

Appendix 4D-A

Water Management Strategy Evaluation

Water management strategies identified to meet water needs during the planning period were evaluated based on criteria described in Chapter 4D.

The evaluation was undertaken through the development of a matrix to rate the above consideration from most desirable (1) to least desirable (5). Rating of the Environmental Factors was evaluated using a separate matrix with consideration of nine factors; total acres impacted, wetland acres, environmental water needs, habitat, threatened and endangered species, cultural resources, bays and estuaries, environmental water quality and other noted factors.

Table 4D-A.1 depicts the summary of evaluation of WMSs in the ETRWPA. Table 4D-A.2 depicts the summary of environmental assessment.

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Table 4D-A.1 Summary of Evaluation of Water Management Strategies

County	Entity	Basin Used	Strategy	Strategy Key	Quantity (Ac-Ft/Yr)	Reliability	Cost (\$/Ac-Ft)	Impacts of Strategy on:					Political Feasibility	Implementation Issues	Comments
								Environmental Factors	Water Resources and Other WMS	Agricultural Resources/Rural Areas	Other Natural Resources	Key Water Quality Parameters			
Name	Name(s)	Name	Name	Name	#	(1-5)	\$	(1-5)	(1-5)	(1-5)	(1-5)	(1-5)	(1-5)		
Anderson	County-Other	Neches	Increase supply from Queen City	ADC-1	100	3	\$321	1	1	1	2	2	1		
Anderson	County-Other	Neches	Increase supply from Carrizo-Wilcox	ADC-2	100	2	\$406	1	3	1	2	2	1		
Anderson	Frankston	Neches	Increase supply from Carrizo-Wilcox	FR-1	120	2	\$357	1	3	1	2	1	1		
Anderson	Mining	Neches	Increase supply from Carrizo-Wilcox	ADN-1	120	2	\$233	1	2	1	2	1	1		
Anderson	Steam-Electric	Neches	Water from Lake Palestine	ADS-1	21,853	2	\$343	1	1	1	2	2	2	Requires agreement with City of Palestine	
Anderson	Steam-Electric	Neches	Water from Lake Fastrill	ADS-2	21,853	1	\$343	See UNRMWA Lake Fastrill Strategy					Requires agreement with UNRMWA		
Angelina	County-Other	Neches	Voluntary Redistribution from City of Lufkin	ANC-1	1,100	1	\$1,627	1	1	1	1	1	2	Requires contract with Lufkin	
Angelina	County-Other	Neches	Increase supply from Yegua-Jackson	ANC-2A	300	2	\$214	1	1	1	2	1	1		
Angelina	Diboll	Neches	Purchase water from the City of Lufkin (Phase I-II)	DI-1	1,600	1	\$1,431	1	1	1	1	1	1		
Angelina	Diboll	Neches	Increase supply from Yegua-Jackson	DI-3	600	3	\$234	1	1	1	2	2	2		
Angelina	Four Way WSC	Neches	Obtain water from the City of Lufkin	FW-1	225	1	\$940	1	1	1	1	1	2	Requires contract with Lufkin	
Angelina	Hudson	Neches	Purchase Water from Hudson WSC	HU-1A	1,200	2	\$317	1	1	1	2	1	1		
Angelina	Hudson WSC	Neches	Increase supply from Carrizo-Wilcox (Phase I)	HW-1A	600	2	\$317	1	1	1	2	1	1		
Angelina	Hudson WSC	Neches	Increase supply from Carrizo-Wilcox (Phase II)	HW-1B	1,400	2	\$320	1	1	1	2	1	1		
Angelina	Manufacturing	Neches	Obtain water from City of Lufkin	ANM-1	15,800	1	\$488	1	1	1	1	1	2		
Angelina	Manufacturing	Neches	Obtain raw water from Lake Columbia via contract with ANRA	ANM-2	8,551	1	\$320	See ANRA Lake Columbia Strategy							
Angelina	Livestock	Neches	Increase stock Ponds	ANL-1	90	3	\$163	1	1	2	1	1	1		
Angelina	Mining	Neches	Obtain Water from ANRA (Lake Columbia or Angelina River)	ANML-1	4,000	1	\$382	2	1	1	1	1	3		
Angelina	Mining	Neches	Obtain water from Lufkin (Lake Kurth)	ANML-2	4,000	1		1	1	1	1	1	1		
Angelina	Steam-Electric	Neches	New wells in the Carrizo-Wilcox	ANP-1	1,000	1	\$1,538	1	1	1	2	2	1		
Cherokee	Mining	Neches	Purchase water from ANRA (Lake Columbia or Angelina River)	CHMI-1	1,500	1	\$485	2	1	1	1	1	3	Requires contract with ANRA	
Cherokee	New Summerfield	Neches	Obtain treated water from Lake Columbia via contract with ANRA	NS-1	1,000	1	\$1,140	See ANRA Lake Columbia Strategy					Requires contract with ANRA		
Cherokee	New Summerfield	Neches	Increase supply from Carrizo-Wilcox	NS-3	242	1	\$262	1	1	1	2	1	1		
Cherokee	Rusk	Neches	Obtain treated water from Lake Columbia via contract with ANRA	RU-1	3,000	1	\$1,323	See ANRA Lake Columbia Strategy					Requires contract with ANRA		
Cherokee	Rusk	Neches	Increase supply from Carrizo-Wilcox	RU-3	212	1	\$285	1	1	1	2	1	1		
Hardin	County-Other	Neches	Increase supply from Gulf Coast Aquifer (Phases I-III)	HAC-1	459	2	\$430	1	3	1	2	1	1		May place additional stress on aquifer
Hardin	Manufacturing	Neches	Use additional water from Gulf Coast Aquifer	HAM-1	114	2	\$381	1	3	1	2	1	1		
Hardin	Irrigation	Neches	Use surface water sources	HAL-1	1,002	2	\$296	1	1	1	3	2	1		
Henderson	Athens	Neches	Water from Athens MWA	AT-2	117	1	\$814	1	1	1	1	1	1		
Henderson	County-Other	Neches	Expand use of Carrizo-Wilcox	HECO-2	50	3	\$1,298	1	3	1	3	1	3	Requires coordination with Neches and	May place additional stress on aquifer
Henderson	County-Other	Neches	Expand use of Queen City	HECO-3	500	3	\$1,009	1	1	1	1	2	2	Requires coordination with Neches and	
Henderson	County-Other	Neches	Water from UNRMWA	HECO-4	500	5	\$1,964	1	1	1	1	1	1	Requires agreement with UNRMWA	
Henderson	Irrigation	Neches	Obtain water Lake Athens	HEL-1	181	1	\$163	1	1	1	1	1	1		
Henderson	Livestock	Neches	Fish Hatchery Reuse	HEL-1	2,872	1	\$0	1	1	1	1	1	1		
Houston	Irrigation	Neches/Trinity	Increase supply from Carrizo-Wilcox (Phase I-VI)	HOL-1	2,298	2	\$207	1	1	1	2	1	1		
Houston	Livestock	Neches/Trinity	Increase supply from Carrizo-Wilcox (Phase I-V)	HOL-1	1,080	2	\$375	1	1	1	2	1	1		
Houston	Manufacturing	Neches/Trinity	Obtain water from Houston County WCID	HOMa-1	15	1	\$163	1	1	1	1	1	1		
Jasper	County-Other	Neches	Use additional supply from Gulf Coast Aquifer	JAC-1	632	3	\$650	1	3	1	2	1	1		May place additional stress on aquifer
Jefferson	Mining	Neches	Use additional supply from Gulf Coast Aquifer	JEM-1	9	2	\$1,416	1	3	1	1	1	1		May place additional stress on aquifer
Jefferson	Steam-Electric	Neches	Use water from the Neches River	JESE-1	25,951	3	\$92	2	1	2	3	2	2		
Nacogdoches	D&M WSC	Neches	Increase supply from Carrizo-Wilcox	DM-1	310	1	\$324	1	1	1	1	1	1		
Nacogdoches	Lilly Grove SUD	Neches	Increase supply from Carrizo-Wilcox	LG-1	500	1	\$270	1	1	1	2	1	1		
Nacogdoches	Livestock	Neches	Increase supply from Carrizo-Wilcox	NCL-1	1,350	2	\$234	1	1	1	2	1	1		
Nacogdoches	Mining	Neches	Purchase water from ANRA (Lake Columbia or Angelina River)	NCMI-1	7,000	1	\$368	2	1	1	1	1	3		
Nacogdoches	Mining	Neches	Purchase water from LNVA	NCMI-2	7,000	1		1	1	1	1	1	1		
Nacogdoches	Nacogdoches	Neches	Additional groundwater from Carrizo-Wilcox	NA-1	2,800	1	\$259	1	1	1	1	1	2	Minimal impacts to downstream water rights	
Nacogdoches	Nacogdoches	Neches	Obtain and treat water from Lake Columbia	NA-3	8,551	1	\$852	See ANRA Lake Columbia Strategy					Requires contract with ANRA		
Nacogdoches	Nacogdoches	Sabine	Obtain and treat water from Toledo Bend	NA-4	5,175	1	\$2,049	2	1	1	2	1	1	Requires agreement with SRA	Highly renewable resource should minimize impacts.
Nacogdoches	Steam-Electric	Neches	Obtain raw water from Lake Columbia	NA-4	13,358	1	\$315	See ANRA Lake Columbia Strategy					Requires contract with ANRA		
Nacogdoches	Steam-Electric	Neches	Obtain raw water from Houston County Lake	NCS-2	340	2	\$774	1	1	1	1	1	1		
Nacogdoches	Swift WSC	Neches	Increase supply from Carrizo-Wilcox	SW-1	700	2	\$244	1	1	1	2	1	1		
Nacogdoches	Swift WSC	Neches	Obtain Treated water from Lake Columbia via contract with ANRA	SW-2	688	1	\$1,140	See ANRA Lake Columbia Strategy							
Newton	Manufacturing	Sabine	Additional groundwater Well Gulf Coast Aquifer	NWM-1	800	1	\$254	1	1	1	1	1	2	Requires coordination with Southeast Texas GCD	
Newton	Manufacturing	Sabine	Purchase water from SRA	NWM-2	700	1	\$285	1	1	1	1	1	1	Requires agreement with SRA.	Highly renewable resource should minimize impacts.
Newton	Steam-Electric	Sabine	Purchase water from SRA	NWP-1	15,000	1	\$266	1	1	1	1	1	1		
Orange	County-Other	Sabine	Use additional supply from Gulf Coast Aquifer	ORC-1	140	2	\$413	1	3	1	1	1	1		May place additional stress on aquifer
Orange	Manufacturing	Sabine	Raw surface water supply from SRA Canal	OR-1SRA	36,000	1	\$82	1	1	1	1	1	1	Requires agreement with SRA.	Highly renewable resource should minimize impacts.
Orange	Manufacturing	Sabine	Raw Water from Toledo Bend Reservoir	ORM-2	5,000	1	\$81	1	1	1	1	1	1		
Orange	Mauriceville WSC	Sabine	New well in Gulf Coast aquifer	ORMa-1	203	2	\$526	1	3	1	1	1	2	Requires coordination with Southeast Texas GCD	Highly renewable resource should minimize impacts.
Panola	Manufacturing		Purchase water from Carthage		187	1	\$978	1	1	1	1	1	1		May place additional stress on aquifer
Polk	County-Other	Neches	Use additional supply from Gulf Coast Aquifer (Phase I-IV)	POC-1	832	2	\$363	1	1	1	2	1	1		
Polk	Manufacturing	Neches	Expand existing supplies form Gulf-Coast aquifer	POM-1	450	2	\$884	1	1	1	3	2	1		

Table 4D-A.1 Summary of Evaluation of Water Management Strategies (Cont.)

County	Entity	Basin Used	Strategy	Strategy Key	Quantity (Ac-Ft/Yr)	Reliability	Cost (\$/Ac-Ft)	Impacts of Strategy on:					Political Feasibility	Implementation Issues	Comments
								Environmental Factors	Water Resources and Other WMS	Agricultural Resources/Rural Areas	Other Natural Resources	Key Water Quality Parameters			
Rusk	Mining	Neches	Increase supply from Carrizo-Wilcox	RUL-1	158	2	\$174	1	1	1	2	1			
Rusk	Steam-Electric	Neches	Supply from SRA, Toledo Bend Reservoir	RUSE-1	1,500	1	\$203	1	1	1	2	1	3		
Rusk	Steam-Electric	Neches	Supply from ANRA (Lake Columbia)	RUSE-2	8,500	1	\$282	See ANRA Lake Columbia Strategy							
Sabine	County-Other	Sabine	Increase supply from Carrizo-Wilcox, Additional groundwater (Phase I-II)	SBC-1	64	1	\$552	1	1	1	1	1	1		
Sabine	County-Other	Sabine	Purchase water from Hemphill	SBC-2	200	1	\$885	1	1	1	1	1	1	Requires water contract with City of Hemphill	
Sabine	Livestock	Sabine	Expand Carrizo-Wilcox supplies (Sabine)	SBL-1	100	1	\$427	1	1	1	1	1	1		
Sabine	Livestock	Sabine	Expand local surface water (stock ponds)	SBL-2	300	2	\$164	1	1	1	2	1	1	Implemented by local users	
San Augustine	Irrigation	Neches	Obtain Water from Carrizo-Wilcox Aquifer	SAI-1	90	1	\$485	1	1	1	1	1	1		
San Augustine	Livestock	Neches	Increase local surface water supplies (stock ponds)	SAL-1	300	3	\$164	1	1	2	1	1	1		
San Augustine	Livestock	Sabine	Increase groundwater supply from Carrizo-Wilcox Aquifer (Sabine)	SAL-2	100	1	\$528	1	1	1	1	1	1		
San Augustine	Livestock	Neches	Increase groundwater supply from Carrizo-Wilcox Aquifer (Neches)	SAL-3	300	1	\$528	1	1	1	1	1	1		
San Augustine	Mining	Neches	Purchase water from ANRA (Angelina river)	SAMI-1	500	2	\$726	2	1	1	1	1	1		
San Augustine	Mining	Neches	Purchase water from LNVA (Sam Rayburn)	SAMI-2	6,500	1	\$307	1	1	1	1	1	1		
Shelby	County-Other	Sabine	Expand groundwater from Carrizo-Wilcox (wells)	SHCo-1	350	1	\$786	1	1	1	1	1	1		
Shelby	County-Other	Sabine	Purchase water from City of Center	SHCo-2	50	1	\$978	1	1	1	1	1	1	Requires water contract with City of Center	
Shelby	County-Other	Sabine	Purchase water from SRA (Toledo Bend Reservoir)	SHCo-3	150	1	\$2,316	1	1	1	1	1	1	Requires agreement with SRA. Highly renewable resource should minimize impacts.	
Shelby	Livestock	Sabine	Additional groundwater wells (Sabine Basin)	SHL-1	2,000	2	\$107	1	1	1	1	1	1		
Shelby	Livestock	Neches	Additional groundwater wells (Neches Basin)	SHL-2	1,500	2	\$106	1	1	1	1	1	1		
Shelby	Livestock	Sabine	Increase local supplies	SHL-3	500	2	\$120	1	1	1	2	1	1	Implemented by local users	
Shelby	Livestock	Sabine	Purchase raw water from SRA (Toledo Bend)	SHL-4	4,000	1	\$294	1	1	1	1	1	1	Requires agreement with SRA. Highly renewable resource should minimize impacts.	
Shelby	Manufacturing	Sabine	Purchase surface water from City of Center	SHM-1	12	1	\$978	1	1	1	1	1	1	Requires water contract with City of Center	
Shelby	Mining	Neches	Purchase water from ANRA (Attoyac Bayou)	SHMI-1	250	2	\$836	3	1	1	1	1	1		
Shelby	Mining	Sabine	Purchase water from SRA (Toledo Bend)	SHMI-2	1,250	1	\$495	1	1	1	1	1	1		
Smith	Bullard	Neches	Increase supply from Carrizo-Wilcox	BU-1A	200	3	\$517	1	3	1	2	1	1	May place additional stress on aquifer	
Smith	Community Water Co.	Neches	Purchase water from the City of Tyler or other local provider	CW-1A	227	1	\$1,743	1	1	1	2	1	1		
Smith	Jackson WSC	Neches	Purchase water from ANRA (Lake Columbia)	JA-1	600	1	\$1,235	See ANRA Lake Columbia Strategy							
Smith	Lindale Rural WSC	Neches	Increase supply from Carrizo-Wilcox	LIR-1	80	3	\$824	1	3	1	2	1	1		
Smith	Irrigation	Neches	Increase supply from Queen City	SML-1	168	2	\$234	1	1	1	2	2	1	May place additional stress on aquifer	
Smith	Manufacturing	Neches	Purchase water from City of Tyler	SMMA-1	294	1	\$1,493	1	1	1	1	1	1		
Smith	Mining	Neches	Increase supply from Queen City	SMM-1	329	2	\$219	1	1	1	2	2	1		
Smith	Whitehouse	Neches	Purchase water from ANRA	WH-1	1,200	1	\$1,140	See ANRA Lake Columbia Strategy							
Smith	Whitehouse	Neches	Purchase additional water from Tyler	WH-2	27	1		1	1	1	1	1	1		
Trinity	County-Other	Neches/Trinity	Increase supply from Yegua-Jackson	TRC-1	60	2	\$616	1	2	1	2	2	2		
Tyler	County-Other	Neches	Increase supply from Gulf Coast Aquifer	TYC-1	251	1	\$197	1	1	1	2	1	1		
Multiple	ANRA	Neches	Lake Columbia Reservoir	ANRA-1	75,700	1	\$215	3	2	2	2	1	3		
Multiple	ANRA	Neches	Water Treatment Plant and Distribution	ANRA-2	5,100	1	\$1,151	1	1	1	1	1	3		
Henderson	Athens MWA	Multiple	Fish Hatchery Reuse to Lake Athens	AMWA-1	2,872	1	\$0	1	1	1	1	1	1	Requires agreement with Fish Hatchery	
Henderson	Athens MWA	Multiple	Water from Forest Grove	AMWA-2	2,000	1	\$843	2	2	1	1	1	2	Requires agreement with Luminant, TRWD and modification of water	
Henderson	Athens MWA	Multiple	Additional Lake Athens	AMWA-3	1,000	1	\$643	1	1	1	1	1	2	Requires modification of hatchery intake	
Cherokee	Jacksonville	Neches	Water from Lake Columbia	JAC-02	1,700	1	\$1,472	1	1	1	1	1	3		
Multiple	LNVA	Neches	Saltwater Barrier conjunctive operation with Rayburn/Steinhagen	LNVA-2	111,000	2	\$16	1	1	1	1	2	3		
Multiple	LNVA	Neches	Permit Amendment for Sam Rayburn	LNVA-3	28,000	1	\$0	1	1	1	1	1	2		
Multiple	LNVA	Neches	Purchase of water from SRA	LNVA-6	36,000	1	\$166	1	1	1	1	1	2		
Multiple	LNVA	Neches	Rockland Reservoir	LNVA-7	614,400	2	\$115	4	4	3	2	2	3		
Multiple	LNVA	Neches	Reallocation of Flood Storage	LNVA-4	122,000	1	\$25	2	1	1	1	1	1		
Angelina	Lufkin	Neches	Develop Sam Rayburn Reservoir Water Rights	LU-1	11,200	1	\$1,577	1	1	1	1	1	1		
Angelina	Lufkin	Neches	Develop additional groundwater Carrizo-Wilcox	LU-2	4,650	1	\$427	1	1	1	1	1	1		
Angelina	Lufkin	Neches	Develop Lake Kurth Surface Water	LU-3	18,400	1	\$455	1	1	1	1	1	2	Requires water right ammendment	
Multiple	SRA	Sabine	Toledo Bend Pipeline Project	SRA-1	100,000	2	\$598	2	1	2	1	1	3		
Tyler	Tyler	Neches/Sabine	Lake Palestine	TYL-2	16,815	1	\$830	1	1	1	1	1	1		
Multiple	UNRMWA	Neches/ Trinity	Lake Fastrill		148,780	1		3	2	2	3	1	5		

1 Most desirable
5 Least desirable

Table 4D-A.2 Summary of Environmental Assessment

County	Entity	Basin	Strategy	Strategy Key	Environmental Factors										Comments	
					Total Acres Impacted	Wetland Acres ¹	Environmental Water Needs	Habitat	Threatened & Endangered Species	Cultural Resources	Bays & Estuaries	Environmental Water Quality	Other	Overall Environmental Impacts		
Name	Name(s)	Name	Name	Name	#	#	(1-5)	(1-5)	#	(1-5)	(1-5)	(1-5)	(1-5)	(1-5)		
Anderson	County-Other	Neches	Increase supply from Queen City	ADC-1	0	NA	1	1	5	1	1	2	1	1	Pending water quality of Queen City, may increase TDS of wastewater discharges	
Anderson	County-Other	Neches	Increase supply from Carrizo-Wilcox	ADC-2	0	NA	1	1	5	1	1	1	1	1		
Anderson	Frankston	Neches	Increase supply from Carrizo-Wilcox	FR-1	0	NA	1	1	5	1	1	1	1	1		
Anderson	Mining	Neches	Increase supply from Carrizo-Wilcox	ADN-1	0	NA	1	1	5	1	1	1	1	1		
Anderson	Steam-Electric	Neches	Water from Lake Palestine	ADS-1	40	NA	2	1	5	1	2	1	1	1		
Anderson	Steam-Electric	Neches	Water from Lake Fastrill	ADS-2	NA	NA	See UNRMWA Lake Fastrill Strategy									
Angelina	County-Other	Neches	Voluntary Redistribution from City of Lufkin	ANC-1	46	NA	1	1	8	1	1	1	1	1		
Angelina	County-Other	Neches	Increase supply from Yegua-Jackson	ANC-2A	0	NA	1	1	8	1	1	1	1	1		
Angelina	Diboll	Neches	Purchase water from the City of Lufkin (Phase I-II)	DI-1	28	NA	1	1	8	1	1	1	1	1		
Angelina	Diboll	Neches	Increase supply from Yegua-Jackson	DI-3	0	NA	1	1	8	1	1	1	1	1		
Angelina	Four Way WSC	Neches	Obtain water from the City of Lufkin	FW-1	0	NA	1	1	8	1	1	1	1	1		
Angelina	Hudson	Neches	Purchase Water from Hudson WSC	HU-1A	0	NA	1	1	8	1	1	1	1	1		
Angelina	Hudson WSC	Neches	Increase supply from Carrizo-Wilcox (Phase I)	HW-1A	0	NA	1	1	8	1	1	1	1	1		
Angelina	Hudson WSC	Neches	Increase supply from Carrizo-Wilcox (Phase II)	HW-1B	0	NA	1	1	8	1	1	1	1	1		
Angelina	Manufacturing	Neches	Obtain water from City of Lufkin	ANM-1	24	NA	1	1	8	1	1	1	1	1		
Angelina	Manufacturing	Neches	Obtain raw water from Lake Columbia via contract with ANRA	ANM-2	7	NA	See ANRA Lake Columbia Strategy									
Angelina	Livestock	Neches	Increase stock Ponds	ANL-1	3	NA	1	1	8	1	1	1	1	1		
Angelina	Mining	Neches	Obtain Water from ANRA (Lake Columbia or Angelina River)	ANMI-1	12	NA	2	2	8	2	2	2	2	2		
Angelina	Mining	Neches	Obtain water from Lufkin (Lake Kurth)	ANMI-2	0	NA	1	1	8	1	1	1	1	1		
Angelina	Steam-Electric	Neches	New wells in the Carrizo-Wilcox	ANP-1	0	NA	1	1	8	1	1	1	1	1		
Cherokee	Mining	Neches	Purchase water from ANRA (Lake Columbia or Angelina River)	CHMI-1	12	NA	2	2	4	2	2	2	2	2		
Cherokee	New Summerfield	Neches	Obtain treated water from Lake Columbia via contract with ANRA	NS-1	6	NA	See ANRA Lake Columbia Strategy									
Cherokee	New Summerfield	Neches	Increase supply from Carrizo-Wilcox	NS-3	0	NA	1	1	4	2	2	1	1	1		
Cherokee	Rusk	Neches	Obtain treated water from Lake Columbia via contract with ANRA	RU-1	23	NA	See ANRA Lake Columbia Strategy									
Cherokee	Rusk	Neches	Increase supply from Carrizo-Wilcox	RU-3	0	NA	1	1	4	1	1	1	1	1		
Hardin	County-Other	Neches	Increase supply from Gulf Coast Aquifer (Phases I-III)	HAC-1	2	NA	1	1	6	1	1	1	3	1	May place additional stress on aquifer	
Hardin	Manufacturing	Neches	Use additional water from Gulf Coast Aquifer	HAM-1	2	NA	1	1	6	1	1	1	1	1		
Hardin	Irrigation	Neches	Use surface water sources	HAI-1	6	NA	2	2	6	1	2	1	1	1		
Henderson	Athens	Neches	Water from Athens MWA	AT-2	NA	NA	see Athen MWA strategies									
Henderson	County-Other	Neches	Expand use of Carrizo-Wilcox	HECo-2	4	NA	1	1	7	1	1	1	3	1	May place additional stress on aquifer	
Henderson	County-Other	Neches	Expand use of Queen City	HECo-3	11	NA	1	1	7	1	1	1	2	1	Pending water quality of Queen City, may increase TDS of wastewater discharges	
Henderson	County-Other	Neches	Water from UNRMWA	HECo-4	12	NA	1	1	7	1	1	1	1	1		
Henderson	Irrigation	Neches	Obtain water Lake Athens	HEI-1	see Athens MWA	NA	1	1	7	1	1	1	1	1		
Henderson	Livestock	Neches	Fish Hatchery Reuse	HEL-1	0	NA	1	1	7	1	1	2	1	1		
Houston	Irrigation	Neches/Trinity	Increase supply from Carrizo-Wilcox (Phase I-VI)	HOI-1	2	NA	1	1	8	1	1	1	1	1		
Houston	Livestock	Neches/Trinity	Increase supply from Carrizo-Wilcox (Phase I-V)	HOL-1	2	NA	1	1	8	1	1	1	1	1		
Houston	Manufacturing	Neches/Trinity	Obtain water from Houston County WCID	HOMa-1	0	NA	1	1	8	1	1	1	1	1		
Jasper	County-Other	Neches	Use additional supply from Gulf Coast Aquifer	JAC-1	2	NA	1	1	7	1	1	1	3	1	May place additional stress on aquifer	
Jefferson	Mining	Neches	Use additional supply from Gulf Coast Aquifer	JEM-1	0	NA	1	1	7	1	1	1	3	1	May place additional stress on aquifer	
Jefferson	Steam-Electric	Neches	Use water from the Neches River	JESE-1	12	NA	2	2	9	1	2	1	1	2		
Nacogdoches	D&M WSC	Neches	Increase supply from Carrizo-Wilcox	DM-1	0	NA	1	1	8	1	1	1	1	1		
Nacogdoches	Lilly Grove SUD	Neches	Increase supply from Carrizo-Wilcox	LG-1	0	NA	1	1	8	1	1	1	1	1		
Nacogdoches	Livestock	Neches	Increase supply from Carrizo-Wilcox	NCL-1	0	NA	1	1	8	1	1	1	1	1		
Nacogdoches	Mining	Neches	Purchase water from ANRA (Lake Columbia or Angelina River)	NCMI-1	12	NA	2	2	8	2	2	2	2	2		
Nacogdoches	Mining	Neches	Purchase water from LNVA	NCMI-2	12	NA	1	1	8	1	1	1	1	1		
Nacogdoches	Nacogdoches	Neches	Additional groundwater from Carrizo-Wilcox	NA-1	0	NA	1	1	8	1	1	1	1	1		
Nacogdoches	Nacogdoches	Neches	Obtain and treat water from Lake Columbia	NA-3	0	NA	See ANRA Lake Columbia Strategy									
Nacogdoches	Nacogdoches	Sabine	Obtain and treat water from Toledo Bend	Alt. Str. NA-4	165	NA	2	2	8	1	2	1	1	2		
Nacogdoches	Steam-Electric	Neches	Obtain raw water from Lake Columbia	NCS-1	12	NA	See ANRA Lake Columbia Strategy									
Nacogdoches	Steam-Electric	Neches	Obtain raw water from Houston County Lake	NCS-2	12	NA	1	1	12	1	1	1	1	1		
Nacogdoches	Swift WSC	Neches	Increase supply from Carrizo-Wilcox	SW-1	0	NA	1	1	8	1	1	1	1	1		
Nacogdoches	Swift WSC	Neches	Obtain Treated water from Lake Columbia via contract with ANRA	SW-2		NA	See ANRA Lake Columbia Strategy									
Newton	Manufacturing	Sabine	Additional Groundwater Well Gulf Coast Aquifer	NWM-1	2	NA	1	1	6	1	1	1	1	1		

Table 4D-A.2 Summary of Environmental Assessment (Cont.)

County	Entity	Basin	Strategy	Strategy Key	Environmental Factors										Comments	
					Total Acres Impacted	Wetland Acres ¹	Environmental Water Needs	Habitat	Threatened & Endangered Species	Cultural Resources	Bays & Estuaries	Environmental Water Quality	Other	Overall Environmental Impacts		
Name	Name(s)	Name	Name	Name	#	#	(1-5)	(1-5)	#	(1-5)	(1-5)	(1-5)	(1-5)	(1-5)		
Newton	Manufacturing	Sabine	Purchase water from SRA	NWM-2	12	NA	1	2	6	1	1	1	1	1		
Newton	Steam-Electric	Sabine	Purchase water from SRA	NWP-1		NA	1	1	6	1	1	1	1	1		
Orange	County-Other	Sabine	Use additional supply from Gulf Coast Aquifer	ORC-1	0	NA	1	1	8	1	1	1	3	1	May place additional stress on aquifer	
Orange	Manufacturing	Sabine	Raw surface water supply from SRA Canal	OR-1SRA	0	NA	2	1	8	1	2	1	1	1		
Orange	Manufacturing	Sabine	Raw Water from Toledo Bend Reservoir	ORM-2	2	NA	1	1	8	1	1	1	1	1		
Orange	Mauriceville WSC	Sabine	New well in Gulf Coast aquifer	ORMa-1	0	NA	1	1	8	1	1	1	3	1	May place additional stress on aquifer	
Panola	Manufacturing		Purchase water from Carthage		0	NA	1	1	4	1	1	1	1	1		
Polk	County-Other	Neches	Use additional supply from Gulf Coast Aquifer (Phase I-IV)	POC-1A	2	NA	1	1	8	1	1	1	1	1		
Polk	Manufacturing	Neches	Expand existing supplies form Gulf-Coast aquifer	POM-1	0	NA	1	1	8	1	1	1	1	1		
Rusk	Mining	Neches	Increase supply from Carrizo-Wilcox	RUL-1	0	NA	1	1	8	1	1	1	1	1		
Rusk	Steam-Electric	Neches	Supply from SRA, Toledo Bend Reservoir	RUSE-1	0	NA	1	1	8	1	1	1	1	1		
Rusk	Steam-Electric	Neches	Supply from ANRA (Lake Columbia)	RUSE-2	NA	NA	See ANRA Lake Columbia Strategy									
Sabine	County-Other	Sabine	Increase supply from Carrizo-Wilcox (Neches)	SBC-1	0	NA	1	1	5	1	1	1	1	1		
Sabine	County-Other	Sabine	Purchase water from Hemphill	SBC-2	9	NA	1	1	5	1	1	1	1	1		
Sabine	Livestock	Sabine	Expand Carrizo-Wilcox supplies (Sabine)	SBL-1	0	NA	1	1	5	1	1	1	1	1		
Sabine	Livestock	Sabine	Expand current surface water supplies (Neches and Sabine)	SBL-2	20	NA	2	2	5	1	1	1	1	1		
San Augustine	Irrigation	Neches	Obtain Water from Carrizo-Wilcox Aquifer	SAI-1	12	NA	1	1	8	1	1	1	1	1		
San Augustine	Livestock	Neches	Increase local surface water supplies (stock ponds)	SAL-1	3	NA	1	1	8	1	1	1	1	1		
San Augustine	Livestock	Sabine	Increase groundwater supply from Carrizo-Wilcox Aquifer (Sabine)	SAL-2	0	NA	1	1	8	1	1	1	1	1		
San Augustine	Livestock	Neches	Increase groundwater supply from Carrizo-Wilcox Aquifer (Neches)	SAL-3	0	NA	1	1	8	1	1	1	1	1		
San Augustine	Mining	Neches	Purchase water from ANRA (Angelina river)	SAMI-1	12	NA	2	2	8	2	2	2	2	2	Run of River	
San Augustine	Mining	Neches	Purchase water from LNVA (Sam Rayburn)	SAMI-2	12	NA	1	1	8	1	1	1	1	1		
Shelby	County-Other	Sabine	Expand groundwater from Carrizo-Wilcox (Sabine)	SHCo-1	12	NA	1	1	8	1	1	1	1	1		
Shelby	County-Other	Sabine	Purchase water from City of Center	SHCo-2	0	NA	1	1	8	1	1	1	1	1		
Shelby	County-Other	Sabine	Purchase water from SRA (Toledo Bend Reservoir)	SHCo-3	9	NA	1	1	8	1	1	1	1	1		
Shelby	Livestock	Sabine	Additional groundwater wells (Sabine Basin)	SHL-1	0	NA	1	1	8	1	1	1	1	1	Potential impacts to stream flows.	
Shelby	Livestock	Neches	Additional groundwater wells (Neches Basin)	SHL-2	0	NA	1	1	8	1	1	1	1	1	Potential impacts to stream flows.	
Shelby	Livestock	Sabine	Increase local supplies	SHL-3	33	NA	2	2	8	1	1	1	1	1	May decrease runoff to local streams	
Shelby	Livestock	Sabine	Purchase raw water from SRA (Toledo Bend)	SHL-4	12	NA	1	1	8	1	2	1	1	1		
Shelby	Manufacturing	Sabine	Purchase surface water from City of Center	SHM-1	0	NA	1	1	8	1	1	1	1	1		
Shelby	Mining	Neches	Purchase water from ANRA (Attoyac Bayou)	SHMI-1	5	NA	3	4	8	3	3	2	3	3	Run of River	
Shelby	Mining	Sabine	Purchase water from SRA (Toledo Bend)	SHMI-2	12	NA	1	1	8	1	1	1	1	1		
Smith	Bullard	Neches	Increase supply from Carrizo-Wilcox	BU-1A	2	NA	1	1	8	1	1	1	3	1	May place additional stress on aquifer	
Smith	Community Water Co.	Neches	Purchase water from the City of Tyler or other local provider	CW-1A	2	NA	1	1	8	1	1	1	1	1		
Smith	Jackson WSC	Neches	Purchase water from ANRA (Lake Columbia)	JA-1	2	NA	See ANRA Lake Columbia Strategy									
Smith	Lindale Rural WSC	Neches	Increase supply from Carrizo-Wilcox	LIR-1	2	NA	1	1	8	1	1	1	1	1		
Smith	Irrigation	Neches	Increase supply from Queen City	SMI-1	0	NA	1	1	8	1	1	1	3	1	May place additional stress on aquifer	
Smith	Manufacturing	Neches	Purchase water from City of Tyler	SMMA-1	7	NA	1	1	8	1	1	1	1	1		
Smith	Mining	Neches	Increase supply from Queen City	SMM-1	0	NA	1	1	8	1	1	1	1	1		
Smith	Whitehouse	Neches	Purchase water from ANRA	WH-1		NA	See ANRA Lake Columbia Strategy									
Smith	Whitehouse	Neches	Purchase additional water from Tyler	WH-2		NA	1	1	8	1	1	1	1	1		
Trinity	County-Other	Neches/Trinity	Increase supply from Yegua-Jackson	TRC-1	2	NA	1	1	8	1	1	1	1	1		
Tyler	County-Other	Neches	Increase supply from Gulf Coast Aquifer	TYC-1	2	NA	1	1	5	1	1	1	1	1		
Multiple	ANRA	Neches	Lake Columbia Reservoir	ANRA-1	10,200	5,900	3	4	12	3	2	2	2	3		
Multiple	ANRA	Neches	Water Treatment Plant and Distribution	ANRA-2	86	NA	1	2	12	1	1	1	1	1		
Henderson	Athens MWA	Multiple	Fish Hatchery Reuse to Lake Athens	AMWA-1	0	NA	2	1	7	1	1	1	1	1	Will decrease flows in current receiving stream and increase flows in Lake Athens watershed	
Henderson	Athens MWA	Multiple	Water from Forest Grove	AMWA-2	9	NA	2	2	7	1	2	2	1	2		
Henderson	Athens MWA	Multiple	Additional Lake Athens	AMWA-3	0	NA	2	1	7	1	1	1	1	1		
Cherokee	Jacksonville	Neches	Water from Lake Columbia	JAC-02	12	NA	1	2	12	1	1	1	1	1		
Multiple	LNVA	Neches	Saltwater Barrier conjunctive operation with Rayburn/Steinhagen	LNVA-3	0	NA	2	1	8	1	2	1	1	1		
Multiple	LNVA	Neches	Permit Amendment for Sam Rayburn	LNVA-4	0	NA	1	1	8	1	1	1	1	1		
Multiple	LNVA	Neches	Purchase of water from SRA	LNVA-5	35	NA	1	1	13	1	1	1	1	1		
Multiple	LNVA	Neches	Rockland Reservoir	LNVA-6	99,102	NA	3	5	8	3	5	3	5	4		
Multiple	LNVA	Neches	Reallocation of Flood Storage			NA	3	3	8	1	3	2	2	2		
Angelina	Lufkin	Neches	Develop Sam Rayburn Reservoir Water Rights	LU-1	30	NA	1	1	8	1	2	1	1	1		
Angelina	Lufkin	Neches	Develop additional groundwater Carrizo-Wilcox	LU-2	22	NA	1	1	8	1	1	1	1	1		
Angelina	Lufkin	Neches	Develop Lake Kurth Surface Water	LU-3	17	NA	2	1	8	1	1	1	1	1		
Multiple	SRA	Sabine	Toledo Bend Pipeline Project	SRA-1	2,077	NA	2	2	13	2	2	2	1	2		
Smith	Tyler	Neches/Sabine	Lake Palestine	TYL-2	12	NA	1	1	7	1	1	1	1	1		
Multiple	UNRMWA	Neches/ Trinity	Lake Fastrill		24,948		3	5	9	3	3	2	3	3		
Multiple	Multiple	Multiple	Water Conservation	Multiple	0	NA	1	1	0	1	1	1	1	1		