

6.3.4 Applied Research

Section 6.3.4 of the Edwards Aquifer Habitat Conservation Plan (EAHCP) includes Applied Research as a “valuable” component of the Phase I package and states that the “Edwards Aquifer Authority (EAA) will contract for the research activities.”

Long Term Objective:

The experimentation done through the Applied Research program of the EAHCP will continue the study of the Comal Springs riffle beetle life history, submerged aquatic vegetation as fountain darter habitat, the effects of sedimentation on submerged aquatic vegetation, fountain darters and Comal Springs riffle beetle. The information gathered through this program may be utilized in the ecological model and will subsequently be used to inform the Adaptive Management Process and identify strategies for improved mitigation.

In early 2015, the first review of the EAHCP conducted by the National Academy of Sciences (NAS) provided recommendations for the Applied Research. From these recommendations, a robust list of possible projects was presented to the NAS Recommendation Review Work Group (RRWG). Based on the recommendation of the RRWG, the Implementing Committee created the Applied Research Work Group at their August 20, 2015 meeting.

Assumptions: Completion of all 2016 approved Applied Research projects.

Methodology:

The purpose of the 2015 Implementing Committee Applied Research Work Group (ARWG) was to evaluate Covered Species research needs to recommend a holistic Applied Research Project Schedule that takes into account the research necessary to better understand the Covered Species in order to achieve the EAHCP’s Biological Goals and Objectives. The applied research schedule developed by the ARWG was reviewed and accepted by the EAHCP Science Committee and the Implementing Committee. This schedule will be used to develop the Work Plans for the Applied Research program in 2016 through 2019 (http://www.eahcp.org/files/uploads/Final_IC-Approved_ARWG_Report.pdf).

All Covered Species collected and utilized for Applied Research may be shared with other Applied Research contractors, within United States Fish & Wildlife Service (FWS) and Texas Parks & Wildlife (TPWD) regulations. The FWS and/or TPWD may require that at the conclusion of the research projects, all Covered Species collected and utilized for Applied Research be delivered to the FWS or the TPWD for Refugia operations.

The Science Committee reviewed the proposed projects from the Applied Research Work Group Report for 2017 at their May 13th meeting. The list of projects were prioritized to be pursued as funds are available.

The ARWG developed and recommended, and the Science Committee approved the Applied Research for years 2016 – 2019. The approved approach is committed to fund the “*Evaluation of the Life History of the Comal Springs Riffle Beetle, Egg to Adult – Phase II*” (\$187,499) and to conduct as much of the highest priority research designated for 2017 as the allocated budget

(\$237,507) allows, ensuring necessary research in the time frame allocated prior to EAHCP Phase II decisions.

The Edwards Aquifer Authority will develop an RFP based on the key elements with expected deliverables and experimental design criteria for each study approved by the Implementing Committee. Where possible, all efforts will be made to match similar studies to allow for shared facility and expertise in an effort to promote fiscal stewardship.

These RFPs will each be issued through a competitive procurement process that will include publication in six print regional newspapers and direct distribution to a list of at least sixty potential qualified contractors.

In addition to the research projects identified for 2017, Applied Research funds will be utilized to pay licensing fees and hardware to maintain the EAHCP database and utilize the Ecomodel.

Monitoring:

EAHCP staff will receive monthly status reports from selected contractors and will visit with selected contractors on-site to evaluate the progress and methodology compliance of Applied Research projects.

Research Facility: In 2016, the Edwards Aquifer Authority is entering the third year of a five-year contract (two, one-year extensions remaining) with Texas State University (TEXAS STATE) to allow researchers to use the Freeman Aquatic Building (FAB) raceways, two concrete ponds and wet lab (with living streams and aquaria) to conduct EAHCP research. The TEXAS STATE facilities meet the needs of providing source water, quarantine capabilities, endangered species handling, and infrastructure/resource needs. The EAA pays the utility costs for use of the facilities.

The FAB facilities are available to potential EAHCP contractors, and terms of use will be included in contracts between EAA and researchers. Additionally, EAHCP staff will coordinate the projects for timing and availability of resource needed (tank, living stream, trough, raceway, or pond).

Budget:

Table 7.1:

\$450,000

Estimated 2017 budget:

\$450,000

*The EAA pays the utility costs for use of the facilities (\$25,000 is budgeted for facility use). There is no annual fee for the use of the FAB for Applied Research.