

Preliminary COA Drought Response Decision Matrix
Supply Management

COA Water Management Strategy Description		STRATEGY YIELD (AC-Ft)	Water Supply Benefit			Economic Impacts			Environmental Impacts			Social Impacts			Implementability			Risk of Alternative Supplies		Final	Comments					
			30%			20%			15%			10%			15%			10%				100%				
			Supply Volume	Drought Resilience	Improved Reliability and Utilization of Existing Supplies	Unit Cost* (\$/Acre-Ft)	Treatment Need/Cost	Energy Intensity	Energy Generation	Impacts on Other Water Supplies	Instream Flow	Endangered/Threatened Species Impact	Wetlands	Water Quality	Imagine Austin Plan	Balances Economic and Environmental Impacts with Community Interests	Recreation	Required External Adoption	Land Acquisition				Timing of Implementation	Regulatory Approval	Political Opposition	Public Acceptance
Operational Augmentation w/Signif. Capital, Permitting, Community Impact	Augmentation of Supplies - (Supply Management)																									
	System Operational Improvements (Existing Supplies)																									
	Longhorn Dam Gate Operation	2,000 - 4,000	1	\$8	2	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1.6	Automation of gates should be directly implemented.		
	Reduced Lake Evaporation-include Fayette	800 - 1,200	0	\$275	0	0	-1	1	0	0	-1	1	0	0	0	0	0	0	0	0	0	0	0.1	Unknown environmental impact. Public acceptability issues.		
	Walter Long (Decker)Lake Off-Channel Storage	1,000 - 4,000	2	\$64	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1.9			
	SAR Discharge Relocation above Austin Gauge	0 - 1,000	0	\$114	-1	1	0	-1	1	0	-1	0	-1	0	-1	0	-1	0	0	0	0	0	-0.2	Potential for TCEQ coordination. Concern about elevated nutrients.		
	Leak detection	-	2		2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.0			
	Lake Austin Varying Operating Level	0 - 5,000	2	\$10	2	2	1	0	1	0	-1	0	-1	0	-1	0	-1	0	-1	0	-1	0	-2	0.8		
	Enhanced Operations (Additional Capital Req'd)																									
	Automate Longhorn Gates	4,000 - 7,000	2	\$15	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.0		
Operational Augmentation w/Signif. Capital, Permitting, Community Impact	Walter Long (Decker) Lake Off-Channel Storage (enhanced storage)	8,000 - 20,000	2	\$183	1	0	-1	0	0	-1	0	0	0	0	0	0	0	0	0	0	0	0	0.7	Possible impacts to energy generation capacity need to be considered		
	Capture Local Inflows to Lady Bird Lake	1,000 - 3,000	1	\$334	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4			
	Aquifer Storage & Recovery ^{C*}	4,000 - 4,000	1	\$1,000	-1	0	1	-2	0	1	-2	0	2	0	2	0	2	0	2	0	2	0	0.1	ASR is a promising strategy for diversification, but a site other than the Edwards Aquifer should be considered.		
	Aquifer Storage & Recovery (Regional Non-Edwards Aquifer)		2		-1	0	1	-1	0	1	-1	0	2	0	2	0	2	0	2	0	2	0	0.6	Assume relative costs for ASR as previous strategy.		
	Indirect Potable Reuse - SAR to Lady Bird Lake ^{A*}	20,000 - 20,000	2	\$190	1	0	-1	0	0	1	-2	0	2	0	2	0	2	0	2	0	2	0	0.6	Strategy suitable for severe prolonged drought.		
	Barton Springs Capture & Augmentation	-	-1		-1	2	2	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0.0	Strong community and environmental benefits.		
	Gray water use	-																								
	Smart Meter implementation	-																								
New Supplies	New Groundwater Supplies																									
	Blue Water Systems ^{B*} (Treat & Deliver)	12,000 - 12,000		\$1,526																						
	Forestar ^{B*}	10,000 - 10,000		???																						
	Northern Edwards Wellfield ^{B*}	1,000 - 1,500		\$431																						
	Vista Ridge ^{B*}	50,000 - 50,000		???																						
	Hays-Caldwell Public Utility Authority ^{B*}	25,000 - 25,000		???																						
	Trinity Aquifer supplies	-																								
	Other																									
	Brackish desalination ^{B*, C*}	5,000 - 10,000		\$1,733																						
	Reclaimed water bank infiltration	20,000 - 40,000	2	\$667	-1	-1	0	-1	0	-1	0	-1	1	0	-1	1	0	-1	1	0	1	0	0.2			
	Colorado Bed and Banks ^{B*}	40,000 - 70,000		\$691																						
	Rainwater harvesting	-																								
Commercial	-																									
Residential	-																									
ASR- Regional/Desalination	-																									

Notes:

* Unit Cost Supply Basis of \$/Acre-Ft at 95th percentile, based on AWU midpoint quantity within range.

A* - Yield and unit cost calculation assumes extremely reduced downstream environmental flow requirements.

B* - These alternatives represent a treated water supply and would not incur the water treatment costs the other alternatives would require.

C* - This alternative is specific to evaluation within the Edwards Aquifer, and would be different when evaluating a different site/aquifer.

■	Shortlisted Supply Option for Near-Term Implementation
■	Shortlisted Option for Further Study