Appendix G-2

Modeling Appendix

G.2.1 Introduction

The modeling for this Water Management Plan (WMP) is based on the Texas Commission on Environmental Quality's Water Availability Model for the Brazos River Basin (TCEQ Brazos WAM) Full Appropriation Scenario, also known as Run 3. The basics of the System Operation Permit modeling were originally developed by the BRA and subsequently modified by TCEQ as part of the permitting process. This Appendix to the Technical Report in Support of the Water Management Plan (Technical Report) describes the modifications made to the TCEQ Brazos WAM as the WMP was developed.

The WMP contains four main groups of WAM modeling, each of which uses a different set of modifications to the TCEQ Brazos WAM:

- *Firm Yield Modeling.* This modeling evaluates the stand-alone firm yields of the eleven existing BRA reservoirs under 2012, 2025 and 2060 sediment conditions, with no return flows, with only BRA return flows, and with all return flows. The yields are described in Section 2.3 of the Technical Report.
- *Current Conditions Operational Modeling.* The current conditions scenario models the eleven existing BRA reservoir operating as a system to meet current demands. This model is similar to the 2012 firm yield model, except that current demands are modeled where they actually occur instead of having all demands met lakeside. Demands that can be met by more than one reservoir are modeled using the multiple reservoir capabilities included in the WRAP model. This model does not make use of the System Operation Permit. The model was developed to model Scenario 1 as described in Section 4.3 of the Technical Report.
- *2025 and 2060 Operational Modeling.* This version of the Brazos WAM was used to model 2025 and 2060 conditions (Scenarios 2 through 5) in Section 4.3 of the Technical Report. The 2025 model is intended to show how the system will perform under 2025 conditions. (This initial WMP is expected to apply through the year 2025.) The 2060 model is a "look ahead" to see how the system may function in the future. The 2025 and 2060 models are similar to the

models used by the BRA and TCEQ for analyses associated with developing the initial draft of the System Operation Permit. Specifically, this model uses the same aggregated diversion approach and instream flow approach used for that modeling. However, instead of all diversions being made at one or two points, diversions are made at the actual location of the contractual demands.

- *Appropriation Modeling.* This modeling is similar to the 2025 and 2060 operational model, except that instead of using projected demands, demands are set to the amounts that are currently contracted by the BRA plus additional demands that were identified in the regional water planning process. These models also include an evaluation of the additional firm yield that could be developed at the Rosharon gage. These models were used for the scenarios described in Section 2.4 of the Technical Report.

Section G.2.2 of this Appendix describes the modifications used in the four groups of models discussed above. These include return flows, future sediment conditions, downstream release requirements not included in the TCEQ Brazos WAM, operational limitations on BRA reservoirs, modeling of Lake Whitney, modeling BRA supply for the City of Temple and other customers with their own water rights, modeling of Lake Belton, Lake Whitney hydropower operation, modeling of the Williamson County Regional Raw Water Line (WCRRWL), modeling of the proposed System Operation Permit, and accounting procedures used to assign diversions to BRA water rights. Sections G.2.3 through G.2.6 provide a description of how these modifications were applied in each of these sets of WAM models, as well as other modifications unique to each set of modeling.

Much of the discussion in this Appendix assumes familiarity with the Water Rights Analysis Package (WRAP) and the TCEQ's Water Availability Models. Documentation for the Water Rights Analysis Package is available on-line at https://ceprofs.civil.tamu.edu/rwurbs/wrap.htm. Model setups for the Brazos WAM that served as the basis for the modeling in the WMP are available from the TCEQ Water Availability Section. All modeling uses the August 2012 version of WRAP.

G.2.2 Modifications to the TCEQ WAM

This section of the Appendix describes modifications that were made to the TCEQ Brazos WAM. Some modifications were applied to all four groups of models, while others were only made to some of the groups. These are identified in the sections describing the individual models.

G.2.2.1 Return Flows

The TCEQ Brazos WAM Run 3 that serves as the basis for the WMP modeling does not include return flows. Return flows were added because they are part of the water supply available to the BRA. There are five sets of return flows used in this WMP:

- *Current return flows.* These return flows are based on the average historical return flows from 2008 to 2011, as reported to TCEQ. Table G.2.1 shows the historical and average annual discharges for this period, as well as the average portion of those discharges that originated from BRA sources. Table G.2.2 shows the monthly discharges, which were developed by applying typical monthly distribution patterns to the annual discharges. These return flows are used in the current condition operational models.
- *Minimum Monthly Return Flows.* These are return flows based on the minimum monthly historical discharge from 2007 to 2011, as reported to TCEQ. Table G.2.3 shows the monthly discharges using these assumptions. These return flows are used in the appropriation models.
- *Current Return Flows, BRA only.* These return flows are the average historical discharge from entities that use BRA sources or plants that are owned or operated by the BRA. For dischargers that use multiple sources of water, the portion of the water that originates from the BRA has been estimated based on historical records. The volumes are based on currently permitted discharges.

The volume of discharge associated with reuse projects that are currently permitted and are expected to be operational by 2025 have been removed during the calculations. Table G.2.4 shows the monthly return flows. These return flows are used for modeling runs that are associated with the Executive Director of the TCEQ's preferred approach to return flows.

- *Minimum Monthly Return Flows, BRA only.* These return flows are the minimum monthly historical discharge from 2007 to 2011, limited to return flows that originate from BRA sources or from plants owned and operated by the BRA. Table G.2.5 shows the monthly return flows. These return flows are used for appropriation modeling runs that are associated with the Executive Director of the TCEQ's preferred approach to return flows.
- *All Permitted Return Flows.* These are the permitted discharges for all major dischargers in the Brazos Basin. (Major dischargers have a permitted discharge greater than 1 MGD. Certain smaller discharges that are less than 1 MGD but come from BRA sources are included as well.) For dischargers that use multiple sources of water, the portion of the water that originates from the BRA has been estimated based on historical records. The volume of discharge associated with reuse projects that are currently permitted and are expected to be operational by 2025 have been removed during the calculations. Table G.2.6 shows the monthly return flows. These return flows are used for operational modeling runs that are associated with the BRA's preferred approach to return flows under future conditions.

The Current Return Flows and the Permitted Return Flows used in the modeling are based on annual totals distributed using monthly patterns derived from the typical distribution of historical discharges. The minimum monthly return flows are based on actual historical minima. Return flows are entered in the models as constant inflows on CI records. Flows on CI Records are added to the naturalized flows at the beginning of each time step and distributed in priority order.

The modeling assumes that by 2025 all return flows will be at least as much as is currently permitted.

Once-through cooling is not included in the return flows used in the modeling.

G.2.2.2 Evaporation

The evaporation input file (.eva) was updated to reflect a correction for TWDB Quadrangle 609. All of the scenarios were run using this updated evaporation input file.

G.2.2.3 Senate Bill 3 Flow Requirements

The TCEQ has adopted environmental flow standards for the Brazos River Basin in Title 30 TAC Chapter 298 Subchapter G. The standards were adopted for nineteen locations in the Brazos River Basin. Of the nineteen control points, eighteen are located at primary control points. The Clear Fork Brazos River at Lueders is not a primary control point in the TCEQ WAM and an existing control point at nearly the same location as the current USGS gage was selected.

The priority date for the environmental flow standards and set-asides established by §298.465 is March 1, 2012. For modeling purposes, the priority date for the system operation permit was changed from October 15, 2004 to March 2, 2012 to be one day junior to the environmental flow standards. In order to preserve proper priority sequence, the priority date of six water rights with priority dates between October 14, 2004 and March 1, 2012 (Permits 5858, 5899, 5931, 12048, 12190 and 12191) were changed as well.

G.2.2.4 Area-Capacity Relationships

A major factor affecting the decreased in future supplies from a reservoir is sedimentation. Storage capacity decreases as sediments are deposited into the reservoir over time through inflows and surface runoff, decreasing the firm yield of the reservoir. The Texas Water Development Board (TWDB) performed volumetric surveys

Table G.2.1 - Historical Return Flows (ac-ft/yr)													
Name	County	Permit Number	Lat	Long	Once-Through Cooling	Return Control Point	Primary Control Point	2008	2009	2010	2011	Average	Historical Percent from BRA Source(s)
City of Abilene (Hamby Plant)	Jones	10334.004	32.56	-99.62	N	103341	CFFG18	10,778	8,344	11,138	7,572	9,458	0%
City of Breckenridge WWTP	Stephens	10040.001	32.77	-98.90	N	100401	CFEL22	593	459	577	590	555	0%
City of Graham WWTP	Young	10487.001	33.10	-98.59	N	104871	SHGR26	1,010	958	1,017	782	942	0%
Double Diamond (The Cliffs WWTP)	Palo Pinto	2789.001	32.86	-98.42	N	027891	BRPP27	22	44	45	86	49	0%
City of Ranger (Ranger WWTP)	Palo Pinto	11557.001	32.47	-98.69	N	401401	PPSA28	421	287	250	138	274	100%
Sportsmans World MUD WTP	Palo Pinto	2461.000	32.85	-98.49	N	515501	SJGR26	37	65	42	11	39	0%
City of Mineral Wells (Willow Creek WWTP)	Parker	10585.004	32.81	-98.05	N	105851	BRDE29	578	484	529	420	503	100%
City of Mineral Wells (Pollard Creek WWTP)	Palo Pinto	10585.001	32.79	-98.13	N	105852	BRDE29	1,557	1,551	1,719	1,386	1,553	0%
City of Granbury (WWTP)	Hood	10178.002	32.42	-97.78	N	101782	BRGR30	1,174	1,142	1,086	963	1,091	0%
Authority SWATs	Hood	2889.000	32.42	-97.68	N	515651	BRGR30	440	361	500	697	500	33%
Acton MUD (Decordova Bend WWTP)	Hood	11208.001	32.44	-97.70	N	515651	BRGR30	238	247	273	199	239	100%
Acton MUD (Pecan Plantation WWTP)	Hood	11415.001	32.36	-97.68	N	407601	BRGR30	139	168	193	137	159	24%
Decordova Steam Electric Station	Hood	1481	32.41	-97.69	Y	515631	BRGR30						24%
AES Wolf Hollow Power Plant	Hood	4288	32.33	-97.73	N	BRGR30	BRGR30	316	339	382	541	394	100%
City of Cleburne WWTP	Johnson	10006.001	32.31	-97.39	N	100061	NRBL32	3,962	4,513	4,541	3,564	4,145	100%
City of Godley	Johnson	10542.001	32.43	-97.52	N	410501	NRBL32	104	116	171	114	126	0%
City of Glen Rose WWTP	Somervell	10177.001	32.25	-97.74	N	409631	BRAQ33	392	365	160	98	254	0%
City of Whitney (Polk Street WWTP)	Hill	11408.002	31.95	-97.34	N	515731	BRAQ33	194	204	193	139	183	0%
Commanche Peak Nuclear Power Plant	Somervell	1854	32.30	-97.79	Y	409732	BRAQ33						0%
City of Itasca WWTP	Hill	10423.001	32.15	-97.14	N	106301	AQAQ34	112	152	147	130	136	100%
City of Hillsboro (WWTP)	Hill	10630.001	32.00	-97.14	N	106301	AQAQ34	1,490	1,046	1,480	1,253	1,317	0%
City of Stephenville (Stephenville WWTP)	Erath	10290.001	32.20	-98.19	N	102902	NBHI35	1,712	1,756	1,477	1,585	1,632	100%
City of Hico WWTP	Hamilton	10188.001	31.98	-98.03	N	NBHI35	NBHI35	112	123	131	102	117	0%
City of Meridian WWTP	Bosque	10113.002	31.93	-97.66	N	228202	NBCL37	198	183	211	372	241	0%
City of Clifton WWTP	Bosque	10043.001	31.78	-97.57	N	555151	NBCL37	306	382	413	305	351	0%
Bosque County Power Plant	Bosque	4167.000	31.85	-97.35	N	431601	BRAQ33	132	184	143	502	240	0%
City of McGregor (South WWTP)	McLennan	10219.002	31.41	-97.40	N	102191	BOWA40	493	701	547	350	523	100%
City of Valley Mills	Bosque	10307.001	31.66	-97.46	N	W12252	BOWA40	111	113	151	156	133	84%
City of Marlin WWTP	Falls	10110.002	31.26	-96.93	N	101102	BRHB42	472	1,021	910	791	798	
City of Waco WMRSS (Waco Metropolitan Area Regional WWTP)	McLennan	11071.001	31.52	-97.07	N	110711	BRHB42	25,665	28,097	29,670	24,613	27,011	21%
City of Lorena WWTP	McLennan	12195.001	31.37	-97.22	N	435201	BRHB42	170	234	199	132	184	0%
City of West WWTP	McLennan	10544.001	31.80	-97.08	N	CON070	BRHB42	280	335	375	222	303	0%
Lake Creek Steam Electric Station	McLenan	954	31.46	-96.98	Y	434531	BRHB42						0%
Tradinghouse Steam Electric Station	McLenan	1267	31.55	-96.97	Y	434231	BRHB42						0%
City of Robinson	McLenan	03466.000	31.52	-97.07	N	508501	BRHB42	189	144	122	173	157	0%
City of Eastland WWTP	Eastland	10637.001	32.39	-98.81	N	106371	LEDL43	569	365	258	234	356	0%
City of DeLeon WWTP	Comanche	10078.001	32.11	-98.52	N	CON054	LEHS45	114	97	115	92	104	0%
City of Dublin WWTP	Erath	10405.001	32.06	-98.34	N	284602	LEHM46	182	166	196	128	168	100%
City of Comanche WWTP	Comanche	10719.001	31.89	-98.59	N	363701	LEHM46	220	242	236	249	237	100%

Table G.2.1 - Historical Return Flows (ac-ft/yr)													
Name	County	Permit Number	Lat	Long	Once-Through Cooling	Return Control Point	Primary Control Point	2008	2009	2010	2011	Average	Historical Percent from BRA Source(s)
Upper Leon MWD WWTP	Comanche	14544.001	31.96	-98.52	N	LEHS45	LEHS45	16	24	26	26	23	99%
City of Hamilton	Hamilton	10492.002	31.71	-98.11	N	CON086	LEGT47	193	257	308	225	246	100%
City of Copperas Cove (Northwest WWTP)	Coryell	10045.005	31.08	-97.86	N	100455	LEBE49	926	1,132	1,298	1,181	1,134	100%
City of Gatesville (Leon Plant WWTP)	Coryell	10176.004	31.43	-97.74	N	101761	LEBE49	567	805	878	991	811	99%
City of Gatesville (Stillhouse Branch)	Coryell	10176.002	31.45	-97.75	N	101761	LEBE49	1,423	1,214	1,418	1,824	1,470	87%
City of Copperas Cove (Northeast WWTP)	Coryell	10045.004	31.13	-97.89	N	022336	LEBE49	831	954	1,044	744	893	87%
City of Moody WWTP	McLennan	10225.001	31.31	-97.36	N	CON090	LEBE49	92	71	116	59	85	99%
Bell County WCID #1 WWTP	Bell	10351.001	31.13	-97.52	N	103511	LEBE49	379	423	557	619	495	85%
North Forth Hood WWTP	Coryell	12096-001	31.22	-97.77	N	290201	LEBE49	140	0	0	0	35	100%
City of Lampasas (Henderson WWTF)	Lampasas	10205.002	31.00	-98.27	N	102051	LAKE50	412	488	570	380	462	0%
City of Copperas Cove (South WWTP)	Coryell	10045.003	31.09	-97.91	N	100451	LAYO51	505	497	603	466	518	100%
City of Harker Heights WWTP	Bell	10155.001	31.09	-97.66	N	101551	LRLR53	1,875	2,213	2,551	2,073	2,178	99%
Bell County WCID #1 WWTP 2	Bell	10351.003	31.11	-97.70	N	103512	LRLR53	2,240	0	0	0	560	100%
Bell County WCID #1	Bell	10351.002	31.11	-97.70	N	103513	LRLR53	9,003	12,499	14,653	11,484	11,910	100%
Authority TBRSS (Temple Belton Regional WWTP)	Bell	11318.001	30.98	-97.54	N	113181	LRLR53	6,326	7,061	7,878	6,618	6,971	100%
Bell County WCID #2 (Academy WWTP)	Bell	11090.001	30.98	-97.34	N	LRLR53	LRLR53	51	51	53	50	51	100%
Bell County WCID #2 (Little River WWTP)	Bell	11091.001	30.98	-97.37	N	LRLR53	LRLR53	66	61	70	16	53	47%
City of Florence WWTP	Williamson	10944.001	30.83	-97.78	N	W12431	LRLR53	72	107	124	75	94	47%
Bell County WCID #3	Bell	10797.001	31.07	-97.61	N	LRLR53	LRLR53	318	360	366	278	331	0%
Universal Services Fort Hood WWTP	Bell	13358-001	31.11	-97.79	N	W12181	LRLR53	36	47	51	41	44	100%
Liberty Hill Regional WWTP	Williamson	14477.001	30.62	-97.85	N	373701	SGGE55	61	99	112	132	101	0%
City of Georgetown (San Gabriel WWTP)	Williamson	10489.002	30.62	-97.79	N	104893	GAGE56	1,485	1,391	1,798	1,276	1,488	0%
City of Georgetown (Dove Springs WWTP)	Williamson	10489.003	30.63	-97.63	N	104892	GALA57	1,146	1,229	1,707	1,520	1,400	52%
City of Georgetown (Pecan Branch WWTP)	Williamson	10489-005	30.67	-97.61	N	CON106	GALA57	1,128	1,155	1,073	819	1,044	52%
City of Cameron (Cameron WWTP)	Milam	10004.001	30.84	-96.97	N	100041	LRCA58	729	705	748	587	692	52%
Authority/LCRA BCRWSS West (Brushy Creek Regional WWTP)	Williamson	10264.001	30.51	-97.67	N	102641	LRCA58	1,035	941	695	0	668	0%
Authority/LCRA BCRWSS East (Brushy Creek Regional WWTP East)	Williamson	10264.002	30.53	-97.62	N	102642	LRCA58	14,951	16,701	17,790	18,287	16,933	100%
City of Taylor (Mustang Creek WWTP)	Williamson	10299.001	30.55	-97.39	N	102991	LRCA58	1,471	1,680	1,803	1,423	1,594	100%
Anderson Mill MUD (Anderson Mill WWTP)	Williamson	11459.001	30.54	-97.88	N	114591	LRCA58	709	624	437	328	524	100%
City of Cedar Park (Water Reclamation)	Williamson	12308.001	30.50	-97.81	N	123081	LRCA58	2,415	2,193	2,492	2,443	2,386	0%
City of Leander WWTP	Williamson	12644.001	30.58	-97.84	N	126441	LRCA58	1,114	1,512	1,509	845	1,245	0%
City of Bartlett WWTP	Bell	10880.001	30.80	-97.41	N	372751	LRCA58	190	156	223	146	179	0%
Brushy Creek MUD	Williamson	11865.001			N	W12441	LRCA58	0	0	0	0	0	0%

Table G.2.1 - Historical Return Flows (ac-ft/yr)													
Name	County	Permit Number	Lat	Long	Once-Through Cooling	Return Control Point	Primary Control Point	2008	2009	2010	2011	Average	Historical Percent from BRA Source(s)
Block House MUD	Williamson	13031.001			N	W12441	LRCA58	0	0	0	0	0	0%
City of Holland WWTP	Bell	10897.001	30.88	-97.39	N	372751	LRCA58	44	53	52	19	42	0%
City of Hutto WWTP	Williamson	11324-001	30.54	-97.54	N	416621	LRCA58?	937	886	1,312	1,018	1,038	81%
City of Hearne WWTP 2	Robertson	10046.002	30.86	-96.60	N	100462	BRBR59	598	628	571	551	587	13%
City of Calvert WWTP	Robertson	10095.001	30.97	-96.68	N	100462	BRBR59	192	133	110	92	132	0%
City of Temple (Doshier Farm WWTP)	Bell	10470.002	31.08	-97.32	N	104702	BRBR59	2,465	3,029	3,467	2,156	2,780	0%
City of Rosebud WWTP	Falls	10731.001	31.06	-96.99	N	CON117	BRBR59	91	93	177	105	116	0%
City of Troy WWTP	Bell	11263.001	31.22	-97.29	N	CON109	BRBR59	84	174	146	76	120	100%
Twin Oaks Power Station	Robertson	2877	31.09	-96.69	N	514831	BRBR59	167	124	0	69	90	0%
City of Lexington WWTP	Lee	10016.001	30.42	-97.01	N	MYDB60	MYDB60	27	54	76	51	52	0%
Aluminum Co. of America (Rockdale Plant)	Lee	395.000	30.55	-97.05	Y	003956	EYDB61						0%
City of Rockdale WWTP	Milam	10658.001	30.64	-97.00	N	CON224	EYDB61	593	492	483	432	500	0%
City of Giddings (North WWTP)	Lee	10456.001	30.19	-96.95	N	CON125	YCSO62	370	330	333	322	339	0%
City of Caldwell	Burleson	10813.001	30.53	-96.68	N	DCLY63	DCLY63	467	496	502	447	478	0%
TX Dept MHMR (Mexia State School)	Limestone	10717.001	31.69	-96.53	N	528801	NAGR64	275	151	121	73	155	0%
City of Teague West WWTP	Freestone	10300.001	31.62	-96.30	N	CON250	BGFR65	47	31	67	46	48	0%
City of Mexia WWTP	Limestone	10222.001	31.66	-96.48	N	CON131	NAEA66	726	764	804	760	764	0%
City of Groesbeck	Limestone	10182.001	31.53	-96.52	N	W12531	NAEA66	395	411	400	250	364	0%
Limestone Electric Generating Station	Limestone	2430	31.38	-96.28	Y	516531	NAEA66						
Oak Grove Steam Electric Station	Robertson	1986	31.12	-96.52	unknown	529831	NABR67						
City of College Station (Carters Creek WWTP)	Brazos	10024.006	30.62	-96.28	N	100241	BRHE68	6,667	6,660	6,198	6,084	6,402	
City of Navasota (Old WWTP)	Grimes	10231.001	30.38	-96.10	N	102311	BRHE68	577	696	668	577	629	0%
City of Brenham WWTP	Washington	10388.001	30.17	-96.38	N	103881	BRHE68	2,424	2,268	2,180	2,046	2,229	0%
City of Bryan (Burton Creek WWTP)	Brazos	10426.001	30.64	-96.32	N	104261	BRHE68	5,001	5,459	5,338	5,072	5,217	100%
City of Bryan (Still Creek WWTP)	Brazos	10426.002	30.67	-96.41	N	104262	BRHE68	1,810	1,471	1,737	1,461	1,620	0%
Texas A&M University (TAMU Main Campus WWTP)	Brazos	10968.003	30.62	-96.34	N	109681	BRHE68	1,719	1,594	1,761	1,775	1,712	0%
City of Somerville WWTP	Burleson	10371.001	30.35	-96.52	N	516451	BRHE68	197	171	187	151	177	
City of Bryan (Turkey Creek WWTP)	Brazos	10426.003	30.62	-96.38	N	526851	BRHE68	366	363	488	616	458	0%
Texas A&M University (Brayton Fire Training School)	Brazos	2585.001	30.58	-96.35	N	025851	BRHE68	153	337	361	455	326	0%
Texas Dept. of Criminal Justice (Pack Unit WWTP)	Grimes	13743.001	30.32	-96.11	N	CON148	BRHE68	256	226	309	311	275	0%
Texas Dept. of Criminal Justice (Luther WWTP)	Grimes	12458.002	30.26	-96.05	N	CON149	BRHE68	125	187	144	179	159	
Gibbons Creek SES	Grimes	2120	30.64	-95.95	Y	531131	BRHE68						
City of College Station (Lick Creek WWTP)	Brazos	10024-003	30.56	-96.21	N	CON143	BRHE68	812	887	941	971	903	0%
Sanderson Farms Brazos Processing Division	Brazos	03821-000	30.65	-96.41	unknown	38211	BRHE68	1,634	1,314	1,340	1,252	1,385	0%
Sanderson Farms Inc	McLenan	04784-000	31.55	-97.20	unknown	BOWA40	BOWA40	1,068	1,267	1,196	1,312	1,211	0%

Table G.2.1 - Historical Return Flows
(ac-ft/yr)

Name	County	Permit Number	Lat	Long	Once-Through Cooling	Return Control Point	Primary Control Point	2008	2009	2010	2011	Average	Historical Percent from BRA Source(s)
City of Bellville WWTP	Austin	10385.002	29.94	-96.27	N	103851	MCBL69	459	507	490	424	470	0%
City of Richmond (Richmond North Second Street WWTP)	Fort Bend	10258.001	29.46	-95.75	N	102581	BRRI70	0	0	0	0	0	0%
City of Sealy (Allens Creek WWTP)	Austin	10276.001	29.74	-96.29	N	102761	BRRI70	591	616	620	526	588	0%
City of Rosenberg (Plant NO 1A WWTP)	Fort Bend	10607.003	29.57	-95.80	N	106073	BRRI70	1,362	1,432	1,362	1,063	1,305	0%
Prairie View A&M University WWTP	Waller	11275.002	30.10	-96.00	N	112751	BRRI70	570	512	581	489	538	0%
Brookshire MWD WWTP	Waller	10001.001	29.78	-95.94	N	516604	BRRI70	442	448	378	358	406	0%
Frito-Lay Inc. (Rosenberg Facility)	Fort Bend	2443.001	29.57	-95.81	N	024431	BRRI70	884	0	1	5	223	0%
Fort Bend Co. MUD 081	Fort Bend	13051.002	29.65	-95.93	N	BRRI70	BRRI70	123	120	146	131	130	
City of Hempstead WWTP	Waller	10948.001	30.08	-96.10	N	CON150	BRRI70	437	402	368	312	380	0%
City of Wallis WWTP	Austin	10765.001	29.64	-96.08	N	CON153	BRRI70	134	140	120	97	123	0%
City of Rosenberg WWTP 3	Fort Bend	10607.004	29.53	-95.85	N	CON236	BGNE71	3	3	5	4	4	0%
City of Fulshear WWTP	Fort Bend	13314.001	29.69	-95.91	N	CON234	BRRI70	38	47	35	29	37	0%
City of Rosenberg WWTP 2	Fort Bend	10607.002	29.53	-95.81	N	106072	BGNE71	1,737	1,678	1,911	1,658	1,746	0%
City of Richmond (SW WWTP, Richmond Regional WWTP)	Fort Bend	10258.003	29.57	-95.75	N	102582	BRRO72	1,564	1,652	1,678	1,601	1,624	0%
SLRSS (Sugarland North WWTP)	Fort Bend	11317.001	29.59	-95.63	N	113171	BRRO72	4,328	4,210	4,446	4,360	4,336	0%
WA Parish SES	Fort Bend	1038-000	29.50	-95.60	Y	532531	BRRO72						0%
Pecan Grove MUD	Fort Bend	11655.001	29.62	-95.74	N	116551	BRRO72	1,226	1,185	1,192	1,059	1,166	
City of Sugarland (South WWTP)	Fort Bend	12833.002	29.56	-95.59	N	128331	BRRO72	4,728	4,141	4,158	4,353	4,345	0%
Texas Department of Criminal Justice - Central	Fort Bend	10986.001	29.61	-95.66	N	128332	BRRO72	254	237	246	151	222	0%
Texas Department of Criminal Justice - Jester III	Fort Bend	11475.003	29.62	-95.71	N	128332	BRRO72	352	335	293	240	305	
City of Sugarland	Fort Bend	12833.003			N	128332	BRRO72						
Plantation MUD	Fort Bend	11971.001	29.55	-95.69	N	133551	BRRO72	333	302	304	321	315	
Fort Bend MUD 106	Fort Bend	13355.001	29.55	-95.69	N	133551	BRRO72	1,107	1,234	1,284	1,110	1,184	0%
Fort Bend MUD 112 (New Territory North Regional WWTP)	Fort Bend	13628.001	29.58	-95.70	N	136281	BRRO72	1,659	1,436	1,578	1,455	1,532	0%
Texas Department of Criminal Justice - Jester I	Fort Bend	11475.001	29.63	-95.71	N	517033	BRRO72	175	161	165	139	160	0%
Missouri City Steep Bank Flat Bank WWTP	Fort Bend	13873-001	29.55	-95.57	N	519951	BRRO72	1,222	1,379	1,480	1,832	1,478	
Quail Valley UD WWTP	Fort Bend	11046.001	29.57	-95.55	N	CON155	BRRO72	1,471	1,676	1,468	1,576	1,548	0%
Sienna Plantation MUD 1	Fort Bend	14118.001	29.49	-95.52	n	516601	BRRO72	778	896	875	1,187	934	0%
City of Lake Jackson WWTP	Brazoria	10047.001	29.03	-95.45	N	100471	BRGM73	3,451	3,132	3,601	2,782	3,242	0%
City of West Columbia WWTP	Brazoria	10312.001	29.14	-95.63	N	103121	BRGM73	1,115	742	1,240	477	893	0%
City of Freeport (Central WWTP)	Brazoria	10882.001	28.94	-95.38	N	108821	BRGM73	974	903	1,050	696	906	0%
Dow Chemical	Brazoria	7.000	28.98	-95.39	unknown	108821	BRGM73						0%
Total All Return Flows								*168,190*	*171,910*	*185,092*	*160,942*	171,534	

Data are from the TCEQ

Table G.2.2 - Current Monthly Return Flows Based on Average from 2008 to 2011							
(values in acft/month)							
Control Point	Jan/July	Feb/Aug	Mar/Sept	April/Oct	May/Nov	June/Dec	Discharger
100401	47	43	47	46	47	46	10040.001 City of Breckenridge WWTP
	47	47	46	47	46	46	
104871	82	78	82	78	92	78	10487.001 City of Graham WWTP
	75	67	77	72	81	80	
27891	2	2	3	3	7	8	2789.001 Double Diamond (The Cliffs WWTP)
	10	5	3	3	2	1	
401401	28	26	26	21	23	21	11557.001 City of Ranger (Ranger WWTP)
	18	19	21	26	22	23	
515501	3	3	3	3	3	3	2461 Sportsmans World MUD WTP
	3	3	3	3	3	6	
105851	43	39	43	41	43	41	10585.004 City of Mineral Wells (Willow Creek WWTP)
	43	43	41	43	41	42	
105852	120	135	148	133	155	137	10585.001 City of Mineral Wells (Pollard Creek WWTP)
	124	137	111	113	115	125	
101782	93	84	93	90	93	90	10178.002 City of Granbury (WWTP)
	93	93	90	93	90	89	
515651	42	33	30	36	39	43	2889 Authority SWATs BRA owned facility
	49	49	44	49	42	44	
515651	19	25	13	17	21	21	11208.001 Acton MUD (Decordova Bend WWTP)
	21	23	17	17	23	22	
407601	11	18	8	11	15	13	11415.001 Acton MUD (Pecan Plantation WWTP)
	13	15	11	13	15	16	
515631	0	0	0	0	0	0	1481 Decordova Steam Electric Station Once-through cooling
	0	0	0	0	0	0	
BRGR30	33	31	33	32	33	32	4288 AES Wolf Hollow Power Plant
	33	33	32	33	32	37	
410501	15	11	11	15	7	15	10542.001 City of Godley
	4	11	7	4	11	15	
409631	16	14	20	20	24	24	10177.001 City of Glen Rose WWTP
	24	24	23	26	22	17	
515731	8	22	22	20	14	9	11408.002 City of Whitney (Polk Street WWTP)
	16	16	16	16	19	5	
409732	0	0	0	0	0	0	1854 Commanche Peak Nuclear Power Plant Once-through cooling
	0	0	0	0	0	0	
106301	13	12	12	10	13	9	10423.001 City of Itasca WWTP
	9	12	9	12	13	12	
106301	108	105	121	115	129	116	10630.001 City of Hillsboro (WWTP)
	106	104	102	101	99	111	
102902	140	139	143	157	157	158	10290.001 City of Stephenville (Stephenville WWTP)
	137	103	90	144	136	128	
NBHI35	10	8	10	10	6	10	10188.001 City of Hico WWTP
	8	10	10	10	10	15	
228202	26	26	23	29	29	5	10113.002 City of Meridian WWTP
	18	10	13	16	18	28	
555151	33	27	33	31	35	29	10043.001 City of Clifton WWTP
	27	27	27	27	27	28	
431601	20	19	20	20	20	20	4167 Bosque County Power Plant
	20	20	20	20	20	21	
102191	45	43	49	46	53	43	10219.002 City of McGregor (South WWTP)
	39	39	38	40	40	48	
W12252	7	11	12	7	11	14	10307.001 City of Valley Mills
	12	9	19	14	12	6	
101102	27	33	40	38	132	138	10110.002 City of Marlin WWTP
	100	114	99	31	26	21	
435201	15	18	21	15	15	15	12195.001 City of Lorena WWTP
	12	12	15	15	15	16	
CON070	24	30	55	30	21	18	10544.001 City of West WWTP
	12	12	15	21	39	26	
434531	0	0	0	0	0	0	954 Lake Creek Steam Electric Station Once-through cooling
	0	0	0	0	0	0	
434231	0	0	0	0	0	0	1267 Tradinghouse Steam Electric Station Once-through cooling
	0	0	0	0	0	0	

Table G.2.2 - Current Monthly Return Flows Based on Average from 2008 to 2011							
(values in acft/month)							
Control Point	Jan/July	Feb/Aug	Mar/Sept	April/Oct	May/Nov	June/Dec	Discharger
508501	13	12	13	13	13	13	03466.000 City of Robinson
	13	13	13	13	13	15	
106371	22	22	23	25	30	35	10637.001 City of Eastland WWTP
	44	43	35	28	24	25	
CON054	9	9	10	9	10	8	10078.001 City of DeLeon WWTP
	8	8	8	8	8	9	
284602	14	15	15	15	16	13	10405.001 City of Dublin WWTP
	12	13	13	13	13	16	
363701	20	21	22	21	23	19	10719.001 City of Comanche WWTP
	17	19	19	19	19	18	
LEHS45	2	2	2	2	2	2	14544.001 Upper Leon MWD WWTP
	2	2	2	2	2	1	
CON086	21	22	22	22	23	20	10492.002 City of Hamilton
	18	20	19	20	19	20	
100455	93	90	104	99	111	100	10045.005 City of Copperas Cove (Northwest WWTP)
	91	90	88	87	86	95	
101761	71	68	76	71	81	68	10176.001 City of Gatesville (Leon Plant WWTP)
	61	61	61	63	61	69	
101761	127	123	138	128	148	122	10176.002 City of Gatesville (Stillhouse Branch)
	111	110	109	113	112	129	
22336	73	73	80	77	88	77	10045.004 City of Copperas Cove (Northeast WWTP)
	73	69	69	69	66	79	
CON090	7	7	8	7	9	7	10225.001 City of Moody WWTP
	6	6	6	6	6	10	
103511	40	39	45	43	48	43	10351.001 Bell County WCID #1 WWTP
	40	39	38	38	37	45	
290201	3	3	3	3	3	3	12096-001 North Forth Hood WWTP
	3	3	3	3	3	2	
102051	40	38	43	40	47	38	10205.002 City of Lampasas (Henderson WWTF)
	36	36	33	36	36	39	
100451	42	41	47	45	51	45	10045.003 City of Copperas Cove (South WWTP)
	41	41	40	39	39	47	
101551	188	181	205	191	218	181	10155.001 City of Harker Heights WWTP
	164	162	161	168	166	193	
103512	46	45	51	49	55	49	10351.003 Bell County WCID #1 WWTP 2
	45	44	43	43	42	48	
103513	974	949	1093	1038	1164	1044	10351.002 Bell County WCID #1
	956	941	921	909	898	1023	
113181	570	556	640	608	682	611	11318.001 TBRSS (Temple Belton Regional WWTP)
	559	551	539	532	525	598	
LRLR53	4	4	5	4	5	4	11090.001 Bell County WCID #2 (Academy WWTP)
	4	4	4	4	4	5	
LRLR53	5	5	5	5	6	5	11091.001 Bell County WCID #2 (Little River WWTP)
	4	4	4	4	4	2	
W12431	6	6	10	8	13	6	10944.001 City of Florence WWTP
	8	6	8	6	6	11	
LRLR53	27	27	30	30	34	27	10797.001 Bell County WCID #3
	24	24	24	27	24	33	
W12181	4	3	4	4	4	4	13358-001 Universal Services Fort Hood WWTP
	4	4	4	4	4	1	
373701	9	8	9	8	9	8	14477.001 Liberty Hill Regional WWTP
	9	9	8	9	8	7	
104893	114	115	117	114	127	148	10489.002 City of Georgetown (San Gabriel WWTP)
	114	115	137	130	133	124	
104892	107	109	109	107	118	139	10489.003 City of Georgetown (Dove Springs WWTP)
	107	109	130	123	125	117	
CON106	89	81	89	86	89	86	10489-005 City of Georgetown (Pecan Branch WWTP)
	89	89	86	89	86	85	
100041	56	59	61	59	67	67	10004.001 City of Cameron (Cameron WWTP)
	47	45	49	58	61	63	
102641	51	52	52	51	57	66	10264.001 BCRWSS West (Brushy Creek Regional WWTP)
	51	52	62	58	60	56	

Table G.2.2 - Current Monthly Return Flows Based on Average from 2008 to 2011							
(values in acft/month)							
Control Point	Jan/July	Feb/Aug	Mar/Sept	April/Oct	May/Nov	June/Dec	Discharger
102642	1095	1110	1128	1097	1225	1423	10264.002 BCRWSS East (Brushy Creek Regional WWTP East)
	1097	1115	1325	1251	1283	1205	
102991	110	116	123	117	130	145	10299.001 City of Taylor (Mustang Creek WWTP)
	152	155	150	138	133	125	
114591	40	41	41	40	45	52	11459.001 Anderson Mill MUD (Anderson Mill WWTP)
	40	41	49	46	47	42	
123081	181	184	187	183	204	236	12308.001 City of Cedar Park (Water Reclamation)
	183	186	221	208	214	199	
126441	94	96	99	94	105	124	12644.001 City of Leander WWTP
	96	96	115	108	112	106	
372751	19	21	23	5	19	14	10880.001 City of Bartlett WWTP
	2	7	7	16	23	23	
W12441	0	0	0	0	0	0	11865.001 Brushy Creek MUD
	0	0	0	0	0	0	
W12441	0	0	0	0	0	0	13031.001 Block House MUD
	0	0	0	0	0	0	
372751	4	4	4	4	4	4	10897.001 City of Holland WWTP
	3	3	3	3	3	3	
416621	88	80	88	85	88	85	11324-001 City of Hutto WWTP
	88	88	85	88	85	90	
100462	6	31	67	60	65	56	10046.002 City of Hearne WWTP 2
	61	66	66	38	38	33	
100462	11	11	11	11	11	11	10095.001 City of Calvert WWTP
	12	9	12	11	11	11	
104702	227	222	255	242	271	244	10470.002 City of Temple (Doshier Farm WWTP)
	223	220	215	212	210	239	
CON117	10	10	10	10	12	9	10731.001 City of Rosebud WWTP
	9	9	9	9	9	10	
CON109	10	10	11	11	12	10	11263.001 City of Troy WWTP
	9	9	9	9	9	11	
514831	8	7	8	7	8	7	2877 Twin Oaks Power Station Once-through cooling
	8	8	7	8	7	7	
MYDB60	5	4	4	5	5	4	10016.001 City of Lexington WWTP
	4	4	4	5	4	4	
3956	0	0	0	0	0	0	395 Aluminum Co. of America (Rockdale Plant)
	0	0	0	0	0	0	
CON224	37	31	33	33	41	39	10658.001 City of Rockdale WWTP
	37	39	50	52	41	67	
CON125	24	26	27	27	39	27	10456.001 City of Giddings (North WWTP)
	31	23	29	31	26	29	
DCLY63	25	24	26	29	52	49	10813.001 City of Caldwell
	47	46	46	47	41	46	
528801	10	11	12	12	14	18	10717.001 TX Dept MHMR (Mexia State School)
	14	13	14	13	12	12	
CON250	4	5	5	6	4	4	10300.001 City of Teague West WWTP
	2	3	3	4	4	4	
CON131	63	41	59	60	69	90	10222.001 City of Mexia WWTP
	69	66	68	60	56	63	
W12531	25	26	29	29	35	38	10182.001 City of Groesbeck
	34	31	30	30	26	31	
516531	0	0	0	0	0	0	2430 Limestone Electric Generating Station
	0	0	0	0	0	0	
529831	0	0	0	0	0	0	1986 Oak Grove Steam Electric Station
	0	0	0	0	0	0	
102311	53	47	54	50	49	37	10231.001 City of Navasota (Old WWTP)
	59	62	56	55	53	54	
103881	161	165	175	175	198	223	10388.001 City of Brenham WWTP
	197	200	202	195	176	162	
109681	114	114	136	146	151	154	10968.003 Texas A&M University (TAMU Main Campus WWTP)
	162	156	154	158	139	128	
516451	16	14	15	14	14	13	10371.001 City of Somerville WWTP
	13	14	17	14	16	17	

Table G.2.2 - Current Monthly Return Flows Based on Average from 2008 to 2011							
(values in acft/month)							
Control Point	Jan/July	Feb/Aug	Mar/Sept	April/Oct	May/Nov	June/Dec	Discharger
25851	26	20	1	17	20	28	2585.001 Texas A&M University (Brayton Fire Training School)
	31	31	31	51	37	33	
CON148	25	22	25	23	23	21	13743.001 Texas Dept. of Criminal Justice (Pack Unit WWTP)
	21	22	23	22	23	25	
CON149	15	8	8	31	10	13	12458.002 Texas Dept. of Criminal Justice (Luther WWTP)
	13	13	10	13	13	12	
531131	0	0	0	0	0	0	2120 Gibbons Creek SES Once-through cooling
	0	0	0	0	0	0	
38211	118	107	118	114	118	114	03821-000 Sanderson Farms Brazos Processing Division
	118	118	114	118	114	114	
BOWA40	103	94	103	99	103	99	04784-000 Sanderson Farms Inc
	103	103	99	103	99	103	
103851	44	41	40	39	44	38	10385.002 City of Bellville WWTP
	40	44	36	38	33	33	
102581	0	0	0	0	0	0	10258.001 City of Richmond (Richmond North Second Street WWTP)
	0	0	0	0	0	0	
102761	51	48	54	51	49	45	10276.001 City of Sealy (Allens Creek WWTP)
	48	47	44	45	47	59	
106073	14	63	84	94	147	165	10607.003 City of Rosenberg (Plant NO 1A WWTP)
	139	144	132	107	103	113	
112751	51	58	48	47	50	24	11275.002 Prairie View A&M University WWTP
	23	30	63	58	51	35	
516604	32	32	32	31	37	34	10001.001 Brookshire MWD WWTP
	37	35	38	31	34	33	
24431	28	20	21	17	17	20	2443.001 Frito-Lay Inc. (Rosenberg Facility)
	9	15	16	18	18	24	
BRRI70	9	9	9	10	11	10	13051.002 Fort Bend Co. MUD 081
	13	13	12	11	11	12	
CON150	24	1	25	19	26	34	10948.001 City of Hempstead WWTP
	43	40	41	43	43	41	
CON153	12	10	10	10	12	9	10765.001 City of Wallis WWTP
	10	10	9	10	10	11	
CON236	0	0	0	0	0	0	10607.004 City of Rosenberg WWTP 3
	0	0	0	0	0	0	
CON234	3	3	3	3	3	3	13314.001 City of Fulshear WWTP
	3	3	3	3	3	4	
106072	169	131	163	154	144	143	10607.002 City of Rosenberg WWTP 2
	144	143	143	133	131	148	
102582	133	100	128	124	145	138	10258.003 City of Richmond (SW WWTP, Richmond Regional WWTP)
	159	159	137	142	128	131	
113171	388	308	342	365	404	378	11317.001 SLRSS (Sugarland North WWTP)
	355	359	323	346	353	415	
532531	0	0	0	0	0	0	1038-000 WA Parish SES Once-through cooling
	0	0	0	0	0	0	
116551	86	84	86	97	114	109	11655.001 Pecan Grove MUD
	109	102	104	97	82	96	
128331	331	295	327	327	367	373	12833.002 City of Sugarland (South WWTP)
	404	426	408	383	343	361	
128332	19	15	19	24	24	12	10986.001 Texas Department of Criminal Justice - Central
	21	15	15	19	21	18	
128332	23	22	25	25	25	25	11475.003 Texas Department of Criminal Justice - Jester III
	27	27	31	25	25	25	
128332	0	0	0	0	0	0	12833.003 City of Sugarland
	0	0	0	0	0	0	
133551	32	24	26	28	26	23	11971.001 Plantation MUD
	26	28	24	26	26	26	
133551	40	40	101	70	101	112	13355.001 Fort Bend MUD 106
	132	132	121	163	90	82	
136281	109	109	109	109	109	109	13628.001 Fort Bend MUD 112 (New Territory North Regional WWTP)
	220	220	109	109	109	111	
517033	13	12	13	13	13	13	11475.001 Texas Department of Criminal Justice - Jester I
	13	13	15	13	13	16	

Table G.2.2 - Current Monthly Return Flows Based on Average from 2008 to 2011							
(values in acft/month)							
Control Point	Jan/July	Feb/Aug	Mar/Sept	April/Oct	May/Nov	June/Dec	Discharger
519951	125	114	125	121	125	121	13873-001 Missouri City Steep Bank Flat Bank WWTP
	125	125	121	125	121	130	
CON155	131	120	131	127	131	127	35220.001 Quail Valley UD WWTP
	131	131	127	131	127	134	
516601	79	72	79	77	79	77	119539.001 Sienna Plantation MUD 1
	79	79	77	79	77	80	
100471	229	240	259	286	278	291	10047.001 City of Lake Jackson WWTP
	321	305	305	274	245	209	
103121	97	93	87	83	77	64	10312.001 City of West Columbia WWTP
	73	62	66	62	66	63	
108821	64	67	73	80	77	82	10882.001 City of Freeport (Central WWTP)
	90	85	85	77	68	58	
108821	0	0	0	0	0	0	7 Dow Chemical Assuming no returns
	0	0	0	0	0	0	

Table G.2.3 - Current Monthly Return Flows Based on Monthly Minima from 2007 to 2011							
(values in acft/month)							
Control Point	Jan/July	Feb/Aug	Mar/Sept	April/Oct	May/Nov	June/Dec	Discharger
103341	104	143	217	251	355	337	10334.004 City of Abilene (Hamby Plant) Diverted under 4266
	273	468	359	199	156	100	
415031	680	291	489	330	324	0	10334.004 City of Abilene (Hamby Plant) Sent to Lake Kirby
	0	0	0	507	513	572	
100401	37	35	43	40	46	39	10040.001 City of Breckenridge WWTP
	42	41	38	38	36	40	
104871	76	70	80	70	69	67	10487.001 City of Graham WWTP
	65	68	63	77	66	81	
27891	3	2	2	2	3	4	2789.001 Double Diamond (The Cliffs WWTP)
	2	4	3	3	3	4	
401401	11	14	10	13	15	8	11557.001 City of Ranger (Ranger WWTP)
	8	11	9	12	9	11	
515501	3	1	1	3	1	1	2461 Sportsmans World MUD WTP
	1	2	1	1	1	2	
105851	26	26	30	36	40	31	10585.004 City of Mineral Wells (Willow Creek WWTP)
	32	29	32	31	28	28	
105852	117	107	111	108	120	103	10585.001 City of Mineral Wells (Pollard Creek WWTP)
	106	110	111	112	106	114	
101782	82	84	93	88	92	87	10178.002 City of Granbury (WWTP)
	88	86	80	84	27	28	
515651	6	3	14	27	35	45	2889 Authority SWATs BRA owned facility
	29	37	34	30	20	5	
515651	13	13	17	16	21	14	11208.001 Acton MUD (Decordova Bend WWTP)
	14	13	12	13	14	13	
407601	10	10	11	11	12	10	11415.001 Acton MUD (Pecan Plantation WWTP)
	11	9	9	11	10	11	
515631	0	0	0	0	0	0	1481 Decordova Steam Electric Station Once-through cooling
	0	0	0	0	0	0	
BRGR30	19	7	27	23	30	27	4288 AES Wolf Hollow Power Plant
	43	42	25	25	20	21	
100061	274	260	307	340	327	225	10006.001 City of Cleburne WWTP Reuse right
	201	201	215	254	271	267	
410501	7	7	9	9	9	7	10542.001 City of Godley
	7	2	8	8	8	7	
409631	20	20	23	29	34	33	10177.001 City of Glen Rose WWTP
	34	34	33	34	24	33	
515731	8	8	6	10	17	8	11408.002 City of Whitney (Polk Street WWTP)
	11	9	8	7	6	10	
409732	0	0	0	0	0	0	1854 Commanche Peak Nuclear Power Plant Once-through cooling
	0	0	0	0	0	0	
106301	4	4	5	10	8	6	10423.001 City of Itasca WWTP
	6	6	8	8	5	4	
106301	107	68	109	103	90	68	10630.001 City of Hillsboro (WWTP)
	74	73	99	94	95	82	
102902	127	120	130	129	136	118	10290.001 City of Stephenville (Stephenville WWTP)
	120	129	130	138	128	124	
NBHI35	9	8	8	9	9	8	10188.001 City of Hico WWTP
	7	8	8	6	8	7	
228202	13	12	12	11	12	12	10113.002 City of Meridian WWTP
	14	12	10	11	12	8	
555151	26	22	23	23	25	25	10043.001 City of Clifton WWTP
	25	25	26	25	26	26	
431601	3	3	2	1	10	12	4167 Bosque County Power Plant
	25	25	14	3	1	1	
102191	27	29	29	27	31	26	10219.002 City of McGregor (South WWTP)
	24	24	24	27	20	30	
W12252	9	7	8	9	9	11	10307.001 City of Valley Mills
	10	10	7	10	6	7	
101102	34	34	44	34	47	31	10110.002 City of Marlin WWTP
	31	38	34	4	45	35	
110711	1984	1881	2138	1841	1719	1700	11071.001 City of Waco WMRSS (Waco Metropolitan Area Regional WWTP)
	1822	1951	2011	2048	1923	2058	Reuse right

Table G.2.3 - Current Monthly Return Flows Based on Monthly Minima from 2007 to 2011							
(values in acft/month)							
Control Point	Jan/July	Feb/Aug	Mar/Sept	April/Oct	May/Nov	June/Dec	Discharger
435201	13	10	11	11	11	9	12195.001 City of Lorena WWTP
	9	9	9	10	10	11	
CON070	20	20	24	17	20	11	10544.001 City of West WWTP
	10	11	12	14	14	18	
434531	0	0	0	0	0	0	954 Lake Creek Steam Electric Station Once-through cooling
	0	0	0	0	0	0	
434231	0	0	0	0	0	0	1267 Tradinghouse Steam Electric Station Once-through cooling
	0	0	0	0	0	0	
508501	7	6	8	9	8	11	03466.000 City of Robinson
	13	16	9	9	5	3	
106371	11	18	19	21	22	16	10637.001 City of Eastland WWTP
	24	22	22	19	12	9	
CON054	9	8	10	8	8	5	10078.001 City of DeLeon WWTP
	4	6	5	7	7	8	
284602	10	8	6	4	6	6	10405.001 City of Dublin WWTP
	5	3	4	8	7	10	
363701	16	16	15	19	19	17	10719.001 City of Comanche WWTP
	18	14	15	19	17	19	
LEHS45	2	2	2	2	2	2	14544.001 Upper Leon MWD WWTP
	2	2	2	2	2	2	
CON086	15	15	18	19	17	14	10492.002 City of Hamilton
	15	17	20	15	14	16	
100455	77	66	84	78	92	70	10045.005 City of Copperas Cove (Northwest WWTP)
	65	67	65	74	70	76	
101761	39	34	48	47	60	51	10176.004 City of Gatesville (Leon Plant WWTP)
	46	37	44	42	37	43	
101761	111	89	105	103	108	101	10176.002 City of Gatesville (Stillhouse Branch)
	104	101	108	111	110	116	
22336	65	61	61	57	65	56	10045.004 City of Copperas Cove (Northeast WWTP)
	51	52	52	57	54	61	
CON090	4	4	5	4	5	3	10225.001 City of Moody WWTP
	3	4	4	4	5	5	
103511	26	26	32	41	38	40	10351.001 Bell County WCID #1 WWTP
	33	49	37	33	30	29	
290201	21	19	21	20	21	20	12096-001 North Forth Hood WWTP
	21	21	20	0	20	0	
102051	37	36	39	34	39	35	10205.002 City of Lampasas (Henderson WWTF)
	35	37	37	40	37	38	
100451	40	36	37	36	37	32	10045.003 City of Copperas Cove (South WWTP)
	32	33	33	37	37	35	
101551	154	128	167	166	177	140	10155.001 City of Harker Heights WWTP
	127	153	144	151	141	150	
103512	125	127	257	216	264	203	10351.003 Bell County WCID #1 WWTP 2
	193	202	181	152	137	130	
103513	721	776	828	802	849	724	10351.002 Bell County WCID #1
	705	721	617	755	700	688	
113181	496	457	544	534	562	489	11318.001 Authority TBRSS (Temple Belton Regional WWTP) BRA owned facility
	496	503	489	494	478	491	
LRLR53	4	4	5	4	4	3	11090.001 Bell County WCID #2 (Academy WWTP)
	3	4	1	4	4	4	
LRLR53	5	4	5	5	5	5	11091.001 Bell County WCID #2 (Little River WWTP)
	5	6	5	5	5	5	
W12431	6	5	6	6	6	2	10944.001 City of Florence WWTP
	2	3	4	5	5	6	
LRLR53	22	22	22	22	12	20	10797.001 Bell County WCID #3
	19	19	19	20	21	24	
W12181	4	3	4	4	3	3	13358-001 Universal Services Fort Hood WWTP
	4	4	4	4	3	4	
373701	2	2	3	2	3	3	14477.001 Liberty Hill Regional WWTP
	3	3	4	4	4	5	
104893	103	117	116	129	112	83	10489.002 City of Georgetown (San Gabriel WWTP)
	76	76	83	95	92	83	

Table G.2.3 - Current Monthly Return Flows Based on Monthly Minima from 2007 to 2011							
(values in acft/month)							
Control Point	Jan/July	Feb/Aug	Mar/Sept	April/Oct	May/Nov	June/Dec	Discharger
104892	93	88	114	109	88	95	10489.003 City of Georgetown (Dove Springs WWTP)
	96	94	99	76	92	89	
CON106	102	83	94	64	38	18	10489-005 City of Georgetown (Pecan Branch WWTP)
	19	19	18	67	55	95	
100041	48	45	51	46	49	46	10004.001 City of Cameron (Cameron WWTP)
	48	48	46	48	46	49	
102641	60	61	57	68	57	64	10264.001 Authority/LCRA BCRWSS West (Brushy Creek Regional WWTP)
	86	88	87	80	77	63	
102642	1239	1146	1337	1320	1278	1088	10264.002 Authority/LCRA BCRWSS East (Brushy Creek Regional WWTP East)
	1210	1338	1256	1196	1113	1061	
102991	121	130	123	110	108	111	10299.001 City of Taylor (Mustang Creek WWTP)
	110	110	94	109	105	115	
114591	33	26	30	29	30	28	11459.001 Anderson Mill MUD (Anderson Mill WWTP)
	29	30	22	25	21	26	
123081	184	175	199	194	188	187	12308.001 City of Cedar Park (Water Reclamation)
	195	192	197	176	181	200	
126441	76	76	73	69	69	63	12644.001 City of Leander WWTP
	64	66	64	71	70	74	
372751	19	19	19	17	17	10	10880.001 City of Bartlett WWTP
	15	8	4	12	18	14	
W12441	0	0	0	0	0	0	11865.001 Brushy Creek MUD
	0	0	0	0	0	0	
W12441	0	0	0	0	0	0	13031.001 Block House MUD
	0	0	0	0	0	0	
372751	3	2	1	1	1	1	10897.001 City of Holland WWTP
	1	2	2	1	2	2	
416621	70	59	73	72	76	69	11324-001 City of Hutto WWTP
	76	71	71	66	63	68	
100462	49	42	43	40	47	44	10046.002 City of Hearne WWTP 2
	47	47	46	45	44	45	
100462	10	7	6	6	8	7	10095.001 City of Calvert WWTP
	8	7	5	6	6	6	
104702	171	160	190	175	181	166	10470.002 City of Temple (Doshier Farm WWTP)
	171	162	147	162	166	181	
CON117	6	12	15	8	4	5	10731.001 City of Rosebud WWTP
	10	10	9	6	5	10	
CON109	9	9	8	6	8	6	11263.001 City of Troy WWTP
	7	7	7	7	7	7	
514831	0	0	0	0	0	0	2877 Twin Oaks Power Station Once-through cooling
	0	0	0	0	0	0	
MYDB60	5	1	3	1	4	2	10016.001 City of Lexington WWTP
	1	2	4	3	4	3	
3956	0	0	0	0	0	0	395 Aluminum Co. of America (Rockdale Plant) Assuming no returns
	0	0	0	0	0	0	
CON224	35	34	8	15	37	36	10658.001 City of Rockdale WWTP
	37	34	34	36	34	36	
CON125	25	23	25	25	27	25	10456.001 City of Giddings (North WWTP)
	26	24	26	25	26	27	
DCLY63	37	32	36	35	37	36	10813.001 City of Caldwell
	36	36	36	37	36	36	
528801	9	4	7	4	4	3	10717.001 TX Dept MHMR (Mexia State School)
	5	10	6	7	6	2	
CON250	4	3	5	4	2	1	10300.001 City of Teague West WWTP
	3	2	2	2	2	6	
CON131	55	52	58	58	60	46	10222.001 City of Mexia WWTP
	42	48	52	47	45	47	
W12531	28	29	30	27	31	32	10182.001 City of Groesbeck
	32	28	27	28	27	30	
516531	0	0	0	0	0	0	2430 Limestone Electric Generating Station Assuming no returns
	0	0	0	0	0	0	
529831	0	0	0	0	0	0	1986 Oak Grove Steam Electric Station Once-through cooling
	0	0	0	0	0	0	

Table G.2.3 - Current Monthly Return Flows Based on Monthly Minima from 2007 to 2011							
(values in acft/month)							
Control Point	Jan/July	Feb/Aug	Mar/Sept	April/Oct	May/Nov	June/Dec	Discharger
100241	512	486	539	521	504	465	10024.006 City of College Station (Carters Creek WWTP)
	470	483	526	520	485	454	
102311	41	34	53	41	50	44	10231.001 City of Navasota (Old WWTP)
	48	49	43	44	43	41	
103881	174	168	171	166	168	171	10388.001 City of Brenham WWTP
	175	179	168	170	161	150	
104261	375	379	413	410	421	391	10426.001 City of Bryan (Burton Creek WWTP)
	410	435	434	409	373	374	
104262	126	152	116	112	104	102	10426.002 City of Bryan (Still Creek WWTP)
	100	114	97	95	113	116	
109681	116	138	134	152	122	117	10968.003 Texas A&M University (TAMU Main Campus WWTP)
	126	132	184	167	140	109	
516451	13	12	13	13	14	12	10371.001 City of Somerville WWTP
	12	12	9	12	12	13	
526851	42	23	32	23	15	15	10426.003 City of Bryan (Turkey Creek WWTP)
	17	16	19	38	33	37	
25851	20	8	15	13	4	3	2585.001 Texas A&M University (Brayton Fire Training School)
	12	9	13	17	21	11	
CON148	20	14	16	17	17	15	13743.001 Texas Dept. of Criminal Justice (Pack Unit WWTP)
	16	17	18	20	18	19	
CON149	9	10	9	8	9	7	12458.002 Texas Dept. of Criminal Justice (Luther WWTP)
	9	9	10	10	10	1	
531131	0	0	0	0	0	0	2120 Gibbons Creek SES Once-through cooling
	0	0	0	0	0	0	
CON143	66	53	65	61	65	64	10024-003 City of College Station (Lick Creek WWTP)
	65	69	64	65	63	62	
38211	112	102	110	104	116	86	03821-000 Sanderson Farms Brazos Processing Division
	99	107	109	109	92	87	
BOWA40	68	65	66	68	97	76	04784-000 Sanderson Farms Inc
	95	89	103	52	47	62	
103851	40	37	39	38	39	39	10385.002 City of Bellville WWTP
	39	40	38	39	37	38	
102581	0	0	0	0	0	0	10258.001 City of Richmond (Richmond North Second Street WWTP)
	0	0	0	0	0	0	
102761	49	43	50	47	47	43	10276.001 City of Sealy (Allens Creek WWTP)
	45	46	45	48	46	47	
106073	89	88	92	86	95	93	10607.003 City of Rosenberg (Plant NO 1A WWTP)
	91	95	88	76	75	85	
112751	45	42	42	40	21	28	11275.002 Prairie View A&M University WWTP
	28	33	44	45	40	32	
516604	35	26	28	26	19	17	10001.001 Brookshire MWD WWTP
	28	30	29	27	28	28	
24431	0	0	0	1	1	0	2443.001 Frito-Lay Inc. (Rosenberg Facility)
	0	0	0	0	0	0	
BRRI70	10	8	10	10	10	10	13051.002 Fort Bend Co. MUD 081
	11	11	10	10	9	10	
CON150	35	22	24	21	23	22	10948.001 City of Hempstead WWTP
	24	19	24	29	26	30	
CON153	9	8	8	8	8	8	10765.001 City of Wallis WWTP
	8	8	7	8	8	8	
CON236	0	0	0	0	0	0	10607.004 City of Rosenberg WWTP 3
	0	0	0	0	0	0	
CON234	2	2	2	2	2	2	13314.001 City of Fulshear WWTP
	2	2	2	2	2	2	
106072	120	110	130	132	125	114	10607.002 City of Rosenberg WWTP 2
	133	129	123	123	123	120	
102582	126	109	131	123	127	124	10258.003 City of Richmond (SW WWTP, Richmond Regional WWTP)
	124	130	127	126	124	124	
113171	346	311	349	295	324	307	11317.001 SLRSS (Sugarland North WWTP)
	336	355	315	350	342	351	
532531	0	0	0	0	0	0	1038-000 WA Parish SES Once-through cooling
	0	0	0	0	0	0	

Table G.2.3 - Current Monthly Return Flows Based on Monthly Minima from 2007 to 2011							
(values in acft/month)							
Control Point	Jan/July	Feb/Aug	Mar/Sept	April/Oct	May/Nov	June/Dec	Discharger
116551	96	86	90	88	91	86	11655.001 Pecan Grove MUD
	86	90	84	86	85	90	
128331	344	318	352	341	381	368	12833.002 City of Sugarland (South WWTP)
	371	314	258	314	327	368	
128332	13	12	14	13	15	15	10986.001 Texas Department of Criminal Justice - Central
	21	21	18	16	14	13	
128332	19	19	20	21	23	23	11475.003 Texas Department of Criminal Justice - Jester III
	24	25	24	21	19	20	
128332	0	0	0	0	0	0	12833.003 City of Sugarland
	0	0	0	0	0	0	
133551	12	9	11	11	12	12	11971.001 Plantation MUD
	16	14	13	15	15	15	
133551	96	82	91	87	90	87	13355.001 Fort Bend MUD 106
	89	91	90	92	88	91	
136281	125	101	116	113	127	119	13628.001 Fort Bend MUD 112 (New Territory North Regional WWTP)
	126	129	121	119	113	121	
517033	14	11	12	11	13	14	11475.001 Texas Department of Criminal Justice - Jester I
	13	12	11	12	10	11	
519951	113	92	107	102	105	102	13873-001 Missouri City Steep Bank Flat Bank WWTP
	114	113	109	104	106	115	
CON155	127	118	117	109	118	122	11046.001 Quail Valley UD WWTP
	134	121	124	112	116	135	
516601	12	9	11	11	12	12	14118.001 Sienna Plantation MUD 1
	16	14	13	15	15	15	
100471	260	227	246	246	245	233	10047.001 City of Lake Jackson WWTP
	240	243	240	236	191	270	
103121	44	41	45	34	30	32	10312.001 City of West Columbia WWTP
	32	30	28	31	30	39	
108821	51	49	59	50	50	44	10882.001 City of Freeport (Central WWTP)
	51	48	46	54	50	47	
108821	0	0	0	0	0	0	7 Dow Chemical Assuming no returns
	0	0	0	0	0	0	

Table G.2.4 - BRA Only 2025 Monthly Return Flows (values in acft/month)							
Control Point	Jan/July	Feb/Aug	Mar/Sept	April/Oct	May/Nov	June/Dec	Discharger
103341	0	0	0	0	0	0	10334.004 City of Abilene (Hamby Plant)
	0	0	0	0	0	0	
104871	0	0	0	0	0	0	10487.001 City of Graham WWTP
	0	0	0	0	0	0	
27891	9	9	17	17	34	43	2789.001 Double Diamond (The Cliffs WWTP)
	52	26	17	17	9	8	
515501	76	69	76	74	76	74	2461 Sportsmans World MUD WTP
	76	76	74	76	74	76	
101782	47	56	63	57	60	60	10178.002 City of Granbury (WWTP)
	75	75	66	69	57	55	
515651	234	187	167	201	221	241	2889 Authority SWATs BRA owned facility
	274	274	247	274	234	248	
515651	13	17	9	12	14	14	11208.001 Acton MUD (Decordova Bend WWTP)
	14	15	12	12	15	14	
407601	9	15	7	9	12	11	11415.001 Acton MUD (Pecan Plantation WWTP)
	11	12	9	11	12	13	
515631	0	0	0	0	0	0	1481 Decordova Steam Electric Station Once-through cooling
	0	0	0	0	0	0	
BRGR30	105	95	105	101	105	101	4288 AES Wolf Hollow Power Plant
	105	105	101	105	101	104	
100061	0	0	0	0	0	0	10006.001 City of Cleburne WWTP Assuming full reuse
	0	0	0	0	0	0	
515731	0	0	0	0	0	0	11408.002 City of Whitney (Polk Street WWTP)
	0	0	0	0	0	0	
409732	0	0	0	0	0	0	1854 Commanche Peak Nuclear Power Plant Once-through cooling
	0	0	0	0	0	0	
106301	160	144	148	156	186	188	10630.001 City of Hillsboro (WWTP)
	192	190	182	172	146	165	
431601	171	156	171	166	171	166	4167 Bosque County Power Plant
	171	171	166	171	166	171	
102191	89	86	98	91	104	86	10219.002 City of McGregor (South WWTP)
	78	78	76	80	80	90	
101102	16	19	24	22	78	81	10110.002 City of Marlin WWTP
	59	67	58	18	15	14	
434531	0	0	0	0	0	0	954 Lake Creek Steam Electric Station Once-through cooling
	0	0	0	0	0	0	
434231	0	0	0	0	0	0	1267 Tradinghouse Steam Electric Station Once-through cooling
	0	0	0	0	0	0	
CON054	29	29	31	29	31	26	10078.001 City of DeLeon WWTP
	24	26	26	26	26	28	
284602	42	46	46	44	49	39	10405.001 City of Dublin WWTP
	37	39	39	39	39	45	
363701	55	59	61	57	63	54	10719.001 City of Comanche WWTP
	48	52	52	52	52	55	
LEHS45	6	6	6	6	6	6	14544.001 Upper Leon MWD WWTP
	6	6	6	6	6	7	
CON086	59	63	63	61	65	55	10492.002 City of Hamilton
	51	55	53	55	53	62	
100455	362	354	407	387	435	390	10045.005 City of Copperas Cove (Northwest WWTP)
	357	351	343	340	335	377	
101761	85	82	91	85	98	82	10176.001 City of Gatesville (Leon Plant WWTP)
	73	73	73	76	73	84	
101761	186	179	201	187	216	178	10176.002 City of Gatesville (Stillhouse Branch
	162	160	159	165	163	189	
22336	226	226	249	238	272	238	10045.004 City of Copperas Cove (Northeast WWTP)
	226	215	215	215	204	250	
CON090	16	16	18	16	20	16	10225.001 City of Moody WWTP
	15	15	15	15	15	14	
103511	83	80	92	88	99	89	10351.001 Bell County WCID #1 WWTP
	81	80	78	77	76	86	
290201	0	0	0	0	0	0	12096-001 North Forth Hood WWTP Use under own right
	0	0	0	0	0	0	
102051	147	138	155	147	172	138	10205.002 City of Lampasas (Henderson WWTF)
	129	129	121	129	129	147	
100451	226	221	253	242	274	242	10045.003 City of Copperas Cove (South WWTP)
	221	221	216	211	211	236	

Table G.2.4 - BRA Only 2025 Monthly Return Flows (values in acft/month)							
Control Point	Jan/July	Feb/Aug	Mar/Sept	April/Oct	May/Nov	June/Dec	Discharger
101551	290	280	316	295	337	280	10155.001 City of Harker Heights WWTP
	253	251	248	259	256	297	
103512	550	535	616	587	658	590	10351.003 Bell County WCID #1 WWTP 2
	541	532	521	513	508	573	
103513	1649	1608	1851	1759	1972	1768	10351.002 Bell County WCID #1
	1620	1594	1560	1539	1521	1732	
113181	916	893	1029	978	1096	982	11318.001 TBRSS (Temple Belton Regional WWTP)
	899	886	867	856	844	961	
LRLR53	4	4	5	4	5	4	11090.001 Bell County WCID #2 (Academy WWTP)
	4	4	4	4	4	4	
LRLR53	4	4	4	4	4	4	11091.001 Bell County WCID #2 (Little River WWTP)
	3	3	3	3	3	3	
LRLR53	62	62	69	69	77	62	10797.001 Bell County WCID #3
	54	54	54	62	54	78	
W12181	0	0	0	0	0	0	13358-001 Universal Services Fort Hood WWTP Use under own right
	0	0	0	0	0	0	
373701	0	0	0	0	0	0	14477.001 Liberty Hill Regional WWTP
	0	0	0	0	0	0	
104893	111	113	114	111	125	145	10489.002 City of Georgetown (San Gabriel WWTP)
	111	113	135	127	130	122	
104892	111	114	114	111	123	145	10489.003 City of Georgetown (Dove Springs WWTP)
	111	114	135	128	130	121	
CON106	67	68	68	67	74	87	10489-005 City of Georgetown (Pecan Branch WWTP)
	67	68	81	77	78	72	
102641	257	260	264	257	287	333	10264.001 BCRWSS West (Brushy Creek Regional WWTP)
	257	261	310	293	301	282	
102642	1508	1528	1553	1511	1688	1960	10264.002 BCRWSS East (Brushy Creek Regional WWTP East)
	1511	1536	1825	1723	1768	1659	
102991	308	325	345	328	367	409	10299.001 City of Taylor (Mustang Creek WWTP)
	428	436	422	389	375	351	
W12441	0	0	0	0	0	0	11865.001 Brushy Creek MUD
	0	0	0	0	0	0	
372751	16	16	16	16	19	16	10897.001 City of Holland WWTP
	13	13	13	13	13	18	
416621	21	19	21	20	21	20	11324-001 City of Hutto WWTP
	21	21	20	21	20	23	
104702	0	0	0	0	0	0	10470.002 City of Temple (Doshier Farm WWTP)
	0	0	0	0	0	0	
CON117	25	25	25	25	28	22	10731.001 City of Rosebud WWTP
	22	22	22	22	22	20	
CON109	0	0	0	0	0	0	11263.001 City of Troy WWTP
	0	0	0	0	0	0	
3956	0	0	0	0	0	0	395 Aluminum Co. of America (Rockdale Plant) Assuming no return
	0	0	0	0	0	0	
516531	0	0	0	0	0	0	2430 Limestone Electric Generating Station Assuming no return
	0	0	0	0	0	0	
529831	0	0	0	0	0	0	1986 Oak Grove Steam Electric Station Once-through cooling
	0	0	0	0	0	0	
103881	288	295	312	312	354	398	10388.001 City of Brenham WWTP
	352	356	361	347	315	289	
531131	0	0	0	0	0	0	2120 Gibbons Creek SES Once-through cooling
	0	0	0	0	0	0	
102581	0	0	0	0	0	0	10258.001 City of Richmond (Richmond North Second Street WWTP)
	0	0	0	0	0	0	
106073	0	0	0	0	0	0	10607.003 City of Rosenberg (Plant NO 1A WWTP)
	0	0	0	0	0	0	
CON236	0	0	0	0	0	0	10607.004 City of Rosenberg WWTP 3
	0	0	0	0	0	0	
CON234	0	0	0	0	0	0	13314.001 City of Fulshear WWTP
	0	0	0	0	0	0	
106072	0	0	0	0	0	0	10607.002 City of Rosenberg WWTP 2
	0	0	0	0	0	0	
102582	0	0	0	0	0	0	10258.003 City of Richmond (SW WWTP, Richmond Regional WWTP)
	0	0	0	0	0	0	
113171	0	0	0	0	0	0	11317.001 SLRSS (Surgarland North WWTP)
	0	0	0	0	0	0	
532531	0	0	0	0	0	0	1038-000 Pecan Grove MUD

Table G.2.4 - BRA Only 2025 Monthly Return Flows							
(values in acft/month)							
Control Point	Jan/July	Feb/Aug	Mar/Sept	April/Oct	May/Nov	June/Dec	Discharger
	0	0	0	0	0	0	
116551	0	0	0	0	0	0	11655.001 WA Parish SES Once-through cooling
	0	0	0	0	0	0	
108821	0	0	0	0	0	0	7 Dow Chemical Assuming no return
	0	0	0	0	0	0	

Table G.2.5 - Current Monthly Return Flows Based on Monthly Minima from 2007 to 2011 BRA Only							
(values in acft/month)							
Control Point	Jan/July	Feb/Aug	Mar/Sept	April/Oct	May/Nov	June/Dec	Discharger
103341	0	0	0	0	0	0	10334.004 City of Abilene (Hamby Plant)
	0	0	0	0	0	0	
104871	0	0	0	0	0	0	10487.001 City of Graham WWTP
	0	0	0	0	0	0	
27891	3	2	2	2	3	4	2789.001 Double Diamond (The Cliffs WWTP)
	2	4	3	3	3	4	
515501	3	1	1	3	1	1	2461 Sportsmans World MUD WTP
	1	2	1	1	1	2	
101782	27	28	31	29	30	29	10178.002 City of Granbury (WWTP)
	29	28	26	28	9	9	
515651	6	3	14	27	35	45	2889 Authority SWATs BRA owned facility
	29	37	34	30	20	5	
515651	3	3	4	4	5	3	11208.001 Acton MUD (Decordova Bend WWTP)
	3	3	3	3	3	3	
407601	2	2	3	3	3	2	11415.001 Acton MUD (Pecan Plantation WWTP)
	3	2	2	3	2	3	
515631	0	0	0	0	0	0	1481 Decordova Steam Electric Station Once-through cooling
	0	0	0	0	0	0	
BRGR30	19	7	27	23	30	27	4288 AES Wolf Hollow Power Plant
	43	42	25	25	20	21	
100061	0	0	0	0	0	0	10006.001 City of Cleburne WWTP Assuming full reuse
	0	0	0	0	0	0	
515731	0	0	0	0	0	0	11408.002 City of Whitney (Polk Street WWTP)
	0	0	0	0	0	0	
409732	0	0	0	0	0	0	1854 Commanche Peak Nuclear Power Plant Once-through cooling
	0	0	0	0	0	0	
106301	107	68	109	103	90	68	10630.001 City of Hillsboro (WWTP)
	74	73	99	94	95	82	
431601	3	3	2	1	10	12	4167 Bosque County Power Plant
	25	25	14	3	1	1	
102191	23	24	25	23	26	22	10219.002 City of McGregor (South WWTP)
	20	20	21	23	17	26	
101102	7	7	9	7	10	6	10110.002 City of Marlin WWTP
	6	8	7	1	9	7	
434531	0	0	0	0	0	0	954 Lake Creek Steam Electric Station Once-through cooling
	0	0	0	0	0	0	
434231	0	0	0	0	0	0	1267 Tradinghouse Steam Electric Station Once-through cooling
	0	0	0	0	0	0	
CON054	9	8	10	8	8	5	10078.001 City of DeLeon WWTP
	4	6	5	7	7	8	
284602	10	8	6	4	6	6	10405.001 City of Dublin WWTP
	5	3	4	8	7	10	
363701	16	16	15	19	19	17	10719.001 City of Comanche WWTP
	18	14	15	19	17	19	
LEHS45	2	2	2	2	2	2	14544.001 Upper Leon MWD WWTP
	2	2	2	2	2	2	
CON086	15	15	18	19	17	14	10492.002 City of Hamilton
	15	17	20	15	14	16	
100455	76	66	83	77	91	70	10045.005 City of Copperas Cove (Northwest WWTP)
	64	67	64	73	70	75	
101761	34	30	42	41	52	44	10176.004 City of Gatesville (Leon Plant WWTP)
	40	32	38	36	32	37	
101761	97	77	91	90	94	88	10176.002 City of Gatesville (Stillhouse Branch
	90	88	94	96	96	101	
22336	65	61	60	57	64	55	10045.004 City of Copperas Cove (Northeast WWTP)
	50	52	51	57	54	60	
CON090	4	3	4	3	5	3	10225.001 City of Moody WWTP
	3	3	3	4	4	4	
103511	26	26	32	41	38	40	10351.001 Bell County WCID #1 WWTP
	33	49	37	33	30	29	
290201	0	0	0	0	0	0	12096-001 North Forth Hood WWTP Use under own right
	0	0	0	0	0	0	

Table G.2.5 - Current Monthly Return Flows Based on Monthly Minima from 2007 to 2011 BRA Only							
(values in acft/month)							
Control Point	Jan/July	Feb/Aug	Mar/Sept	April/Oct	May/Nov	June/Dec	Discharger
102051	37	36	39	34	39	35	10205.002 City of Lampasas (Henderson WWTF)
	35	37	37	40	37	38	
100451	40	36	37	36	36	32	10045.003 City of Copperas Cove (South WWTP)
	32	32	33	36	36	35	
101551	154	128	167	166	177	140	10155.001 City of Harker Heights WWTP
	127	153	144	151	141	150	
103512	125	127	257	216	264	203	10351.003 Bell County WCID #1 WWTP 2
	193	202	181	152	137	130	
103513	721	776	828	802	849	724	10351.002 Bell County WCID #1
	705	721	617	755	700	688	
113181	496	457	544	534	562	489	11318.001 Authority TBRSS (Temple Belton Regional WWTP) BRA owned faci
	496	503	489	494	478	491	
LRLR53	2	2	2	2	2	2	11090.001 Bell County WCID #2 (Academy WWTP)
	1	2	0	2	2	2	
LRLR53	2	2	3	2	2	3	11091.001 Bell County WCID #2 (Little River WWTP)
	3	3	2	3	2	3	
LRLR53	22	22	22	22	12	20	10797.001 Bell County WCID #3
	19	19	19	20	21	24	
W12181	0	0	0	0	0	0	13358-001 Universal Services Fort Hood WWTP Use under own right
	0	0	0	0	0	0	
373701	0	0	0	0	0	0	14477.001 Liberty Hill Regional WWTP
	0	0	0	0	0	0	
104893	53	61	61	67	58	43	10489.002 City of Georgetown (San Gabriel WWTP)
	40	40	43	49	48	43	
104892	48	46	60	57	46	49	10489.003 City of Georgetown (Dove Springs WWTP)
	50	49	52	40	48	46	
CON106	53	43	49	34	20	10	10489-005 City of Georgetown (Pecan Branch WWTP)
	10	10	10	35	29	49	
102641	60	61	57	68	57	64	10264.001 Authority/LCRA BCRWSS West (Brushy Creek Regional WWTP)
	86	88	87	80	77	63	
102642	1239	1146	1337	1320	1278	1088	10264.002 Authority/LCRA BCRWSS East (Brusy Creek Regional WWTP East)
	1210	1338	1256	1196	1113	1061	
102991	121	130	123	110	108	111	10299.001 City of Taylor (Mustang Creek WWTP)
	110	110	94	109	105	115	
W12441	0	0	0	0	0	0	11865.001 Brushy Creek MUD
	0	0	0	0	0	0	
372751	2	2	1	1	1	1	10897.001 City of Holland WWTP
	1	1	1	1	2	2	
416621	9	8	9	9	10	9	11324-001 City of Hutto WWTP
	10	9	9	9	8	9	
104702	0	0	0	0	0	0	10470.002 City of Temple (Doshier Farm WWTP) Assuming all from own right
	0	0	0	0	0	0	
CON117	6	12	15	8	4	5	10731.001 City of Rosebud WWTP
	10	10	9	6	5	10	
CON109	0	0	0	0	0	0	11263.001 City of Troy WWTP
	0	0	0	0	0	0	
3956	0	0	0	0	0	0	395 Aluminum Co. of America (Rockdale Plant) Assuming no return
	0	0	0	0	0	0	
516531	0	0	0	0	0	0	2430 Limestone Electric Generating Station Assuming no return
	0	0	0	0	0	0	
529831	0	0	0	0	0	0	1986 Oak Grove Steam Electric Station Once-through cooling
	0	0	0	0	0	0	
103881	174	168	171	166	168	171	10388.001 City of Brenham WWTP
	175	179	168	170	161	150	
531131	0	0	0	0	0	0	2120 Gibbons Creek SES Once-through cooling
	0	0	0	0	0	0	
102581	0	0	0	0	0	0	10258.001 City of Richmond (Richmond North Second Street WWTP)
	0	0	0	0	0	0	
106073	0	0	0	0	0	0	10607.003 City of Rosenberg (Plant NO 1A WWTP)
	0	0	0	0	0	0	
CON236	0	0	0	0	0	0	10607.004 City of Rosenberg WWTP 3
	0	0	0	0	0	0	

Table G.2.5 - Current Monthly Return Flows Based on Monthly Minima from 2007 to 2011 BRA Only							
(values in acft/month)							
Control Point	Jan/July	Feb/Aug	Mar/Sept	April/Oct	May/Nov	June/Dec	Discharger
CON234	0	0	0	0	0	0	13314.001 City of Fulshear WWTP
	0	0	0	0	0	0	
106072	0	0	0	0	0	0	10607.002 City of Rosenberg WWTP 2
	0	0	0	0	0	0	
102582	0	0	0	0	0	0	10258.003 City of Richmond (SW WWTP, Richmond Regional WWTP)
	0	0	0	0	0	0	
113171	0	0	0	0	0	0	11317.001 SLRSS (Surgarland North WWTP)
	0	0	0	0	0	0	
532531	0	0	0	0	0	0	1038-000 Pecan Grove MUD
	0	0	0	0	0	0	
116551	0	0	0	0	0	0	11655.001 WA Parish SES Once-through cooling
	0	0	0	0	0	0	
108821	0	0	0	0	0	0	7 Dow Chemical Assuming no return
	0	0	0	0	0	0	
123081	184	175	199	194	188	187	12308.001 City of Cedar Park (Water Reclamation)
	195	192	197	176	181	200	
126441	76	76	73	69	69	63	12644.001 City of Leander WWTP
	64	66	64	71	70	74	
372751	19	19	19	17	17	10	10880.001 City of Bartlett WWTP
	15	8	4	12	18	14	
W12441	0	0	0	0	0	0	11865.001 Brushy Creek MUD
	0	0	0	0	0	0	
W12441	0	0	0	0	0	0	13031.001 Block House MUD
	0	0	0	0	0	0	
372751	3	2	1	1	1	1	10897.001 City of Holland WWTP
	1	2	2	1	2	2	
416621	70	59	73	72	76	69	11324-001 City of Hutto WWTP
	76	71	71	66	63	68	
100462	49	42	43	40	47	44	10046.002 City of Hearne WWTP 2
	47	47	46	45	44	45	
100462	10	7	6	6	8	7	10095.001 City of Calvert WWTP
	8	7	5	6	6	6	
104702	171	160	190	175	181	166	10470.002 City of Temple (Doshier Farm WWTP)
	171	162	147	162	166	181	
CON117	6	12	15	8	4	5	10731.001 City of Rosebud WWTP
	10	10	9	6	5	10	
CON109	9	9	8	6	8	6	11263.001 City of Troy WWTP
	7	7	7	7	7	7	
514831	0	0	0	0	0	0	2877 Twin Oaks Power Station Once-through cooling
	0	0	0	0	0	0	
MYDB60	5	1	3	1	4	2	10016.001 City of Lexington WWTP
	1	2	4	3	4	3	
3956	0	0	0	0	0	0	395 Aluminum Co. of America (Rockdale Plant) Assuming no returns
	0	0	0	0	0	0	
CON224	35	34	8	15	37	36	10658.001 City of Rockdale WWTP
	37	34	34	36	34	36	
CON125	25	23	25	25	27	25	10456.001 City of Giddings (North WWTP)
	26	24	26	25	26	27	
DCLY63	37	32	36	35	37	36	10813.001 City of Caldwell
	36	36	36	37	36	36	
528801	9	4	7	4	4	3	10717.001 TX Dept MHMR (Mexia State School)
	5	10	6	7	6	2	
CON250	4	3	5	4	2	1	10300.001 City of Teague West WWTP
	3	2	2	2	2	6	
CON131	55	52	58	58	60	46	10222.001 City of Mexia WWTP
	42	48	52	47	45	47	
W12531	28	29	30	27	31	32	10182.001 City of Groesbeck
	32	28	27	28	27	30	
516531	0	0	0	0	0	0	2430 Limestone Electric Generating Station Assuming no returns
	0	0	0	0	0	0	
529831	0	0	0	0	0	0	1986 Oak Grove Steam Electric Station Once-through cooling
	0	0	0	0	0	0	

Table G.2.5 - Current Monthly Return Flows Based on Monthly Minima from 2007 to 2011 BRA Only							
(values in acft/month)							
Control Point	Jan/July	Feb/Aug	Mar/Sept	April/Oct	May/Nov	June/Dec	Discharger
100241	512	486	539	521	504	465	10024.006 City of College Station (Carters Creek WWTP)
	470	483	526	520	485	454	
102311	41	34	53	41	50	44	10231.001 City of Navasota (Old WWTP)
	48	49	43	44	43	41	
103881	174	168	171	166	168	171	10388.001 City of Brenham WWTP
	175	179	168	170	161	150	
104261	375	379	413	410	421	391	10426.001 City of Bryan (Burton Creek WWTP)
	410	435	434	409	373	374	
104262	126	152	116	112	104	102	10426.002 City of Bryan (Still Creek WWTP)
	100	114	97	95	113	116	
109681	116	138	134	152	122	117	10968.003 Texas A&M University (TAMU Main Campus WWTP)
	126	132	184	167	140	109	
516451	13	12	13	13	14	12	10371.001 City of Somerville WWTP
	12	12	9	12	12	13	
526851	42	23	32	23	15	15	10426.003 City of Bryan (Turkey Creek WWTP)
	17	16	19	38	33	37	
25851	20	8	15	13	4	3	2585.001 Texas A&M University (Brayton Fire Training School)
	12	9	13	17	21	11	
CON148	20	14	16	17	17	15	13743.001 Texas Dept. of Criminal Justice (Pack Unit WWTP)
	16	17	18	20	18	19	
CON149	9	10	9	8	9	7	12458.002 Texas Dept. of Criminal Justice (Luther WWTP)
	9	9	10	10	10	1	
531131	0	0	0	0	0	0	2120 Gibbons Creek SES Once-through cooling
	0	0	0	0	0	0	
CON143	66	53	65	61	65	64	10024-003 City of College Station (Lick Creek WWTP)
	65	69	64	65	63	62	
38211	112	102	110	104	116	86	03821-000 Sanderson Farms Brazos Processing Division
	99	107	109	109	92	87	
BOWA40	68	65	66	68	97	76	04784-000 Sanderson Farms Inc
	95	89	103	52	47	62	
103851	40	37	39	38	39	39	10385.002 City of Bellville WWTP
	39	40	38	39	37	38	
102581	0	0	0	0	0	0	10258.001 City of Richmond (Richmond North Second Street WWTP)
	0	0	0	0	0	0	
102761	49	43	50	47	47	43	10276.001 City of Sealy (Allens Creek WWTP)
	45	46	45	48	46	47	
106073	89	88	92	86	95	93	10607.003 City of Rosenberg (Plant NO 1A WWTP)
	91	95	88	76	75	85	
112751	45	42	42	40	21	28	11275.002 Prairie View A&M University WWTP
	28	33	44	45	40	32	
516604	35	26	28	26	19	17	10001.001 Brookshire MWD WWTP
	28	30	29	27	28	28	
24431	0	0	0	1	1	0	2443.001 Frito-Lay Inc. (Rosenberg Facility)
	0	0	0	0	0	0	
BRRI70	10	8	10	10	10	10	13051.002 Fort Bend Co. MUD 081
	11	11	10	10	9	10	
CON150	35	22	24	21	23	22	10948.001 City of Hempstead WWTP
	24	19	24	29	26	30	
CON153	9	8	8	8	8	8	10765.001 City of Wallis WWTP
	8	8	7	8	8	8	
CON236	0	0	0	0	0	0	10607.004 City of Rosenberg WWTP 3
	0	0	0	0	0	0	
CON234	2	2	2	2	2	2	13314.001 City of Fulshear WWTP
	2	2	2	2	2	2	
106072	120	110	130	132	125	114	10607.002 City of Rosenberg WWTP 2
	133	129	123	123	123	120	
102582	126	109	131	123	127	124	10258.003 City of Richmond (SW WWTP, Richmond Regional WWTP)
	124	130	127	126	124	124	
113171	346	311	349	295	324	307	11317.001 SLRSS (Sugarland North WWTP)
	336	355	315	350	342	351	
532531	0	0	0	0	0	0	1038-000 WA Parish SES Once-through cooling
	0	0	0	0	0	0	

Table G.2.5 - Current Monthly Return Flows Based on Monthly Minima from 2007 to 2011 BRA Only							
(values in acft/month)							
Control Point	Jan/July	Feb/Aug	Mar/Sept	April/Oct	May/Nov	June/Dec	Discharger
116551	96	86	90	88	91	86	11655.001 Pecan Grove MUD
	86	90	84	86	85	90	
128331	344	318	352	341	381	368	12833.002 City of Sugarland (South WWTP)
	371	314	258	314	327	368	
128332	13	12	14	13	15	15	10986.001 Texas Department of Criminal Justice - Central
	21	21	18	16	14	13	
128332	19	19	20	21	23	23	11475.003 Texas Department of Criminal Justice - Jester III
	24	25	24	21	19	20	
128332	0	0	0	0	0	0	12833.003 City of Sugarland
	0	0	0	0	0	0	
133551	12	9	11	11	12	12	11971.001 Plantation MUD
	16	14	13	15	15	15	
133551	96	82	91	87	90	87	13355.001 Fort Bend MUD 106
	89	91	90	92	88	91	
136281	125	101	116	113	127	119	13628.001 Fort Bend MUD 112 (New Territory North Regional WWTP)
	126	129	121	119	113	121	
517033	14	11	12	11	13	14	11475.001 Texas Department of Criminal Justice - Jester I
	13	12	11	12	10	11	
519951	113	92	107	102	105	102	13873-001 Missouri City Steep Bank Flat Bank WWTP
	114	113	109	104	106	115	
CON155	127	118	117	109	118	122	11046.001 Quail Valley UD WWTP
	134	121	124	112	116	135	
516601	12	9	11	11	12	12	14118.001 Sienna Plantation MUD 1
	16	14	13	15	15	15	
100471	260	227	246	246	245	233	10047.001 City of Lake Jackson WWTP
	240	243	240	236	191	270	
103121	44	41	45	34	30	32	10312.001 City of West Columbia WWTP
	32	30	28	31	30	39	
108821	51	49	59	50	50	44	10882.001 City of Freeport (Central WWTP)
	51	48	46	54	50	47	
108821	0	0	0	0	0	0	7 Dow Chemical Assuming no returns
	0	0	0	0	0	0	

Table G.2.6 - All 2025 Monthly Return Flows							
(values in acft/month)							
Control Point	Jan/July	Feb/Aug	Mar/Sept	April/Oct	May/Nov	June/Dec	Discharger
100401	90	82	90	87	90	87	10040.001 City of Breckenridge WWTP
	90	90	87	90	87	95	
104871	205	195	205	195	229	195	10487.001 City of Graham WWTP
	188	167	193	180	203	199	
27891	9	9	17	17	34	43	2789.001 Double Diamond (The Cliffs WWTP)
	52	26	17	17	9	8	
401401	64	58	58	46	52	46	11557.001 City of Ranger (Ranger WWTP)
	41	43	46	58	49	55	
515501	76	69	76	74	76	74	2461 Sportsmans World MUD WTP
	76	76	74	76	74	76	
105851	120	109	120	116	120	116	10585.004 City of Mineral Wells (Willow Creek WWTP)
	120	120	116	120	116	119	
105852	203	229	251	225	262	233	10585.001 City of Mineral Wells (Pollard Creek WWTP)
	211	233	188	192	196	211	
101782	190	173	190	184	190	184	10178.002 City of Granbury (WWTP)
	190	190	184	190	184	193	
515651	234	187	167	201	221	241	2889 Authority SWATs BRA owned facility
	274	274	247	274	234	248	
515651	54	70	38	48	59	59	11208.001 Acton MUD (Decordova Bend WWTP)
	59	65	48	48	65	59	
407601	39	62	28	39	51	45	11415.001 Acton MUD (Pecan Plantation WWTP)
	45	51	39	45	51	51	
515631	0	0	0	0	0	0	1481 Decordova Steam Electric Station
	0	0	0	0	0	0	
BRGR30	105	95	105	101	105	101	4288 AES Wolf Hollow Power Plant
	105	105	101	105	101	104	
410501	47	36	36	47	24	47	10542.001 City of Godley
	12	36	24	12	36	47	
409631	42	38	53	53	65	65	10177.001 City of Glen Rose WWTP
	65	65	61	68	57	40	
515731	19	54	54	50	35	23	11408.002 City of Whitney (Polk Street WWTP)
	39	39	39	39	46	11	
409732	0	0	0	0	0	0	1854 Commanche Peak Nuclear Power Plant
	0	0	0	0	0	0	
106301	41	37	37	33	41	29	10423.001 City of Itasca WWTP
	29	37	29	37	41	33	
106301	166	161	186	177	199	178	10630.001 City of Hillsboro (WWTP)
	163	160	157	155	153	174	
102902	289	287	294	323	323	325	10290.001 City of Stephenville (Stephenville WWTP)
	282	213	184	297	279	266	
NBHI35	25	20	25	25	15	25	10188.001 City of Hico WWTP
	20	25	25	25	25	25	
228202	54	54	49	60	60	11	10113.002 City of Meridian WWTP
	38	22	27	33	38	58	
555151	69	56	69	64	73	60	10043.001 City of Clifton WWTP
	56	56	56	56	56	58	
431601	171	156	171	166	171	166	4167 Bosque County Power Plant
	171	171	166	171	166	171	
102191	107	103	116	108	124	103	10219.002 City of McGregor (South WWTP)
	93	93	91	95	95	105	
W12252	22	34	35	22	32	41	10307.001 City of Valley Mills
	37	28	56	42	36	17	
101102	76	91	113	107	371	387	10110.002 City of Marlin WWTP
	280	321	277	88	72	60	
435201	14	17	19	14	14	14	12195.001 City of Lorena WWTP
	11	11	14	14	14	12	
CON070	40	50	91	50	35	30	10544.001 City of West WWTP
	20	20	25	35	66	42	
434531	0	0	0	0	0	0	954 Lake Creek Steam Electric Station
	0	0	0	0	0	0	
434231	0	0	0	0	0	0	1267 Tradinghouse Steam Electric Station
	0	0	0	0	0	0	

Table G.2.6 - All 2025 Monthly Return Flows (values in acft/month)							
Control Point	Jan/July	Feb/Aug	Mar/Sept	April/Oct	May/Nov	June/Dec	Discharger
508501	95	87	95	92	95	92	03466.000 City of Robinson
	95	95	92	95	92	96	
106371	63	63	65	72	86	100	10637.001 City of Eastland WWTP
	126	121	98	79	68	68	
CON054	29	29	31	29	31	26	10078.001 City of DeLeon WWTP
	24	26	26	26	26	28	
284602	42	46	46	44	49	39	10405.001 City of Dublin WWTP
	37	39	39	39	39	45	
363701	56	60	62	58	64	54	10719.001 City of Comanche WWTP
	49	52	52	52	52	56	
LEHS45	6	6	6	6	6	6	14544.001 Upper Leon MWD WWTP
	6	6	6	6	6	7	
CON086	59	63	63	61	65	55	10492.002 City of Hamilton
	51	55	53	55	53	62	
100455	366	358	411	391	439	394	10045.005 City of Copperas Cove (Northwest WWTP)
	360	355	346	344	338	381	
101761	98	95	105	98	112	95	10176.001 City of Gatesville (Leon Plant WWTP)
	84	84	84	88	84	94	
101761	213	206	232	215	248	204	10176.002 City of Gatesville (Stillhouse Branch)
	186	184	182	190	188	218	
22336	229	229	252	240	274	240	10045.004 City of Copperas Cove (Northeast WWTP)
	229	217	217	217	206	252	
CON090	19	19	21	19	23	19	10225.001 City of Moody WWTP
	17	17	17	17	17	19	
103511	83	80	92	88	99	89	10351.001 Bell County WCID #1 WWTP
	81	80	78	77	76	86	
290201	24	22	24	23	24	23	12096-001 North Forth Hood WWTP
	24	24	23	24	23	22	
102051	147	138	155	147	172	138	10205.002 City of Lampasas (Henderson WWTF)
	129	129	121	129	129	147	
100451	229	223	255	245	276	245	10045.003 City of Copperas Cove (South WWTP)
	223	223	218	213	213	239	
101551	290	280	316	295	337	280	10155.001 City of Harker Heights WWTP
	253	251	248	259	256	297	
103512	550	535	616	587	658	590	10351.003 Bell County WCID #1 WWTP 2
	541	532	521	513	508	573	
103513	1649	1608	1851	1759	1972	1768	10351.002 Bell County WCID #1
	1620	1594	1560	1539	1521	1732	
113181	916	893	1029	978	1096	982	11318.001 TBRSS (Temple Belton Regional WWTP)
	899	886	867	856	844	961	
LRLR53	9	9	10	9	11	9	11090.001 Bell County WCID #2 (Academy WWTP)
	8	8	8	8	8	8	
LRLR53	8	8	9	8	9	8	11091.001 Bell County WCID #2 (Little River WWTP)
	7	7	7	7	7	5	
W12431	19	19	31	25	37	19	10944.001 City of Florence WWTP
	25	19	25	19	19	23	
LRLR53	62	62	69	69	77	62	10797.001 Bell County WCID #3
	54	54	54	62	54	78	
W12181	9	8	9	8	9	8	13358-001 Universal Services Fort Hood WWTP
	9	9	8	9	8	7	
373701	38	35	38	37	38	37	14477.001 Liberty Hill Regional WWTP
	38	38	37	38	37	37	
104893	214	217	220	214	239	278	10489.002 City of Georgetown (San Gabriel WWTP)
	214	217	259	244	250	236	
104892	214	218	218	214	237	279	10489.003 City of Georgetown (Dove Springs WWTP)
	214	218	260	246	251	233	
CON106	143	130	143	138	143	138	10489-005 City of Georgetown (Pecan Branch WWTP)
	143	143	138	143	138	141	
100041	87	92	94	92	105	105	10004.001 City of Cameron (Cameron WWTP)
	73	70	77	91	94	96	
102641	257	260	264	257	287	333	10264.001 BCRWSS West (Brushy Creek Regional WWTP)
	257	261	310	293	301	282	

Table G.2.6 - All 2025 Monthly Return Flows							
(values in acft/month)							
Control Point	Jan/July	Feb/Aug	Mar/Sept	April/Oct	May/Nov	June/Dec	Discharger
102642	1508	1528	1553	1511	1688	1960	10264.002 BCRWSS East (Brushy Creek Regional WWTP East)
	1511	1536	1825	1723	1768	1659	
102991	308	325	345	328	367	409	10299.001 City of Taylor (Mustang Creek WWTP)
	428	436	422	389	375	351	
114591	84	86	87	84	94	110	11459.001 Anderson Mill MUD (Anderson Mill WWTP)
	84	86	103	97	99	96	
123081	213	216	220	215	240	278	12308.001 City of Cedar Park (Water Reclamation)
	215	218	259	244	251	233	
126441	190	195	200	190	214	251	12644.001 City of Leander WWTP
	195	195	232	218	228	214	
372751	38	43	47	9	38	28	10880.001 City of Bartlett WWTP
	5	14	14	33	47	48	
W12441	0	0	0	0	0	0	11865.001 Brushy Creek MUD
	0	0	0	0	0	0	
W12441	0	0	0	0	0	0	13031.001 Block House MUD
	0	0	0	0	0	0	
372751	20	20	20	20	24	20	10897.001 City of Holland WWTP
	16	16	16	16	16	20	
416621	162	147	162	156	162	156	11324-001 City of Hutto WWTP
	162	162	156	162	156	162	
100462	13	71	153	137	148	129	10046.002 City of Hearne WWTP 2
	140	151	151	87	87	78	
100462	24	23	23	23	24	24	10095.001 City of Calvert WWTP
	25	20	25	23	23	23	
104702	686	671	770	733	821	737	10470.002 City of Temple (Doshier Farm WWTP)
	675	664	649	642	635	723	
CON117	25	25	25	25	28	22	10731.001 City of Rosebud WWTP
	22	22	22	22	22	20	
CON109	29	29	31	31	34	29	11263.001 City of Troy WWTP
	26	26	26	26	26	33	
514831	285	260	285	276	285	276	2877 Twin Oaks Power Station
	285	285	276	285	276	288	
MYDB60	20	19	19	20	20	16	10016.001 City of Lexington WWTP
	18	19	15	20	18	20	
3956	0	0	0	0	0	0	395 Aluminum Co. of America (Rockdale Plant)
	0	0	0	0	0	0	
CON224	104	87	93	93	116	110	10658.001 City of Rockdale WWTP
	104	110	139	145	116	184	
CON125	56	60	64	64	90	64	10456.001 City of Giddings (North WWTP)
	71	52	67	71	60	66	
DCLY63	42	39	44	48	87	81	10813.001 City of Caldwell
	79	77	77	79	68	76	
528801	33	36	38	40	45	59	10717.001 TX Dept MHMR (Mexia State School)
	45	43	45	43	38	39	
CON250	21	23	24	28	22	19	10300.001 City of Teague West WWTP
	12	16	16	19	17	18	
CON131	186	119	172	177	203	265	10222.001 City of Mexia WWTP
	203	195	199	177	164	182	
W12531	41	43	46	46	56	62	10182.001 City of Groesbeck
	54	50	48	48	43	51	
516531	0	0	0	0	0	0	2430 Limestone Electric Generating Station
	0	0	0	0	0	0	
529831	0	0	0	0	0	0	1986 Oak Grove Steam Electric Station
	0	0	0	0	0	0	
102311	170	152	173	159	156	118	10231.001 City of Navasota (Old WWTP)
	190	197	180	176	170	176	
103881	288	295	312	312	354	398	10388.001 City of Brenham WWTP
	352	356	361	347	315	289	
109681	297	297	355	382	396	403	10968.003 Texas A&M University (TAMU Main Campus WWTP)
	424	408	403	415	364	339	
516451	31	27	29	27	26	25	10371.001 City of Somerville WWTP
	25	27	32	26	30	31	

Table G.2.6 - All 2025 Monthly Return Flows (values in acft/month)							
Control Point	Jan/July	Feb/Aug	Mar/Sept	April/Oct	May/Nov	June/Dec	Discharger
25851	175	137	10	116	137	194	2585.001 Texas A&M University (Brayton Fire Training School)
	213	213	213	351	254	229	
CON148	50	45	50	48	48	42	13743.001 Texas Dept. of Criminal Justice (Pack Unit WWTP)
	42	45	48	45	48	49	
CON149	27	14	14	54	18	23	12458.002 Texas Dept. of Criminal Justice (Luther WWTP)
	23	23	18	23	23	20	
531131	0	0	0	0	0	0	2120 Gibbons Creek SES Once-through cooling
	0	0	0	0	0	0	
38211	0	0	0	0	0	0	03821-000 Sanderson Farms Brazos Processing Division
	0	0	0	0	0	0	
BOWA40	0	0	0	0	0	0	04784-000 Sanderson Farms Inc
	0	0	0	0	0	0	
103851	99	93	91	88	99	85	10385.002 City of Bellville WWTP
	91	99	82	85	74	79	
102581	92	91	92	91	102	92	10258.001 City of Richmond (Richmond North Second Street WWTP)
	94	97	89	92	89	100	
102761	95	89	100	95	92	84	10276.001 City of Sealy (Allens Creek WWTP)
	89	87	81	84	87	110	
106073	25	109	145	161	252	283	10607.003 City of Rosenberg (Plant NO 1A WWTP)
	239	247	227	184	176	194	
112751	214	242	199	195	207	101	11275.002 Prairie View A&M University WWTP
	97	125	261	242	214	145	
516604	58	58	58	55	66	60	10001.001 Brookshire MWD WWTP
	66	63	69	55	60	61	
24431	154	110	115	95	95	113	2443.001 Frito-Lay Inc. (Rosenberg Facility)
	51	85	87	101	100	127	
BRRI70	27	25	25	28	32	29	13051.002 Fort Bend Co. MUD 081
	37	38	34	32	30	27	
CON150	42	3	44	34	47	60	10948.001 City of Hempstead WWTP
	76	70	73	76	76	71	
CON153	21	18	18	18	21	16	10765.001 City of Wallis WWTP
	18	18	16	18	18	24	
CON236	2	2	2	2	2	2	10607.004 City of Rosenberg WWTP 3
	2	2	2	2	2	6	
CON234	10	9	10	9	10	9	13314.001 City of Fulshear WWTP
	10	10	9	10	9	7	
106072	489	378	472	444	417	413	10607.002 City of Rosenberg WWTP 2
	417	413	413	385	378	424	
102582	138	103	132	129	150	143	10258.003 City of Richmond (SW WWTP, RichmondRegional WWTP)
	164	164	142	147	132	137	
113171	602	478	530	566	626	585	11317.001 SLRSS (Sugarland North WWTP)
	551	556	501	537	548	644	
532531	0	0	0	0	0	0	1038-000 WA Parish SES Once-through cooling
	0	0	0	0	0	0	
116551	156	153	156	178	209	200	11655.001 Pecan Grove MUD
	200	187	191	178	149	172	
128331	640	570	632	632	709	721	12833.002 City of Sugarland (South WWTP)
	781	823	789	740	663	706	
128332	43	35	43	55	55	27	10986.001 Texas Department of Criminal Justice
	47	35	35	43	47	39	
128332	64	59	69	69	69	69	11475.003 Texas Department of Criminal Justice
	74	74	84	69	69	72	
128332	0	0	0	0	0	0	12833.003 City of Sugarland
	0	0	0	0	0	0	
133551	50	38	41	43	41	36	11971.001 Plantation MUD
	41	43	38	41	41	40	
133551	51	51	129	90	129	143	13355.001 Fort Bend MUD 106
	168	168	154	208	115	107	
136281	199	199	199	199	199	199	13628.001 Fort Bend MUD 112 (New Territory North Regional WWTP)
	402	402	199	199	199	207	
517033	29	26	29	29	29	29	11475.001 Texas Department of Criminal Justice
	29	29	32	29	29	34	

Table G.2.6 - All 2025 Monthly Return Flows							
(values in acft/month)							
Control Point	Jan/July	Feb/Aug	Mar/Sept	April/Oct	May/Nov	June/Dec	Discharger
519951	143	130	143	138	143	138	13873-001 Missouri City Steep Bank Flat Bank WWTP
	143	143	138	143	138	141	
CON155	380	347	380	368	380	368	11046.001 Quail Valley UD WWTP
	380	380	368	380	368	384	
516601	114	104	114	110	114	110	14118.001 Sienna Plantation MUD 1
	114	114	110	114	110	117	
100471	462	486	523	579	563	589	10047.001 City of Lake Jackson WWTP
	649	617	617	554	495	422	
103121	195	187	174	166	154	129	10312.001 City of West Columbia WWTP
	146	124	132	124	132	130	
108821	177	187	202	222	215	227	10882.001 City of Freeport (Central WWTP)
	250	237	237	214	191	163	
108821	0	0	0	0	0	0	7 Dow Chemical Assuming no returns
	0	0	0	0	0	0	

on each of the reservoirs within the BRA's System most recently between 2003 and 2008. Table G.2.7 gives a history of volumetric surveys conducted by the TWDB. These volumetric surveys are used in estimating rates of sediment deposition, which allows estimates of firm yield to be made for various points in the future.

The average annual sedimentation rate is dependent on factors such as the size of the drainage area, upstream development, hydrology, type of terrain, climate, vegetation and land use. Based on these factors, sedimentation rates within the Brazos River basin vary greatly from reservoir to reservoir, ranging from 7 to 2,588 acft/yr. Sedimentation rates for each reservoir are shown in Table G.2.7.

The sedimentation rate for each reservoir is determined by taking the difference in capacity between earlier volumetric surveys or initial design estimates and the most recent surveys. The sedimentation rate is defined as the volume of sediment (acft) deposited within a reservoir over a specified period of time (years).

These measured sedimentation rates were adjusted in some reservoirs to account for other factors that impact the rate of reservoir siltation. Possum Kingdom Lake, Lake Belton and Lake Whitney's measured sedimentation rates were adjusted to account for reductions in the uncontrolled drainage areas caused by the construction of additional reservoir(s) upstream of each lake. The construction of Possum Kingdom Lake was completed in 1941. Since then eight reservoirs have been built within Possum Kingdom's drainage area reducing the uncontrolled drainage area by over 3,000 square miles. As a result the sedimentation rate has been adjusted downward from 2,888 to 2,588 acre-feet/year. Lake Belton's construction ended in 1954. Since then two reservoirs have been built within its drainage area decreasing the uncontrolled drainage area by over 1,500 square miles, thereby reducing the sedimentation rate from 455 to 393 acre-feet/year. Since the completion of Lake Whitney in 1951 four reservoirs have been built within its drainage area, decreasing the uncontrolled drainage area by over 2,100 square miles, thereby reducing the sedimentation rate from 1,589 to 910 acre-feet/year.

Table G.2.7 Volumetric Surveys					
Aquilla					
Source of Survey	**Year Surveyed**	**Area (ac)**	**Volume (ac-ft)**	**Volumetric Survey Method**	**Sediment Rate (acft/yr)**
Original Design	1983	3,280	52,400	USGS aerial topography maps	116
TWDB	1995	3,266	45,962	depth sounder, velocity profiler, and GPS	
TWDB	2002	3,020	45,319	depth sounder, velocity profiler, and GPS	
TWDB	2008	3,066	44,566	depth sounder, velocity profiler, and GPS	
Belton					
Original Design	1954	12,300	457,600	USGS aerial topography maps	393
COE	1961	12,420	447,500	Resurvey of monumental and degradation ranges	
COE	1966	12,423	441,984	Resurvey of monumental and degradation ranges	
TWDB	1994	12,385	434,500	depth sounder, velocity profiler, and GPS	
TWDB	2003	12,315	435,225	depth sounder, velocity profiler, and GPS	
Georgetown					
Original Design	1980	1,310	37,082	USGS aerial topography maps	7
TWDB	1995	1,297	37,010	depth sounder, velocity profiler, and GPS	
TWDB	2005	1,287	36,904	depth sounder, velocity profiler, and GPS	
Granbury					
Original Design	1969	8,700	153,500	USGS aerial topography maps	724
TWDB	1993	7,949	131,593	depth sounder, velocity profiler, and GPS	
TWDB	2003	7,945	129,011	depth sounder, velocity profiler, and GPS	
Granger					
Original Design	1980	4,400	65,507	USGS aerial topography maps	234
TWDB	2002	4,064	52,525	depth sounder, velocity profiler, and GPS	
TWDB	2008	4,203	50,779	Multi Frequency Bottom Profiler	
Possum Kingdom					
Original Design	1941	19,800	724,739	Determined from 1"=500' maps according to SCS	2,588
URS/Forrest & Cotton	1974	17,700	570,243	Resurvey of monumental and degradation ranges	
TWDB	1994	16,716	548,217	depth sounder, velocity profiler, and GPS	
TWDB	2005	16,716	540,340	Multi Frequency Bottom Profiler	

Table G.2.7 - Continued Volumetric Surveys					
Source of Survey	**Year Surveyed**	**Area (ac)**	**Volume (ac-ft)**	**Volumetric Survey Method**	**Sediment Rate (acft/yr)**
Limestone					
Original Design	1979	14,200	225,400	USGS aerial topography maps	614
TWDB	1993	12,553	214,827	depth sounder, velocity profiler, and GPS	
TWDB	2002	12,553	208,017	depth sounder, velocity profiler, and GPS	
Proctor					
Original Design	1964	4,610	59,387	USGS aerial topography maps	101
TWDB	1993	4,474	55,686	depth sounder, velocity profiler, and GPS	
TWDB	2002	4,537	55,457	depth sounder, velocity profiler, and GPS	
Somerville					
Original Design	1967	11,460	160,100	USGS aerial topography maps	355
TWDB	1995	11,456	155,062	depth sounder, velocity profiler, and GPS	
TWDB	2003	11,555	147,104	depth sounder, velocity profiler, and GPS	
Stillhouse Hollow					
Original Design	1967	6,430	235,700	USGS aerial topography maps	212
TWDB	1995	6,484	226,063	depth sounder, velocity profiler, and GPS	
TWDB	2005	6,484	227,825	depth sounder, velocity profiler, and GPS	
Whitney					
Original Design	1951	Unknown	627,302	USGS aerial topography maps	910
COE	1959	23,560	627,100	USGS aerial topography maps	
TWDB	2005	23,220	554,203	depth sounder, velocity profiler, and GPS	

Area-capacity relationships obtained from the most recent volumetric surveys and the estimated annual sedimentation rates shown in Table G.2.7 were used for development of 2012, 2025 and 2060 area-capacity characteristics.

Area-Capacity relationships are calculated at 1 foot intervals, so larger reservoirs may have over 100 sets of data points. However, the Water Availability Model (WAM) used to calculate estimated firm yields only allows up to 12 pairs of data points (SV/SA records) from the area-capacity curve as model input for each reservoir. The WAM applies linear interpolation to the area-capacity inputs to determine the area corresponding to a calculated storage volume. In an effort to reduce error in model

output, a representative set of area-capacity relationships were chosen based on frequency of capacity for each reservoir. The area-capacity relationships used as model input for the yield analysis are presented in Table G.2.8a through G.2.8k.

Area-capacity data for the same 2012, 2020 and 2060 sediment conditions also were developed for Lake Fort Phantom Hill, Hubbard Creek Reservoir and Lake Waco. Because of their location, and size, these reservoirs have a significant interaction with BRA reservoirs.

Table G.2.8a – WAM Area-Capacity Data for Possum Kingdom Lake

Year 2012			Year 2025			Year 2060		
Elevation (Feet msl)	Area (Acres)	Capacity (Acre-Feet)	Elevation (Feet msl)	Area (Acres)	Capacity (Acre-Feet)	Elevation (Feet msl)	Area (Acres)	Capacity (Acre-Feet)
Less than 10% of the time the reservoir will be at this stage								
902	0	0	909	0	0	928	0	0
944	3,293	54,220	948	3,415	53,097	956	3,330	43,964
Less than 20% of the time the reservoir will be at this stage								
987	11,593	340,158	987	11,223	310,461	987	10,085	234,663
989	12,173	363,922	989	11,803	333,484	989	10,665	255,412
991	12,810	388,890	991	12,440	357,713	991	11,302	277,367
More than 80% of the time the reservoir will be at this stage								
992	13,158	401,874	992	12,788	370,327	992	11,650	288,843
994	14,321	429,291	994	13,951	397,005	994	12,813	313,246
996	15,312	459,054	996	14,942	426,028	996	13,804	339,995
997	15,619	474,519	997	15,249	441,123	997	14,111	353,953
998	15,897	490,277	998	15,527	456,511	998	14,389	368,203
999	16,161	506,305	999	15,791	472,169	999	14,653	382,725
1000	16,537	522,654	1,000	16,167	488,148	1,000	15,029	397,566

Note: Reservoir stage percentages were derived from the trigger points chosen for the drought contingency plan

Table G.2.8b - WAM Area-Capacity Data for Lake Granbury								
Year 2012			Year 2025			Year 2060		
Elevation (Feet msl)	Area (Acres)	Capacity (Acre-Feet)	Elevation (Feet msl)	Area (Acres)	Capacity (Acre-Feet)	Elevation (Feet msl)	Area (Acres)	Capacity (Acre-Feet)
Less than 10% of the time the reservoir will be at this stage								
634	0	0	642	0	0	651	0	0
643	183	636	648	200	464	657	122	119
651	519	3,342	657	707	4,384	663	605	2,244
660	1,115	10,536	666	1,460	13,991	670	1,253	8,699
669	1,919	24,111	675	2,464	31,237	676	2,020	18,384
678	3,135	46,270	684	4,233	60,879	683	3,424	37,272
Less than 20% of the time the reservoir will be at this stage								
688	5,734	88,917	688	5,553	80,166	688	4,968	57,753
689	6,095	94,831	689	5,914	85,899	689	5,329	62,901
More than 80% of the time the reservoir will be at this stage								
690	6,550	101,153	690	6,369	92,041	690	5,784	68,457
691	6,980	107,917	691	6,799	98,625	691	6,214	74,456
692	7,409	115,111	692	7,228	105,639	692	6,643	80,884
693	7,839	122,735	693	7,658	113,082	693	7,073	87,742

Note: Reservoir stage percentages were derived from the trigger points chosen for the drought contingency plan

Table G.2.8c - WAM Area-Capacity Data for Lake Whitney								
Year 2012			Year 2025			Year 2060		
Elevation (Feet msl)	Area (Acres)	Capacity (Acre-Feet)	Elevation (Feet msl)	Area (Acres)	Capacity (Acre-Feet)	Elevation (Feet msl)	Area (Acres)	Capacity (Acre-Feet)
Less than 10% of the time the reservoir will be at this stage								
441	0	0	451	0	0	462	0	0
460	446	2,976	460	304	1,208	480	1,618	13,091
475	1,616	17,830	475	1,474	13,932	490	3,816	39,897
490	4,379	59,651	490	4,237	53,623	500	5,826	88,200
505	7,626	148,171	505	7,484	140,013	510	9,526	161,276
520	14,232	315,201	520	14,090	304,913	520	13,669	278,543
524	16,071	375,564	524	15,929	364,708	524	15,508	336,651
528	18,498	444,590	528	18,356	433,166	528	17,935	403,424
529	19,251	463,465	529	19,109	451,899	529	18,688	421,735
530	20,227	483,204	530	20,085	471,496	530	19,664	440,911
Less than 20% of the time the reservoir will be at this stage								
531	21,211	503,924	531	21,069	492,074	531	20,648	461,067
More than 80% of the time the reservoir will be at this stage								
533	23,151	548,062	533	23,009	535,928	532	22,588	504,078

Note: Reservoir stage percentages were derived from the trigger points chosen for the drought contingency plan

Table G.2.8d – WAM Area-Capacity Data for Lake Aquilla								
Year 2012			Year 2025			Year 2060		
Elevation (Feet msl)	Area (Acres)	Capacity (Acre-Feet)	Elevation (Feet msl)	Area (Acres)	Capacity (Acre-Feet)	Elevation (Feet msl)	Area (Acres)	Capacity (Acre-Feet)
Less than 10% of the time the reservoir will be at this stage								
502	30	21	502	0	0	516	667	3,224
508	290	918	508	247	645	519	909	5,563
515	766	4,495	515	723	3,919	523	1,202	9,797
521	1,223	10,428	521	1,180	9,593	526	1,484	13,790
527	1,742	19,200	527	1,699	18,106	529	1,805	18,701
Less than 20% of the time the reservoir will be at this stage								
532	2,306	29,302	532	2,263	27,993	532	2,142	24,600
533	2,447	31,679	533	2,404	30,326	533	2,283	26,813
534	2,582	34,194	534	2,539	32,798	534	2,418	29,163
More than 80% of the time the reservoir will be at this stage								
535	2,720	36,846	535	2,677	35,407	535	2,556	31,650
536	2,879	39,646	536	2,836	38,163	536	2,715	34,285
537	3,004	42,588	537	2,961	41,062	537	2,840	37,063
537.5	3,053	44,102	538	3,010	42,555	537.5	2,889	38,495

Note: Reservoir stage percentages were derived from the trigger points chosen for the drought contingency plan

Table G.2.8e - WAM Area-Capacity Data for Lake Proctor								
Year 2012			Year 2025			Year 2060		
Elevation (Feet msl)	Area (Acres)	Capacity (Acre-Feet)	Elevation (Feet msl)	Area (Acres)	Capacity (Acre-Feet)	Elevation (Feet msl)	Area (Acres)	Capacity (Acre-Feet)
Less than 10% of the time the reservoir will be at this stage								
1133	0	0	1,133	0	0	1134	0	0
1143	1,148	6,159	1,143	1101	5,709	1144	1,125	5,638
Less than 20% of the time the reservoir will be at this stage								
1153	2,271	23,494	1,153	2224	22,573	1153	2,097	20,181
1154	2,378	25,819	1,154	2331	24,850	1154	2,204	22,332
1155	2,520	28,268	1,155	2473	27,252	1155	2,346	24,606
1156	3,069	31,062	1,156	3022	29,999	1156	2,895	27,226
More than 80% of the time the reservoir will be at this stage								
1157	3,459	34,326	1,157	3412	33,216	1157	3,285	30,316
1158	3,733	37,922	1,158	3686	36,764	1158	3,559	33,738
1159	3,965	41,771	1,159	3918	40,566	1159	3,791	37,412
1160	4,148	45,828	1,160	4101	44,575	1160	3,974	41,294
1161	4,328	50,066	1,161	4281	48,766	1161	4,154	45,358
1162	4,503	54,481	1,162	4456	53,134	1162	4,329	49,599

Note: Reservoir stage percentages were derived from the trigger points chosen for the drought contingency plan

Table G.2.8f - WAM Area-Capacity Data for Lake Belton								
Year 2012			Year 2025			Year 2060		
Elevation (Feet msl)	Area (Acres)	Capacity (Acre-Feet)	Elevation (Feet msl)	Area (Acres)	Capacity (Acre-Feet)	Elevation (Feet msl)	Area (Acres)	Capacity (Acre-Feet)
Less than 10% of the time the reservoir will be at this stage								
492	0	0	492	0	0	502	0	0
529	1,852	24,950	529	1,799	23,152	538	2,536	37,437
Less than 20% of the time the reservoir will be at this stage								
573	7,916	221,108	573	7,863	216,980	573	7,717	206,285
578	8,956	263,132	578	8,903	258,740	578	8,757	247,316
583	9,965	310,533	583	9,912	305,875	583	9,766	293,723
More than 80% of the time the reservoir will be at this stage								
585	10,274	330,797	585	10,221	326,034	585	10,075	313,590
587	10,714	351,812	587	10,661	346,943	587	10,515	334,208
589	11,130	373,653	589	11,077	368,678	589	10,931	355,651
591	11,511	396,296	591	11,458	391,214	591	11,312	377,897
592	11,732	407,917	592	11,679	402,783	592	11,533	389,319
593	11,919	419,743	593	11,866	414,555	593	11,720	400,946
594	12,102	431,753	594	12,049	426,513	594	11,903	412,758

Note: Reservoir stage percentages were derived from the trigger points chosen for the drought contingency plan

Table G.2.8g - WAM Area-Capacity Data for Lake Stillhouse Hollow								
Year 2010			Year 2025			Year 2060		
Elevation (Feet msl)	Area (Acres)	Capacity (Acre-Feet)	Elevation (Feet msl)	Area (Acres)	Capacity (Acre-Feet)	Elevation (Feet msl)	Area (Acres)	Capacity (Acre-Feet)
Less than 10% of the time the reservoir will be at this stage								
513	0	0	516	0	0	519	0	0
553	949	16,532	555	1,002	17,465	556	971	15,787
Less than 20% of the time the reservoir will be at this stage								
593	3,160	94,150	593	3,133	92,096	593	3,061	86,749
599	3,626	114,546	599	3,599	112,332	599	3,527	106,556
605	4,137	137,771	605	4,110	135,398	605	4,038	129,193
More than 80% of the time the reservoir will be at this stage								
611	4,806	164,558	611	4,779	162,024	611	4,707	155,390
612	4,936	169,428	612	4,909	166,868	612	4,837	160,163
614	5,218	179,574	614	5,191	176,961	614	5,119	170,113
616	5,505	190,296	616	5,478	187,630	616	5,406	180,638
618	5,889	201,654	618	5,862	198,935	618	5,790	191,800
620	6,179	213,745	620	6,152	210,972	620	6,080	203,694
622	6,471	226,376	622	6,444	223,550	622	6,372	216,129

Note: Reservoir stage percentages were derived from the trigger points chosen for the drought contingency plan

Table G.2.8h - WAM Area-Capacity Data for Lake Georgetown								
Year 2012			Year 2025			Year 2060		
Elevation (Feet msl)	Area (Acres)	Capacity (Acre-Feet)	Elevation (Feet msl)	Area (Acres)	Capacity (Acre-Feet)	Elevation (Feet msl)	Area (Acres)	Capacity (Acre-Feet)
Less than 10% of the time the reservoir will be at this stage								
712	0	0	712	0	0	713	0	0
745	286	3242	745	285	3,205	746	299	3397
Less than 20% of the time the reservoir will be at this stage								
777	916	21,406	777	915	21,330	777	912	21,130
779	966	23,289	779	965	23,211	779	962	23,004
781	1,020	25,275	781	1,019	25,194	781	1,016	24,981
More than 80% of the time the reservoir will be at this stage								
782	1,046	26,309	782	1,045	26,227	782	1,042	26,010
784	1,104	28,459	784	1,103	28,374	784	1,100	28,151
786	1,162	30,727	786	1,161	30,640	786	1,158	30,411
788	1,215	33,105	788	1,214	33,016	788	1,211	32,780
789	1,239	34,333	789	1,238	34,242	789	1,235	34,003
790	1,260	35,583	790	1,259	35,491	790	1,256	35,249
791	1,286	36,856	791	1,285	36,763	791	1,282	36,518

Note: Reservoir stage percentages were derived from the trigger points chosen for the drought contingency plan

Table G.2.8i - WAM Area-Capacity Data for Lake Granger								
Year 2012			Year 2025			Year 2060		
Elevation (Feet msl)	Area (Acres)	Capacity (Acre-Feet)	Elevation (Feet msl)	Area (Acres)	Capacity (Acre-Feet)	Elevation (Feet msl)	Area (Acres)	Capacity (Acre-Feet)
Less than 10% of the time the reservoir will be at this stage								
472	70	76	472	0	0	486	729	2,663
475	168	442	475	73	92	488	954	4,348
479	408	1,516	479	313	784	491	1,291	7,710
484	913	4,889	484	818	3,680	493	1,557	10,555
489	1,453	10,785	489	1,358	9,098	495	1,867	13,968
494	2,093	19,573	494	1,998	17,409	497	2,231	18,064
Less than 20% of the time the reservoir will be at this stage								
499	3,016	32,268	499	2,921	29,626	499	2,624	22,919
500	3,200	35,377	500	3,105	32,639	500	2,808	25,635
501	3,386	38,670	501	3,291	35,837	501	2,994	28,536
More than 80% of the time the reservoir will be at this stage								
502	3,652	42,189	502	3,557	39,260	502	3,260	31,664
503	3,837	45,934	503	3,742	42,910	503	3,445	35,016
504	4,176	49,941	504	4,081	46,821	504	3,784	38,631

Note: Reservoir stage percentages were derived from the trigger points chosen for the drought contingency plan

Table G.2.8j - WAM Area-Capacity Data for Lake Somerville								
Year 2012			Year 2025			Year 2060		
Elevation (Feet msl)	Area (Acres)	Capacity (Acre-Feet)	Elevation (Feet msl)	Area (Acres)	Capacity (Acre-Feet)	Elevation (Feet msl)	Area (Acres)	Capacity (Acre-Feet)
Less than 10% of the time the reservoir will be at this stage								
210	0	0	211	0	0	212	0	0
214	1,067	1,743	214	890	1,276	214	412	302
218	2,777	9,416	218	2,600	8,238	218	2,122	5,355
222	4,185	23,438	222	4,008	21,549	222	3,530	16,758
226	5,936	43,357	226	5,759	40,757	226	5,281	34,057
Less than 20% of the time the reservoir will be at this stage								
232	8,210	85,804	232	8,033	82,138	232	7,555	72,575
233	8,697	94,258	233	8,520	90,414	233	8,042	80,374
234	9,167	103,190	234	8,990	99,168	234	8,512	88,651
More than 80% of the time the reservoir will be at this stage								
235	9,611	112,580	235	9,434	108,380	235	8,956	97,385
236	10,154	122,462	236	9,977	118,085	236	9,499	106,613
237	10,782	132,931	237	10,605	128,375	237	10,127	116,427
238	11,410	144,027	238	11,233	139,294	238	10,755	126,868

Note: Reservoir stage percentages were derived from the trigger points chosen for the drought contingency plan

Table G.2.8k - WAM Area-Capacity Data for Lake Limestone								
Year 2012			Year 2025			Year 2060		
Elevation (Feet msl)	Area (Acres)	Capacity (Acre-Feet)	Elevation (Feet msl)	Area (Acres)	Capacity (Acre-Feet)	Elevation (Feet msl)	Area (Acres)	Capacity (Acre-Feet)
Less than 10% of the time the reservoir will be at this stage								
323	0	0	324	0	0	327	0	0
338	3,027	20,168	339	3,006	20,167	341	2,874	18,097
Less than 20% of the time the reservoir will be at this stage								
354	8,489	108,306	354	8,278	102,019	354	7,688	85,841
355	8,892	116,997	355	8,681	110,498	355	8,091	93,730
356	9,289	126,087	356	9,078	119,378	356	8,488	102,019
357	9,669	135,566	357	9,458	128,646	357	8,868	110,697
More than 80% of the time the reservoir will be at this stage								
358	10,132	145,466	358	9,921	138,335	358	9,331	119,796
359	10,617	155,841	359	10,406	148,499	359	9,816	129,369
360	11,134	166,716	360	10,923	159,163	360	10,333	139,443
361	11,559	178,063	361	11,348	170,299	361	10,758	149,988
362	11,887	189,786	362	11,676	181,811	362	11,086	160,910
363	12,398	201,928	363	12,187	193,742	363	11,597	172,251

Note: Reservoir stage percentages were derived from the trigger points chosen for the drought contingency plan

G.2.2.5 Reservoir Release Requirements

Table G.2.9 summarizes several reservoir release requirements that are not included in the original TCEQ Brazos WAM. (These releases do not include other releases that may be required by the proposed System Operation Permit.) These release requirements were incorporated in all versions of the Brazos WAM used to develop the WMP.

The Federal Energy Regulatory Commission (FERC) license for Possum Kingdom required a release from the reservoir for downstream fish and wildlife purposes. BRA has not generated hydropower since 2007 and is in the process of decommissioning the hydropower facility. As part of the FERC decommissioning process, BRA has agreed to maintain the low flow releases. These releases vary by storage in the reservoir and are limited to the inflow into the reservoir. These releases are modeled using three IF records controlled by a drought index. These IF records have a 99999999 priority date, making them junior to all other priority water rights. Releases are backed up by reservoir storage, but are limited to inflows by using TO records that reference regulated flows at control point 515501, which is located just upstream of the reservoir control point 515531. The regulated flows at 515501 are equal to the inflows into Possum Kingdom after all upstream water rights have diverted.

At Lake Granbury a mean daily release of up to 25 cfs is used to benefit downstream environmental needs. This operational release is limited to the inflow into the reservoir. Inflow into Lake Granbury does not include water supply releases from Possum Kingdom. This release is not included in the Appropriation Models. The release is modeled using the following steps:

1. A dummy water right calculates a target equal to the regulated flows at control point 515601. This control point is located just upstream of the Lake Granbury control point (515631), so the regulated flows at the control point are equal to the inflows into the reservoir. In the Current Operation Model, this target calculation is given the same priority date as Possum Kingdom (19380406) so that it

measures flows just before releases have been made to meet demand assigned to Possum Kingdom but diverted at Lake Granbury (see Section G.2.4 of this

Table G.2.9 – Reservoir Release Requirements Added to the Brazos WAM				
Location	**Source**	**Type**	**Monthly Period**	**Release**
Possum Kingdom	FERC License	Inflow bypass	March - June	100 cfs above 994.5 ft 50 cfs 990. ft to 994.5 ft 20 cfs below 990.0 ft
			July - September	75 cfs above 994.5 ft 37.5 cfs 990. ft to 994.5 ft 20 cfs below 990.0 ft
			October – February	50 cfs above 994.5 ft 25 cfs 990. ft to 994.5 ft 20 cfs below 990.0 ft
Lake Granbury*	BRA	Inflow bypass	All times	Mean daily release of 25 cfs
Lake Limestone	CA 12-5165	Combination release from storage and inflow bypass	All times	Up to 6 cfs of inflow Minimum of 2 cfs until inflow ceases
Excess Flows	CA 12-5166	Minimum flow	All times	1,100 cfs at Richmond

* Lake Granbury releases not included in Appropriation Models at request of TCEQ because it is not part of Lake Granbury water right.

Appendix). In the 2025 and 2060 Operation Models the target calculation has a priority date of 20120301. Because it is located before system operation diversions in the priority loop, it also measures flows prior to releases from Possum Kingdom.

2. The actual reservoir bypass is initiated using an IF Record with a 99999999 (most junior) priority date. The release is backed up by reservoir storage but limited to the inflows calculated in Step #1. In the Operation Models a PX2

record is used so that it is only applied in the second simulation, which is where all of the BRA system releases occur.

The Lake Limestone water right requires passage of inflows up to 6 cfs when inflows into the reservoir are above 2 cfs. When inflows are below 2 cfs, a minimum of 2 cfs must be released downstream as long as there is inflow into the reservoir. Once inflows into the reservoir cease, no release is required. This bypass is modeled using two IF records with a 99999999 priority date, one modeling the 6 cfs requirement (4348 acft/yr) and the other modeling the 2 cfs requirement (1449 acft/yr). Both are backed up by reservoir storage with the limits applied using TO Records that reference control point 516501. Control point 516501 is located just upstream of the Lake Limestone control point 516531, so the regulated flows at this control point are equal to inflows into the reservoir. The 6 cfs release is set to the minimum of the release or the inflow. The 2 cfs release applies at all times unless the flow at 515601 is less than 0.1 acft/month. The flow cutoff when there is no inflow is applied using the LIM option on the TO record, which sets the 2 cfs release target to zero when the flow is less than 0.1 acft/month.

The Excess Flows permit specifies that flows at the Richmond gage (USGS 08114000) must exceed 1,100 cfs for diversions above the gage. (If the diversion is downstream of the Richmond gage, then the minimum flow at Richmond should be 1,100 plus the rate of diversion under the permit downstream of the gage. However, no diversion under this permit was modeled downstream of Richmond.) The 1,100 cfs instream flow requirement was modeled using an IF record with a priority date of 99999999. The Excess Flows IF record was included only in models that have Allens Creek Reservoir, which uses diversions made under this permit when the 202,000 acft/yr limit on run-of-the-river flows has been met for filling Allens Creek Reservoir but there is still unappropriated flow available. The IF record was inserted just before the Allens Creek diversion in the model setup so that it would apply to the diversion (which also has a 99999999 priority date). Excess Flows diversions by NRG, which have a more restrictive 2,000 cfs limit at Richmond, are assigned in a post-processor spreadsheet and were not included in the model (see Section G.2.2.14 of this Appendix).

The Excess Flows permit also allows for a minimum flow as low as 650 cfs if all water right holders below the diversion agree to the lower minimum flow. However, this option was not included in any model.

G.2.2.6 Reservoir Operational Limitations

Operational limitations for BRA reservoirs were included in the Current Operation Model and the 2025 and 2060 Operation Models. Table G.2.10 contains the elevation and storage limitations for the BRA reservoirs used in the modeling. The “30% of Storage Elevation” column refers to the System Operation Order (System Order), which was modified in some cases (see Section 4.3.5 of the Technical Report).

G.2.2.7 Modeling of Lake Whitney

The original TCEQ WAM used three “evaporation allocation” pools to model Lake Whitney. One pool models the BRA’s storage, the second pool models the non-priority storage used to model the remainder of the conservation storage (which is the portion of the storage above 520 feet mean sea level (ft msl) and is used to generate hydropower), and a third pool that models the “dead” storage in the reservoir below elevation 520 ft msl.

For the Firm Yield and Operational Models, the reservoir setup at Lake Whitney was altered to include only the BRA and conservation pools, both of which are above elevation 520 ft msl. This setup prevents diversions and releases when reservoir elevations were below elevation 520 ft msl. BRA water rights and its storage contract with the USACE do not allow diversions from Lake Whitney at elevations below this level under normal circumstances. The SV Records for Lake Whitney were adjusted to remove the storage below elevation 520 ft msl. The SA records were adjusted so that when the reservoir has zero storage the area is equal to the area at elevation 520 ft msl.

At the request of TCEQ, the Appropriation Models use a slightly different approach to Lake Whitney. Like the other models, there are two pools. One represents the 50,000 acft of storage for the BRA. The other pool represents the total remaining storage in the reservoir, including both conservation and dead storage.

Table G.2.10 – Limitations for BRA Reservoirs															
Reservoir	Elevation (Feet)			Current Storage (acre-feet)				2025 Storage (acre-feet)				2060 Storage (acre-feet)			
	Top of Conservation Elevation	Minimum for Lakeside Diversion	Minimum for Downstream Release	Top of Conservation	Minimum for Lakeside Diversion	Minimum for Downstream Release	30% of Storage	Top of Conservation	Minimum for Lakeside Diversion	Minimum for Downstream Release	30% of Storage	Top of Conservation	Minimum for Lakeside Diversion	Minimum for Downstream Release	30% of Storage
Possum Kingdom	1000	n/a	921	522,654	0	8,382	156,796	488,148	0	4,855	146,444	397,566	0	0	119,270
Lake Granbury	693	675	625.75	122,735	37,644	0	36,821	113,082	31,237	0	33,925	87,742	16,435	0	26,323
Lake Aquilla	537.5	none	503	44,102	66	66	13,231	42,555	9	9	12,766	38,495	0	0	11,549
Lake Whitney	533	520	448.83	548,062	315,201	249		535,928	304,913	0		504,078	278,543	0	
BRA Portion				49,868	0	0	14,960	49,473	0	0	14,842	48,299	0	0	14,490
Southwest Power Administration Portion				182,993	0			181,542	0			177,236	0		
Lake Proctor	1162	1142	1,128	54,481	5,071	0	16,344	53,134	4,669	0	15,940	49,599	3,676	0	14,880
Lake Belton	594	540	483	431,753	50,992	0	129,526	426,513	48,612	0	127,954	412,758	42,724	0	123,827
Lake Stillhouse Hollow	622	532	515	226,376	3,298	3	67,913	223,550	2,868	0	67,065	216,129	1,884	0	64,839
WCRRWL Limit			559.5		23,567				22,404				19,453		
Lake Georgetown	791	699	720	36,856	0	61	11,057	36,763	0	54	11,029	36,518	0	35	10,955
Lake Granger	504	440	457	49,941	0	0	14,982	46,821	0	0	14,046	38,631	0	0	11,589
Lake Somerville	238	210	206	144,027	0	0	43,208	139,294	0	0	41,788	126,868	0	0	38,060
Lake Limestone	363	330	321	201,928	3,590	0	60,578	193,742	2,366	0	58,123	172,251	356	0	51,675
Allens Creek				145,533				145,533				145,533			
Total				*2,030,254*				*1,958,608*				*1,770,389*			

G.2.2.8 Backup of Temple Water Right

The Operational Models include special modeling for the City of Temple. The BRA makes regular releases from Lake Belton for the City of Temple. The City of Temple has its own water right (CA 12-2938) that authorizes diversion of up to 15,804 acre-feet per year from a small channel dam on the Leon River. This water right has a 1915 priority date and is senior to Lake Belton. In accordance with the contract between BRA and the City of Temple, to the extent that there is inflow into Lake Belton and the City of Temple has remaining diversion rights, the BRA assigns up to 12,500 acre-feet per year of these releases to the Temple water right. Releases from stored BRA water or releases in excess of 12,500 acre-feet per year are assumed to come from BRA rights.

In the Appropriation Models the Temple water right is assumed to divert at its full authorized diversion of 15,804 acft/yr.

In all of the models the demand for the City of Temple is greater than the amount available under its own right. In the Current Operation model, the BRA use for the City of Temple is modeled as a lakeside diversion from Lake Belton. (The City's diversion is a short distance downstream of the reservoir.) This prevents the use of run-of-the-river flows for diversions in excess of 12,500 acft/yr. In other models, which include the System Operation Permit, the BRA use is modeled downstream so that diversions in excess of the maximum diversion target can use run-of-the-river flows when available.

In the WRAP code an additional dummy water right sets the target for use from the BRA system. The target for this water right is set to the City of Temple demand. This target is modified using option 11 on a TO Record, which subtracts the diversion under COA 2938 from the demand target. This target is then passed via a BU Record to another water right that actually diverts the BRA water.

G.2.2.9 Variable Demand Modeling

Several of the BRA's larger contract holders also have their own water rights, including Dow Chemical, the Gulf Coast Water Authority (GCWA), the City of Marlin, the Texas Municipal Power Agency (TMPA), Alcoa and NRG. Most of the time these entities rely on their own rights to meet their demands. These entities use their BRA contracts to provide additional water when flows in the Brazos River are low. The Current Operation Model, 2025 and 2060 Operation Models, and some of the Appropriation Models incorporate this operation, using their BRA contract water only when these entities own water rights do not have sufficient supply to meet demands.

The Dow Chemical, Gulf Coast Water Authority (GCWA) and NRG Smithers Lake demands are modeled using a BU Record that references the Group Identifier associated with the customer's water right. Since GCWA has multiple water rights, the WR Records were modified to use a new common Group Identifier. Diversions associated with the BU Records are limited to contract amounts using an SO Record.

The contract for the City of Marlin is relatively small. It was combined with the contracts for the cities of Lorena and Rosebud and is diverted with a municipal demand pattern.

BRA diversions for TMPA are used to fill storage in Gibbons Creek Reservoir that is still empty after all of TMPA's water rights have executed. The diversion target for TMPA is determined based on the empty storage in Gibbons Creek less 4,000 acft. Diversions are limited to a maximum of 900 acft/month and 3,600 acft/yr.

BRA diversions for Alcoa are modeled in a similar fashion to TMPA, except that the target is set to the entire empty storage in Lake Alcoa that has not been filled by Alcoa's own water rights.

G.2.2.10 Lake Belton Modeling

Fort Hood has its own water rights in Lake Belton for 12,000 acft of storage and 12,000 acft/yr of diversion (COA 12-2936). In order to protect this right in the system operation runs (Current Operation Model, 2025 and 2060 Operations Model, and Appropriation Models), Lake Belton was split into two pools. This prevents BRA operations from depleting too much water and impacting the reliability of the Fort Hood right. To adjust for sedimentation, the Fort Hood pool was reduced from 12,000 acft by the same percentage as the total storage in the reservoir has been reduced from initial conditions.

G.2.2.11 Lake Whitney Hydropower Operation

Lake Whitney hydropower operation has a significant impact on water availability in the Brazos Basin. Hydropower operation has been included in the Current Operation Model, 2025 and 2060 Operation Models and the Appropriation Models. Hydropower releases are based on a trend analysis of historical releases performed by the BRA in 2010. Table G.2.11 shows the release schedule from this analysis.

The release schedule is implemented in the WAM by placing a demand with 100% return flow on the non-priority hydropower storage (i.e. the non-BRA portion of Lake Whitney). In the Operational Models, the hydropower release is modeled as a type 3 right with a priority date of 1 (most senior). The type 3 right is used so there are no stream flow depletions at this priority date. The hydropower pool is later filled at a 99999999 (most junior) priority date. In the Appropriation Models the hydropower release is modeled as a junior right (priority date 99999999), with a return flow at the beginning of the time step in the next month. In both cases the modeling allows distribution of the hydropower releases in priority order for existing water rights. The variable release schedule is implemented using a drought index based on the total storage in Lake Whitney (BRA storage plus non-priority storage). The minimum storage volume in the hydropower pool was adjusted so that hydropower releases were curtailed well before the reservoir reaches elevation 520 feet. This was done to

minimize the occurrence of periods when the reservoir is below 520 feet. Below this elevation the only releases from Lake Whitney are water supply releases made by the BRA.

Table G.2.11 – Lake Whitney Hydropower Release Schedule	
Elevation Range (ft - msl)	**Release** (cfs)
520.00 to 526.99	276
527.00 to 527.99	561
530.00 to 533.99	1,267

G.2.2.12 Williamson County Regional Raw Water Line

The Williamson County Regional Raw Water Line (WCRRWL) connects Lake Stillhouse Hollow to Lake Georgetown. The pipeline is included in the Current Operation Model, 2025 and 2060 Operation Models and Appropriation Models. In the Current Operation Model and the 2025 and 2060 Operation Models the pipeline is modeled as a diversion from Lake Stillhouse Hollow with a return flow to a dummy control point. Flows in the dummy control point are then used to meet demands and fill storage at Lake Georgetown. Diversions start when Lake Georgetown reaches a given level. Water from Stillhouse Hollow may be stored in Lake Georgetown for use in later time steps. More detail on this modeling is found in Section G.2.4 and G.2.5 of this Appendix.

The Appropriation Model uses a “shared demand” approach that shifts demands between the two reservoirs. This approach is described in Section G.2.6 of this Appendix.

G.2.2.13 Modeling of the Proposed System Operation Permit

The proposed System Operation Permit was modeled using the same approach developed by the BRA and the TCEQ for the permit application. This approach uses the "dual simulation" technique to minimize impacts on other water rights. The first simulation models only the existing BRA reservoir rights. The second simulation aggregates all of the depletions made by these reservoir rights. These aggregated flows are then used along with appropriations under the proposed System Operation Permit to meet demands from the BRA system and fill storage in BRA reservoirs. The process is described below.

First Simulation

1. Each BRA reservoir executes with all demand lakeside, using the PX 1 option.
2. A PX 4 WR Record makes depletions from a dummy control point equal to the aggregated depletions of the BRA reservoirs in Step 1.

Second Simulation

3. A PX 5 WR Record makes depletions from a dummy control point equal to the amount recorded in Step 2.
4. A PX 2 WR Record uses the depletions in Step 3 as a target for actual streamflow depletions at the priority dates of the BRA reservoirs. The depleted water is stored in dummy control points.
5. BRA reservoirs are filled at a 20120003 priority date (just senior to application of the instream flows) from the corresponding dummy control point.
6. Lakeside diversions are made from the corresponding dummy control points or reservoir storage.
7. Water left in the dummy control points is returned to the river.

8. Environmental flows are applied at a 20120103 priority date.
9. BRA reservoirs are filled with unappropriated flows (if any).
10. Downstream diversions are made at their diversion location, using releases from upstream reservoirs as needed.
11. Fill BRA reservoirs with any remaining unappropriated water.

G.2.2.14 Accounting Spreadsheet

In the approach used for modeling the proposed System Operation Permit described above in Section G.2.2.13, all "BRA water" diverted under their existing rights is put into a common pool for distribution to demands. As a result, the diversions under the individual water rights are not directly tracked by the model. Excel spreadsheet post-processors were developed to assign diversions to the various BRA water rights. The spreadsheets assign diversions on an annual basis. The post-processing is consistent with the Accounting Plan described in Section 5 and Appendices H-1 and H-2 of the Technical Report.

The spreadsheets use the following steps for diversions from reservoirs:

1. Lakeside diversions are summed by year.
2. An Excel macro processes the raw HRR output from the WRAP model so that it is grouped by reservoir. These releases are summed by year.
3. The annual lakeside diversions and downstream releases are summed together to determine total annual use from each reservoir.
4. The use under the priority right for each reservoir is calculated as the minimum of either the priority diversion from the reservoir or the actual total use from the reservoir.
5. The unused priority reservoir rights are determined for each year for potential use under the System Order. This calculation excludes Allens Creek Reservoir.

6. Diversions made under the Excess Flows permit by NRG or to fill Allens Creek Reservoir are subtracted from the unused priority rights. In some cases diversions under the Excess Flows permit by NRG are adjusted so that the total diversions do not exceed the unused priority reservoir rights.
7. Any remaining unused priority rights are distributed to reservoirs that are using more than their local priority water right. These flows are assigned to Lake Georgetown and Lake Granbury (in runs with CPNPP expansion) first. These diversions are used under the System Order.
8. Any remaining lakeside diversions are assigned to the proposed System Operation Permit.

With the exception of Excess Flows diversions by NRG Smithers and to fill Allens Creek Reservoir, diversions of run-of-river flows downstream of reservoirs are assigned to the proposed System Operation Permit.

G.2.3 Firm Yield Model

Firm yields of the eleven BRA reservoirs were determined for 2012, 2025 and 2060 sediment conditions. The model used for the firm yield calculations includes the following changes to the base Brazos-WAM.

1. Each sediment condition was modeled using no return flows, current return flows and all permitted return flows. The return flows are described in Section G.2.2.1 of this Appendix.

2. Area-capacity relationships were adjusted for all BRA reservoirs, Lake Fort Phantom Hill, Lake Waco and Hubbard Creek Reservoir. Calculation of sediment conditions is discussed in Section G.2.2.4 of this Appendix. Other reservoirs remain at their original area-capacity relationships in the TCEQ WAM.

3. The dual simulation option was employed to avoid overestimating firm yields for under-permitted reservoirs. Dual simulation options in WAM are designed primarily for scenarios where multiple rights with different priorities divert water from the same reservoir system. Firm yield simulations are completed for each reservoir with the original priority date in the certificate of adjudication and a junior priority date to calculate additional unpermitted yield within the reservoir. Without the dual simulation option, reservoir drawdowns associated with junior diversions may be inappropriately refilled in subsequent months by senior rights at the same reservoir which overestimates the additional unpermitted yield of a reservoir. In this scenario the dual simulation option allows reservoir refills under the junior priority date computed during an initial simulation to be used as upper limits constraining refills during the second or final simulation. Implementing the dual simulation option in this manner prevents overestimation of firm yield in under-permitted reservoirs.

4. Reservoir setup at Lake Whitney was altered to include only the conservation storage, as discussed in Section G.2.2.7 of this Appendix.

5. Reservoir releases from Lake Granbury and Possum Kingdom Lake as described in Section G.2.2.5 of this Appendix.

The firm yields of the reservoirs may be found in Section 2.3 of the Technical Report.

G.2.4 Current Operation Model

The Current Operation Model was used for the Scenario 1 modeling described in Section 4.3 of the Technical Report. This model incorporates the modifications discussed in Section G.2.2 of this Appendix, plus additional changes discussed below.

The Current Operation Model puts all BRA use at its location, either lakeside or downstream of reservoirs. If a diversion is located downstream of multiple reservoirs,

then its demand can be met from all of those reservoirs using the multiple reservoir simulation capabilities in WRAP. These are modeled as Type 2 rights (no refilling of storage). This model does not use the proposed System Operation Permit, so any downstream diversions (except NRG Excess Flows diversions) must come from BRA reservoir releases.

Table G.2.12 shows the demands and water right identifiers associated with the BRA demands. (Demands are discussed in Section 3.3, Section 4.3 and Appendix G-1 of the Technical Report.) The X's in columns 8-18 of Table G.2.12 show the reservoirs that are located upstream of each demand point. The "Assigned Reservoir" column shows the primary reservoir associated with each demand. The demand is assigned the priority date of the primary reservoir except for the variable demands in the lower basin, which are assigned the most junior priority date (see Section G.2.2.9 above and Section 4.3 of the Technical Report for a discussion of fixed and variable demands). Note that the irrigation demand at Lake Granbury has been assigned to Possum Kingdom. This is because the demand at Lake Granbury exceeds the priority water right for that reservoir, so some of the demand must come from Possum Kingdom. This diversion is modeled as a Type 3 water right (no depletions) to keep it from depleting flows at Lake Granbury.

Table G.2.12 - Current Operations Model BRA Water Right Records (Scenario 1)																		
Reach	Type of Use	Fixed Amount (acft/yr)	Variable Amount (acft/yr)	Water Right ID	Group ID 1	Group ID 2	PK	Granbury	Whitney	Aquilla	Proctor	Belton	Stillhouse	Georgetown	Granger	Somerville	Limestone	Assigned Reservoir
Possum Kingdom Lake	MU	1,106	0	PSMT2_ls_mun	C5155	pk_ls	X											PK
	IN	1,116	0	PSMT2_ls_ind	C5155	pk_ls	X											PK
	IR	763	0	PSMT2_ls_irr	C5155	pk_ls	X											PK
	MI	2	0	PSMT2_ls_min	C5155	pk_ls	X											PK
	Total	2,987	0															
Possum Kingdom Lake Dam to Palo Pinto gage & Palo Pinto gage to Dennis gage	MU	0	0	DNNT2_ds_mun	C5155	pk_ds	X											PK
	IN	0	0															PK
	IR	10	0	DNNT2_ds_irr	C5155	pk_ds	X											PK
	MI	629	0	DNNT2_ds_min	C5155	pk_ds	X											PK
	Total	639	0															
Dennis gage to Lake Granbury Dam	MU	8,238	0	GBYT2_ls_mun	C5156	gb_ls	X	X										GB
	IN	54,154	0	GBYT2_ls_ind	C5156	gb_ls	X	X										GB
	IR	5,806	0	GBYT2_ls_irr	C5156	gb_ls	X	X										PK
	MI	222	0	GBYT2_ls_min	C5156	gb_ls	X	X										GB
	Total	68,420	0															
Lake Granbury Dam to Glen Rose gage	MU	0	0															GB
	IN	558	0	GBYT2_ds_ind	C5156	gb_ds	X	X										GB
	IR	40	0	GBYT2_ds_irr	C5156	gb_ss	X	X										GB
	MI	1,066	0	GBYT2_ds_min	C5156	gb_ds	X	X										GB
	Total	1,664	0															
Glen Rose gage to Lake Whitney Dam	MU	15	0	WTYT2_ls_mun	C5157	wh_ls	X	X	X									WH
	IN	0	0															WH
	IR	1,442	0	WTYT2_ls_irr	C5157	wh_ls	X	X	X									WH
	MI	0	0															WH
	Total	1,457	0															
Lake Whitney Dam to Aquilla Creek/Brazos Rv confluence	MU	0	0															WH
	IN	1,830	0	WTYT2_ds_ind	C5157	wh_ds	X	X	X									WH
	IR	893	0	WTYT2_ds_irr	C5157	wh_ds	X	X	X									WH
	MI	0	0															WH
	Total	2,723	0															
Lake Aquilla	MU	6,738	0	ALAT2_ls_mun	C5158	aq_ls				X								AQ
	IN	0	0															AQ
	IR	94	0	ALAT2_ls_irr	C5158	aq_ls				X								AQ
	MI	0	0															AQ
	Total	6,832	0															
Lake Aquilla Dam to Aquilla Creek gage	MU	0	0															AQ
	IN	0	0															AQ
	IR	0	0															AQ
	MI	0	0															AQ
	Total	0	0															
Aquilla Creek gage to Aquilla Creek/Brazos Rv confluence	MU	0	0															AQ
	IN	0	0															AQ
	IR	0	0															AQ
	MI	0	0															AQ
	Total	0	0															
Aquilla Creek/ Brazos confluence to Highbank gage	MU	895	0	HIBT2_ds_mun	C5157	wh_ds	X	X	X									PK
	MU	757	0	HIBT2_ds_marlin	C5157	wh_ds	X	X	X									PK
	IN	0	0															WH
	IR	0	0															WH
	MI	0	0															WH
	Total	1,652	0															
Lake Proctor	MU	3,299	0	PCTT2_ls_mun	C5159	pr_ls					X							PR
	IN	0	0															PR
	IR	4,904	0	PCTT2_ls_irr	C5159	pr_ls					X							PR
	MI	0	0															PR
	Total	8,203	0															
Lake Proctor Dam to Leon Rv at Gatesville gage	MU	0	0															PR
	IN	0	0															PR
	IR	0	0															PR
	MI	0	0															PR
	Total	0	0															
Leon Rv at Gatesville to Lake Belton Dam	MU	43,404	0	BLNT2_ls_mun	C5160	be_ls						X						BE
	IN	0	0															BE
	IR	60	0	BLNT2_ls_irr	C5160	be_ls						X						BE

Table G.2.12 - Current Operations Model BRA Water Right Records (Scenario 1)																		
Reach	Type of Use	Fixed Amount (acft/yr)	Variable Amount (acft/yr)	Water Right ID	Group ID 1	Group ID 2	PK	Granbury	Whitney	Aquilla	Proctor	Belton	Stillhouse	Georgetown	Granger	Somerville	Limestone	Assigned Reservoir
	MI	0	0															BE
	Total	43,464	0															
Lake Belton Dam to Leon Rv nr Belton gage	MU	0	21,974	BLNT2_ds_temple	C5160	be_ds						X						BE
	IN	0	0															BE
	IR	0	0															BE
	MI	0	0															BE
	Total	0	21,974															
Leon Rv nr Belton gage to Little River gage	MU	0	0															BE
	IN	0	0															BE
	IR	218	0	BLNT2_ds_irr	C5160	be_ds						X						BE
	MI	0	0															BE
	Total	218	0															
Lake Stillhouse Hollow	MU	8,556	0	STIT2_ls_mun	C5161	sh_ls							X					SH
	IN	2	0	STIT2_ls_ind	C5161	sh_ls							X					SH
	IR	100	0	STIT2_ls_irr	C5161	sh_ls							X					SH
	MI	0	0															SH
	Total	8,658	0															
Lake Stillhouse Hollow Dam to Lampasas Rv nr Belton gage	MU	0	0															SH
	IN	0	0															SH
	IR	8	0	STIT2_ds_irr	C5161	sh_ds							X					SH
	MI	0	0															SH
	Total	8	0															
Lampasas Rv nr Belton gage to Little River gage	MU	0	0															BE
	IN	0	0															BE
	IR	0	0															BE
	MI	0	0															BE
	Total	0	0															
Little River gage to Little Rv/San Gabriel Rv confluence	MU	0	0															BE
	IN	0	0															BE
	IR	0	0															BE
	MI	0	0															BE
	Total	0	0															
Lake Georgetown	MU	13,261	0	GGLT2_ls_mun2	C5161	gt_ls								X				GT
	MU	26,200	0	GGLTSTIT2_mun1, GGLT2_ls_mun1	C5162	gtsh_ls								X				SH
	IN	0	0															GT
	IR	349	0	GGLT2_ls_irr	C5162	gt_ls								X				GT
	MI	0	0															GT
	Total	39,810	0															
Lake Georgetown Dam to N San Gabriel gage	MU	0	0															GT
	IN	0	0															GT
	IR	0	0															GT
	MI	0	0															GT
	Total	0	0															
N San Gabriel gage to Lake Granger Dam	MU	4,255	0	GLKT2_ls_mun	C5163	gn_ls									X			GR
	IN	0	0															GR
	IR	0	0															GR
	MI	0	0															GR
	Total	4,255	0															
Lake Granger Dam to Laneport gage	MU	0	0															GR
	IN	0	0															GR
	IR	0	0															GR
	MI	0	0															GR
	Total	0	0															
Laneport gage to Little Rv/San Gabriel confluence	MU	0	0															GR
	IN	0	0															GR
	IR	0	0															GR
	MI	0	0															GR
	Total	0	0															
Little/San Gabriel confluence to Little Rv at Cameron gage	MU	0	0															GR
	IN	0	5,540	GLKT2_ds_ind	C5163	gn_ds						X	X		X			GR
	IR	0	0															GR
	MI	0	0															GR
	Total	0	5,540															

Table G.2.12 - Current Operations Model BRA Water Right Records (Scenario 1)																		
Reach	Type of Use	Fixed Amount (acft/yr)	Variable Amount (acft/yr)	Water Right ID	Group ID 1	Group ID 2	PK	Granbury	Whitney	Aquilla	Proctor	Belton	Stillhouse	Georgetown	Granger	Somerville	Limestone	Assigned Reservoir
Cameron gage to Brazos Rv/Little Rv confluence	MU	0	0															BE
	IN	0	0															BE
	IR	0	0															BE
	MI	0	0															BE
	Total	0	0															
Highbank gage to Brazos Rv/Little Rv confluence	MU	0	0															WH
	IN	0	0															WH
	IR	0	0															WH
	MI	0	0															WH
	Total	0	0															
Brazos Rv/Little Rv confluence to Bryan gage	MU	0	0															WH
	IN	0	0															WH
	IR	2,066	0	BBZT2_ds_irr	C5157	wh_ds	X	X	X			X	X		X			PK
	MI	9	0	BBZT2_ds_min	C5157	wh_ds	X	X	X			X	X		X			PK
	Total	2,075	0															
Bryan gage to Brazos Rv/Yegua Crk confluence	MU	0	0															WH
	IN	68	0	YEGBR_ds_ind	C5157	wh_ds	X	X	X			X	X		X			PK
	IR	0	0															WH
	MI	0	0															WH
	Total	68	0															
Lake Somerville	MU	4,102	0	SOMT2_ls_mun	C5164	so_ls										X		SO
	IN	0	0															SO
	IR	0	0															SO
	MI	0	0															SO
	Total	4,102	0															
Lake Somerville Dam to Yegua Crk gage	MU	0	0															SO
	IN	0	0															SO
	IR	0	0															SO
	MI	0	0															SO
	Total	0	0															
Yegua Crk gage to Brazos Rv/Yegua Crk confluence	MU	0	0															SO
	IN	0	0															SO
	IR	0	0															SO
	MI	0	0															SO
	Total	0	0															
Brazos Rv/Yegua Crk confluence to Brazos Rv/Navasota Rv confluence	MU	0	0															SO
	IN	0	0															SO
	IR	1	0	NAVBR_ds_irr	C5164	so_ds	X	X	X			X	X		X	X		SO
	MI	0	0															SO
	Total	1	0															
Lake Limestone	MU	208	0	LLST2_ls_mun	C5165	ls_ls											X	LS
	IN	50,543	0	LLST2_ls_ind	C5165	ls_ls											X	LS
	IR	0	0															LS
	MI	26	0	LLST2_ls_min	C5165	ls_ls											X	LS
	Total	50,777	0															
Lake Limestone Dam to Easterly gage	MU	0	0															LS
	IN	0	0															LS
	IR	0	0															LS
	MI	0	0															LS
	Total	0	0															
Easterly gage to Brazos Rv/Navasota Rv confluence	MU	748	0	LLST2_ds_mun	C5165	ls_ds											X	LS
	IN	0	3,600	LLST2_ds_tmpa	C5165	ls_ds											X	LS
	IN	17	0	LLST2_ds_ind	C5165	ls_ds											X	LS
	IR	1,049	0	LLST2_ds_irr	C5165	ls_ds											X	LS
	MI	0	0															LS
	Total	1,814	3,600															
Brazos Rv/Navasota Rv confluence to Hempstead gage	MU	0	0															WH
	IN	0	0															WH
	IR	0	0															WH
	MI	0	0															WH
	Total	0	0															

Table G.2.12 - Current Operations Model BRA Water Right Records (Scenario 1)																		
Reach	**Type of Use**	**Fixed Amount (acft/yr)**	**Variable Amount (acft/yr)**	**Water Right ID**	**Group ID 1**	**Group ID 2**	**PK**	**Granbury**	**Whitney**	**Aquilla**	**Proctor**	**Belton**	**Stillhouse**	**Georgetown**	**Granger**	**Somerville**	**Limestone**	**Assigned Reservoir**
Hempstead gage to Richmond gage	MU	0	0															WH
	IN	0	41,840	RMOT2_sys_NRG	C5157	wh_ds	X	X	X			X	X		X	X	X	JR
	IR	85	0	RMOT2_sys_irr	C5164	so_ds	X	X	X			X	X		X	X	X	PK
	MI	0	0															WH
	Total	85	41,840															
Richmond gage to Gulf	MU	1,822	0	ROST2_sys_mun	C5164	so_ds	X	X	X			X	X		X	X	X	PK
	MU, IN, IR	0	129,995	ROST2_sys_GCWA	C5164	so_ds	X	X	X			X	X		X	X	X	JR
	IN	0	43,998	ROST2_sys_Dow	C5164	so_ds	X	X	X			X	X		X	X	X	JR
	IR	13	0	ROST2_sys_irr	C5164	so_ds	X	X	X			X	X		X	X	X	PK
	MI	149	0	ROST2_sys_min			X	X	X			X	X		X	X	X	PK
	Total	1,984	173,993															
	Grand Total	251,896	246,947	498,843														

PK - Possum Kingdom
GB - Lake Granbury
WH - Lake Whitney
AQ - Lake Aquilla
PR - Lake Proctor
BE - Lake Belton
SH - Lake Stillhouse Hollow
GT - Lake Georgetown
GR - Lake Granger
SO - Lake Somerville
LS - Lake Limestone
JR - Junior priority (99999999)

In the Current Operations Model, demands for the City of Temple are first met from the Temple water right (COA 12-2938). The portion of the demands greater than 12,500 acft/yr comes from a direct diversion from Lake Belton. The modeling of the City of Temple's diversion is discussed in Section G.2.2.8 of this Appendix.

The Current Operation Model assumes that large customers with their own water rights use their rights first to meet demands as described in Section G.2.2.9 of this Appendix. Diversions from the BRA system for Dow Chemical, NRG Smithers and the Gulf Coast Water Authority are limited to their 2011 use by SO Records.

Currently the BRA coordinates releases from Lake Whitney with hydropower generation as much as possible. The Current Operations Model includes adjustments to Lake Whitney hydropower to account for times when a hydropower release also coincides with a major reservoir release. These adjustments were made by examining the model output and iteratively applying manual adjustments to the hydropower releases using TS Records.

In the Current Operation Model, the WCRRWL can transfer up to 40,000 acft/yr from Lake Stillhouse Hollow to Lake Georgetown, with a maximum monthly diversion of 4,000 acft. The pipeline is turned on when the beginning-of-month storage in Lake Georgetown is 23,099 acft (elevation 778.8 ft msl). The model uses dual simulation, implemented using the following steps.

First Simulation

1. The 26,200 acft/yr of Lake Georgetown demand that is met from Stillhouse Hollow are diverted directly from Stillhouse.
2. A PX 3 WR Record diverts 13,610 acft/yr from Lake Georgetown.

Second Simulation

3. The PX3 WR Records at Lake Georgetown meet 13,610 acft/yr of Lake Georgetown demand, limited to the depletions in the first simulation.
4. Water is diverted from Lake Stillhouse Hollow when Lake Georgetown begins the month below the trigger storage of 23,099 acft. The diversions are stored in a dummy control point.
5. Water in the dummy control point and reservoir storage in Lake Georgetown are used to meet the additional 26,200 acft/yr at Lake Georgetown.
6. Remaining water in the dummy control point is used to fill Lake Georgetown. If there is no empty storage in Lake Georgetown (this happens when the reservoir fills during the current timestep), this water is used to fill Stillhouse Hollow. This simulates conditions where pumping is cut off during the month because Lake Georgetown fills. If there is no empty storage in Stillhouse Hollow, the water is returned to the stream.
7. A water right with the most junior priority (99999999) is used for the 26,200 acft/yr of additional demand when not pumping from Lake Stillhouse Hollow. This simulates diversions under the System Order.
8. In some wetter years normal operation based on storage does not bring over enough water to be within the limits of the System Order. To account for this situation, an additional WR Record was added that brings over an additional 4,000 acft in August for years that have minimal pumping at the beginning of the year.

G.2.5 2025 and 2060 Operation Models

The 2025 and 2060 Operation Models were used to model Scenarios 2 through 5 as described in Section 4.3 of the Technical Report. These models incorporate the modifications discussed in Section G.2.2 of this Appendix, plus additional changes discussed below.

The 2025 and 2060 Operation Models put all BRA use at its location, either lakeside or downstream of reservoirs. If a diversion is located downstream of multiple reservoirs, then its demand can be met from all of those reservoirs using the multiple reservoir simulation capabilities in WRAP. These are modeled as Type 2 rights (no refilling of storage).

These models use the proposed System Operation Permit. The modeling approach to the System Operation Permit is described in Section G.2.2.13 above and the accounting procedures described in Section G.2.2.14 above. Lakeside diversions that exceed priority or System Order diversions at a reservoir are assigned to the System Operation Permit. Downstream diversions of run-of-river flow are assigned to the System Operation Permit, except for NRG diversions or diversions used to fill Allens Creek Reservoir made using the Excess Flows Permit.

Tables G.2.13 through G.2.16 show the demands and water right identifiers associated with the 2025 and 2060 BRA demands used for Scenarios 2 through 5. (Demands are discussed in Section 3.3 and Section 4.3 and Appendix G-1 of the Technical Report.) The X's in columns 8-18 of the tables show the reservoirs that are located upstream of each demand point.

In the 2025 and 2060 Operation Models, demands for the City of Temple are first met from the Temple water right (COA 12-2938). The portion of the demands greater than 12,500 acft/yr comes from another WR Record located at the Temple diversion point. When Lake Belton is spilling (or would have been spilling if only operating under its existing right), this diversion comes from run-of-river flows appropriated by the proposed System Operation Permit. Otherwise the additional demand is met by a release from Lake Belton. The modeling of the City of Temple's diversion is discussed in Section G.2.2.8 of this Appendix.

Table G.2.13 - 2025 Operations Model BRA Water Right Records (Scenario 2)																	
Reach	Type of Use	Fixed Amount (acft/yr)	Variable Amount (acft/yr)	Water Right ID	Group ID 1	Group ID 2	PK	Granbury	Whitney	Aquilla	Proctor	Belton	Stillhouse	Georgetown	Granger	Somerville	Limestone
Possum Kingdom Lake	MU	4,734	0	PSMT2_ls_mun	C5155	pk_ls	X										
	IN	1,084	0	PSMT2_ls_ind	C5155	pk_ls	X										
	IR	250	0	PSMT2_ls_irr	C5155	pk_ls	X										
	MI	959	0	PSMT2_ls_min	C5155	pk_ls	X										
	Total	7,027	0														
Possum Kingdom Lake Dam to Palo Pinto gage & Palo Pinto gage to Dennis gage	MU	0	0	DNNT2_ds_mun	C5155	pk_ds	X										
	IN	0	0														
	IR	50	0	DNNT2_ds_irr	C5155	pk_ds	X										
	MI	318	0	DNNT2_ds_min	C5155	pk_ds	X										
	Total	368	0														
Dennis gage to Lake Granbury Dam	MU	22,057	0	GBYT2_ls_mun	C5156	gb_ls	X	X									
	IN	51,206	0	GBYT2_ls_ind	C5156	gb_ls	X	X									
	IR	2,581	0	GBYT2_ls_irr	C5156	gb_ls	X	X									
	MI	0	0	GBYT2_ls_min	C5156	gb_ls	X	X									
	Total	75,844	0														
Lake Granbury Dam to Glen Rose gage	MU	0	0														
	IN	0	0	GBYT2_ds_ind	C5156	gb_ds	X	X									
	IR	200	0	GBYT2_ds_irr	C5156	gb_ss	X	X									
	MI	179	0	GBYT2_ds_min	C5156	gb_ds	X	X									
	Total	379	0														
Glen Rose gage to Lake Whitney Dam	MU	1,627	0	WTYT2_ls_mun	C5157	wh_ls	X	X	X								
	IN	0	0														
	IR	60	0	WTYT2_ls_irr	C5157	wh_ls	X	X	X								
	MI	0	0														
	Total	1,687	0														
Lake Whitney Dam to Aquilla Creek/Brazos Rv confluence	MU	0	0														
	IN	3,898	0	WTYT2_ds_ind	C5157	wh_ds	X	X	X								
	IR	20	0	WTYT2_ds_irr	C5157	wh_ds	X	X	X								
	MI	0	0														
	Total	3,918	0														
Lake Aquilla	MU	10,186	0	ALAT2_ls_mun	C5158	aq_ls				X							
	IN	0	0														
	IR	0	0	ALAT2_ls_irr	C5158	aq_ls				X							
	MI	0	0														
	Total	10,186	0														
Lake Aquilla Dam to Aquilla Creek gage	MU	0	0														
	IN	0	0														
	IR	0	0														
	MI	0	0														
	Total	0	0														
Aquilla Creek gage to Aquilla Creek/Brazos Rv confluence	MU	0	0														
	IN	0	0														
	IR	0	0														
	MI	0	0														
	Total	0	0														
Aquilla Creek/ Brazos confluence to Highbank gage	MU	0	0	HIBT2_ds_mun	C5157	wh_ds	X	X	X								
	MU	760	0	HIBT2_ds_marlin	C5157	wh_ds	X	X	X								
	IN	0	0														
	IR	0	0														
	MI	0	0														
	Total	760	0														
Lake Proctor	MU	5,005	0	PCTT2_ls_mun	C5159	pr_ls					X						
	IN	0	0														
	IR	4,064	0	PCTT2_ls_irr	C5159	pr_ls					X						
	MI	0	0														
	Total	9,069	0														
Lake Proctor Dam to Leon Rv at Gatesville gage	MU	0	0														

Table G.2.13 - 2025 Operations Model BRA Water Right Records (Scenario 2)																	
Reach	Type of Use	Fixed Amount (acft/yr)	Variable Amount (acft/yr)	Water Right ID	Group ID 1	Group ID 2	PK	Granbury	Whitney	Aquilla	Proctor	Belton	Stillhouse	Georgetown	Granger	Somerville	Limestone
	IN	0	0														
	IR	0	0														
	MI	0	0														
	Total	0	0														
Leon Rv at Gatesville to Lake Belton Dam	MU	43,890	0	BLNT2_ls_mun	C5160	be_ls						X					
	IN	0	0														
	IR	0	0	BLNT2_ls_irr	C5160	be_ls						X					
	MI	0	0														
	Total	43,890	0														
Lake Belton Dam to Leon Rv nr Belton gage	MU	0	24,901	BLNT2_ds_temple	C5160	be_ds						X					
	IN	0	0														
	IR	0	0														
	MI	0	0														
	Total	0	24,901														
Leon Rv nr Belton gage to Little River gage	MU	0	0														
	IN	0	0														
	IR	200	0	BLNT2_ds_irr	C5160	be_ds						X					
	MI	0	0														
	Total	200	0														
Lake Stillhouse Hollow	MU	20,924	0	STIT2_ls_mun	C5161	sh_ls							X				
	IN	0	0	STIT2_ls_ind	C5161	sh_ls							X				
	IR	100	0	STIT2_ls_irr	C5161	sh_ls							X				
	MI	0	0														
	Total	21,024	0														
Lake Stillhouse Hollow Dam to Lampasas Rv nr Belton gage	MU	0	0														
	IN	0	0														
	IR	8	0	STIT2_ds_irr	C5161	sh_ds							X				
	MI	0	0														
	Total	8	0														
Lampasas Rv nr Belton gage to Little River gage	MU	0	0														
	IN	0	0														
	IR	0	0														
	MI	0	0														
	Total	0	0														
Little River gage to Little Rv/San Gabriel Rv confluence	MU	0	0														
	IN	0	0														
	IR	0	0														
	MI	0	0														
	Total	0	0														
Lake Georgetown	MU	50,192	0	GGLT2_ls_mun	C5162	gt_ls								X			
	IN	0	0														
	IR	0	0	GGLT2_ls_irr	C5161	gt_ls								X			
	MI	0	0														
	Total	50,192	0														
Lake Georgetown Dam to N San Gabriel gage	MU	0	0														
	IN	0	0														
	IR	0	0														
	MI	0	0														
	Total	0	0														
N San Gabriel gage to Lake Granger Dam	MU	3,507	0	GLKT2_ls_mun	C5163	gn_ls									X		
	IN	0	0														
	IR	0	0														
	MI	0	0														
	Total	3,507	0														
Lake Granger Dam to Laneport gage	MU	0	0														
	IN	0	0														
	IR	0	0														
	MI	0	0														
	Total	0	0														

Table G.2.13 - 2025 Operations Model BRA Water Right Records (Scenario 2)																	
Reach	Type of Use	Fixed Amount (acft/yr)	Variable Amount (acft/yr)	Water Right ID	Group ID 1	Group ID 2	PK	Granbury	Whitney	Aquilla	Proctor	Belton	Stillhouse	Georgetown	Granger	Somerville	Limestone
Laneport gage to Little Rv/San Gabriel confluence	MU	0	0														
	IN	0	0														
	IR	0	0														
	MI	0	0														
	Total	0	0														
Little/San Gabriel confluence to Little Rv at Cameron gage	MU	0	0														
	IN	0	3,369	GLKT2_ds_ind	C5163	gn_ds						X	X		X		
	IR	0	0														
	MI	0	0														
	Total	0	3,369														
Cameron gage to Brazos Rv/Little Rv confluence	MU	0	0														
	IN	0	0														
	IR	0	0														
	MI	0	0														
	Total	0	0														
Highbank gage to Brazos Rv/Little Rv confluence	MU	0	0														
	IN	0	0														
	IR	0	0														
	MI	0	0														
	Total	0	0														
Brazos Rv/Little Rv confluence to Bryan gage	MU	0	0														
	IN	0	0														
	IR	350	0	BBZT2_ds_irr	C5157	wh_ds	X	X	X			X	X		X		
	MI	0	0	BBZT2_ds_min	C5157	wh_ds	X	X	X			X	X		X		
	Total	350	0														
Bryan gage to Brazos Rv/Yegua Crk confluence	MU	0	0														
	IN	0	0	YEGBR_ds_ind	C5157	wh_ds	X	X	X			X	X		X		
	IR	0	0														
	MI	0	0														
	Total	0	0														
Lake Somerville	MU	3,263	0	SOMT2_ls_mun	C5164	so_ls										X	
	IN	0	0														
	IR	0	0														
	MI	0	0														
	Total	3,263	0														
Lake Somerville Dam to Yegua Crk gage	MU	0	0														
	IN	0	0														
	IR	0	0														
	MI	0	0														
	Total	0	0														
Yegua Crk gage to Brazos Rv/Yegua Crk confluence	MU	0	0														
	IN	0	0														
	IR	0	0														
	MI	0	0														
	Total	0	0														
Brazos Rv/Yegua Crk confluence to Brazos Rv/Navasota Rv confluence	MU	0	0														
	IN	0	0														
	IR	527	0	NAVBR_ds_irr	C5164	so_ds	X	X	X			X	X		X	X	
	MI	0	0														
	Total	527	0														
Lake Limestone	MU	200	0	LLST2_ls_mun	C5165	ls_ls											X
	IN	50,675	0	LLST2_ls_ind	C5165	ls_ls											X
	IR	0	0														
	MI	0	0	LLST2_ls_min	C5165	ls_ls											X
	Total	50,875	0														

Table G.2.13 - 2025 Operations Model BRA Water Right Records (Scenario 2)																	
Reach	Type of Use	Fixed Amount (acft/yr)	Variable Amount (acft/yr)	Water Right ID	Group ID 1	Group ID 2	PK	Granbury	Whitney	Aquilla	Proctor	Belton	Stillhouse	Georgetown	Granger	Somerville	Limestone
Lake Limestone Dam to Easterly gage	MU	0	0														
	IN	0	0														
	IR	0	0														
	MI	0	0														
	Total	0	0														
Easterly gage to Brazos Rv/Navasota Rv confluence	MU	1,384	0	LLST2_ds_mun	C5165	ls_ds											X
	IN	0	3,600	LLST2_ds_tmpa	C5165	ls_ds											X
	IN	0	0	LLST2_ds_ind	C5165	ls_ds											X
	IR	0	0	LLST2_ds_irr	C5165	ls_ds											X
	MI	0	0														
	Total	1,384	3,600														
Brazos Rv/Navasota Rv confluence to Hempstead gage	MU	0	0														
	IN	0	0														
	IR	0	0														
	MI	0	0														
	Total	0	0														
Hempstead gage to Richmond gage	MU	0	0														
	IN	0	31929	RMOT2_sys_NRG	C5157	wh_ds	X	X	X			X	X		X	X	X
	IR	50	0	RMOT2_sys_irr	C5164	so_ds	X	X	X			X	X		X	X	X
	MI	0	0														
	Total	50	31,929														
Richmond gage to Gulf of Mexico	MU	12,862	0	ROST2_sys_mun	C5164	so_ds	X	X	X			X	X		X	X	X
	MU, IN, IR		164,180	ROST2_sys_GCWAbu	C5164	so_ds	X	X	X			X	X		X	X	X
	MU	0	0	ROST2_sys_GCWA	C5164	so_ds	X	X	X			X	X		X	X	X
	IN	1,168	0	ROST2_sys_ind	C5164	so_ds	X	X	X			X	X		X	X	X
	IN	38,535	0	ROST2_sys_indBz	C5164	so_ds	X	X	X			X	X		X	X	X
	IN		16,000	ROST2_sys_Dow	C5164	so_ds	X	X	X			X	X		X	X	X
	IR	0	0														
	MI	1,111	0	ROST2_sys_min	C5164	so_ds	X	X	X			X	X		X	X	X
	Total	53,676	180,180														
	Grand Total	338,184	243,979														

Table G.2.14 - 2025 Operations Model BRA Water Right Records with CPNPP Expansion (Scenario 3)																	
Reach	Type of Use	Fixed Amount (acft/yr)	Variable Amount (acft/yr)	Water Right ID	Group ID 1	Group ID 2	PK	Granbury	Whitney	Aquilla	Proctor	Belton	Stillhouse	Georgetown	Granger	Somerville	Limestone
Possum Kingdom Lake	MU	4,734	0	PSMT2_ls_mun	C5155	pk_ls	X										
	IN	1,084	0	PSMT2_ls_ind	C5155	pk_ls	X										
	IR	250	0	PSMT2_ls_irr	C5155	pk_ls	X										
	MI	959	0	PSMT2_ls_min	C5155	pk_ls	X										
	Total	7,027	0														
Possum Kingdom Lake Dam to Palo Pinto gage & Palo Pinto gage to Dennis gage	MU	0	0	DNNT2_ds_mun	C5155	pk_ds	X										
	IN	0	0														
	IR	50	0	DNNT2_ds_irr	C5155	pk_ds	X										
	MI	318	0	DNNT2_ds_min	C5155	pk_ds	X										
	Total	368	0														
Dennis gage to Lake Granbury Dam	MU	22,057	0	GBYT2_ls_mun	C5156	gb_ls	X	X									
	IN	51,206	0	GBYT2_ls_ind, GBYT2_ls_LUM	C5156	gb_ls	X	X									
	IN	90,152	0	GBYT2_ls_CPNPP	C5156	gb_ls	X	X									
	IR	2,581	0	GBYT2_ls_irr	C5156	gb_ls	X	X									
	MI	0	0	GBYT2_ls_min	C5156	gb_ls	X	X									
	Total	165,996	0														
Lake Granbury Dam to Glen Rose gage	MU	0	0														
	IN	0	0	GBYT2_ds_ind	C5156	gb_ds	X	X									
	IR	200	0	GBYT2_ds_irr	C5156	gb_ss	X	X									
	MI	179	0	GBYT2_ds_min	C5156	gb_ds	X	X									
	Total	379	0														
Glen Rose gage to Lake Whitney Dam	MU	1,627	0	WTYT2_ls_mun	C5157	wh_ls	X	X	X								
	IN	0	0														
	IR	60	0	WTYT2_ls_irr	C5157	wh_ls	X	X	X								
	MI	0	0														
	Total	1,687	0														
Lake Whitney Dam to Aquilla Creek/Brazos Rv confluence	MU	0	0														
	IN	3,898	0	WTYT2_ds_ind	C5157	wh_ds	X	X	X								
	IR	20	0	WTYT2_ds_irr	C5157	wh_ds	X	X	X								
	MI	0	0														
	Total	3,918	0														
Lake Aquilla	MU	10,186	0	ALAT2_ls_mun	C5158	aq_ls				X							
	IN	0	0														
	IR	0	0	ALAT2_ls_irr	C5158	aq_ls				X							
	MI	0	0														
	Total	10,186	0														
Lake Aquilla Dam to Aquilla Creek gage	MU	0	0														
	IN	0	0														
	IR	0	0														
	MI	0	0														
	Total	0	0														
Aquilla Creek gage to Aquilla Creek/Brazos Rv confluence	MU	0	0														
	IN	0	0														
	IR	0	0														
	MI	0	0														
	Total	0	0														
Aquilla Creek/ Brazos confluence to Highbank gage	MU	0	0	HIBT2_ds_mun	C5157	wh_ds	X	X	X								
	MU	760	0	HIBT2_ds_marlin	C5157	wh_ds	X	X	X								
	IN	0	0														
	IR	0	0														
	MI	0	0														
	Total	760	0														
Lake Proctor	MU	5,005	0	PCTT2_ls_mun	C5159	pr_ls					X						
	IN	0	0														
	IR	4,064	0	PCTT2_ls_irr	C5159	pr_ls					X						
	MI	0	0														
	Total	9,069	0														

Table G.2.14 - 2025 Operations Model BRA Water Right Records with CPNPP Expansion (Scenario 3)																	
Reach	Type of Use	Fixed Amount (acft/yr)	Variable Amount (acft/yr)	Water Right ID	Group ID 1	Group ID 2	PK	Granbury	Whitney	Aquilla	Proctor	Belton	Stillhouse	Georgetown	Granger	Somerville	Limestone
Lake Proctor Dam to Leon Rv at Gatesville gage	MU	0	0														
	IN	0	0														
	IR	0	0														
	MI	0	0														
	Total	0	0														
Leon Rv at Gatesville to Lake Belton Dam	MU	43,890	0	BLNT2_ls_mun, BLNTSTIT_sys_bu	C5160	be_ls						X					
	IN	0	0														
	IR	0	0	BLNT2_ls_irr	C5160	be_ls						X					
	MI	0	0														
	Total	43,890	0														
Lake Belton Dam to Leon Rv nr Belton gage	MU	0	24,901	BLNT2_ds_temple	C5160	be_ds						X					
	IN	0	0														
	IR	0	0														
	MI	0	0														
	Total	0	24,901														
Leon Rv nr Belton gage to Little River gage	MU	0	0														
	IN	0	0														
	IR	200	0	BLNT2_ds_irr	C5160	be_ds						X					
	MI	0	0														
	Total	200	0														
Lake Stillhouse Hollow	MU	20,924	0	STIT2_ls_mun	C5161	sh_ls							X				
	IN	0	0	STIT2_ls_ind	C5161	sh_ls							X				
	IR	100	0	STIT2_ls_irr	C5161	sh_ls							X				
	MI	0	0														
	Total	21,024	0														
Lake Stillhouse Hollow Dam to Lampasas Rv nr Belton gage	MU	0	0														
	IN	0	0														
	IR	8	0	STIT2_ds_irr	C5161	sh_ds							X				
	MI	0	0														
	Total	8	0														
Lampasas Rv nr Belton gage to Little River gage	MU	0	0														
	IN	0	0														
	IR	0	0														
	MI	0	0														
	Total	0	0														
Little River gage to Little Rv/San Gabriel Rv confluence	MU	0	0														
	IN	0	0														
	IR	0	0														
	MI	0	0														
	Total	0	0														
Lake Georgetown	MU	50,192	0	GGLT2_ls_mun	C5162	gt_ls								X			
	IN	0	0														
	IR	0	0	GGLT2_ls_irr	C5161	gt_ls								X			
	MI	0	0														
	Total	50,192	0														
Lake Georgetown Dam to N San Gabriel gage	MU	0	0														
	IN	0	0														
	IR	0	0														
	MI	0	0														
	Total	0	0														
N San Gabriel gage to Lake Granger Dam	MU	3,507	0	GLKT2_ls_mun	C5163	gn_ls									X		
	IN	0	0														
	IR	0	0														
	MI	0	0														
	Total	3,507	0														

Table G.2.14 - 2025 Operations Model BRA Water Right Records with CPNPP Expansion (Scenario 3)																	
Reach	Type of Use	Fixed Amount (acft/yr)	Variable Amount (acft/yr)	Water Right ID	Group ID 1	Group ID 2	PK	Granbury	Whitney	Aquilla	Proctor	Belton	Stillhouse	Georgetown	Granger	Somerville	Limestone
Lake Granger Dam to Laneport gage	MU	0	0														
	IN	0	0														
	IR	0	0														
	MI	0	0														
	Total	0	0														
Laneport gage to Little Rv/San Gabriel confluence	MU	0	0														
	IN	0	0														
	IR	0	0														
	MI	0	0														
	Total	0	0														
Little/San Gabriel confluence to Little Rv at Cameron gage	MU	0	0														
	IN	0	3,369	GLKT2_ds_ind	C5163	gn_ds						X	X		X		
	IR	0	0														
	MI	0	0														
	Total	0	3,369														
Cameron gage to Brazos Rv/Little Rv confluence	MU	0	0														
	IN	0	0														
	IR	0	0														
	MI	0	0														
	Total	0	0														
Highbank gage to Brazos Rv/Little Rv confluence	MU	0	0														
	IN	0	0														
	IR	0	0														
	MI	0	0														
	Total	0	0														
Brazos Rv/Little Rv confluence to Bryan gage	MU	0	0														
	IN	0	0														
	IR	350	0	BBZT2_ds_irr	C5157	wh_ds	X	X	X			X	X		X		
	MI	0	0	BBZT2_ds_min	C5157	wh_ds	X	X	X			X	X		X		
	Total	350	0														
Bryan gage to Brazos Rv/Yegua Crk confluence	MU	0	0														
	IN	0	0	YEGBR_ds_ind	C5157	wh_ds	X	X	X			X	X		X		
	IR	0	0														
	MI	0	0														
	Total	0	0														
Lake Somerville	MU	3,263	0	SOMT2_ls_mun	C5164	so_ls										X	
	IN	0	0														
	IR	0	0														
	MI	0	0														
	Total	3,263	0														
Lake Somerville Dam to Yegua Crk gage	MU	0	0														
	IN	0	0														
	IR	0	0														
	MI	0	0														
	Total	0	0														
Yegua Crk gage to Brazos Rv/Yegua Crk confluence	MU	0	0														
	IN	0	0														
	IR	0	0														
	MI	0	0														
	Total	0	0														
Brazos Rv/Yegua Crk confluence to Brazos Rv/Navasota Rv confluence	MU	0	0														
	IN	0	0														
	IR	527	0	NAVBR_ds_irr	C5164	so_ds	X	X	X			X	X		X	X	
	MI	0	0														
	Total	527	0														

Table G.2.14 - 2025 Operations Model BRA Water Right Records with CPNPP Expansion (Scenario 3)																	
Reach	Type of Use	Fixed Amount (acft/yr)	Variable Amount (acft/yr)	Water Right ID	Group ID 1	Group ID 2	PK	Granbury	Whitney	Aquilla	Proctor	Belton	Stillhouse	Georgetown	Granger	Somerville	Limestone
Lake Limestone	MU	200	0	LLST2_ls_mun	C5165	ls_ls											X
	IN	50,675	0	LLST2_ls_ind	C5165	ls_ls											X
	IR	0	0														
	MI	0	0	LLST2_ls_min	C5165	ls_ls											X
	Total	50,875	0														
Lake Limestone Dam to Easterly gage	MU	0	0														
	IN	0	0														
	IR	0	0														
	MI	0	0														
	Total	0	0														
Easterly gage to Brazos Rv/Navasota Rv confluence	MU	1,384	0	LLST2_ds_mun	C5165	ls_ds											X
	IN	0	3,600	LLST2_ds_tmpa	C5165	ls_ds											X
	IN	0	0	LLST2_ds_ind	C5165	ls_ds											X
	IR	0	0	LLST2_ds_irr	C5165	ls_ds											X
	MI	0	0														
	Total	1,384	3,600														
Brazos Rv/Navasota Rv confluence to Hempstead gage	MU	0	0														
	IN	0	0														
	IR	0	0														
	MI	0	0														
	Total	0	0														
Hempstead gage to Richmond gage	MU	0	0														
	IN	0	31929	RMOT2_sys_NRG	C5157	wh_ds	X	X	X			X	X		X	X	X
	IR	50	0	RMOT2_sys_irr	C5164	so_ds	X	X	X			X	X		X	X	X
	MI	0	0														
	Total	50	31,929														
Richmond gage to Gulf of Mexico	MU	12,862	0	ROST2_sys_mun	C5164	so_ds	X	X	X			X	X		X	X	X
	MU, IN, IR		164,180	ROST2_sys_GCWAbu	C5164	so_ds	X	X	X			X	X		X	X	X
	MU	0	0	ROST2_sys_GCWA	C5164	so_ds	X	X	X			X	X		X	X	X
	IN	1,168	0	ROST2_sys_ind	C5164	so_ds	X	X	X			X	X		X	X	X
	IN	2,779	0	ROST2_sys_indBz	C5164	so_ds	X	X	X			X	X		X	X	X
	IN		16,000	ROST2_sys_Dow	C5164	so_ds	X	X	X			X	X		X	X	X
	IR	0	0														
	MI	638	0	ROST2_sys_min	C5164	so_ds	X	X	X			X	X		X	X	X
	Total	17,447	180,180														
	Grand Total	392,107	243,979														

Table G.2.15 - 2060 Operations Model BRA Water Right Records (Scenario 4)																		
Reach	Type of Use	Fixed Amount (acft/yr)	Variable Amount (acft/yr)	Water Right ID	Group ID 1	Group ID 2	PK	Granbury	Whitney	Aquilla	Proctor	Belton	Stillhouse	Georgetown	Granger	Somerville	Limestone	Allens
Possum Kingdom Lake	MU	4,688	0	PSMT2_ls_mun	C5155	pk_ls	X											
	IN	1,084	0	PSMT2_ls_ind	C5155	pk_ls	X											
	IR	250	0	PSMT2_ls_irr	C5155	pk_ls	X											
	MI	959	0	PSMT2_ls_min	C5155	pk_ls	X											
	Total	6,981	0															
Possum Kingdom Lake Dam to Palo Pinto gage & Palo Pinto gage to Dennis gage	MU	0	0	DNNT2_ds_mun	C5155	pk_ds	X											
	IN	0	0															
	IR	50	0	DNNT2_ds_irr	C5155	pk_ds	X											
	MI	318	0	DNNT2_ds_min	C5155	pk_ds	X											
	Total	368	0															
Dennis gage to Lake Granbury Dam	MU	28,956	0	GBYT2_ls_mun	C5156	gb_ls	X	X										
	IN	51,206	0	GBYT2_ls_ind	C5156	gb_ls	X	X										
	IR	2,581	0	GBYT2_ls_irr	C5156	gb_ls	X	X										
	MI	0	0	GBYT2_ls_min	C5156	gb_ls	X	X										
	Total	82,743	0															
Lake Granbury Dam to Glen Rose gage	MU	0	0															
	IN	0	0	GBYT2_ds_ind	C5156	gb_ds	X	X										
	IR	200	0	GBYT2_ds_irr	C5156	gb_ss	X	X										
	MI	179	0	GBYT2_ds_min	C5156	gb_ds	X	X										
	Total	379	0															
Glen Rose gage to Lake Whitney Dam	MU	2,030	0	WTYT2_ls_mun	C5157	wh_ls	X	X	X									
	IN	0	0															
	IR	60	0	WTYT2_ls_irr	C5157	wh_ls	X	X	X									
	MI	0	0															
	Total	2,090	0															
Lake Whitney Dam to Aquilla Creek/Brazos Rv confluence	MU	0	0															
	IN	6,509	0	WTYT2_ds_ind	C5157	wh_ds	X	X	X									
	IR	20	0	WTYT2_ds_irr	C5157	wh_ds	X	X	X									
	MI	0	0															
	Total	6,529	0															
Lake Aquilla	MU	13,337	0	ALAT2_ls_mun	C5158	aq_ls				X								
	IN	0	0															
	IR	0	0	ALAT2_ls_irr	C5158	aq_ls				X								
	MI	0	0															
	Total	13,337	0															
Lake Aquilla Dam to Aquilla Creek gage	MU	0	0															
	IN	0	0															
	IR	0	0															
	MI	0	0															
	Total	0	0															
Aquilla Creek gage to Aquilla Creek/Brazos Rv confluence	MU	0	0															
	IN	0	0															
	IR	0	0															
	MI	0	0															
	Total	0	0															
Aquilla Creek/ Brazos confluence to Highbank gage	MU	0	0	HIBT2_ds_mun	C5157	wh_ds	X	X	X									
	MU	760	0	HIBT2_ds_marlin	C5157	wh_ds	X	X	X									
	IN	0	0															
	IR	0	0															
	MI	0	0															
	Total	760	0															
Lake Proctor	MU	5,922	0	PCTT2_ls_mun	C5159	pr_ls					X							
	IN	0	0															
	IR	4,064	0	PCTT2_ls_irr	C5159	pr_ls					X							
	MI	0	0															
	Total	9,986	0															
Lake Proctor Dam to Leon Rv at Gatesville gage	MU	0	0															
	IN	0	0															
	IR	0	0															

Table G.2.15 - 2060 Operations Model BRA Water Right Records (Scenario 4)																		
Reach	Type of Use	Fixed Amount (acft/yr)	Variable Amount (acft/yr)	Water Right ID	Group ID 1	Group ID 2	PK	Granbury	Whitney	Aquilla	Proctor	Belton	Stillhouse	Georgetown	Granger	Somerville	Limestone	Allens
	MI	0	0															
	Total	0	0															
Leon Rv at Gatesville to Lake Belton Dam	MU	61,655	0	BLNT2_ls_mun, BLNTSTIT_sys_bu	C5160	be_ls						X						
	IN	0	0															
	IR	0	0	BLNT2_ls_irr	C5160	be_ls						X						
	MI	0	0															
	Total	61,655	0															
Lake Belton Dam to Leon Rv nr Belton gage - Temple	MU	0	31,501	BLNT2_ds_temple	C5160	be_ds						X						
	IN	0	0															
	IR	0	0															
	MI	0	0															
	Total	0	31,501															
Leon Rv nr Belton gage to Little River gage	MU	0	0															
	IN	0	0															
	IR	200	0	BLNT2_ds_irr	C5160	be_ds						X						
	MI	0	0															
	Total	200	0															
Lake Stillhouse Hollow	MU	29,506	0	BLNTSTIT_sys_mun, STIT2_ls_mun	C5161	sh_ls							X					
	IN	0	0	STIT2_ls_ind	C5161	sh_ls							X					
	IR	100	0	STIT2_ls_irr	C5161	sh_ls							X					
	MI	0	0															
	Total	29,606	0															
Lake Stillhouse Hollow Dam to Lampasas Rv nr Belton gage	MU	0	0															
	IN	0	0															
	IR	8	0	STIT2_ds_irr	C5161	sh_ds							X					
	MI	0	0															
	Total	8	0															
Lampasas Rv nr Belton gage to Little River gage	MU	0	0															
	IN	0	0															
	IR	0	0															
	MI	0	0															
	Total	0	0															
Little River gage to Little Rv/San Gabriel Rv confluence	MU	0	0															
	IN	0	0															
	IR	0	0															
	MI	0	0															
	Total	0	0															
Lake Georgetown	MU	71,891	0	GLKTGGLT_sys_mun, GGLT2_ls_mun	C5162	gt_ls								X				
	IN	0	0															
	IR	0	0	GGLT2_ls_irr	C5161	gt_ls								X				
	MI	0	0															
	Total	71,891	0															
Lake Georgetown Dam to N San Gabriel gage	MU	0	0															
	IN	0	0															
	IR	0	0															
	MI	0	0															
	Total	0	0															
N San Gabriel gage to Lake Granger Dam	MU	5,357	0	GLKT2_ls_mun, GLKTGGLT_sys_bu	C5163	gn_ls									X			
	IN	0	0															
	IR	0	0															
	MI	0	0															
	Total	5,357	0															
Lake Granger Dam to Laneport gage	MU	0	0															
	IN	0	0															
	IR	0	0															
	MI	0	0															

Table G.2.15 - 2060 Operations Model BRA Water Right Records (Scenario 4)																		
Reach	Type of Use	Fixed Amount (acft/yr)	Variable Amount (acft/yr)	Water Right ID	Group ID 1	Group ID 2	PK	Granbury	Whitney	Aquilla	Proctor	Belton	Stillhouse	Georgetown	Granger	Somerville	Limestone	Allens
	Total	0	0															
Laneport gage to Little Rv/San Gabriel confluence	MU	0	0															
	IN	0	0															
	IR	0	0															
	MI	0	0															
	Total	0	0															
Little/San Gabriel confluence to Little Rv at Cameron gage	MU	0	0															
	IN	0	3,369	GLKT2_ds_ind	C5163	gn_ds						X	X		X			
	IR	0	0															
	MI	0	0															
	Total	0	3,369															
Cameron gage to Brazos Rv/Little Rv confluence	MU	0	0															
	IN	0	0															
	IR	0	0															
	MI	0	0															
	Total	0	0															
Highbank gage to Brazos Rv/Little Rv confluence	MU	0	0															
	IN	0	0															
	IR	0	0															
	MI	0	0															
	Total	0	0															
Brazos Rv/Little Rv confluence to Bryan gage	MU	0	0															
	IN	0	0															
	IR	350	0	BBZT2_ds_irr	C5157	wh_ds	X	X	X			X	X		X			
	MI	0	0	BBZT2_ds_min	C5157	wh_ds	X	X	X			X	X		X			
	Total	350	0															
Bryan gage to Brazos Rv/Yegua Crk confluence	MU	2,500	0	BBZT2_ds_mun	C5157	wh_ds	X	X	X			X	X		X			
	IN	0	0	YEGBR_ds_ind	C5157	wh_ds	X	X	X			X	X		X			
	IR	0	0															
	MI	0	0															
	Total	2,500	0															
Lake Somerville	MU	3,415	0	SOMT2_ls_mun	C5164	so_ls										X		
	IN	0	0															
	IR	0	0															
	MI	0	0															
	Total	3,415	0															
Lake Somerville Dam to Yegua Crk gage	MU	0	0															
	IN	0	0															
	IR	0	0															
	MI	0	0															
	Total	0	0															
Yegua Crk gage to Brazos Rv/Yegua Crk confluence	MU	0	0															
	IN	0	0															
	IR	0	0															
	MI	0	0															
	Total	0	0															
Brazos Rv/Yegua Crk confluence to Brazos Rv/Navasota Rv confluence	MU	0	0															
	IN	0	0															
	IR	527	0	NAVBR_ds_irr	C5164	so_ds	X	X	X			X	X		X	X		
	MI	0	0															
	Total	527	0															
Lake Limestone	MU	200	0	LLST2_ls_mun	C5165	ls_ls											X	
	IN	50,675	0	LLST2_ls_ind	C5165	ls_ls											X	
	IR	0	0															
	MI	0	0	LLST2_ls_min	C5165	ls_ls											X	
	Total	50,875	0															

Table G.2.15 - 2060 Operations Model BRA Water Right Records (Scenario 4)																		
Reach	**Type of Use**	**Fixed Amount (acft/yr)**	**Variable Amount (acft/yr)**	**Water Right ID**	**Group ID 1**	**Group ID 2**	**PK**	**Granbury**	**Whitney**	**Aquilla**	**Proctor**	**Belton**	**Stillhouse**	**Georgetown**	**Granger**	**Somerville**	**Limestone**	**Allens**
Lake Limestone Dam to Easterly gage	MU	0	0															
	IN	0	0															
	IR	0	0															
	MI	0	0															
	Total	0	0															
Easterly gage to Brazos Rv/Navasota Rv confluence	MU	1,886	0	LLST2_ds_mun	C5165	ls_ds											X	
	IN	0	3,600	LLST2_ds_tmpa	C5165	ls_ds											X	
	IN	0	0	LLST2_ds_ind	C5165	ls_ds											X	
	IR	0	0	LLST2_ds_irr	C5165	ls_ds											X	
	MI	0	0															
	Total	1,886	3,600															
Brazos Rv/Navasota Rv confluence to Hempstead gage	MU	0	0															
	IN	0	0															
	IR	0	0															
	MI	0	0															
	Total	0	0															
Hempstead gage to Richmond gage	MU	0	0															
	IN	0	31,929	RMOT2_sys_NRG	C5157	wh_ds	X	X	X			X	X		X	X	X	X
	IR	50	0	RMOT2_sys_irr	C5164	so_ds	X	X	X			X	X		X	X	X	X
	MI	0	0															
	Total	50	31,929															
Richmond gage to Gulf of Mexico - Rosh	MU	29,668	0	ROST2_sys_mun	C5164	so_ds	X	X	X			X	X		X	X	X	X
	MU, IN, IR	0	164,180	ROST2_sys_GCWAbu	C5164	so_ds	X	X	X			X	X		X	X	X	X
	MU	61,647	0	ROST2_sys_GCWA	C5164	so_ds	X	X	X			X	X		X	X	X	X
	IN	1,710	0	ROST2_sys_ind	C5164	so_ds	X	X	X			X	X		X	X	X	X
	IN	39,490	0	ROST2_sys_indBz	C5164	so_ds	X	X	X			X	X		X	X	X	X
	IN	0	16,000	ROST2_sys_Dow	C5164	so_ds	X	X	X			X	X		X	X	X	X
	IR	0	0															
	MI	1,945	0	ROST2_sys_min	C5164	so_ds	X	X	X			X	X		X	X	X	X
	Total	134,460	180,180															
	Grand Total	485,953	250,579	736,532														

Table G.2.16 - 2060 Operations Model BRA Water Right Records with CPNPP Expansion (Scenario 5)																		
Reach	Type of Use	Fixed Amount (acft/yr)	Variable Amount (acft/yr)	Water Right ID	Group ID 1	Group ID 2	PK	Granbury	Whitney	Aquilla	Proctor	Belton	Stillhouse	Georgetown	Granger	Somerville	Limestone	Allens
Possum Kingdom Lake	MU	4,688	0	PSMT2_ls_mun	C5155	pk_ls	X											
	IN	1,084	0	PSMT2_ls_ind	C5155	pk_ls	X											
	IR	250	0	PSMT2_ls_irr	C5155	pk_ls	X											
	MI	959	0	PSMT2_ls_min	C5155	pk_ls	X											
	Total	6,981	0															
Possum Kingdom Lake Dam to Palo Pinto gage & Palo Pinto gage to Dennis gage	MU	0	0	DNNT2_ds_mun	C5155	pk_ds	X											
	IN	0	0															
	IR	50	0	DNNT2_ds_irr	C5155	pk_ds	X											
	MI	318	0	DNNT2_ds_min	C5155	pk_ds	X											
	Total	368	0															
Dennis gage to Lake Granbury Dam	MU	28,956	0	GBYT2_ls_mun	C5156	gb_ls	X	X										
	IN	141,358	0	GBYT2_ls_ind	C5156	gb_ls	X	X										
	IR	2,581	0	GBYT2_ls_irr	C5156	gb_ls	X	X										
	MI	0	0	GBYT2_ls_min	C5156	gb_ls	X	X										
	Total	172,895	0															
Lake Granbury Dam to Glen Rose gage	MU	0	0															
	IN	0	0	GBYT2_ds_ind	C5156	gb_ds	X	X										
	IR	200	0	GBYT2_ds_irr	C5156	gb_ss	X	X										
	MI	179	0	GBYT2_ds_min	C5156	gb_ds	X	X										
	Total	379	0															
Glen Rose gage to Lake Whitney Dam	MU	2,030	0	WTYT2_ls_mun	C5157	wh_ls	X	X	X									
	IN	0	0															
	IR	60	0	WTYT2_ls_irr	C5157	wh_ls	X	X	X									
	MI	0	0															
	Total	2,090	0															
Lake Whitney Dam to Aquilla Creek/Brazos Rv confluence	MU	0	0															
	IN	6,509	0	WTYT2_ds_ind	C5157	wh_ds	X	X	X									
	IR	20	0	WTYT2_ds_irr	C5157	wh_ds	X	X	X									
	MI	0	0															
	Total	6,529	0															
Lake Aquilla	MU	13,337	0	ALAT2_ls_mun	C5158	aq_ls				X								
	IN	0	0															
	IR	0	0	ALAT2_ls_irr	C5158	aq_ls				X								
	MI	0	0															
	Total	13,337	0															
Lake Aquilla Dam to Aquilla Creek gage	MU	0	0															
	IN	0	0															
	IR	0	0															
	MI	0	0															
	Total	0	0															
Aquilla Creek gage to Aquilla Creek/Brazos Rv confluence	MU	0	0															
	IN	0	0															
	IR	0	0															
	MI	0	0															
	Total	0	0															
Aquilla Creek/ Brazos confluence to Highbank gage	MU	0	0	HIBT2_ds_mun	C5157	wh_ds	X	X	X									
	MU	760	0	HIBT2_ds_marlin	C5157	wh_ds	X	X	X									
	IN	0	0															
	IR	0	0															
	MI	0	0															
	Total	760	0															
Lake Proctor	MU	5,922	0	PCTT2_ls_mun	C5159	pr_ls					X							
	IN	0	0															
	IR	4,064	0	PCTT2_ls_irr	C5159	pr_ls					X							
	MI	0	0															
	Total	9,986	0															
Lake Proctor Dam to Leon Rv at Gatesville gage	MU	0	0															
	IN	0	0															
	IR	0	0															

Table G.2.16 - 2060 Operations Model BRA Water Right Records with CPNPP Expansion (Scenario 5)																		
Reach	Type of Use	Fixed Amount (acft/yr)	Variable Amount (acft/yr)	Water Right ID	Group ID 1	Group ID 2	PK	Granbury	Whitney	Aquilla	Proctor	Belton	Stillhouse	Georgetown	Granger	Somerville	Limestone	Allens
	MI	0	0															
	Total	0	0															
Leon Rv at Gatesville to Lake Belton Dam	MU	61,655	0	BLNT2_ls_mun	C5160	be_ls						X						
	IN	0	0															
	IR	0	0	BLNT2_ls_irr	C5160	be_ls						X						
	MI	0	0															
	Total	61,655	0															
Lake Belton Dam to Leon Rv nr Belton gage - Temple	MU	0	31,501	BLNT2_ds_temple	C5160	be_ds						X						
	IN	0	0															
	IR	0	0															
	MI	0	0															
	Total	0	31,501															
Leon Rv nr Belton gage to Little River gage	MU	0	0															
	IN	0	0															
	IR	200	0	BLNT2_ds_irr	C5160	be_ds						X						
	MI	0	0															
	Total	200	0															
Lake Stillhouse Hollow	MU	29,506	0	BLNTSTIT_sys_mun, STIT2_ls_mun	C5161	sh_ls							X					
	IN	0	0	STIT2_ls_ind	C5161	sh_ls							X					
	IR	100	0	STIT2_ls_irr	C5161	sh_ls							X					
	MI	0	0															
	Total	29,606	0															
Lake Stillhouse Hollow Dam to Lampasas Rv nr Belton gage	MU	0	0															
	IN	0	0															
	IR	8	0	STIT2_ds_irr	C5161	sh_ds							X					
	MI	0	0															
	Total	8	0															
Lampasas Rv nr Belton gage to Little River gage	MU	0	0															
	IN	0	0															
	IR	0	0															
	MI	0	0															
	Total	0	0															
Little River gage to Little Rv/San Gabriel Rv confluence	MU	0	0															
	IN	0	0															
	IR	0	0															
	MI	0	0															
	Total	0	0															
Lake Georgetown	MU	71,891	0	GLKTGGLT_sys_mun, GGLT2_ls_mun	C5162	gt_ls								X				
	IN	0	0															
	IR	0	0	GGLT2_ls_irr	C5161	gt_ls								X				
	MI	0	0															
	Total	71,891	0															
Lake Georgetown Dam to N San Gabriel gage	MU	0	0															
	IN	0	0															
	IR	0	0															
	MI	0	0															
	Total	0	0															
N San Gabriel gage to Lake Granger Dam	MU	5,357	0	GLKT2_ls_mun, GLKTGGLT_sys_bu	C5163	gn_ls									X			
	IN	0	0															
	IR	0	0															
	MI	0	0															
	Total	5,357	0															
Lake Granger Dam to Laneport gage	MU	0	0															
	IN	0	0															
	IR	0	0															
	MI	0	0															
	Total	0	0															

Table G.2.16 - 2060 Operations Model BRA Water Right Records with CPNPP Expansion (Scenario 5)																		
Reach	Type of Use	Fixed Amount (acft/yr)	Variable Amount (acft/yr)	Water Right ID	Group ID 1	Group ID 2	PK	Granbury	Whitney	Aquilla	Proctor	Belton	Stillhouse	Georgetown	Granger	Somerville	Limestone	Allens
Laneport gage to Little Rv/San Gabriel confluence	MU	0	0															
	IN	0	0															
	IR	0	0															
	MI	0	0															
	Total	0	0															
Little/San Gabriel confluence to Little Rv at Cameron gage	MU	0	0															
	IN	0	3,369	GLKT2_ds_ind	C5163	gn_ds						X	X		X			
	IR	0	0															
	MI	0	0															
	Total	0	3,369															
Cameron gage to Brazos Rv/Little Rv confluence	MU	0	0															
	IN	0	0															
	IR	0	0															
	MI	0	0															
	Total	0	0															
Highbank gage to Brazos Rv/Little Rv confluence	MU	0	0															
	IN	0	0															
	IR	0	0															
	MI	0	0															
	Total	0	0															
Brazos Rv/Little Rv confluence to Bryan gage	MU	0	0															
	IN	0	0															
	IR	350	0	BBZT2_ds_irr	C5157	wh_ds	X	X	X			X	X		X			
	MI	0	0	BBZT2_ds_min	C5157	wh_ds	X	X	X			X	X		X			
	Total	350	0															
Bryan gage to Brazos Rv/Yegua Crk confluence	MU	2,500	0	BBZT2_ds_mun	C5157	wh_ds	X	X	X			X	X		X			
	IN	0	0	YEGBR_ds_ind	C5157	wh_ds	X	X	X			X	X		X			
	IR	0	0															
	MI	0	0															
	Total	2,500	0															
Lake Somerville	MU	3,415	0	SOMT2_ls_mun	C5164	so_ls										X		
	IN	0	0															
	IR	0	0															
	MI	0	0															
	Total	3,415	0															
Lake Somerville Dam to Yegua Crk gage	MU	0	0															
	IN	0	0															
	IR	0	0															
	MI	0	0															
	Total	0	0															
Yegua Crk gage to Brazos Rv/Yegua Crk confluence	MU	0	0															
	IN	0	0															
	IR	0	0															
	MI	0	0															
	Total	0	0															
Brazos Rv/Yegua Crk confluence to Brazos Rv/Navasota Rv confluence	MU	0	0															
	IN	0	0															
	IR	527	0	NAVBR_ds_irr	C5164	so_ds	X	X	X			X	X		X	X		
	MI	0	0															
	Total	527	0															
Lake Limestone	MU	200	0	LLST2_ls_mun	C5165	ls_ls											X	
	IN	50,675	0	LLST2_ls_ind	C5165	ls_ls											X	
	IR	0	0															
	MI	0	0	LLST2_ls_min	C5165	ls_ls											X	
	Total	50,875	0															
Lake Limestone Dam to Easterly gage	MU	0	0															

Table G.2.16 - 2060 Operations Model BRA Water Right Records with CPNPP Expansion (Scenario 5)																		
Reach	Type of Use	Fixed Amount (acft/yr)	Variable Amount (acft/yr)	Water Right ID	Group ID 1	Group ID 2	PK	Granbury	Whitney	Aquilla	Proctor	Belton	Stillhouse	Georgetown	Granger	Somerville	Limestone	Allens
	IN	0	0															
	IR	0	0															
	MI	0	0															
	Total	0	0															
Easterly gage to Brazos Rv/Navasota Rv confluence	MU	1,886	0	LLST2_ds_mun	C5165	ls_ds											X	
	IN	0	3,600	LLST2_ds_tmpa	C5165	ls_ds											X	
	IN	0	0	LLST2_ds_ind	C5165	ls_ds											X	
	IR	0	0	LLST2_ds_irr	C5165	ls_ds											X	
	MI	0	0															
	Total	1,886	3,600															
Brazos Rv/Navasota Rv confluence to Hempstead gage	MU	0	0															
	IN	0	0															
	IR	0	0															
	MI	0	0															
	Total	0	0															
Hempstead gage to Richmond gage	MU	0	0															
	IN	0	31,929	RMOT2_sys_NRG	C5157	wh_ds	X	X	X			X	X		X	X	X	X
	IR	50	0	RMOT2_sys_irr	C5164	so_ds	X	X	X			X	X		X	X	X	X
	MI	0	0															
	Total	50	31,929															
Richmond gage to Gulf of Mexico - Rosh	MU	29,668	0	ROST2_sys_mun	C5164	so_ds	X	X	X			X	X		X	X	X	X
	MU, IN, IR	0	164,180	ROST2_sys_GCWAbu	C5164	so_ds	X	X	X			X	X		X	X	X	X
	MU	61,647	0	ROST2_sys_GCWA	C5164	so_ds	X	X	X			X	X		X	X	X	X
	IN	1,710	0	ROST2_sys_ind	C5164	so_ds	X	X	X			X	X		X	X	X	X
	IN	39,490	0	ROST2_sys_indBz	C5164	so_ds	X	X	X			X	X		X	X	X	X
	IN	0	16,000	ROST2_sys_Dow	C5164	so_ds	X	X	X			X	X		X	X	X	X
	IR	0	0															
	MI	1,945	0	ROST2_sys_min	C5164	so_ds	X	X	X			X	X		X	X	X	X
	Total	134,460	180,180															
	Grand Total	576,105	250,579															

The 2025 and 2060 Operation Models assumes that large customers with their own water rights use them first to meet demands as described in Section G.2.2.9 of this Appendix. Diversions from the BRA system for Dow Chemical and NRG Smithers are limited to their contract amount by SO Records.

In the 2025 Operation Model, the WCRRWL can transfer up to 48,000 acft/yr from Lake Stillhouse Hollow to Lake Georgetown, with a maximum monthly diversion of 4,000 acft. The pipeline is turned on when the beginning-of-month storage in Lake Georgetown is less than 28,374 acft (elevation 784.0 ft msl). The 2060 Operation Model assumes that up to 60,000 acft/yr can be transferred with a maximum monthly diversion of 5,000 acft. The pipeline is turned on when Lake Georgetown begins the month at less than 36,518 acft (791.0 ft msl).

In these models all of the pipeline operation occurs in the second simulation at the 2012 priority date of the proposed System Operation Permit, implemented using the following steps.

1. Water is diverted from Lake Stillhouse Hollow when Lake Georgetown begins the month at less than the trigger storage (in 2025 28,374 acft, in 2060 36,518 acft). The diversions are stored in a dummy control point.
2. Water in the dummy control point is used to backup shortages and fill storage at Lake Georgetown.
3. If there is no empty storage in Lake Georgetown (this happens when the reservoir fills during the current timestep), the water in the dummy control point is used to fill Stillhouse Hollow. This simulates conditions where pumping is cut off during the month because Lake Georgetown fills. If there is no empty storage in Stillhouse Hollow, the water is returned to the stream.

The 2060 Operation Model assumes that a pipeline has been built linking Lake Belton to Lake Stillhouse Hollow. Rather than modeling a pipeline that stores Lake Belton water in Stillhouse Hollow, the model uses a “shared demand” approach where part of the

time a subset of the demand is met from Lake Belton and part of the time it is met from Stillhouse Hollow. In the 2060 model, 22,000 acft/yr of Stillhouse Hollow demand is met from Stillhouse Hollow as long as the reservoir has more than 110,000 acft in storage. At that point the demand is shifted to Lake Belton until Lake Belton reaches 42,724 acft (storage in the BRA pool). At that point demand is shifted back to Stillhouse Hollow. The shared demand is implemented by using the minimum storage options on the WS Records for Stillhouse Hollow and Lake Belton and TO Records using option 11 to subtract the shared demands form the total Stillhouse Hollow demand of 29,506 acft/yr.

The 2060 Operation Model uses a similar method to share demand between Lake Georgetown and Lake Granger, simulating a connection between the two reservoirs. When Lake Georgetown is above 26,500 acft, 19,200 acft/yr is diverted from Lake Georgetown. When Lake Georgetown is below 26,500 acft, this demand is shifted to Lake Granger.

G.2.6 Appropriation Models

The Appropriation Models were used to model the twelve Variable Demand and the twelve Fixed Use scenarios described in Section 2.4 of the Technical Report. These models incorporate most of the modifications discussed in Section G.2.2 of this Appendix, plus additional changes discussed below. The models are very similar to the Operational Models, except that most demands are set to contract amounts rather than projected demands, original storage volumes are used instead of 2025 storage, and the models are used to evaluate the firm supply of the BRA System. These models also use minimum monthly return flows instead of average return flows. TCEQ requested the use of original storage volumes and monthly minimum return flows to be consistent with other water availability analyses performed by the agency.

The Appropriation Models put all BRA use at its location, either lakeside or downstream of reservoirs. If a diversion is located downstream of multiple reservoirs, then its

demand can be met from all of those reservoirs using the multiple reservoir simulation capabilities in WRAP. These are modeled as Type 2 rights (no refilling of storage).

These models use the proposed System Operation Permit. The modeling approach to the System Operation Permit is described in Section G.2.2.13 above. Lakeside diversions that exceed priority or System Order diversions at a reservoir are assigned to the System Operation Permit. Downstream diversions of run-of-river flow are assigned to the System Operation Permit, except for NRG diversions or diversions used to fill Allens Creek Reservoir made using the Excess Flows Permit.

Tables G.2.17 through G.2.20 show the demands and water right identifiers associated with the BRA demands used for the Variable Demand scenarios. Tables G.2.21 through G.2.24 show the demands used in the Fixed Use scenarios. These demands are discussed in Section 2.4 of the Technical Report. The X's in columns 8-18 of the tables show the reservoirs that are located upstream of each demand point.

The Appropriation Models for the Variable Demand scenarios treat the demands for the City of Temple differently than the Fixed Use scenarios. In the Variable Demand scenarios, demands for the City of Temple (which are equal to the Temple contract) are first met from the Temple water right (COA 12-2938). The portion of the demands greater than 15,804 acft/yr comes from another WR Record located at the Temple diversion point. When Lake Belton is spilling (or would have been spilling if only operating under its existing right), this diversion comes from run-of-river flows appropriated by the proposed System Operation Permit. Otherwise the additional demand is met by a release of stored water from Lake Belton. This approach to modeling of the City of Temple's diversion is discussed in Section G.2.2.8 of this Appendix. In the Fixed Use Scenarios, the Temple demand is modeled as a water right at the Temple diversion point with a constant diversion equal to the Temple contract amount. There is no backup of the Temple right.

Table G.2.17 - Appropriation Model BRA Water Right Records Variable Demand Level A (Scenarios 1, 2 and 3)																		
Reach	Type of Use	Fixed Amount (acft/yr)	Variable Amount (acft/yr)	Water Right ID	Group ID 1	Group ID 2	PK	Granbury	Whitney	Aquilla	Proctor	Belton	Stillhouse	Georgetown	Granger	Somerville	Limestone	Allens
Possum Kingdom Lake	MU	6,809	0	PSMT2_ls_mun	C5155	pk_ls	X											
	IN	65,447	0	PSMT2_ls_ind	C5155	pk_ls	X											
	IR	500	0	PSMT2_ls_irr	C5155	pk_ls	X											
	MI	1,410	0	PSMT2_ls_min	C5155	pk_ls	X											
	OT	14,400	0	PSMT2_us	C5155	pk_ls	X											
	Total	88,566	0															
Possum Kingdom Lake Dam to Palo Pinto gage	MU	0	0															
	IN	1,200	0	PLOT2_ds_ind	C5155	pk_ds	X											
	IR	0	0															
	MI	0	0															
	OT	0	0	PLOT2_ds_oth	C5155	pk_ds	X											
	Total	1,200																
Palo Pinto gage to Dennis gage	MU	0	0	DNNT2_ds_mun	C5155	pk_ds	X											
	IN	0	0															
	IR	50	0	DNNT2_ds_irr	C5155	pk_ds	X											
	MI	1,000	0	DNNT2_ds_min	C5155	pk_ds	X											
	Total	1,050	0															
Dennis gage to Lake Granbury Dam	MU	34,597	0	GBYT2_ls_mun	C5156	gb_ls	X	X										
	IN	7,000	0	GBYT2_ls_ind	C5156	gb_ls	X	X										
	IN	43,000	0	GBYT2_ls_LUM	C5156	gb_ls	X	X										
	IN	0	0	GBYT2_ls_CPNPP	C5156	gb_ls	X	X										
	IR	4,760	0	GBYT2_ls_irr	C5156	gb_ls	X	X										
	MI	44	0	GBYT2_ls_min	C5156	gb_ls	X	X										
	Total	89,401	0															
Lake Granbury Dam to Glen Rose gage	MU	0	0															
	IN	0	0	GBYT2_ds_ind	C5156	gb_ds	X	X										
	IR	200	0	GBYT2_ds_irr	C5156	gb_ss	X	X										
	MI	1,000	0	GBYT2_ds_min	C5156	gb_ds	X	X										
	Total	1,200	0															
Glen Rose gage to Lake Whitney Dam	MU	11,260	0	WTYT2_ls_mun	C5157	wh_ls	X	X	X									
	IN	0	0															
	IR	1,000	0	WTYT2_ls_irr	C5157	wh_ls	X	X	X									
	MI	0	0															
	Total	12,260	0															
Lake Whitney Dam to Aquilla Creek/Brazos Rv confluence	MU	0	0															
	IN	11,722	0	WTYT2_ds_ind	C5157	wh_ds	X	X	X									
	IR	0	0	WTYT2_ds_irr	C5157	wh_ds	X	X	X									
	MI	0	0															
	Total	11,722	0															
Lake Aquilla	MU	11,403	0	ALAT2_ls_mun	C5158	aq_ls				X								
	IN	0	0															
	IR	0	0	ALAT2_ls_irr	C5158	aq_ls				X								
	MI	0	0															
	Total	11,403	0															
Lake Aquilla Dam to Aquilla Creek gage	MU	0	0															
	IN	0	0															
	IR	0	0															
	MI	0	0															
	Total	0	0															
Aquilla Creek gage to Aquilla Creek/Brazos Rv confluence	MU	0	0															
	IN	0	0															
	IR	0	0															
	MI	0	0															
	Total	0	0															
Aquilla Creek/ Brazos confluence to Highbank gage	MU	2,300	0	HIBT2_ds_mun	C5157	wh_ds	X	X	X									
	IN	0	0															
	IR	0	0															
	MI	0	0															
	Total	2,300	0															
Lake Proctor	MU	6,437	0	PCTT2_ls_mun	C5159	pr_ls					X							

Table G.2.17 - Appropriation Model BRA Water Right Records Variable Demand Level A (Scenarios 1, 2 and 3)																		
Reach	Type of Use	Fixed Amount (acft/yr)	Variable Amount (acft/yr)	Water Right ID	Group ID 1	Group ID 2	PK	Granbury	Whitney	Aquilla	Proctor	Belton	Stillhouse	Georgetown	Granger	Somerville	Limestone	Allens
	IN	0	0															
	IR	6,652	0	PCTT2_ls_irr	C5159	pr_ls					X							
	MI	0	0															
	Total	13,089	0															
Lake Proctor Dam to Leon Rv at Gatesville gage	MU	0	0															
	IN	0	0															
	IR	0	0	legt2_ds_irr	C5159	pr_ds												
	MI	0	0															
	Total	0	0															
Leon Rv at Gatesville to Lake Belton Dam	MU	76,062	0	BLNT2_ls_mun, BLNT2_ls_mun2	C5160	be_ls					X	X						
	MU		0	BLNT2STIT2_sys_bu [a]	C5160	be_ls						X						
	IN	0	0															
	IR	0	0	BLNT2_ls_irr	C5160	be_ls						X						
	MI	0	0															
	Total	76,062	0															
Lake Belton Dam to Leon Rv nr Belton gage - Temple	MU		30,453	BLNT2_ds_temple	C5160	be_ds						X						
	IN	0	0															
	IR	0	0															
	MI	0	0															
	Total	0	30,453															
Leon Rv nr Belton gage to Little River gage	MU	0	0															
	IN	0	0															
	IR	200	0	BLNT2_ds_irr	C5160	be_ds						X						
	MI	0	0															
	Total	200	0															
Lake Stillhouse Hollow	MU	39,155	0	STIT2_ls_mun	C5161	sh_ls							X					
	MU			BLNTSTIT_sys_mun [a]									X					
	MU			GGLTSTIT_sys_bu [b]									X					
	IN	0	0	STIT2_ls_ind	C5161	sh_ls							X					
	IR	100	0	STIT2_ls_irr	C5161	sh_ls							X					
	MI	0	0															
	Total	39,255	0															
Lake Stillhouse Hollow Dam to Lampasas Rv nr Belton gage	MU	0	0															
	IN	0	0															
	IR	8	0	STIT2_ds_irr	C5161	sh_ds							X					
	MI	0	0															
	Total	8	0															
Lampasas Rv nr Belton gage to Little River gage	MU	0	0															
	IN	0	0															
	IR	0	0															
	MI	0	0															
	Total	0	0															
Little River gage to Little Rv/San Gabriel Rv confluence	MU	0	0															
	IN	0	0															
	IR	0	0															
	MI	0	0															
	Total	0	0															
Lake Georgetown	MU	74,561	0	GGLT2_ls_mun [c]	C5162	gt_ls								X				
	MU		0	GGLTGLKT_sys_bu [d]										X				
	MU		0	GGLTSTIT_sys_mun [b]										X				
	IN	0	0															
	IR	0	0	GGLT2_ls_irr	C5161	gt_ls								X				
	MI	0	0															
	Total	74,561	0															
Lake Georgetown Dam to N San Gabriel gage	MU	0	0															
	IN	0	0															
	IR	0	0															
	MI	0	0															

Table G.2.17 - Appropriation Model BRA Water Right Records Variable Demand Level A (Scenarios 1, 2 and 3)																		
Reach	Type of Use	Fixed Amount (acft/yr)	Variable Amount (acft/yr)	Water Right ID	Group ID 1	Group ID 2	PK	Granbury	Whitney	Aquilla	Proctor	Belton	Stillhouse	Georgetown	Granger	Somerville	Limestone	Allens
	Total	0	0															
N San Gabriel gage to Lake Granger Dam	MU	13,000	0	GLKT2_ls_mun	C5163	gn_ls									X			
	MU			GGLTGLKT_sys_mun [d]											X			
	IN	0	0															
	IR	15	0	GLKT2_ls_irr	C5163	gn_ls									X			
	MI	0	0															
	Total	13,015	0															
Lake Granger Dam to Laneport gage	MU	0	0															
	IN	0	0															
	IR	0	0															
	MI	0	0															
	Total	0	0															
Laneport gage to Little Rv/San Gabriel confluence	MU	0	0															
	IN	0	0															
	IR	0	0															
	MI	0	0															
	Total	0	0															
Little/San Gabriel confluence to Little Rv at Cameron gage	MU	0	0															
	IN	0	5,000	GLKT2_ds_ind	C5163	gn_ds						X	X		X			
	IR	0	0															
	MI	0	0															
	Total	0	5,000															
Cameron gage to Brazos Rv/Little Rv confluence	MU	0	0															
	IN	0	0															
	IR	0	0															
	MI	0	0															
	Total	0	0															
Highbank gage to Brazos Rv/Little Rv confluence	MU	0	0															
	IN	0	0															
	IR	0	0															
	MI	0	0															
	Total	0	0															
Brazos Rv/Little Rv confluence to Bryan gage	MU	0	0															
	IN	0	0															
	IR	200	0	BBZT2_ds_irr	C5157	wh_ds	X	X	X			X	X		X			
	MI	0	0	BBZT2_ds_min	C5157	wh_ds	X	X	X			X	X		X			
	Total	200	0															
Bryan gage to Brazos Rv/Yegua Crk confluence	MU	2,500	0	BBZT2_ds_mun	C5157	wh_ds	X	X	X			X	X		X			
	IN	0	0	YEGBR_ds_ind	C5157	wh_ds	X	X	X			X	X		X			
	IR	150	0	YEBR2_ds_irr	C5157	wh_ds	X	X	X			X	X		X			
	MI	0	0															
	Total	2,650	0															
Lake Somerville	MU	4,200	0	SOMT2_ls_mun	C5164	so_ls										X		
	IN	0	0															
	IR	0	0															
	MI	0	0															
	Total	4,200	0															
Lake Somerville Dam to Yegua Crk gage	MU	0	0															
	IN	0	0															
	IR	0	0															
	MI	0	0															
	Total	0	0															
Yegua Crk gage to Brazos Rv/Yegua Crk confluence	MU	0	0															
	IN	0	0															
	IR	0	0															
	MI	0	0															
	Total	0	0															

Table G.2.17 - Appropriation Model BRA Water Right Records Variable Demand Level A (Scenarios 1, 2 and 3)																		
Reach	Type of Use	Fixed Amount (acft/yr)	Variable Amount (acft/yr)	Water Right ID	Group ID 1	Group ID 2	PK	Granbury	Whitney	Aquilla	Proctor	Belton	Stillhouse	Georgetown	Granger	Somerville	Limestone	Allens
Brazos Rv/Yegua Crk confluence to Brazos Rv/Navasota Rv confluence	MU	0	0															
	IN	0	0															
	IR	540	0	NAVBR_ds_irr	C5164	so_ds	X	X	X			X	X		X	X		
	MI	0	0															
	Total	540	0															
Lake Limestone	MU	200	0	LLST2_ls_mun	C5165	ls_ls											X	
	IN	50,675	0	LLST2_ls_ind	C5165	ls_ls											X	
	IR	0	0															
	MI	0	0	LLST2_ls_min	C5165	ls_ls											X	
	Total	50,875	0															
Lake Limestone Dam to Easterly gage	MU	0	0															
	IN	0	0															
	IR	0	0															
	MI	0	0															
	Total	0	0															
Easterly gage to Brazos Rv/Navasota Rv confluence	MU	4,000	0	LLST2_ds_mun	C5165	ls_ds											X	
			3,600	LLST2_ds_tmpa	C5165	ls_ds											X	
	IN		0	LLST2_ds_ind	C5165	ls_ds											X	
	IR	0	0	LLST2_ds_irr	C5165	ls_ds											X	
	MI	0	0															
	Total	4,000	3,600															
Brazos Rv/Navasota Rv confluence to Hempstead gage	MU	0	0															
	IN	0	0															
	IR	0	0															
	MI	0	0															
	Total	0	0															
Hempstead gage to Richmond gage	MU	0	0															
	IN	47,792	35,208	RMOT2_sys_NRG, RMOT2_sys_NRG2	C5157	wh_ds	X	X	X			X	X		X	X	X	X
	IR	50	0	RMOT2_sys_irr	C5164	so_ds	X	X	X			X	X		X	X	X	X
	MI	0	0															
	Total	47,842	35,208															
Richmond gage to Gulf of Mexico - Rosh	MU	18,715		ROST2_sys_mun	C5164	so_ds	X	X	X			X	X		X	X	X	X
	MU, IN, IR		164,180	ROST2_sys_GCWAbu	C5164	so_ds	X	X	X			X	X		X	X	X	X
	MU	0		ROST2_sys_GCWA	C5164	so_ds	X	X	X			X	X		X	X	X	X
	IN	1,698		ROST2_sys_ind	C5164	so_ds	X	X	X			X	X		X	X	X	X
	IN	2,779		ROST2_sys_indBz	C5164	so_ds	X	X	X			X	X		X	X	X	X
	IN		16,000	ROST2_sys_Dow	C5164	so_ds	X	X	X			X	X		X	X	X	X
	IR	0		ROST2_sys_irr	C5164	so_ds	X	X	X			X	X		X	X	X	X
	MI	779		ROST2_sys_min	C5164	so_ds	X	X	X			X	X		X	X	X	X
	Total	23,971	180,180															
	Grand Total	569,570	254,441															

a Belton-Stillhouse Pipeline shared demand. Amount varies depending on use of return flows and groundwater.
b Stillhouse-Georgetown Pipeline (WCRRWL) shared demand. Amount varies depending on use of return flows and groundwater.
c Demand is reduced by assumed amount of groundwater. Amount of groundwater needed depends on use of return flows.
d Lake Georgetown demand shared with Lake Granger. Amont varies depending on use of return flows and groundwater.

Table G.2.18 - Appropriation Model BRA Water Right Records Variable Demand Level B (Scenarios 4, 5 and 6)																		
Reach	Type of Use	Fixed Amount (acft/yr)	Variable Amount (acft/yr)	Water Right ID	Group ID 1	Group ID 2	PK	Granbury	Whitney	Aquilla	Proctor	Belton	Stillhouse	Georgetown	Granger	Somerville	Limestone	Allens
Possum Kingdom Lake	MU	6,809	0	PSMT2_ls_mun	C5155	pk_ls	X											
	IN	38,000	0	PSMT2_ls_ind	C5155	pk_ls	X											
	IR	500	0	PSMT2_ls_irr	C5155	pk_ls	X											
	MI	1,410	0	PSMT2_ls_min	C5155	pk_ls	X											
	OT	14,400	0	PSMT2_us	C5155	pk_ls	X											
	Total	61,119	0															
Possum Kingdom Lake Dam to Palo Pinto gage	MU	0	0															
	IN	1,200	0	PLOT2_ds_ind	C5155	pk_ds	X											
	IR	0	0															
	MI	0	0															
	OT	0	0	PLOT2_ds_oth	C5155	pk_ds	X											
	Total	1,200																
Palo Pinto gage to Dennis gage	MU	0	0	DNNT2_ds_mun	C5155	pk_ds	X											
	IN	0	0															
	IR	50	0	DNNT2_ds_irr	C5155	pk_ds	X											
	MI	1,000	0	DNNT2_ds_min	C5155	pk_ds	X											
	Total	1,050	0															
Dennis gage to Lake Granbury Dam	MU	34,597	0	GBYT2_ls_mun	C5156	gb_ls	X	X										
	IN	7,000	0	GBYT2_ls_ind	C5156	gb_ls	X	X										
	IN	43,000	0	GBYT2_ls_LUM	C5156	gb_ls	X	X										
	IN	90,152	0	GBYT2_ls_CPNPP	C5156	gb_ls	X	X										
	IR	4,760	0	GBYT2_ls_irr	C5156	gb_ls	X	X										
	MI	44	0	GBYT2_ls_min	C5156	gb_ls	X	X										
	Total	179,553	0															
Lake Granbury Dam to Glen Rose gage	MU	0	0															
	IN	0	0	GBYT2_ds_ind	C5156	gb_ds	X	X										
	IR	200	0	GBYT2_ds_irr	C5156	gb_ss	X	X										
	MI	1,000	0	GBYT2_ds_min	C5156	gb_ds	X	X										
	Total	1,200	0															
Glen Rose gage to Lake Whitney Dam	MU	11,260	0	WTYT2_ls_mun	C5157	wh_ls	X	X	X									
	IN	0	0															
	IR	1,000	0	WTYT2_ls_irr	C5157	wh_ls	X	X	X									
	MI	0	0															
	Total	12,260	0															
Lake Whitney Dam to Aquilla Creek/Brazos Rv confluence	MU	0	0															
	IN	11,722	0	WTYT2_ds_ind	C5157	wh_ds	X	X	X									
	IR	0	0	WTYT2_ds_irr	C5157	wh_ds	X	X	X									
	MI	0	0															
	Total	11,722	0															
Lake Aquilla	MU	11,403	0	ALAT2_ls_mun	C5158	aq_ls				X								
	IN	0	0															
	IR	0	0	ALAT2_ls_irr	C5158	aq_ls				X								
	MI	0	0															
	Total	11,403	0															
Lake Aquilla Dam to Aquilla Creek gage	MU	0	0															
	IN	0	0															
	IR	0	0															
	MI	0	0															
	Total	0	0															
Aquilla Creek gage to Aquilla Creek/Brazos Rv confluence	MU	0	0															
	IN	0	0															
	IR	0	0															
	MI	0	0															
	Total	0	0															
Aquilla Creek/ Brazos confluence to Highbank gage	MU	2,300	0	HIBT2_ds_mun	C5157	wh_ds	X	X	X									
	IN	0	0															
	IR	0	0															
	MI	0	0															
	Total	2,300	0															

Table G.2.18 - Appropriation Model BRA Water Right Records Variable Demand Level B (Scenarios 4, 5 and 6)																		
Reach	Type of Use	Fixed Amount (acft/yr)	Variable Amount (acft/yr)	Water Right ID	Group ID 1	Group ID 2	PK	Granbury	Whitney	Aquilla	Proctor	Belton	Stillhouse	Georgetown	Granger	Somerville	Limestone	Allens
Lake Proctor	MU	6,437	0	PCTT2_ls_mun	C5159	pr_ls					X							
	IN	0	0															
	IR	6,652	0	PCTT2_ls_irr	C5159	pr_ls					X							
	MI	0	0															
	Total	13,089	0															
Lake Proctor Dam to Leon Rv at Gatesville gage	MU	0	0															
	IN	0	0															
	IR	0	0	legt2_ds_irr	C5159	pr_ds												
	MI	0	0															
	Total	0	0															
Leon Rv at Gatesville to Lake Belton Dam	MU	76,062	0	BLNT2_ls_mun, BLNT2_ls_mun2	C5160	be_ls					X	X						
	MU			BLNT2STIT2_sys_bu [a]								X						
	IN	0	0															
	IR	0	0	BLNT2_ls_irr	C5160	be_ls						X						
	MI	0	0															
	Total	76,062	0															
Lake Belton Dam to Leon Rv nr Belton gage - Temple	MU		30,453	BLNT2_ds_temple	C5160	be_ds						X						
	IN	0	0															
	IR	0	0															
	MI	0	0															
	Total	0	30,453															
Leon Rv nr Belton gage to Little River gage	MU	0	0															
	IN	0	0															
	IR	200	0	BLNT2_ds_irr	C5160	be_ds						X						
	MI	0	0															
	Total	200	0															
Lake Stillhouse Hollow	MU	39,155	0	STIT2_ls_mun	C5161	sh_ls							X					
	MU			BLNTSTIT_sys_mun [a]									X					
	MU			GGLTSTIT_sys_bu [b]									X					
	IN	0	0	STIT2_ls_ind	C5161	sh_ls							X					
	IR	100	0	STIT2_ls_irr	C5161	sh_ls							X					
	MI	0	0															
	Total	39,255	0															
Lake Stillhouse Hollow Dam to Lampasas Rv nr Belton gage	MU	0	0															
	IN	0	0															
	IR	8	0	STIT2_ds_irr	C5161	sh_ds							X					
	MI	0	0															
	Total	8	0															
Lampasas Rv nr Belton gage to Little River gage	MU	0	0															
	IN	0	0															
	IR	0	0															
	MI	0	0															
	Total	0	0															
Little River gage to Little Rv/San Gabriel Rv confluence	MU	0	0															
	IN	0	0															
	IR	0	0															
	MI	0	0															
	Total	0	0															
Lake Georgetown	MU	74,561	0	GGLT2_ls_mun [c]	C5162	gt_ls								X				
	MU			GGLTGLKT_sys_bu [d]										X				
	MU			GGLTSTIT_sys_mun [b]										X				
	IN	0	0															
	IR	0	0	GGLT2_ls_irr	C5161	gt_ls								X				
	MI	0	0															
	Total	74,561	0															
Lake Georgetown Dam to N San Gabriel gage	MU	0	0															
	IN	0	0															

Table G.2.18 - Appropriation Model BRA Water Right Records Variable Demand Level B (Scenarios 4, 5 and 6)																		
Reach	Type of Use	Fixed Amount (acft/yr)	Variable Amount (acft/yr)	Water Right ID	Group ID 1	Group ID 2	PK	Granbury	Whitney	Aquilla	Proctor	Belton	Stillhouse	Georgetown	Granger	Somerville	Limestone	Allens
	IR	0	0															
	MI	0	0															
	Total	0	0															
N San Gabriel gage to Lake Granger Dam	MU	13,000	0	GLKT2_ls_mun	C5163	gn_ls									X			
	MU			GGLTGLKT_sys_mun											X			
	IN	0	0															
	IR	15	0	GLKT2_ls_irr	C5163	gn_ls									X			
	MI	0	0															
	Total	13,015	0															
Lake Granger Dam to Laneport gage	MU	0	0															
	IN	0	0															
	IR	0	0															
	MI	0	0															
	Total	0	0															
Laneport gage to Little Rv/San Gabriel confluence	MU	0	0															
	IN	0	0															
	IR	0	0															
	MI	0	0															
	Total	0	0															
Little/San Gabriel confluence to Little Rv at Cameron gage	MU	0	0															
	IN	0	5,000	GLKT2_ds_ind	C5163	gn_ds						X	X		X			
	IR	0	0															
	MI	0	0															
	Total	0	5,000															
Cameron gage to Brazos Rv/Little Rv confluence	MU	0	0															
	IN	0	0															
	IR	0	0															
	MI	0	0															
	Total	0	0															
Highbank gage to Brazos Rv/Little Rv confluence	MU	0	0															
	IN	0	0															
	IR	0	0															
	MI	0	0															
	Total	0	0															
Brazos Rv/Little Rv confluence to Bryan gage	MU	0	0															
	IN	0	0															
	IR	200	0	BBZT2_ds_irr	C5157	wh_ds	X	X	X			X	X		X			
	MI	0	0	BBZT2_ds_min	C5157	wh_ds	X	X	X			X	X		X			
	Total	200	0															
Bryan gage to Brazos Rv/Yegua Crk confluence	MU	2,500	0	BBZT2_ds_mun	C5157	wh_ds	X	X	X			X	X		X			
	IN	0	0	YEGBR_ds_ind	C5157	wh_ds	X	X	X			X	X		X			
	IR	150	0	YEBR2_ds_irr	C5157	wh_ds	X	X	X			X	X		X			
	MI	0	0															
	Total	2,650	0															
Lake Somerville	MU	4,200	0	SOMT2_ls_mun	C5164	so_ls										X		
	IN	0	0															
	IR	0	0															
	MI	0	0															
	Total	4,200	0															
Lake Somerville Dam to Yegua Crk gage	MU	0	0															
	IN	0	0															
	IR	0	0															
	MI	0	0															
	Total	0	0															
Yegua Crk gage to Brazos Rv/Yegua Crk confluence	MU	0	0															
	IN	0	0															
	IR	0	0															

Table G.2.18 - Appropriation Model BRA Water Right Records Variable Demand Level B (Scenarios 4, 5 and 6)																		
Reach	Type of Use	Fixed Amount (acft/yr)	Variable Amount (acft/yr)	Water Right ID	Group ID 1	Group ID 2	PK	Granbury	Whitney	Aquilla	Proctor	Belton	Stillhouse	Georgetown	Granger	Somerville	Limestone	Allens
	MI	0	0															
	Total	0	0															
Brazos Rv/Yegua Crk confluence to Brazos Rv/Navasota Rv confluence	MU	0	0															
	IN	0	0															
	IR	540	0	NAVBR_ds_irr	C5164	so_ds	X	X	X			X	X		X	X		
	MI	0	0															
	Total	540	0															
Lake Limestone	MU	200	0	LLST2_ls_mun	C5165	ls_ls											X	
	IN	50,675	0	LLST2_ls_ind	C5165	ls_ls											X	
	IR	0	0															
	MI	0	0	LLST2_ls_min	C5165	ls_ls											X	
	Total	50,875	0															
Lake Limestone Dam to Easterly gage	MU	0	0															
	IN	0	0															
	IR	0	0															
	MI	0	0															
	Total	0	0															
Easterly gage to Brazos Rv/Navasota Rv confluence	MU	4,000	0	LLST2_ds_mun	C5165	ls_ds											X	
			3,600	LLST2_ds_tmpa	C5165	ls_ds											X	
	IN		0	LLST2_ds_ind	C5165	ls_ds											X	
	IR	0	0	LLST2_ds_irr	C5165	ls_ds											X	
	MI	0	0															
	Total	4,000	3,600															
Brazos Rv/Navasota Rv confluence to Hempstead gage	MU	0	0															
	IN	0	0															
	IR	0	0															
	MI	0	0															
	Total	0	0															
Hempstead gage to Richmond gage	MU	0	0															
	IN	47,792	35,208	RMOT2_sys_NRG, RMOT2_sys_NRG2	C5157	wh_ds	X	X	X			X	X		X	X	X	X
	IR	50	0	RMOT2_sys_irr	C5164	so_ds	X	X	X			X	X		X	X	X	X
	MI	0	0															
	Total	47,842	35,208															
Richmond gage to Gulf of Mexico - Rosh	MU	18,715		ROST2_sys_mun	C5164	so_ds	X	X	X			X	X		X	X	X	X
	MU, IN, IR		164,180	ROST2_sys_GCWAbu	C5164	so_ds	X	X	X			X	X		X	X	X	X
	MU	0		ROST2_sys_GCWA	C5164	so_ds	X	X	X			X	X		X	X	X	X
	IN	1,698		ROST2_sys_ind	C5164	so_ds	X	X	X			X	X		X	X	X	X
	IN	2,779		ROST2_sys_indBz	C5164	so_ds	X	X	X			X	X		X	X	X	X
	IN		16,000	ROST2_sys_Dow	C5164	so_ds	X	X	X			X	X		X	X	X	X
	IR	0		ROST2_sys_irr	C5164	so_ds	X	X	X			X	X		X	X	X	X
	MI	779		ROST2_sys_min	C5164	so_ds	X	X	X			X	X		X	X	X	X
	Total	23,971	180,180															
	Grand Total	632,275	254,441															

a Belton-Stillhouse Pipeline shared demand. Amount varies depending on use of return flows and groundwater.
b Stillhouse-Georgetown Pipeline (WCRRWL) shared demand. Amount varies depending on use of return flows and groundwater.
c Demand is reduced by assumed amount of groundwater. Amount of groundwater needed depends on use of return flows.
d Lake Georgetown demand shared with Lake Granger. Amont varies depending on use of return flows and groundwater.

Table G.2.19 - Appropriation Model BRA Water Right Records Variable Demand Level C (Scenarios 7, 8 and 9)																		
Reach	Type of Use	Fixed Amount (acft/yr)	Variable Amount (acft/yr)	Water Right ID	Group ID 1	Group ID 2	PK	Granbury	Whitney	Aquilla	Proctor	Belton	Stillhouse	Georgetown	Granger	Somerville	Limestone	Allens
Possum Kingdom Lake	MU	6,809	0	PSMT2_ls_mun	C5155	pk_ls	X											
	IN	65,447	0	PSMT2_ls_ind	C5155	pk_ls	X											
	IR	500	0	PSMT2_ls_irr	C5155	pk_ls	X											
	MI	1,410	0	PSMT2_ls_min	C5155	pk_ls	X											
	OT	14,400	0	PSMT2_us	C5155	pk_ls	X											
	Total	88,566	0															
Possum Kingdom Lake Dam to Palo Pinto gage	MU	0	0															
	IN	1,200	0	PLOT2_ds_ind	C5155	pk_ds	X											
	IR	0	0															
	MI	0	0															
	OT	0	0	PLOT2_ds_oth	C5155	pk_ds	X											
	Total	1,200																
Palo Pinto gage to Dennis gage	MU	0	0	DNNT2_ds_mun	C5155	pk_ds	X											
	IN	0	0															
	IR	50	0	DNNT2_ds_irr	C5155	pk_ds	X											
	MI	1,000	0	DNNT2_ds_min	C5155	pk_ds	X											
	Total	1,050	0															
Dennis gage to Lake Granbury Dam	MU	34,597	0	GBYT2_ls_mun	C5156	gb_ls	X	X										
	IN	7,000	0	GBYT2_ls_ind	C5156	gb_ls	X	X										
	IN	43,000	0	GBYT2_ls_LUM	C5156	gb_ls	X	X										
	IN	0	0	GBYT2_ls_CPNPP	C5156	gb_ls	X	X										
	IR	4,760	0	GBYT2_ls_irr	C5156	gb_ls	X	X										
	MI	44	0	GBYT2_ls_min	C5156	gb_ls	X	X										
	Total	89,401	0															
Lake Granbury Dam to Glen Rose gage	MU	0	0															
	IN	0	0	GBYT2_ds_ind	C5156	gb_ds	X	X										
	IR	200	0	GBYT2_ds_irr	C5156	gb_ss	X	X										
	MI	1,000	0	GBYT2_ds_min	C5156	gb_ds	X	X										
	Total	1,200	0															
Glen Rose gage to Lake Whitney Dam	MU	11,260	0	WTYT2_ls_mun	C5157	wh_ls	X	X	X									
	IN	0	0															
	IR	1,000	0	WTYT2_ls_irr	C5157	wh_ls	X	X	X									
	MI	0	0															
	Total	12,260	0															
Lake Whitney Dam to Aquilla Creek/Brazos Rv confluence	MU	0	0															
	IN	11,722	0	WTYT2_ds_ind	C5157	wh_ds	X	X	X									
	IR	0	0	WTYT2_ds_irr	C5157	wh_ds	X	X	X									
	MI	0	0															
	Total	11,722	0															
Lake Aquilla	MU	11,403	0	ALAT2_ls_mun	C5158	aq_ls				X								
	IN	0	0															
	IR	0	0	ALAT2_ls_irr	C5158	aq_ls				X								
	MI	0	0															
	Total	11,403	0															
Lake Aquilla Dam to Aquilla Creek gage	MU	0	0															
	IN	0	0															
	IR	0	0															
	MI	0	0															
	Total	0	0															
Aquilla Creek gage to Aquilla Creek/Brazos Rv confluence	MU	0	0															
	IN	0	0															
	IR	0	0															
	MI	0	0															
	Total	0	0															
Aquilla Creek/ Brazos confluence to Highbank gage	MU	2,300	0	HIBT2_ds_mun	C5157	wh_ds	X	X	X									
	IN	0	0															
	IR	0	0															
	MI	0	0															
	Total	2,300	0															

Table G.2.19 - Appropriation Model BRA Water Right Records Variable Demand Level C (Scenarios 7, 8 and 9)																		
Reach	Type of Use	Fixed Amount (acft/yr)	Variable Amount (acft/yr)	Water Right ID	Group ID 1	Group ID 2	PK	Granbury	Whitney	Aquilla	Proctor	Belton	Stillhouse	Georgetown	Granger	Somerville	Limestone	Allens
Lake Proctor	MU	6,437	0	PCTT2_ls_mun	C5159	pr_ls					X							
	IN	0	0															
	IR	6,652	0	PCTT2_ls_irr	C5159	pr_ls					X							
	MI	0	0															
	Total	13,089	0															
Lake Proctor Dam to Leon Rv at Gatesville gage	MU	0	0															
	IN	0	0															
	IR	0	0	legt2_ds_irr	C5159	pr_ds												
	MI	0	0															
	Total	0	0															
Leon Rv at Gatesville to Lake Belton Dam	MU	76,062	0	BLNT2_ls_mun, BLNT2_ls_mun2	C5160	be_ls					X	X						
	MU			BLNT2STIT2_sys_bu [a]								X						
	IN	0	0															
	IR	0	0	BLNT2_ls_irr	C5160	be_ls						X						
	MI	0	0															
	Total	76,062	0															
Lake Belton Dam to Leon Rv nr Belton gage - Temple	MU	11,905	18,548	BLNT2_ds_temple, BLNT2_ls_temple2	C5160	be_ds						X						
	IN	0	0															
	IR	0	0															
	MI	0	0															
	Total	11,905	18,548															
Leon Rv nr Belton gage to Little River gage	MU	0	0															
	IN	0	0															
	IR	200	0	BLNT2_ds_irr	C5160	be_ds						X						
	MI	0	0															
	Total	200	0															
Lake Stillhouse Hollow	MU	39,155	0	STIT2_ls_mun	C5161	sh_ls							X					
	MU			BLNTSTIT_sys_mun [a]									X					
	MU			GGLTSTIT_sys_bu [b]									X					
	IN	0	0	STIT2_ls_ind	C5161	sh_ls							X					
	IR	100	0	STIT2_ls_irr	C5161	sh_ls							X					
	MI	0	0															
	Total	39,255	0															
Lake Stillhouse Hollow Dam to Lampasas Rv nr Belton gage	MU	0	0															
	IN	0	0															
	IR	8	0	STIT2_ds_irr	C5161	sh_ds							X					
	MI	0	0															
	Total	8	0															
Lampasas Rv nr Belton gage to Little River gage	MU	0	0															
	IN	0	0															
	IR	0	0															
	MI	0	0															
	Total	0	0															
Little River gage to Little Rv/San Gabriel Rv confluence	MU	0	0															
	IN	0	0															
	IR	0	0															
	MI	0	0															
	Total	0	0															
Lake Georgetown	MU	74,561	0	GGLT2_ls_mun [c]	C5162	gt_ls								X				
	MU			GGLTGLKT_sys_bu [d]										X				
	MU			GGLTSTIT_sys_mun [b]										X				
	IN	0	0															
	IR	0	0	GGLT2_ls_irr	C5161	gt_ls								X				
	MI	0	0															
	Total	74,561	0															
Lake Georgetown Dam to N San Gabriel gage	MU	0	0															
	IN	0	0															

Table G.2.19 - Appropriation Model BRA Water Right Records Variable Demand Level C (Scenarios 7, 8 and 9)																		
Reach	Type of Use	Fixed Amount (acft/yr)	Variable Amount (acft/yr)	Water Right ID	Group ID 1	Group ID 2	PK	Granbury	Whitney	Aquilla	Proctor	Belton	Stillhouse	Georgetown	Granger	Somerville	Limestone	Allens
	IR	0	0															
	MI	0	0															
	Total	0	0															
N San Gabriel gage to Lake Granger Dam	MU	13,000	0	GLKT2_ls_mun	C5163	gn_ls									X			
	MU			GGLTGLKT_sys_mun											X			
	IN	0	0															
	IR	15	0	GLKT2_ls_irr	C5163	gn_ls									X			
	MI	0	0															
	Total	13,015	0															
Lake Granger Dam to Laneport gage	MU	0	0															
	IN	0	0															
	IR	0	0															
	MI	0	0															
	Total	0	0															
Laneport gage to Little Rv/San Gabriel confluence	MU	0	0															
	IN	0	0															
	IR	0	0															
	MI	0	0															
	Total	0	0															
Little/San Gabriel confluence to Little Rv at Cameron gage	MU	0	0															
	IN	0	5,000	GLKT2_ds_ind	C5163	gn_ds						X	X		X			
	IR	0	0															
	MI	0	0															
	Total	0	5,000															
Cameron gage to Brazos Rv/Little Rv confluence	MU	0	0															
	IN	0	0															
	IR	0	0															
	MI	0	0															
	Total	0	0															
Highbank gage to Brazos Rv/Little Rv confluence	MU	0	0															
	IN	0	0															
	IR	0	0															
	MI	0	0															
	Total	0	0															
Brazos Rv/Little Rv confluence to Bryan gage	MU	0	0															
	IN	0	0															
	IR	200	0	BBZT2_ds_irr	C5157	wh_ds	X	X	X			X	X		X			
	MI	0	0	BBZT2_ds_min	C5157	wh_ds	X	X	X			X	X		X			
	Total	200	0															
Bryan gage to Brazos Rv/Yegua Crk confluence	MU	2,500	0	BBZT2_ds_mun	C5157	wh_ds	X	X	X			X	X		X			
	IN	0	0	YEGBR_ds_ind	C5157	wh_ds	X	X	X			X	X		X			
	IR	150	0	YEBR2_ds_irr	C5157	wh_ds	X	X	X			X	X		X			
	MI	0	0															
	Total	2,650	0															
Lake Somerville	MU	4,200	0	SOMT2_ls_mun	C5164	so_ls										X		
	IN	0	0															
	IR	0	0															
	MI	0	0															
	Total	4,200	0															
Lake Somerville Dam to Yegua Crk gage	MU	0	0															
	IN	0	0															
	IR	0	0															
	MI	0	0															
	Total	0	0															
Yegua Crk gage to Brazos Rv/Yegua Crk confluence	MU	0	0															
	IN	0	0															
	IR	0	0															

Table G.2.19 - Appropriation Model BRA Water Right Records Variable Demand Level C (Scenarios 7, 8 and 9)																		
Reach	Type of Use	Fixed Amount (acft/yr)	Variable Amount (acft/yr)	Water Right ID	Group ID 1	Group ID 2	PK	Granbury	Whitney	Aquilla	Proctor	Belton	Stillhouse	Georgetown	Granger	Somerville	Limestone	Allens
	MI	0	0															
	Total	0	0															
Brazos Rv/Yegua Crk confluence to Brazos Rv/Navasota Rv confluence	MU	0	0															
	IN	0	0															
	IR	540	0	NAVBR_ds_irr	C5164	so_ds	X	X	X			X	X		X	X		
	MI	0	0															
	Total	540	0															
Lake Limestone	MU	200	0	LLST2_ls_mun	C5165	ls_ls											X	
	IN	50,675	0	LLST2_ls_ind	C5165	ls_ls											X	
	IR	0	0															
	MI	0	0	LLST2_ls_min	C5165	ls_ls											X	
	Total	50,875	0															
Lake Limestone Dam to Easterly gage	MU	0	0															
	IN	0	0															
	IR	0	0															
	MI	0	0															
	Total	0	0															
Easterly gage to Brazos Rv/Navasota Rv confluence	MU	4,000	0	LLST2_ds_mun	C5165	ls_ds											X	
	IN		3,600	LLST2_ds_tmpa	C5165	ls_ds											X	
	IN		0	LLST2_ds_ind	C5165	ls_ds											X	
	IR	0	0	LLST2_ds_irr	C5165	ls_ds											X	
	MI	0	0															
	Total	4,000	3,600															
Brazos Rv/Navasota Rv confluence to Hempstead gage	MU	0	0															
	IN	0	0															
	IR	0	0															
	MI	0	0															
	Total	0	0															
Hempstead gage to Richmond gage	MU	0	0															
	IN	47,792	35,208	RMOT2_sys_NRG, RMOT2_sys_NRG2	C5157	wh_ds	X	X	X			X	X		X	X	X	X
	IR	50	0	RMOT2_sys_irr	C5164	so_ds	X	X	X			X	X		X	X	X	X
	MI	0	0															
	Total	47,842	35,208															
Richmond gage to Gulf of Mexico - Rosh	MU	27,882		ROST2_sys_mun	C5164	so_ds	X	X	X			X	X		X	X	X	X
	MU, IN, IR		164,180	ROST2_sys_GCWAbu	C5164	so_ds	X	X	X			X	X		X	X	X	X
	MU	0		ROST2_sys_GCWA	C5164	so_ds	X	X	X			X	X		X	X	X	X
	IN	1,698		ROST2_sys_ind	C5164	so_ds	X	X	X			X	X		X	X	X	X
	IN	39,490		ROST2_sys_indBz	C5164	so_ds	X	X	X			X	X		X	X	X	X
	IN		16,000	ROST2_sys_Dow	C5164	so_ds	X	X	X			X	X		X	X	X	X
	IR	0		ROST2_sys_irr	C5164	so_ds	X	X	X			X	X		X	X	X	X
	MI	1,945		ROST2_sys_min	C5164	so_ds	X	X	X			X	X		X	X	X	X
	Total	71,015	180,180															
	Grand Total	628,519	242,536															

a Belton-Stillhouse Pipeline shared demand. Amount varies depending on use of return flows and groundwater.
b Stillhouse-Georgetown Pipeline (WCRRWL) shared demand. Amount varies depending on use of return flows and groundwater.
c Demand is reduced by assumed amount of groundwater. Amount of groundwater needed depends on use of return flows.
d Lake Georgetown demand shared with Lake Granger. Amont varies depending on use of return flows and groundwater.

Table G.2.20 - Appropriation Model BRA Water Right Records Variable Demand Level D (Scenarios 10, 11 and 12)																		
Reach	Type of Use	Fixed Amount (acft/yr)	Variable Amount (acft/yr)	Water Right ID	Group ID 1	Group ID 2	PK	Granbury	Whitney	Aquilla	Proctor	Belton	Stillhouse	Georgetown	Granger	Somerville	Limestone	Allens
Possum Kingdom Lake	MU	6,809	0	PSMT2_ls_mun	C5155	pk_ls	X											
	IN	38,000	0	PSMT2_ls_ind	C5155	pk_ls	X											
	IR	500	0	PSMT2_ls_irr	C5155	pk_ls	X											
	MI	1,410	0	PSMT2_ls_min	C5155	pk_ls	X											
	OT	14,400	0	PSMT2_us	C5155	pk_ls	X											
	Total	61,119	0															
Possum Kingdom Lake Dam to Palo Pinto gage	MU	0	0															
	IN	1,200	0	PLOT2_ds_ind	C5155	pk_ds	X											
	IR	0	0															
	MI	0	0															
	OT	0	0	PLOT2_ds_oth	C5155	pk_ds	X											
	Total	1,200																
Palo Pinto gage to Dennis gage	MU	0	0	DNNT2_ds_mun	C5155	pk_ds	X											
	IN	0	0															
	IR	50	0	DNNT2_ds_irr	C5155	pk_ds	X											
	MI	1,000	0	DNNT2_ds_min	C5155	pk_ds	X											
	Total	1,050	0															
Dennis gage to Lake Granbury Dam	MU	34,597	0	GBYT2_ls_mun	C5156	gb_ls	X	X										
	IN	7,000	0	GBYT2_ls_ind	C5156	gb_ls	X	X										
	IN	43,000	0	GBYT2_ls_LUM	C5156	gb_ls	X	X										
	IN	90,152	0	GBYT2_ls_CPNPP	C5156	gb_ls	X	X										
	IR	4,760	0	GBYT2_ls_irr	C5156	gb_ls	X	X										
	MI	44	0	GBYT2_ls_min	C5156	gb_ls	X	X										
	Total	179,553	0															
Lake Granbury Dam to Glen Rose gage	MU	0	0															
	IN	0	0	GBYT2_ds_ind	C5156	gb_ds	X	X										
	IR	200	0	GBYT2_ds_irr	C5156	gb_ss	X	X										
	MI	1,000	0	GBYT2_ds_min	C5156	gb_ds	X	X										
	Total	1,200	0															
Glen Rose gage to Lake Whitney Dam	MU	11,260	0	WTYT2_ls_mun	C5157	wh_ls	X	X	X									
	IN	0	0															
	IR	1,000	0	WTYT2_ls_irr	C5157	wh_ls	X	X	X									
	MI	0	0															
	Total	12,260	0															
Lake Whitney Dam to Aquilla Creek/Brazos Rv confluence	MU	0	0															
	IN	11,722	0	WTYT2_ds_ind	C5157	wh_ds	X	X	X									
	IR	0	0	WTYT2_ds_irr	C5157	wh_ds	X	X	X									
	MI	0	0															
	Total	11,722	0															
Lake Aquilla	MU	11,403	0	ALAT2_ls_mun	C5158	aq_ls				X								
	IN	0	0															
	IR	0	0	ALAT2_ls_irr	C5158	aq_ls				X								
	MI	0	0															
	Total	11,403	0															
Lake Aquilla Dam to Aquilla Creek gage	MU	0	0															
	IN	0	0															
	IR	0	0															
	MI	0	0															
	Total	0	0															
Aquilla Creek gage to Aquilla Creek/Brazos Rv confluence	MU	0	0															
	IN	0	0															
	IR	0	0															
	MI	0	0															
	Total	0	0															
Aquilla Creek/ Brazos confluence to Highbank gage	MU	2,300	0	HIBT2_ds_mun	C5157	wh_ds	X	X	X									
	IN	0	0															
	IR	0	0															
	MI	0	0															
	Total	2,300	0															

Table G.2.20 - Appropriation Model BRA Water Right Records Variable Demand Level D (Scenarios 10, 11 and 12)																		
Reach	Type of Use	Fixed Amount (acft/yr)	Variable Amount (acft/yr)	Water Right ID	Group ID 1	Group ID 2	PK	Granbury	Whitney	Aquilla	Proctor	Belton	Stillhouse	Georgetown	Granger	Somerville	Limestone	Allens
Lake Proctor	MU	6,437	0	PCTT2_ls_mun	C5159	pr_ls					X							
	IN	0	0															
	IR	6,652	0	PCTT2_ls_irr	C5159	pr_ls					X							
	MI	0	0															
	Total	13,089	0															
Lake Proctor Dam to Leon Rv at Gatesville gage	MU	0	0															
	IN	0	0															
	IR	0	0	legt2_ds_irr	C5159	pr_ds												
	MI	0	0															
	Total	0	0															
Leon Rv at Gatesville to Lake Belton Dam	MU	76,062	0	BLNT2_ls_mun, BLNT2_ls_mun2	C5160	be_ls					X	X						
	MU			BLNT2STIT2_sys_bu								X						
	IN	0	0															
	IR	0	0	BLNT2_ls_irr	C5160	be_ls						X						
	MI	0	0															
	Total	76,062	0															
Lake Belton Dam to Leon Rv nr Belton gage - Temple	MU	11,905	18,548	BLNT2_ds_temple, BLNT2_ls_temple2	C5160	be_ds						X						
	IN	0	0															
	IR	0	0															
	MI	0	0															
	Total	11,905	18,548															
Leon Rv nr Belton gage to Little River gage	MU	0	0															
	IN	0	0															
	IR	200	0	BLNT2_ds_irr	C5160	be_ds						X						
	MI	0	0															
	Total	200	0															
Lake Stillhouse Hollow	MU	39,155	0	STIT2_ls_mun	C5161	sh_ls							X					
	MU			BLNTSTIT_sys_mun [a]									X					
	MU			GGLTSTIT_sys_bu [b]									X					
	IN	0	0	STIT2_ls_ind	C5161	sh_ls							X					
	IR	100	0	STIT2_ls_irr	C5161	sh_ls							X					
	MI	0	0															
	Total	39,255	0															
Lake Stillhouse Hollow Dam to Lampasas Rv nr Belton gage	MU	0	0															
	IN	0	0															
	IR	8	0	STIT2_ds_irr	C5161	sh_ds							X					
	MI	0	0															
	Total	8	0															
Lampasas Rv nr Belton gage to Little River gage	MU	0	0															
	IN	0	0															
	IR	0	0															
	MI	0	0															
	Total	0	0															
Little River gage to Little Rv/San Gabriel Rv confluence	MU	0	0															
	IN	0	0															
	IR	0	0															
	MI	0	0															
	Total	0	0															
Lake Georgetown	MU	74,561	0	GGLT2_ls_mun [c]	C5162	gt_ls								X				
	MU			GGLTGLKT_sys_bu [d]										X				
	MU			GGLTSTIT_sys_mun [b]										X				
	IN	0	0															
	IR	0	0	GGLT2_ls_irr	C5161	gt_ls								X				
	MI	0	0															
	Total	74,561	0															
Lake Georgetown Dam to N San Gabriel gage	MU	0	0															
	IN	0	0															

Table G.2.20 - Appropriation Model BRA Water Right Records Variable Demand Level D (Scenarios 10, 11 and 12)																		
Reach	Type of Use	Fixed Amount (acft/yr)	Variable Amount (acft/yr)	Water Right ID	Group ID 1	Group ID 2	PK	Granbury	Whitney	Aquilla	Proctor	Belton	Stillhouse	Georgetown	Granger	Somerville	Limestone	Allens
	IR	0	0															
	MI	0	0															
	Total	0	0															
N San Gabriel gage to Lake Granger Dam	MU	13,000	0	GLKT2_ls_mun	C5163	gn_ls									X			
	MU			GGLTGLKT_sys_mun											X			
	IN	0	0															
	IR	15	0	GLKT2_ls_irr	C5163	gn_ls									X			
	MI	0	0															
	Total	13,015	0															
Lake Granger Dam to Laneport gage	MU	0	0															
	IN	0	0															
	IR	0	0															
	MI	0	0															
	Total	0	0															
Laneport gage to Little Rv/San Gabriel confluence	MU	0	0															
	IN	0	0															
	IR	0	0															
	MI	0	0															
	Total	0	0															
Little/San Gabriel confluence to Little Rv at Cameron gage	MU	0	0															
	IN	0	5,000	GLKT2_ds_ind	C5163	gn_ds						X	X		X			
	IR	0	0															
	MI	0	0															
	Total	0	5,000															
Cameron gage to Brazos Rv/Little Rv confluence	MU	0	0															
	IN	0	0															
	IR	0	0															
	MI	0	0															
	Total	0	0															
Highbank gage to Brazos Rv/Little Rv confluence	MU	0	0															
	IN	0	0															
	IR	0	0															
	MI	0	0															
	Total	0	0															
Brazos Rv/Little Rv confluence to Bryan gage	MU	0	0															
	IN	0	0															
	IR	200	0	BBZT2_ds_irr	C5157	wh_ds	X	X	X			X	X		X			
	MI	0	0	BBZT2_ds_min	C5157	wh_ds	X	X	X			X	X		X			
	Total	200	0															
Bryan gage to Brazos Rv/Yegua Crk confluence	MU	2,500	0	BBZT2_ds_mun	C5157	wh_ds	X	X	X			X	X		X			
	IN	0	0	YEGBR_ds_ind	C5157	wh_ds	X	X	X			X	X		X			
	IR	150	0	YEBR2_ds_irr	C5157	wh_ds	X	X	X			X	X		X			
	MI	0	0															
	Total	2,650	0															
Lake Somerville	MU	4,200	0	SOMT2_ls_mun	C5164	so_ls										X		
	IN	0	0															
	IR	0	0															
	MI	0	0															
	Total	4,200	0															
Lake Somerville Dam to Yegua Crk gage	MU	0	0															
	IN	0	0															
	IR	0	0															
	MI	0	0															
	Total	0	0															
Yegua Crk gage to Brazos Rv/Yegua Crk confluence	MU	0	0															
	IN	0	0															
	IR	0	0															

Table G.2.20 - Appropriation Model BRA Water Right Records Variable Demand Level D (Scenarios 10, 11 and 12)																		
Reach	Type of Use	Fixed Amount (acft/yr)	Variable Amount (acft/yr)	Water Right ID	Group ID 1	Group ID 2	PK	Granbury	Whitney	Aquilla	Proctor	Belton	Stillhouse	Georgetown	Granger	Somerville	Limestone	Allens
	MI	0	0															
	Total	0	0															
Brazos Rv/Yegua Crk confluence to Brazos Rv/Navasota Rv confluence	MU	0	0															
	IN	0	0															
	IR	540	0	NAVBR_ds_irr	C5164	so_ds	X	X	X			X	X		X	X		
	MI	0	0															
	Total	540	0															
Lake Limestone	MU	200	0	LLST2_ls_mun	C5165	ls_ls											X	
	IN	50,675	0	LLST2_ls_ind	C5165	ls_ls											X	
	IR	0	0															
	MI	0	0	LLST2_ls_min	C5165	ls_ls											X	
	Total	50,875	0															
Lake Limestone Dam to Easterly gage	MU	0	0															
	IN	0	0															
	IR	0	0															
	MI	0	0															
	Total	0	0															
Easterly gage to Brazos Rv/Navasota Rv confluence	MU	4,000	0	LLST2_ds_mun	C5165	ls_ds											X	
	IN		3,600	LLST2_ds_tmpa	C5165	ls_ds											X	
	IN		0	LLST2_ds_ind	C5165	ls_ds											X	
	IR	0	0	LLST2_ds_irr	C5165	ls_ds											X	
	MI	0	0															
	Total	4,000	3,600															
Brazos Rv/Navasota Rv confluence to Hempstead gage	MU	0	0															
	IN	0	0															
	IR	0	0															
	MI	0	0															
	Total	0	0															
Hempstead gage to Richmond gage	MU	0	0															
	IN	47,792	35,208	RMOT2_sys_NRG, RMOT2_sys_NRG2	C5157	wh_ds	X	X	X			X	X		X	X	X	X
	IR	50	0	RMOT2_sys_irr	C5164	so_ds	X	X	X			X	X		X	X	X	X
	MI	0	0															
	Total	47,842	35,208															
Richmond gage to Gulf of Mexico - Rosh	MU	27,882		ROST2_sys_mun	C5164	so_ds	X	X	X			X	X		X	X	X	X
	MU, IN, IR		164,180	ROST2_sys_GCWAbu	C5164	so_ds	X	X	X			X	X		X	X	X	X
	MU	0		ROST2_sys_GCWA														
	IN	1,698		ROST2_sys_ind	C5164	so_ds	X	X	X			X	X		X	X	X	X
	IN	39,490		ROST2_sys_indBz	C5164	so_ds	X	X	X			X	X		X	X	X	X
	IN		16,000	ROST2_sys_Dow	C5164	so_ds	X	X	X			X	X		X	X	X	X
	IR	0		ROST2_sys_irr	C5164	so_ds	X	X	X			X	X		X	X	X	X
	MI	1,945		ROST2_sys_min	C5164	so_ds	X	X	X			X	X		X	X	X	X
	Total	71,015	180,180															
	Grand Total	691,224	242,536															

a Belton-Stillhouse Pipeline shared demand. Amount varies depending on use of return flows and groundwater.
b Stillhouse-Georgetown Pipeline (WCRRWL) shared demand. Amount varies depending on use of return flows and groundwater.
c Demand is reduced by assumed amount of groundwater. Amount of groundwater needed depends on use of return flows.
d Lake Georgetown demand shared with Lake Granger. Amont varies depending on use of return flows and groundwater.

Table G.2.21- Appropriation Model BRA Water Right Records Fixed Use Level A (Scenarios 1, 2 and 3)																	
Reach	Type of Use	Fixed Amount (acft/yr)	Water Right ID	Group ID 1	Group ID 2	PK	Granbury	Whitney	Aquilla	Proctor	Belton	Stillhouse	Georgetown	Granger	Somerville	Limestone	Allens
Possum Kingdom Lake	MU	6,809	PSMT2_ls_mun	C5155	pk_ls	X											
	IN	65,447	PSMT2_ls_ind	C5155	pk_ls	X											
	IR	500	PSMT2_ls_irr	C5155	pk_ls	X											
	MI	1,410	PSMT2_ls_min	C5155	pk_ls	X											
	OT	14,400	PSMT2_us	C5155	pk_ls	X											
	Total	88,566															
Possum Kingdom Lake Dam to Palo Pinto gage	MU	0															
	IN	1,200	PLOT2_ds_ind	C5155	pk_ds	X											
	IR	0															
	MI	0															
	OT	0	PLOT2_ds_oth	C5155	pk_ds	X											
	Total	1,200															
Palo Pinto gage to Dennis gage	MU	0	DNNT2_ds_mun	C5155	pk_ds	X											
	IN	0															
	IR	50	DNNT2_ds_irr	C5155	pk_ds	X											
	MI	1,000	DNNT2_ds_min	C5155	pk_ds	X											
	Total	1,050															
Dennis gage to Lake Granbury Dam	MU	34,597	GBYT2_ls_mun	C5156	gb_ls	X	X										
	IN	7,000	GBYT2_ls_ind	C5156	gb_ls	X	X										
	IN	43,000	GBYT2_ls_LUM	C5156	gb_ls	X	X										
	IN	0	GBYT2_ls_CPNPP	C5156	gb_ls	X	X										
	IR	4,760	GBYT2_ls_irr	C5156	gb_ls	X	X										
	MI	44	GBYT2_ls_min	C5156	gb_ls	X	X										
	Total	89,401															
Lake Granbury Dam to Glen Rose gage	MU	0															
	IN	0	GBYT2_ds_ind	C5156	gb_ds	X	X										
	IR	200	GBYT2_ds_irr	C5156	gb_ss	X	X										
	MI	1,000	GBYT2_ds_min	C5156	gb_ds	X	X										
	Total	1,200															
Glen Rose gage to Lake Whitney Dam	MU	11,260	WTYT2_ls_mun	C5157	wh_ls	X	X	X									
	IN	0															
	IR	1,000	WTYT2_ls_irr	C5157	wh_ls	X	X	X									
	MI	0															
	Total	12,260															
Lake Whitney Dam to Aquilla Creek/Brazos Rv confluence	MU	0															
	IN	11,722	WTYT2_ds_ind	C5157	wh_ds	X	X	X									
	IR	0	WTYT2_ds_irr	C5157	wh_ds	X	X	X									
	MI	0															
	Total	11,722															
Lake Aquilla	MU	11,403	ALAT2_ls_mun	C5158	aq_ls				X								
	IN	0															
	IR	0	ALAT2_ls_irr	C5158	aq_ls				X								
	MI	0															
	Total	11,403															
Lake Aquilla Dam to Aquilla Creek gage	MU	0															
	IN	0															
	IR	0															
	MI	0															
	Total	0															
Aquilla Creek gage to Aquilla Creek/Brazos Rv confluence	MU	0															
	IN	0															
	IR	0															
	MI	0															
	Total	0															
Aquilla Creek/ Brazos confluence to Highbank gage	MU	2,300	HIBT2_ds_mun	C5157	wh_ds	X	X	X									
	IN	0															

Table G.2.21- Appropriation Model BRA Water Right Records Fixed Use Level A (Scenarios 1, 2 and 3)																	
Reach	Type of Use	Fixed Amount (acft/yr)	Water Right ID	Group ID 1	Group ID 2	PK	Granbury	Whitney	Aquilla	Proctor	Belton	Stillhouse	Georgetown	Granger	Somerville	Limestone	Allens
	IR	0															
	MI	0															
	Total	2,300															
Lake Proctor	MU	6,437	PCTT2_ls_mun	C5159	pr_ls					X							
	IN	0															
	IR	6,652	PCTT2_ls_irr	C5159	pr_ls					X							
	MI	0															
	Total	13,089															
Lake Proctor Dam to Leon Rv at Gatesville gage	MU	0															
	IN	0															
	IR	0	legt2_ds_irr	C5159	pr_ds												
	MI	0															
	Total	0															
Leon Rv at Gatesville to Lake Belton Dam	MU	76,062	BLNT2_ls_mun, BLNT2_ls_mun2	C5160	be_ls					X	X						
	MU		BLNT2STIT2_sys_bu [a]	C5160	be_ls						X						
	IN	0															
	IR	0	BLNT2_ls_irr	C5160	be_ls						X						
	MI	0															
	Total	76,062															
Lake Belton Dam to Leon Rv nr Belton gage - Temple	MU	30,453	BLNT2_ds_temple	C5160	be_ds						X						
	IN	0															
	IR	0															
	MI	0															
	Total	30,453															
Leon Rv nr Belton gage to Little River gage	MU	0															
	IN	0															
	IR	200	BLNT2_ds_irr	C5160	be_ds						X						
	MI	0															
	Total	200															
Lake Stillhouse Hollow	MU	39,155	STIT2_ls_mun	C5161	sh_ls							X					
	MU		BLNTSTIT_sys_mun [a]									X					
	MU		GGLTSTIT_sys_bu [b]									X					
	IN	0	STIT2_ls_ind	C5161	sh_ls							X					
	IR	100	STIT2_ls_irr	C5161	sh_ls							X					
	MI	0															
	Total	39,255															
Lake Stillhouse Hollow Dam to Lampasas Rv nr Belton gage	MU	0															
	IN	0															
	IR	8	STIT2_ds_irr	C5161	sh_ds							X					
	MI	0															
	Total	8															
Lampasas Rv nr Belton gage to Little River gage	MU	0															
	IN	0															
	IR	0															
	MI	0															
	Total	0															
Little River gage to Little Rv/San Gabriel Rv confluence	MU	0															
	IN	0															
	IR	0															
	MI	0															
	Total	0															
Lake Georgetown	MU	74,561	GGLT2_ls_mun [c]	C5162	gt_ls								X				
	MU		GGLTGLKT_sys_bu [d]										X				

Table G.2.21- Appropriation Model BRA Water Right Records Fixed Use Level A (Scenarios 1, 2 and 3)																	
Reach	Type of Use	Fixed Amount (acft/yr)	Water Right ID	Group ID 1	Group ID 2	PK	Granbury	Whitney	Aquilla	Proctor	Belton	Stillhouse	Georgetown	Granger	Somerville	Limestone	Allens
	MU		GGLTSTIT_sys_mun [b]										X				
	IN	0															
	IR	0	GGLT2_ls_irr	C5161	gt_ls								X				
	MI	0															
	Total	74,561															
Lake Georgetown Dam to N San Gabriel gage	MU	0															
	IN	0															
	IR	0															
	MI	0															
	Total	0															
N San Gabriel gage to Lake Granger Dam	MU	13,000	GLKT2_ls_mun	C5163	gn_ls									X			
	MU		GGLTGLKT_sys_mun [d]											X			
	IN	0															
	IR	15	GLKT2_ls_irr	C5163	gn_ls									X			
	MI	0															
	Total	13,015															
Lake Granger Dam to Laneport gage	MU	0															
	IN	0															
	IR	0															
	MI	0															
	Total	0															
Laneport gage to Little Rv/San Gabriel confluence	MU	0															
	IN	0															
	IR	0															
	MI	0															
	Total	0															
Little/San Gabriel confluence to Little Rv at Cameron gage	MU	0															
	IN	5,000	GLKT2_ds_ind	C5163	gn_ds						X	X		X			
	IR	0															
	MI	0															
	Total	5,000															
Cameron gage to Brazos Rv/Little Rv confluence	MU	0															
	IN	0															
	IR	0															
	MI	0															
	Total	0															
Highbank gage to Brazos Rv/Little Rv confluence	MU	0															
	IN	0															
	IR	0															
	MI	0															
	Total	0															
Brazos Rv/Little Rv confluence to Bryan gage	MU	0															
	IN	0															
	IR	200	BBZT2_ds_irr	C5157	wh_ds	X	X	X			X	X		X			
	MI	0	BBZT2_ds_min	C5157	wh_ds	X	X	X			X	X		X			
	Total	200															
Bryan gage to Brazos Rv/Yegua Crk confluence	MU	2,500	BBZT2_ds_mun	C5157	wh_ds	X	X	X			X	X		X			
	IN	0	YEGBR_ds_ind	C5157	wh_ds	X	X	X			X	X		X			
	IR	150	YEBR2_ds_irr	C5157	wh_ds	X	X	X			X	X		X			
	MI	0															
	Total	2,650															
Lake Somerville	MU	4,200	SOMT2_ls_mun	C5164	so_ls										X		
	IN	0															
	IR	0															
	MI	0															

Table G.2.21- Appropriation Model BRA Water Right Records Fixed Use Level A (Scenarios 1, 2 and 3)																	
Reach	Type of Use	Fixed Amount (acft/yr)	Water Right ID	Group ID 1	Group ID 2	PK	Granbury	Whitney	Aquilla	Proctor	Belton	Stillhouse	Georgetown	Granger	Somerville	Limestone	Allens
	Total	4,200															
Lake Somerville Dam to Yegua Crk gage	MU	0															
	IN	0															
	IR	0															
	MI	0															
	Total	0															
Yegua Crk gage to Brazos Rv/Yegua Crk confluence	MU	0															
	IN	0															
	IR	0															
	MI	0															
	Total	0															
Brazos Rv/Yegua Crk confluence to Brazos Rv/Navasota Rv confluence	MU	0															
	IN	0															
	IR	540	NAVBR_ds_irr	C5164	so_ds	X	X	X			X	X		X	X		
	MI	0															
	Total	540															
Lake Limestone	MU	200	LLST2_ls_mun	C5165	ls_ls											X	
	IN	50,675	LLST2_ls_ind	C5165	ls_ls											X	
	IR	0															
	MI	0	LLST2_ls_min	C5165	ls_ls											X	
	Total	50,875															
Lake Limestone Dam to Easterly gage	MU	0															
	IN	0															
	IR	0															
	MI	0															
	Total	0															
Easterly gage to Brazos Rv/Navasota Rv confluence	MU	4,000	LLST2_ds_mun	C5165	ls_ds											X	
	IN	3,600	LLST2_ds_tmpa	C5165	ls_ds											X	
	IN		LLST2_ds_ind	C5165	ls_ds											X	
	IR	0	LLST2_ds_irr	C5165	ls_ds											X	
	MI	0															
	Total	7,600															
Brazos Rv/Navasota Rv confluence to Hempstead gage	MU	0															
	IN	0															
	IR	0															
	MI	0															
	Total	0															
Hempstead gage to Richmond gage	MU	0															
	IN	83,000	RMOT2_sys_NRG, RMOT2_sys_NRG2	C5157	wh_ds	X	X	X			X	X		X	X	X	X
	IR	50	RMOT2_sys_irr	C5164	so_ds	X	X	X			X	X		X	X	X	X
	MI	0															
	Total	83,050															
Richmond gage to Gulf of Mexico - Rosh	MU	12,720	ROST2_sys_mun	C5164	so_ds	X	X	X			X	X		X	X	X	X
	MU, IN, IR	0	ROST2_sys_GCWAbu	C5164	so_ds	X	X	X			X	X		X	X	X	X
	MU	48,080	ROST2_sys_GCWA	C5164	so_ds	X	X	X			X	X		X	X	X	X
	IN	0	ROST2_sys_ind	C5164	so_ds	X	X	X			X	X		X	X	X	X
	IN	0	ROST2_sys_indBz	C5164	so_ds	X	X	X			X	X		X	X	X	X
	IN	16,000	ROST2_sys_Dow	C5164	so_ds	X	X	X			X	X		X	X	X	X
	IR	0	ROST2_sys_irr	C5164	so_ds	X	X	X			X	X		X	X	X	X
	MI	0	ROST2_sys_min	C5164	so_ds	X	X	X			X	X		X	X	X	X
	MU	25,350	ROST2_sys_yield [e]	SYSTEM	sysops	X	X	X			X	X		X	X	X	X
	Total	102,150															
	Grand Total	722,010															

a Belton-Stillhouse Pipeline shared demand. Amount varies depending on use of return flows and groundwater.
b Stillhouse-Georgetown Pipeline (WCRRWL) shared demand. Amount varies depending on use of return flows and groundwater.

Table G.2.21- Appropriation Model BRA Water Right Records Fixed Use Level A (Scenarios 1, 2 and 3)																	
Reach	**Type of Use**	**Fixed Amount (acft/yr)**	**Water Right ID**	**Group ID 1**	**Group ID 2**	**PK**	**Granbury**	**Whitney**	**Aquilla**	**Proctor**	**Belton**	**Stillhouse**	**Georgetown**	**Granger**	**Somerville**	**Limestone**	**Allens**

c Demand is reduced by assumed amount of groundwater. Amount of groundwater needed depends on use of return flows.
d Lake Georgetown demand shared with Lake Granger. Amont varies depending on use of return flows and groundwater.
e Firm yield at Rosharon. Includes 25,350 acft/yr already assigned in Region H Plan.

Table G.2.22 - Appropriation Model BRA Water Right Records Fixed Use Level B (Scenarios 4, 5 and 6)																	
Reach	Type of Use	Fixed Amount (acft/yr)	Water Right ID	Group ID 1	Group ID 2	PK	Granbury	Whitney	Aquilla	Proctor	Belton	Stillhouse	Georgetown	Granger	Somerville	Limestone	Allens
Possum Kingdom Lake	MU	6,809	PSMT2_ls_mun	C5155	pk_ls	X											
	IN	38,000	PSMT2_ls_ind	C5155	pk_ls	X											
	IR	500	PSMT2_ls_irr	C5155	pk_ls	X											
	MI	1,410	PSMT2_ls_min	C5155	pk_ls	X											
	OT	14,400	PSMT2_us	C5155	pk_ls	X											
	Total	61,119															
Possum Kingdom Lake Dam to Palo Pinto gage	MU	0															
	IN	1,200	PLOT2_ds_ind	C5155	pk_ds	X											
	IR	0															
	MI	0															
	OT	0	PLOT2_ds_oth	C5155	pk_ds	X											
	Total	1,200															
Palo Pinto gage to Dennis gage	MU	0	DNNT2_ds_mun	C5155	pk_ds	X											
	IN	0															
	IR	50	DNNT2_ds_irr	C5155	pk_ds	X											
	MI	1,000	DNNT2_ds_min	C5155	pk_ds	X											
	Total	1,050															
Dennis gage to Lake Granbury Dam	MU	34,597	GBYT2_ls_mun	C5156	gb_ls	X	X										
	IN	7,000	GBYT2_ls_ind	C5156	gb_ls	X	X										
	IN	43,000	GBYT2_ls_LUM	C5156	gb_ls	X	X										
	IN	90,152	GBYT2_ls_CPNPP	C5156	gb_ls	X	X										
	IR	4,760	GBYT2_ls_irr	C5156	gb_ls	X	X										
	MI	44	GBYT2_ls_min	C5156	gb_ls	X	X										
	Total	179,553															
Lake Granbury Dam to Glen Rose gage	MU	0															
	IN	0	GBYT2_ds_ind	C5156	gb_ds	X	X										
	IR	200	GBYT2_ds_irr	C5156	gb_ss	X	X										
	MI	1,000	GBYT2_ds_min	C5156	gb_ds	X	X										
	Total	1,200															
Glen Rose gage to Lake Whitney Dam	MU	11,260	WTYT2_ls_mun	C5157	wh_ls	X	X	X									
	IN	0															
	IR	1,000	WTYT2_ls_irr	C5157	wh_ls	X	X	X									
	MI	0															
	Total	12,260															
Lake Whitney Dam to Aquilla Creek/Brazos Rv confluence	MU	0															
	IN	11,722	WTYT2_ds_ind	C5157	wh_ds	X	X	X									
	IR	0	WTYT2_ds_irr	C5157	wh_ds	X	X	X									
	MI	0															
	Total	11,722															
Lake Aquilla	MU	11,403	ALAT2_ls_mun	C5158	aq_ls				X								
	IN	0															
	IR	0	ALAT2_ls_irr	C5158	aq_ls				X								
	MI	0															
	Total	11,403															
Lake Aquilla Dam to Aquilla Creek gage	MU	0															
	IN	0															
	IR	0															
	MI	0															
	Total	0															
Aquilla Creek gage to Aquilla Creek/Brazos Rv confluence	MU	0															
	IN	0															
	IR	0															
	MI	0															
	Total	0															
Aquilla Creek/ Brazos confluence to Highbank gage	MU	2,300	HIBT2_ds_mun	C5157	wh_ds	X	X	X									
	IN	0															

Table G.2.22 - Appropriation Model BRA Water Right Records Fixed Use Level B (Scenarios 4, 5 and 6)																	
Reach	Type of Use	Fixed Amount (acft/yr)	Water Right ID	Group ID 1	Group ID 2	PK	Granbury	Whitney	Aquilla	Proctor	Belton	Stillhouse	Georgetown	Granger	Somerville	Limestone	Allens
	IR	0															
	MI	0															
	Total	2,300															
Lake Proctor	MU	6,437	PCTT2_ls_mun	C5159	pr_ls					X							
	IN	0															
	IR	6,652	PCTT2_ls_irr	C5159	pr_ls					X							
	MI	0															
	Total	13,089															
Lake Proctor Dam to Leon Rv at Gatesville gage	MU	0															
	IN	0															
	IR	0	legt2_ds_irr	C5159	pr_ds												
	MI	0															
	Total	0															
Leon Rv at Gatesville to Lake Belton Dam	MU	76,062	BLNT2_ls_mun, BLNT2_ls_mun2	C5160	be_ls					X	X						
	MU		BLNT2STIT2_sys_bu [a]	C5160	be_ls						X						
	IN	0															
	IR	0	BLNT2_ls_irr	C5160	be_ls						X						
	MI	0															
	Total	76,062															
Lake Belton Dam to Leon Rv nr Belton gage - Temple	MU	30,453	BLNT2_ds_temple	C5160	be_ds						X						
	IN	0															
	IR	0															
	MI	0															
	Total	30,453															
Leon Rv nr Belton gage to Little River gage	MU	0															
	IN	0															
	IR	200	BLNT2_ds_irr	C5160	be_ds						X						
	MI	0															
	Total	200															
Lake Stillhouse Hollow	MU	39,155	STIT2_ls_mun	C5161	sh_ls							X					
	MU		BLNTSTIT_sys_mun [a]									X					
	MU		GGLTSTIT_sys_bu [b]									X					
	IN	0	STIT2_ls_ind	C5161	sh_ls							X					
	IR	100	STIT2_ls_irr	C5161	sh_ls							X					
	MI	0															
	Total	39,255															
Lake Stillhouse Hollow Dam to Lampasas Rv nr Belton gage	MU	0															
	IN	0															
	IR	8	STIT2_ds_irr	C5161	sh_ds							X					
	MI	0															
	Total	8															
Lampasas Rv nr Belton gage to Little River gage	MU	0															
	IN	0															
	IR	0															
	MI	0															
	Total	0															
Little River gage to Little Rv/San Gabriel Rv confluence	MU	0															
	IN	0															
	IR	0															
	MI	0															
	Total	0															
Lake Georgetown	MU	74,561	GGLT2_ls_mun [c]	C5162	gt_ls								X				
	MU		GGLTGLKT_sys_bu [d]										X				

Table G.2.22 - Appropriation Model BRA Water Right Records Fixed Use Level B (Scenarios 4, 5 and 6)																	
Reach	Type of Use	Fixed Amount (acft/yr)	Water Right ID	Group ID 1	Group ID 2	PK	Granbury	Whitney	Aquilla	Proctor	Belton	Stillhouse	Georgetown	Granger	Somerville	Limestone	Allens
	MU		GGLTSTIT_sys_mun [b]										X				
	IN	0															
	IR	0	GGLT2_ls_irr	C5161	gt_ls								X				
	MI	0															
	Total	74,561															
Lake Georgetown Dam to N San Gabriel gage	MU	0															
	IN	0															
	IR	0															
	MI	0															
	Total	0															
N San Gabriel gage to Lake Granger Dam	MU	13,000	GLKT2_ls_mun	C5163	gn_ls									X			
	MU		GGLTGLKT_sys_mun [d]											X			
	IN	0															
	IR	15	GLKT2_ls_irr	C5163	gn_ls									X			
	MI	0															
	Total	13,015															
Lake Granger Dam to Laneport gage	MU	0															
	IN	0															
	IR	0															
	MI	0															
	Total	0															
Laneport gage to Little Rv/San Gabriel confluence	MU	0															
	IN	0															
	IR	0															
	MI	0															
	Total	0															
Little/San Gabriel confluence to Little Rv at Cameron gage	MU	0															
	IN	5,000	GLKT2_ds_ind	C5163	gn_ds						X	X		X			
	IR	0															
	MI	0															
	Total	5,000															
Cameron gage to Brazos Rv/Little Rv confluence	MU	0															
	IN	0															
	IR	0															
	MI	0															
	Total	0															
Highbank gage to Brazos Rv/Little Rv confluence	MU	0															
	IN	0															
	IR	0															
	MI	0															
	Total	0															
Brazos Rv/Little Rv confluence to Bryan gage	MU	0															
	IN	0															
	IR	200	BBZT2_ds_irr	C5157	wh_ds	X	X	X			X	X		X			
	MI	0	BBZT2_ds_min	C5157	wh_ds	X	X	X			X	X		X			
	Total	200															
Bryan gage to Brazos Rv/Yegua Crk confluence	MU	2,500	BBZT2_ds_mun	C5157	wh_ds	X	X	X			X	X		X			
	IN	0	YEGBR_ds_ind	C5157	wh_ds	X	X	X			X	X		X			
	IR	150	YEBR2_ds_irr	C5157	wh_ds	X	X	X			X	X		X			
	MI	0															
	Total	2,650															
Lake Somerville	MU	4,200	SOMT2_ls_mun	C5164	so_ls										X		
	IN	0															
	IR	0															
	MI	0															

Table G.2.22 - Appropriation Model BRA Water Right Records Fixed Use Level B (Scenarios 4, 5 and 6)																	
Reach	Type of Use	Fixed Amount (acft/yr)	Water Right ID	Group ID 1	Group ID 2	PK	Granbury	Whitney	Aquilla	Proctor	Belton	Stillhouse	Georgetown	Granger	Somerville	Limestone	Allens
	Total	4,200															
Lake Somerville Dam to Yegua Crk gage	MU	0															
	IN	0															
	IR	0															
	MI	0															
	Total	0															
Yegua Crk gage to Brazos Rv/Yegua Crk confluence	MU	0															
	IN	0															
	IR	0															
	MI	0															
	Total	0															
Brazos Rv/Yegua Crk confluence to Brazos Rv/Navasota Rv confluence	MU	0															
	IN	0															
	IR	540	NAVBR_ds_irr	C5164	so_ds	X	X	X			X	X		X	X		
	MI	0															
	Total	540															
Lake Limestone	MU	200	LLST2_ls_mun	C5165	ls_ls											X	
	IN	50,675	LLST2_ls_ind	C5165	ls_ls											X	
	IR	0															
	MI	0	LLST2_ls_min	C5165	ls_ls											X	
	Total	50,875															
Lake Limestone Dam to Easterly gage	MU	0															
	IN	0															
	IR	0															
	MI	0															
	Total	0															
Easterly gage to Brazos Rv/Navasota Rv confluence	MU	4,000	LLST2_ds_mun	C5165	ls_ds											X	
	IN	3,600	LLST2_ds_tmpa	C5165	ls_ds											X	
	IN		LLST2_ds_ind	C5165	ls_ds											X	
	IR	0	LLST2_ds_irr	C5165	ls_ds											X	
	MI	0															
	Total	7,600															
Brazos Rv/Navasota Rv confluence to Hempstead gage	MU	0															
	IN	0															
	IR	0															
	MI	0															
	Total	0															
Hempstead gage to Richmond gage	MU	0															
	IN	83,000	RMOT2_sys_NRG, RMOT2_sys_NRG2	C5157	wh_ds	X	X	X			X	X		X	X	X	X
	IR	50	RMOT2_sys_irr	C5164	so_ds	X	X	X			X	X		X	X	X	X
	MI	0															
	Total	83,050															
Richmond gage to Gulf of Mexico - Rosh	MU	12,720	ROST2_sys_mun	C5164	so_ds	X	X	X			X	X		X	X	X	X
	MU, IN, IR	0	ROST2_sys_GCWAbu	C5164	so_ds	X	X	X			X	X		X	X	X	X
	MU	48,080	ROST2_sys_GCWA	C5164	so_ds	X	X	X			X	X		X	X	X	X
	IN	0	ROST2_sys_ind	C5164	so_ds	X	X	X			X	X		X	X	X	X
	IN	0	ROST2_sys_indBz	C5164	so_ds	X	X	X			X	X		X	X	X	X
	IN	16,000	ROST2_sys_Dow	C5164	so_ds	X	X	X			X	X		X	X	X	X
	IR	0	ROST2_sys_irr	C5164	so_ds	X	X	X			X	X		X	X	X	X
	MI	0	ROST2_sys_min	C5164	so_ds	X	X	X			X	X		X	X	X	X
	MU	25,350	ROST2_sys_yield [e]	SYSTEM	sysops	X	X	X			X	X		X	X	X	X
	Total	102,150															
	Grand Total	784,715															

a Belton-Stillhouse Pipeline shared demand. Amount varies depending on use of return flows and groundwater.
b Stillhouse-Georgetown Pipeline (WCRRWL) shared demand. Amount varies depending on use of return flows and groundwater.

Table G.2.22 - Appropriation Model BRA Water Right Records Fixed Use Level B (Scenarios 4, 5 and 6)																	
Reach	**Type of Use**	**Fixed Amount (acft/yr)**	**Water Right ID**	**Group ID 1**	**Group ID 2**	**PK**	**Granbury**	**Whitney**	**Aquilla**	**Proctor**	**Belton**	**Stillhouse**	**Georgetown**	**Granger**	**Somerville**	**Limestone**	**Allens**

c Demand is reduced by assumed amount of groundwater. Amount of groundwater needed depends on use of return flows.
d Lake Georgetown demand shared with Lake Granger. Amont varies depending on use of return flows and groundwater.
e Firm yield at Rosharon. Includes 25,350 acft/yr already assigned in Region H Plan.

Table G.2.23 - Appropriation Model BRA Water Right Records Fixed Use Level C (Scenarios 7, 8 and 9)																	
Reach	Type of Use	Fixed Amount (acft/yr)	Water Right ID	Group ID 1	Group ID 2	PK	Granbury	Whitney	Aquilla	Proctor	Belton	Stillhouse	Georgetown	Granger	Somerville	Limestone	Allens
Possum Kingdom Lake	MU	6,809	PSMT2_ls_mun	C5155	pk_ls	X											
	IN	65,447	PSMT2_ls_ind	C5155	pk_ls	X											
	IR	500	PSMT2_ls_irr	C5155	pk_ls	X											
	MI	1,410	PSMT2_ls_min	C5155	pk_ls	X											
	OT	14,400	PSMT2_us	C5155	pk_ls	X											
	Total	88,566															
Possum Kingdom Lake Dam to Palo Pinto gage	MU	0															
	IN	1,200	PLOT2_ds_ind	C5155	pk_ds	X											
	IR	0															
	MI	0															
	OT	0	PLOT2_ds_oth	C5155	pk_ds	X											
	Total	1,200															
Palo Pinto gage to Dennis gage	MU	0	DNNT2_ds_mun	C5155	pk_ds	X											
	IN	0															
	IR	50	DNNT2_ds_irr	C5155	pk_ds	X											
	MI	1,000	DNNT2_ds_min	C5155	pk_ds	X											
	Total	1,050															
Dennis gage to Lake Granbury Dam	MU	34,597	GBYT2_ls_mun	C5156	gb_ls	X	X										
	IN	7,000	GBYT2_ls_ind	C5156	gb_ls	X	X										
	IN	43,000	GBYT2_ls_LUM	C5156	gb_ls	X	X										
	IN	0	GBYT2_ls_CPNPP	C5156	gb_ls	X	X										
	IR	4,760	GBYT2_ls_irr	C5156	gb_ls	X	X										
	MI	44	GBYT2_ls_min	C5156	gb_ls	X	X										
	Total	89,401															
Lake Granbury Dam to Glen Rose gage	MU	0															
	IN	0	GBYT2_ds_ind	C5156	gb_ds	X	X										
	IR	200	GBYT2_ds_irr	C5156	gb_ss	X	X										
	MI	1,000	GBYT2_ds_min	C5156	gb_ds	X	X										
	Total	1,200															
Glen Rose gage to Lake Whitney Dam	MU	11,260	WTYT2_ls_mun	C5157	wh_ls	X	X	X									
	IN	0															
	IR	1,000	WTYT2_ls_irr	C5157	wh_ls	X	X	X									
	MI	0															
	Total	12,260															
Lake Whitney Dam to Aquilla Creek/Brazos Rv confluence	MU	0															
	IN	11,722	WTYT2_ds_ind	C5157	wh_ds	X	X	X									
	IR	0	WTYT2_ds_irr	C5157	wh_ds	X	X	X									
	MI	0															
	Total	11,722															
Lake Aquilla	MU	11,403	ALAT2_ls_mun	C5158	aq_ls				X								
	IN	0															
	IR	0	ALAT2_ls_irr	C5158	aq_ls				X								
	MI	0															
	Total	11,403															
Lake Aquilla Dam to Aquilla Creek gage	MU	0															
	IN	0															
	IR	0															
	MI	0															
	Total	0															
Aquilla Creek gage to Aquilla Creek/Brazos Rv confluence	MU	0															
	IN	0															
	IR	0															
	MI	0															
	Total	0															
Aquilla Creek/ Brazos confluence to Highbank gage	MU	2,300	HIBT2_ds_mun	C5157	wh_ds	X	X	X									
	IN	0															

Table G.2.23 - Appropriation Model BRA Water Right Records Fixed Use Level C (Scenarios 7, 8 and 9)																	
Reach	Type of Use	Fixed Amount (acft/yr)	Water Right ID	Group ID 1	Group ID 2	PK	Granbury	Whitney	Aquilla	Proctor	Belton	Stillhouse	Georgetown	Granger	Somerville	Limestone	Allens
	IR	0															
	MI	0															
	Total	2,300															
Lake Proctor	MU	6,437	PCTT2_ls_mun	C5159	pr_ls					X							
	IN	0															
	IR	6,652	PCTT2_ls_irr	C5159	pr_ls					X							
	MI	0															
	Total	13,089															
Lake Proctor Dam to Leon Rv at Gatesville gage	MU	0															
	IN	0															
	IR	0	legt2_ds_irr	C5159	pr_ds												
	MI	0															
	Total	0															
Leon Rv at Gatesville to Lake Belton Dam	MU	76,062	BLNT2_ls_mun, BLNT2_ls_mun2	C5160	be_ls					X	X						
	MU		BLNT2STIT2_sys_bu [a]	C5160	be_ls						X						
	IN	0															
	IR	0	BLNT2_ls_irr	C5160	be_ls						X						
	MI	0															
	Total	76,062															
Lake Belton Dam to Leon Rv nr Belton gage - Temple	MU	30,453	BLNT2_ds_temple	C5160	be_ds						X						
	IN	0															
	IR	0															
	MI	0															
	Total	30,453															
Leon Rv nr Belton gage to Little River gage	MU	0															
	IN	0															
	IR	200	BLNT2_ds_irr	C5160	be_ds						X						
	MI	0															
	Total	200															
Lake Stillhouse Hollow	MU	39,155	STIT2_ls_mun	C5161	sh_ls							X					
	MU		BLNTSTIT_sys_mun [a]									X					
	MU		GGLTSTIT_sys_bu [b]									X					
	IN	0	STIT2_ls_ind	C5161	sh_ls							X					
	IR	100	STIT2_ls_irr	C5161	sh_ls							X					
	MI	0															
	Total	39,255															
Lake Stillhouse Hollow Dam to Lampasas Rv nr Belton gage	MU	0															
	IN	0															
	IR	8	STIT2_ds_irr	C5161	sh_ds							X					
	MI	0															
	Total	8															
Lampasas Rv nr Belton gage to Little River gage	MU	0															
	IN	0															
	IR	0															
	MI	0															
	Total	0															
Little River gage to Little Rv/San Gabriel Rv confluence	MU	0															
	IN	0															
	IR	0															
	MI	0															
	Total	0															
Lake Georgetown	MU	74,561	GGLT2_ls_mun [c]	C5162	gt_ls								X				
	MU		GGLTGLKT_sys_bu [d]										X				

Table G.2.23 - Appropriation Model BRA Water Right Records Fixed Use Level C (Scenarios 7, 8 and 9)																	
Reach	Type of Use	Fixed Amount (acft/yr)	Water Right ID	Group ID 1	Group ID 2	PK	Granbury	Whitney	Aquilla	Proctor	Belton	Stillhouse	Georgetown	Granger	Somerville	Limestone	Allens
	MU		GGLTSTIT_sys_mun [b]										X				
	IN	0															
	IR	0	GGLT2_ls_irr	C5161	gt_ls								X				
	MI	0															
	Total	74,561															
Lake Georgetown Dam to N San Gabriel gage	MU	0															
	IN	0															
	IR	0															
	MI	0															
	Total	0															
N San Gabriel gage to Lake Granger Dam	MU	13,000	GLKT2_ls_mun	C5163	gn_ls									X			
	MU		GGLTGLKT_sys_mun [d]											X			
	IN	0															
	IR	15	GLKT2_ls_irr	C5163	gn_ls									X			
	MI	0															
	Total	13,015															
Lake Granger Dam to Laneport gage	MU	0															
	IN	0															
	IR	0															
	MI	0															
	Total	0															
Laneport gage to Little Rv/San Gabriel confluence	MU	0															
	IN	0															
	IR	0															
	MI	0															
	Total	0															
Little/San Gabriel confluence to Little Rv at Cameron gage	MU	0															
	IN	5,000	GLKT2_ds_ind	C5163	gn_ds						X	X		X			
	IR	0															
	MI	0															
	Total	5,000															
Cameron gage to Brazos Rv/Little Rv confluence	MU	0															
	IN	0															
	IR	0															
	MI	0															
	Total	0															
Highbank gage to Brazos Rv/Little Rv confluence	MU	0															
	IN	0															
	IR	0															
	MI	0															
	Total	0															
Brazos Rv/Little Rv confluence to Bryan gage	MU	0															
	IN	0															
	IR	200	BBZT2_ds_irr	C5157	wh_ds	X	X	X			X	X		X			
	MI	0	BBZT2_ds_min	C5157	wh_ds	X	X	X			X	X		X			
	Total	200															
Bryan gage to Brazos Rv/Yegua Crk confluence	MU	2,500	BBZT2_ds_mun	C5157	wh_ds	X	X	X			X	X		X			
	IN	0	YEGBR_ds_ind	C5157	wh_ds	X	X	X			X	X		X			
	IR	150	YEBR2_ds_irr	C5157	wh_ds	X	X	X			X	X		X			
	MI	0															
	Total	2,650															
Lake Somerville	MU	4,200	SOMT2_ls_mun	C5164	so_ls										X		
	IN	0															
	IR	0															
	MI	0															

Table G.2.23 - Appropriation Model BRA Water Right Records Fixed Use Level C (Scenarios 7, 8 and 9)																	
Reach	Type of Use	Fixed Amount (acft/yr)	Water Right ID	Group ID 1	Group ID 2	PK	Granbury	Whitney	Aquilla	Proctor	Belton	Stillhouse	Georgetown	Granger	Somerville	Limestone	Allens
	Total	4,200															
Lake Somerville Dam to Yegua Crk gage	MU	0															
	IN	0															
	IR	0															
	MI	0															
	Total	0															
Yegua Crk gage to Brazos Rv/Yegua Crk confluence	MU	0															
	IN	0															
	IR	0															
	MI	0															
	Total	0															
Brazos Rv/Yegua Crk confluence to Brazos Rv/Navasota Rv confluence	MU	0															
	IN	0															
	IR	540	NAVBR_ds_irr	C5164	so_ds	X	X	X			X	X		X	X		
	MI	0															
	Total	540															
Lake Limestone	MU	200	LLST2_ls_mun	C5165	ls_ls											X	
	IN	50,675	LLST2_ls_ind	C5165	ls_ls											X	
	IR	0															
	MI	0	LLST2_ls_min	C5165	ls_ls											X	
	Total	50,875															
Lake Limestone Dam to Easterly gage	MU	0															
	IN	0															
	IR	0															
	MI	0															
	Total	0															
Easterly gage to Brazos Rv/Navasota Rv confluence	MU	4,000	LLST2_ds_mun	C5165	ls_ds											X	
	IN	3,600	LLST2_ds_tmpa	C5165	ls_ds											X	
	IN		LLST2_ds_ind	C5165	ls_ds											X	
	IR	0	LLST2_ds_irr	C5165	ls_ds											X	
	MI	0															
	Total	7,600															
Brazos Rv/Navasota Rv confluence to Hempstead gage	MU	0															
	IN	0															
	IR	0															
	MI	0															
	Total	0															
Hempstead gage to Richmond gage	MU	0															
	IN	83,000	RMOT2_sys_NRG, RMOT2_sys_NRG2	C5157	wh_ds	X	X	X			X	X		X	X	X	X
	IR	50	RMOT2_sys_irr	C5164	so_ds	X	X	X			X	X		X	X	X	X
	MI	0															
	Total	83,050															
Richmond gage to Gulf of Mexico - Rosh	MU	12,720	ROST2_sys_mun	C5164	so_ds	X	X	X			X	X		X	X	X	X
	MU, IN, IR	0	ROST2_sys_GCWAbu	C5164	so_ds	X	X	X			X	X		X	X	X	X
	MU	48,080	ROST2_sys_GCWA	C5164	so_ds	X	X	X			X	X		X	X	X	X
	IN	0	ROST2_sys_ind	C5164	so_ds	X	X	X			X	X		X	X	X	X
	IN	0	ROST2_sys_indBz	C5164	so_ds	X	X	X			X	X		X	X	X	X
	IN	16,000	ROST2_sys_Dow	C5164	so_ds	X	X	X			X	X		X	X	X	X
	IR	0	ROST2_sys_irr	C5164	so_ds	X	X	X			X	X		X	X	X	X
	MI	0	ROST2_sys_min	C5164	so_ds	X	X	X			X	X		X	X	X	X
	MU	125,000	ROST2_sys_yield [e]	SYSTEM	sysops	X	X	X			X	X		X	X	X	X
	Total	201,800															
	Grand Total	821,660															

a Belton-Stillhouse Pipeline shared demand. Amount varies depending on use of return flows and groundwater.
b Stillhouse-Georgetown Pipeline (WCRRWL) shared demand. Amount varies depending on use of return flows and groundwater.

Table G.2.23 - Appropriation Model BRA Water Right Records Fixed Use Level C (Scenarios 7, 8 and 9)																	
Reach	Type of Use	Fixed Amount (acft/yr)	Water Right ID	Group ID 1	Group ID 2	PK	Granbury	Whitney	Aquilla	Proctor	Belton	Stillhouse	Georgetown	Granger	Somerville	Limestone	Allens

c Demand is reduced by assumed amount of groundwater. Amount of groundwater needed depends on use of return flows.
d Lake Georgetown demand shared with Lake Granger. Amont varies depending on use of return flows and groundwater.
e Firm yield at Rosharon. Includes 25,350 acft/yr already assigned in Region H Plan plus 99,650 acft/yr for Allens Creek Reservoir.

Table G.2.24 - Appropriation Model BRA Water Right Records Fixed Use Level D (Scenarios 10, 11 and 12)																	
Reach	Type of Use	Fixed Amount (acft/yr)	Water Right ID	Group ID 1	Group ID 2	PK	Granbury	Whitney	Aquilla	Proctor	Belton	Stillhouse	Georgetown	Granger	Somerville	Limestone	Allens
Possum Kingdom Lake	MU	6,809	PSMT2_ls_mun	C5155	pk_ls	X											
	IN	38,000	PSMT2_ls_ind	C5155	pk_ls	X											
	IR	500	PSMT2_ls_irr	C5155	pk_ls	X											
	MI	1,410	PSMT2_ls_min	C5155	pk_ls	X											
	OT	14,400	PSMT2_us	C5155	pk_ls	X											
	Total	61,119															
Possum Kingdom Lake Dam to Palo Pinto gage	MU	0															
	IN	1,200	PLOT2_ds_ind	C5155	pk_ds	X											
	IR	0															
	MI	0															
	OT	0	PLOT2_ds_oth	C5155	pk_ds	X											
	Total	1,200															
Palo Pinto gage to Dennis gage	MU	0	DNNT2_ds_mun	C5155	pk_ds	X											
	IN	0															
	IR	50	DNNT2_ds_irr	C5155	pk_ds	X											
	MI	1,000	DNNT2_ds_min	C5155	pk_ds	X											
	Total	1,050															
Dennis gage to Lake Granbury Dam	MU	34,597	GBYT2_ls_mun	C5156	gb_ls	X	X										
	IN	7,000	GBYT2_ls_ind	C5156	gb_ls	X	X										
	IN	43,000	GBYT2_ls_LUM	C5156	gb_ls	X	X										
	IN	90,152	GBYT2_ls_CPNPP	C5156	gb_ls	X	X										
	IR	4,760	GBYT2_ls_irr	C5156	gb_ls	X	X										
	MI	44	GBYT2_ls_min	C5156	gb_ls	X	X										
	Total	179,553															
Lake Granbury Dam to Glen Rose gage	MU	0															
	IN	0	GBYT2_ds_ind	C5156	gb_ds	X	X										
	IR	200	GBYT2_ds_irr	C5156	gb_ss	X	X										
	MI	1,000	GBYT2_ds_min	C5156	gb_ds	X	X										
	Total	1,200															
Glen Rose gage to Lake Whitney Dam	MU	11,260	WTYT2_ls_mun	C5157	wh_ls	X	X	X									
	IN	0															
	IR	1,000	WTYT2_ls_irr	C5157	wh_ls	X	X	X									
	MI	0															
	Total	12,260															
Lake Whitney Dam to Aquilla Creek/Brazos Rv confluence	MU	0															
	IN	11,722	WTYT2_ds_ind	C5157	wh_ds	X	X	X									
	IR	0	WTYT2_ds_irr	C5157	wh_ds	X	X	X									
	MI	0															
	Total	11,722															
Lake Aquilla	MU	11,403	ALAT2_ls_mun	C5158	aq_ls				X								
	IN	0															
	IR	0	ALAT2_ls_irr	C5158	aq_ls				X								
	MI	0															
	Total	11,403															
Lake Aquilla Dam to Aquilla Creek gage	MU	0															
	IN	0															
	IR	0															
	MI	0															
	Total	0															
Aquilla Creek gage to Aquilla Creek/Brazos Rv confluence	MU	0															
	IN	0															
	IR	0															
	MI	0															
	Total	0															
Aquilla Creek/ Brazos confluence to Highbank gage	MU	2,300	HIBT2_ds_mun	C5157	wh_ds	X	X	X									
	IN	0															

Table G.2.24 - Appropriation Model BRA Water Right Records Fixed Use Level D (Scenarios 10, 11 and 12)																	
Reach	Type of Use	Fixed Amount (acft/yr)	Water Right ID	Group ID 1	Group ID 2	PK	Granbury	Whitney	Aquilla	Proctor	Belton	Stillhouse	Georgetown	Granger	Somerville	Limestone	Allens
	IR	0															
	MI	0															
	Total	2,300															
Lake Proctor	MU	6,437	PCTT2_ls_mun	C5159	pr_ls					X							
	IN	0															
	IR	6,652	PCTT2_ls_irr	C5159	pr_ls					X							
	MI	0															
	Total	13,089															
Lake Proctor Dam to Leon Rv at Gatesville gage	MU	0															
	IN	0															
	IR	0	legt2_ds_irr	C5159	pr_ds												
	MI	0															
	Total	0															
Leon Rv at Gatesville to Lake Belton Dam	MU	76,062	BLNT2_ls_mun, BLNT2_ls_mun2	C5160	be_ls					X	X						
	MU		BLNT2STIT2_sys_bu [a]	C5160	be_ls						X						
	IN	0															
	IR	0	BLNT2_ls_irr	C5160	be_ls						X						
	MI	0															
	Total	76,062															
Lake Belton Dam to Leon Rv nr Belton gage - Temple	MU	30,453	BLNT2_ds_temple	C5160	be_ds						X						
	IN	0															
	IR	0															
	MI	0															
	Total	30,453															
Leon Rv nr Belton gage to Little River gage	MU	0															
	IN	0															
	IR	200	BLNT2_ds_irr	C5160	be_ds						X						
	MI	0															
	Total	200															
Lake Stillhouse Hollow	MU	39,155	STIT2_ls_mun	C5161	sh_ls							X					
	MU		BLNTSTIT_sys_mun [a]									X					
	MU		GGLTSTIT_sys_bu [b]									X					
	IN	0	STIT2_ls_ind	C5161	sh_ls							X					
	IR	100	STIT2_ls_irr	C5161	sh_ls							X					
	MI	0															
	Total	39,255															
Lake Stillhouse Hollow Dam to Lampasas Rv nr Belton gage	MU	0															
	IN	0															
	IR	8	STIT2_ds_irr	C5161	sh_ds							X					
	MI	0															
	Total	8															
Lampasas Rv nr Belton gage to Little River gage	MU	0															
	IN	0															
	IR	0															
	MI	0															
	Total	0															
Little River gage to Little Rv/San Gabriel Rv confluence	MU	0															
	IN	0															
	IR	0															
	MI	0															
	Total	0															
Lake Georgetown	MU	74,561	GGLT2_ls_mun [c]	C5162	gt_ls								X				
	MU		GGLTGLKT_sys_bu [d]										X				

Table G.2.24 - Appropriation Model BRA Water Right Records Fixed Use Level D (Scenarios 10, 11 and 12)																	
Reach	Type of Use	Fixed Amount (acft/yr)	Water Right ID	Group ID 1	Group ID 2	PK	Granbury	Whitney	Aquilla	Proctor	Belton	Stillhouse	Georgetown	Granger	Somerville	Limestone	Allens
	MU		GGLTSTIT_sys_mun [b]										X				
	IN	0															
	IR	0	GGLT2_ls_irr	C5161	gt_ls								X				
	MI	0															
	Total	74,561															
Lake Georgetown Dam to N San Gabriel gage	MU	0															
	IN	0															
	IR	0															
	MI	0															
	Total	0															
N San Gabriel gage to Lake Granger Dam	MU	13,000	GLKT2_ls_mun	C5163	gn_ls									X			
	MU		GGLTGLKT_sys_mun [d]											X			
	IN	0															
	IR	15	GLKT2_ls_irr	C5163	gn_ls									X			
	MI	0															
	Total	13,015															
Lake Granger Dam to Laneport gage	MU	0															
	IN	0															
	IR	0															
	MI	0															
	Total	0															
Laneport gage to Little Rv/San Gabriel confluence	MU	0															
	IN	0															
	IR	0															
	MI	0															
	Total	0															
Little/San Gabriel confluence to Little Rv at Cameron gage	MU	0															
	IN	5,000	GLKT2_ds_ind	C5163	gn_ds						X	X		X			
	IR	0															
	MI	0															
	Total	5,000															
Cameron gage to Brazos Rv/Little Rv confluence	MU	0															
	IN	0															
	IR	0															
	MI	0															
	Total	0															
Highbank gage to Brazos Rv/Little Rv confluence	MU	0															
	IN	0															
	IR	0															
	MI	0															
	Total	0															
Brazos Rv/Little Rv confluence to Bryan gage	MU	0															
	IN	0															
	IR	200	BBZT2_ds_irr	C5157	wh_ds	X	X	X			X	X		X			
	MI	0	BBZT2_ds_min	C5157	wh_ds	X	X	X			X	X		X			
	Total	200															
Bryan gage to Brazos Rv/Yegua Crk confluence	MU	2,500	BBZT2_ds_mun	C5157	wh_ds	X	X	X			X	X		X			
	IN	0	YEGBR_ds_ind	C5157	wh_ds	X	X	X			X	X		X			
	IR	150	YEBR2_ds_irr	C5157	wh_ds	X	X	X			X	X		X			
	MI	0															
	Total	2,650															
Lake Somerville	MU	4,200	SOMT2_ls_mun	C5164	so_ls										X		
	IN	0															
	IR	0															
	MI	0															

Table G.2.24 - Appropriation Model BRA Water Right Records Fixed Use Level D (Scenarios 10, 11 and 12)																	
Reach	Type of Use	Fixed Amount (acft/yr)	Water Right ID	Group ID 1	Group ID 2	PK	Granbury	Whitney	Aquilla	Proctor	Belton	Stillhouse	Georgetown	Granger	Somerville	Limestone	Allens
	Total	4,200															
Lake Somerville Dam to Yegua Crk gage	MU	0															
	IN	0															
	IR	0															
	MI	0															
	Total	0															
Yegua Crk gage to Brazos Rv/Yegua Crk confluence	MU	0															
	IN	0															
	IR	0															
	MI	0															
	Total	0															
Brazos Rv/Yegua Crk confluence to Brazos Rv/Navasota Rv confluence	MU	0															
	IN	0															
	IR	540	NAVBR_ds_irr	C5164	so_ds	X	X	X			X	X		X	X		
	MI	0															
	Total	540															
Lake Limestone	MU	200	LLST2_ls_mun	C5165	ls_ls											X	
	IN	50,675	LLST2_ls_ind	C5165	ls_ls											X	
	IR	0															
	MI	0	LLST2_ls_min	C5165	ls_ls											X	
	Total	50,875															
Lake Limestone Dam to Easterly gage	MU	0															
	IN	0															
	IR	0															
	MI	0															
	Total	0															
Easterly gage to Brazos Rv/Navasota Rv confluence	MU	4,000	LLST2_ds_mun	C5165	ls_ds											X	
	IN	3,600	LLST2_ds_tmpa	C5165	ls_ds											X	
	IN		LLST2_ds_ind	C5165	ls_ds											X	
	IR	0	LLST2_ds_irr	C5165	ls_ds											X	
	MI	0															
	Total	7,600															
Brazos Rv/Navasota Rv confluence to Hempstead gage	MU	0															
	IN	0															
	IR	0															
	MI	0															
	Total	0															
Hempstead gage to Richmond gage	MU	0															
	IN	83,000	RMOT2_sys_NRG, RMOT2_sys_NRG2	C5157	wh_ds	X	X	X			X	X		X	X	X	X
	IR	50	RMOT2_sys_irr	C5164	so_ds	X	X	X			X	X		X	X	X	X
	MI	0															
	Total	83,050															
Richmond gage to Gulf of Mexico - Rosh	MU	12,720	ROST2_sys_mun	C5164	so_ds	X	X	X			X	X		X	X	X	X
	MU, IN, IR	0	ROST2_sys_GCWAbu	C5164	so_ds	X	X	X			X	X		X	X	X	X
	MU	48,080	ROST2_sys_GCWA	C5164	so_ds	X	X	X			X	X		X	X	X	X
	IN	0	ROST2_sys_ind	C5164	so_ds	X	X	X			X	X		X	X	X	X
	IN	0	ROST2_sys_indBz	C5164	so_ds	X	X	X			X	X		X	X	X	X
	IN	16,000	ROST2_sys_Dow	C5164	so_ds	X	X	X			X	X		X	X	X	X
	IR	0	ROST2_sys_irr	C5164	so_ds	X	X	X			X	X		X	X	X	X
	MI	0	ROST2_sys_min	C5164	so_ds	X	X	X			X	X		X	X	X	X
	MU	125,000	ROST2_sys_yield [e]	SYSTEM	sysops	X	X	X			X	X		X	X	X	X
	Total	201,800															
	Grand Total	884,365															

a Belton-Stillhouse Pipeline shared demand. Amount varies depending on use of return flows and groundwater.
b Stillhouse-Georgetown Pipeline (WCRRWL) shared demand. Amount varies depending on use of return flows and groundwater.

Table G.2.24 - Appropriation Model BRA Water Right Records Fixed Use Level D (Scenarios 10, 11 and 12)																	
Reach	Type of Use	Fixed Amount (acft/yr)	Water Right ID	Group ID 1	Group ID 2	PK	Granbury	Whitney	Aquilla	Proctor	Belton	Stillhouse	Georgetown	Granger	Somerville	Limestone	Allens

c Demand is reduced by assumed amount of groundwater. Amount of groundwater needed depends on use of return flows.
d Lake Georgetown demand shared with Lake Granger. Amont varies depending on use of return flows and groundwater.
e Firm yield at Rosharon. Includes 25,350 acft/yr already assigned in Region H Plan plus 99,650 acft/yr for Allens Creek Reservoir.

Like the City of Temple demands, the Appropriation Models for the Variable Demand Scenarios treats large customers with their own water rights differently than the Fixed Use scenarios. The Variable Demand scenarios assume that these customers (Dow, GCWA, TMPA, NRG, and Alcoa) use their own water rights first to meet demands as described in Section G.2.2.9 of this Appendix. Most are limited to their contract amount except for GCWA, whose demand is set to a full backup of their water rights. (Sections 2.4 and 4.3 of the Technical Report contain a discussion of demands for GCWA.) In the Fixed Use scenarios all of these water users are assumed to use their full contract amount in every year. There is no backup of customer water rights.

NRG's use of the Excess Flows permit is treated differently in the Variable Demand and Fixed Use scenarios. In the Variable Demand scenarios, NRG's diversions to fill Smithers Lake are assigned to the Excess Flows Permit when the flows at the Richmond gage are greater than 2,000 cfs. In the Fixed Use scenarios NRG's diversions are not tied to filling Smithers Lake. Instead they are tied to the full diversion of NRGs' contract amount (83,000 acft/yr). Therefore in the Fixed Use scenarios the entire diversion of the contract is assigned to the Excess Flows Permit whenever the flows at Richmond are greater than 2,000 cfs.

The Appropriation Models use the "shared demand" approach used in the 2060 Operation Model for all pipelines, including the WCRRWL. This approach is described in Section G.2.5 above. When Lake Georgetown is relatively full, all demands come from Lake Georgetown. When Lake Georgetown falls below a specified level, the demand is shifted to Lake Stillhouse Hollow. The storage triggers and volume shared varies among the scenarios.

The Appropriation Models also use the same approach described in Section G.2.5 for the connections between Lake Belton and Stillhouse Hollow and Lake Georgetown and Lake Granger. Like the WCRRWL modeling, the trigger levels and amount of shared demand varies among the scenarios.