

**Preliminary COA Drought Response Decision Matrix**

Subject to Change

Updated: 5-Jun-14

Category	Option Description	Annual HL Benefit at 95th Pctl (ac-ft)		Cumulative Demand Reduction (multi-year) (ac-ft)	Water Rights/Supply Contract Req'd?	Coordinating Entities	Land Purchase Req'd?	Timing	Discharge Permit Req'd?	Drought Only Supply	Cost Basis Supply Quantity (ac-ft/yr)	Est. Capital Cost	Est. Annual Cost	Est. Unit Cost (Supply Basis) at 95th Pctl (\$/kgal)	Est. Unit Cost at 95th Pctl (\$/ac-ft)
		Low	High												
Demand-side Management	Drought Response Stage 3	17,000	19,000		N	N/A	N	If needed - is in DCP	N	Y	* (see footnote below)	\$0	* (see footnote below)	* (see footnote below)	* (see footnote below)
	Interim Drought Response - Hand-watering only	12,000	15,500		N	N/A	N	Directors Authority	N	Y	* (see footnote below)	\$0	* (see footnote below)	* (see footnote below)	* (see footnote below)
	Emergency Drought Stage 4	24,000	26,000		N	N/A	N	If needed - is in DCP	N	Y	* (see footnote below)	\$0	* (see footnote below)	* (see footnote below)	* (see footnote below)
	Mandatory Toilet Retrofit on Resale	128	128	1,280	N	RECA, BOR, BOMA	N	3-10 yrs	N	N	128	\$0	\$75,000	\$2.39	\$780
	Limit irrigated area in new residential development	178	178	1,246	N	HBA, RECA	N	3-5 yrs	N	N	178	\$0	\$150,000	\$2.57	\$840
	Require new facilities to capture A/C condensate for reuse	31	31	310	N	WPD	N	10 yrs	N	N	31	\$0	\$75,000	\$7.50	\$2,400
	Require retrofit of existing cooling towers to meet efficiency standards	73	73	292	N	RECA, BOMA	N	4 yrs	N	N	73	\$0	\$75,000	\$3.15	\$1,027
	Require home audits at time of sale	589	589	589	N	RECA, BOR, AE	N	10 yrs	N	N	589	\$0	\$75,000	\$3.91	\$1,270
	Mandatory irrigation audits for high users	371	371	742	N	N/A	N	2 yrs	N	N	371	\$0	\$150,000	\$1.24	\$404
	Implement smart meters for residential customers	986	986	4,928	N	AE	N	5 yrs	N	N	986	\$95,500,000	\$300,000	\$6.04	\$19,683
	Additional staff for marketing reclaimed water program	78	78	390	N	N/A	N	5 yrs	N	N	78	\$0	\$75,000	\$2.95	\$961
	Water budget rates (applied to irrigation-only meters)	1,000	1,000	2,000	N	AE, BOMA, RECA	N	2 yrs	N	N	1,000	\$0	N/A	N/A	N/A
	Hot water on demand incentives	6	6	59	N	N/A	N	10 yrs	N	N	6	\$0	\$55,000	\$29.00	\$9,322
	Provide rebates for 0.8gpf toilets	29	29	145	N	N/A	N	1 yr	N	N	29	\$0	\$50,000	\$52.00	\$17,000
	Direct Reuse - Completing the Core	TBD	TBD		N	N/A	N	5-7 yrs	N	N	TBD	\$41,395,000	\$1,275,000	TBD	TBD
Operational Improvements	Operate Longhorn Dam Lift Gates	2,000	4,000		N	LCRA, AE	N	<6 Mos.	N	Y	3,000	\$0	\$25,000	\$0.03	\$8
	Reduced Lake Evaporation (Long & LBL)	800	1,200		N	TCEQ, TPWD	N	<6 Mos.	N	Y	1,000	\$0	\$275,000	\$0.84	\$275
	Walter Long Off-Channel Storage (Existing Capacity)	1,000	4,000		??	LCRA, AE, TCEQ	N	<6 Mos.	N	Y	2,500	\$0	\$160,000	\$0.20	\$64
	Relocate SAR Discharge Above Austin Gauge - Existing Reclaimed System	0	1,000		N	TCEQ, LCRA	N	1-2 yrs	Y	Y	500	\$294,000	\$57,000	\$0.35	\$114
	Lake Austin Operation	0	5,000		N	LCRA	N	<6 Mos.	N	Y	2,500	\$0	\$25,000	\$0.03	\$10
Enhanced Operations	Automate Longhorn Dam Gates	4,000	7,000		N	LCRA, AE	N	1-2 yrs	N	N	5,500	\$750,000	\$80,000	\$0.04	\$15
	Walter Long Off-Channel Storage (Enhanced Capacity)	8,000	20,000		??	LCRA, AE, TCEQ	N	1-2 yrs	Y	Y	14,000	\$22,340,000	\$2,561,000	\$0.56	\$183
	Capture Local Inflows in Lady Bird Lake	1,000	3,000		N	N/A	N	1-2 yrs	N	Y	2,000	\$1,743,000	\$669,000	\$1.03	\$334
	Aquifer Storage and Recovery - Northern Edwards	4,000	4,000		N	TCEQ	Y	3-5 yrs	N	N	4,000	\$130,000,000	\$4,000,000	\$3.07	\$1,000
	Indirect Potable Reuse - SAR to Lady Bird Lake <sup>2</sup>	20,000	20,000		??	TCEQ, LCRA	N	2-3 yrs	Y	Y	20,000	\$30,485,000	\$3,794,000	\$0.58	\$190
Alternative Groundwater Supplies	Existing BlueWater System <sup>1</sup> (Treat and Deliver)	12,000	12,000		Y	BlueWater	N	1 yr	N	Y/N	12,000	\$26,448,000	\$18,310,000	\$4.68	\$1,526
	Forestar <sup>1</sup>	10,000	10,000		Y	Forestar	N	2-3 yrs	N	Y/N	???	???	???	???	???
	Northern Edwards Wellfield <sup>1</sup>	1,000	1,500		N	N/A	Y	2 yrs	N	N	1,200	\$7,624,000	\$517,000	\$1.32	\$431
	Vista Ridge <sup>1</sup>	50,000	50,000		Y	SAWS	N	3 yrs	N	Y	???	???	???	???	???
	HCPUA <sup>1</sup>	25,000	25,000		Y	HCPUA	N	2-3 yrs	N	Y	25,000	???	???	???	???
Other Mid- and Long-term Supplies	Down Dip Brackish Edwards <sup>1</sup>	5,000	10,000		Y	TCEQ, BSEACD	Y	5 - 10 yrs	Y	Y/N	7,500	\$90,000,000	\$13,000,000	\$5.32	\$1,733
	Reclaimed Water Infiltration	20,000	40,000		N	TCEQ	N	5 - 10 yrs	??	N	30,000	\$110,000,000	\$20,000,000	\$2.05	\$667
	Colorado Bed and Banks Permit <sup>1</sup>	40,000	70,000		Y	LCRA, TCEQ	Y	10 - 15 yrs	N	N	55,000	\$310,000,000	\$38,000,000	\$2.12	\$691

<sup>1</sup> These alternatives represent a treated water supply and would not incur the water treatment costs the other alternatives would require

<sup>2</sup> Yield and unit cost calculation assumes extremely reduced downstream environmental flow requirements

\* Drought Contingency Plan (DCP) Stage 3 and 4 implementation costs are included in the current Austin Water O&M budget. However, these costs do not address the community costs/impacts of additional restrictions.