

## Memorandum

### Brazos G RWPG – Recommended Revisions to the 2021 Draft Non-Municipal Water Demand Projections

**TO:** David D. Dunn, P.E.

**CC:** Peter Newell, P.E.

**FROM:** Susan K. Roth, P.E.

**DATE:** October 18, 2017

Brazos River Authority mailed out the TWDB Draft 2021 Non-Municipal Water Demand Projections (Irrigation, Manufacturing, Steam-Electric, Livestock, and Mining) to 37 County Judges and 13 Groundwater Conservation Districts on June 19, 2017. Water demand revision requests along with supporting documentation is provided in this memorandum.

#### 1.0 Draft Mining Water Demand Requested Revisions (ac-ft/yr)

Requested Revisions	2020	2030	2040	2050	2060	2070
2021 Draft-Lee County Projections	3,180	7,289	7,767	8,304	8,904	9,631
2021 Draft-Robertson Co. Projections	9,913	11,753	13,768	16,222	19,217	22,940
<b>Total Region G-Mining</b>	<b>61,586</b>	<b>70,381</b>	<b>68,875</b>	<b>70,949</b>	<b>75,038</b>	<b>81,409</b>
Requested Revisions	2020	2030	2040	2050	2060	2070
Revised Lee County Projections	3,180	3,180	0	0	0	0
Difference	0	(4,109)	(7,767)	(8,304)	(8,904)	(9,631)
Revised Robertson Co. Projections	9,913	11,753	12,000	12,000	12,000	12,000
Difference	0	0	(1,768)	(4,222)	(7,217)	(10,940)
<b>New Total Region G-Mining</b>	<b>61,586</b>	<b>66,272</b>	<b>59,340</b>	<b>58,423</b>	<b>58,917</b>	<b>60,838</b>

#### 1.1 Lee County

##### Summary of Comments Received:

1. Request for revisions to the mining water projections for Lee County.
2. General Manager of Lost Pines GCD stated that his understanding is the mining operations at the Luminant Three Oaks mine are going to be concentrated in Bastrop County and will have limited mining occurring at the Alcoa mines in Lee County. As a result, he expects the water demands to remain constant or decrease over the planning horizon instead of increase as shown in the draft projections.

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**Summary of Supporting Materials Received (reference attachments):**

1. Revision request received by email on August 14, 2017 from the General Manager of Lost Pines GCD (James Totten).
2. Email received on August 18, 2017 from Terrill Tomecek with Alcoa; he clarified that Alcoa is not pumping any mining related water in Lee County. The LPGCD permitted wells are for municipal use.

**RWPG Recommendation:**

1. Methodology: Based on Alcoa's email, water demand projections for 2020 will also be projected for 2030 (3,180 ac-ft/yr). The mining water demand projections in Lee County for the following decades (2040-2070) will be zero. The difference between the draft and revised projections will be subtracted from the Brazos G Total.

## **1.2 Robertson County**

**Summary of Comments Received:**

1. Request for revisions to the mining water projections for Robertson County.
2. General Manager of Brazos Valley GCD forwarded review comments from their consulting engineer, LBG-Guyton Associates. Their main comment is regarding the estimate of mine water demand projections for Robertson County, which appear high based on the history of the amount of water pumped for mine dewatering/depressuring and the potential locations of any other lignite reserves that might be mined in the county.

**Summary of Supporting Materials Received (reference attachments):**

1. Revision request received by email on July 19, 2017 from the General Manager of Brazos Valley GCD (Alan Day).

**RWPG Recommendation:**

1. Methodology: Based on LBG-Guyton's comments, water demand projections in Robertson County for 2040-2070 will be capped at 12,000 ac-ft/yr. The mining water demand projections for the previous decades (2020-2030) will remain unchanged. The difference between the draft and revised projections will be subtracted from the Brazos G Total.

## 2.0 Draft Steam-Electric Power Water Demand Requested Revisions (ac-ft/yr)

Requested Revisions	2020	2030	2040	2050	2060	2070
2021 Draft-Milam County Projections	32,254	32,254	32,254	32,254	32,254	32,254
<b>Total Region G-Steam Electric</b>	<b>232,894</b>	<b>232,894</b>	<b>232,894</b>	<b>232,894</b>	<b>232,894</b>	<b>232,894</b>
Requested Revisions	2020	2030	2040	2050	2060	2070
Revised Milam County Projections	0	0	0	0	0	0
Difference	32,254	32,254	32,254	32,254	32,254	32,254
<b>New Total Region G-Steam Electric</b>	<b>200,640</b>	<b>200,640</b>	<b>200,640</b>	<b>200,640</b>	<b>200,640</b>	<b>200,640</b>

### 2.1 Milam County

#### Summary of Comments Received:

1. Revision request needed for Milam County - steam electric power water demand projections.

#### Summary of Supporting Materials Received (reference attachments):

1. Press Release published in Austin Business Journal on October 13, 2017 - Luminant to close two power plants in Milam and Freestone Counties.

#### RWPG Recommendation:

1. Methodology: Based on the press release, the steam electric power water demand projections in Milam County for 2020-2070 will be zero. The difference between the draft and revised projections will be subtracted from the Brazos G Total.

## **ATTACHMENTS**



Susan Roth &lt;susan@srothconsulting.com&gt;

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## Lee County Mining water demands

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**James Totten** <jtotten@lostpineswater.org>  
Reply-To: jtotten@lostpineswater.org  
To: susan@srothconsulting.com

Mon, Aug 14, 2017 at 3:47 PM

Good afternoon,

Thank you for taking the time to follow up with me regarding the non-municipal water demands for Lee County. As we discussed on the phone the majority of the projected demands seem to be in line with our expectations but I have some concerns regarding the projected mining demands. My current understanding is the mining operations at the Luminant Three Oaks mine are going to be concentrated in Bastrop County for the foreseeable future and there will be limited mining occurring at the Alcoa mines in Lee County. The current projections that you supplied show an increase in water demands for mining in Lee County where I would expect the water demands to remain constant or decrease over the planning horizon. Perhaps the operations managers of Alcoa and Luminant could provide some clarifications regarding their long term plans for each mine.

If you have any other questions please feel free to let me know. If Alcoa or Luminant do provide you with more clarification I would appreciate it if you could pass that along to me.

Thank you,

Jim

--

James M Totten '00  
General Manager  
Lost Pines GCD  
Phone : [512.360.5088](tel:512.360.5088)  
Fax : [512.360.5448](tel:512.360.5448)  
Voicemail : [512.677.4099](tel:512.677.4099)



Susan Roth &lt;susan@srothconsulting.com&gt;

## Lee County Mining Demands

2 messages

Dunn, David &lt;David.Dunn@hdrinc.com&gt;

Thu, Aug 17, 2017 at 5:30 PM

To: "Gary Spicer (spicer@luminant.com)" &lt;spicer@luminant.com&gt;, "terrell.tomecek@gmail.com" &lt;terrell.tomecek@gmail.com&gt;

Cc: "Susan Roth (susan@srothconsulting.com)" &lt;susan@srothconsulting.com&gt;, "Newell, Peter" &lt;Peter.Newell@hdrinc.com&gt;, 10029705\_Brazos\_G\_2021\_Plan &lt;279004\_Brazos\_G\_2021\_Plan@hdrinc.com&gt;

Mr. Spicer and Mr. Tomecek,

It was nice seeing you both again yesterday at the Brazos G meeting. I'm sure you are glad we got finished in a relatively short 2 hours.

If you recall, I discussed with you individually that the GM of the Lost Pines GCD, James Totten, believes the mining demands for Lee County may be overstated. He has recommended that we coordinate with Alcoa and Luminant to confirm or revise the draft mining demands. I have included Mr. Totten's email to Susan Roth below.

Would you be able, on behalf of your respective companies, and as representatives of Brazos G, help us determine what changes need to be made to the Lee County mining demand projections? I have attached the table containing the mining demands for the entire Brazos G Area and pasted the Lee County demands below. All values are in acre-feet per year.

County	Water Demands 2020	Water Demands 2030	Water Demands 2040	Water Demands 2050	Water Demands 2060	Water Demands 2070
LEE	3,180	7,289	7,767	8,304	8,904	9,631

Thanks for your help with this matter.

David

**David D. Dunn**, PE

Vice President

**HDR**

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**From:** James Totten <[jtotten@lostpineswater.org](mailto:jtotten@lostpineswater.org)>  
**Date:** August 14, 2017 3:47:56 PM CDT  
**To:** [susan@srothconsulting.com](mailto:susan@srothconsulting.com)  
**Subject:** Lee County Mining water demands  
**Reply-To:** [jtotten@lostpineswater.org](mailto:jtotten@lostpineswater.org)

Good afternoon,

Thank you for taking the time to follow up with me regarding the non-municipal water demands for Lee County. As we discussed on the phone the majority of the projected demands seem to be in line with our expectations but I have some concerns regarding the projected mining demands. My current understanding is the mining operations at the Luminant Three Oaks mine are going to be concentrated in Bastrop County for the foreseeable future and there will be limited mining occurring at the Alcoa mines in Lee County. The current projections that you supplied show an increase in water demands for mining in Lee County where I would expect the water demands to remain constant or decrease over the planning horizon. Perhaps the operations managers of Alcoa and Luminant could provide some clarifications regarding their long term plans for each mine.

If you have any other questions please feel free to let me know. If Alcoa or Luminant do provide you with more clarification I would appreciate it if you could pass that along to me.

Thank you,

Jim

--

James M Totten '00  
General Manager  
Lost Pines GCD  
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**David D. Dunn, PE**

*Vice President*

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 **Draft 2021 Lee County Mining Demands.pdf**  
221K

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**Tomecek, Terrill** <Terrill.Tomecek@alcoa.com>

Fri, Aug 18, 2017 at 2:55 PM

To: "David.Dunn@hdrinc.com" <David.Dunn@hdrinc.com>

Cc: "spicer@luminant.com" <spicer@luminant.com>, "susan@srothconsulting.com" <susan@srothconsulting.com>, "Peter.Newell@hdrinc.com" <Peter.Newell@hdrinc.com>, "279004\_Brazos\_G\_2021\_Plan@hdrinc.com" <279004\_Brazos\_G\_2021\_Plan@hdrinc.com>, "Tomecek, Terrill" <Terrill.Tomecek@alcoa.com>

Mr. Dunn,

Alcoa is not pumping any mining related water in Lee County. The LPGCD permitted wells are for municipal use.

Thanks

Terrill

----- Original message -----

From: "Dunn, David" <>

Date: 8/17/17 5:30 PM (GMT-06:00)

To: "Gary Spicer ()" <spicer@luminant.com>,

Cc: "Susan Roth ()" <susan@srothconsulting.com>, "Newell, Peter" <>, 10029705\_Brazos\_G\_2021\_Plan <>

Subject: Lee County Mining Demands

[Quoted text hidden]



**2021 Brazos G Regional Water Plan**  
**DRAFT Mining Water Demand Projections**  
**by County (acft/yr)**

County	Water Demands 2020	Water Demands 2030	Water Demands 2040	Water Demands 2050	Water Demands 2060	Water Demands 2070
BELL	3,242	3,980	4,599	5,349	6,105	6,968
BOSQUE	1,972	2,071	1,892	1,872	1,833	1,821
<b>BRAZOS</b>	<b>1,088</b>	<b>1,610</b>	<b>1,433</b>	<b>1,144</b>	<b>923</b>	<b>814</b>
BURLESON	995	1,923	1,512	1,100	686	428
CALLAHAN	228	227	214	201	190	180
COMANCHE	444	525	363	276	188	128
CORYELL	1,510	1,072	491	363	398	437
EASTLAND	1,164	1,173	929	714	518	432
ERATH	505	536	376	304	232	177
FALLS	225	246	259	286	307	331
FISHER	407	402	359	313	273	238
GRIMES	323	602	471	340	209	128
HAMILTON	393	236	101	0	0	0
HASKELL	93	92	83	74	66	59
HILL	1,634	1,190	775	403	436	472
HOOD	2,078	2,436	2,222	2,133	2,043	2,057
JOHNSON	4,126	2,788	1,515	1,013	1,161	1,336
JONES	239	234	218	199	183	169
KENT	38	38	35	32	29	26
KNOX	15	15	14	14	14	14
LAMPASAS	198	221	241	261	286	313
LEE	3,180	7,289	7,767	8,304	8,904	9,631
LIMESTONE	10,317	9,925	9,865	10,339	10,805	11,425
MCLENNAN	2,538	3,000	3,060	3,508	3,832	4,216
MILAM	14	14	14	14	14	14
NOLAN	225	222	200	178	158	141
PALO PINTO	656	847	625	480	336	235
<b>ROBERTSON</b>	<b>9,913</b>	<b>11,753</b>	<b>13,768</b>	<b>16,222</b>	<b>19,217</b>	<b>22,940</b>
SHACKELFORD	562	747	558	442	328	243
SOMERVELL	1,112	1,279	1,146	1,060	998	971
STEPHENS	5,064	5,141	4,458	3,825	3,257	2,773
STONEWALL	584	576	512	446	388	338
TAYLOR	391	391	366	346	329	315
THROCKMORTON	194	191	171	150	132	116
WASHINGTON	569	866	703	538	373	264
WILLIAMSON	5,163	6,247	7,364	8,555	9,782	11,186
YOUNG	187	276	196	151	105	73
<b>Total</b>	<b>61,586</b>	<b>70,381</b>	<b>68,875</b>	<b>70,949</b>	<b>75,038</b>	<b>81,409</b>

5

6

5 Estimate of demand adequate.

6 Estimate of demand appears high, suggest that it be capped at 12,000 ac-ft/yr after 2030.

**From:** Alan Day [mailto:[aday@brazosvalleygcd.org](mailto:aday@brazosvalleygcd.org)]  
**Sent:** Wednesday, July 19, 2017 1:04 PM  
**To:** Dunn, David <[David.Dunn@hdrinc.com](mailto:David.Dunn@hdrinc.com)>  
**Cc:** 'Cathy Lazarus' <[clazhome@msn.com](mailto:clazhome@msn.com)>; 'Judge Charles Ellison' <[ellisonmarine@yahoo.com](mailto:ellisonmarine@yahoo.com)>; 'shelley.smith@co.robertson.tx.us' <[shelley.smith@co.robertson.tx.us](mailto:shelley.smith@co.robertson.tx.us)>; Wayne and Linda Wilson <[wlwilsoncattlecompany@gmail.com](mailto:wlwilsoncattlecompany@gmail.com)>  
**Subject:** FW: Review of 2021 Brazos G Regional Water Plan Estimates of Non-Municipal Water Demand

David,

Please read the email below from John Seifert detailing BVGCD thoughts on the draft proposed non-municipal water use projections for the 2021 State Water Plan. The attachment highlights where we believe adjustments would be warranted.

I also want to bring to your attention that Robertson County Judge Charles Ellison has some concerns regarding the estimated projected municipal use numbers for Calvert, Hearne and Franklin. This same unease has been voiced by Cathy Lazarus, a local landowner and individual fully dedicated to making this next round of regional planning more precise and realistic. My belief is that Cathy has expressed her issues and levied them with Brazos G prior to the suggested close of comments on July 1<sup>st</sup>. Both Charles and Cathy believe the estimated population growth is understated with new industry projects soon to be realized in the area. These would include a new National Gypsum drywall production facility in Calvert and construction of a new railroad bump yard on 1,100 acres just outside Hearne by Union Pacific Railroad. Please keep Judge Ellison, Cathy and the BVGCD in the loop as adjustments to municipal use are considered. Those listed would want to be able to proffer timely input.

If you have any questions concerning the suggestions or comments, please give me a call.

Have a great day!

Alan M. Day

General Manager

Brazos Valley Groundwater Conservation District

[aday@brazosvalleygcd.org](mailto:aday@brazosvalleygcd.org)

979-279-9350 office

817-774-6412 cell

979-279-0035 fax

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**From:** John Seifert [mailto:jseifert@lbgguyton.com]

**Sent:** Tuesday, July 11, 2017 3:45 PM

**To:** Alan Day

**Cc:** Chris Drabek

**Subject:** FW: Review of 2021 Brazos G Regional Water Plan Estimates of Non-Municipal Water Demand

**Subject:** Review of 2021 Brazos G Regional Water Plan Estimates of Non-Municipal Water Demand

Alan,

As we discussed yesterday, we reviewed the non-municipal water demand estimates in the proposed plan. Our comments regarding them are typed on the individual water demand estimate sheets. Our main comment is regarding the estimate of mine water demand projections for Robertson County, which appear high based on the history of the amount of water pumped for mine dewatering/depressuring and the potential locations of any other lignite reserves that might be mined in the county. We realize that these are water demand projections for decades into the future with definite uncertainty as to what could happen during that period.

If you have questions concerning any of our comments, we are available to answer them.

John Seifert

LBG-Guyton Associates

713-468-8600

**From:** Alan Day [<mailto:aday@brazosvalleygcd.org>]

**Sent:** Wednesday, July 05, 2017 2:05 PM

**To:** John Seifert

**Subject:** Please Review

John,

Attached is the draft projected non-municipal water demands for Brazos and Robertson counties for use in the 2021 State Water Plan. Please review and make any suggestions you feel are necessary.

Have a great day!

Alan

## PRESS RELEASES

# Luminant to Close Two Texas Power Plants

Decision a Result of Challenging Plant and Market Economics

Oct 13, 2017, 8:30am EDT

IRVING, Texas, Oct. 13, 2017 /PRNewswire/ -- Luminant, a subsidiary of Vistra Energy (NYSE: VST), today announced that it will close two coal-fueled power plants in Central Texas: its two-unit Sandow Power Plant in Milam County and its two-unit Big Brown Power Plant in Freestone County. In total, approximately 2,300 MW of nameplate power will be taken offline in early 2018.

These two plants are economically challenged in the competitive ERCOT market. Sustained low wholesale power prices, an oversupplied renewable generation market, and low natural gas prices, along with other factors, have contributed to this decision.

Curt Morgan, Vistra Energy's president and chief executive officer, said, "This announcement is a difficult one to make. It is never easy to announce an action that has a significant impact on our people. Though the long-term economic viability of these plants has been in question for some time, our year-long analysis indicates this announcement is now necessary. These employees have kept both plants reliably powering Texas for decades, and we greatly appreciate their service."

## Sandow Site

Earlier this week, the company and Alcoa entered into a contract termination agreement pursuant to which the parties agreed to an early settlement of a long-standing power and mining agreement. In consideration for the early termination, Alcoa made a one-time payment to Luminant. The settlement follows a decrease in wholesale power prices in ERCOT and the prior curtailment of Alcoa's smelter operation next to Sandow. The contract has helped shield Sandow from significant exposure to the downturn in the wholesale power market; however, the standalone economics of the Sandow complex no longer support continued investment in the site in this low wholesale power price environment.

Also closing will be Three Oaks Mine, located primarily in Bastrop County, which supports this plant.

Luminant estimates that approximately 450 employees will be impacted by the Sandow plant and Three Oaks mine closure. Eligible and affected employees will be offered severance benefits and outplacement assistance.

As part of the closure process, today Luminant filed a 90-day notice of suspension of operations with ERCOT, which will trigger a 60-day reliability review. If ERCOT determines the Sandow units are not needed for reliability following this 60-day review, Luminant expects to cease plant operations on Jan. 11, 2018.

Luminant will take the necessary steps to responsibly decommission the facility in accordance with all federal and state regulations. In addition, ongoing reclamation work will continue at Three Oaks Mine.

### **Big Brown Site**

Over the last few years, the Big Brown team has made tremendous operational adjustments to remain viable given the challenging market conditions. However, despite these best efforts, the economics of operating Big Brown do not make it a sustainable option for our fleet. The company will explore a sales process for the site during the ERCOT notification period.

Turlington Mine, which supplies Big Brown, was already scheduled to wind down operations by the end of 2017. Reclamation work will continue there.

Luminant estimates that about 200 employees will be impacted by the Big Brown closure. Eligible and affected employees will be offered severance benefits and outplacement assistance.

As part of the closure process, today Luminant filed a 120-day notice of suspension of operations with ERCOT, which will trigger a 60-day reliability review. Luminant is extending the 90-day notice to 120 days to permit a more complete sales process and give ERCOT additional time to conduct their reliability analysis. If ERCOT determines the Big Brown units are not needed for reliability following the 60-day review, and if the site has not been sold, Luminant expects to cease operations on Feb. 12, 2018.

### **Financial Impact**

Vistra expects to record one-time charges of approximately \$70 to 90 million in the fourth quarter of 2017 related to the expected retirements, including employee-related severance costs and non-cash charges for writing off materials inventory and a contract intangible asset associated with Big Brown. We expect to record additional one-time charges in the fourth quarter of 2017 related to changes in the timing and amounts of asset retirement obligations for mining and plant-related reclamation obligations at these facilities.

### **Media**

Allan Koenig

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### **Analysts**

Molly Sorg

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### **About Vistra Energy**

Vistra Energy is a premier Texas-based energy company focused on the competitive energy and power generation markets through operation as the largest retailer and generator of electricity in the growing Texas market. Our integrated portfolio of competitive businesses consists primarily of TXU Energy and Luminant. TXU Energy sells retail electricity and value-added services (primarily through our market-

leading TXU Energy™ brand) to approximately 1.7 million residential and business customers in Texas. Luminant generates and sells electricity and related products from our diverse fleet of generation facilities totaling approximately 18,000 MW of generation in Texas, including 2,300 MW fueled by nuclear power, 8,000 MW fueled by coal, and 7,500 MW fueled by natural gas, and is a large purchaser of renewable power including wind and solar-generated electricity. The company is currently developing one of the largest solar facilities in Texas by capacity.

### **Cautionary Note Regarding Forward-Looking Statements**

This press release includes forward-looking statements, which are subject to risks and uncertainties. All statements, other than statements of historical facts, are forward-looking statements. These statements are often, but not always, made through the use of words or phrases such as "may," "should," "could," "predict," "potential," "believe," "will likely result," "expect," "continue," "will," "anticipate," "seek," "estimate," "intend," "plan," "project," "forecast," "goal," "target," "would" and "outlook," or the negative variations of those words or other comparable words of a future or forward-looking nature. Readers are cautioned not to place undue reliance on forward-looking statements. Any such forward-looking statement involves uncertainties and is qualified in its entirety by reference to the discussion of risk factors under "Risk Factors" and the discussion under "Management's Discussion and Analysis of Financial Condition and Results of Operations" in the Form 10-Ks and Form 10-Qs filed by Vistra Energy Corp. and other important factors that could cause actual results to differ materially from those implied by such forward-looking statements.

Any forward-looking statement speaks only at the date on which it is made, and except as may be required by law, Vistra Energy undertakes no obligation to update any forward-looking statement to reflect events or circumstances after the date on which it is made or to reflect the occurrence of unanticipated events. New factors emerge from time to time, and it is not possible to predict all of them; nor can Vistra Energy assess the impact of each such factor or the extent to which any factor, or combination of factors, may cause results to differ materially from those contained in any forward-looking statement.

View original content:<http://www.prnewswire.com/news-releases/luminant-to-close-two-texas-power-plants-300536238.html>

SOURCE Vistra Energy

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