



# TEXAS WATER DEVELOPMENT BOARD



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**TO:** Board Members

**THROUGH:** Bill Mullican, Deputy Executive Administrator, Office of Planning  
Robert Mace, Division Director, Groundwater Resources Division

**FROM:** Cindy Ridgeway, Team Leader, Groundwater Availability Modeling Section  
Phyllis Thomas, Agency Contract Administrator

**DATE:** June 18, 2007

**SUBJECT:** Consider authorizing staff to publish a Request for Statements of Qualifications for projects to improve and update existing groundwater availability models using matching funds.

## **ACTION REQUESTED**

Authorize the Executive Administrator to publish in the Texas Register a Request for Statements of Qualifications to be considered by the Texas Water Development Board (TWDB) for funding of research grants for improvements and updates to existing groundwater availability models with a total contribution from TWDB not to exceed \$190,000 for fiscal year 2008. These proposed groundwater availability modeling projects shall (1) include stakeholder involvement; (2) use valid, defensible, and documented data and procedures; (3) address a legitimate issue, concern, or improvement to the model under consideration; and (4) follow all TWDB groundwater availability modeling protocols, as applicable.

## **BACKGROUND**

In 2001, the Texas Legislature mandated that the TWDB obtain or develop groundwater availability models for all major and minor aquifers in Texas in coordination with groundwater conservation districts and regional water planning groups (Texas Water Code Section 16.012). To date, we have developed or obtained groundwater availability models for the 9 major aquifers and for 7 of the 21 minor aquifers, not including a model for part of one minor aquifer. We are currently maintaining a total of 20 numerical groundwater flow models as part of the groundwater availability modeling program.

### *Our Mission*

*To provide leadership, planning, financial assistance, information and education for the conservation and responsible development of water for Texas.*

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Once a groundwater availability model is completed, it is important to be able to revisit the models to incorporate new information or understanding of the aquifers. New hydrogeologic studies are being completed routinely by municipalities, groundwater conservation districts, river authorities, universities, state agencies (including the TWDB), private companies, and others.

### **KEY ISSUES**

As models are completed and used, contractors, staff, and stakeholders identify improvements that can be made to the models at a later date. Unfortunately, the budget does not allow TWDB to immediately make all of the improvements, especially since we continue to develop models for the rest of the minor aquifers. Therefore, with this memo, staff ask approval for a matching fund program where stakeholders can team up with a qualified contractor to propose improving a model provided that they furnish matching funds of at least 50 percent of the total project cost. In this manner, the TWDB may be able to leverage some of our current funds into additional funds and may be able to more quickly accommodate improvements that stakeholders want. Any proposals would have to meet with staff approval through our review process, include stakeholder involvement, and would have to be done by contractors without a conflict of interest in the modeled area.

In early April 2007, we conducted an informal survey of groundwater conservation districts through the Texas Alliance of Groundwater Districts to determine if districts would be interested in a matching fund option for improving the groundwater availability models. We received several positive responses.

On April 20, 2007, staff presented to the technical advisory group for groundwater availability modeling a draft project plan that included improvements to existing models using matching funds. The technical advisory group is made up of stakeholders from groundwater conservation districts, regional water planning groups, consulting firms, and government. The technical advisory group did not have any substantial comments on the matching funds option presented at the meeting.

If not all of the allocated funds are spent or committed, staff will reassess options for possibly accelerating the schedule for future model development and updates. Currently, our plans include developing models for the Capitan Reef Complex, Rustler, and Brazos River Alluvium aquifers in fiscal year 2009 (see Attachment D). We plan to return to the Board later this year with recommendations for initiating contracts with acceptable proposals and/or alternative options for any funds not committed using the matching fund option for model updates.

**RECOMMENDATION**

Staff recommends authorizing the Executive Administrator to publish in the Texas Register a Request for Statements of Qualifications for funding of research grants for improvements and updates to existing groundwater availability models with a total matching contribution from TWDB not to exceed \$190,000 for fiscal year 2008.

**ANTICIPATED OPPOSITION**

None.

**ATTACHMENTS:**

- Attachment A: Requests for Statements of Qualifications for Water Research (Texas Register)
- Attachment B: Guidelines for the Statements of Qualifications
- Attachment C: Request for Statements of Qualification Review Criteria—Groundwater Availability Modeling Program
- Attachment D: Proposed GAM Schedule

This recommendation has been reviewed by legal counsel and complies with applicable statutes and TWDB rules.

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Robert R. Flores  
Staff Attorney

**Attachment A**  
**Request for Statements of Qualifications for Water Research**  
**(Texas Register)**

**Texas Water Development Board**

Request for Statements of Qualifications for Water Research.

Pursuant to 31 Texas Administrative Code §355.3, the Texas Water Development Board (TWDB) requests the submission of Statements of Qualifications leading to the possible award of contracts for updates and improvements to existing groundwater availability models. Guidelines for Request for the Statements of Qualifications, which include an application form and more detailed research topic information, will be supplied by the TWDB upon request.

**Description of Research Objectives**

Since 1999, the Texas Legislature has approved funding for the Groundwater Availability Modeling Program. The purpose of the Groundwater Availability Modeling Program is to provide reliable and timely information on groundwater availability to the citizens of Texas to ensure adequate supplies or recognize inadequate supplies over a 50-year planning period. Numerical groundwater flow models of the aquifers in Texas will be used to make this assessment of groundwater availability. The development of models for Groundwater Availability Modeling Program (1) includes substantial stakeholder involvement; (2) results in standardized, thoroughly documented, and publicly available numerical groundwater flow models and support data; and (3) is capable of providing predictions of groundwater availability through 2060 based on current projections of groundwater demands during drought-of-record conditions. Once a groundwater availability model is completed, it is important to be able to revisit the models to incorporate new information or understanding of the aquifers. New hydrogeologic studies are being completed routinely by municipalities, groundwater conservation districts, river authorities, universities, state agencies (including the TWDB), private companies, and others.

In support of the Groundwater Availability Modeling Program, TWDB is seeking Statements of Qualifications from Groundwater Availability Modelers (Contractor) teamed with political subdivisions for work to update and improve existing groundwater availability models with a total matching contribution from TWDB not to exceed \$190,000 for fiscal year 2008. These proposed groundwater availability modeling projects shall (1) include stakeholder involvement; (2) use valid, defensible, and documented data and standard scientific modeling procedures; (3) address a legitimate issue, concern, or improvement to the model under consideration; and (4) follow all TWDB groundwater availability modeling protocol and standards, as applicable. Higher consideration shall be given to proposals that address regional scale model updates, provide a reasonable budget for the tasks described in the scope of work, and include at least two public stakeholder meetings (one at the beginning of the project and one after the draft deliverable). Proposed Contractors shall not have a conflict of interest in the modeled area during the tenure of the project.

Details on existing modeling projects and GAM-related project requirements are available from the TWDB. The TWDB Web site includes (1) guidelines for the statement of qualifications, (2) copies of the attachments, (3) a list of Request for Statements of Qualifications Review Criteria, and (4) some supporting material

([http://www.twdb.state.tx.us/assistance/financial/fin\\_research/research.htm](http://www.twdb.state.tx.us/assistance/financial/fin_research/research.htm) ).

The following issues need to be addressed in the statement:

- name of the groundwater availability model to be adjusted;
- description of parameter(s) to be updated and why;
- an estimate of how large of an area the update(s) will affect;
- proposed methodology or approach to addressing model update/improvement and re-calibration;
- communication between the contractor and the stakeholder advisory forum, regional water planning groups, other groundwater conservation districts located within the study area, and TWDB staff; and
- total budget, matching fund contribution, and itemized budget broken by tasks.

In addition, we expect potential contractors and sub-contractors to indicate their abilities in:

- general hydrogeology,
- hydrogeology of the modeled aquifer,
- numerical groundwater flow modeling,
- geographical information systems,
- communicating with the public,
- technology transfer,
- producing high-quality reports, and
- meeting deadlines.

The statement of qualifications shall not be more than 15 pages in length, excluding qualifications and experience of project staff. Applicants should be familiar with standards and requirements for the groundwater availability models.

### **Description of Funding Consideration**

Up to \$190,000 has been identified for water research assistance from the TWDB's Research and Planning Fund for matching funds contribution from TWDB. Following the receipt and evaluation of all statement of qualifications, the TWDB may adjust the amount of funding initially authorized for water research. Oral presentations may be required as part of the review. However, invitation for oral presentation is not an indication of probable selection. Funding will not include reimbursement for indirect expenses incurred by political subdivisions of the state or other state and federal agencies. In the event that acceptable Statements of Qualifications are not submitted, the TWDB retains the right to not award funds for the contracts.

**Deadline, Review Criteria, and Contact Person for Additional Information**

Ten double-sided copies of a complete statement of qualifications, including the required attachments, must be filed with the TWDB prior to 5:00 PM, September 10, 2007. Statements of qualifications must be directed either in person to Ms. Phyllis Thomas, Texas Water Development Board, Stephen F. Austin Building, 1700 North Congress Avenue, Austin, Texas; or by mail to Ms. Phyllis Thomas, Texas Water Development Board, P.O. Box 13231-Capitol Station, Austin, Texas 78711-3231. Statements of Qualifications will be evaluated according to 31 Texas Administrative Code §355.5 and the Request for Statements of Qualification Review Criteria rating form included in the TWDB's Guidelines for Water Research Grants. Research shall not duplicate work planned or underway by state agencies. All potential applicants must contact the TWDB to obtain these guidelines.

Requests for information, the TWDB's rules covering the Research and Planning Fund, detailed evaluation criteria, more detailed research topic information, and the guidelines may be directed to Ms. Phyllis Thomas at the preceding address or by calling (512) 463-3154. All technical questions should be directed to Ms. Cindy Ridgeway at (512) 936-2386.

Issued in Austin, Texas \_\_\_\_\_, 2007.

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Robert R. Flores  
Staff Attorney

**Attachment B**  
**TEXAS WATER DEVELOPMENT BOARD**  
**Guidelines for the Statements of Qualifications**

**I. GENERAL INFORMATION**

1. Legal name of applicant(s).
2. Legal name of each participant(s).
3. Applicant's Official Representative, Name, Title, Mailing Address, Phone Number, Fax Number, if available, E-mail Address and Vendor ID Number.
4. Is the application in response to a Request for Statements of Qualifications in the Texas Register?    **Yes**     **No**
5. If yes to number 4 above, list document's number and date of publication of the Texas Register.
6. A brief description of the research proposal (not to exceed 1 page).
7. If proposed project is specific to a geographic area, list location or site of proposed project.
8. A list of potential users and their possible involvement with the research.
9. Total grant funds requested from the Texas Water Development Board.
10. Applicant cash contribution to the study.
11. List source of cash contribution.
12. Identify the applicant in-kind contribution including source and description of in-kind services.
13. Are you an individual member of the Texas Water Development Board, a Board staff member, or a member of their immediate families?                    **Yes**     **No**
14. If this project is estimated to be over \$100,000, you are required to submit a completed Historically Underutilized Business Subcontracting Plan. The forms are available at: <http://www.tbpc.state.tx.us/hub/forms/hubsubcontplan.html>

**II. RESEARCH PROJECT INFORMATION**

15. Explanation of why this research is needed (not to exceed 1 page).
16. A detailed scope of work describing each task, a percent of effort per each task, a time schedule for each task, and the amount of time each team member will spend on the project (not to exceed 12 pages using Times Roman 12 font for projects).
17. A description of project-monitoring procedures.
18. Qualifications and experience of project staff that are *directly related to this project only, and no more than 2 pages in length per person.*

### **III. WRITTEN ASSURANCES**

Written assurance of the following items:

- Proposed water research does not duplicate previously completed or ongoing research;
- If the contract is awarded to the applicant, the applicant agrees to discontinue existing contracts and not enter into new contracts with persons or entities other than TWDB and Regional Water Planning Groups for groundwater supply and availability studies involving the study area while working on the TWDB project without a prior no conflict of interest determination by TWDB and written authorization by TWDB.

### **IV. RESOLUTION**

A resolution from the governing body of the political subdivision

- stating the entity's representative is authorized to apply for a grant from the Texas Water Development Board;
- granting authority for the entity to enter into a contract with the Texas Water Development Board; and
- stating the intent to commit local matching funds in cash and/or in-kind services for the amount as required by the application.

### **V. TASK AND EXPENSE BUDGET EXAMPLE**

#### TASK BUDGET

TASK	DESCRIPTION	AMOUNT
Task 1		\$5,000.00
Task 2		\$7,000.00
Total		\$12,000.00



## EXPENSE BUDGET

CATEGORY	TOTAL AMOUNT
Salaries & Wages <sup>1</sup>	\$6,000.00
Fringe <sup>2</sup>	\$1,000.00
Travel	\$200.00
Other Expenses <sup>3</sup>	\$3,500.00
Overhead <sup>4</sup>	\$000.00
Profit	\$500.00
<b>TOTAL</b>	<b>\$12,000.00</b>

<sup>1</sup>Salaries and Wages is defined as the cost of salaries of engineers, draftsmen, stenographers, surveyors, clerks, laborers, etc., for time directly chargeable to this contract.

<sup>2</sup>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.

<sup>3</sup>Other Expenses is defined to include expendable supplies, communications, reproduction, postage, and costs of public meetings.

<sup>4</sup>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.

## **VI. APPLICATION REVIEW CRITERIA**

- See Attachment C.

**Attachment C**  
**Request for Statements of Qualification Review Criteria—Groundwater Availability Modeling Program**

Name of Applicant: \_\_\_\_\_ Reviewer's Name: \_\_\_\_\_ Date of Review: \_\_\_\_\_

Are the qualifications at least somewhat responsive to the TWDB's RFQ? (Circle either "yes" or "no")	<b>Yes</b> (if "yes", then continue review of the application)	<b>No</b> (if "no", discontinue review of application)
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***Review the application taking into consideration the following:***

1	Qualifications and experience
	Project staff qualifications (e.g., education, publications)
	Project staff experience in general hydrogeology
	Project staff experience in hydrogeology of the modeled aquifer
	Project staff experience in numerical groundwater flow modeling
	Project staff experience in geographical information systems
	Project staff experience in technology transfer
2	Technical issues
	Communication between the contractor and the stakeholder advisory forum for the model, regional water planning groups, other groundwater conservation districts, and TWDB staff
	Approach for re-calibrating of the model
	Estimate of how large of an area the update(s) will affect and necessity of the improvement(s);
	Approach for handling dewatered cells
3	Organization and management
	Progress monitoring procedures

	Approach to organizing and managing the project
	Approach to organizing and managing stakeholder advisory forums
4	Reports and deliverables
	Are capable writing abilities demonstrated in application?
	Specific and usable deliverables
5	Your assessment of proposer's ability to perform this research and complete the project