



Edwards Aquifer Habitat Conservation Plan Implementing Committee Meeting

EAHCP Staff ♦ January 24, 2019





Comprehensive Phase II Work Plan

Scott Storment – EAHCP Program Manager

January 24, 2019

Phase II Work Plan Process

- ▶ EAHCP staff utilized:
 - National Academy of Sciences' *Review of the Edwards Aquifer Habitat Conservation Plan: Report 3*
 - EAA MODFLOW simulations
 - Six years of EAHCP management
 - Review/comments from Phase II Work Plan Work Group



National Academies of Sciences', Report 3

- NAS Report 3 reviewed the effectiveness of EAHCP Conservation Measures, Biological Objectives and long-term Biological Goals. The general findings were as follows:
 - Phase I Conservation Measures are achieving the biological goals
 - NAS 3 was **unable to reach a determination** on the effectiveness of the Conservation Measures relating to the Comal Springs Riffle Beetle.





EAHCP Strategic Adaptive Management Process

As identified by the EAHCP Strategic Adaptive Management Process, four potential paths guide the transition from Phase I to Phase II.

- Continuation of Phase I Conservation Measures without change.
- Continuation of Phase I Conservation Measures with changes or expansion.
- Continuation of Phase I Conservation Measures, plus new Phase II Conservation Measures.
- Continuation of Phase I Conservation Measures with changes, plus a new Phase II Conservation Measure.



Phase I Conservation Measures proposed to not be carried forward to Phase II

- ▶ Science Review Panel (FMA § 7.10) – Completed; *Report 3* submitted in Fall 2018.
- ▶ Ecological Modeling (EAHCP § 6.3.3) – Completed; Ecological Model submitted in Spring 2018.
- ▶ Groundwater Modeling (EAHCP § 6.3.2) – Will be completed in Spring 2019.
- ▶ Applied Research Facility Experimental Channel at the USFWS National Fish Hatchery and Technology Center (EAHCP § 6.3.4) – Determined not pertinent to Phase II implementation.
- ▶ Sessom Creek Sand Bar Removal (EAHCP § 5.4.6) – Removed through nonroutine adaptive management. Funding has been transferred to implement the Impervious Cover and Water Quality Protection Conservation Measure in San Marcos (EAHCP § 5.7.6).



Funding and Management Agreement

FMA § 7.13.7 (f)

If Review Fails or is Inconclusive:

- *If SRP fails to make a determination or determines that the Scientific Record is inconclusive about whether the Phase I Conservation Measures are achieving the Biological Objectives, the Implementing Committee will coordinate with the Fish and Wildlife Service as part of the AMP, and attempt to reach a conclusion that the Presumptive Phase II Conservation Measure or another Phase II Conservation Measure either is or is not necessary to achieve the Biological Objectives.*



Phase II Work Plan Timeline

- ▶ **January 24, 2019** - Draft Phase II Work Plan presented to Implementing Committee and comment period begins.
- ▶ **February 15, 2019** – Comment Period ends.
- ▶ **March 21, 2019** – Implementing Committee Approval of Final Comprehensive Phase II Work Plan.





Questions?



Phase II Work Plan Work Group Report

Cindy Loeffler – Chair

Members of the Phase II Work Group

- Cindy Loeffler, Texas Parks and Wildlife Department (Chair)
- Mark Enders, City of New Braunfels (Co-Chair)
- Patrick Shriver, San Antonio Water System
- Melani Howard, City of San Marcos
- Nathan Pence, Guadalupe-Blanco River Authority
- Julia Carrillo, Edwards Aquifer Authority



Phase II Work Group Charge

- ▶ The Phase II Work Group's charge consists of the following tasks:
 - ▶ Review the draft Comprehensive Phase II Work Plan
 - ▶ Participate in coordination conference calls and attend Work Group coordination meetings
 - ▶ Provide comments and recommendations to the EAHCP Program Manager
 - ▶ Review and approve the Phase II Work Group Report



Table 1 Work Group Comments on Phase II Work Plan (page 7)

Table 1
Work Group Comments on Phase II Work Plan and EAHCP Responses.

Item	EAHCP Section Number*	Conservation Measure	Work Group Comment	EAHCP Response
1	6.3.1	Biological Monitoring	EAA biological monitoring should include invasive species monitoring to address NAS concerns on Zebra Mussels and other non-native invasive species.	Added invasive species monitoring to biological monitoring.
2	6.3.1	Biological Monitoring	Based on NAS recommendations, issues with the Comal Springs Riffle Beetle should be addressed.	Included the efforts of the Comal Spring Riffle Beetle Work Group to address NAS concerns.
3	5.2.3	Management of Public Recreational Use of Comal Springs and River Ecosystems	Add Certificate of Inclusions (COI) and indicate that is a "voluntary effort".	Voluntary language included in the COI initiative.
4	5.2.5	Control of Harmful Non-Native Animal Species	Add language to incorporate removal of non-native animal species not otherwise noted.	Added "including, but not limited to" language to be more inclusive of non-native animals species not noted in the conservation measure.
5	5.2.6	Monitoring and Reduction of Gill Parasites	Reduce the effort of gill parasite monitoring.	Cited BIO-WEST research on the effects of gill parasites on fountain darters in the Comal watershed. Increased monitoring will occur during low flow conditions (<100 cfs).
6	5.2.8	Native Riparian Habitat Restoration (Comal Springs Riffle Beetle)	Fine sediment removal covering the springs will occur in coordination with TPWD, as necessary.	Added language to address Work Group's comment.
7	5.2.9	Reduction of Non-native Species Introduction and Live Bait Prohibition	Include outreach and education as a component in the effort to reduce non-native species.	Added language to address Work Group's comment.
8	5.7.1	Native Riparian Habitat Restoration	Coordination with private landowners should occur on a volunteer basis.	Added language to address Work Group's comment.
9	5.3.2, 5.4.2	Management of Recreation in Key Areas	Include establishment of access points on the east and west banks of the San Marcos River near Spring Lake Dam; update conservation crew efforts to occur "as needed"; include installation and maintenance of exclusion barriers by conservation crew	Added language to address Work Group's comments.
10	5.3.2.1	Management of Public Recreational Use of San Marcos Springs and River Ecosystem	Add Certificate of Inclusions and indicate that is a "voluntary effort"	Voluntary language included in the COI initiative.
11	5.7.6	Impervious Cover/Water Quality Protection	Include tracking the efforts of BMPs and LID to determine the efficacy of WQPP and Impervious Cover projects	Added language to address Work Group's comments.
12	5.4.3.1	Management of Submerged and Floating Aquatic Vegetation in Spring Lake	Include tracking SAV maintenance around spring orifices in Spring Lake to address NAS concern.	Added language to address Work Group's comments.
13	5.5.1	Use of SAWS ASR for Springflow Protection	Work Group provided language referencing the Interlocal Agreement between EAA and SAWS.	Added the language provided to the Work Plan draft.
14	5.5.1	Use of SAWS ASR for Springflow Protection	The Work Group requested to confirm the frequency of the Regional Advisory Group meetings.	EAHCP Staff confirmed, with Regional Advisory Group documents, that the group is to convene annually, or as needed.
15	5.6	State Scientific Areas	Include the creation of a state scientific area in the Comal Springs ecosystem, if necessary.	Added language to address Work Group's comments.
16	N/A	N/A	Use common names to identify species	Common names of species have been included in the Work Plan.

* EAHCP section numbers correspond to the section numbers used in the draft Phase II work plan.



Work Group Additional Concerns and Considerations

- ▶ The costs associated with each Conservation Measure during Phase I (EAHCP § 7.1) were utilized as the basis for Phase II cost estimates. The Work Group suggests a formal review of the Phase II Work Plan costs by the EAHCP Budget Work Group, under the direction of the Implementing Committee.
- ▶ Appendix E matrix summarizes the NAS third and final review of the program and includes plans to address each concern.



Work Group Additional Concerns and Considerations (continued)

- ▶ Research indicates that gill parasites (*C. formosanus*) are not a significant threat to fountain darter populations (BIO-WEST, 2017). Based on this report and program management experience, the significance of the “Monitoring and Reduction of Gill Parasites” Conservation Measure in the City of New Braunfels work plan (EAHCP § 5.2.6) should be reevaluated during the transition to the second EAHCP Incidental Take Permit.
- ▶ Activity under the “Minimizing Impact of Contaminated Runoff” (EAHCP § 5.7.4) Conservation Measure in the City of San Marcos work plan will likely be completed before the final Phase II Work Plan is approved. The Work Group suggests summarizing the work completed under this measure throughout Phase I or removing it from the Phase II Work Plan.



Work Group Additional Concerns and Considerations (concluded)

- ▶ Phase II Work Group recommends that the Comal Springs Riffle Beetle Work Group include a discussion to incorporate quantitative monitoring of native habitat restoration and sedimentation rates in the efforts to improve the Conservation Measures relating to the Comal Springs riffle beetle.
- ▶ The Work Group discussed concerns of the springflow deficit between the draft MODFLOW simulations and the 30 cfs minimum springflow target requirement for Comal Springs. The Work Group considered this an issue to the development of the Phase II Work Plan and the springflow protection measures. The EAHCP staff are investigating additional springflow forbearance scenarios to meet the minimum springflow targets for Comal Springs.





Questions?



Funding and Management Agreement Sections 4.3 and 7.13.7

Scott Storment – EAHCP Program Manager

January 24, 2019



FMA § 4.3

Comprehensive Phase II Work Plan

- ▶ “Not later than March 1, 2019, the Implementing Committee will develop and approve a Comprehensive Phase II Work Plan, which will include descriptions, schedules, and cost estimates for ongoing Phase I Conservation Measures, for the Phase II Conservation Measures, and for all Program activities to be conducted or managed by the Parties and Program Manager that are to be funded from the HCP Program Account for the Phase II period from January 1, 2020 until expiration of the Permit. The Implementing Committee may amend the Comprehensive Phase II Work Plan from time to time to accommodate new information and modifications in Conservation Measures as may be approved and authorized in compliance with page 17 of 80 the AMP established by Article Seven.”



FMA § 4.3

Comprehensive Phase II Work Plan

- ▶ **Action:** To extend Comprehensive Phase II Work Plan submission to the Implementing Committee from:
 - ▶ March 1, 2019 to **March 21, 2019**



FMA § 7.13.7 Action on Science Review Panel Determinations

- ▶ **7.13.7 (f)** “If, contrary to its duties as set out in Subsection 7.10.3, the SRP fails to make a determination or determines that the Scientific Record is inconclusive about whether the Phase I Conservation Measures are achieving the Biological Objectives, the Implementing Committee will coordinate with the Service as part of the AMP, and attempt to reach a conclusion that the Presumptive Phase II Conservation Measure or another Phase II Conservation Measure either is or is not necessary to achieve the Biological Objectives. The Implementing Committee will proceed as provided below:
- ▶ Implementing Committee will direct the Program Manager to initiate, not later than January 31, 2019, the procedure for Strategic AMP Decisions set forth in Section 7.14.



FMA § 7.13.7 Action on Science Review Panel Determinations – *NAS Report 3*

- ▶ **Action:** To extend Strategic Adaptive Management proposal due date from:
 - ▶ January 31, 2019 to **March 21, 2019**



Questions?