

EXHIBIT A

SCOPE OF WORK

Task 1 – Planning Area Description

1. Review listing of Water User Groups (WUGs) from this round with list from last round and include descriptions of any new WUGs
2. Review TPWD listing of threatened and endangered species and their habitat and incorporate any changes since the listing from the last round.
3. Update section of report summarizing population and water demands for Region H in accordance with revisions made to Tasks 2 and 3 for the 2011 Region H Regional Water Plan.
4. Update section of the report summarizing Drought Preparations in accordance with results obtained as a result of the Drought Management Study performed as part of Phase 1 planning for the 2011 Region H Regional Water Plan.
5. Update section of report summarizing recommendations made in the 2006 Region H Regional Water Plan.
6. Submit revised Chapter 1 to Region H WPG members for review and approval.
7. Make changes based on comments.

Deliverables: A completed Chapter 1 describing Region H Planning Area will be delivered in the 2011 RWP as a work product.

Task 2 – Population and Water Demands

1. Prepare correspondence to all WUGs detailing population and demand projections for the 2011 regional plan and request that they reply with any comments or requested changes.
2. Prepare estimates of projected population and water demands for new municipal WUGs in Region H including, but possibly not limited to, North Fort Bend Water Authority.
3. Meet with Wholesale Water Providers to determine what requests for service are in their planning horizons and compare to population projections for individual WUGs and County-other.
4. Review TWDB contracted steam-electric power generation demand numbers and make changes to the figures and tables based on the updated amounts as appropriate.
5. Review any comments received for compliance with TWDB requirements and incorporate changes which meet TWDB conditions for changes.
6. Prepare and submit draft chapter text and changes to the Region H WPG for review and approval prior to seeking TWDB approval.
7. Provide any changes to TWDB for review and approval prior to finalizing.
8. Incorporate changes to database tables as appropriate.
9. Population estimates for Counties and Cities that have surpassed 2010 projections in the 2006 RWP
 - a. Review studies of population and demand growth conducted by local stakeholders including but not limited to the North Harris County Regional Water Authority, West Harris County Regional Water Authority, Central Harris County Regional Water Authority, and the North Fort Bend Water Authority.
 - b. Review revised county and city projections and identify additional areas of concern (e.g. cities or counties with large numeric projection increases, although percentile increases may be more modest) for analysis.
 - c. Apply revised named, city WUG populations where appropriate as a portion of the total, revised County population.
 - d. Allocate demands for local stakeholders based on information provided and examined above.

- e. Determine the remaining population in County-Other and utility WUGs by subtracting revised city and stakeholder population projections from county-control populations.
- f. Allocate additional growth in County-Other and utility WUGs to these WUGs on a proportional basis to the growth rate identified between the years 2000 and 2010 in the 2006 RWP(WUGs with larger projected growth in the 2006 RWP are expected to experience a proportionally larger amount of the revised growth.)
- g. If the sum of the TWDB-provided city, stakeholder-provided, and existing 2006 RWP utility and County-Other WUG demands exceeds the TWDB-provided county-control population, either subtract the excess population from the 2006 RWP County-Other WUG population or recommend increasing the county-control population total.
- h. Provide mail out to each WUG concerning the revised population and water demand estimates and ask for concurrence with these projections for the next plan.
- i. Prepare tables of population for RWPG approval.
- j. Submit to TWDB for approval of draft numbers and development of water demands.
- k. Make changes based on TWDB comments as appropriate and provide final numbers to RWPG for approval.

Deliverables: A completed Chapter 2 detailing revised population and water demands will be delivered in the 2011 RWP as a work product

Task 3A – Water Supply Analysis

1. Update groundwater supply volumes for the Gulf Coast Aquifer based on revisions to the groundwater availability model, where appropriate.
2. Reviewing the Desired Future Condition status of other GMA's covering Region H to determine status and whether or not they will be completed in time to be incorporated into the 2011 regional plan. Review will include establishment of a deadline for inclusion in the 2011 RWP for MAG's with minor impact and for MAGs with major impacts to available groundwater.
3. Incorporate, where applicable, changes to groundwater supplies as a result of changed conditions and/or requirements of existing or new Groundwater Conservation Districts (GCDs) in Region H.
4. Include information and/or results from other studies, including those provided by the TWDB, related to groundwater availability that may impact Region H.
5. Incorporate revisions to water rights and/or contracts that have occurred since the last plan.
6. Update firm yield surface water supplies based on water right reliability and supply contracts.
7. Revise wording for Chapter 3 of the plan to include new supply availability numbers.
8. Submit revised chapter to Region H WPG members for review and approval.
9. Submit approved chapter to TWDB for comment.
10. Present TWDB comments to planning group with associated recommended changes and seek approval for final.
11. Entering the data from this portion of the plan into DB12.
12. Firm Yield Determination.
 - a. Using the updated version of the TCEQ WAM Run 3 for the Brazos, San Jacinto, Trinity, and the coastal basins within Region H, evaluate surface water rights to quantify the firm yield of water supplies on a monthly basis for each planning decade (2010 to 2060).

- b. Review the Region C 2006 RWP and identify WMSs that may reduce return flows to the lower basin and Lake Livingston.
- c. Perform a desktop analysis of upper Trinity River Basin WUG demands and reuse strategies to estimate the annual return flow that can be expected.
- d. Coordinate with the Region C Planning Group to determine the suitability of these return flow estimates.
- e. Perform a firm yield analysis with the Trinity River WAM to determine if the projected return flow volume is sufficient for maintaining the firm yield of the Lake Livingston water rights.
- f. Perform several iterative firm yield analyses with the Trinity River WAM to determine the necessary level of return flows required for making the Livingston rights firm. Compare this number to the calculated return flows from Region C to determine excess return flows or the projected shortfall between the two numbers.
- g. Make a summary of the study results available to the Region C Water Planning Group for review and input.
- h. Prepare a summary section for the Chapter 3 report.
- i. Compare this re-evaluation of firm yield to the firm yields and surface water supplies projected in the 2006 Region H Regional Water Plan for each planning decade (2010 to 2060).
- j. Present the results of the analysis to the Region H WPG and the TWDB.
- k. Meet and coordinate with major surface water rights holders in Region H (e.g. City of Houston, GCWA, BRA, TRA, CLCND, etc.) on the results of this analysis. Incorporate information and requests from major surface water rights holders into analysis.
- l. Coordinate with Regions G and C on the impact, if any, of these modified firm yield determinations.
- m. Recommend what, if any, surface water supply numbers require modification from the 2006 Region H RWP based on these modified firm yield determinations.
- n. Assign revised available water supplies to appropriate WUGs based on existing knowledge of wholesale contracts and information gained from contacting water providers.
- o. Revise projected shortages for WUGs, where applicable, based on recommended revised surface water supply estimates.

Task 3B - Incorporate managed available groundwater (MAG) numbers for aquifers covered under GMA 14 Desired Future Condition adoption, where appropriate.

Deliverables: A completed Chapter 3 detailing revised water supplies will be delivered in the 2011 RWP as a work product.

Task 4A – Identification, Evaluation, and Selection of Water Management Strategies Based on Needs

- 1. Perform an update of water management strategies capital costs per Exhibit C for all strategies from the 2006 plan that will be carried over to the 2011 regional plan. This update will be performed for the majority of the strategies by updating the existing cost tables to the required index.
- 2. Perform an update of water management strategies Operations and Maintenance (O&M) costs for strategies as noted above to be reflective of updated power and labor costs as well as annualized capital costs.
- 3. Identify, evaluate, and select new management strategies for the current WUGs in order to provide adequate strategies for those WUGs that have seen a reduction in available supplies from the new model and from the increase environmental flow needs or have experienced increases in demand due to revised population projections or reductions in firm yield due to an application of a “no monthly shortages” policy.

4. Incorporate revisions from modeling done in the first biennium of this planning round, and the associated environmental flow needs and concerns into the matrix of available options and reevaluate the adequacy and effectiveness of the management strategy selected.
5. Incorporate the potential for use of interruptible supplies identified in the First Biennium study as a potential management strategy to be compared with other existing strategies.
6. Select water management strategies for identified needs.
7. Re-run Water Availability model to test environmental impacts of new strategies on environmental flows
8. Revise wording for Chapter 4 of the plan to include the new management strategies.
9. Submit revised chapter to Region H WPG members for review and approval.
10. Submit approved chapter to TWDB for comment
11. Present TWDB comments to planning group with associated recommended changes and seek approval for final.
12. Incorporate data into the TWDB database
13. Update Strategies with Changed Conditions
 - a. Update to BRA Systems Operations Permit
 - i. Coordinate with BRA status regarding the status of the System Operations permit and identify any expected changes in yield, return flows, and supply volumes for Region H.
 - ii. Determine the impact on water availability from the System Operations strategy due to the permitting process as well as other factors in the Brazos Basin (increased demands, environmental, etc.).
 - iii. Obtain the Brazos System Operations WAM from BRA.
 - iv. Modify the System Operation model to include other major water management strategies in the Brazos basin.
 - v. Use modified WAM to compare the availability of interruptible supplies that could be captured and stored in the lower basin before and after the implementation of System Operation and other upstream strategies.
 - vi. Identify WUGs that were assigned water from the System Operations strategy that will require water from another WMS and identify an available source to meet shortages.
 - vii. Revise applicable portions of the Plan to include revised System Operations supply and new WMS allocation.
 - viii. Identify operational mechanisms/conditions of the System Operation strategy intended to protect Region H downstream water right reliability. Prepare a summary of the operating plan including a list of these safeguards and their levels.
 - ix. Update Plan and DB12 to reflect changed condition.
 - b. Montgomery County Surface Water Supply
 - i. Consult with SJRA regarding the current plans for surface water conversion in Montgomery County.
 - ii. Revise source allocations for Montgomery County to reflect current strategy and reallocate sources and WMSs for other WUGs in the 2006 RWP where necessary.
 - iii. Update strategy costs according to data provided by SJRA.
 - iv. Update Plan and DB12 to reflect changed condition.
 - c. Luce Bayou Strategy Re-Definition
 - i. Update Luce Bayou strategy to parallel the preliminary engineering report accompanying CWA's application for WIF funding.
 - ii. Correspond with CWA as well as the COH, NHCRWA, WHCRWA, CHCRWA, and NFBWA as necessary to determine the latest status of the project.
 - iii. Revise the strategy as necessary to reflect changes in WUG shortages identified in the process of updating demands and supplies.
 - iv. Update Plan and DB12 to reflect changed condition.
 - d. Identification of New or Revised Raw and Treated Water Projects

- i. Prepare correspondence to all WWPs to request information regarding major water projects to be considered for inclusion in the 2011 RWP, including treatment facility construction and upgrades as well as raw and treated water transmission projects.
 - ii. Meet with WWPs known to be planning extensive projects that may utilize WIF and state participation funding and any WWPs indicating an interest in response to the correspondence described above.
 - iii. Review Plan for consistency with existing projects identified in the 2006 RWP and any known, changed conditions since development of the 2006 Plan.
 - iv. Obtain projected costs from project sponsors for inclusion in Plan.
 - v. Update Plan and DB12 to reflect changed condition.
14. **Alternative Strategy Formulation:** Several strategies in the 2006 RWP rely on several specific factors to be successfully implemented. As time passes between the development of the RWPs, some alternative strategies with comparable cost benefit ratios to selected strategies may become more attractive alternatives in light of new information. The recommendation of alternative strategies will increase the flexibility of the Plan and enhance the ability of stakeholders to obtain funding for projects to respond to rapidly increasing demands in the near-term. Furthermore, this task promotes the investigation of new strategies that have not been considered in the existing RWPs.
- a. Update pertinent information for strategies that were not selected in the 2006 RWP.
 - b. Identify new strategies that may be effective strategies. This includes but is not limited to the development of storage to enhance yields from run-of-river rights, aquifer storage and recovery (ASR), and the desalination of brackish water.
 - c. Meet with local stakeholders that are considering strategies outside of those listed in the 2006 RWP for their input on potential strategies.
 - d. Develop yield and cost figures for each strategy in order to compare to current strategies.
 - e. Develop a matrix of impacts associated with each potential alternative strategy.
 - f. Link alternative strategies to WUG shortages currently being met with a selected strategy from the 2006 RWP.
 - g. Present results of alternative management strategy analysis to RWP group to decide which, if any, alternative water management strategies will be recommended for inclusion in the 2011 RWP.
 - h. Based on RWP group decision, incorporate recommended alternative water management strategies for identified WUGs in the 2011 RWP.
 - i. Summarize the results of this study within Chapter 4.

Task 4B – Environmental Flows Investigation and Coordination

1. **Environmental Flows Investigation:** Efforts in the First Biennium focused on future 2060 conditions and the impacts of future management strategies on inflows to Galveston Bay. The preliminary results of this study and further investigation indicate that the management strategies recommended in the 2006 RWP interact in a complex manner that may result in widely varied impacts on bay and estuary inflow throughout the planning horizon. This is especially the case as the timing of certain strategies such as reuse and the importation of water occur in different decades. The end result may be a worst-case scenario for inflows to Galveston occurring in a decade sooner than 2060. Identifying impacts of management strategies throughout the planning horizon will better prepare the RHWPG for selecting environmentally conscious solutions to water supply issues. The following tasks aim to investigate this possibility in greater detail than was possible in the First Biennium study:
- a. Link water usage as a result of demand (not allocation) from each Region H WUG to each supply source and each water right, including future Region H management

- strategies. Compile these demands for each water right to determine projected diversion for each water right in the years 2010, 2020, 2030, 2040, 2050, and 2060.
- b. Modify the TWDB-produced Run 8 models for each basin to create a future condition for the years 2010, 2020, 2030, 2040, 2050, and 2060.
 - i. Receive TWDB-produced models of the Trinity River basin including Region C demands, strategies, and return flows for each decade. Correspond as necessary with TWDB staff to ensure proper model development and use by consultant.
 - ii. For each decade, insert the proper diversions for each Region H water right or strategy as identified above into the six TWDB-produced models.
 - iii. Modify static return flows (CI cards) where necessary to properly represent return flows from Interbasin transfers, groundwater, and any otherwise "hard-wired" return flows.
 - iv. Develop area-capacity-elevation (ACE) curves to simulate storage in major reservoirs within the study basins and enter into model.
 - c. Execute the modified Run 8 models to develop regulated flows at the basin outlets into Galveston Bay for each planning decade.
 - d. Compile the model regulated flows for the modified Run 8 models to determine the impacts of strategies.
 - e. Summarize the results of the analysis in a technical memorandum and add accompanying text to Chapter 4.
 - f. Include the evaluation of bay and estuary inflows as a criterion for evaluating impacts from water management strategies in Chapter 4.
2. **Environmental Flows Coordination:** The issue of environmental flows is central to the determination of impacts from Water Management Strategies that lead to the preferential selection of strategies within the RWP. This task aims to enhance coordination with the ongoing initiatives to evaluate the need for both instream and bay and estuary flows and the impacts that strategies will have on these critical factors.
- a. **Galveston Bay Freshwater Inflow Group (GBFIG)**
 - i. Present technical information developed under this work task and other related Region H studies at the meetings.
 - ii. Record, post and distribute the summary notes, relevant results and supporting materials of all meetings.
 - iii. Prepare a summary report of the GBFIG activities and of any consensus agreements of GBFIG participants for distribution to RHRWPG and the TWDB.
 - b. **Coordination with Environmental Flows Allocation Process -** Prepare a summary report detailing efforts supporting the Environmental Flows Allocation process including any technical memoranda provided to the stakeholder groups in support of their efforts.

Deliverables: A completed Chapter 4 detailing revised water management strategies will be delivered in the 2011 RWP as a work product.

Task 5 – Impacts of Selected Water Management Strategies on Key Parameters of Water Quality and Impacts of Moving Water from Rural and Agricultural Areas

1. Review and update information in plan for all strategies which have remained the same
2. Address quality impacts of new management strategies developed during this round of planning
3. Revise wording for Chapter 5 of the plan to include the new management strategies.
4. Submit revised chapter to WPG members for review and approval.
5. Submit approved chapter to TWDB for comment
6. Present TWDB comments to planning group with associated recommended changes and seek approval for final.

Deliverables: A completed Chapter 5 detailing revised impacts will be delivered in the 2011 RWP as a work product.

Task 6 – Water Conservation and Drought Management Recommendations

1. Produce and distribute a survey for each WUG asking about water conservation measures implemented and measures planned, as well as what impacts of conservation measures they have been able to measure.
2. Compare information received to information contained in the 2006 plan to determine level of impact.
3. Revise conservation strategies in the Plan to reflect information gained from survey.
4. Incorporate results of First Biennium study on drought contingency into Chapter 6.
5. Revise wording for Chapter 6 of the plan to include the new management strategies.
6. Submit revised chapter to Region H WPG members for review and approval.
7. Submit approved chapter to TWDB for comment
8. Present TWDB comments to planning group with associated recommended changes and seek approval for final.
9. Water conservation evaluation
 - a. Contact TCEQ and TWDB in order to obtain any water conservation plans that have not been received by the RWPG.
 - b. Identify entities that were required to submit specific plans for water conservation and review the submitted plans to prepare a summary of recommended water conservation practices throughout Region H and the expected efficacy of these techniques.
 - c. Contact these entities and request any preliminary information pertaining to actual observed efficacy and cost to implement.
 - d. Compare planned and actual water conservation performance and cost to the conservation strategies presented in the 2006 RWP.
 - e. Use this information to make adjustments to conservation WMS volumes and costs for Region H in Chapter 4.
 - f. Assign alternative strategies as necessary to supplement shortfalls in supply from revised conservation strategy.
 - g. Add summary section to Chapter 6 to address the information gained in this study.

Deliverables: A completed Chapter 6 detailing revised conservation and drought management recommendations will be delivered in the 2011 RWP as a work product.

Task 7 – Description of How the Regional Water Plan is Consistent with Long-Term Protection of the State's Water Resources and Natural Resources

1. Update the current descriptions of water management strategies with any new strategies developed during this planning round, as well as any alternate strategies which are developed for specific WUGs with shortages which need additional flexibility.
2. Revise wording for Chapter 7 of the plan to include the new management strategies.
3. Submit revised chapter to Region H WPG members for review and approval.
4. Submit approved chapter to TWDB for comment.
5. Present TWDB comments to planning group with associated recommended changes and seek approval for final.

Deliverables: A completed Chapter 7 regarding Plan consistency will be delivered in the 2011 RWP as a work product.

Task 8 – Unique Stream Segments / Reservoir Sites / Legislative Recommendations

1. Convene RWPG to review designations and recommendations from last round.

2. Provide any updates of descriptions of reservoir projects and any changes in classifications in stream segments.
3. Review the legislative recommendations made in the last round of planning and determine the need for addition to or removal from the list.
4. Revise wording for Chapter 8 of the plan to include the new management strategies.
5. Submit revised chapter to Region H RWPG members for review and approval.
6. Submit approved chapter to TWDB for comment.
7. Present TWDB comments to planning group with associated recommended changes and seek approval for final.

Deliverables: A completed Chapter 8 summarizing recommendations will be delivered in the 2011 RWP as a work product.

Task 9 – Report to Legislature on Water Infrastructure Funding Recommendations

1. Integrate WIF information request into conservation plan letter to individual WUGs.
2. Receive and collate information on infrastructure needs from individual WUGs and develop tables of total funds needed.
3. Coordinate with WUGs indicating a need for WIF funding to determine detailed needs and costs associated with their anticipated projects.
4. Revise wording for Chapter 9 of the plan to include the updated WIF funding needs.
5. Include text in Chapter 9 to summarize each proposed WIF project and indicate its location in the RWP along with the sources and WUGs associated with the project.
6. Submit revised chapter to Region H WPG members for review and approval.
7. Submit approved chapter to TWDB for comment.
8. Present TWDB comments to planning group with associated recommended changes and seek approval for final.

Deliverables: A completed Chapter 9 summarizing Water Infrastructure Funding recommendations will be delivered in the 2011 RWP as a work product.

Task 10A – Adoption of Plan

- a. *Public Participation for Planning Grant Process* – Provision for public comment on the proposed scope of work, schedule of activities, and required budgets for the three remaining years of the third planning cycle.
 1. Provide public notification of Region H RWPG intent to apply for grant funding for the next three years of the third planning cycle.
 2. Make grant applications available to the general public throughout Region H.
 3. Make presentations explaining the proposed grant funding for Region H RWPG in a public meeting.
 4. Incorporate changes requested by Region H RWPG as a result of public comments.
- b. *Periodic Meetings of the Region H RWPG* – Technical support and participation of the regular and special called meetings of the Region H RWPG.
 1. Participate in approximately 12 regular meetings of the Region H RWPG.
 2. Participate in developing agendas, arranging speakers, and coordinating activities for the Region H RWPG.
 3. Develop presentations and handout materials for the regular and special meetings to provide technical and explanatory data to the Region H RWPG and its subcommittees.
- c. *Required Public Meetings* – Provide technical support and participate in three required public meetings for:

- a. Receiving input on draft water demand calculations for applicable water user groups in the region.
 - b. Receiving input on the selected water management strategies.
 - c. Receiving input on the draft 2011 Regional Water Plan.
1. Provide notice for the three public meetings.
 2. Develop presentations and handout materials for the public meetings to provide to the general public.
 3. Provide draft responses for RWPG approval to any questions that are asked at the public meetings.
- d. *Administrative Support*
1. Prepare and submit invoices to the SJRA for work performed for the RWPG and provide consultant's status report for each meeting.
 2. Maintain lists of contacts for regional planning information in the region, coordinated with Jace Houston at SJRA.
 3. Attend and prepare presentation and handout materials for public meetings in various locations of the region to solicit input on the draft Region H Regional Plan.
 4. Prepare report section summarizing Task 10 activities.
 5. Prepare and transmit correspondence once Region H RWPG approval of draft responses is obtained.

Deliverables: Deliverables from this task will include properly prepared notices of action by the Planning Group, minutes of public meetings and hearings, and a summary of all associated efforts in Chapter 10 of the 2011 RWP.

Task 10B – Scope of Work Development

1. Meet with Scoping Committee twice prior to May 28, 2008 Region H WPG meeting to detail and discuss draft scope items to be included in Grant Application for 2nd Phase funding.
2. Develop schedule for development of draft documents to the Committee, presentation of Grant Application to the RWPG, and submittal to the TWDB.
3. Coordinate with TWDB on allowable tasks and subtasks.
4. Develop draft scoping document narrative for submission to the Scoping Committee for approval of overall tasks prior to development of cost estimate.
5. Coordinate with Region C and G on modeling tasks that potentially impact water availability and supply estimates.
6. Receive feedback from Scoping Committee and prepare draft scope narrative and estimated cost estimates for review by Scoping Committee.
7. Revise Narrative scope document based on feedback from Scoping Committee and revise cost estimates for subtasks.
8. Submit task and subtask budgets and narrative scope to Scoping Committee for final approval.
9. Make final modifications to scope document and prepare for Region H WPG Chairman signature and submit to TWDB.

Deliverables: The completed application for grant funding serves as the deliverable for this scope item.