	Strategy Type(s)																	
ASR	Conservation/Drought Management	Groundwater Desal	Groundwater Dvlp	Reuse	New Major Reservoir	Other Surface Water	Seawater Desal	Conjunctive Use	Other WMS (Subordination, etc)	Region	Overall TWDB Task Number	SubTask WMS evaluation number	SubTask WMS	SubTask Scope of Work Write-up	Deliverable	SubTask Budget ($)	WUG(s) &/OR WWP Entities Potentially Served by WMS(s)	Addressing a changed condition from previous cycle? If yes, describe the changed condition.	When was this WMS identified by RWPG as potentially feasible?	Was the WMS evaluated in any previous Regional Water Planning Cycles?	Is evaluation a limited update to previous technical evaluation information? If no, indicate specific update in subtask sow column E
	X									K	**5A**	1	Drought Management	Drought management strategy evaluations will be updated based on existing drought contingency plans. Re-assessments of whether drought management is an appropriate strategy for a particular WUG will be performed based on the conditions under which the base GPCD demand numbers were determined. Drought Management will be considered for all municipal WUGs, and other WUGs with needs.	Updated WMS documentation will include discussion of strategy, firm DOR demand reduction yields, environmental factors, engineering & costing considerations, and implementation issues. Corresponding data will be submitted through the DB22 interface.	$ 20,000	All municipal WUGs; other WUGs with needs	Yes, new municipal WUG and potential updated Drought Contingency Plans	July 11, 2018 Region K meeting	Yes	No
	X									K	**5A**	2	Advanced Water Conservation Strategies	Advanced Conservation WMS may be evaluated for all water use categories including Municipal, Industrial, Irrigation, Livestock, Mining, and Steam-Electric. Success of conservation implementation during 2011 (dry year) and other years will be evaluated and used to help establish highest practicable levels of conservation. Assessments of whether conservation is an appropriate strategy for a particular WUG will be performed based on the conditions under which the base GPCD demand numbers were determined. All strategies will be assessed to determine needs, applicable participants, costs, social and environmental impacts, and DOR firm yield. GIS exhibits will be developed. Cost estimates will be developed utilizing TWDB costing tool modified as appropriate to Region K. Conservation WMS may include, but are not limited to: technology-based conservation programs, rebates, and water-efficient irrigation. As is required, these RWPG recommendations shall be assumed to be the "highest practicable level" of conservation for WUGs that are dependent upon WMSs involving an interbasin transfer(s). Each WMSP with a capital cost will be presented separately in the 2021 Plan and DB22.	Updated WMS documentation will include discussion of strategy, firm DOR demand reduction yields, environmental factors, engineering & costing considerations, and implementation issues. Corresponding data will be submitted through the DB22 interface. WMSP locations will be approximated using GIS.	$ 30,000	Municipal and Irrigation WUGs; possibly others with needs	Yes, new municipal WUGs; public input request to consider new methodology; available conservation quantification study	July 11, 2018 Region K meeting	Yes	No
		X								K	**5A**	3	Expand Local Use of Groundwater	Strategy will evaluate whether additional groundwater is available to meet water needs for entities currently using groundwater. MAG values will be considered and potential MAG Peak Factors may be considered, as directed by the RWPG, and correlated with identified WUG needs. All strategies will be assessed to determine needs, applicable participants, costs, social and environmental impacts, and DOR firm yield. GIS exhibits will be developed. Cost estimates will be developed utilizing TWDB costing tool modified as appropriate to Region K. Aquifers to be considered may include five major, seven minor, and other aquifers located within Region K.	Updated WMS documentation will include discussion of strategy, firm DOR yields, environmental factors, engineering & costing considerations, and implementation issues. Corresponding data will be submitted through the DB22 interface. WMSP locations will be approximated using GIS.	$ 25,000	WUGs that are currently served by groundwater and looking to expand the amount of groundwater they use from a specific source.	Yes, new municipal WUGs, MAG volume changes, and introduction of MAG Peak Factor	July 11, 2018 Region K meeting	Yes	No
						X				K	5A	4	City of Austin Return Flows	Per the 2007 settlement agreement between the COA and LCRA that resolved several permitting disputes, an arrangement for shared rights to the beneficial use of return flows discharged by the COA exists, subject to TCEQ permit approval. The settlement contemplates that the return flows will be managed between the two parties to first help satisfy environmental flow needs before Austin conducts indirect reuse. This water management strategy will identify any City of Austin indirect reuse project opportunities per the 2007 agreement, as well as potential supplies for additional downstream users. Development of a strategy version of the Region K Cutoff Model will be required to perform analysis. Costs and yields as well as permitting and implementation factors will be addressed.	Updated WMS documentation will include discussion of strategy, firm DOR supply, environmental factors, costing considerations, and implementation issues. Corresponding data will be submitted through the DB22 interface.	$ 12,000	City of Austin and other downstream run-of-river users	Yes, need to update Region K Cutoff Model for strategy evaluation	July 11, 2018 Region K meeting	Yes	No
													Original Partial SOW (Subtasks 1-4), approved by RWPG on August 29, 2018		**Total Original Budget**	**$ 87,000**					
				X						K	**5A**	5	Reuse	Opportunities for reuse of reclaimed water will be evaluated for LCRA, COA, and others. Reuse opportunities include: centralized direct non-potable; decentralized direct non-potable; direct potable; and indirect. The strategy will utilize treated wastewater for landscape irrigation, agricultural or commercial irrigation, industrial cooling and process water, municipal, manufacturing, steam-electric, and other uses. Specific sources of wastewater and end-use facilities will be considered and identified along with any necessary treatment and transmission costs. Resulting reduction of demands on surface and groundwater will be quantified. Consideration of reduced wastewater quantities during times of conservation and drought measures will be included.	Updated WMS documentation will include discussion of strategy, firm DOR yields, environmental factors, engineering & costing considerations, and implementation issues. Corresponding data will be submitted through the DB22 interface. WMSP location will be approximated using GIS.	$ 14,000	LCRA, COA, Blanco, Buda, Burnet, Cypress Ranch WCID 1, Horseshoe Bay, Lago Vista, Leander, Llano, Marble Falls, Pflugerville, Sweetwater Community, West Travis County PUA, other potential WUGs.	Yes; new municipal WUGs and new requests for projects.	July 11, 2018 Region K meeting	Yes, 4th planning cycle, recommended in 2016 Plan	No
		X								K	**5A**	6	Development of New Groundwater Supplies	Development of new groundwater will be considered for WUGs across Region K. MAG values will be considered and correlated with identified WUG needs and MAG peak factors may be considered at request of RWPG. Strategies will incorporate development of new well fields and any necessary treatment requirements. Transmission and connection infrastructure configurations to serve potential customers will be developed and assessed. Coordination inter-regionally and intra-regionally will occur, as needed. All strategies will be assessed to determine needs, applicable participants, costs, social and environmental impacts, and DOR firm yield. Aquifers to be considered may include five major, seven minor, and other aquifers located within Region K.	Updated WMS documentation will include discussion of strategy, firm DOR yields, environmental factors, engineering & costing considerations, and implementation issues. Corresponding data will be submitted through the DB22 interface. WMSP location will be approximated using GIS.	$ 13,000	WUGs that are not currently served by a specific groundwater source and are looking to use a new source.	Yes; new municipal WUGs, MAG volume changes, and introduction of MAG Peak Factor	July 11, 2018 Region K meeting	Yes, 4th planning cycle, recommended in 2016 Plan	No

Strategy Type(s)

ASR	Conservation/Drought Management	Groundwater Desal	Groundwater Dvlp	Reuse	New Major Reservoir	Other Surface Water	Seawater Desal	Conjunctive Use	Other WMS (Subordination, etc)	Region	Overall TWDB Task Number	SubTask WMS evaluation number	SubTask WMS	SubTask Scope of Work Write-up	Deliverable	SubTask Budget ($)	WUG(s) &/OR WWP Entities Potentially Served by WMS(s)	Addressing a changed condition from previous cycle? If yes, describe the changed condition.	When was this WMS identified by RWPG as potentially feasible?	Was the WMS evaluated in any previous Regional Water Planning Cycles?	Is evaluation a limited update to previous technical evaluation information? If no, indicate specific update in subtask sow column E
X										K	**5A**	7	Aquifer Storage and Recovery	Opportunities to utilize groundwater aquifers for temporary storage of diverted and treated surface water, as well as potentially other available sources of water, will be considered. Volume available for storage, appropriate diversion points, storage locations and recovery wells and infrastructure will be determined. Additionally, costing and feasibility of pre-storage treatment to drinking water quality standards per TCEQ regulations will be evaluated. Finally, potential end-users will be identified.	WMS documentation will include discussion of strategy, firm DOR water supply, environmental factors, engineering & costing considerations, and implementation issues. Corresponding data will be submitted through the DB22 interface. WMSP location will be approximated using GIS.	$ 10,000	Municipal WUGs that did not have an ASR strategy in the 2016 Plan.	Yes; new municipal WUGs, MAG volume changes, and introduction of MAG Peak Factor	July 11, 2018 Region K meeting	Yes, 4th planning cycle, recommended in 2016 Plan	No
X										K	**5A**	8	BS/EACD – Edwards/Middle Trinity ASR	Update to 2016 Plan strategy. Opportunities to utilize the Middle Trinity aquifer for temporary storage of excess Edwards BFZ aquifer water, as well as potentially other available sources of water, will be considered. Volume available for storage, appropriate diversion points, storage locations and recovery wells and infrastructure will be determined. Additionally, costing and feasibility of pre-storage treatment to drinking water quality standards per TCEQ regulations will be evaluated. Finally, potential end-users will be identified.	Updated WMS documentation will include discussion of strategy, firm DOR water supply, environmental factors, engineering & costing considerations, and implementation issues. Corresponding data will be submitted through the DB22 interface. WMSP location will be approximated using GIS.	$ 4,000	Buda, Hays County-Other, Hays Mining, other potential WUGs	No	July 11, 2018 Region K meeting	Yes, 4th planning cycle, recommended in 2016 Plan	No
X										K	**5A**	9	BS/EACD – Saline Edwards ASR	Update to 2016 Plan strategy. Opportunities to utilize the saline portion of the Edwards BFZ aquifer for temporary storage of freshwater Edwards BFZ aquifer water, desalinated water, or municipal supply, as well as potentially other available sources of water, will be considered. Volume available for storage, appropriate diversion points, storage locations and recovery wells and infrastructure will be determined. Additionally, costing and feasibility of pre-storage and post-storage treatment to drinking water quality standards per TCEQ regulations will be evaluated. Finally, potential end-users will be identified.	Updated WMS documentation will include discussion of strategy, firm DOR water supply, environmental factors, engineering & costing considerations, and implementation issues. Corresponding data will be submitted through the DB22 interface. WMSP location will be approximated using GIS.	$ 4,000	Buda, Hays County-Other, other potential WUGs	No	July 11, 2018 Region K meeting	Yes, 4th planning cycle, recommended in 2016 Plan	No
X										K	**5A**	10	City of Austin ASR	Update to 2016 Plan strategy. Opportunities to utilize local aquifers for temporary storage of treated excess Colorado River water and effluent from Walnut Creek WWTP, as well as potentially other available sources of water, will be considered. Volume available for storage, appropriate diversion points, storage locations and recovery wells and infrastructure will be determined. Additionally, costing and feasibility of pre-storage treatment to drinking water quality standards per TCEQ regulations will be evaluated. Finally, potential end-users will be identified.	Updated WMS documentation will include discussion of strategy, firm DOR water supply, environmental factors, engineering & costing considerations, and implementation issues. Corresponding data will be submitted through the DB22 interface. WMSP location will be approximated using GIS.	$ 2,500	City of Austin and its customers	Yes; new Austin Water Forward Plan	July 11, 2018 Region K meeting	Yes, 4th planning cycle, recommended in 2016 Plan	No
X										K	**5A**	11	LCRA Aquifer Storage and Recovery (ASR) in Carrizo-Wilcox	Update to 2016 Plan strategy. Opportunities to utilize the Carrizo-Wilcox aquifer for temporary storage of excess treated Colorado River water, as well as potentially other available sources of water, will be considered. Volume available for storage, appropriate diversion points, storage locations and recovery wells and infrastructure will be determined. Additionally, costing and feasibility of pre-storage treatment to drinking water quality standards per TCEQ regulations will be evaluated. Finally, potential end-users will be identified.	Updated WMS documentation will include discussion of strategy, firm DOR water supply, environmental factors, engineering & costing considerations, and implementation issues. Corresponding data will be submitted through the DB22 interface. WMSP location will be approximated using GIS.	$ 2,500	LCRA and LCRA existing and future customers	No	July 11, 2018 Region K meeting	Yes, 4th planning cycle, alternative in 2016 Plan	No
		X								K	**5A**	12	Brackish Groundwater Desalination	Brackish groundwater desalination will be considered for LCRA and WUGs across Region K, as appropriate. MAG values will be considered and correlated with identified WUG needs. TWDB reports on brackisch groundwater production zones will be reviewed and considered. Strategies will incorporate development of new well fields and necessary treatment requirements. Transmission and connection infrastructure configurations to serve potential customers will be developed and assessed. Coordination inter-regionally and intra-regionally will occur, as needed. Aquifers to be considered may include five major, seven minor, and other aquifers located within Region K.	Updated WMS documentation will include discussion of strategy, firm DOR water supply, environmental factors, engineering & costing considerations, and implementation issues. Corresponding data will be submitted through the DB22 interface. WMSP location will be approximated using GIS.	$ 8,000	LCRA and others, as appropriate	Yes, new municipal WUGs, MAG volume changes, and introduction of MAG Peak Factor	July 11, 2018 Region K meeting	Yes, 4th planning cycle, alternative in 2016 Plan	No
		X								K	**5A**	13	Groundwater Importation – Carrizo-Wilcox to LCRA System	Update to 2016 Plan strategy. Strategy will incorporate development of new well fields and necessary treatment requirements to transport water from Carrizo-Wilcox aquifer in Burleson County or possible other counties outside of the region to LCRA (East Travis County). Transmission and connection infrastructure configurations to serve potential customers will be developed and assessed. Coordination inter-regionally and intra-regionally will occur, as needed. All strategies will be assessed to determine needs, applicable participants, costs, social and environmental impacts, and DOR firm yield. GIS exhibits will be developed, as appropriate. Cost estimates will be developed utilizing TWDB costing tool modified as appropriate to Region K.	Updated WMS documentation will include discussion of strategy, firm DOR water supply, environmental factors, engineering & costing considerations, and implementation issues. Corresponding data will be submitted through the DB22 interface. WMSP location will be approximated using GIS.	$ 3,000	LCRA and LCRA customers	Yes, new municipal WUGs, MAG volume changes, and introduction of MAG Peak Factor	July 11, 2018 Region K meeting	Yes, 4th planning cycle, alternative in 2016 Plan	No

Strategy Type(s)

ASR	Conservation/Drought Management	Groundwater Desal	Groundwater Dvlp	Reuse	New Major Reservoir	Other Surface Water	Seawater Desal	Conjunctive Use	Other WMS (Subordination, etc)	Region	Overall TWDB Task Number	SubTask WMS evaluation number	SubTask WMS	SubTask Scope of Work Write-up	Deliverable	SubTask Budget ($)	WUG(s) &/OR WWP Entities Potentially Served by WMS(s)	Addressing a changed condition from previous cycle? If yes, describe the changed condition.	When was this WMS identified by RWPG as potentially feasible?	Was the WMS evaluated in any previous Regional Water Planning Cycles?	Is evaluation a limited update to previous technical evaluation information? If no, indicate specific update in subtask sow column E
			X							K	**5A**	14	Groundwater Importation – Hays County Pipeline	Update to 2016 Plan strategy. Strategy will incorporate development of new well fields and necessary treatment requirements to transport water from Carrizo-Wilcox aquifer in Gonzales County to Hays County. Transmission and connection infrastructure configurations to serve potential customers will be developed and assessed. Coordination inter-regionally and intra-regionally will occur, as needed. Strategy will be assessed to determine updated needs, applicable participants, costs, social and environmental impacts, and DOR firm yield. Cost estimates will be developed utilizing TWDB costing tool modified as appropriate to Region K.	Updated WMS documentation will include discussion of strategy, firm DOR water supply, environmental factors, engineering & costing considerations, and implementation issues. Corresponding data will be submitted through the DB22 interface. WMSP location will be approximated using GIS.	$ 4,500	West Travis County PUA, Dripping Springs, Hays County-Other, and other potential WUGs	Yes, new municipal WUGs, MAG volume changes, and introduction of MAG Peak Factor	July 11, 2018 Region K meeting	Yes, 4th planning cycle, recommended in 2016 Plan	No
			X							K	**5A**	15	Groundwater Importation – Alliance Regional Water Authority Pipeline	Update to 2016 Plan HCPUA Pipeline Strategy. Strategy will incorporate development of new well fields and necessary treatment requirements to transport water from Carrizo-Wilcox aquifer in Gonzales County to 1-35 Corridor area near San Marcos, Kyle, and Buda. Transmission and connection infrastructure configurations to serve potential customers will be developed and assessed. Coordination inter-regionally and intra-regionally will occur, as needed. All strategies will be assessed to determine needs, applicable participants, costs, social and environmental impacts, and DOR firm yield. GIS exhibits will be developed, as appropriate. Cost estimates will be developed utilizing TWDB costing tool modified as appropriate to Region K.	Updated WMS documentation will include discussion of strategy, firm DOR water supply, environmental factors, engineering & costing considerations, and implementation issues. Corresponding data will be submitted through the DB22 interface. WMSP location will be approximated using GIS.	$ 3,000	Buda and other potential WUGs	Yes; This is an updated strategy for the 2016 Plan HCPUA Pipeline, based on Region L correspondence. MAG volume changes, and introduction of MAG Peak Factor	July 11, 2018 Region K meeting	Yes, 4th planning cycle, recommended in 2016 Plan	No
									X	K	**5A**	16	New LCRA Contracts	New contracts between LCRA and potential new customers will be considered and documented in order to meet needs. Strategy will consider WUG's current water source(s). Strategy assumes no new infrastructure will be required to implement strategy. Costs, DOR firm yields, and environmental impacts will be evaluated meeting TWDB requirements.	WMS documentation will include discussion of strategy, firm DOR yields, environmental factors, engineering & costing considerations, and implementation issues. Corresponding data will be submitted through the DB22 interface.	$ 4,000	Potential new LCRA customers	Yes; new WUGs this cycle, potential need to update Region K Cutoff Model for strategy evaluation	July 11, 2018 Region K meeting	Yes, 4th planning cycle, recommended in 2016 Plan	No
						X			X	K	**5A**	17	New LCRA Contracts Requiring Infrastructure	New contracts between LCRA and potential new customers will be considered and documented in order to meet needs. Strategy will consider WUG's current water source(s), identify transmission/treatment requirements, and associated project costs (including infrastructure) for becoming an LCRA customer.	WMS documentation will include discussion of strategy, firm DOR yields, environmental factors, engineering & costing considerations, and implementation issues. Corresponding data will be submitted through the DB22 interface. WMSP location will be approximated using GIS.	$ 8,000	Potential new LCRA customers	Yes; new WUGs this cycle, potential need to update Region K Cutoff Model for strategy evaluation	July 11, 2018 Region K meeting	Yes, 4th planning cycle, recommended in 2016 Plan	No
									X	K	**5A**	18	LCRA Contract Amendments	Contract amendments between LCRA and current customers will be considered and documented in order to meet needs. Strategy assumes no new infrastructure will be required to implement strategy. Costs, DOR yields, and environmental impacts will be evaluated meeting TWDB requirements.	WMS documentation will include discussion of strategy, firm DOR yields, environmental factors, engineering & costing considerations, and implementation issues. Corresponding data will be submitted through the DB22 interface. WMSP location will be approximated using GIS.	$ 3,000	Existing LCRA customers	Yes; new WUGs this cycle, potential need to update Region K Cutoff Model for strategy evaluation	July 11, 2018 Region K meeting	Yes, 4th planning cycle, recommended in 2016 Plan	No
						X			X	K	**5A**	19	LCRA Contract Amendments Requiring Infrastructure	Contract amendments between LCRA and current customers will be considered and documented in order to meet needs. Costs, DOR yields, transmission and connection infrastructure requirements, and environmental impacts will be evaluated meeting TWDB requirements.	WMS documentation will include discussion of strategy, firm DOR yields, environmental factors, engineering & costing considerations, and implementation issues. Corresponding data will be submitted through the DB22 interface.	$ 6,000	Existing LCRA customers	Yes; new WUGs this cycle, potential need to update Region K Cutoff Model for strategy evaluation	July 11, 2018 Region K meeting	Yes, 4th planning cycle, recommended in 2016 Plan	No
									X	K	**5A**	20	New Water Purchase Strategy	Strategy will document the new purchase of water, through contracts, from all non-LCRA sellers. Strategy assumes no new infrastructure will be required to implement strategy. Feasibility, availability, impacts, and associated project costs will be calculated.	WMS documentation will include discussion of strategy, firm DOR yields, environmental factors, engineering & costing considerations, and implementation issues. Corresponding data will be submitted through the DB22 interface.	$ 3,000	Municipal WUGs; other WUGs with needs	Yes; new WUGs this cycle	October 24, 2018 Region K meeting	Yes, 4th planning cycle, recommended in 2016 Plan	No
									X	K	**5A**	21	New Water Purchase Strategy Requiring Infrastructure	Strategy will document the new purchase of water, through contracts, from all non-LCRA sellers. Feasibility, availability, impacts, and associated project costs (including infrastructure) will be calculated.	WMS documentation will include discussion of strategy, firm DOR yields, environmental factors, engineering & costing considerations, and implementation issues. Corresponding data will be submitted through the DB22 interface. WMSP location will be approximated using GIS.	$ 5,000	Municipal WUGs; other WUGs with needs	Yes; potential need to update Region K Cutoff Model for strategy evaluation	October 24, 2018 Region K meeting	No	No

DRAFT

Strategy Type(s)

ASR	Conservation/Drought Management	Groundwater Desal	Groundwater Dvlp	Reuse	New Major Reservoir	Other Surface Water	Seawater Desal	Conjunctive Use	Other WMS (Subordination, etc)	Region	Overall TWDB Task Number	SubTask WMS evaluation number	SubTask WMS	SubTask Scope of Work Write-up	Deliverable	SubTask Budget ($)	WUG(s) &/OR WWP Entities Potentially Served by WMS(s)	Addressing a changed condition from previous cycle? If yes, describe the changed condition.	When was this WMS identified by RWPG as potentially feasible?	Was the WMS evaluated in any previous Regional Water Planning Cycles?	Is evaluation a limited update to previous technical evaluation information? If no, indicate specific update in subtask sow column E
									X	K	**5A**	22	Water Purchase Amendments	Strategy will document the amended purchase of water, through contracts, from all non-LCRA sellers. Strategy assumes no new infrastructure will be required to implement strategy. Feasibility, availability, impacts, and associated project costs will be calculated.	WMS documentation will include discussion of strategy, firm DOR yields, environmental factors, engineering & costing considerations, and implementation issues. Corresponding data will be submitted through the DB22 interface.	$ 3,000	WUGs that are currently purchasing water from a WWP other than LCRA	No	October 24, 2018 Region K meeting	No	No
									X	K	**5A**	23	Water Purchase Amendments Requiring Infrastructure	Strategy will document the amended purchase of water, through contracts, from all non-LCRA sellers. Feasibility, availability, impacts, and associated project costs (including infrastructure) will be calculated.	WMS documentation will include discussion of strategy, firm DOR yields, environmental factors, engineering & costing considerations, and implementation issues. Corresponding data will be submitted through the DB22 interface. WMSP location will be approximated using GIS.	$ 5,000	WUGs that are currently purchasing water from a WWP other than LCRA	No	October 24, 2018 Region K meeting	No	No
									X	K	**5A**	24	Amendment to Existing Water Rights/Permits	Update to 2016 Plan strategy. Amendments to existing water rights and permits will be considered in an effort to optimize existing resources. Strategy includes the acquisition of new water rights either through purchase or permitting. Regulatory obstacles will be documented and yield, cost, and environmental impacts quantified.	Updated WMS documentation will include discussion of strategy, firm DOR yields, environmental factors, engineering & costing considerations, and implementation issues. Corresponding data will be submitted through the DB22 interface.	$ 2,000	LCRA, COA, and possibly other WUGs	Yes; previous cycle focused on LCRA water right amendments. Others requesting this cycle	July 11, 2018 Region K meeting	Yes, 4th planning cycle, recommended in 2016 Plan	No
				X					X	K	**5A**	25	Downstream Return Flows	Return flows from Pflugerville and other potential WUGs downstream of Highland Lakes will be considered for downstream use. Costs and DOR yields as well as permitting and implementation factors will be addressed. The WAM Cutoff Model will be used, as needed. GIS exhibits will be developed, as appropriate.	Updated WMS documentation will include discussion of strategy, firm DOR yields, environmental factors, engineering & costing considerations, and implementation issues. Corresponding data will be submitted through the DB22 interface.	$ 1,500	WUGs downstream of Highland Lakes	No	July 11, 2018 Region K meeting	Yes, 4th planning cycle, recommended in 2016 Plan	No
						X				K	**5A**	26	East Lake Buchanan Project	Limited update to 2016 Plan strategy to construct a new regional surface water treatment plant and deep water intake at Council Creek Village to provide treated surface water to the other communities along the east side of Lake Buchannan. Strategy addresses water reliability and water quality issues.	Updates to WMS documentation will include discussion of strategy and cost only. Corresponding data will be submitted through the DB22 interface.	$ 1,000	Burnet County-Other	No	July 11, 2018 Region K meeting	Yes, 4th planning cycle, recommended in 2016 Plan	Yes
						X				K	**5A**	27	Buena Vista Regional Project	Limited update to 2016 Plan strategy. Update description details and costs of a regional surface water treatment plant to serve the residents in Buena Vista utilizing the existing source of Colorado River, including construction of transmission main from Buchanan WTP to Buena Vista. Addresses water reliability and water quality issues.	Updates to WMS documentation will include discussion of strategy and cost only. Corresponding data will be submitted through the DB22 interface.	$ 1,000	Burnet County WUGs (County-Other and potential others)	No	July 11, 2018 Region K meeting	Yes, 4th planning cycle, recommended in 2016 Plan	Yes
						X				K	**5A**	28	Marble Falls Regional Project	Update to 2016 Plan strategy. Evaluate and document strategy to develop additional surface water and/or groundwater supplies with additional or new surface water to serve existing and future developments. Strategy includes construction of new raw water intake and Regional WTP at Max Starcke Dam, and construction of transmission lines to support future development. Addresses water reliability and water quality issues.	Updated WMS documentation will include discussion of strategy, firm DOR yields, environmental factors, engineering & costing considerations, and implementation issues. Corresponding data will be submitted through the DB22 interface. WMSP location will be approximated using GIS.	$ 1,500	Marble Falls, Burnet County-Other, other potential WUGs	No	July 11, 2018 Region K meeting	Yes, 4th planning cycle, recommended in 2016 Plan	No
									X	K	**5A**	29	Brush Management	Limited update to 2016 Plan strategy. Available reports will be reviewed to determine potential yield and cost data. Strategy may be considered for County-Other in counties where Texas State Soil and Conservation Board funding is available. Cost, yield, and impact data will be general in nature, rather than specific to each WUG.	Updates to WMS documentation will include discussion of strategy and cost only. Corresponding data will be submitted through the DB22 interface.	$ 1,000	County-Other	No	July 11, 2018 Region K meeting	Yes, 4th planning cycle, recommended in 2016 Plan	Yes
	X								X	K	**5A**	30	Reduced Lake Evaporation	NSF-approved product applied to lakes to form a monolayer that reduces evaporation. Literature on the product and process indicates that evaporation could be reduced by 20 to 30%. There may be other products or methods in the arena of evaporation that could be explored. DOR yields, costs, and environmental impacts will be considered for Lady Bird Lake, Lake Long, and potential others. GIS exhibits will be included, as appropriate.	Updated WMS documentation will include discussion of strategy, firm DOR yields, environmental factors, engineering & costing considerations, and implementation issues. Corresponding data will be submitted through the DB22 interface.	$ 2,500	City of Austin and its customers; potential other WWP or WUGs with reservoirs	No	October 24, 2018 Region K meeting	Yes, 4th planning cycle, not recommended in 2016 Plan	No
									X	K	**5A**	31	Water Supply Infrastructure Development or Expansion	Strategy would be considered for water user groups or wholesale water providers that need to expand/improve their infrastructure in order to utilize existing available water via current contracts or water rights, in order to increase their water supply. Strategy will be assessed to determine needs, applicable participants, costs, social and environmental impacts, and DOR firm yield. GIS exhibits will be developed, as appropriate. Cost estimates will be developed utilizing TWDB costing tool or project-specific cost data provided by the project sponsor.	WMS documentation will include discussion of strategy, firm DOR yields, environmental factors, engineering & costing considerations, and implementation issues. Corresponding data will be submitted through the DB22 interface. WMSP location will be approximated using GIS.	$ 6,000	Any WUG with sufficient surface or ground water contracts/permits, but lacking infrastructure to deliver the water	No	July 11, 2018 Region K meeting	Yes, 4th planning cycle, not recommended in 2016 Plan	No

DRAFT

Strategy Type(s)

ASR	Conservation/Drought Management	Groundwater Desal	Groundwater Dvlp	Reuse	New Major Reservoir	Other Surface Water	Seawater Desal	Conjunctive Use	Other WMS (Subordination, etc)	Region	Overall TWDB Task Number	SubTask WMS evaluation number	SubTask WMS	SubTask Scope of Work Write-up	Deliverable	SubTask Budget ($)	WUG(s) &/OR WWP Entities Potentially Served by WMS(s)	Addressing a changed condition from previous cycle? If yes, describe the changed condition.	When was this WMS identified by RWPG as potentially feasible?	Was the WMS evaluated in any previous Regional Water Planning Cycles?	Is evaluation a limited update to previous technical evaluation information? If no, indicate specific update in subtask sow column E
					X					K	**5A**	32	LCRA - Mid-Basin Off-Channel Reservoir	Update to 2016 Plan evaluation of the proposed reservoir. Updates will include firm yield during DOR determination, transmission and connection infrastructure configurations, cost estimate, and potential impacts to the region.	Updated WMS documentation will include discussion of strategy, firm DOR yields, environmental factors, engineering & costing considerations, and implementation issues. Corresponding data will be submitted through the DB22 interface. WMSP location will be approximated using GIS.	$ 6,000	LCRA and LCRA existing and future customers	Yes, need to update Region K Cutoff Model for strategy evaluation	July 11, 2018 Region K meeting	Yes, 4th planning cycle, recommended in 2016 Plan	No
					X					K	**5A**	33	LCRA - Prairie Site Off-Channel Reservoir	Update to 2016 Plan evaluation of the proposed reservoir. Updates will include firm yield during DOR determination, transmission and connection infrastructure configurations, cost estimate, and potential impacts to the region.	Updated WMS documentation will include discussion of strategy, firm DOR yields, environmental factors, engineering & costing considerations, and implementation issues. Corresponding data will be submitted through the DB22 interface. WMSP location will be approximated using GIS.	$ 6,000	LCRA and LCRA existing and future customers	Yes, need to update Region K Cutoff Model for strategy evaluation	July 11, 2018 Region K meeting	Yes, 4th planning cycle, recommended in 2016 Plan	No
					X					K	**5A**	34	LCRA - Excess Flows Off-Channel Reservoir	Update to 2016 Plan evaluation of the proposed reservoir. Updates will include firm yield during DOR determination, transmission and connection infrastructure configurations, cost estimate, and potential impacts to the region.	Updated WMS documentation will include discussion of strategy, firm DOR yields, environmental factors, engineering & costing considerations, and implementation issues. Corresponding data will be submitted through the DB22 interface. WMSP location will be approximated using GIS.	$ 6,000	LCRA and LCRA existing and future customers	Yes, need to update Region K Cutoff Model for strategy evaluation	July 11, 2018 Region K meeting	Yes, 4th planning cycle, recommended in 2016 Plan	No
					X					K	**5A**	35	LCRA - Baylor Creek Reservoir	Limited update to the 2016 Plan evaluation of this proposed reservoir. Update to description details and costs only.	Updated WMS documentation will include discussion of strategy and cost. Corresponding data will be submitted through the DB22 interface.	$ 2,000	LCRA and LCRA existing and future customers	No	July 11, 2018 Region K meeting	Yes, 4th planning cycle, alternative in 2016 Plan	Yes
									X	K	**5A**	36	Amendments to LCRA Water Management Plan	Update to 2016 Plan strategy. The 2015 LCRA WMP is currently under revision. Consider current and possible future triggers with respect to environmental flow assumptions and interruptible water supplies for Irrigation. Interruptible supplies are not considered in the supply WAM Cutoff Model, but can be evaluated as a strategy by using projected, rather than authorized, water demands over the planning period. Strategy will determine DOR yield, costs, social, environmental, and other impacts.	Updated WMS documentation will include description and discussion of impacts of WMP amendments on interruptible DOR supply, environmental factors, engineering & costing considerations, and implementation issues. Corresponding data will be submitted through the DB22 interface.	$ 6,000	LCRA; Irrigation	Yes, new LCRA WMP and need to update Region K Cutoff Model for strategy evaluation	July 11, 2018 Region K meeting	Yes, 4th planning cycle, recommended in 2016 Plan	No
									X	K	**5A**	37	Supplement Bay and Estuary Inflows with Brackish Groundwater Thereby Replacing Demands on LCRA Highland Lakes Firm Yield	Limited update to the 2016 Plan strategy. Update to description details and costs only.	Updated WMS documentation will include discussion of strategy and cost. Corresponding data will be submitted through the DB22 interface.	$ 2,000	LCRA and LCRA existing and future customers	No	July 11, 2018 Region K meeting	Yes, 4th planning cycle, alternative in 2016 Plan	Yes
						X				K	**5A**	38	Import Return Flows from Williamson County	Update to the 2016 Plan strategy. This strategy allows for a portion of the return flows from water sold by LCRA to entities in Williamson County to be returned to LCRA for use in either the Brazos or Colorado River Basins. This strategy would require an interbasin transfer permit and will be coordinated with Region G. Updates to the strategy will include firm yield during DOR determination, transmission and connection infrastructure configurations, cost estimate, and potential impacts to the region.	Updated WMS documentation will include discussion of strategy, firm DOR yields, environmental factors, engineering & costing considerations, and implementation issues. Corresponding data will be submitted through the DB22 interface. WMSP location will be approximated using GIS.	$ 6,000	LCRA and LCRA existing and future customers	No	July 11, 2018 Region K meeting	Yes, 4th planning cycle, alternative in 2016 Plan	No
								X		K	**5A**	39	Enhanced Recharge and Conjunctive Use	Update to the 2016 Plan strategy. This strategy involves diverting surface water from the Colorado River under LCRA water rights and pumping to recharge basins located in the recharge zone of the Gulf Coast Aquifer. Updates to the strategy will include firm yield during DOR determination, transmission and connection infrastructure configurations, cost estimate, potential impacts to the region, and implementation issues.	Updated WMS documentation will include discussion of strategy, firm DOR yields, environmental factors, engineering & costing considerations, and implementation issues. Corresponding data will be submitted through the DB22 interface. WMSP location will be approximated using GIS.	$ 5,000	LCRA, and others, as appropriate	No	July 11, 2018 Region K meeting	Yes, 4th planning cycle, alternative in 2016 Plan	No
	X									K	**5A**	40	City of Austin Conservation	Update to 2016 Plan strategy with new components. This update will incorporate conservation-related components of the Austin Water Forward Plan, including local onsite blackwater and greywater reuse, onsite rainwater and stormwater harvesting, and AC condensate, in addition to other conservation measures. Updated strategy will include description and discussion of planned facilities, firm DOR water demand reductions, environmental factors, engineering & costing considerations, and implementation issues.	Updated WMS documentation will include discussion of strategy, firm DOR demand reductions, environmental factors, engineering & costing considerations, and implementation issues. Corresponding data will be submitted through the DB22 interface. WMSP location will be approximated using GIS.	$ 4,000	City of Austin and existing customers	Yes, new Austin Water Forward Plan	July 11, 2018 Region K meeting	Yes, 4th planning cycle, recommended in 2016 Plan	No

DRAFT

Strategy Type(s)

ASR	Conservation/Drought Management	Groundwater Desal	Groundwater Dvlp	Reuse	New Major Reservoir	Other Surface Water	Seawater Desal	Conjunctive Use	Other WMS (Subordination, etc)	Region	Overall TWDB Task Number	SubTask WMS evaluation number	SubTask WMS	SubTask Scope of Work Write-up	Deliverable	SubTask Budget ($)	WUG(s) &/OR WWP Entities Potentially Served by WMS(s)	Addressing a changed condition from previous cycle? If yes, describe the changed condition.	When was this WMS identified by RWPG as potentially feasible?	Was the WMS evaluated in any previous Regional Water Planning Cycles?	Is evaluation a limited update to previous technical evaluation information? If no, indicate specific update in subtask sow column E
				X						K	**5A**	41	City of Austin Centralized Direct Non-Potable Reuse	Update to 2016 Plan Direct Reuse strategy. This update will include projects incorporating centralized direct reuse components of the Austin Water Forward Plan. Updated strategy will include description and discussion of planned facilities, firm DOR water supply, environmental factors, engineering & costing considerations, and implementation issues.	Updated WMS documentation will include discussion of strategy, firm DOR water supply, environmental factors, engineering & costing considerations, and implementation issues. Corresponding data will be submitted through the DB22 interface. WMSP location will be approximated using GIS.	$ 3,000	City of Austin (Municipal, Manufacturing, and Steam Electric)	Yes, new Austin Water Forward Plan	July 11, 2018 Region K meeting	Yes, 4th planning cycle, recommended in 2016 Plan	No
				X						K	**5A**	42	City of Austin Decentralized Direct Non-Potable Reuse	Update to 2016 Plan Other Reuse strategy with new components. This update will include projects incorporating decentralized direct reuse components of the Austin Water Forward Plan. Updated strategy will include description and discussion of planned facilities, firm DOR water supply, environmental factors, engineering & costing considerations, and implementation issues.	Updated WMS documentation will include discussion of strategy, firm DOR water supply, environmental factors, engineering & costing considerations, and implementation issues. Corresponding data will be submitted through the DB22 interface. WMSP location will be approximated using GIS.	$ 3,500	City of Austin (Municipal, Manufacturing, and Steam Electric)	Yes, new Austin Water Forward Plan	July 11, 2018 Region K meeting	Yes, 4th planning cycle, recommended in 2016 Plan	No
						X				K	**5A**	43	Capture Local Inflows to Lady Bird Lake	Limited update to 2016 Plan strategy based on Austin Water Forward Plan. Updates would be limited to description details, project yield, and costs only.	Updated WMS documentation will include discussion of strategy, yield, and cost. Corresponding data will be submitted through the DB22 interface.	$ 1,500	City of Austin and existing customers	Yes, new Austin Water Forward Plan	July 11, 2018 Region K meeting	Yes, 4th planning cycle, recommended in 2016 Plan	Yes
	X									K	**5A**	44	Lake Austin Operations	Limited update to 2016 Plan strategy. This strategy would be used as a best management practice during times of drought. Update will be limited to cost.	Updated WMS documentation will include cost. Corresponding data will be submitted through the DB22 interface.	$ 1,000	City of Austin and existing customers	No	July 11, 2018 Region K meeting	Yes, 4th planning cycle, recommended in 2016 Plan	Yes
						X				K	**5A**	45	Community-Scale Stormwater Harvesting	This is a replacement strategy for the 2016 Plan City of Austin Rainwater Harvesting strategy, based on the Austin Water Forward Plan. This strategy involves the collection of excess stormwater runoff from urban areas (including paved surfaces and roofs) for treatment and use. Strategy evaluation will include description and discussion of planned facilities, firm DOR water supply, environmental factors, engineering & costing considerations, and implementation issues.	Updated WMS documentation will include discussion of strategy, firm DOR water supply, environmental factors, engineering & costing considerations, and implementation issues. Corresponding data will be submitted through the DB22 interface. WMSP location will be approximated using GIS.	$ 4,000	City of Austin and existing customers	Yes, new Austin Water Forward Plan	July 11, 2018 Region K meeting	Was evaluated and recommended as rainwater harvesting in 4th planning cycle for 2016 Plan.	No
									X	K	**5A**	46	STPNOC Alternate Canal Delivery	Limited update to 2016 Plan strategy. Diversion point upstream of Bay City Dam would allow for diversion of water that is not impacted by the salinity levels found at the normal delivery point. Strategy would allow diversions during winter months. Update will be to costs only.	Updated WMS documentation will include cost. Corresponding data will be submitted through the DB22 interface.	$ 1,000	Steam-Electric in Matagorda County	No	July 11, 2018 Region K meeting	Yes, 4th planning cycle, recommended in 2016 Plan	Yes
						X				K	**5A**	47	STPNOC Brackish Surface Water Blending	Limited Update to 2016 Plan strategy. During an emergency situation, when STPNOC reservoir reaches 30 feet MSL, STPNOC and LCRA will pursue relief from TCEQ to be allowed to pump brackish surface water to blend in with the existing fresh water in the STPNOC reservoir in order to increase their water supply. Strategy description and DOR firm yield will be updated only. There are no costs associated with this strategy.	Updated WMS documentation will be provided. Corresponding data will be submitted through the DB22 interface.	$ 1,000	Steam-Electric in Matagorda County	No	July 11, 2018 Region K meeting	Yes, 4th planning cycle, recommended in 2016 Plan	Yes
X				X		X			X	K	**5A**	48	City of Wharton Water Supply Strategy	Update to strategy that was considered for 2016 Plan. This strategy incorporates several project components: in-channel detention, off-channel storage, groundwater development, reuse, and ASR. Strategy evaluation will include description and discussion of planned facilities, firm DOR water supply, environmental factors, engineering & costing considerations, and implementation issues.	Updated WMS documentation will include discussion of strategy, firm DOR water supply, environmental factors, engineering & costing considerations, and implementation issues. Corresponding data will be submitted through the DB22 interface. WMSP location will be approximated using GIS.	$ 6,000	Wharton, Irrigation, and possible others	No	July 11, 2018 Region K meeting	Yes, 4th planning cycle, considered but not recommended in 2016 Plan due to timing.	No

Amended Partial SOW (Subtasks 5-48), October 2018 **Amended Budget for Subtasks 5-48** **$ 186,000**

REGION-SPECIFIC SUBTASKS TOTAL SCOPED BUDGET TO-DATE	**$ 273,000**