

REGION C WATER PLANNING GROUP

Senate Bill One Fifth Round of Regional Water Planning - Texas Water Development Board

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April 10, 2018

Jeff Walker
Texas Water Development Board
1700 North Congress
Austin, Texas 78711-3231

RE: RCWPG Approved Initial Scope for Task 5A and Request for Notice-To-Proceed

Dear Mr. Walker:

At the April 9, 2018 Region C Water Planning Group (RCWPG) meeting, the RCWPG approved an initial region-specific scope and budget for Task 5A (Evaluation and Recommendation of WMSs and Associated WMS Projects). For your consideration, attached is the RCWPG-approved scope and budget, in the TWDB-required spreadsheet format. The fee for this portion of the region-specific scope is \$412,500. Region C will provide additional scope and fee for the remainder of the Task 5A budget at a later time.

The RCWPG also authorized our political subdivision, Trinity River Authority, to amend the Regional Planning Contract with TWDB (TWDB Contract No. 1548301831) and to request from TWDB a Notice-to-Proceed on this initial Task 5A scope.

Please call me if you have any questions regarding our request.

Sincerely,



Jo M. (Jody) Puckett

Chair, Region C Water Planning Group

C: Kevin Ward, Region C Secretary
Connie Townsend, TWDB Project Manager
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Region C - Draft Scope of Work for Task 5A – Phase 1

The TWDB developed a scope of work for Water Management Strategies (Task 5A), which includes the development and evaluation of water management strategies and development of Chapter 5 of the 2021 Region C Water Plan (see Attachment 1). The scope items that are necessary for regulatory compliance are outlined in the executed contracts and shown in Attachment 1. However, specific scopes of work for the evaluations of potentially feasible water management strategies are to be developed by the regions. All funds for this task are contingent upon written notice to proceed. The total budget in the executed contract for this effort is \$1,095,005. This memorandum presents the scope and fee for a portion of the effort to complete this task. The scope for the remainder of the effort to complete the strategies evaluations and prepare Chapter 5 of the Region C Water Plan will be developed after the needs analysis is completed.

Many of the water management strategies in Region C are sponsored by a wholesale water provider. Preliminary needs analyses have been conducted for these providers, which continue to show significant projected needs over the planning cycle. Through meetings and correspondence, each of these providers identified the strategies to be retained in the Region C Water Plan. Some new strategies were also identified. Region C requests the authorization of funds to evaluate strategies for wholesale water providers prior to the completion of the needs analysis.

All strategies will be identified and evaluated in accordance with the rules and guidance for regional water planning. Technical evaluations will be conducted for each potentially feasible WMS including previously identified or recommended WMSs and newly identified WMSs; WMS documentation will include a strategy description, discussion of associated facilities, and technical evaluation addressing all considerations and factors required under 31 TAC §357.34(d)(e)(f) and §357.35.

All strategies will require review and updating of WMS quantities and costs. Data developed under this task, including quantity and cost, will be updated and entered into the TWDB database, DB22.

The following Region-Specific scope of work represents the effort to complete a portion of Task 5A. The scope items shown in Attachment 1 apply to the evaluations of all potentially feasible water management strategies and may not be repeated in the scope descriptions below.

1. Consider available plans in developing WMSs. Collect and review (to the extent available and reasonable) the following types of plans to gather information to be considered in evaluating and recommending WMSs and WMSPs:
 - Publicly available Water Supply Plans for Water Users and Providers
 - Local/regional water management Plans
 - Groundwater Conservation District Plans from the following CGDs: North Texas, Northern Trinity, Prairielands, Red River Upper Trinity, Neches & Trinity Valleys, Mid-East Texas, Pineywoods, Post Oak Savannah.
 - Other plans as available
2. Evaluate and document selection of all recommended Water Management Strategies (WMS) and associated projects.
 - Prepare technical memoranda that describe each of the major potentially feasible water management strategies (PFWMS)

- Develop matrices for evaluating PFWMS
 - Select criteria, parameters, ranges, weighting
 - Populate matrix with qualitative and quantitative data
 - Based on matrix scoring, select recommended WMSs/WMSPs
3. Inter-regional and Intra-regional coordination, communication, and facilitation.
- Interregional coordination memos/calls. Develop interregional coordination memos with adjacent regions (D, G, H, and I). Include all shared WUGS (including new WUGs). Conduct conference calls with each adjacent region to discuss the following, results of which will be captured in final inter-regional coordination memos:
 - i. WMS supplies located in adjacent region used in Region C
 - ii. WMS supplies located in Region C used in adjacent region
 - iii. Other issues of mutual interest
 - iv. Follow-up action items
 - Additional interregional coordination. As needed, correspond with adjacent regions regarding shared WUGs or resources, DB22 entry, and other items as needed.
 - Coordination within the region. Communication/coordination including but not limited to conducting meetings with large WWP, surveying WWP/WUGs, and directly contacting WWP/WUGs or other entities.
4. Update the analyses of the larger water management strategies in the 2016 Region C Water Plan to incorporate changed conditions. The larger water management strategies are listed below in four primary categories: 4 a. "Not Implemented since 2016 Region C Water Plan", 4 b. "Partially Implemented or in Design Phase", 4c. "In Study or Permit Phase", and 4d. "Other Changes since 2016 Plan."
- 4a. Not Implemented since 2016 Region C Water Plan: For the following strategies, few changed conditions are anticipated. However, strategies need to be revisited and updated for reasons such as updating cost estimates with revised unit costs, confirmation of supply amount, changes to transmission routes, additions/deletions of users of supply, etc. For example, the strategies that require new water rights (Neches Run-of-River and Lake Tehuacana) will need to be re-evaluated with the latest TCEQ WAMs.
- Toledo Bend Reservoir
 - Gulf of Mexico with Desalination
 - Lake Texoma Not Yet Authorized – Blend
 - Lake Texoma Not Yet Authorized- Desalination
 - Oklahoma Water
 - Lake Texoma – Blend
 - Neches River Run-of-the-River Diversion
 - Lake Texoma- Desalination
 - Carrizo-Wilcox Groundwater (Region D)
 - Cypress Basin Supplies (Lake O' the Pines)
 - DWU Southside (Lake Ray Hubbard) Reuse
 - DWU Lake Lewisville Reuse
 - Tehuacana Reservoir
 - Lake Columbia

- 4b. Partially Implemented or in Design Phase: The following strategies are known to be partially implemented or in design phase. Based on further study or design that has been done since publication of the *2016 Region C Water Plan*, these strategies should be revisited and updated accordingly. Updates may be made to supply amounts, cost estimates, expected in-service dates, etc.
- Lake Palestine Connection (DWU Integrated Pipeline with TRWD)
 - TRWD Cedar Creek Wetlands
 - Lower Bois d'Arc Creek Reservoir
- 4c. In Study or Permit Phase: The following strategies are known to be in study or permitting phase. Based on further study that has been done since publication of the *2016 Region C Water Plan*, these strategies should be reviewed and updated. Updates may be made to supply amounts, cost estimates, expected in-service dates, environmental impacts, etc.
- Lake Ralph Hall and Reuse
 - Lake Ringgold
- 4d. Significantly Changed since 2016 Plan
- The Sulphur Basin Supplies strategy may change as a result of the U.S. Army Corps of Engineers (USACE) pending decision regarding raising the conservation pool at Wright Patman Lake. The Sulphur Basin Supplies strategies will be updated for the Region C Water Plan to be consistent with the results of the USACE decision. The elements that make up the Sulphur Basin Supplies are listed below:
- Wright Patman Lake-System
 - Wright Patman Lake-Raise Conservation Pool
 - Wright Patman Lake-Texarkana
 - Marvin Nichols Reservoir
 - George Parkhouse Lake (North)
 - George Parkhouse Lake (South)
5. Develop New Strategies for Wholesale Providers. During meetings with Region C wholesale water providers, several new strategies were identified for evaluation and inclusion in the Region C Water Plan. These strategies will be further developed through coordination with the respective sponsor, review of previous studies, and evaluation of potential source water.
- New Groundwater from Carrizo-Wilcox (TRWD)
 - Aquifer Storage and Recovery (TRWD)
 - Additional Reuse (TRWD)
 - Reallocation of Storage in Joe Pool Lake (TRA)
 - Additional reuse, multiple projects (NTMWD)
6. Assignment and Allocation of WMS supplies. Assignment and allocation of WMS supplies for all recommended WMS supplies to meet projected needs of specific WUGs. This task will be performed after the evaluation and selection of WMSs. This includes county-split and region-split allocation of supplies, rolling up supplies by water providers who have customers for proper DB22 entry, and other analyses required to provide WMS supplies to TWDB in proper format.

7. Coordination of Strategy Development. This task includes all coordination with sponsoring water user groups, wholesale water providers, TWDB, and/or other resource agencies regarding any changed conditions in terms of projected needs, strategy modifications, planned facilities, new strategies, market costs of water supply, endangered or threatened species, institutional changes, water contracts, partnering agreements, etc.
8. Submission of data through DB22. All necessary data will be entered into DB22, reviewed for accuracy, and if necessary revised for accuracy. Entities: All WUGs and WWPs for which a WMS was identified and evaluated under this scope of work.
9. Documentation. Prepare a summary presentation of the recommended and alternative water management strategies for the 2021 Region C Water Plan for the Region C WPG. Portions of the following sections of Chapter 5 (and related appendices) will be written as part of this subtask:
 - Chapter 5B – Evaluation of Major Water Management Strategies
 - Chapter 5C – Recommended Water Management Strategies for WWPs

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Region	Overall TWDB Task Number	SubTask WMS evaluation number	SubTask WMS and/or WMSP Title	SubTask Scope of Work Write-up	Deliverable	SubTask Budget	WUG(s) &/OR WWP Entities Potentially Served by WMS(s)/WMSP(s)	Addressing a changed condition from previous cycle? If yes, describe the changed condition.	When was this WMS/WMSP identified by RWPG as potentially feasible?	Was the WMS/WMSP 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
C	5A	4a	Toledo Bend Reservoir	See scope of work. Includes multiple supply and infrastructure configurations; coordination with project sponsors, SRA, re-evaluation of supplies, costs and infrastructure requirements. Will need to revisit the pipeline intake and route.	Technical memorandum	\$ 20,000	NTMWD , TRWD, UTRWD, DWU	Yes. Intake location and potential participants	Previous plans	Yes	No
C	5A	4a	Gulf of Mexico with Desalination	See scope of work. Includes coordination with project sponsors, costs and infrastructure requirements	Technical memorandum	\$ 12,500	TRWD, DWU, NTMWD	No	Previous plans	Yes	Yes
C	5A	4a	Lake Texoma	See scope of work. This includes evaluations of Lake Texoma unauthorized supplies and Lake Texoma authorized supplies. Includes different treatment approaches: blending and desalination.	Technical memorandum	\$ 18,000	NTMWD, DWU	No	Previous plans	Yes	No
C	5A	4a	Water from Oklahoma	See scope of work. Includes coordination with project sponsors, re-evaluation of supplies, costs and infrastructure requirements	Technical memorandum	\$ 18,000	NTMWD, TRWD, UTRWD, Irving	No	Previous plans	Yes	Yes
C	5A	4a	Neches Run of River	See scope of work. Includes coordination with project sponsors, re-evaluation of supplies, costs and infrastructure requirements.	Technical memorandum	\$ 12,500	DWU and customers	Yes. New WAM	Previous plans	Yes	No
C	5A	4a	Carrizo -Wilcox (Region D)	See scope of work. Includes coordination with project sponsors, re-evaluation of supplies, costs and infrastructure requirements	Technical memorandum	\$ 12,500	DWU and customers	No	Previous plans	Yes	Yes
C	5A	4a	Lake O' The Pines	See scope of work. Includes coordination with project sponsors, NETMWD, re-assessment of available supplies, costs and infrastructure requirements	Technical memorandum	\$ 12,500	NTMWD and customers	Yes. Supplies and participants	Previous plans	Yes	No
C	5A	4a	Tehuacana Reservoir	See scope of work. Includes coordination with project sponsors, re-evaluation of supplies, costs and infrastructure requirements	Technical memorandum	\$ 12,500	TRWD and customers	Yes. Updated WAM	Previous plans	Yes	No
C	5A	4a	Lake Columbia	See scope of work. Includes coordination with project sponsors, re-evaluation of supplies, costs and infrastructure requirements	Technical memorandum	\$ 12,500	DWU and customers	Yes. New WAM	Previous plans	Yes	No
C	5A	4a	Hubbard and Lewisville Indirect Reuse	See scope of work. Includes coordination with project sponsors, re-evaluation of supplies, costs and infrastructure requirements	Technical memorandum	\$ 12,500	DWU and customers	Yes. Potential changes to supplies	Previous plans	Yes	No
C	5A	4b	Integrated Pipeline	See scope of work. Includes coordination with project sponsors, re-evaluation of supplies, costs and infrastructure requirements	Technical memorandum	\$ 12,500	DWU and customers	Yes. Updated design, costs	Previous plans	Yes	No
C	5A	4b	Cedar Creek Wetlands	See scope of work. Includes coordination with project sponsors, re-evaluation of supplies, costs and infrastructure requirements	Technical memorandum	\$ 12,500	TRWD and customers	Yes. Updated design, costs	Previous plans	Yes	No
C	5A	4b	Additional TRWD Reuse	See scope of work. Includes coordination with project sponsor, evaluation of supplies, costs and infrastructure requirements	Technical memorandum	\$ 12,500	TRWD and customers	Yes. New strategy	2017	No	No
C	5A	4b	Lower Bois d'Arc Creek Reservoir	See scope of work. Includes coordination with project sponsors, re-evaluation of supplies, costs and infrastructure requirements	Technical memorandum	\$ 12,500	NTMWD and customers	Yes. Updated design, costs	Previous plans	Yes	No
C	5A	4c	Lake Ralph Hall and Reuse	See scope of work. Includes coordination with project sponsors, re-evaluation of supplies, costs and infrastructure requirements	Technical memorandum	\$ 12,500	UTRWD and customers	Yes. Updated design, costs	Previous plans	Yes	No

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Region	Overall TWDB Task Number	SubTask WMS evaluation number	SubTask WMS and/or WMSP Title	SubTask Scope of Work Write-up	Deliverable	SubTask Budget	WUG(s) &/OR WWP Entities Potentially Served by WMS(s)/WMSP(s)	Addressing a changed condition from previous cycle? If yes, describe the changed condition.	When was this WMS/WMSP identified by RWPG as potentially feasible?	Was the WMS/WMSP 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
C	5A	4c	Lake Ringgold	See scope of work. Includes coordination with project sponsors, re-evaluation of supplies, costs and infrastructure requirements	Technical memorandum	\$ 12,500	TRWD and customers	Yes. Updated supplies	Previous plans	Yes	No
C	5A	4d	Sulphur Basin Supplies	See scope of work. Includes reassessment for three (3) new sources (Marvin Nichols, Parkhouse North and South reservoirs) and three (3) different scenarios for additional supply from Lake Wright Patman. Includes coordination with USACE, project sponsors, re-evaluation of supplies, costs and infrastructure requirements	Technical memorandum	\$ 25,000	NTMWD, TRWD, UTRWD, DWU, Irving	Yes. Potential changes in basin operations.	Previous plans	Yes	No
C	5A	5	New Groundwater from Carrizo-Wilcox	Develop new strategy for supplementing TRWD surface water supplies with groundwater from Carrizo-Wilcox aquifer. Assess quantity, quality and reliability of groundwater source. Size and cost infrastructure requirements; complete full evaluation of strategy.	Technical memorandum	\$ 15,000	TRWD and customers	Yes. New WMS	2017	No	No
C	5A	5	Aquifer Storage and Recovery	Develop new strategy to storage treated (or untreated) surface water through ASR. Assess quantity, costs, and infrastructure requirements; complete full evaluation of strategy.	Technical memorandum	\$ 15,000	TRWD and customers	Yes. New WMS	2017	No	No
C	5A	5	Reallocation of Storage in Joe Pool Lake	Develop new strategy for providing additional surface water supplies by reallocating flood storage in Joe Pool Lake. . Assess quantity and reliability of supply. Size and cost infrastructure requirements; complete full evaluation of strategy.	Technical memorandum	\$ 16,000	TRA and customers	Yes. New WMS	2017	No	No
C	5A	5	Additional reuse, multiple projects	Develop new strategy for new reuse supplies. Assess quantity, quality and reliability of source. Size and cost infrastructure requirements; complete full evaluation of strategy.	Technical memorandum	\$ 22,000	NTMWD and customers	Yes. New WMS	2017	No	No
C	5A	8	DB 22 entry	See Scope of work.	Completed DB22 entry for specified WMSs	\$ 36,000	WWPs and WUGs	NA	NA	NA	NA
C	5A	9	Documentation	See Scope of work.	Completed portions of draft Chapters 5B and 5C of the Region C IPP	\$ 65,000	WWPs	NA	NA	NA	NA
				TOTAL		\$ 412,500					

ATTACHMENT 1

TASK 5A SCOPE OF WORK

Task 5A - Evaluation and Recommendation of WMSs and Associated Water Management Strategy Projects (WMSPs)

The objective of this task is to evaluate and recommend WMS and their associated WMSPs, including preparing a separate chapter and subchapter (on conservation recommendations see - Task 5B) to be included in the 2021 RWP that describes the work completed, presents the potentially feasible WMSs, recommended and alternative WMSs and WMSPs, including all the technical evaluations, and presents which water user entities will rely on the recommended WMSs and WMSPs.

Work shall be contingent upon a written notice-to-proceed and shall include but not be limited to the following:

- a) In addition to generally meeting all applicable rules and statute requirements governing regional and state water planning under 31 TAC Chapters 357 and 358, this portion of work shall, in particular, include all work necessary to meet all the requirements of 31 TAC §357.34 and §357.35 that is not already included under Tasks 4B, 5A, or 5B.³³
- b) Plans to be considered in developing WMSs include those referenced under 31 TAC §357.22.
- c) Inclusion of a list of the potentially feasible WMSs that were identified by the RWPG. Information to include what past evaluations have been performed for each potentially feasible WMS listed.
- d) Technical evaluations of all categories of potentially feasible WMSs including previously identified or recommended WMSs and newly identified WMSs including drought management and conservation WMSs; WMS and WMSP documentation shall include a strategy description, discussion of associated facilities, project map, and technical evaluation addressing all considerations and factors required under 31 TAC §357.34(d)-(h) and §357.35.
- e) Process of selecting all recommended WMSs and associated WMSPs including development of WMS evaluations matrices and other tools required to assist the RWPG in comparing and selecting recommended WMSs and WMSPs.
- f) Consideration of water conservation and drought contingency plans from each WUG, as necessary, to inform WMS evaluations and recommendations.
- g) Communication, coordination, and facilitation required within the RWPA and with other RWPGs to develop recommendations.
- h) Updates to descriptions and associated technical analyses and documentation of any WMSs and WMSPs that are carried forward from the previous RWP to address:
 - Changed conditions or project configuration
 - Changes to sponsor of WMS and WMSP(s)

³³ Requirements are further explained in the guidance document *First Amended General Guidelines for Fifth Cycle of Regional Water Plan Development*.

- Updated costs (based on use of required costing tool³⁴)
 - Other changes that must be addressed to meet requirements of 31 TAC §357.34 and §357.35.
- i) Assignment of all recommended WMS water supplies to meet projected needs of specific WUGs.
 - j) Documentation of the evaluation and selection of all recommended WMS and WMSPs, including an explanation for why certain types of strategies (e.g., aquifer storage and recovery, seawater desalination, brackish groundwater desalination) may not have been recommended.
 - k) Coordination with sponsoring water user groups, wholesale water providers, and/or other resource agencies regarding any changed conditions in terms of projected needs, strategy modifications, planned facilities, market costs of water supply, endangered or threatened species, etc.
 - l) If applicable, determination of the “highest practicable level” of water conservation and efficiency achievable (as existing conservation or proposed within a water management strategy) for each WUG that relies on a WMS involving and interbasin transfer to which TWC 11.085 applies. Recommended conservation WMSs associated with this analysis shall be presented by WUG.
 - m) Presentation of the water supply plans in the RWP for each WUG and WWP relying on the recommended WMSs and WMSPs.
 - n) Consideration of alternative WMSs and WMSPs for inclusion in the plan. Alternative water management strategies must be fully evaluated in accordance with 31 TAC §357.34(d)-(h).
 - o) Incorporation of all required DB22 reports into document.
 - p) Submission of data through the Regional Water Planning Application (DB22) to include the following work:
 - review of the data,
 - confirmation that data is accurate,
 - incorporation of the required DB22 reports into the draft and final regional water planning chapter document
 - q) Review of the chapter document and related information by RWPG members,
 - r) Modifications to the chapter document based on RWPG, public, and or agency comments.
 - s) Submittal of chapter document to TWDB for review and approval; and
 - t) All effort required to obtain final approval of the regional water plan chapter and associated DB22 data by TWDB.

³⁴ See section 5.1.1 under ‘Financial Costs’ in *First Amended General Guidelines for Fifth Cycle of Regional Water Plan Development*.

u) [SCOPE OF WORK TO BE DETERMINED]

Scope of Work to be amended based on specific Task 5A scope of work to be developed and negotiated with TWDB. Work under this Task to be performed only after approval and incorporation of Task 5A scope of work and written notice-to-proceed. NOTE: Work effort associated with preparing and submitting a proposed Task 5A scope of work for the purpose of obtaining a written 'notice-to-proceed' from TWDB is not included in Task 5A and shall not be reimbursed under the Contract.

Deliverables: A completed Chapter 5 shall be delivered in the 2021 RWP as a work product to include technical analyses of all evaluated WMSs and WMSPs. Data shall be submitted and finalized through DB22 in accordance with the Guidelines for Regional Water Planning Data Deliverables.