ATTACHMENT 4

CONTRACT _____
BETWEEN TEXAS AGRILIFE EXTENSION of the TEXAS A&M UNIVERSITY SYSTEM
AND
HDR ENGINEERING, INC
FOR ENVIRONMENTAL CONSULTING SERVICES FOR THE EDWARDS AQUIFER RECOVERY IMPLEMENTATION PROGRAM

This Contract ("Contract") is made and entered into this __ day of December, 2009 by and between the TEXAS AGRILIFE EXTENSION ("TAE") of the TEXAS A&M UNIVERSITY SYSTEM, located at 2147 TAMU, College Station, Texas 77843-2147, and HDR Engineering, Inc., a Nebraska corporation (the "Consultant" or "HDR"), with offices located at 4401 West Gate Blvd., Suite 400, Austin, Texas, 78745. TAE or Consultant/HDR may be referred to in this Contract as "party" or collectively as "parties."

RECITALS

A. The 80th Texas Legislature adopted Senate Bill 3 in 2007, requiring the Edwards Aquifer Authority ("EAA") in cooperation the United States Fish and Wildlife Service ("FWS") and stakeholders to establish a recovery implementation program (the "EARIP"), overseen by a Steering Committee comprised of representatives of stakeholders and charged with accomplishing certain required program activities;

B. Senate Bill 3 provides that Texas A&M University ("TAMU") will, among other things, provide assistance to the EARIP and hire and maintain a Program Director for the EARIP;

C. TAMU has designated the TAE, acting through its Institute of Renewable Natural Resources ("IRNR"), as the arm of TAMU responsible for performing the TAMU responsibilities related to Senate Bill 3 and the EARIP;

D. TAMU has hired a Program Director for the EARIP;

E. The Texas Legislature required the Edwards Aquifer Authority, Texas Commission on Environmental Quality ("TCEQ"), the Texas Parks and Wildlife Department ("TPWD"), the Texas Department of Agriculture ("TDA"), the Texas Water Development Board ("TWDB"), and other stakeholders to prepare a program document ("Program Document") that may be in the form of a habitat conservation plan used in the issuance of an incidental take permit;

F. The Texas Legislature requires that the Program Document be approved and executed by the EAA, TCEQ, TPWD, TDA, TWDB, and the FWS not later than September 1, 2012;

G. The EARIP Stakeholders have elected to prepare and include an Incidental Take Permit ("ITP") application, Habitat Conservation Plan, including an adaptive management plan

("HCP"), the draft Environmental Impact Statement ("DEIS") and other supporting documentation (collectively referred to as the "Documents") in the Program Document.

H. The EARIP has hired a facilitator to facilitate the decision-making process for the HCP;

I. The EARIP desires to have additional technical information to assist it in its decision-making process regarding the feasibility of certain recharge options (the "Feasibility Study") to protect springflow at the Comal and San Marcos springs;

J. HDR has submitted a proposal regarding such a Feasibility Study;

K. The EARIP wishes to engage HDR to conduct the Feasibility Study; and,

L. The Steering Committee for the EARIP has requested TAE to serve as the contracting agent for this Contract;

NOW THEREFORE, for and in consideration of the mutual promises and agreements set forth in this Contract, TAE, and the Consultant agree as follows:

ARTICLE I
DESCRIPTION OF WORK

Section 1.1. Services. Subject to the terms and conditions of this Contract, TAE hereby engages the Consultant to perform the work set forth and described in this Contract and in the following: (1) the Scope of Work which is attached hereto as Exhibit A (the "Scope of Work") and (2) the Request for Proposal which is attached hereto as Exhibit B (such work is referred to as the "Services"). To the extent that a specific conflict exists between this Contract and the Scope of Work and Request for Proposal, the Contract will prevail. The Consultant hereby accepts such engagement and agrees to devote its best efforts and abilities, and to furnish all necessary labor, machinery, equipment, tools, and transportation necessary for HDR in furtherance of its engagement hereby.

Section 1.2. Commencement and Completion Date. The Consultant will commence work hereunder immediately upon the execution of this Contract. All work covered hereby will be completed by December 31, 2010. TIME IS OF THE ESSENCE IN THE PERFORMANCE OF THIS CONTRACT.

Section 1.3 Professional guidelines and conduct. HDR will approach the Services in a workmanlike manner and shall be accountable to the Program Director as representative of all participants in the process.

ARTICLE II
ALTERATIONS TO CONTRACT AND SCOPE OF WORK

Section 2.1. Notice of Changes. TAE may, at its own option, or upon the recommendation of the Consultant, request changes or additions to the Scope of Work during the progress of the work by delivering change orders to the Consultant.

Section 2.2. Change Orders. The Consultant agrees to honor any change or additions to the Scope of Work requested by TAE. Consultant shall provide TAE with an estimate of the cost of the requested change. The fees for a requested change shall be for no more than the Rates set out in Section 3.2. The parties to this Contract agree that such changes must be the subject of either a written amendment to this Contract or a supplemental agreement approved by the Consultant and by TAE in accordance with its procedures for approving such a contract.

ARTICLE III
COMPENSATION

Section 3.1 TAE Obligations. TAE agrees to pay the Consultant for the Services at the Rates set out in Sections 3.2, and actual costs, and expenses (including airline travel, automobile mileage, and lodging, and copy costs) incurred under this Contract which are reasonably consistent with the Scope of Work, within 30 days of receipt and approval of each invoice but in no event shall the total compensation to the Consultant for work under this Contract exceed $150,000 (the "Contract Amount") without the prior written consent of TAE. The Consultant may not exceed the Contract Amount. The Consultant will be responsible for the payment of all of its other additional costs and expenses, including but not limited to the cost of the Subcontractors. TAE will not be held accountable for any unauthorized work performed, commitments made, or funds spent by the Consultant.

Section 3.2. Fees and Expenses. Consultant will invoice TAE for the Services at the following hourly rates (the "Rates").

HOURLY RATES

HDR

Sam Vaugh, P.E…….$262
Larry Land, P.E……..$240
Brian Perkins, P.E……..$164
Ken Choffel, P.E……$331
Tricia Sebes, P.E……$145

Todd Engineers

Phyllis Stanin……..$190
Maureen Reilly……$155
Daniel Craig……$185
Iris Priestaf……..$190

Expense and task budgets are attached as Exhibit C. With the prior approval of the Program Director, the Consultant shall have budget flexibility among task budgets and expense category budgets as contained in Exhibit C to the extent that the resulting changes associated with a single task or expense category do not exceed thirty-five percent (35%) of the total amount authorized by the Contract or subcontract for the task or expense category to be changed.

Section 3.3. Invoicing and payment. All invoices from the Consultant for the Services shall be sent monthly to the Program Director and shall provide: (1) an itemization of the Services rendered by Task, including the date of the services, the hours involved (rounded to the nearest quarter hour) and a description of the Services rendered; and, (2) costs and expenses incurred including supporting documentation for all travel expenses. Invoices will include an assessment of the percentage completion of each Task described in the Scope of Work completed. Invoicing will include hourly charges and expenses for HDR employees. Subcontractor invoicing by Todd Engineers for its work shall be submitted through HDR and will include specific description of work undertaken by each subcontractor's employee during the invoice period. The terms of each invoice shall be net thirty (30) days upon the Program Director's receipt and approval of that invoice. Invoices shall be sent to:

Robert L. Gulley
Program Director
Edwards Aquifer Recovery Implementation Program
2632 Broadway, South Bldg., Suite 301
San Antonio, Texas 78215

ARTICLE IV
LEGAL RELATIONSHIPS

Section 4.1. No Employment Contract. The Parties understand and agree that this Contract does not create a fiduciary relationship between them, they are separate entities, the Consultant is an independent contractor with respect to the performance of the Services hereunder and is not subject to the direct or continuous control and supervision of TAE Authority, and nothing in this Contract is intended to make either party a subsidiary, joint venture, partner, employee, agent, servant or representative of the other for any purpose whatsoever. TAE shall have no right of direction or control of Consultant, or its employees and agents, except in the results to be obtained, and in a general right to order the work to start or stop as agreed to herein, to inspect the progress of the Services, and to receive reports.

ARTICLE V
CONSULTANT PERSONNEL, SUBCONTRACTORS, NO ASSIGNMENT

Section 5.1. Personnel. The Consultant will provide any and all personnel necessary for its performance of the Services hereunder. The Consultant will be responsible for its employees in all respects, including, without limitation, their compliance with applicable laws and their

safety, including without limitation, all Occupational Safety and Health Administration (OSHA) standards, requirements, and regulations. The Consultant hereby indemnifies and holds harmless TAE, its officers, employees and directors, from and against any claims bought by any employee, subcontractor or other agent of the Consultant relating in any way to the work performed under this Contract.

Section 5.2. Subcontractors. In performing the Services under this Contract, the Consultant shall retain Todd Engineers as a Subcontractor. Consultant shall not retain any other subcontractors without the written consent of the Program Director. The Consultant will be solely responsible for the payment of any Subcontractors that is retained and responsible for any such Subcontractors in all respects including their compliance with applicable laws and their safety, including without limitation, all Occupational Safety and Health Administration (OSHA) standards, requirements, and regulations. TAE is not liable for Subcontractors' fees in the case of non-payment by HDR. Consultant shall provide the Program Director a copy of all contracts with its Subcontractors and with prompt notice of any dispute with Subcontractors regarding payment for work performed pursuant to this Contract.

Section 5.3 No Assignment. The Services to be rendered by Consultant pursuant to this Agreement are personal in nature, and, except for subcontracting under Section 5.2 above, Consultant may not assign any rights and obligations under this Agreement without written consent of TAE.

ARTICLE VI
TERMINATION

Section 6.1. Termination by TAE. TAE may terminate this Contract at any time, including the expiration of each budget or payment period, with or without cause, upon ten (10) days prior written notice to the Consultant. Upon receipt of such termination notice, the Consultant shall immediately stop all work in progress, including, without limitation, all work performed by subcontractors, and Consultant shall submit a "Final Invoice" to TAE. Insofar as possible, all work in progress will be brought to a logical termination point. Within 30 days of receipt of the Final Invoice, TAE shall pay the Consultant all moneys then due and owing for the Services rendered, costs and expenses reasonably incurred up to the time of termination. Upon receipt of a termination notice, the Consultant shall, within sixty (60) days, deliver or make available to TAE all data, drawings, specifications, reports, estimates, summaries, and such other information and materials as may have been accumulated by the Consultant, including all Subcontractors, in performing this Contract, whether completed or in process.

ARTICLE VII
OWNERSHIP OF MATERIALS, INTELLECTUAL PROPERTY

Section 7.1. Ownership. All information, documents, property and materials produced, created or supplied under this Contract, whether by the EARIP, the Consultant, its employees, agents or Subcontractors or anyone else, and whether finished or unfinished or in draft or final form, will be the property of the EARIP, and, subject to the terms of Section 7.4 below,

Consultant will not use any such information except in the course of performing this Contract, without the prior written approval of EARIP. Upon termination of this Contract, all such information, property and materials not already in the possession of TAE will be promptly delivered to the Program Director.

Section 7.2. Record Copies. The Consultant shall retain a record or copies of all materials developed in the course of performing the Services hereunder and said materials will be supplied to the Program Director upon request, including after expiration or termination of the Contract. TAE will reimburse the Consultant for actual cost of time and expenses of reproduction of materials requested pursuant to this provision.

Section 7.3 Intellectual Property. With respect to such Intellectual Property held by, or to which TAE has rights, that is (i) incorporated in the Services, or (ii) produced by Consultant or its employees, subcontractors, or subcontractors' employees during the course of performing the Services, Consultant hereby grants to TAE a nonexclusive, perpetual, irrevocable, enterprise-wide license to use, copy, publish, and modify such Intellectual Property, and allow others to do so for TAE purposes. Consultant shall secure any necessary intellectual property licenses from third parties and warrants that the Services and the intended use of the Services will not infringe any property rights of any third party. Consultant agrees to indemnify and hold harmless TAE from damages arising from or related to any infringement of rights in intellectual property, and agrees to require its contractors to indemnify and hold harmless TAE from damages arising from or related to any infringement of rights in intellectual property.

Section 7.4. Information Concerning Services. Subject to the protection to Intellectual or Proprietary Property as described in Section 7.3 above, TAE agrees that Consultant and its subcontractors may present descriptions of the activities or results under this Contract in journals, theses, dissertations or other documents or at training sessions, symposia, or professional meetings.

ARTICLE VIII
NON-PERFORMANCE

Section 8.1. The Consultant represents that it will perform all Services hereunder in a good and workmanlike manner, strictly in accordance with the standards of the Consultant's profession, the Scope of Work, and as otherwise provided in this Contract. Failure to timely perform the Services as represented and agreed shall constitute a breach of contract and shall be subject to all applicable remedies of law. Judgment of nonperformance shall rest solely with TAE.

ARTICLE IX
NOTICES

Section 9.1. Notices to TAE. All notices or communications under this Contract to be mailed or delivered to TAE shall be in writing and shall be sent to TAE at the following address, unless and until the Consultant is otherwise notified:

Texas Agrilife Extension
Contracts and Grants
2147 TAMU
College Station, Texas 77843-2147
ATTENTION: Diane Gilliland

A copy of the notice or communication (and those described in Section 9.2) shall be sent to:

Robert L. Gulley
Program Director
Edwards Aquifer Recovery Implementation Program
2632 Broadway, South Bldg., Suite 301
San Antonio, Texas 78215

Section 9.2. Notices to the Consultant. All notices or communications under this Contract to be mailed or delivered to the Consultant shall be in writing and shall be sent to the address of the Consultant as follows, unless and until TAE is otherwise notified:

Sam Vaugh, P.E.
Vice President
HDR Engineering
4401 West Gate Boulevard, Suite 400
Austin, Texas 78745

Section 9.3. Effective Date of Notice. Any notices or communications required to be given in writing by one party to the other shall be considered as having been given to the addressee on the date the notice of communication is posted by the sending party.

Section 9.4. Electronic Notice. The Parties may, with regard to certain routine communications relating to program activities, agree to accept electronic delivery, by fax or email, provided that such receipt of such delivery is confirmed to the sending Party by the receiving Party. The effective date of any communication sent electronically shall be the date transmission is completed.

ARTICLE X
MISCELLANEOUS

Section 10.1. Entire Agreement. This Contract and the attached Exhibits constitute the entire agreement between the parties regarding the work to be performed by the Consultant and there are no representations, warranties, agreements or commitments between the parties hereto except as set forth herein. Unless otherwise authorized herein, no amendments or additions to this Contract shall be binding on the parties hereto unless in writing and signed by the parties.

Section 10.2. Non-Waiver. No delay or failure by either party hereto to exercise any right under this Contract, nor any partial or single exercise of that right, shall constitute a waiver of that or any other right, unless otherwise expressly provided herein.

Section 10.3. Headings. Headings in this Contract are for convenience only and shall not be used to interpret or construe its provisions.

Section 10.4. Governing Law. This Contract shall be construed in accordance with and governed by the laws of the State of Texas.

Section 10.5. Counterparts. This Contract may be executed in two or more counterparts, each of which shall be deemed an original but all of which together shall constitute one and the same instrument.

Section 10.6. Binding Effect. The provisions of this Contract shall be binding upon and inure to the benefit of the parties hereto and their respective successors and assigns; provided, however, that the Consultant may not assign any of its rights nor delegate any of its duties hereunder without TAE's prior written consent.

Section 10.7. Validity. The invalidity of any provision or provisions of this Contract shall not affect any other provision of this Contract, which shall remain in full force and effect, nor shall the invalidity of a portion of any provision of this Contract affect the balance of such provision.

Section 10.8. Non-Waiver of Immunity. Nothing in this Contract is intended as any waiver by TAE of any immunity from suit to which it is entitled under Texas law.

Section 10.9. Survival. Termination of this Contract for breach shall not constitute a waiver of any rights or remedies available at law or in equity to a party to redress such breach. All remedies, either under this Contract or at law or in equity or otherwise available to a party, are cumulative and not alternative and may be exercised or pursued separately or collectively in any order, sequence or combination. In addition, to these provisions, applicable provisions of this Contract shall survive any termination of this Contract.

Section 10.10. Attachments. The Exhibits, schedules and/or other documents attached hereto or referred to herein are incorporated herein and made a part hereof for all purposes. As used herein, the expression "Contract" means the body of this Contract and such attachments, Exhibits, schedules and/or other documents, and the expressions "herein," "hereof," and "hereunder" and other words of similar import refer to this Contract and such attachments, exhibits, schedules and/or other documents as a whole and not to any particular part or subdivision thereof.

Section 10.11. Costs. If any legal action, arbitration or other proceeding is brought for the enforcement of this Contract or because of an alleged breach or default relating to this Contract, the successful or prevailing party or parties shall be entitled to recover reasonable costs incurred, including but not limited to attorney's fees, in such action or proceeding in addition to

any other relief to which it or they may be entitled as such costs may be determined under applicable Texas law provided, however, that the costs and fees so awarded may not exceed the total costs and fees incurred by the non-prevailing party.

Section 10.12. Includes. The verb "to include", in all its forms, tenses, and variations, is always used in the nonexclusive sense.

Section 10.13 State Audit. By executing this Contract, the Consultant accepts the authority of the State Auditor's Office, under direction of the legislative audit committee, to conduct audits and investigations in connection with any and all state funds received pursuant to this contract. The Consultant shall comply with and cooperate in any such investigation or audit. The Contractor agrees to provide the State Auditor with access to any information the State Auditor considers relevant to the investigation or audit. The Consultant also agrees to include a provision in any subcontract related to this contract that requires the Subcontractors to submit to audits and investigation by the State Auditor's Office in connection with any and all state funds received pursuant to the subcontract.

Section 10.14 No Debt Against the State. This Contract shall not be construed as creating any debt by or on behalf of the State of Texas and the TWDB, and all obligations of the State of Texas are subject to the availability of funds. To the extent the performance of this Contract transcends the biennium in which this CONTRACT is entered into, this Contract is specifically contingent upon the continued authority of the TWDB and appropriations therefore.

IN WITNESS WHEREOF, this Contract is executed as of the day and date first written above.

TEXAS AGRILIFE EXTENSION	HDR Engineering, Inc.
By:_____	By:_____
Dr. Edward G. Smith, Director	Kelly J. Kaatz, P.E., Senior Vice President

EXHIBIT A

SCOPE OF WORK FOR ENVIRONMENTAL CONSULTING SERVICES FOR THE EDWARDS AQUIFER RECOVERY IMPLEMENTATION PROGRAM

Task 1 – Scope Definition and Baseline Analysis

a) Develop specific technical assumptions and method(s) of evaluating alternatives and procedures for incremental comparisons of the baseline with recharge alternatives for springflow maintenance during drought. The Request for Proposal (Exhibit B) includes examples of tabular, graphical, and textual summaries that will be incorporated in baseline and recharge alternative evaluations.
b) Using Edwards Aquifer groundwater withdrawal permits subject to critical period stages and withdrawal reductions specified in Senate Bill 3 of the 80th Texas Legislature as the baseline, analyze the baseline with respect to the number of months and percentage of time each spring system is below a given springflow target discharge.
c) In analyzing the baseline, Consultant shall use the springflow targets recommended by the EARIP Expert Science Subcommittee for protection of endangered species at Comal and San Marcos springs as well as 5 cfs at Comal Springs and 45 cfs at San Marcos Springs (to the extent possible using monthly Edwards Aquifer model).
d) Present the results of Task 1 to the Recharge Facility Feasibility Subcommittee for comment.

Task 2 – Source Water Rights

a) Review and refine estimates of unappropriated and marketable surface water potentially available for recharge enhancement as reported in previous studies. Potential refinements of previous estimates may include accounting for daily (rather than monthly) estimates of water available, ensuring that assumed monthly recharge rates are consistent with infrastructure and hydrogeologic constraints, subordination of Choke Canyon Reservoir / Lake Corpus Christi System storage rights (with mitigation), subordination of priority hydropower rights on the Guadalupe River (with mitigation), accounting for large pending applications for surface water rights, and/or reflection of the current water supply reservation agreement between the Guadalupe-Blanco River Authority and Exelon Generation Company, LLC.
b) Consider options for water storage including off-channel reservoirs, recharge dams (Type 2), and quarries.
c) Review and refine estimates of unused, restricted and unrestricted groundwater production permits issued by the Edwards Aquifer Authority (EAA) for municipal, industrial, and irrigation purposes. Potential refinements may include accounting for recent transfers to municipal use through purchase or lease, and/or potential expiration of transfers across Cibolo Creek. Budget and schedule are based on the assumption that the Edwards Aquifer Authority (EAA) will provide an updated well package for the Edwards

Aquifer model that reflects appropriate geographical distribution of groundwater production in accordance with technical assumptions for this study.

d) Task 2.2 in the RFP is not included as part of the Scope of Work.

Task 3 – Project/Program Definition and Modeling

This task involves the evaluation of projects with respect to their ability to enhance springflow during the drought of record and the development of programs consisting of one or more projects that combined have the ability to significantly supplement springflow through a repeat of the drought of record. These combinations should be optimized to provide a given springflow target at least cost.

a) Identify and compile relevant technical information regarding potential projects for springflow enhancement projects including Type 2 (direct percolation) recharge structures, run-of-river diversions, run-of-river diversions with storage (*i.e.*, quarries), and storage of water from the Edwards or other aquifers in quarries or other structures for timed recharge during drought. Define appropriate technical assumptions for evaluation of the effectiveness of each project for springflow enhancement during the drought of record.
b) Identify and compile relevant technical information regarding potential Edwards Aquifer recharge and recirculation concepts including run-of-river diversions below the springs with delivery to the recharge zone and intra-aquifer pumping and recharge to take advantage of transient storage. Define appropriate technical assumptions for evaluation of recharge and recirculation concepts with respect to maintaining springflow during drought of record, including but not limited to aquifer storage retention times.
c) Evaluate the effectiveness of Type-2 recharge structures in providing springflow enhancement during a repeat of the drought of record. If the Type-2 structures alone do not meet one or more of the springflow targets set out in Task 1, incrementally supplement those structures through additional supplies, storage options, recirculation, or management strategies (*e.g.*, recharge enhancement with stored water), and identify the increased benefit (*i.e.,* fewer months below a certain spring flow target after adding a given component). Based on these evaluations, select the most promising programs for springflow protection for technical evaluation under Task 4.
d) Present the results of Tasks 2 and 3 to the Recharge Facility Feasibility Subcommittee for comment.

Task 4 – Technical Evaluation

a) Perform technical evaluations of five (5) recharge alternatives in accordance with Texas Water Development Board (TWDB) guidance for regional water supply planning. It is understood and agreed that at least one (1) of the five (5) recharge alternatives will not include recirculation components. Elements of each technical evaluation will include description of the alternative, water supply modeling, assessment of environmental issues, development of cost estimates, and discussion of implementation issues.
b) Descriptions of alternatives are expected to include identification and mapping of component facilities as well as discussion of previous studies used as sources of information.

c) Water supply modeling of alternatives may include applications of both surface water and groundwater models with appropriate recognition of the limitations of such models. Surface and groundwater models will not be computationally linked.
    i) Surface water modeling may include calculation of water available for recharge, recharge structure operations, contents fluctuations in off-channel and quarry storage sites, translation of modified spring flows to downstream locations, and computation of effects on water available to downstream surface water rights.
    ii) Groundwater modeling may include simulation of recharge enhancement and/or recirculation concepts and computation of changes in aquifer levels, percentages of time in critical period management, pumping for direct use (subject to critical period withdrawal reductions), and springflow. Based on hypothetical 1000 acft/yr permits in the Uvalde and San Antonio Pools, summaries of results will include illustrations of improvements in use of permitted withdrawal rights relative to the baseline for each alternative. The groundwater modeling is to include the water management module maintained by the EAA.
d) Assessment of environmental issues will include comparison of the programs to baseline with respect to springflow enhancement and the flow targets identified in Task 1. Focus of this work element will be on quantitative changes in flow and potential effects of infrastructure associated with each alternative.
e) Cost estimates will be developed in accordance with current TWDB guidance for the 2012 State Water Plan and will include:
    i) Capital costs for facilities.
    ii) Related project costs for land acquisition, mitigation, engineering, legal counsel, interest during construction, and contingencies.
    iii) Annual costs for debt service and operations and maintenance.
    iv) Annual unit costs for spring flow benefits.
f) Discussion of implementation issues will include identification of expected permitting requirements and resource conflicts.
g) At the conclusion of Task 4 and prior to submittal of a draft report, present the results of Task 4 to the Recharge Facility Feasibility Subcommittee for comment.

Task 5 – Summary Report and Communications

a) Compile and interpret summary information developed through technical evaluations and rank recharge alternatives on the bases of improvements relative to baseline conditions, feasibility of implementation, cost, and/or other factors.
b) Prepare a draft written report that documents baseline definitions, source water rights, recharge alternative definitions, technical evaluations, and ultimate ranking of recharge alternatives. With due consideration of written comments on the draft report provided by and through the Program Manager, prepare a final report. Draft and final reports shall include an Executive Summary and shall be delivered, two (2) each, in hardcopy and electronic formats.
c) One (1) presentation of the final report and key findings shall be made to the EARIP Steering Committee/Stakeholders.

SCHEDULE

The tasks outlined above will be completed by December 31, 2010 with the assumption of a

January 1, 2010 start date. The following is an estimated schedule for completing each task:

Task 1	February 28, 2010
Task 2	April 30, 2010
Task 3	April 30, 2010
Task 4	August 31, 2010
Task 5	October 31, 2010 (Draft Report)
	December 31, 2010 (Final Report)

EXHIBIT B
REQUEST FOR PROPOSAL FOR ENVIRONMENTAL CONSULTING SERVICES FOR THE EDWARDS AQUIFER RECOVERY IMPLEMENTATION PROGRAM

EARIP Evaluation
of Recharge Alternatives
for Spring Flow Supplementation

CONSULTING SERVICES FOCUSED ON CONCEPTUAL ENGINEERING AND MODELING WORK SUPPORTING THE DECISION-MAKING PROCESS OF THE EDWARDS AQUIFER RECOVERY IMPLEMENTATION PROGRAM HABITAT CONSERVATION PLAN (HCP)

SCOPE OF WORK

Guidance Items:

Guidance Item 1 – Review of the scientific work and literature

Analyze past evaluations of recharge, recharge and recirculation, and water storage options focusing on the Edwards Aquifer. Reference or cite in the resulting conceptual engineering and modeling work the various analyses examined and how they were incorporated.

Guidance Item 2 – Interface with the EARIP

The individual(s) responsible for the work will work through the Edwards Aquifer Recovery Implementation Program (EARIP) Program Manager, Additional Studies Workgroup, Funding/Financing Subcommittee and any other group established or requested by the EARIP Steering Committee related to this proposal. The product shall be completed in maximum of 12 months from the date of execution of the contract. The goal of the product is to develop a report that will serve as a decision assistance tool with respect to work done on recharge, recharge & recirculation, storage, and hybridized options of recharge and/or recirculation configurations covered in past evaluations, planning, and scientific works.

Guidance Item 3 – Modeling Tools

Use the State of Texas' approved groundwater flow model for the Edwards Aquifer (EAA MODFLOW), current Demand Management / Critical Period Management "DM/CPM" management module, and an aquifer "yield" placeholder of 340,000 acre-feet as a region-wide pumpage "floor."

Specific Scope of Work Tasks:

Task 1 – Restate an appropriate baseline that will allow for comparison of recharge, hybridized recharge variations and/or recirculation for spring flow maintenance to be put into the context of current conditions.

Display the results of the established baseline as a graphic and a table substantively similar to the table below:

For Illustrative Purposes Only - Suggested Conceptual Results Display Table			
	Springflow	Baseline % time	Baseline mos below
Comal:	0 cfs	6.0%	30
	30 cfs	8.0%	54
	60 cfs	15.0%	87
	90 cfs	23.0%	103
	120 cfs	28.0%	274
San Marcos:	0 cfs	0.0%	0
	40 cfs	2.0%	16
	80 cfs	10.0%	97
	120 cfs	50.0%	160
	160 cfs	52.0%	171

The results should indicate, for each of the modeling baselines, the number of months and percentage of time period each spring system is below a given spring flow target discharge. The EARIP Expert Science Subcommittee is currently evaluating the necessary minimum spring flow level(s) required to protect and contribute to the recovery of Federally-listed endangered species associated with the Comal and San Marcos springs. In the meantime, while that evaluation is underway, use the following minimum spring flow targets or thresholds:

Spring Flow Targets			
Comal:	0 cfs	**San Marcos:**	0 cfs
	30 cfs		40 cfs
	60 cfs		80 cfs
	90 cfs		120 cfs
	120 cfs		160 cfs

Task 1.1 - The baseline should include full utilization of all Edwards Aquifer groundwater withdrawal permits (572,000 acre-feet) issued by the Edwards Aquifer Authority (EAA), as amended by the State of Texas in 2007 (S.B. 3) and include the Demand Management/Critical Period Management (DM/CPM) regimen incorporated in that same legislation through the period of record (Todd Engineers performed a similar task for EAA in 2008; TWDB performed a similar task in a different modeling environment in 2007).

Future scenarios developed in Task 3 will be compared to the baseline in order to facilitate a side

by side evaluation of the benefit over baseline given the cost of that proposed option.
Task 2 – **Further evaluate source water rights** in the basin of each structure or component (most recently evaluated by Todd Engineers with TRC/Brandes for EAA in 2008, previous work by HDR Engineering in 1991-2004; Trans-Texas Water Program through HDR in 1998) .

Task 2.1 – Consider the following source water rights for alternatives

- Surface water rights: unappropriated, marketable (as defined by Todd, 2008), flood flow
  - Off-channel storage options should be considered (for example, quarries, ring dikes, existing or proposed reservoirs, Type-1 structures, etc.) (HDR issued a technical memorandum for SAWS in 2003, additional work was prepared for EAA by EarthTech Inc in 2002)
- Groundwater rights: unused EAA unrestricted municipal, industrial, and irrigation permits. (Todd Engineers prepared an evaluation of this facet for EAA in 2008)
- Consider as an additional option all base irrigation rights, whether used or unused.

Task 2.2 – Use "recharge credits" derived during Task 3 as a supplemented source of recharge through a recirculation or storage option. Identify any changes resulting to source water amounts or infrastructure necessary to deliver those amounts.

Task 3 – **Develop conceptual projects and components** that combined have the ability to supplement spring flow through a repeat of the drought of record. These combinations will ideally provide the targeted level(s) of spring flow outlined in task 1 above. The combination of components and structures should be optimized to provide a given spring flow target at least cost.

Represent the results of this task in tabular form substantially similar to the table below:

For Illustrative Purposes Only - Suggested Conceptual Results Display Table

Option A	Springflow	Baseline % time	Option A % time	Option A Improvement %	Baseline mos below	Option A mos below	Option A Improvement (mos)
Comal:	0 cfs	6.0%	4.2%	1.8%	30	14	16.00
	30 cfs	8.0%	5.0%	3.0%	54	26	28.00
	60 cfs	15.0%	8.0%	7.0%	87	54	33.00
	90 cfs	23.0%	10.0%	13.0%	103	77	26.00
	120 cfs	28.0%	16.0%	12.0%	274	167	107.00
San Marcos:	0 cfs	0.0%	0.0%	0.0%	0	0	0.00
	40 cfs	2.0%	0.8%	1.2%	16	5	11.00
	80 cfs	10.0%	7.0%	3.0%	97	52	45.00
	120 cfs	50.0%	16.0%	34.0%	160	103	57.00
Option B	**Springflow**	**Baseline % time**	**Option B % time**	**Option B Improvement %**	**Baseline mos below**	**Option B mos below**	**Option B Improvement (mos)**
Comal:	**0 cfs**	**6.0%**	**0.0%**	**6.0%**	**30**	**9**	**21.00**
	30 cfs	**8.0%**	**1.2%**	**6.8%**	**54**	**15**	**39.00**
	60 cfs	**15.0%**	**5.3%**	**9.7%**	**87**	**26**	**61.00**
	90 cfs	**23.0%**	**7.2%**	**15.8%**	**103**	**38**	**65.00**
	120 cfs	**28.0%**	**9.1%**	**18.9%**	**274**	**94**	**180.00**
San Marcos:	**0 cfs**	**0.0%**	**0.0%**	**0.0%**	**0**	**0**	**0.00**
	40 cfs	**2.0%**	**0.0%**	**2.0%**	**16**	**3**	**13.00**
	80 cfs	**10.0%**	**6.2%**	**3.8%**	**97**	**21**	**76.00**
	120 cfs	**50.0%**	**28.0%**	**22.0%**	**160**	**86**	**74.00**

Option C…
Option D…

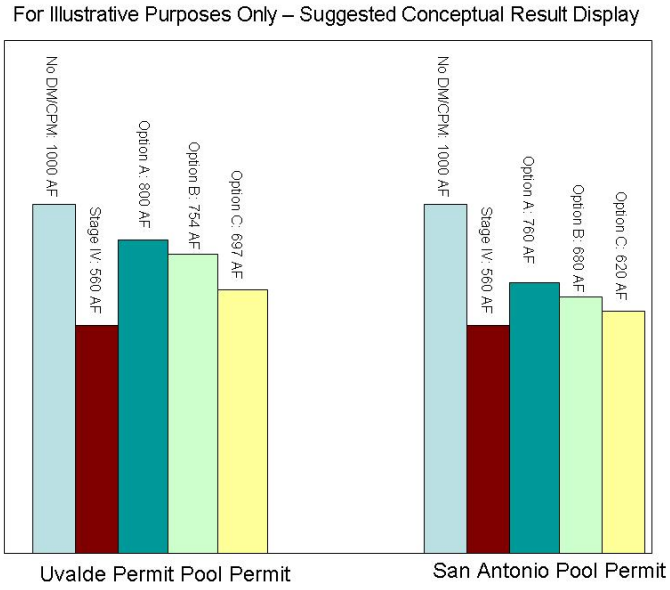
Task 3.1 - Evaluate recharge structures as stand alone component(s) to determine what volume of supply, if any, is necessary to maintain given spring flow targets without supplemental

sources/recirculation (consider previous analyses by HDR (1991-2004); Trans Texas program in 1996; and Todd Engineers (2008) for EAA). Document improvement over the baseline from the recharge structure(s) as a stand-alone component.

Task 3.2 - Evaluate the Type-2 recharge structures analyzed in previous works and then supplement those structures through additional supplies, storage options, recirculation, or management strategies (i.e. timing of "pulses"), if those Type-2 structures alone do not meet the spring flow targets in task 1. Add any additional components in an incremental fashion and identify the increased benefit (i.e. fewer months below a certain spring flow target after adding a given component). Take into consideration options identified in all previous studies and analyses, including those feasibility studies being presently conducted by the U.S. Army Corps of Engineers.

Task 3.3 - Propose and evaluate the most promising hybrids based on the body of existing evaluations and the analysis above to achieve given spring flow targets at least-cost.

Task 4 – **Calculate spring flow and ancillary aquifer storage benefits** based on retention times reflected in the MODFLOW model. Determine the total capital costs and other costs (i.e. operations & maintenance) in both total and annualized cost per unit (acre-foot of spring flow and benefits through increased access to a hypothetical 1000 AF pumping permit). A graphical illustration of this concept is presented below:

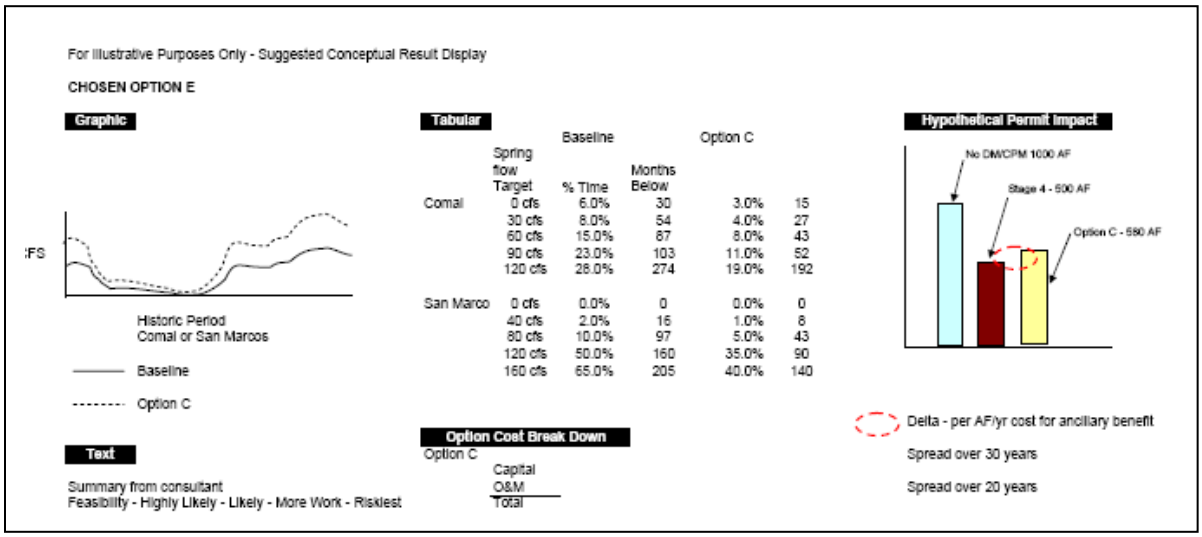


In previous studies, "recharge credits" were identified as an additional water supply for consumption. Incorporate and use the current EAA Aquifer Recharge, Storage and Recovery permitting rules (Edwards Aquifer Authority Rules revised July 22, 2008 Subchapter "J") to guide this phase of the analysis. In this study, assume these "recharge credits" that would have supplemented supply are applied toward further storage or recharge for spring flow protection. Identify the cost of attaining a "recharge credit" for each conceptual hybridized option identified in Task 3. Revisit Task 2.2 above and identify or propose changes to recharge sources that would be supplemented or replaced if the "credits" applied to spring flow maintenance. Identify

changes to components or structures in Task 3 necessary to adjust for the increased recharge source.

Task 5 – **Report summary and compilation.**

Task 5.1 - Using the consulting team's or individual's expertise and results from the tasks above, propose the top few optimal configurations of components, structures, storage, and management options for achieving supplementation of given spring flow target based on most improvement over baseline, feasibility considerations in implementation, and cost. A suggested



illustrative example is shown below:

Task 5.2 - arrangements or configurations that were not chosen in task 5.1 for inclusion to the report.

Task 5.3 – Prepare summarization arrangements in a format to facilitate inclusion in the Region L Regional Water Planning Group.

Task 5.4 – Prepare a written report, including an Executive Summary, data tables (including results from all computer simulations), and recommendations for implementation of various components. Maintain quarterly dialog meetings with EARIP's designated additional studies workgroup or alternate designation per guidance item two. Expect at minimum two final presentations on findings to the EARIP Steering Committee/Stakeholders as requested.

EXHIBIT C
EXPENSE AND TASK BUDGETS FOR PROPOSALS FOR THE FEASIBILITY STUDY

TASK BUDGET

Task	Description	Amount
Subtask 1	Baseline and Scope Definition	$13,000
Subtask 2	Source Water Rights	$16,000
Subtask 3	Project/Program Definition and Modeling	$25,000
Subtask 4	Technical Evaluation	$61,000
Subtask 5	Summary Report and Communications	$35,000
TOTAL		**$150,000**

EXPENSE BUDGET

CATEGORY	TOTAL AMOUNT
Salaries & Wages[1]	$
Fringe[2]	$
Travel	$
Other Expenses[3]	$
Subcontract Services	$
Overhead[4]	$
Profit	$
TOTAL	**$**

[1] Salaries and Wages is defined as the cost of labor of scientists, engineers, technicians, stenographers, secretaries, clerks, laborers, etc., for work time directly chargeable to this contract.

[2] Fringe is defined as the cost of social security contributions, unemployment, excise, and payroll taxes, workers' 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 not directly involved in collecting or analyzing contract data;
- Depreciation of furniture, fixtures, equipment, and vehicles;
- Dues, subscriptions, and fees associated with trade, business, technical, and prof. orgs.;
- Other insurance;
- Building rent and utilities; and

Repairs and maintenance of furniture, fixtures, and equipment**.**