LCRA
ENERGY • WATER • COMMUNITY SERVICES

September 13, 2006

Ms. Phyllis Thomas
Contract Administration Division
Texas Water Development Board
1700 North Congress Avenue
Austin, Texas 78701

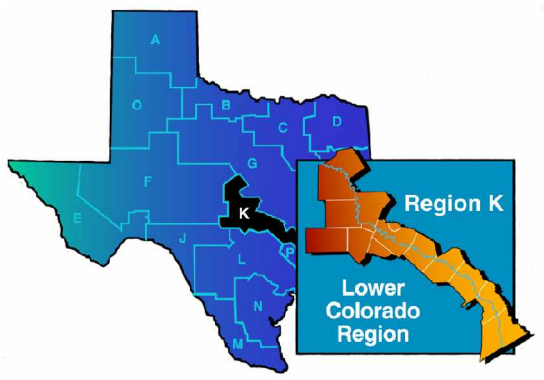
Dear Ms. Thomas:

The purpose of this letter is to inform you that the Lower Colorado Regional Water Planning Group (Region K), recognized by the Texas Water Development Board (TWDB) under Senate Bill 1 and Senate Bill 2, has authorized the Lower Colorado River Authority (LCRA) to act on its behalf in filing a grant application to the TWDB for special studies within Region K. The Lower Colorado Regional Water Planning Group Executive Committee authorizes LCRA to apply for this grant.

If you have any questions or need for additional information, please do not hesitate to contact me at (512) 473-4023.

Sincerely,

Mark H. Jordan
Water Resources Planning



APPLICATION TO THE TEXAS WATER DEVELOPMENT BOARD REQUESTING GRANT FUNDS TO DEVELOP REGIONAL WATER PLAN FOR REGION K

Prepared by the Lower Colorado River Authority
On behalf of the Lower Colorado Regional Water Planning Group

I. GENERAL INFORMATION

1. Legal name of applicant(s).

Lower Colorado River Authority (LCRA). See ***Appendix A*** for LCRWPG's letter designating LCRA to submit application for LCRWPG.

2. Regional Water Planning Group

Lower Colorado Regional Water Planning Group (LCRWPG), Region K.

3. Authority of law under which the applicant was created.

Article 82-80-107 as Amended VTCS (The LCRA Act)

4. Applicant's official representative, Name, Title, Mailing address, Phone number, Fax number, if available, E-mail Address, and Vendor ID Number.

Mark H. Jordan, Esq.
Water Resources Planning
LCRA
P.O. Box 220
Austin, TX 78767
Tel: 512-473-4023
Fax: 512-473-3551
Email Address: Mark.Jordan@lcra.org
Fed. ID # 74-6002915

5. Is this application in response to a Request for Proposals published in the Texas Register?

Yes

6. If yes to No. 5 above, list document numbers and date of publication of the Texas Register.

Texas Register Document No. 200603279, published June 23, 2006

7. Type of proposed planning (Check all that apply)

Initial scope of work	**X**
Development of a regional water plan	
Revision of a regional water plan	
Special studies approved by TWDB	**X**

8. Total proposed planning cost.

$677,680

9. Cash Contribution to the study.

No funds are currently identified to assist with the proposed study.

10. List source of cash contribution, explanation of source of local cash contribution.

N/A

11. Total grant funds requested from the Texas Water Development Board.

$677,680

12. Detailed statement of the purpose for which the money will be used. . (Not to exceed 1 page.)

Money will be used to fund additional tasks that will explore the impacts of issues that have not been fully explored by previous planning cycles. These include funds to reevaluate the Colorado River Basin Water Availability Model (WAM) to consider issues identified in the last planning round, to further study the environmental impacts of recommended water management strategies and investigation of other potential strategies, and further study of groundwater availability in the Lower Colorado Region. Funding is also requested to provide for plan amendments resulting from changed conditions or new strategies and to support public participation and outreach.

13. Detailed description of why state funding assistance is needed. (Not to exceed 1 page.)

The RWPGs were created by the State of Texas; however, they do not have their own independent funding mechanisms. The State provides appropriations to the TWDB, who in turn, provides the funding necessary for the groups' approved regional water planning activities.

14. Identify potential sources and amounts of funding available for implementation of viable solutions resulting from proposed planning.

Potential sources of funding available for implementation of viable solutions resulting from the proposed planning include the LCRA, the City of Austin (COA), the San Antonio Water System (SAWS), other water purveyors, and farmers. Amounts of available funding for implementation are unknown.

II. PLANNING INFORMATION

15. A detailed scope of work for proposed planning. (Not to exceed 6 pages.)

The Texas Water Development Board (TWDB) has published the guidelines for the next round of regional planning and announced the availability of grant funds to accomplish specific tasks within the regional planning process. The TWDB also requested the submission of grant applications from each of the regional planning areas to perform additional tasks during this funding round as long as they fit into one of the following categories:

1. Evaluation of new water management strategies in response to changed conditions;
2. Studies that will further implementation of recommended water management strategies;
3. Refinement of water supply information or water management strategies;
4. Activities that will help overcome problems from the last round of planning;
5. Further evaluation of water management strategies, especially regional solutions, to meet needs in small communities or rural areas;
6. Reevaluation of population and demand projections only under the presence of changed conditions;
7. Interregional coordination; and
8. Administrative and public participation activities.

This scope is being prepared for the Lower Colorado Regional Water Planning Group (LCRWPG) as a part of the grant application process and also to be included in the public deliberation process. Each specific scope item has been outlined below to include: 1) a statement of the problem or issue, 2) an explanation of how this item corresponds to the allowable categories listed above, 3) an outline of the specific activities required, and 4) a list of the desired outcome or deliverables expected.

Scope Item Number 1 – Surface Water Availability Modeling

Statement of the Problem/Issue

During the last round of planning the LCRWPG was approached by Region F representatives who were greatly concerned that the results from the version of the model being used for the second round of regional planning were vastly different from the results from the first round. In the second round of planning, the Texas Commission on Environmental Quality (TCEQ) Water Availability Model (WAM) was used to assess surface water availability. The WAM results gave a distribution of water availability between upper basin and lower basin rights that was significantly different from the LCRA RESPONSE model. For Region K, a comparison of WAM to RESPONSE model results showed downstream senior water rights had access to greater water availability. For Region F, junior reservoirs saw a significant decrease

compared to the first round of regional water planning. Possible factors leading to the shift in water availability from upper to lower basin rights are mentioned in the January 2006 Region K Plan, Section 3.2.1.2.7. Many of those reservoirs had small yields anyway, but the Region F area is significantly drier than the Region K area and the loss of those relatively small quantities of water was proving to be a significant problem; it would have required Region F to come up with new water management strategies over the ones that were identified in the first round of Region F's Plan. Region F requested and LCRWPG agreed to the use of a modified model for planning purposes only. In this model, major senior downstream water rights were simulated as forgoing their right to call on inflows that could otherwise be made available for major and junior reservoirs in Region F. This assumption was referred to as a "No Call" assumption. Region F's consultant was to develop the model and LCRWPG's consultant was to use it to determine the availability of water to the LCRWPG and also to determine potential impacts from strategies to be implemented to meet LCRWPG water needs. Despite the efforts of the Region F consultant, the model that was produced had unexplainable increases to junior downstream water rights. Additionally, some of the assumptions regarding implementing the "No Call" process in the WAM, could have been better reflected within the constraints of the model, e.g., the order of which downstream senior water right(s) to get the most impact from the "No Call." Although it was used for the determination of available supplies and the results of that determination were similar to the availabilities from the last plan, the results were always in question. As such, the incorporation of Region K strategies, such as the LCRA-SAWS Water Project (LSWP) for the water availability analysis was conducted using a different WAM, the one used in LSWP studies (Region K Plan, Chapter 4). In addition, the impacts of strategies in future years were predicted using this model, but the results were also in question.

In the January 2006 Region K Plan, the LCRWPG recognizes that several technical issues remain unresolved with the underlying WAM that, if resolved, could have impacted the planning process. The following list is an excerpt from the adopted Region K Plan Section 8.5 Unresolved Issues (Page 8-40):

Examples of issues include but are not limited to the following:

1. The WAM's representation of a zero firm yield for several reservoirs in the basin
2. The WAM's approach to modeling environmental flow restrictions on water rights
3. The naturalized flows used in the WAM
4. The WAM's incorporation of channel gains and losses
5. The WAM's treatment (or lack thereof) of "futile call" issues
6. The WAM's incorporation of existing subordination agreements
7. The WAM's backup of Austin's steam electric water rights with LCRA stored water

8. Other technical issues too numerous to elaborate on here
9. Inconsistencies with how interregional strategies are addressed in the planning cycle relative to application of WAM Run 3

Allowable Board Category

This scope item fits under at least three of the board categories. The primary one is No. 3, the Refinement of water supply information or water management strategies. Region K identified many issues for consideration in the next planning cycle in order to improve the surface water modeling. Those issues are listed in Section 3.2.1.2.7 of the January 2006 Region K Water Plan. In addition, new modeling tools have become available for the Water Rights Analysis Package (WRAP) since the last round of planning. Other modeling tools are also available, such as LCRA's development of a new daily model for planning. The new tools should be included in a technical review of the surface water model in the context of improvements they may be bring to regional water planning, in coordination with the TCEQ. This scope item also relates to No. 4 from the Board's list, namely activities that will help overcome problems encountered in the last planning round. The questionable results from the model were a significant problem for the LCRWPG in the last round. This scope item also relates to No. 7, by virtue of the fact that Region K and Region F have a natural requirement to coordinate between the two regions due to the extent of the Colorado River basin. It is important for both regional water planning groups to coordinate on technical information to maximize the benefits of the planning process.

Scope of Work

Re-evaluate Lower Colorado River Availability utilizing the TCEQ WAM

a. Conduct a detailed review of the hydrologic and water right information in the TCEQ WAM for the Colorado River.
b. Contact TCEQ staff to discuss current status of the Colorado River WAM and determine whether or not modifications to include the "priority circumvention" subroutine or any other significant changes are anticipated by TCEQ. Also discuss any written agreements that are provided by LCRA or any of the upstream rights holders with TCEQ staff and determine status of any efforts to include in the WAM.
c. Meet with the LCRWPG Water Modeling Committee to discuss the findings of the WAM review in terms of any clarification or resolution they may bring to the "No Call" assumption used in the 2nd round of planning. (one meeting)
d. Research and present alternative models and the advantages and disadvantages of each to the Water Modeling Committee. (one meeting)
e. Assist the Water Modeling Committee and the LCRWPG in choosing a course of action and develop an updated and improved surface water

availability model for planning purposes. (same meeting as c above, plus one meeting of the LCRWPG)

f. Coordinate with Region F and determine if there are any additional agreements or other specific items that Region F desires to incorporate. (Up to three meetings anticipated, with all by conference call or by Region F representatives coming to Region K area.)
g. Report to the Water Modeling Committee on Region F input and determine whether to incorporate changes requested. (one meeting)
h. Coordinate with LCRA regarding incorporation of LSWP water availability in the model.
i. Research information from any other relevant major project undertaken by any entity/water right holder that may have impacts on water availability estimates.
j. Incorporate information on revised schedule for cooling water needs for additional generating capacity for the South Texas Nuclear Project, as appropriate
k. Research information on any new water right, any amendment or any agreements between parties, since the January 2006 Regional Plans, for inclusion in the model.
l. Perform up to three model runs to determine whether or not any of the negative issues associated with the model used in the last round are present.
m. Use selected model to determine availability of surface water supplies and compare to availabilities determined in the last round.
n. Present initial results to Water Modeling Committee and LCRWPG and discuss alternatives if needed.
o. If new shortages arise due to the revised modeling then additional water management strategies may need to be developed and evaluated.
p. Develop scope of services and budget for analysis of additional water management strategies as needed. This scope of services would be performed in the second biennium funding cycle of this third planning round.

<u>Work Product</u>

The deliverables for this process will be as follows:

1. Technical memorandum summarizing the findings of Scope of Work Item 1a.
2. Revised WAM suitable for use in determining availability
3. Revised availability numbers by water source
4. Revised supply numbers by water user group (WUG)
5. Revised shortages analysis
6. Identification of any additional shortages over and above those in the last round
7. Scope and budget for additional analysis of new strategies for next biennium of current planning round (round 3)

Work products for this task will also include refinements to Chapters 3 and 4 including additional tables, charts and graphs.

Scope Item Number 2 – Environmental Impacts of the Water Management Strategies

Statement of the Problem/ Issue

Due to the uncertainties and limitations associated with the surface water availability models described for Scope Item Number 1, the quantitative analysis of environmental impacts for the various water management strategies had to be conducted with a reduced confidence level and with a simplified approach. The LCRWPG accepted this analysis as minimally fulfilling the scope requirements but requested that additional investigations be conducted in the next round to better define and quantify the anticipated impacts of the selected strategies in a subsequent round of planning.

Allowable Board Category

This activity supports two categories of need established by the Board: No. 3, Refinement of water supply information or water management strategies; and No. 4, Activities that will help overcome problems from the last round of planning.

In order to better define the environmental impacts of the proposed water management strategies, additional refinement of the scope and activities associated with each strategy will likely be required. Additionally, there were numerous requests by environmental interest groups to more fully identify the potential impacts of the selected strategies in order to better define the reasonableness of these impacts and the consistency of the strategies with the long-term goals of the region to protect sensitive wildlife habitats, public lands, agricultural resources, and overall environmental standards.

Scope of Work

This task will conduct more detailed evaluation of the impacts of the proposed water management strategies throughout Region K under projected demand conditions for the planning period. It will include identification of quantitative indicators for identified environmental factors such as impacts to sensitive environmental and wildlife habitat, agricultural lands or public lands, instream flows and freshwater inflows into Matagorda Bay, water quality, and sustainable aquifer yields.

a. Perform a quantitative impact analysis of the proposed water management strategies for instream flows at five designated control points on the Colorado River and its major tributaries.
b. Perform a quantitative impact analysis of the proposed water management strategies for freshwater inflows into Matagorda Bay.
c. Research information on any new environmental criteria in any amendment to an existing water right or such criteria in any new water right or any

agreements between parties, since the January 2006 Regional Plans, for inclusion in the model.

d. Prepare tabular comparisons for each strategy of the impacts to land and water resources.
e. Determine if the impacts are reasonable, consistent with protection of environmental flows, and consistent with long-term protection of the state's water resources, natural resources, and agricultural resources.
f. Utilize the LCRA Water Management Plan guidelines when evaluating freshwater inflows impacts and instream flow impacts. Incorporate information from most recent studies conducted by LCRA on Bay and Estuary inflows as well as instream flows.
g. Coordinate with LCRA regarding incorporation of information from LSWP impact studies.
h. Present information to LCRWPG and discuss results.
i. Assist LCRWPG in determining long term viability of projects analyzed, including any new management strategies.
j. For any strategies that are determined to have unreasonable impacts, develop scope and budget for investigation of new strategies to replace the ones with unreasonable impacts. This scope and budget will be for the second biennium of the third planning round.

Work Product

Work products for this task will include refinements to Chapters 4, 5, and 7 including additional tables, charts and graphs outlining the quantified impacts in more detail and comparing environmental conditions anticipated throughout the planning period both with and without the selected water management strategies.

Scope Item Number 3 – Perform a Literature Review of Selected Water Management Strategies and Incorporate Into Plan

Statement of the Problem/Issue

There were a number of potential strategies which were briefly mentioned or given some coverage in the last round of planning that were seen as potentially being valuable components of the regional plan. However, these strategies had not been specifically proposed by a WUG within the LCRWPG, so there were no site specific analyses to review. As a result, the determination of the cost of the strategy and the amount of savings anticipated from the strategy were unknown to the LCRWPG. However, there was sufficient interest in these strategies that there is a desire on the part of the LCRWPG to determine through a focused literature search whether there is sufficient available data to make a reasonable determination about applicability to specific WUGs in the LCRWPG without site specific studies being done. The strategies are as follows:

1. Brush control/management as an additional means of conserving water
2. Open space maintenance and land acquisition
3. Land stewardship
4. Aquifer storage and recovery
5. Additional water conservation (was an alternate strategy in last plan)
6. Manufacturing water conservation- need to discuss with TWDB the need for additional information in order to develop as a strategy
7. Look at improved floodplain and riparian management along potential recharge locations as a strategy
8. Drought contingency measures and drought management

Allowable Board Category

The studies referred to above appear to fit into No. 2 and 3 of the TWDB list of allowable studies. No. 2 is Studies that will further implementation of recommended water management strategies; and No. 3 is Refinement of water supply information or water management strategies. In addition, there were a number of specific comments requesting the consideration of several of these items during the public comment process from the last round. However, they were not included at least partially because they were not included as a strategy from any of the WUGs in the LCRWPG, and there were not site specific studies as a result.

Scope of Work

For seven of the specific strategies noted above, the scope of work will consist of the following:

a. Perform a literature review to determine the number of articles that are available and determine the number that have specific cost and yield information for a particular area. This scope assumes a maximum of six articles will be reviewed for this specific information for seven of the strategies listed above.
b. Request submission of data from each of the planning group members on studies and data that they are aware of for each of these areas, as well as posting a request for such data on the Region K website.
c. Develop a table of results in terms of yield, cost per unit of yield, and specific factors that influence the yield, such as soil conditions, plant type, amount of conservation already achieved, etc.
d. Assist LCRWPG in forming an Alternative Strategies Committee to review the above information.
e. Work with Alternative Strategies Committee to determine potential applications for each alternative strategy.
f. Review site conditions for proposed alternative strategy WUGs and determine comparability with reviewed papers and table.

g. Adjust cost and yield based on best professional judgment of comparability of conditions, or determine that it is not possible to even develop planning level assessments without further study.
h. Report back to Alternative Strategies Committee with information developed and discuss applications.
i. Meet with up to five potential WUGs that might use the selected strategies and determine potential interest based on initial numbers.
j. Apply strategies to target WUGs and compare to strategies and costs from last round of planning.
k. Substitute one of these strategies for one of the strategies from the last round if the costs and yield and reliability are significantly better and the WUG it is proposed for concurs. These strategies will be targeted for the high growth areas first.
l. Develop text for inclusion in the amended portions of the plans encouraging these measures even if there is insufficient data to include them in the regional plan.
m. Revise shortage analysis with new strategy information.
n. Present results of all analyses to LCRWPG
o. Prepare revisions to the last round plan for submittal to the TWDB as an amendment to the regional plan.

The one remaining item from the list above is the Manufacturing water conservation. In past planning cycles, the TWDB has not been able to release data on specific industrial facilities because the facility owners were concerned about a potential competitive advantage being lost with the publication of water use data. As a result, there was no way for the LCRWPG to assess what amounts of conservation had already taken place and what the costs would be for additional conservation occurring. The LCRWPG had little recourse other than to assume that the TWDB projections were the best information available. For this planning round, the following scope of services is proposed for this issue:

p. The consultant will meet with the TWDB to determine source and accessibility of the water usage information for the industrial facilities.
q. If specific water usage is now available, the consultant will obtain and evaluate that data to determine whether or not it can be referenced geographically to locate the specific demands, and also whether or not there is any standard for comparison for water usage from similar industries.
r. Consultant will perform literature review concerning water usage in industries in terms of usage per unit of product produced. If such data is available, consultant will prepare a table of expected quantities of use per unit of product produced.
s. Consultant will prepare table of anticipated savings that could be achieved and determine the magnitude of the potential savings as well as the estimated costs to achieve those savings if sufficient data is available to do so.

t. Consultant will meet with the Alternative Strategies Committee as already noted above and present draft results.
u. Consultant will finalize results for presentation to LCRWPG.
v. Consultant will finalize results for inclusion as amendment to the regional plan.

Work Product

The deliverables for this series of tasks will consist of revised tables of strategies, revised tables for cost and yield of strategies, as well as the necessary meeting information tools and amended figures, tables, charts, and text for inclusion as an amendment to the existing plan if appropriate. Otherwise, the information gained will be used in the next biennium of the third round in meeting shortages

Scope Item Number 4 – Evaluate New Strategies for High Growth Areas

Statement of the Problem/ Issue

One of the areas of particular concern in the last plan was the area of northern Hays County and southern Travis County. This area is experiencing considerable growth while at the same time some of the water supplies are being reduced because of over allocation. There are a number of Wholesale Water Providers that could potentially provide water to the area, but it will require a coordinated effort among all of them to be sure that the growth needs are addressed. In addition, the new SH 130 corridor is seen as a potential growth concentrator that may stretch the capabilities of the various entities charged with serving the water needs of their respective service areas. Meetings are currently underway among those service providers with portions of the rights of way in their service areas to determine how to best serve these areas. This could result in a significant shift in the locations of demands shown in the last plan.

Allowable Board Category

The allowable board categories for this scope item include 1, 3, 4, 5, and 7. The changed condition that is driving part of the urgency is the reduction in available supply from the new modeling of the Barton Springs/Edwards Aquifer Conservation District (BS/EACD). At the end of the last plan, the management of the BS/EACD notified the LCRWPG that the numbers provided for available supply had been superseded by additional modeling and that the aquifer was already over allocated. In addition, one of the strategies that was used for this area was a recharge project. There have been some additional studies which cast reasonable doubt on the ability of this project, so the yield was reduced by approximately 50 percent. This strategy was kept in the plan because there were not any other reasonably viable strategies to replace it with in the time available. In addition, the Lower Trinity Aquifer GAM was not complete at the time of the last plan, and that Groundwater

Availability Model (GAM) is or will shortly be available, which may provide a source of additional water that was not present in the last plan except for meeting industrial needs in northern Hays County.

Scope of Work

a. Develop maps which include the WUGs with shortages and the extent of the area in southern Travis and northern Hays Counties where the shortages exist.
b. Meet with BS/EACD to determine progress of their meetings with potential providers of water to this area to make up for shortages of groundwater determined by the BS/EACD modeling. If appropriate, set up follow-up meetings with wholesale providers with interest in serving this area as well as WUGs in the area which need supply.
c. Coordinate with existing water providers regarding changes since the January 2006 Regional Plan.
d. Evaluate impacts of revised availability numbers for high growth areas of Hays County/Travis County
    i. Barton Springs/Edwards Aquifer Conservation District
        1. Update availability numbers based on BS/EACD findings
        2. Determine impacts on water management strategies for the area
    ii. Hays-Trinity Groundwater Conservation District
        1. Determine Lower Trinity Aquifer availability
        2. Develop impacts on water management strategies for the area
    iii. Further analyze the viability of the Onion Creek Recharge structure strategy
e. Coordinate with groups trying to identify water needs for the SH-130 corridor. This task will consist primarily of trying to determine a better location for specific portions of County-Other populations in Travis and Bastrop Counties
f. Make revisions to shortages analysis based on revisions to available supplies.
g. Meet with WUGs in the area and review potential shortages and possible management strategies to meet those shortages.
h. Develop scope of work for second biennium to investigate management strategies based on Wholesale Water Providers and WUGs inputs and to apply water management strategies for that portion of the County-Other population assigned to the SH-130 corridor.

Work Product

The deliverables produced by this task will include revised figures, tables and text in Chapters 3, 4, and 5 of the Region K plan, documenting the reductions and additions to groundwater availability as well as the revised shortage analysis based on the aquifer reductions.

Scope Item Number 5 – Groundwater Availability

Statement of the Problem/ Issue

There was a considerable variance in the last planning round as to the states of completion of the various GAMs and a similar variation in the way in which the groundwater management plans of the various Groundwater Conservation Districts (GCDs) were included in the regional plan.

The BS/EACD completed at study at the end of the last planning cycle which identified the aquifer as being overallocated already instead of having some capacity for providing additional supplies. This study was completed after the availability numbers were completed and the LCRWPG was unable to incorporate this reduced availability into the plan. Other GAMs that are currently in various stages of completion which may be completed in time for inclusion in this planning round include the Llano Uplift GAM and the Ellenberger GAM. In addition, there is also the issue of completion of the Upper and Middle Gulf Coast GAMs, which were not completed in time for the last round, as well as ongoing modeling that is being supported as one of the tasks in the LSWP. One of the features of the LSWP is the construction of wells which will provide water during drought conditions at fairly high rates of production and provide limited amounts of water in other years. The impact of these wells is of great concern to Colorado, Wharton, and Matagorda Counties. The LSWP is currently supporting a study of a more intensive GAM which focuses on the three counties noted above. Results of that study will be available for the next biennium of Round 3. However, the LCRWPG will be desirous of following the progress of this GAM, evaluating the results and comparing those results to the Gulf Coast GAMs to determine which modeling tool to employ in revising the availability from the lower three counties. In addition, there are new GCDs that have been formed and are in various stages of writing their management plans. The LCRWPG desires their consultant team to maintain contact with these new GCDs and report back to the LCRWPG as availabilities are finalized.

Allowable Board Category

The issues noted above correspond to No. 3, Refinement to water supply availability. It also corresponds to No. 4, Overcoming problems noted in the last round, namely the lack of a usable model at the time the availability numbers were generated, the questions about the LSWP modeling effort which was not far enough along to address, the reduction in supply from the BS/EACD at the end of the process, the completion of the Lower Trinity GAM since the completion of the last plan, and the formation of new GCDs in the area. It also corresponds to No. 7, Interregional coordination. Availability of groundwater from the Gulf Coast Aquifer is of critical interest to both Regions K and P in Wharton County and there are a number of areas where groundwater is shared across regional boundaries where that sharing was problematic at the end of the planning cycle.

Scope of Work

The project objective is to provide sufficient investigation of the GAMs in all areas to determine what model should be used for availability studies in the next planning round, as well as to review the impacts of the updated BS/EACD model, and follow the deliberations on management plans of the newly formed districts. It will also encompass a determination of the potential supplies available from the Lower Trinity and whether those supplies may be one means of helping to alleviate the shortages in the areas noted in 4 above.

I. Contact all GCDs in the Region K area and determine what process they are following in developing the desired future conditions (DFC).
   a. Determine estimated schedule for development of DFC for their portion of the aquifer.
   b. Provide regional data as available and as needed for the determination of DFC.
   c. Encourage GCDs to finish determination of DFC in time to include information in the current regional water plan.
   d. Respond to limited requests for information from Groundwater Management Areas (GMAs) and their associated GCDs

II Review Middle and Upper Gulf Coast final models and determine degree of correlation if any for the lower three counties.
   a. Compare GAM runs with model being developed by the LSWP.
   b. Review outputs of the various models and develop comparisons of input and output files.
   c. Perform limited middle Gulf Coast GAM runs to compare outputs from LSWP model with similar inputs.
   d. Compare drawdown conditions with drawdowns resulting from previous limitations to groundwater availability in the 2006 Regional Plan.
   e. Develop strengths and weaknesses for each model and present to the Water Modeling Committee for review and comment.
   f. Present model analysis to the LCRWPG and recommend path forward for future modeling runs.
   g. Compare estimated groundwater availabilities from the alternatives examined below and determine whether additional modeling is needed as well as whether additional shortages or surpluses will result.
   h. Develop scope and budget for any tasks for the next biennium of the 3rd planning round.

III Review Lower Trinity Model
   a. Review modeling and present results to Water Modeling Committee.
   b. Discuss previous calculations of availability from the last planning round.
   c. Determine whether or not spring flow is an issue
   d. Review contact information with any GCDs that have a portion of the Lower Trinity.

e. Locate demands from last planning round that are in close proximity to the Lower Trinity
f. Present results of investigation to the Water Modeling Committee and discuss potential availability based on modeling results.
g. Receive input from Water Modeling Committee, make appropriate changes, and present to the LCRWPG.
h. Prepare scopes and budgets for appropriate new water management strategies using Lower Trinity water for next planning biennium.

IV Coordinate with other Regions on Shared Supplies
a. Maintain contact with other regions on shared groundwater supplies as refinements to groundwater availability are made as a result of GCD management plan implementation or GMA activity on DFC.
b. Review impacts to Region K WUGs on changes in availability in other regions.
c. Develop scopes for new strategies in next biennium of 3rd planning round as appropriate.

Work Product

The deliverables for the above subtasks will be as follows:

1. Technical memorandum on the comparison of the three GAMs for the lower three counties in Region K (Colorado, Wharton, and Matagorda).
2. Listing of groundwater availability numbers reported by new GCDs
3. Listing of new models completed since last planning round.
4. Changes to availabilities reported in last planning round and determination of qualitative impact on the plan
5. Determination of whether a plan amendment(s) is needed in the interim.
6. Scope items for next biennium related to groundwater modeling and availability.
7. Draft and final reports.

Scope Item Number 6 – Changed Conditions/Plan Amendments

Statement of the Problem/Issues

The current requirements for receiving funding from the TWDB for a water supply related project, and for processing permits for water resources through the TCEQ state that the project being contemplated for funding or for permitting must be in accordance with the completed and adopted regional plan for its area. As a result of this, there is significant emphasis placed on being specifically acknowledged in the plan. For these reasons, there is a potential need for short term plan amendments to allow new sources of supply to be placed in line in advance of need.

Allowable Board Category

This task fits into Board Category No. 1, Evaluation of new water management strategies in response to changed conditions. The development of multiple potential sources of water is common in the industry in order to ensure an adequate long term supply. Where these sources do not correspond with a single strategy from the existing plan, then a plan amendment must be sought in order to allow the project to proceed.

Scope of Work

A generic scope of work for these types of amendments that might be likely is as follows:

a. Meet with the applicant for the plan amendment and determine the reason behind the amendment.
b. Review the amendment proposed and determine whether or not there is an adverse impact on any WUG as a result of the amendment
c. Prepare presentation materials for the LCRWPG for review to determine the potential impact to other WUGs and resources and whether or not the implementation of this strategy causes a shortage to another WUG.
d. Exercise water model (if surface water) to determine potential impacts on the environment from the proposed strategy.
e. Develop presentation materials and present pros and cons of the amendment to the assembled LCRWPG.
f. Review situation with LCRWPG and request determination of whether or not LCRWPG recommends approval with information available.
g. Provide support to LCRWPG in holding public hearing on plan amendments, and responding to comments received.
h. Make any changes needed as a result of the public hearing and submit to LCRWPG for transmittal to the TWDB.

Work Product

The work product for this scope of work will consist of either amended pages to the plan incorporating the revised strategy, or a written determination that the proposed amendment is in conflict with the plan.

Scope Item Number 7 – Public Outreach/Administration

Statement of the Problem/Issue

The LCRWPG has a vested interest in having professional representation at its meetings and in meeting all of the necessary requirements for outreach to the public related to the workings and deliberations of LCRWPG. These requirements include

assisting with the presentation of materials and statements from various sources, providing advice and guidance on the response to some of the presentations given to the LCRWPG, and providing the notice required for public meetings, public hearings, and other venues for obtaining public input to the process. Some funds are needed to provide the necessary support and make the required publications and notifications of availability of scopes of work and draft reports.

Allowable Board Category

The work contemplated here fits within the Board's set aside for administrative purposes, which was allocated to the regions based on a funding formula developed by the Board staff. The purpose of including it here is to ensure that the work done under these funds is recoverable by the LCRWPG.

Scope of Work

a. Attend regularly scheduled meetings of the LCRWPG even when there is not a specific report by the consultant team.
b. Coordinate with Board staff to determine adequacy of notice for each instance in which notice is required.
c. Provide all required notices of availability for scopes of work, grant applications, and draft and final documents. This includes providing notices in the newspaper of general circulation in each county.
d. Perform other duties as assigned.

Work Products

Work products from this scope will include properly prepared notices of availability of scopes of work and draft and final products, properly prepared newspaper notices, etc.

16. Prioritization of scope of work tasks by the regional planning group.

The above scope items are presents are presented in the priority order assigned by the LCRWPG. For reference, these major task items are summarized in priority order below:

1. Surface Water Availability Modeling
2. Environmental Impacts of the Water Management Strategies
3. Perform a Literature Review of Selected Water Management Strategies and Incorporate Into Plan
4. Evaluate New Strategies for High Growth Areas
5. Groundwater Availability
6. Changed Conditions/Plan Amendments
7. Public Outreach/Administration

17. A task budget for detailed scope of work by task.

Please see ***Appendix B***

18. An expense budget for detailed scope of work by expense category.

Please see ***Appendix C***

19. A time schedule for completing detailed Scope of Work by task.

Please see ***Appendix D***

20. Specific deliverables for each task in Scope of Work.

Deliverables for the scope items are presented with each scope item above.

21. Method of monitoring study progress.

Progress reports to the TWDB, Regional Planning Group, and LCRA.

22. Qualifications and direct experience of proposed project staff.

Please see ***Appendix E***

III. WRITTEN ASSURANCES

Written assurance of the following items:

Proposed planning does not duplicate existing projects;

The LCRA on behalf of the LCRWPG hereby assures that the proposed planning does not duplicate existing projects.

Implementation of viable solutions identified through the proposed planning will be diligently pursued and identification of potential sources of funding for implementation of viable solutions;

The LCRA and LCRWPG will diligently pursue any implementation of viable solutions identified through the proposed planning and identify potential sources of funding for the implementation of viable solutions.

If a grant is awarded, written evidence that local matching funds are available for the proposed planning must be provided when the contract is executed.

N/A

IV. PROOF OF NOTIFICATION

Proof of notification

Develop or revise regional water plans. Eligible applicants requesting funds to develop or revise regional water plans must, not less than 30 days before board consideration of the application, provide notice that an application for planning assistance is being filed with the executive administrator by:

(1) publishing notice once in a newspaper of general circulation in each county located in whole or in part in the regional water planning area; and
(2) mailing notice to each mayor of a municipality with a population of 1,000 or more or which is a county seat and that is located in whole or in part in the regional water planning area, to each county judge of a county located in whole or in part in the regional water planning area, to all districts and authorities created under Texas Constitution, Article III, §52, or Article XVI, §59, located in whole or in part in the regional water planning area based upon lists of such water districts and river authorities obtained from Texas Commission on Environmental Quality, and all regional water planning groups in the state.

The notice must include the following:

Name and address of applicant and applicant's official representative;
Brief description of proposed planning area;
Purpose of the proposed planning;
Texas Water Development Board Executive Administrator's name and address; and
Statement that any comments on the proposed planning must be filed with the applicant and the Texas Water Development Board Executive Administrator within 30 days of the date on which the notice was mailed.

Published Notice: On behalf of the LCRWPG, LCRA published public notices in the following newspapers stating that it is filing an application with the TWDB for funding assistance for developing Region K's regional water plan:

- Austin American Statesman
- Bastrop Advertiser
- Bay City Daily Tribune
- Burnet Bulletin (Highlander)
- Columbus Colorado Co. Citizen
- Fredericksburg Standard
- Georgetown Williamson County Sun
- Goldthwaite Eagle
- Johnson City Record - Courier

- LaGrange Fayette Co. Record
- Llano News
- San Saba News
- Wharton Journal

Copies of these published notices, showing publication dates, are shown in ***Appendix F***.

Mailed Notices: Before submission of this application for funding and more than 30 days prior to November 14, 2006, on behalf of the LCRWPG, LCRA mailed notices to the following individuals stating that LCRA is filing an application with the TWDB for funding assistance for developing Region K's regional water plan:

- Mayor of each municipality with a population of over 1,000 or more within Region K;
- County judges of each county within Region K; and,
- Chairs of all regional water planning groups in the state
- Water districts and water authorities

A copy of the notice and a list of those to whom the notice was sent are shown in ***Appendix G***.

Appendix A

LCRWPG CHAIR'S LETTER
DESIGNATING LCRA TO SUMMIT APPLICATION FOR LCRWPG

LOWER COLORADO REGIONAL WATER PLANNING GROUP

John E. Burke, P.E.
Chairman

P.O. Drawer P
Bastrop, TX 78602

Phone: 512/303-3943
Fax: 512/303-4881

September 13, 2006

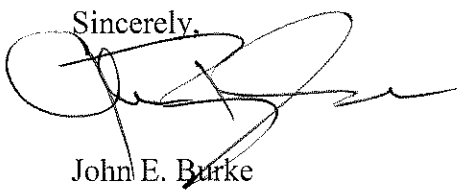
Mr. Kevin Ward
Executive Administrator
Texas Water Development Board
1700 North Congress
Austin, Texas 78701

Dear Mr. Ward:

The purpose of this letter is to inform you that the Lower Colorado Regional Water Planning Group (LCRWPG), recognized by the Texas Water Development Board (TWDB) under Senate Bill 1, has authorized the Lower Colorado River Authority (LCRA) to submit a grant application to the TWDB. The LCRWPG will use these grant funds for developing second round of regional water plan for Region K. The LCRWPG Executive Committee authorizes the LCRA to apply for the grant.

Please call me at (512) 303-3943 if you have any questions.

Sincerely,



John E. Burke
Chair, LCRWPG

Appendix B

TASK BUDGET

Task	Subtask	Task Description	Total Amount
1		**Surface Water Availability Modeling**	**$ 200,000**
	a	Conduct a detailed review of the hydrologic and water right information in the TCEQ WAM for the Colorado River	$ 68,100
	b	Contact TCEQ staff to discuss current status of the Colorado River WAM and determine whether or not modifications to include the "priority circumvention" subroutine or any other significant changes are anticipated by TCEQ. Also discuss any written agreements that are provided by LCRA or any of the	$ 10,000
	c	Meet with the LCRWPG Water Modeling Committee to discuss the findings of the WAM review in terms of any clarification or resolution they may bring to the "No Call" assumption used in the 2nd round of planning	$ 11,700
	d	Research and present alternative models and the advantages and disadvantages of each to the Water Modeling Committee	$ 13,200
	e	Assist the Water Modeling Committee and the LCRWPG in choosing a course of action and develop an updated and improved surface water availability model for planning purposes	$ 6,000
	f	Coordinate with Region F and determine if there are any additional agreements or other specific items that Region F desires to incorporate	$ 8,800
	g	Report to the Water Modeling Committee on Region F input and determine whether to incorporate changes requested	$ 13,100
	h	Coordinate with LCRA regarding incorporation of LSWP water availability in the model	$ 14,200
	i	Research information from any other relevant major project undertaken by any entity/water right holder that may have impacts on water availability estimates	$ 11,200
	j	Incorporate information on revised schedule for for cooling water needs for generating capacity	$ 3,800
	k	Research information on any new water right, any amendment or any agreements between parties, since the January 2006 Regional Plans, for inclusion in the model	$ 5,500
	l	Perform up to three model runs to determine whether or not any of the negative issues associated with the model used in the last round are present	$ 6,000
	m	Use selected model to determine availability of surface water supplies and compare to availabilities determined in the last round	$ 12,700
	n	Present initial results to Water Modeling Committee and LCRWPG and discuss alternatives if needed	$ 4,900
	o	If new shortages arise due to the revised modeling then additional water management strategies may need to be developed and evaluated	$ 5,300
	p	Develop scope of services and budget for analysis of additional water management strategies as needed. This scope of services would be performed in the second biennium funding cycle of this third planning round	$ 5,500

Task	Subtask	Task Description	Total Amount
2		**Environmental Impacts of the Water Management Strategies**	**$ 125,000**
	a	Perform a quantitative impact analysis of the proposed water management strategies for instream flows at five designated control points on the Colorado River and its major tributaries	$ 37,300
	b	Perform a quantitative impact analysis of the proposed water management strategies for freshwater inflows into Matagorda Bay	$ 29,400
	c	Research information on any new environmental criteria in any amendment to an existing water right or such criteria in any new water right or any agreements between parties, since the January 2006 Regional Plans, for inclusion in the model	$ 6,900
	d	Prepare tabular comparisons for each strategy of the impacts to land and water resources	$ 5,300
	e	Determine if the impacts are reasonable, consistent with protection of environmental flows, and consistent with long-term protection of the state's water resources, natural resources, and agricultural resources	$ 9,600
	f	Utilize the LCRA Water Management Plan guidelines when evaluating freshwater inflows impacts and instream flow impacts. Incorporate information from most recent studies conducted by LCRA on Bay and Estuary inflows as well as instream flows	$ 6,500
	g	Coordinate with LCRA regarding incorporation of information from LSWP impact studies	$ 8,100
	h	Present information to LCRWPG and discuss results	$ 4,500
	i	Assist LCRWPG in determining long term viability of projects analyzed, including any new management strategies	$ 10,500
	j	For any strategies that are determined to have unreasonable impacts, develop scope and budget for investigation of new strategies to replace the ones with unreasonable impacts. This scope and budget will be for the second biennium of the third planning round	$ 6,900

Task	Subtask	Task Description	Total Amount
3		**Perform a Literature Review of Selected Water Management Strategies and Incorporate Into Plan**	**$ 125,000**
	a	Perform literature review for brush control, open space mainenance.,land stewardship, aquifer storage and recovery, additional water conservation, improved management in potential recharge areas, and drought contingency measures/management	$ 7,500
	b	Request data and studies from LCRWPG members	$ 2,400
	c	Develop results table of yield, cost, and yield influencing factors	$ 5,800
	d	Assist LCRWPG in forming Alternative Strategies Committee	$ 1,000
	e	Meet w/ Alternative Strategy Committee to determine potential applications	$ 1,500
	f	Review conditions in target areas and compared to literature reviewed	$ 9,400
	g	Adjust cost/yield for comparable conditions, or stay why not possible	$ 4,000
	h	Report to Alternative Strategy Committee and discuss applications	$ 2,200
	i	Meet with potential WUGs to determine interest in alternative strategy	$ 8,200
	j	Compare forecasts, review, discuss, and recommendations - Apply strategy to target WUGs and compare costs with last round	$ 12,800
	k	Substitute for former strategy if costs compare and WUG agrees	$ 2,300
	l	Develop text to encourage alternative strategy even if data insufficient to include	$ 2,700
	m	Revise shortage analysis with new strategy information	$ 6,500
	n	Present results to LCRWPG	$ 4,150
	o	Prepare revisions as a plan amendment	$ 5,700
	p	Meet with TWDB on industrial use information	$ 2,300
	q	Obtain, evaluate, locate and find standards of comparison, if any	$ 6,700
	r	Develop expected quantities for unit of production if possible	$ 10,500
	s	Prepare table of anticipated savings and costs to achieve	$ 3,000
	t	Present draft results to Alternative Strategy Committee	$ 6,400
	u	Present to LCRWPG meeting	$ 8,650
	v	Prepare as an amendment to the regional plan	$ 11,300

Task	Subtask	Task Description	Total Amount
4		**Evaluate New Strategies for High Growth Areas**	**$ 60,000**
	a	Map shortage areas in Northern Hays and Southern Travis Counties	$ 7,200
	b	Meet with BS/EACD and all potential wholesale suppliers to the area and WUGs with shortages	$ 11,850
	c	Coordinate with wholesale suppliers on changes since 2006 regional plan	$ 6,200
	d	Evaluate impacts of revised availability numbers on shortages	$ 5,700
	e	Coordinate with I 30 corridor groups to better locate demand centers	$ 10,100
	f	Incorporate revised availability into shortages analysis	$ 4,400
	g	Meet with area WUGs to discuss remaining shortages and strategies	$ 9,650
	h	Develop scope of work for next biennium for new strategies	$ 4,900

Task	Subtask	Task Description	Total Amount
5		**Groundwater Availability**	**$ 65,000**
	I	***Contact all GCDs in the Region K area and determine what process they are following in developing the desired future conditions (DFC)***	
	a	Determine estimated schedule for development of DFC for their portion of the aquifer	$ 1,000
	b	Provide regional data as available and as needed for the determination of DFC	$ 2,100
	c	Encourage GCDs to finish determination of DFC in time to include information in the current regional water plan	$ 800
	d	Respond to limited requests for information from GMAs and their associated GCDs	$ 900
	II	***Review Middle and Upper Gulf Coast final models and determine degree of correlation if any for the lower three counties***	
	a	Compare GAM runs with model being developed by the LSWP	$ 3,500
	b	Review outputs of the various models and develop comparisons of input and output files	$ 3,500
	c	Perform limited middle Gulf Coast GAM runs to compare outputs from LSWP model with similar inputs	$ 3,500
	d	Compare drawdown conditions with drawdowns resulting from previous limitations to groundwater availability in the 2006 Regional Plan	$ 4,700
	e	Develop strengths and weaknesses for each model and present to the Water Modeling Committee for review and comment	$ 3,200
	f	Present model analysis to the LCRWPG and recommend path forward for future modeling runs	$ 3,750
	g	Compare estimated groundwater availabilities from the alternatives examined below and determine whether additional modeling is needed as well as whether additional shortages or surpluses will result	$ 2,900
	h	Develop scope and budget for any tasks for the next biennium of the 3rd planning round	$ 2,700
	III	***Review Lower Trinity Model***	
	a	Review modeling and present results to Water Modeling Committee	$ 2,900
	b	Discuss previous calculations of availability from the last planning round	$ 1,600
	c	Determine whether or not spring flow is an issue	$ 3,200
	d	Review contact information with any GCDs that have a portion of the Lower Trinity	$ 4,200
	e	Locate demands from last planning round that are in close proximity to the Lower Trinity	$ 2,300
	f	Present results of investigation to the Water Modeling Committee and discuss potential availability based on modeling results	$ 3,200
	g	Receive input from the Water Modeling Committee, make appropriate changes, and present to the LCRWPG	$ 4,450
	h	Prepare scopes and budgets for appropriate new water management strategies using Lower Trinity water for next planning biennium	$ 2,700
	IV	***Coordinate with other Regions on Shared Supplies***	
	a	Maintain contact with other regions on shared groundwater supplies as refinements to groundwater availability are made as a result of GCD management plan implementation or GMA activity on DFC	$ 4,100
	b	Review impacts to Region K WUGs on changes in availability in other regions	$ 1,600
	c	Develop scopes for new strategies in next biennium of 3rd planning round as appropriate	$ 2,200

Task	Subtask	Task Description	Total Amount
6		**Changed Conditions/Plan Amendments**	**$ 45,000**
	a	Meet with the applicant for the plan amendment and determine the reason behind the amendment	$ 5,600
	b	Review the amendment proposed and determine whether or not there is an adverse impact on any WUG as a result of the amendment	$ 5,900
	c	Prepare presentation materials for the LCRWPG for review to determine the potential impact to other WUGs and resources and whether or not the implementation of this strategy causes a shortage to another WUG	$ 4,100
	d	Exercise water model (if surface water) to determine potential impacts on the environment from the proposed strategy	$ 6,800
	e	Develop presentation materials and present pros and cons of the amendment to the assembled LCRWPG	$ 3,900
	f	Review situation with LCRWPG and request determination of whether or not LCRWPG recommends approval with information available	$ 2,100
	g	Provide support to LCRWPG in holding public hearing on plan amendments, and responding to comments received	$ 13,600
	h	Make any changes needed as a result of the public hearing and submit to LCRWPG for transmittal to the TWDB	$ 3,000

Task	Subtask	Task Description	Total Amount
7		**Public Outreach/Administration**	**$ 57,680**
	a	Attend regularly scheduled meetings of the LCRWPG even when there is not a specific report by the consultant team	
	b	Coordinate with Board staff to determine adequacy of notice for each instance in which notice is required	
	c	Provide all required notices of availability for scopes of work, grant applications, and draft and final documents. This includes providing notices in the newspaper of general circulation in each county	
	d	Perform other duties as assigned	

Appendix C

EXPENSE BUDGET

Task 1 – Surface Water Availability Modeling

Category	Total Amount
Salaries & Wages[1]	$ 59,848
Fringe[2]	$ 31,361
Travel	$ 2,000
Other Expenses[3]	$ 500
Subcontract Services	$ -
Overhead[4]	$ 66,851
Profit	$ 39,440
Total	**$ 200,000**

Task 2 – Environmental Impacts of the Water Management Strategies

Category	Total Amount
Salaries & Wages[1]	$ 36,970
Fringe[2]	$ 19,372
Travel	$ -
Other Expenses[3]	$ 3,000
Subcontract Services	$ -
Overhead[4]	$ 41,295
Profit	$ 24,363
Total	**$ 125,000**

Task 3 – Perform a Literature Review of Selected Water Management Strategies and Incorporate Into Plan

Category	Total Amount
Salaries & Wages[1]	$ 35,758
Fringe[2]	$ 18,737
Travel	$ 1,000
Other Expenses[3]	$ 6,000
Subcontract Services	$ -
Overhead[4]	$ 39,941
Profit	$ 23,564
Total	**$ 125,000**

Task 4 – Evaluate New Strategies for High Growth Areas

Category	Total Amount
Salaries & Wages[1]	$ 16,061
Fringe[2]	$ 8,416
Travel	$ 500
Other Expenses[3]	$ 4,000
Subcontract Services	$ 2,500
Overhead[4]	$ 17,940
Profit	$ 10,584
Total	**$ 60,000**

Task 5 – Groundwater Availability

Category	Total Amount
Salaries & Wages[1]	$ 18,788
Fringe[2]	$ 9,845
Travel	$ 1,000
Other Expenses[3]	$ 2,000
Subcontract Services	$ -
Overhead[4]	$ 20,986
Profit	$ 12,381
Total	**$ 65,000**

Task 6 – Changed Conditions/Plan Amendments

Category	Total Amount
Salaries & Wages[1]	$ 10,303
Fringe[2]	$ 5,399
Travel	$ 1,000
Other Expenses[3]	$ -
Subcontract Services	$ 10,000
Overhead[4]	$ 11,508
Profit	$ 6,790
Total	**$ 45,000**

Task 7 – Public Outreach/Administration

Category	Total Amount
Salaries & Wages[1]	$ 9,903
Fringe[2]	$ 5,189
Travel	$ -
Other Expenses[3]	$ -
Subcontract Services	$ 25,000
Overhead[4]	$ 11,062
Profit	$ 6,526
Total	**$ 57,680**

[1] Salaries and Wages is defined as the cost of salaries of engineers, draftsmen, stenographers, surveymen, clerks, laborers, etc., for time directly chargeable to this contract.

[2] Fringe is defined as the cost of social security contributions, unemployment, excise, and payroll taxes, employment compensation insurance, retirement benefits, medical and insurance benefits, sick leave, vacation, and holiday pay applicable thereto.

[3] Other Expenses is defined to include expendable supplies, communications, reproduction, postage, and costs of public meetings.

[4] Overhead is defined as the costs incurred in maintaining a place of business and performing professional services similar to those specified in this contract. These costs shall include the following:

- Indirect salaries, including that portion of the salary of principals and executives that is allocable to general supervision;
- Indirect salary fringe benefits;
- Accounting and legal services related to normal management and business operations;
- Travel costs incurred in the normal course of overall administration of the business;
- Equipment rental;
- Depreciation of furniture, fixtures, equipment, and vehicles;
- Dues, subscriptions, and fees associated with trade, business, technical, and professional organizations;
- Other insurance;
- Rent and utilities; and
- Repairs and maintenance of furniture, fixtures, and equipment.

[5] Voting Planning Member Travel Expenses is defined as eligible travel expenses incurred by regional water planning members that cannot be reimbursed by any other entity, political subdivision, etc.

Appendix D

TIME SCHEDULE

	Region K Task Timeline	2007				2008			
		1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q
1	**Surface Water Availability Modeling**								
	a. Conduct a detailed review of the hydrologic and water right information in the TCEQ WAM for the Colorado River	X							
	b. Contact TCEQ staff to discuss current status of the Colorado River WAM and determine whether or not modifications to include the "priority circumvention" subroutine or any other significant changes are anticipated by TCEQ. Also discuss any written agreements that are provided by LCRA or any of the upstream rights holders with TCEQ staff and determine status of any efforts to include in the WAM	X							
	c. Meet with the LCRWPG Water Modeling Committee to discuss the findings of the WAM review in terms of any clarification or resolution they may bring to the "No Call" assumption used in the 2nd round of planning		X						
	d. Research and present alternative models and the advantages and disadvantages of each to the Water Modeling Committee		X						
	e. Assist the Water Modeling Committee and the LCRWPG in choosing a course of action and develop an updated and improved surface water availability model for planning purposes			X					
	f. Coordinate with Region F and determine if there are any additional agreements or other specific items that Region F desires to incorporate			X	X				
	g. Report to the Water Modeling Committee on Region F input and determine whether to incorporate changes requested				X				
	h. Coordinate with LCRA regarding incorporation of LSWP water availability in the model				X				
	availability estimates					X			
	j. Incorporate information on revised schedule for for cooling water needs for generating capacity					X			
	Plans, for inclusion in the model					X			
	present					X	X		
	m. Use selected model to determine availability of surface water supplies and compare to availabilities determined in the last round						X	X	
	n. Present initial results to Water Modeling Committee and LCRWPG and discuss alternatives if needed							X	
	o. If new shortages arise due to the revised modeling then additional water management strategies may need to be developed and evaluated								X
	p. Develop scope of services and budget for analysis of additional water management strategies as needed. This scope of services would be performed in the second biennium funding cycle of this third planning round								X
2	**Environmental Impacts of the Water Management Strategies**								
	a. Perform a quantitative impact analysis of the proposed water management strategies for instream flows at five designated control points on the Colorado River and its major tributaries	X	X	X					
	b. Perform a quantitative impact analysis of the proposed water management strategies for freshwater inflows into Matagorda Bay	X	X	X					
	c. Research information on any new environmental criteria in any amendment to an existing water right or such criteria in any new water right or any agreements between parties, since the January 2006 Regional Plans, for inclusion in the model			X					
	d. Prepare tabular comparisons for each strategy of the impacts to land and water resources				X				
	e. Determine if the impacts are reasonable, consistent with protection of environmental flows, and consistent with long-term protection of the state's water resources, natural resources, and agricultural resources				X				
	f. Utilize the LCRA Water Management Plan guidelines when evaluating freshwater inflows impacts and instream flow impacts. Incorporate information from most recent studies conducted by LCRA on Bay and Estuary inflows as well as instream flows	X	X	X					
	g. Coordinate with LCRA regarding incorporation of information from LSWP impact studies	X	X	X					
	h. Present information to LCRWPG and discuss results					X			
	i. Assist LCRWPG in determining long term viability of projects analyzed, including any new management strategies					X	X		
	j. For any strategies that are determined to have unreasonable impacts, develop scope and budget for investigation of new strategies to replace the ones with unreasonable impacts. This scope and budget will be for the second biennium of the third planning round							X	
3	**Perform a Literature Review of Selected Water Management Strategies and Incorporate Into Plan**								
	a. Perform literature review for brush control, open space mainenance.,land stewardship, aquifer storage and recovery, additional water conservation, improved management in potential recharge areas, and drought contingency measures/management	X	X						
	b. Request data and studies from LCRWPG members	X	X						
	c. Develop results table of yield, cost, and yield influencing factors		X						
	d. Assist LCRWPG in forming Alternative Strategies Committee		X						
	e. Meet w/ Alternative Strategy Committee to determine potential applications		X						
	f. Review conditions in target areas and compared to literature reviewed		X	X					
	g. Adjust cost/yield for comparable conditions, or stay why not possible			X					
	h. Report to Alternative Strategy Committee and discuss applications			X					
	i. Meet with potential WUGs to determine interest in alternative strategy				X				
	j. Compare forecasts, review, discuss, and recommendations - Apply strategy to target WUGs and compare costs with last round				X				
	k. Substitute for former strategy if costs compare and WUG agrees				X				
	l. Develop text to encourage alternative strategy even if data insufficient to include					X			
	m. Revise shortage analysis with new strategy information					X			
	n. Present results to LCRWPG					X			
	o. Prepare revisions as a plan amendment						X		
	p. Meet with TWDB on industrial use information	X							
	q. Obtain, evaluate, locate and find standards of comparison, if any		X						
	r. Develop expected quantities for unit of production if possible			X					
	s. Prepare table of anticipated savings and costs to achieve					X			
	t. Present draft results to Alternative Strategy Committee						X		
	u. Present to LCRWPG meeting							X	
	v. Prepare as an amendment to the regional plan							X	X
4	**Evaluate New Strategies for High Growth Areas**								
	a. Map shortage areas in Northern Hays and Southern Travis Counties	X	X						
	b. Meet with BS/EACD and all potential wholesale suppliers to the area and WUGs with shortages		X						
	c. Coordinate with wholesale suppliers on changes since 2006 regional plan		X	X					
	d. Evaluate impacts of revised availability numbers on shortages			X					
	e. Coordinate with I 30 corridor groups to better locate demand centers			X	X				
	f. Incorporate revised availability into shortages analysis				X				
	g. Meet with area WUGs to discuss remaining shortages and strategies					X	X		
	h. Develop scope of work for next biennium for new strategies							X	

	Region K Task Timeline	2007				2008			
		1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q
5	**Groundwater Availability**								
	I. Contact all GCDs in the Region K area and determine what process they are following in developing the desired future conditions (DFC)								
	a. Determine estimated schedule for development of DFC for their portion of the aquifer	X							
	b. Provide regional data as available and as needed for the determination of DFC	X	X						
	c. Encourage GCDs to finish determination of DFC in time to include information in the current regional water plan	X	X	X	X				
	d. Respond to limited requests for information from GMAs and their associated GCDs	X	X	X	X	X			
	II. Review Middle and Upper Gulf Coast final models and determine degree of correlation if any for the lower three counties								
	a. Compare GAM runs with model being developed by the LSWP	X	X						
	b. Review outputs of the various models and develop comparisons of input and output files		X						
	c. Perform limited middle Gulf Coast GAM runs to compare outputs from LSWP model with similar inputs		X	X					
	d. Compare drawdown conditions with drawdowns resulting from previous limitations to groundwater availability in the 2006 Regional Plan			X	X				
	e. Develop strengths and weaknesses for each model and present to the Water Modeling Committee for review and comment					X			
	f. Present model analysis to the LCRWPG and recommend path forward for future modeling runs					X			
	g. Compare estimated groundwater availabilities from the alternatives examined below and determine whether additional modeling is needed as well as whether additional shortages or surpluses will result						X	X	
	h. Develop scope and budget for any tasks for the next biennium of the 3rd planning round								X
	III. Review Lower Trinity Model								
	a. Review modeling and present results to Water Modeling Committee	X	X						
	b. Discuss previous calculations of availability from the last planning round		X						
	c. Determine whether or not spring flow is an issue	X	X	X					
	d. Review contact information with any GCDs that have a portion of the Lower Trinity			X	X				
	e. Locate demands from last planning round that are in close proximity to the Lower Trinity			X	X				
	f. Present results of investigation to the Water Modeling Committee and discuss potential availability based on modeling results					X			
	g. Receive input from the Water Modeling Committee, make appropriate changes, and present to the LCRWPG						X		
	h. Prepare scopes and budgets for appropriate new water management strategies using Lower Trinity water for next planning biennium							X	
	IV. Coordinate with other Regions on Shared Supplies								
	a. Maintain contact with other regions on shared groundwater supplies as refinements to groundwater availability are made as a result of GCD management plan implementation or GMA activity on DFC	X	X	X	X	X	X		
	b. Review impacts to Region K WUGs on changes in availability in other regions	X	X	X	X	X	X		
	c. Develop scopes for new strategies in next biennium of 3rd planning round as appropriate							X	X
6	**Changed Conditions/Plan Amendments**								
	a. Meet with the applicant for the plan amendment and determine the reason behind the amendment	X	X						
	b. Review the amendment proposed and determine whether or not there is an adverse impact on any WUG as a result of the amendment		X						
	c. Prepare presentation materials for the LCRWPG for review to determine the potential impact to other WUGs and resources and whether or not the implementation of this strategy causes a shortage to another WUG			X					
	d. Exercise water model (if surface water) to determine potential impacts on the environment from the proposed strategy			X	X				
	e. Develop presentation materials and present pros and cons of the amendment to the assembled LCRWPG				X				
	f. Review situation with LCRWPG and request determination of whether or not LCRWPG recommends approval with information available					X			
	g. Provide support to LCRWPG in holding public hearing on plan amendments, and responding to comments received						X	X	
	h. Make any changes needed as a result of the public hearing and submit to LCRWPG for transmittal to the TWDB								X
7	**Public Outreach/Administration**								
	a. Attend regularly scheduled meetings of the LCRWPG even when there is not a specific report by the consultant team	X	X	X	X	X	X	X	X
	b. Coordinate with Board staff to determine adequacy of notice for each instance in which notice is required	X	X	X	X	X	X	X	X
	c. Provide all required notices of availability for scopes of work, grant applications, and draft and final documents. This includes providing notices in the newspaper of general circulation in each county	X	X	X	X	X	X	X	X
	d. Perform other duties as assigned	X	X	X	X	X	X	X	X

Appendix E

QUALIFICATIONS AND DIRECT EXPERIENCE OF PROPOSED PROJECT STAFF

Mark H. Jordan, Esq.

2609 Ellise Avenue Austin, TX 78757

(512) 467-7270

CAREER SUMMARY

Results-oriented program manager and attorney with progressively responsible experience directing projects related to the development and implementation of regulatory policies and procedures. Eleven years experience supervising technical and legal staff. Proven experience working successfully with outside interests on the development of environmental policies and regulations.

KEY SKILLS

Environmental Law	**Legislative Affairs**	**Water Rights Law**
Administrative Management	**Policy Analysis**	**Clean Water Act**
Administrative Law	**Public Speaking**	**Endangered Species Act**

SELECTED ACHIEVEMENTS

Coordinated creation and administration of Texas Colorado River Floodplain Coalition; provided agency review and input to Senate Bill 1, 75th Texas Legislative Session, major omnibus legislation related to water resource management in Texas. Reviewed draft revisions to bill. Served as resource witness for agency on bill. Participated in briefings with Legislative committees and Legislative staff. Successfully presented needs analysis to support multi-million dollar appropriation for development of new water availability models, resulting in Legislative appropriation for models.

Managed River Management and Flood & Emergency Preparedness Divisions, Lower Colorado River Authority, and Water Policy and Regulations Division, Texas Natural Resource Conservation Commission, supervising senior technical and policy analysts; divisions had an annual budget of $900,000 and $500,000, respectively. Supervised agency staff attorneys working in the areas of water quality, water rights, and hazardous and municipal solid waste.

Directed major revision to agency rules regarding federal Clean Water Act 401 Certification to assist Texas= admittance into NOAA=s Coastal Zone Management Program. Worked with inter-agency team of staff to negotiate federal approval of the State Coastal Management Program. Supervised agency review of all relevant rules and policies to insure consistency with proposed Plan. Federal government approved the Texas State Coastal Zone Management Program giving Texas additional regulatory jurisdiction over its coastal resources and awarding $2 million per year of federal monies to pass-through to local governments.

Developed agency manual A Regulatory Guidance Document for Applications to Divert, Store, or Use State Water (TNRCC RGD-141, June1995) to provide for documentation of criteria procedures for processing water right applications. Negotiated with regulated interests to obtain input and consensus. Documentation resulted in improved consistency in handling of water right applications.

Coordinated State participation in the development of pre-listing agreements to protect Barton Creek Salamander in accordance with Federal Endangered Species Act. Agreement resulted in consensus between U.S. Fish and Wildlife and Texas State government regarding adequacy of State authority protect species without listing.

Prepared policy white papers for a broad spectrum of water management issues including floodplain management, water quality, water reuse, groundwater management, interbasin transfers, alternative water development strategies, and Total Daily Maximum Loads.

WORK HISTORY

Lower Colorado River Authority

Manager, River Management	February 2003 – present
Supervisor, Flood & Emergency Preparedness	August 2000 - February 2003
Administrative Director, Texas Colorado River Floodplain Coalition	

Texas Natural Resource Conservation Commission (formerly Texas Water Commission)

Executive Assistant to Deputy Director	
Office of Environmental Policy, Analysis and Assessment	March 1999-July 2000
Division Director, Water Policy	Nov. 1992-March 1999
Assistant Division Director, Legal Division	Feb. 1991-Nov. 1992
Senior Staff Attorney Water Rights, Legal Division	Aug. 1989-Feb. 1991
Staff Attorney, Legal Division	Feb. 1988-Aug. 1989

Texas Secretary of State's Office

Staff Attorney, Elections Division	July 1985-Feb. 1989

EDUCATION

JD, Lewis & Clark Law School, Portland, Oregon 1984
Certificate in Environmental and Natural Resources Law

BA, History, Austin College, Sherman Texas 1976
Folberg Fellowship in History

SELECTED PUBLICATIONS

Impact of Reuse on Downstream Water Rights and Environmental Flow Needs≅ presented at the Water Law in Texas Conference, February 1999.

A Regulatory Guidance Document for Applications to Divert, Store, or Use State Water (TNRCC RGD-141) June 1995.

"Alternative Water Development Strategies," presented at Texas Water Law Conference, October 28, 1993.

"A Management Plan for the Edwards Aquifer," presented at the Texas Environmental Law Conference, July 1991.

PROFESSIONAL LICENSES, TRAINING, AND HONORS

License to practice law, Texas State Bar, May 1986-present.
FEMA Cooperating Technical Partner Training – 2001
FEMA Project Impact Training – 2001
TNRCC Floodplain Management Training - 2000
EPA Water Quality Standards Academy - 1995.
Certificate in Environmental Agreement Negotiation, Massachusetts Institute of Technology - May 1994.
"Manager of Managers" Training, Texas Governor's Office - 1990.
TNRCC Management Training: Performance Management System Training; Hiring the Best - 1995-1996.
TNRCC Management Award for Productivity - 1995

Appendix F

NOTIFICATION PUBLISHED IN NEWSPAPERS

Notice of Public Meeting
on Scope of Work to Prepare an
Updated Regional Water Plan

A public meeting to receive comments on a proposed scope of work will be held on August 23, 2006 as part of the regular meeting of the Region K. Water Planning Group. The meeting will begin at 10 a.m. at:

Aqua Water Supply Corporation
415 Old Austin Hwy.
Bastrop, Texas 78602

Region K is a 14 county area including all of Bastrop, Blanco, Burnet, Colorado, Fayette, Gillespie, Llano, Matagorda, Mills, San Saba, and Travis counties as well as portions of Hays and Wharton and Williamson counties. Water User Groups in the regional planning area rely on both surface water and groundwater to meet their needs for municipal, manufacturing, mining, steam electric power generation, irrigation and livestock water.

The Lower Colorado Regional Water Planning Group is applying for a grant from the Texas Water Development Board to perform special studies to better define water supply availability, both surface and ground water, in the region. This additional information will assist in the implementation of selected water management strategies. The public meeting is being held as required by 31 TAC Chapter 357.12 (a) (1).

The studies noted above will facilitate providing the necessary information to respond to changed conditions as well as the receipt of additional information from ongoing studies related to water management strategies included in the current plan. During the last round of planning the Regional Water Planning Group concurred with commentors that additional study was needed on several topics. This initial list of topics and the current Region K Water Plan are available for review on the website of the Texas Water Development Board (TWDB) at www.twdb.state.tx.us, on the Region K website at www.regionk.org, and at the offices of Aqua Water Supply Corporation and the Lower Colorado River Authority, 3700 Lake Austin Boulevard, Austin, Texas 78703 during regular business hours.

Comments on the proposed scope of work may also be made in writing by submitting them to Mr. John Burke, General Manager, Aqua Water Supply Corporation, P.O. Drawer P, Bastrop, Texas, 78602 within 30 days of the date of this notice.

Comments on the notice to apply for funding from the Texas Water Development Board should be made in writing to Mr. Kevin Ward, Executive Administrator, Texas Water Development Board, P.O. Box 13231, Austin, Texas, 78711-3231, with a copy to Mr. Burke at the address shown above. Comments should be submitted prior to September 30, 2006

Appendix G

NOTIFICATION TO JUDGES, MAYORS, REGIONAL PLANNING GROUP CHAIRS, AND WATER DISTRICTS AND WATER AUTHORITIES

This notification will be mailed more than 30 days prior to the November 14, 2006 Texas Water Development Board (TWDB) Meeting. A copy of the letter and a list of the recipients will be provided to the TWDB.