Region F Strategy Evaluation Matrix

		T											
Entity	County Used	Basin Used	Strategy	Quantity (Ac-Ft/Yr)	Reliability	Cost (\$/Ac-Ft)	Impacts of	Strategy on:		Interbasin Transfer	Third Party Social & Economic Impacts	Implementation Issues	Comments
				(AC-1011)		Environmental Factors	Agricultural Resources/ Rural Areas	Other Natural Resources	Key Water Quality Parameters	Hansiei	Leonomic impacts		
Andrews	Andrews	Colorado	Water Conservation	310	Medium	\$185 Low	Positive	None identified	Low	n/a	None identified	Site specific data needed. May require financial and technical assistance.	Conservation based on generic assessment. Site-specific data not available.
Andrews	Andrews	Colorado	Dockum Desalination	950	Medium	\$1,163 Low	Positive	None identified	Low	n/a	None identified	Co-disposal with oil field brine	
Bronte	Coke	Colorado	Reuse	110	High	\$2,345 Medium	Positive	None identified	Medium	n/a	None identified Provides service to local	Public perception, disposal, TCEQ rule	Interconnection between Oak Creek
Bronte	Coke	Colorado	New groundwater at Oak Creek	150	Unknown	\$2,060 Low to Medium	Positive	Low	Low	n/a	residents	High costs	reservoir and alluvium is unknown.
Bronte	Coke	Colorado	New groundwater and advanced treatment	350	Medium	\$1,740 Medium	Low	None identified	Low	n/a	None identified	Disposal of treatment discharge.	
Bronte	Coke	Colorado	Rehabilitation of Oak Creek pipeline	0	Medium	n/a Low	Positive	None identified	Low	n/a	None identified	Funding	
Bronte	Coke	Colorado	Water Conservation	51	Medium	\$188 Low	Positive	None identified	Low	n/a	None identified	Site specific data needed. May require financial and technical assistance.	available.
Dahamilaa	Calia	Calarada	Information of the Information	200	LUmb	©4 200 L	Danition	Name identified	TDD	- /-	Improved quality and	Financian	0.5 mgd treatment expansion and new
Robert Lee	Coke	Colorado	Infrastructure Improvements		High Modium to	\$1,328 Low	Positive	None identified	TBD	n/a	reliability for the city	Financing	storage tank
Robert Lee	Coke	Colorado	New groundwater	150	Medium to	\$1,047 Medium	Low	None identified	Low	n/a	None identified	Unknown quantity and quality	
	Coke	Colorado	Purchase from San Angelo		Medium to High	\$1,047 Wedium	Low	None identified	Low	n/a	None identified	Further study is needed on water quali issues associated with transporting water both directions and small quanties to Robert Lee.	May preclude San Angelo from using water from Spence reservoir
Dahadhaa	0.1.	0.1	D	110	1.12 1-	00 0 45 Mar di 111	D	Nie o da organi	NA - Para	- 1-	Nie za Sale z CC z al	D. I. F	
Robert Lee	Coke	Colorado	Reuse	110	High	\$2,345 Medium	Positive	None identified	Medium	n/a	None identified	Public perception, disposal, TCEQ rule	PS
	Coke	Colorado	Desalination of Spence Reservoir Water		High	\$1,879 Medium	Positive	None identified		n/a	Increased reliability and better water for city	Financing, disposal of brine reject	Strategy assumes that reject can be discharged. Costs may be significantly higher if other methods used. Allows city to take more water when
Robert Lee	Coke	Colorado	Floating pump in Mountain Creek Resevoir	50	Low	\$1,132 Low	Positive	None identified	Low	n/a	None identified	Financing	reservoir is low
Robert Lee	Coke	Colorado	Water Conservation	48	Medium	\$199 Low	Positive	None identified	Low	n/a	None identified	Site specific data needed. May require financial and technical assistance.	available.
Coleman	Coleman	Colorado	Water Conservation	107	Medium	\$101 Low	Positive	None identified	Low	n/a	None identified	Site specific data needed. May require financial and technical assistance.	Conservation based on generic assessment. Site-specific data not available.
											High cost takes away		
Eden	Concho	Colorado	RO treatment		High	\$819 Low to Medium	Positive	None identified	Medium	n/a	resources	Disposal of waste products	
Eden	Concho	Colorado	Replacement well	323	High	\$1,113 Low	Positive	None identified	Low	n/a			
CRMWD	Ector/Midland	Colorado	Odessa/Midland Reuse	9,799	High	\$1,354 Low	Low	None	Low to Medium	n/a	None identified	Public perception, disposal, TCEQ rule	es
CRMWD	Howard	Colorado	Big Spring Reuse	1,855	High	\$824 Low	Low	None	Low to Medium	n/a	None identified	Public perception, disposal, TCEQ rule	
	12: 11			4 000		04.000				,	N	Locating areas with sufficient	Manufacturing demands appear to
Manufacturing	Kimble	Colorado	Edwards-Trinity aquifer	1,000	Medium	\$1,080 Medium	None	None identified	None	n/a	None identified	production and acceptable water qualifications of the specific data needed. May require	Conservation based on generic
Brady	McCulloch	Colorado	Water Conservation	239	Medium	\$132 Low	Positive	None identified	Low	n/a	None identified	financial and technical assistance.	available.
•												Depends on ability to locate injection	
											loss of revenue due to	well. Will require long-term contract	
Richland SUD	McCulloch	Colorado	Specialty Media Treatment System	113	High	\$664 Low	Positive	None identified	Low	n/a	increased costs	and minimum guaranteed payment.	
Diables (OUD	MaQuillant	Calanada	Dattle durates are super		LULE	(000 700	Desition	Name (de come)		- /-	Users need to travel to	Demilatary assents to	I awart award and
Richland SUD	IVICCUIIOCN	Colorado	Bottled water program	1	High	\$28,780 Low	Positive	None identified	Low	n/a	obtain water	Regulatory acceptance Assumes that an area with low radionuclide concentration can be	Lowest overall cost
Richland SUD		Colorado	Replacement well		High	\$1,982 Low	Positive	None identified		n/a	None identified	identified	
Richland SUD	McCulloch	Colorado	System connection	200	High	\$2,615 Low	Positive	None identified	Low	n/a	None identified		
Menard	Menard	Colorado	Aquifer Storage and Recovery	240	High	\$1,271 Low	Positive	None identified	Low	n/a	None identified	Suitability of Hickory not established, financing	Concernation boost
Menard	Menard	Colorado	Water Conservation	33	Medium	\$211 Low	Positive	None identified	Low	n/a	None identified	Site specific data needed. May require financial and technical assistance.	Conservation based on generic assessment. Site-specific data not available.

Region F Strategy Evaluation Matrix

	T.	T				1	y Evaluation				T		1
Entity	County Used	Basin Used	Strategy	Quantity Reliability	Cost		Impacts of	Impacts of Strategy on:			Third Party Social &	Implementation Issues	Comments
			Strategy	(Ac-Ft/Yr)	(\$/Ac-Ft)	Environmental Factors	Agricultural Resources/ Rural Areas	Other Natural Resources	Key Water Quality Parameters	Transfer	Economic Impacts	impononation locate	Comments
Menard	Menard	Colorado	New Hickory well	Medium to	\$1,456	Low	Positive	None identified	Low	n/a	None identified	Water quality unknown.	May be higher impacts if advanced treatment needed.
Wichard	Wichard	Colorado	New Flickery Well	redriigii	ψ1,400	LOW	1 OSILIVE	None identified	LOW	11/4	Property owners at	1 ,	Assuming that diversion is under existing
Menard	Menard	Colorado	San Saba Off-Channel Reservoir	500 High	\$4,430	Medium	Positive	None identified	Low	n/a	reservoir site	of water significantly affects feasibility.	Menard or LCRA water right.
										Not required for		Pipeline route and well field layout not	_
Midland	Midland	Colorado	T-Bar Well Field	13,600 High	\$1,422	Low	Low	Low	Low	groundwater		determined	available for this plan. Conservation based on generic
												Site specific data needed. May require	· ·
Midland	Midland	Colorado	Water Conservation	3,663 Medium	\$132	Low	Positive	None identified	Low	n/a	None identified	financial and technical assistance.	available.
····aiaira	- Trialcina	00.0.00	Traisi Concertanon	5,555 1.154.4.11	Ų.02	2011	1 0011110	Ttorio idontinod	2011	.,, .	Trong tagining	Site specific data needed. May require	
Colorado City	Mitchell	Colorado	New wells in Dockum aquifer	2,200 Medium	\$1,153	Low	Positive	None identified	Low	n/a	None identified	financial and technical assistance.	pending treatability analyses.
										Not required for		Pipeline route and well field layout not	
CRMWD	Multiple	Colorado	Winkler Well Field	6,000 High	\$1,444	Low	Low	Low	Low	groundwater		determined	
											May impact other	N 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
CRMWD	Multiple	Colorado	Water from SW Pecos County	15,000 Medium	¢4 40E	Low to Medium	May impact	None identified	Low		groundwater users in Pecos County	Needs additional studies regarding supplies and impacts	
CKIVIVD	Multiple	Colorado	water from SW Pecos County	15,000 Medium	\$1,400	Low to Medium	beiding Famis	None identified	LOW	groundwater Not required for	,	Would be more cost-effective with other	or .
CRMWD	Multiple	Colorado	Water from Roberts County	25,000 High	\$3,319	Low	Low	Low	Low	groundwater	County water	participants	
					4 0,010					9		Needs further analysis before	
Multiple	Multiple	Multiple	Subordination of senior water rights	80,130 Medium	TDB	Medium	Positive	None identified	Low	n/a	None identified	implementation	Done in conjunction with Region K
			Voluntary redistribution - Hords Creek									Subordination to downstream water	May require modifications to contracts
Ballinger	Runnels	Colorado	Resevoir	220 Low	\$3,361	Low	Positive	None identified	Low	n/a	None identified	rights	with Corps of Engineers
Ballinger	Runnels	Colorado	Volunary Redistribution - purchase water from CRMWD	600 High	\$658	Low	Positive	None identified	Low	n/a	None identified	Must have agreement with CRMWD and WCTMWD	Uses existing WCTMWD and Ballinger pipelines
Ballinger	Runnels	Colorado	Reuse	220 High	¢1 /72	Medium	Positive	None identified	Modium	n/a	None identified	Public perception, disposal, TCEQ rule	6
Dallinger	Kulliels	Colorado	Neuse	220 (1)(g)1	φ1,473	Mediam	FOSITIVE	None identified	Mediaiii	II/a	None identified	r ubilic perception, disposal, TCEQ rule	Conservation based on generic
												Site specific data needed. May require	
Ballinger	Runnels	Colorado	Water Conservation	144 Medium	\$208	Low	Positive	None identified	Low	n/a	None identified	financial and technical assistance.	available.
Winters	Runnels	Colorado	Reuse	110 High	\$2,345	Medium	Positive	None identified	Medium	n/a	None identified	Public perception, disposal, TCEQ rule	S
													Conservation based on generic
												Site specific data needed. May require	· ·
Winters	Runnels	Colorado	Water Conservation	76 Medium	\$248	Low	Positive	None identified	Low	n/a	None identified	financial and technical assistance.	available.
CRMWD	Scurry	Colorado	Snyder Reuse	726 High	\$1,521	Low	Low	None	Low to Medium	n/a	None identified	Public perception, disposal, TCEQ rule	g
Ortanivi	Courry	Colorado	Citydol Rodos	720111911	ψ1,021	2011	2011	140110	Low to Modium	170	Ttorio idonimod	Reliability of large-scale development	
CRMWD	Multiple	Colorado	Capitan Reef Desalination	9,500 Medium	\$1,875	Low	Low	None	Low	n/a	None identified	not established.	
												City developing a water conservation	Actual conservation savings may be
San Angelo	Tom Green	Colorado	Water Conservation	2,371 Medium	\$110	Low	Low	None identified	Low	n/a	None identified	program	greater.
												Locating areas with sufficient	
												production. Groundwater conservation	
	- 0			40.000	*		Potential impact			1,	Potential impact to local	district rules that discourage large-scale	e
San Angelo	Tom Green	Colorado	Edwards-Trinity aquifer - Schleicher Co.	12,000 Medium	\$660	Medium	to local users	None identified	Low	n/a	users May impact other	development	
							May impact			Not required for	May impact other groundwater users in	Needs additional studies regarding	
San Angelo	Tom Green	Colorado	Water from SW Pecos County	12,000 Medium	\$2 643	Low to Medium		None identified	Low	groundwater	Pecos County	supplies and impacts	
Can / ingolo	. 5 0.0011	Soloiado	Tata. Hom off 1 5555 County	12,000 Modium	Ψ2,040		Potential impact			groundwater	. 5500 County	ospenoo ana mpaoto	Water may not meet standards for
							to other Hickory				Potential impact to other	Pipeline route and well field layout	Radium & require advanced treatment,
San Angelo	Tom Green	Colorado	McCulloch Well Field	12,000 High	\$1,936		users	None identified	Low	n/a	Hickory users	currently being studied	which may increase costs
San Angelo	Tom Green	Colorado	Desalination Facility	11,200 High	\$1,075		Low	None identified		n/a		Lack of data on target aquifer	
San Angelo	Tom Green	Colorado	Rehabilitation of Spence Pipeline	2,300 High	\$311	Low	Low	None identified	Low	n/a			
			0007 1400 0 "	Medium to	.					1,		Implementation based on economic	
Steam Electric	Not determined	Not determined	CCGT and ACC Generation	15,000 High	\$1,127	Low	None	None identified	Low	n/a		decisions by power industry	Technology requires very little water

Region F Environmental Quantification Matrix

	County	Basin	Strategy			Ti de la constanta de la const								
Entity				Acres Impacted	Wetland Acres	Envir Water Needs	Habitat	Threat an Endange Species	r Resources	Bays & Estuaries	Envir Water Quality	Other	Overall Environmental Impacts	Comments
Andrews	Andrews	Colorado	Dockum Desalination	15		Low	Low		6 Low	None	Low		Low	Disposal through existing deep well injection
County Other	Brown	Colorado	Voluntary redistribution	53		Low	Low	1	I0 Low	None	Low		Low	Not a significant draw on reservoir
														Assuming that waste stream from treatment process
Bronte	Coke	Colorado	Reuse	10		Medium	Medium		8 Low	None	Medium		Medium	would be discharged or use land application.
Bronte	Coke	Colorado	New groundwater at Oak Creek	5		Low to Medium	Low		8 Low	None	Low		Low to Medium	The connection between the alluvium and surface water is unknown.
						Low to								Unknown how discharge from advanced treatment will
	Coke		New groundwater and advanced treatment	12		Medium	Low		8 Low	None	Medium		Medium	be handled.
	Coke		Rehabilitation of Oak Creek pipeline	32		Low	Low		8 Low	None	Low		Low	
	Coke	Colorado		0		Low	Low		8 Low	None	Low		Low	
Robert Lee	Coke	Colorado	Infrastructure Improvements	4		Low	Low		8 Low	None	Low		Low	0.5 mgd treatment plant and new storage tank
						Low to								The connection between the alluvium and surface
	Coke		New groundwater	36		Medium	Low		8 Low	None	Low		Low	water is unknown.
Robert Lee	Coke	Colorado	Purchase frm San Angelo	<1		Low	Low		8 Low	None	Low		Low	
														Assuming that waste stream from treatment process
	Coke	Colorado		10		Medium	Medium		8 Low	None	Medium		Medium	would be discharged or use land application.
	Coke	Colorado		5		Medium	Medium		8 Low	None	Medium		Medium	
	Coke		Floating pump in Mountain Creek Resevoir	1		Low	Low		8 Low	None	Low		Low	Allows city to take more water when reservoir is low
Robert Lee	Coke	Colorado	Water Conservation	0		Low	Low		8 Low	None	Low		Low	
						Low to	Low to							Long-term impacts of land application of naturally
	Concho		RO treatment	<1		Medium	Medium		8 Low	None	Medium		Low to Medium	occuring radionuclides unknown
		Colorado	· ·	<1		Low	Low		8 Low	None	Low		Low	Small amount of water treated
			Odessa/Midland Reuse	152		Low	Medium		6 Low	None	Low		Low	Impacts due to decreased flow in Monahans Draw.
			Big Spring Reuse	6		Low	Low		6 Low	None	Medium		Low	No impact below Beals Creek diversion
Manufacturing			Edwards-Trinity aquifer	<1		Medium	Medium		9 Low	None	Medium		Medium	Potential impact on surface water flows
Richland SUD		Colorado	Specialty Media Treatment System	<1		Low	Low		5 Low	None	Low		Low	Spent media disposed using deep-well injection.
Richland SUD	McCulloch	Colorado	Bottled water program	<1		Low	Low	N	IA Low	None	Low		Low	Small amount of water treated
Richland SUD	McCulloch	Colorado	System Connection	25		Low to Medium	Low	1	I1 Low	None	Low		Low	
Richland SUD	McCulloch	Colorado	Replacement well	1		Low	Low	1	I1 Low	None	Low		Low	Replaces existing well
						Low to								
Menard	Menard	Colorado	Aquifer Storage and Recovery	2		Medium	Low	1	12 Low	None	Low		Low	In conjunction with Hickory well
Menard	Menard	Colorado	Water Conservation	0		Low	Low	1	12 Low	None	Low		Low	
														Impacts may be higher if advanced treatment required
Menard	Menard	Colorado	New Hickory well	2		Low	Low	1	12 Low	None	Low		Low	because of brine disposal
Menard	Menard	Colorado	San Saba Off-Channel Reservoir	80		Medium	Medium	1	12 Low to Medium	None	Low		Medium	Specific site not selected Estimated impacts. Precise route unknown pending
Midland	Midland	Colorado	T-Bar Well Field	212		Low	Low		7 Low	None	Low		Low	routing study.
			Water Conservation	212		Low	Low		6 Low	None	Low		Low	Touting Study.
Midiand	Midiand	Colorado	vvaler conservation	0		LOW	LOW		LOW	None			LOW	Evaporation ponds have been known ot accumulate
Calarada O'	Mitala di	Calagasti	Newwelle in Dealume access	0-					01	Nama	Low to		1	selenium and other contituents. This should be
Colorado City	Mitchell	Colorado	New wells in Dockum aquifer	35		Low	Low		9 Low	None	Medium		Low	considered during design.
CRMWD	Multiple	Colorada	Winkler Well Field	110		Low	Low		7 Low	None	Low		Low	Estimated impacts. Precise route unknown pending routing study.
CRIVIVID	Multiple	Colorado	vvirikier vveii Field	112			LOW		/ LOW	None			Low	Touling Study.
CRMWD	Multiple	Colorado	Water from SW Pecos County	265		Low to Medium Low to	Low	2	23 Low	None	Low to Medium		Low to Medium	
CRMWD	Multiple	Colorada	Water from Roberts County	1125		Medium	Low		Low	None	Low		Low	Possible impact on Canadian River flows
CKIVIVVD	iviuitipie	COIOISGO	vvaler from Roberts County	1125		wealulli	LUW		LOW		Medium to		LUW	r ossible impaction Canadian Rivel Hows
Multiple	Multiple	Multiple	Subordination of senior water rights			Medium	Low	varies	Low	Medium to Low	Low		Medium	
ividitible	wuuupie	widitiple	Subordination of Senior Water Hyrits	0		IVICUIUIII	LUW	valles	LOW	LUVV	LUW		IVICUIUIII	
Ballinger	Runnels	Colorado	Voluntary redistribution - Hords Creek Resevoir	51		Low	Low	1	10 Low	None	Low		Low	

Region F Environmental Quantification Matrix

Entity	County	Basin	Strategy	Acres Impacted	Wetland Acres	Envir Water Needs	Habitat	Threat and Endanger Species	Cultural Resources	Bays & Estuaries	Envir Water Quality	Other	Overall Environmental Impacts	Comments
			Volunary Redistribution - purchase water from											
Ballinger	Runnels	Colorado	CRMWD	0		Low	Low	10	Low	None	Low		Low	Pipeline already in place
Ballinger	Runnels			10		Medium	Medium	_	Low	None	Medium		Medium	Assuming that waste stream from treatment process would be discharged or use land application.
Ballinger	Runnels	Colorado	Water Conservation	0		Low	Low	10	Low	None	Low		Low	
														Assuming that waste stream from treatment process
Winters	Runnels	Colorado		10		Medium	Medium	_	Low	None	Medium		Medium	would be discharged or use land application.
Winters	Runnels			0		Low	Low	_	Low	None	Low		Low	
CRMWD	Scurry	Colorado	Snyder Reuse	9		Low	Low	6	Low	None	Medium		Low	No impact below Colorado City
CRMWD	Multiple	Colorado	Capitan Reef Desalination	164		Low	Low	7	Low	None	Low		Low	Estimated impacts. Precise route unknown pending routing study.
San Angelo	Tom Green	Colorado	Water Conservation	0		Low	Low	10	Low	None	Low		Low	Conserved water expected to remain in reservoirs for later use, use by others, or lost due to evaporation. Not expected to have a significant positive impact on environmental flows.
						Medium to					Medium to			
San Angelo	Tom Green	Colorado	Edwards-Trinity aquifer - Schleicher Co.	83		high	Medium	10	Low	None	Low		Medium	
Con Angolo			Water from SW Pecos County	448		Low to Medium	Low	22	Low	None	Low to Medium		Low to Medium	
San Angelo	rom Green	Colorado	vvaler from Svv recos County	448		wealum	LUW	23	LOW	INUITE	IVIEUIUITI		Low to Medium	Estimated impacts. Precise route unknown and disc
San Angelo	Tom Green	Colorado	McCulloch Well Field	476		Low	Low	12	Low	None	Low		Low	Estimated impacts. Precise route unknown pending routing study.
San Angelo	Tom Green		Desalination Facility	100		Low	Low		Low	None	Low		Low	Using deep well injection for brine disposal
San Angelo			Rehabilitation of Spence Pipeline	0		Low	Low	10	Low	None	Low		Low	Existing pipeline
Steam Electric			CCGT and ACC Generation	0		Low	Low	unknown	Low	None	Low		Low	Location of new generation not determined