

NOTICE OF OPEN MEETING

BRAZOS G REGIONAL WATER PLANNING GROUP

10:00 a.m. December 18, 2019
Brazos River Authority Central Office 4600
Cobbs Drive, Waco, Texas 76710

AGENDA

1. CALL MEETING TO ORDER
2. INVOCATION
3. NOTICE OF MEETING
4. ATTENDANCE AND ANNOUNCEMENTS
5. PUBLIC INPUT - Public questions and comments on agenda items or water planning issues *(limited to 5 minutes each; public must fill out a 'Request to Speak' form prior to the discussion of the agenda item)*
6. PROGRAM
 - 6.1. Report and possible discussion on report from Texas Water Development Board (TWDB) staff.
 - 6.2. Discussion and possible action on HDR planning tasks.
 - 6.2.1. Presentation on updated water management strategy evaluations.
 - 6.2.2. Discussion and possible action regarding water management strategies to meet Williamson County needs.
 - 6.2.3. Discussion and possible action on other HDR planning tasks.
 - 6.2.4. Presentation of the timeline to develop the 2021 Brazos G Regional Water Plan.
 - 6.3. Report and possible discussion on updates from other regional water planning groups (Regions B, C, F, H, K, L & O).
 - 6.4. Report and possible discussion on Groundwater Management Area (GMA) activities.
 - 6.5. Report and possible discussion on agency communication and information.
 - 6.6. Discussion and possible action on report by Brazos G Administrator.
 - 6.7. Report and possible discussion from Brazos G Chair.
7. DISCUSSION AND POSSIBLE ACTION ON NEW BUSINESS TO BE CONSIDERED AT NEXT MEETING
8. CONFIRMATION OF NEXT MEETING DATE
9. ADJOURN

Agenda items may be considered, deliberated and/or acted upon in a different order than set forth above.

Meeting agendas and materials are available online at www.brazosqwater.org
For additional information, please contact
STEVE HAMLIN @ 254-761-3172, Brazos River Authority, Administrative Agent



BRAZOS G REGIONAL WATER PLANNING GROUP

December 18, 2019

10:00 A.M.

**Brazos River Authority Central Office
4600 Cobbs Drive, Waco, Texas 76710**



- 1. CALL THE MEETING TO ORDER**
- 2. INVOCATION**
- 3. NOTICE OF MEETING**
- 4. ATTENDANCE AND ANNOUNCEMENTS**
- 5. PUBLIC INPUT**



6.1. Report and possible discussion from Texas Water Development Board staff.

Application Period for 2020 SWIFT Funding Cycle Opens December 2

The Texas Water Development Board (TWDB) will open the application period for the 2020 funding cycle of the State Water Implementation Fund for Texas (SWIFT) program* on Monday, December 2, 2019. Abridged applications will be due on Monday, February 3, 2020.

The SWIFT program helps communities develop and optimize water supplies at cost-effective rates. The program provides low-interest financing, extended repayment terms, deferral of repayments, and incremental repurchase terms for projects with state ownership aspects. It also includes additional interest rate subsidies for rural and agricultural projects. For more information on the program, please visit the [SWIFT program web page](#).

To be eligible for SWIFT program financial assistance, projects must be recommended in the 2017 State Water Plan.

Abridged applications are due by midnight on February 3, 2020, and may be submitted via the TWDB's [online application system](#) or by [paper copy](#). These short applications provide information the TWDB needs to complete prioritization of the projects. Projects that receive priority for financial assistance will be invited to submit a complete application, which will include a detailed financial, legal, engineering, and environmental review.

For more details on how to apply for the SWIFT program, please visit the [TWDB website](#).

*The SWIFT program includes two funds, the State Water Implementation Fund for Texas (SWIFT) and the State Water Implementation Revenue Fund for Texas (SWIRFT).





- 6.2. Discussion and possible action on HDR planning tasks.**
 - 6.2.1 Presentation on updated water management strategy evaluations.**
 - 6.2.2. Discussion and possible action regarding water management strategies to meet Williamson County needs.**
 - 6.2.3. Discussion and possible action on other HDR planning tasks.**
 - 6.2.4 Presentation of the timeline to develop the 2021 Brazos G Regional Water Plan.**



Control of Naturally Occurring Salinity

Agenda Item 6.2.1A

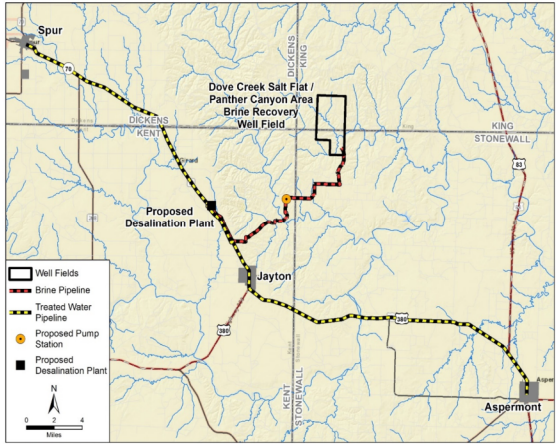

December 18, 2019




© 2014 HDR, all rights reserved.

SALINITY CONTROL PROJECT

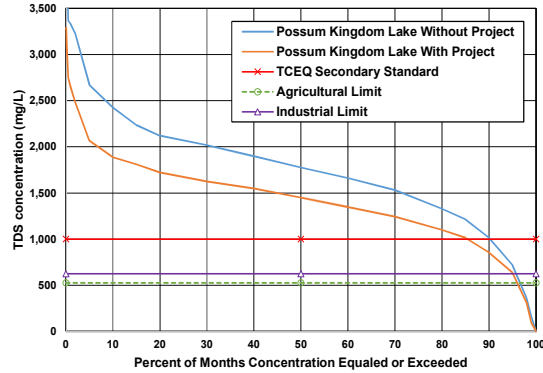
- Water Source: Brine Aquifer
- Treatment: Desalination and Remineralization
- Annual Capacity: 949 acft/yr
- TDS Reduction: 26% in Brazos River near Seymour
- Major Facilities:
 - 10 Brine Wells
 - Brine Transmission Pipeline
 - Desalination Facility
 - Remineralization Facility
 - Water Supply Pipelines
 - Transportation System Improvements for Salt Distribution

SALINITY CONTROL BENEFITS

- Benefits of Reducing TDS in the Brazos River:

- o Decrease downstream desalination costs (reduce volume of water required to desalinate)
- o Increase downstream water supply (improve desal recovery rates)



- Other Project Benefits:

- o Zero brine discharge
- o Salt revenue expected to cover O&M costs
- o Relatively energy efficient evaporative desal technology



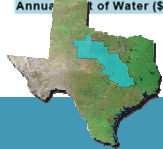
PROJECT COSTS

Item	Brine Utilization and Management System	White River Municipal Water District	Jayton	Aspermont
Brine Transmission Pipeline (12 in dia., 17 miles)	\$14,467,000	-	-	-
Brine Transmission Pump Station(s) & Storage Tank(s)	\$1,874,000	-	-	-
Treated Water Transmission Pipeline	-	\$5,836,000	\$579,000	\$4,057,000
Treated Water Transmission Pump Station(s) & Storage Tank(s)	-	\$953,000	\$442,000	\$1,384,000
Well Fields (Wells, Pumps, and Piping)	\$839,000	-	-	-
Storage Tanks (Other Than at Booster Pump Stations)	\$600,000	-	-	-
Two Water Treatment Plants (1 MGD and 1 MGD)	\$34,326,000	-	-	-
Integration, Relocations, & Other	\$5,500,000	-	-	-
TOTAL COST OF FACILITIES	\$57,606,000	\$6,789,000	\$1,021,000	\$5,441,000
Engineering and Feasibility Studies, Legal Assistance, Financing, Bond Counsel, and Contingencies (30% for pipes & 35% for all other facilities)	\$36,216,000	\$2,084,000	\$328,000	\$1,702,000
Environmental & Archaeology Studies and Mitigation	\$1,619,000	\$150,000	\$600,000	\$625,000
Land Acquisition and Surveying (80 acres)	\$5,541,000	-	\$55,000	\$55,000
Interest During Construction (3% for 2 years with a 0.5% ROI)	\$5,555,000	\$497,000	\$111,000	\$431,000
TOTAL COST OF PROJECT	\$106,537,000	\$9,520,000	\$2,115,000	\$8,254,000
Debt Service (3.5 percent, 20 years)	\$7,496,000	\$670,000	\$149,000	\$581,000
Operation & Maintenance	\$7,826,000	\$82,000	\$17,000	\$75,000
Purchase of Water (949 acft/yr @ 1189.36 \$/acft)	(\$1,128,000)	\$214,000	\$140,000	\$296,000
Salt Revenue	(\$8,000,000)	-	-	-
TOTAL ANNUAL COST	\$6,194,000	\$966,000	\$306,000	\$952,000
Available Project Yield (acft/yr)	949	180	118	249
Annual Cost of Water (\$ per acft), based on PF=1	\$6,527	\$5,367	\$2,593	\$3,823
Annual Cost of Water (\$ per 1,000 gallons), based on PF=1	\$20.03	\$16.47	\$7.96	\$11.73



PROJECT COSTS

Item	Brine Utilization and Management System	White River Municipal Water District	Jayton	Aspermont
Brine Transmission Pipeline (12 in dia., 17 miles)	\$14,467,000	-	-	-
Brine Transmission Pump Station(s) & Storage Tank(s)	\$1,874,000	-	-	-
Treated Water Transmission Pipeline	-	\$5,836,000	\$579,000	\$4,057,000
TOTAL COST OF PROJECT	\$106,537,000	\$9,520,000	\$2,115,000	\$8,254,000
Well Fields	-	-	-	-
Storage Tanks	-	-	-	-
Two Water Integration	-	-	-	-
TOTAL COST OF PROJECT	\$106,537,000	\$9,520,000	\$2,115,000	\$8,254,000
Debt Service (3.5 percent, 20 years)	\$7,496,000	\$670,000	\$149,000	\$581,000
Operation & Maintenance	\$7,826,000	\$82,000	\$17,000	\$75,000
TOTAL COST OF PROJECT	\$15,322,000	\$752,000	\$166,000	\$656,000
Purchase of Water (949 acft/yr @ 1189.36 \$/acft)	(\$1,128,000)	\$214,000	\$140,000	\$296,000
Engineering Counsel, Environmental, Land Acquisition, Interest	(\$8,000,000)	-	-	-
TOTAL ANNUAL COST	\$6,194,000	\$966,000	\$306,000	\$952,000
TOTAL COST OF PROJECT	\$100,343,000	\$9,520,000	\$2,115,000	\$8,254,000
Debt Service (3.5 percent, 20 years)	\$7,496,000	\$670,000	\$149,000	\$581,000
Operation & Maintenance	\$7,826,000	\$82,000	\$17,000	\$75,000
Purchase of Water (949 acft/yr @ 1189.36 \$/acft)	(\$1,128,000)	\$214,000	\$140,000	\$296,000
Salt Revenue	(\$8,000,000)	-	-	-
TOTAL ANNUAL COST	\$6,194,000	\$966,000	\$306,000	\$952,000
Available Project Yield (acft/yr)	949	180	118	249
Annual Cost of Water (\$ per acft), based on PF=1	\$6,527	\$5,367	\$2,593	\$3,823
Annual Cost of Water (\$ per 1,000 gallons), based on PF=1	\$20.03	\$16.47	\$7.96	\$11.73



PROJECT COSTS - Summary

Item	Brine Utilization and Management System	White River Municipal Water District	Jayton	Aspermont
Total Cost of Facilities	\$57,606,000	\$6,789,000	\$1,021,000	\$5,441,000
Total Cost of Project	\$106,537,000	\$9,520,000	\$2,115,000	\$8,254,000
Total Annual Cost	\$6,194,000	\$966,000	\$306,000	\$952,000
Available Project Yield (acft/yr)	949	180	118	249
Annual Cost of Water (\$/acft)	\$6,527	\$5,367	\$2,593	\$3,823
Annual Cost of Water (\$/1k gal)	\$20	\$16	\$8	\$12



DOWNSTREAM COST BENEFITS

Location	Municipal Use ¹ (acft/yr)	Unit Cost of Desalination Treatment (\$/acft/yr)		Total Annual Cost of Desalination Treatment (\$/yr)		Annual Desalination Cost Savings With Project
		Without Salinity Control Project	With Salinity Control Project	Without Salinity Control Project	With Salinity Control Project	
Seymour	0	\$1,189	\$1,026	\$0	\$0	\$0
Possum Kingdom Lake	3,298	\$790	\$725	\$2,607,000	\$2,392,000	\$215,000
Lake Granbury	35,644	\$757	\$680	\$26,976,000	\$24,250,000	\$2,726,000
Lake Whitney	18,975	\$608	\$521	\$11,539,000	\$9,892,000	\$1,647,000
Bryan	19,935	\$534	\$534	\$10,654,000	\$10,654,000	\$0
Richmond	428,136	\$431	\$431	\$184,486,000	\$184,486,000	\$0
Total	505,988			\$236,262,000	\$231,674,000	\$4,588,000

¹ Includes Brazos River Authority Contract amounts and TCEQ Water Rights for municipal use, as of March 2015.

Total Annual Cost: \$6,194,000
 Downstream Desalination Cost Savings: \$4,588,000
Difference: \$1,606,000



QUESTIONS?







Alcoa Supplies to Williamson County

Agenda Item 6.2.1B

December 18, 2019



© 2014 HDR, all rights reserved.

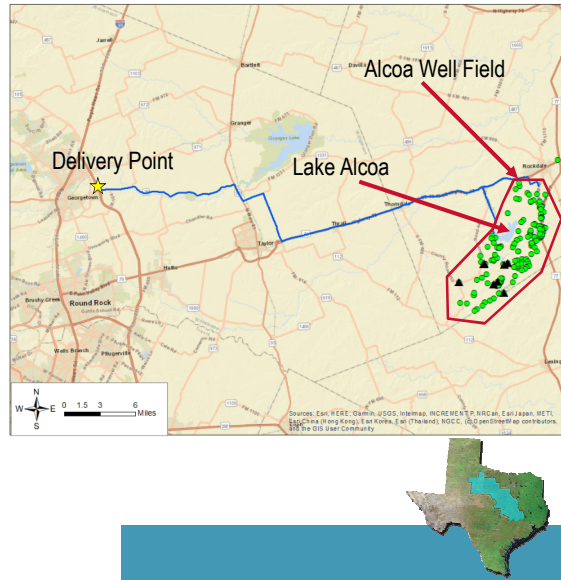
CONCEPT & IMPLEMENTATION

- Utilize existing groundwater and surface water rights from Alcoa to meet shortages in Williamson County
- Water supply agreements between Luminant and Alcoa would need modification
- GW permits need to be amended from on-site industrial use to allow municipal off-site use (lose historic use designation?)
- Surface water rights (Lake Alcoa and Little River diversion) need to be amended to change type and place of use
- BRA contract (Little River diversion) requires amendment to change the type and place of use
- Existing wells would be upgraded to municipal use standards
- Utilization of these supplies would cause Milam County Steam Electric demands to be unmet in the 2021 Brazos G Plan



ALCOA WILLIAMSON COUNTY PROJECT

- GW supply from existing wells
 - 33,600 acft/yr permitted
 - 14,006 – 17,529 acft/yr available (MAG limits)
- SW Supply
 - 14,000 acft/yr - Lake Alcoa
 - 650 acft/yr – Little River
 - 4,019 acft/yr – BRA contract
- Three Options Evaluated
 1. 14,000 acft/yr GW only
 2. 18,600 acft/yr SW only
 3. 32,600 acft/yr SW and GW



COSTS OPTION 1:

Item	Estimated Costs for Facilities
Primary Pump Station (13.2 MGD)	\$11,263,000
Transmission Pipeline (30 in dia., miles)	\$56,059,000
Transmission Pump Station(s) & Storage Tank(s)	\$5,483,000
Well Fields (Wells, Pumps, and Piping)	\$13,913,000
Storage Tanks (Other Than at Booster Pump Stations)	\$1,736,000
Water Treatment Plant (12.5 MGD)	\$709,000
TOTAL COST OF FACILITIES	\$89,163,000
Engineering and Feasibility Studies, Legal Assistance, Financing, Bond Counsel, and Contingencies (30% for pipes & 35% for all other facilities)	\$28,404,000
Environmental & Archaeology Studies and Mitigation	\$2,032,000
Land Acquisition and Surveying (688 acres)	\$3,087,000
Interest During Construction (3% for 1 years with a 0.5% ROI)	\$3,374,000
TOTAL COST OF PROJECT	\$126,060,000
ANNUAL COST	
Debt Service (3.5 percent, 20 years)	\$8,870,000
Operation and Maintenance	
Pipeline, Wells, and Storage Tanks (1% of Cost of Facilities)	\$717,000
Intakes and Pump Stations (2.5% of Cost of Facilities)	\$419,000
Water Treatment Plant	\$425,000
Pumping Energy Costs (29766625 kW-hr @ 0.08 \$/kW-hr)	\$2,381,000
Purchase of Water (14000 acft/yr @ 76.5 \$/acft)	\$1,071,000
TOTAL ANNUAL COST	\$13,883,000
Available Project Yield (acft/yr)	14,000
Annual Cost of Water (\$ per acft), based on PF=1	\$992
Annual Cost of Water After Debt Service (\$ per acft), based on PF=1	\$358
Annual Cost of Water (\$ per 1,000 gallons), based on PF=1	\$3.04
Annual Cost of Water After Debt Service (\$ per 1,000 gallons), based on PF=1	\$1.10



COSTS OPTION 2:

Item	Estimated Costs for Facilities
Intake Pump Stations (17.5 MGD)	\$31,910,000
Transmission Pipeline (36 in dia., 42 miles)	\$64,762,000
Transmission Pump Station(s) & Storage Tank(s)	\$7,177,000
Water Treatment Plant (16.6 MGD)	\$64,207,000
TOTAL COST OF FACILITIES	\$168,056,000
Engineering and Feasibility Studies, Legal Assistance, Financing, Bond Counsel, and Contingencies (30% for pipes & 35% for all other facilities)	\$55,582,000
Environmental & Archaeology Studies and Mitigation	\$1,119,000
Land Acquisition and Surveying (525 acres)	\$2,353,000
Interest During Construction (3% for 1 years with a 0.5% ROI)	\$6,246,000
TOTAL COST OF PROJECT	\$233,356,000
ANNUAL COST	
Debt Service (3.5 percent, 20 years)	\$16,419,000
Operation and Maintenance	
Pipeline, Wells, and Storage Tanks (1% of Cost of Facilities)	\$648,000
Intakes and Pump Stations (2.5% of Cost of Facilities)	\$977,000
Water Treatment Plant	\$4,494,000
Pumping Energy Costs (16563378 kW-hr @ 0.08 \$/kW-hr)	\$1,325,000
Purchase of Water (18,600 acft/yr @ 76.5 \$/acft)	\$1,423,000
TOTAL ANNUAL COST	\$25,286,000
Available Project Yield (acft/yr)	18,600
Annual Cost of Water (\$ per acft), based on PF=1	\$1,359
Annual Cost of Water After Debt Service (\$ per acft), based on PF=1	\$477
Annual Cost of Water (\$ per 1,000 gallons), based on PF=1	\$4.17
Annual Cost of Water After Debt Service (\$ per 1,000 gallons), based on PF=1	\$1.46



COSTS OPTION 3:

Item	Estimated Costs for Facilities
Intake Pump Stations (30.7 MGD)	\$38,806,000
Transmission Pipeline (42 in dia., 43 miles)	\$77,426,000
Transmission Pump Station(s) & Storage Tank(s)	\$12,262,000
Well Fields (Wells, Pumps, and Piping)	\$16,269,000
Water Treatment Plant (29.2 MGD)	\$105,758,000
TOTAL COST OF FACILITIES	\$250,521,000
Engineering and Feasibility Studies, Legal Assistance, Financing, Bond Counsel, and Contingencies (30% for pipes & 35% for all other facilities)	\$83,811,000
Environmental & Archaeology Studies and Mitigation	\$2,020,000
Land Acquisition and Surveying (675 acres)	\$3,029,000
Interest During Construction (3% for 1 years with a 0.5% ROI)	\$9,333,000
TOTAL COST OF PROJECT	\$348,714,000
ANNUAL COST	
Debt Service (3.5 percent, 20 years)	\$24,536,000
Operation and Maintenance	
Pipeline, Wells, and Storage Tanks (1% of Cost of Facilities)	\$937,000
Intakes and Pump Stations (2.5% of Cost of Facilities)	\$1,277,000
Water Treatment Plant	\$7,403,000
Pumping Energy Costs (48286691 kW-hr @ 0.08 \$/kW-hr)	\$3,863,000
Purchase of Water (32600 acft/yr @ 76.5 \$/acft)	\$2,494,000
TOTAL ANNUAL COST	\$40,510,000
Available Project Yield (acft/yr)	32,600
Annual Cost of Water (\$ per acft), based on PF=1	\$1,243
Annual Cost of Water After Debt Service (\$ per acft), based on PF=1	\$490
Annual Cost of Water (\$ per 1,000 gallons), based on PF=1	\$3.81




COST OPTIONS SUMMARY:

	Option 1	Option 2	Option 3
Description	GW only	SW only	SW and GW
Yield (acft/yr)	14,000	18,600	32,600
Annual Cost of Water (\$/acft)	\$992	\$1,359	\$1,243
Annual Cost of Water (\$/1000 gal)	\$3.04	\$4.17	\$3.81





QUESTIONS?





**Williamson
County Planning**
Agenda Item 6.2.2

December 18, 2019

© 2014 HDR, all rights reserved.

Background

- Substantial needs in Williamson County
- No user has large surplus
- Multiple strategies evaluated to potentially meet the needs
- Three steps:
 1. Conservation recommendations
 2. Remaining small WUG needs
 3. Remaining large needs
 - Cedar Park, Leander, Round Rock, Hutto, Georgetown, County-Other, Mining



Williamson County Needs

EntityWUGName	WUG Needs/Surpluses (acre-feet/year)					
	2020	2030	2040	2050	2060	2070
BARTLETT	-102	-114	-130	-147	-168	-189
BRUSHY CREEK MUD	-246	-206	-191	-193	-210	-231
CEDAR PARK	-3,088	-4,799	-4,825	-4,792	-4,775	-4,768
COUNTY-OTHER	-780	1,461	-3,627	-8,231	-23,882	-37,798
FLORENCE	-35	-38	-42	-50	-59	-72
GEORGETOWN	-10,023	-18,733	-27,734	-38,634	-51,172	-65,608
GRANGER	22	13	2	-14	-33	-56
HUTTO	-907	-3,046	-3,304	-5,437	-8,596	-10,703
LEANDER	-1,364	-5,130	-8,258	-10,881	-14,576	-19,041
LIBERTY HILL	-90	-90	-90	-90	-90	-90
PALOMA LAKE MUD 1	-168	-243	-198	-123	-25	76
ROUND ROCK	2,232	-2,519	-8,632	-15,915	-16,255	-16,642
SOUTHWEST MILAM WSC	34	-51	-109	-112	-150	-217
IRRIGATION	-172	-172	-172	-172	-172	-172
MINING	-4,722	-5,804	-6,921	-8,112	-9,339	-10,743



Plans for WUGs with Small Needs

- Bartlett (189 acft/yr)
 - Conservation
 - Trinity well or purchase from Jarrell-Schwertner WSC
- Brushy Creek MUD (246 acft in 2020 only)
 - Conservation
 - Purchase from Round Rock in 2020
- Florence (72 acft/yr)
 - Purchase from Georgetown
- Granger (56 acft/yr)
 - BRA Supply from East Williamson County Water Supply Project (Lake Granger)
- Liberty Hill (90 acft/yr)
 - Brushy Creek RUA (Lake Travis supply)
- Paloma Lake MUD 1 (168 acft/yr)
 - Purchase from Jonah SUD

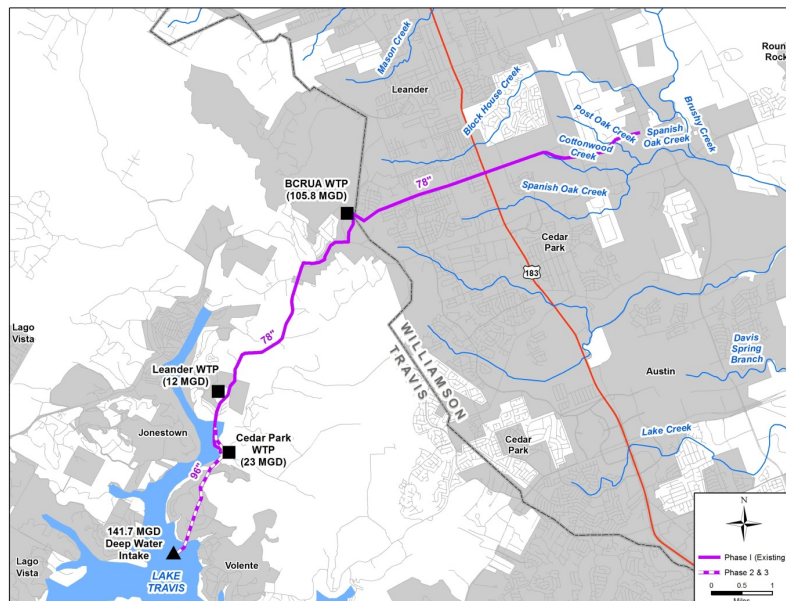


Large WUG Needs in 2070

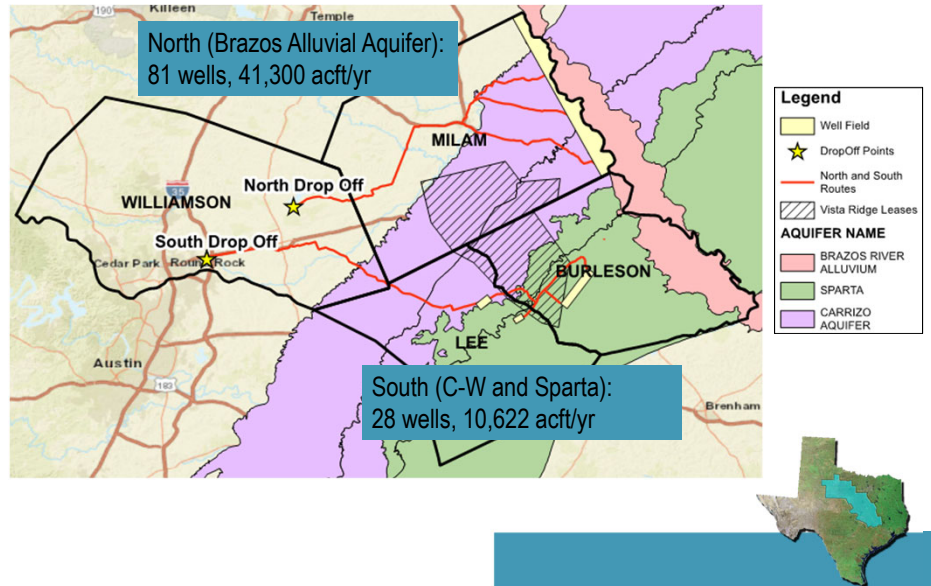
- Cedar Park: 4,768 acft/yr (0 acft/yr w/Conservation)
- Leander: 19,041 acft/yr
- Round Rock: 16,642 acft/yr (11,691 acft/yr w/Conservation)
- Hutto: 10,073 acft/yr
- Georgetown: 65,608 acft/yr (19,746 acft/yr after WTP expansion and Conservation)
- County-Other: 37,798 acft/yr (33,517 acft/yr w/Conservation)
- Mining: 10,743 acft/yr



Brushy Creek RUA System

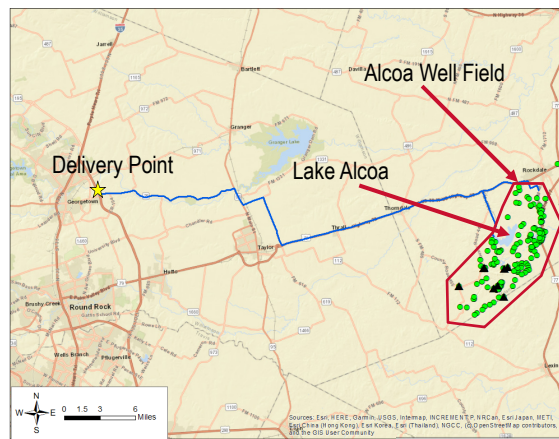


Potential GW Supplies to Meet Needs



ALCOA WILLIAMSON COUNTY PROJECT

- GW supply from existing wells
 - 33,600 acft/yr permitted
 - 14,006 – 17,529 acft/yr available (MAG limits)
- SW Supply
 - 14,000 acft/yr - Lake Alcoa
 - 650 acft/yr – Little River
 - 4,019 acft/yr – BRA contract
- Three Options Evaluated
 1. 14,000 acft/yr GW only
 2. 18,600 acft/yr SW only
 3. 32,600 acft/yr SW and GW



Large WUG Needs

Cedar Park

Plan Element	2020	2030	2040	2050	2060	2070
<i>Projected Surplus/(Shortage) (acft/yr)</i>	-3,088	-4,799	-4,825	-4,792	-4,775	-4,768
Conservation						
Supply From Plan Element (acft/yr)	-	1,672	3,197	4,626	5,932	6,250
<i>Projected Surplus/(Shortage) after Conservation</i>	-3,088	-3,127	-1,628	-166	1,157	1,482
Brushy Creek RUA						
Supply From Plan Element (acft/yr)	0	0	0	0	0	0
Unit Cost (\$/acft)	ND	ND	ND	ND	ND	ND
Reuse						
Supply From Plan Element (acft/yr)	1,120	1,120	1,120	1,120	1,120	1,120
Unit Cost (\$/acft)	\$609	\$609	\$93	\$93	\$93	\$93
Voluntary Redistribution through Brushy Creek RUA Project						
Supply From Plan Element (acft/yr)	1,968	2,007	508			
Unit Cost (\$/acft)	\$836	\$836	\$512			



Large WUG Needs

Leander

Plan Element	2020	2030	2040	2050	2060	2070
<i>Projected Surplus/(Shortage) (acft/yr)</i>	-1,364	-5,130	-8,258	-10,881	-14,576	-19,041
Conservation						
Supply From Plan Element (acft/yr)	-	-	-	-	-	-
<i>Projected Surplus/(Shortage) after Conservation</i>	-1,364	-5,130	-8,258	-10,881	-14,576	-19,041
Brushy Creek RUA						
Supply From Plan Element (acft/yr)	17,600	17,600	17,600	17,600	17,600	17,600
Unit Cost (\$/acft)	\$1,128	\$1,128	\$645	\$645	\$645	\$645
Contract Amendment with LCRA or Redistribution through BCRUA						
Supply From Plan Element (acft/yr)						1,441
Unit Cost (\$/acft)						\$151



Large WUG Needs

Round Rock

Plan Element	2020	2030	2040	2050	2060	2070
<i>Projected Surplus/(Shortage) (acft/yr)</i>	2,232	-2,519	-8,632	-15,915	-16,255	-16,642
Conservation						
Supply From Plan Element (acft/yr)	-	1,934	4,192	5,026	4,972	4,951
<i>Projected Surplus/(Shortage) after Conservation</i>	2,232	-585	-4,440	-10,889	-11,283	-11,691
Brushy Creek RUA						
Supply From Plan Element (acft/yr)	24,400	24,400	24,400	24,400	24,400	24,400
Unit Cost (\$/acft)	\$976	\$976	\$623	\$623	\$623	\$623
Alternative No. 1: Alcoa Property Supplies and/or Williamson County Groundwater - South Option						
Supply From Plan Element (acft/yr)		585	4,440	10,889	11,283	11,691
Unit Cost (\$/acft)						



Large WUG Needs

Hutto

Plan Element	2020	2030	2040	2050	2060	2070
<i>Projected Surplus/(Shortage) (acft/yr)</i>	-907	-3,046	-3,304	-5,437	-8,596	-10,703
Conservation						
Supply From Plan Element (acft/yr)	-	-	-	-	-	-
<i>Projected Surplus/(Shortage) after Conservation</i>	-907	-3,046	-3,304	-5,437	-8,596	-10,703
Williamson County GW Supply - South Option						
Supply From Plan Element (acft/yr)	907	3,046	3,304	5,437	8,596	10,703
Unit Cost (\$/acft)	\$1,670	\$1,264	\$300	\$300	\$300	\$300
Alt No. 1: Alcoa Property Supply						
Supply From Plan Element (acft/yr)				2,133	5,292	7,399
Unit Cost (\$/acft)				\$1,243	\$1,243	\$499



Large WUG Needs

Georgetown

Plan Element	2020	2030	2040	2050	2060	2070
<i>Projected Surplus/(Shortage) (acft/yr)</i>	-10,023	-18,733	-27,734	-38,634	-51,172	-65,608
Conservation						
Supply From Plan Element (acft/yr)		2,884	7,106	12,854	20,175	28,862
<i>Projected Surplus/(Shortage) after Conservation</i>	-10,023	-15,849	-20,628	-25,780	-30,997	-36,746
WTP Expansion						
Supply From Plan Element (acft/yr)	17,000	17,000	17,000	17,000	17,000	17,000
Unit Cost (\$/acft)	\$576	\$576	\$266	\$266	\$266	\$266
Lake Georgetown ASR						
Supply From Plan Element (acft/yr)			8,700	8,700	8,700	8,700
Unit Cost (\$/acft)			\$5,126	\$5,126	\$1,500	\$1,500
Reuse - Dove Springs						
Supply From Plan Element (acft/yr)		1,456	1,456	1,456	1,456	1,456
Unit Cost (\$/acft)		\$359	\$359	\$45	\$45	\$45
Alt. No. 1: Alcoa Property Supply						
Supply From Plan Element (acft/yr)				9,590	9,590	9,590
Unit Cost (\$/acft)				\$1,243	\$1,243	\$499
Alt. No. 2: Williamson County GW Supply - North Option						
Alt. No. 3: Williamson County GW Supply - South Option						

Large WUG Needs

County-Other

	2020	2030	2040	2050	2060	2070
<i>Projected Surplus/(Shortage) (acft/yr)</i>	-780	1,461	-3,627	-8,231	-23,882	-37,798
Conservation						
Supply From Plan Element (acft/yr)	-	288	948	1,390	2,923	4,281
<i>Projected Surplus/(Shortage) after Conservation</i>	-780	1,749	-2,679	-6,841	-20,959	-33,517
Purchase Supply from Round Rock and/or Georgetown						
Supply From Plan Element (acft/yr)	780	780	2,679	2,679	2,679	2,679
Unit Cost (\$/acft)	\$976	\$976	\$623	\$623	\$623	\$623
Purchase from SAWS Vista Ridge						
Supply From Plan Element (acft/yr)	5,700	5,700	5,700	5,700	5,700	5,700
Unit Cost (\$/acft)	\$2,177	\$2,177	\$2,177	\$2,177	\$2,177	\$2,177
Williamson County GW Supply - North Option						
Supply From Plan Element (acft/yr)				4,162	4,162	4,162
Unit Cost (\$/acft)				\$1,254	\$1,254	\$300
Alcoa Property Supply						
Supply From Plan Element (acft/yr)					8,418	20,976
Unit Cost (\$/acft)					\$1,243	\$1,243
Alternative No. 1: Williamson County GW Supply - South Option						

Large WUG Needs

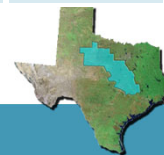
Mining

	2020	2030	2040	2050	2060	2070
<i>Projected Surplus/(Shortage) (acft/yr)</i>	-4,722	-5,804	-6,921	-8,112	-9,339	-10,743
Leave Needs Unmet						
Supply From Plan Element (acft/yr)	-	-	-	-	-	-



Summary of Potential Strategies for Williamson County WUGs with Large Needs (after Conservation and other strategies)

	2070 Need	Alcoa Property		Williamson County Groundwater	
		GW Only	GW & SW	North Option	South Option
Supply Available		14,000	32,600	41,300	10,622
Potential Users					
Hutto	10,703				10,703
Georgetown	9,590	9,590			
County-Other	25,138		20,976	4,162	
Total	45,431	9,590	20,976	4,162	10,703
Alternatives					
Hutto	10,703	10,703			
Georgetown	9,590			9,590	
County-Other	25,138			20,976	
Round Rock	45,431	11,691	11,691	11,691	



Other Strategies to Consider

- Red River OCR and Transmission Pipeline
 - Large yield: 196,000 acft/yr
 - Feasibility?
- Brazos River Main Stem OCR – Hopes Creek OCR or Spring Branch OCR
 - Relatively small yields: 6,300 – 7,200 acft/yr
- Lake Granger ASR
 - Will be a recommended strategy for BRA to pursue to firm up Little River System supplies



Points for Consideration During Discussion


- Total supplies needed: 45,431 acft/yr
- Total supplies available:
 - North GW option: 41,300 acft/yr (supplies from Brazos Alluvial System)
 - South GW option: 10,622 acft/yr (MAG limitations)
 - Alcoa Property GW Option: 14,000 acft/yr (MAG limitations)
 - Alcoa Property GW & SW Option: 32,600 acft/yr
- Requires combination of supplies to meet needs
- Alcoa options require that Milam County Steam-Electric demands go unmet



Discussion





HR



Schedule to Develop the 2021 Brazos G Plan

Agenda Item 6.2.4

December 18, 2019

© 2014 HDR, all rights reserved.

Working Schedule for the 2021 Planning Cycle

- December Brazos G mtg
 - Review Chapter 2
 - Review final WMS evaluations
 - Review plans for many WUGs/WWPs
 - Adopt policy recommendations for Chapter 8?
- December/January
 - Finalize Chapters 1-5 (all out for review in mid-January)
 - Clean up for remaining tasks
 - Remaining chapters out for review in late January
 - » Chapters 6 – Impacts
 - » Chapter 7 – Drought Information
 - » Chapter 9 – for final Plan
 - » Chapter 10 – partial (final in final Plan)
 - » Chapter 11 – Implementation of 2016 Plan and Comparison of Plans
- January Sub-regional meetings
 - Review draft plans for WUGs and WWPs
 - Jan. 21 – College Station
 - Jan. 22 – Waco
 - Jan. 23 – Abilene
- February Brazos G mtg
 - Review/approve Initially Prepared Plan
 - 2 meetings?
 - » Week of Feb. 9 (Wed, 2/12?)
 - » Week of Feb. 23 (Wed, 2/26?)
- **March 3 – Initially Prepared Plan**
 - March – Distribute IPP
 - Spring – Public/agency comment period
 - June/July – Public Hearing on IPP
 - Aug/Sep – Address Comments & Finalize Plan
 - September – Brazos G mtg – adopt plan
- **October 14 – Final Plan**





6.3. Report and possible discussion on updates from other regional planning groups (Regions B,C,F,H,K,L &O)



6.4. Report and possible discussion on Groundwater Management Area (GMA) activities.



6.5. Report and possible discussion on agency communication and information.



6.6. Discussion and possible action on report by Brazos G Administrator.



**6.7. Report and possible discussion
from Brazos G Chair.**



- 7. DISCUSSION AND POSSIBLE ACTION ON
NEW BUSINESS TO BE CONSIDERED AT
NEXT MEETING**
- 8. CONFIRMATION OF NEXT MEETING
DATE**
- 9. ADJOURN**