	2,885	3,339	3,626	3,938	1,968
WILLIAMSON	MINING	2,363	3,766	1,403	5,168	6,250	7,367	12,242	8,476	8,558	9,785	11,189	7,424
WILLIAMSON	STEAM ELECTRIC POWER	-	-	-	-	-	-	-	-	-	-	-	-
WILLIAMSON	LIVESTOCK	1,344	1,400	56	1,456	1,456	1,456	2,184	784	1,456	1,456	1,456	56
WILLIAMSON	IRRIGATION	80	116	36	151	151	151	227	111	151	151	151	36
WILLIAMSON Total		82,382	101,668	19,286	120,954	146,220	176,322	295,982	194,314	207,821	244,771	283,310	181,642
Combined		276,685	308,195	31,510	339,704	401,741	467,477	759,115	450,920	525,376	584,065	647,075	338,881
Combined	MANUFACTURING	24,589	31,367	6,778	38,144	51,402	66,890	109,775	78,409	76,330	85,407	95,568	64,202
Combined	MINING	3,894	6,282	2,388	8,670	10,358	12,129	19,997	13,715	13,932	15,831	18,006	11,724
Combined	STEAM ELECTRIC POWER	17,500	18,000	500	18,500	22,500	22,500	34,750	16,750	23,500	24,500	26,500	8,500
Combined	LIVESTOCK	2,048	2,104	56	2,160	2,160	2,160	3,240	1,136	2,160	2,160	2,160	56
Combined	IRRIGATION	1,206	2,840	1,634	4,473	4,126	3,808	5,419	2,580	3,515	3,248	3,036	197
Combined		325,922	368,787	42,865	411,651	492,287	574,964	932,295	563,509	644,813	715,211	792,345	423,559

¹2010 estimates from 2011 TWDB planning. All others from 2016 TWDB planning.

²Linear interpolation between 2010 and 2020 values.

Five Year Municipal Need-Total	(2015 to 2020)	339,704
Five Year Municipal Need-Incremental	(2015 to 2020)	31,510
Thirty Year Municipal Need-Total	(2015-2045)	759,115
Thirty Year Municipal Need-Incremental	(2015-2045)	450,920

SOAH DKT NO. 952-13-5210

Applicant End Op

Exhibit No. 58