

EDWARDS AQUIFER RECOVERY IMPLEMENTATION PROGRAM HABITAT
CONSERVATION PLAN

**PROJECT STATEMENT
SECTION 6 HABITAT CONSERVATION PLANNING ASSISTANCE GRANT**

Submitted to the TEXAS PARKS AND WILDLIFE DEPARTMENT by the GREATER EDWARDS AQUIFER ALLIANCE, INC., a 501(c) (3) non-profit corporation, on behalf of the EDWARDS AQUIFER RECOVERY IMPLEMENTATION PROGRAM

Contact Information:

Annalisa Peace
Executive Director
Greater Edwards Aquifer Alliance
P.O. Box 15618
San Antonio, Texas 78212
210-320-6294
annalisa@aquiferalliance.org

Robert L. Gulley, Ph.D.
Edwards Aquifer Recovery Implementation
Texas A&M University
Institute of Renewable Natural Resources
3355 Cherry Ridge Dr., Suite 212
San Antonio, Texas 78230
210-467-6575, ext 232 (W)
210-930-1753(F)
RLGulley@ag.tamu.edu

I. Need

The Edwards Aquifer is a unique groundwater resource, extending 180 miles from Brackettville in Kinney County to Kyle in Hays County (Attachment 1). It is the primary source of drinking water for over 2 million people in south central Texas and serves the domestic, agricultural, industrial, and recreational needs of the area. The Edwards Aquifer is the source of the only two major springs remaining in Texas - the San Marcos and Comal springs. These springs feed the San Marcos and Comal rivers, which are tributaries to the Guadalupe River.

Eight species that depend directly on water in, or discharged from, the Edwards Aquifer system are federally-listed as threatened or endangered. These species include: fountain darter (*Etheostoma fonticola*), San Marcos salamander (*Eurycea nana*), San Marcos gambusia (*Gambusia georgi*), Texas blind salamander (*Eurycea rathbuni*), Peck's cave amphipod (*Stygobromus pecki*), Comal Springs dryopid beetle (*Stygoparnus comalensis*), Comal Springs riffle beetle (*Heterolemis comalensis*) and Texas wild rice (*Zizania texana*). The San Marcos gambusia has not been seen since 1983 and may be extinct.

The primary threat to the aquifer-dependent listed species is the intermittent loss of habitat from reduced springflows. Springflow loss is the combined result of naturally fluctuating rainfall patterns, regional intermittent pumping, and temporal drawdown of the aquifer. Other threats include invasive non-native species, recreational activities, predation, and direct or indirect habitat destruction or modification by humans and other factors that decrease water quality (U.S. Fish and Wildlife Service 1996).

In 1991, the Sierra Club filed a lawsuit under the Federal Endangered Species Act that ultimately resulted in the creation of the Edwards Aquifer Authority ("EAA"). The Texas Legislature directed the EAA to regulate pumping from the aquifer, implement critical period management restrictions, and pursue measures to ensure minimum continuous springflows of the Comal and San Marcos springs are maintained to protect endangered and threatened species to the extent required by Federal law. Today, competing water needs within the region continue to influence management of the resource, and a workable comprehensive plan for the long-term protection for the federally-listed species has yet to be adopted among the region's stakeholders.

EAA worked from 1999 to 2005 to complete a Habitat Conservation Plan ("HCP") with respect to its management of withdrawals from the Edwards Aquifer.¹ EAA submitted a draft HCP to the U.S. Fish and Wildlife Service ("FWS") in 2005. However, this draft HCP was not acted on because it did not include important elements of the water management strategy such as permanent withdrawal limits from the Edwards Aquifer or supporting NEPA documentation.

As a result, in late 2006, FWS brought together stakeholders from throughout the region to participate in a unique collaborative process to develop a plan to contribute to the recovery of federally-listed species dependent on the Edwards Aquifer. This process is referred to as the Edwards Aquifer Recovery Implementation Program ("EARIP"). In May 2007, the Texas Legislature directed the EAA and certain other State and municipal water agencies to participate

¹ See Attachment 2.

in the EARIP and to prepare a FWS-approved plan by 2012 for protecting the Edwards Aquifer-dependent listed species at Comal and San Marcos springs. See Act of May 28, 2007§ 1.26A(d). The Legislature directed that the plan must include recommendations regarding withdrawal adjustments during critical periods (*i.e.*, droughts) that ensure that federally-listed species associated with the Edwards Aquifer will be protected. *Id.* at 1.26A§ (d)(1).

Funds from the requested HCP Planning Assistance Grant will be used to develop, through a facilitated decision-making process, an HCP to protect the eight federally-listed species and to contribute to the recovery of these species. As part of the development of the HCP, the Stakeholders will determine whether other listed or candidate species, *e.g.*, the whooping crane, black-capped vireo and golden cheeked warbler, will be included in the HCP as covered species.

II. Objective

To use a facilitated consensus-based decision-making process to develop, and complete by February 2011, a Habitat Conservation Plan to protect and contribute to the recovery of listed species in the San Marcos and Comal springs and river systems fed by the Edwards Aquifer and affected by the management of the water in that aquifer.

III. Expected Results or Benefits

The development and implementation of an HCP for the Edwards Aquifer provides a high benefit to species and ecosystem conservation, including the following:

- The scope of the HCP will provide protection throughout the entire range of the eight federally-listed species in the aquifer and the springs fed by the aquifer.
- The HCP will protect springflow.
- By protecting springflow, the HCP will
 - benefit other species of concern in the vicinity of the ecosystems of Comal and San Marcos springs including the Texas cave shrimp (*Palaemonetes antrorum*); Texas salamander (*Eurycea neonetes*), Edwards Aquifer diving beetle (*Haideoporus texanus*), toothless blindcat (*Trogloglanis pattersoni*) and widemouth blindcat (*Satan eurystomus*); and
 - contribute to the overall base flow of the Guadalupe River, which is necessary to maintain productivity of the Guadalupe River Estuary on the Texas coast and species that depend on it.
- The adaptive management plan and other elements of the HCP will provide a safety net in the event that springflows decline below critical levels.
- By using a facilitated, consensus-based process, the HCP will have strong regional support that balances the needs of the species with the needs of the regional economies in utilizing water from the Edwards Aquifer.
- Because of the participation of water authorities other than EAA, water purveyors, and municipalities with jurisdiction near the springs, the scope of the HCP and associated mitigation measures is likely to provide a comprehensive approach to protecting species dependent on the aquifer.

IV. Approach

A. Background

The EARIP is a collaborative, consensus-based stakeholder process to develop a plan to protect the federally-listed species potentially affected by the management of the Edwards Aquifer and to contribute to these species' recovery. The stakeholders in the process include State of Texas agencies, local water resource authorities, water purveyors, environmental groups, municipalities, public utilities, and other individuals and groups interested in the Aquifer and the species residing in the Edwards Aquifer or in the springs and river systems fed by the springs. *See Attachment 3.*

Since its first formal meeting in September 2007, the EARIP has

- established a Steering Committee composed of twenty-six members;
- hired a full-time Program Manager;
- executed a Memorandum of Agreement among 38 stakeholders and FWS and established operating rules;
- established a budget and raised voluntary contributions totaling over \$200,000 from numerous stakeholders for operating the EARIP in 2008;
- appointed fifteen scientists to serve as an expert Science Subcommittee;
- established a Recharge Facility Subcommittee² to examine options for enhancing recharge; and
- retained a team of scientists, led by Dr. Thomas Hardy of Utah State University, with extensive experience with the species related to the Edwards Aquifer to evaluate the impacts of in-stream flows and other factors, such as recreation, flooding, and non-native species, that affect species in the Comal and San Marcos springs and river systems (the "Hardy Study").³

By December 31, 2008, the Science Subcommittee will make recommendations regarding whether the existing science supports the designation of a separate pool in the San Marcos area for regulatory purposes and what alternatives, if any, exist to maintaining minimum flows from the springs. The Recharge Facility Subcommittee will make recommendations to the EARIP in 2009 regarding the feasibility, effectiveness, and cost of various options to enhance recharge into the Edwards Aquifer. The options considered will include physical structures, such as recharge dams, as well as land management strategies. In 2009, the results of the Hardy Study will be provided to the EARIP and to the Science Subcommittee that will make recommendation to the EARIP regarding withdrawal limits from the Edwards Aquifer during critical periods.

² In addition to the Stakeholders, this subcommittee includes other potentially affected interests such as the City of Corpus Christi, the Uvalde County Underground Water Conservation District, the Medina County Groundwater Conservation District, and a representative from Groundwater Management Area-9 (*i.e.*, Texas Hill Country area).

³ The United States Geological Survey ("USGS") will participate in the study to ensure that the study meets the needs, not only of the EARIP in preparing the HCP, but also the needs of the FWS that will evaluate the HCP and prepare a biological opinion.

B. Elements of the Approach

The EARIP will use a consensus-based, structured decision-making (“SDM”)⁴ process to develop the scope of the HCP. Following the completion of this process, the EARIP will use a consultant to prepare the section 10(a) permit application, HCP, and a draft EIS. The following sets forth specific actions involved in these activities.

- Prior to the award of the grant, the EARIP intends to retain through a competitive bidding process the necessary expertise (the “Consultant”) to review the EAA draft EIS and make recommendations regarding the biological information and the adequacy of that draft document. No funds are sought in the grant for that review.⁵
- The EARIP will retain a consultant to manage and conduct the SDM process.⁶ Initially, the SDM process will define the objectives and evaluation criteria for the development of the scope of the HCP.
- The Consultant will update the biological information in the EAA draft EIS.
- Information from the initial recommendations of the Science Subcommittee and Recharge Facility Subcommittee and the initial results of the Hardy Study will be integrated into the SDM process to begin the process of developing actions and evaluating the consequences of different combinations of actions.
- As the SDM process progresses, the Consultant will develop a NEPA scoping document. After its completion, the framework for the HCP will be presented to the general public with public meetings and notices through local media, and solicited additional comments.
- After the completion of the Hardy Study and the receipt of recommendations of the Science Subcommittee and the Recharge Facility Subcommittees, the EARIP will use the SDM process to develop a slate of actions and mitigation and adaptive management measures.
- At the completion of the SDM decision-making and NEPA scoping processes, the Consultant will prepare the section 10(a) permit application and complete the draft HCP and draft EIS.
- A second round of public meetings will be held after public notice to describe the plan, answer questions and gather comments.
- The EARIP will provide TPWD a final report on the project 90 days after completion of the last grant segment.

⁴ Structured Decision Making is a systematic way to approach complex decision problems, with emphasis on identifying and evaluating management or policy options. *See* www.StructuredDecisionmaking.org.

⁵ This Consultant will prepare the section 10(a) permit application, the HCP and the draft EIS covered by the requested grant.

⁶ The EARIP has not formally decided who the SDM consultant will be. It has received a proposal for this work from Lee Failing, a partner in Compass Resource Management, and Dr. Robin Gregory, Value Scope Research. Ms. Failing has made a presentation to the EARIP that was well-received by the Stakeholders.

C. Project Management

The Greater Edwards Aquifer Authority (“GEAA”) is submitting this Project Statement on behalf of the EARIP and will serve as the contracting agent for the EARIP in the event that an award is made.⁷ GEAA will also hold and disburse to the consultants the cost-share money that will be contributed by the EARIP stakeholders. The Project Manager for the EARIP, Robert L. Gulley, will serve, at no cost, as Project Manager for GEAA. Dr. Gulley will monitor the progress of the Consultant’s work under the grant, make regular reports to the EARIP regarding that progress, and review and recommend for payment all invoices from the contractors.

V. Contact Information

Annalisa Peace
Executive Director
Greater Edwards Aquifer Alliance
P.O. Box 15618
San Antonio, Texas 78212
210-320-6294 (W)
210-320-6298 (F)
annalisa@aquiferalliance.org

Robert L. Gulley, Ph.D.
Program Manager
Edwards Aquifer Recovery Implementation
Program
Texas A&M University
Institute of Renewable Natural Resources
3355 Cherry Ridge Dr., Suite 212
San Antonio, Texas 78230
210-467-6575, ext 232 (W)
210-930-1753(F)
RLGulley@ag.tamu.edu

VI. Location

EAA’s jurisdiction to manage the Edwards Aquifer is limited to all, or portions of, eight counties, including Atascosa, Bexar, Caldwell, Comal, Guadalupe, Hays, Medina and Uvalde counties. *See* Attachment 1. Moreover, EAA’s organic legislation establishes a five-mile buffer beyond the jurisdictional boundary, reflecting the existence of a contributing zone to the aquifer recharge area, in which EAA has authority to protect water quality. Consequently, the area of the HCP will include the eight counties within the EAA’s jurisdiction proper and the portions of the four counties that contain that the EAA’s jurisdictional five-mile buffer located over the Edwards Aquifer contributing zone. This 12-county area covers approximately 10,600 square miles, and includes the ecosystems related to the eight federally-listed species.

The EARIP HCP potentially will include a larger area. As part of the development of the scope of the HCP, the Stakeholders will determine whether other species will be included in the HCP as covered species. For example, the Edwards Aquifer also supplies a portion of the flow in the Guadalupe River Basin downstream of the Comal and San Marcos springs. Thus, the HCP may

⁷ GEAA is a 501(c)(3) nonprofit dedicated to protecting the Edwards Aquifer through effective grass roots organization of support for comprehensive region-wide planning. GEAA has forty-three member organizations, including civic, religious and environmental groups. GEAA is a participant in all aspects of the EARIP and has executed the Memorandum of Agreement along with 37 other stakeholders and FWS.

include an additional five counties adjacent to the Guadalupe River and the bays and estuary served by this river.

VII. Milestone Schedule

A schedule of project milestones, assuming that the grant is awarded in April 2009, that are associated with the tasks described in section IV of this proposal are listed below.

April 2009	Grant awarded.
April 2009	Retain a consultant to manage and conduct the SDM process.
May 2009	Begin the SDM process by defining the objectives and evaluation criteria for the development of the scope of the HCP.
May 2009	Update the biological information in EAA's draft EIS.
July 2009	Begin the iterative SDM process of developing alternatives evaluating the consequences of different combinations of actions.
August 2009	Complete NEPA scoping document and hold public meetings.
November 2009	Complete development of the scope of the HCP including the mitigation and adaptive management plans.
June 2010	Prepare and complete the draft HCP and draft EIS.
January 2011	Hold second round of public meetings
March 2011	Submit section 10(a) application with HCP and draft EIS
April 2011	Provide TPWD a final report on the project

VIII. Estimated Cost

The EARIP will provide at least a 25 percent cost-share, or \$354,375, for the cost of the SDM process, preparing the section 10(a) permit application, HCP, NEPA scoping document, and a draft EIS,⁸ with the Federal government providing no more than 75 percent in grant funds, or \$1,063,125. All of the funds will be used to pay for consultant costs in accomplishing the grant objectives through implementing the described approach. The estimated budget for the project is set out below:

⁸ No in-kind contributions are anticipated to satisfy the 25 percent cost-share.

• Prepare a complete section 10(a) permit application, including HCP and draft NEPA documentation ⁹	\$	1,200,000
• Management and conduct of the SDM process	\$	150,000
• GEAA overhead (5 percent of direct costs)	\$	67,500

Total Project Cost	\$	1,417,500
Federal Share (75%)	\$	1,063,125
EARIP Share (25%)	\$	354,375

IX. Literature Cited

Act of May 28, 2007, 80th Leg., R.S. ch 1430, §§ 1201-12.12, 2007 Tex. Gen. Laws ____.

U.S. Fish and Wildlife Service, 1996, San Marcos & Comal Springs & Associated Aquatic Ecosystems (Revised) Recovery Plan.

X. Attachments

ATTACHMENT 1: Map of the Edwards Aquifer Region

ATTACHMENT 2: Relationship of the Proposed HCP to the EAA Draft HCP and other planned HCPs

ATTACHMENT 3: Participants in the Edwards Aquifer Recovery Implementation Program

ATTACHMENT 4: Budget Request in EAA’s 2003 Project Statement

⁹ The EARIP has not solicited or received proposals for conducting this work. This estimate is based on discussions with consultants experienced in preparing such documentation and familiar with the EAA 2005 draft HCP. As a point of reference, EAA spent just over \$1.7 million, exclusive of biological monitoring costs, to prepare similar documentation for the 2005 draft HCP. *See* Attachment 2.

ATTACHMENT 1

RELATIONSHIP OF THE PROPOSED HCP TO THE EAA 2005 DRAFT HCP AND OTHER PLANNED HCPS

I. EAA 2005 Draft HCP

FWS's Notice of Availability for fiscal year 2009 makes clear that proposals must be for "activities to develop a new HCP." The Notice explains that proposed amendments to "existing approved HCPS will not be accepted."

In 2003, FWS provided EAA, one of the participants in the EARIP, a section 6 Habitat Conservation Planning Assistance Grant for \$327,467, primarily to complete the draft EIS for an HCP it intended to submit with respect to its management of withdrawals from the Edwards Aquifer and protection of the quality of water in the aquifer. The draft HCP that EAA prepared and submitted was never approved by FWS. The draft HCP EAA submitted to FWS in 2005 did not include withdrawal limits from the Edwards Aquifer, or the draft EIS. Thus, the application here is not an amendment to an "existing approved HCP."

While building on EAA's earlier efforts to prepare a HCP, the proposed work here is largely a new proposal because: (1) the express goal of the EARIP HCP is to contribute to the recovery of the eight federally-listed species; and (2) the EARIP is employing a consensus-based, collaborative decision-making process to develop the HCP. The HCP which is the subject of this proposal is part of a recovery implementation program. Accordingly, unlike the EAA 2005 draft HCP, the objective of the EARIP HCP will be to contribute to the recovery of the covered species. Moreover, the current grant application focuses on the development of covered actions and mitigation and adaptive management measures for the HCP through a collaborative, consensus-based decision-making process involving a much larger representation of interested stakeholders in the region. Thus, the scope of the HCP for which funding is sought is likely to be substantially different than the draft HCP that EAA submitted in 2005. Indeed, because the EARIP includes water authorities other than EAA, water purveyors, municipalities and State agencies with jurisdiction over the springs, as well as environmental, agricultural, industrial and recreational organizations, the scope of the HCP and proposed mitigation is likely to provide a more comprehensive approach to protecting species dependent on the Edwards Aquifer.

Finally, the requested funding goes beyond simply updating the work for which the EAA was previously funded. The EAA sought and received funding largely to finish work on the draft EIS, *see* Attachment 4, that was substantially completed but not submitted with the draft HCP. The new funding request includes work on the draft EIS but focuses as well on the development and preparation of the HCP itself. Moreover, while the funding requested by this proposal includes the costs of preparing a draft EIS, the EARIP draft EIS will differ significantly from the one for which the EAA sought funding in 2003. While the EARIP will build on the basic biological information in the EAA draft EIS, the EARIP's draft EIS will contain an expanded alternatives analysis driven by the SDM process and extending beyond the scope of the previous

planning efforts. The draft EIS also will be supported by the work of the Science Subcommittee, the Recharge Facility Subcommittee, and the science team led by Dr. Hardy.

II. Planned Hays and Comal Counties Regional HCPs

The proposed HCP will complement existing conservation efforts by Hays and Comal counties, which are separately developing regional HCPs to provide coordinated conservation for the golden-cheeked warbler and black-capped vireo. While Hays and Comal counties' proposed regional HCPs do not provide direct conservation for listed aquatic species, the conservation efforts of both counties for the warbler and vireo may have collateral benefits for listed aquatic and other rare and sensitive species. Similarly, conservation efforts undertaken in the proposed EARIP HCP may have collateral benefits to the warbler and vireo that may complement the efforts of Hays and Comal counties as well as other counties in the region which may in the future seek to craft regional HCPs for the warbler and vireo. Should FWS award the EARIP section 6 Habitat Conservation Planning Assistance funds, those funds would further the investment FWS has already made in Hays and Comal counties, which are both developing their regional HCPs with the aid of Habitat Conservation Planning assistance funds granted in 2005 and 2007, respectively.

**PARTICIPANTS IN THE EDWARDS AQUIFER RECOVERY
IMPLEMENTATION PROGRAM**

The following thirty-eight Stakeholders have executed the 2007 Memorandum of Agreement with the United States Fish and Wildlife Service regarding participation in the Edwards Aquifer Recovery Implementation Program:

Aquifer Guardian in Urban Areas	Larry Hoffman
Alamo Cement Company	Mary Q. Kelly
Bexar County	Nueces River Authority
Bexar Metropolitan Water District	New Braunfels Utilities
Carol G. Patterson	Regional Clean Air and Water Association
City of Garden Ridge	San Antonio River Authority
City of New Braunfels	San Antonio Water System
City of San Marcos	San Marcos River Foundation
City of Victoria	South Central Texas Water Advisory Committee
Comal County	South Texas Farm and Ranch Club
CPS Energy	Texas Bass Federation
East Medina Special Utility District	Texas Commission on Environmental Quality
Edwards Aquifer Authority	Texas Department of Agriculture
Gilleland Farms	Texas Living Waters Project
Greater Edwards Aquifer Alliance	Texas Parks and Wildlife Department
Greater San Antonio Chamber of Commerce	Texas Water Development Board
Guadalupe Basin Coalition	Texas Wildlife Association
Guadalupe-Blanco River Authority	Union Carbide Corporation
Guadalupe County Farm Bureau	
John M. Donahue, Ph.D.	

ATTACHMENT 4