

NRC Committee to Review the Edwards Aquifer Habitat Conservation Program

2013-18 Statements of Task, Work Plan, and Report Budget Estimates

An ad hoc committee of the National Research Council (NRC), overseen by the NRC Water Science and Technology Board, will issue three reports that review the many different scientific initiatives underway to support the Edwards Aquifer Habitat Conservation Plan (EAHCP).

The NRC Committee will focus on the adequacy of the body of scientific information to reliably inform assessments of the EAHCP biological goals and objectives; ensuring that best-available science is utilized. Relationships among proposed conservation measures (including specified flow rates and habitat protection and restoration); biological objectives; and, biological goals form an important science-policy foundation for the EAHCP, and will be important background for all three NRC reports.

The NRC review will be conducted from 2013-2018. The committee will issue its first report in 2014, its second report in 2016, and its third and final report in 2018.

The statement of task for the committee's first report is presented below. General descriptions of the committee's second and third statements of task also are presented, but formal statements of task for both these reports will be agreed to after the committee's first (2014) report is issued, and will be subject to discussion between and mutual agreement of the Edwards Aquifer Authority and the NRC.

First NRC Report

The NRC committee will review and provide advice on four scientific initiatives within the Edwards Aquifer Habitat Conservation Program: 1) ecological modeling, 2) hydrological modeling, 3) biological and water quality monitoring programs, and 4) applied research.

The committee's report will address:

- hydrological and ecological modeling approaches,
- accuracy and reliability of the assumptions used to support development of both conceptual and quantitative models,
- adequacy of data for model calibration and verification,
- identification and description of uncertainties,
- additional monitoring data needs,
- additional research needs, and
- other issues deemed relevant by the committee.

In addition, the committee will assess the sufficiency of the modeling, research, and monitoring under development to support the EAHCP Phase II strategic decisions and questions regarding relationships among conservation measures, biological objectives, and biological goals.

To develop its report, the NRC Committee will review written documentation describing these four initiatives that will be provided by the EAHCP Science Committee. Documentation will be augmented by discussions between Edwards Aquifer Authority staff, the EAHCP Implementing Committee, the standing local EAHCP Science Committee, other scientists engaged in the activities, and the NRC Committee.

The NRC will hold three public committee meetings in Texas to facilitate production of the first report. The NRC committee will finalize its draft report at a fourth meeting that will be closed to the public. The NRC committee's draft report will undergo standard NRC external review procedures. The NRC will issue the report one year following the committee's first meeting.

Second Report—tentative statement of task; details to be determined after 2014 (first) NRC report

In the second phase of the study, the committee will continue to follow developments of the scientific aspects to support adaptive management in the EAHCP, including changes implemented as a result of the committee's first report.

The committee's report will provide a comprehensive review of the development, and anticipated uses, of scientific information within the adaptive management program of the EAHCP.

The committee will assess the development and progress of relevant ecological and hydrological modeling, monitoring, and applied research that will be used as a basis for water management and related decisions. The committee will focus on identification of biological questions related to the biological objectives and biological goals of the Covered Species that the ecological and hydrological models should be used to answer. These questions shall be purposeful in design to generate information relative to the questions to be answered for the Phase II strategic decisions.

Third and Final Report—tentative statement of task; details to be determined after 2016 (second) NRC report

During 2017 and 2018, the NRC Committee will review scientific information related to the strategic adaptive management Phase II decision as defined in the EAHCP. This Phase II decision necessitates an evaluation of measures designed to provide spring flows and habitat improvements to sustain the endangered species during a repeat of the drought of record, as defined by the EAHCP. The NRC Committee will produce a third and final report by September 30, 2018, which will determine for each Covered Species in the EAHCP:

1. whether the biological objectives in the EAHCP are likely to achieve its biological goals; and if not, how might flow rates, amounts/types of habitat, and water quality objectives

have to be amended to achieve the required habitat and species population numbers identified in the biological goals?

2. whether the conservation measures in the EAHCP are adequate to meet the biological objectives; and if not, does the presumptive Phase II conservation measure achieve the biological objectives required by the EAHCP? If neither the Phase I conservation measures nor the presumptive Phase II conservation measure are likely to achieve the biological objectives, the committee will explain the extent to which the objectives are not likely to be achieved, and why.

The EAHCP Science Committee will provide all scientific record information and data no later than July 1, 2017, to the NRC Committee for review. Documentation will be augmented by discussions between EAA staff, the EAHCP Implementing Committee, the standing local EARIP Science Committee, other scientists engaged in the activities, and the NRC Committee.

NRC Committee

For its first report, the NRC Committee will be composed of approximately 12 expert scientists, with diverse disciplines and expertise. These scientists shall be independent of the current EAHCP process and shall be free of conflicts of interest, as determined by the NRC. Members will be vetted through standard NRC procedures to ensure that the committee as a whole is free of inappropriate biases. The committee will be supported by NRC staff, who will handle all administrative business, plan and organize all meetings, perform limited research, facilitate report preparation, maintain communications with the sponsors, and ensure compliance with NRC policies.

After publication of each report, membership of the NRC Committee will be reconstituted, so that committee expertise is appropriate to the task. Membership of the NRC committees for the second and third report are likely to be larger—approximately 15 committee members—than for the first report.

Budget Estimates

\$430,000 – 1st 20 months and 1st report
\$480,500 – next 21 months and 2nd report
\$539,500 – remaining 24 months and 3rd report

Total budget estimate: \$1.45M over 65-month performance period.

Additional time beyond issue of the third report will be required for report publication, dissemination activities, and to close out the project financial accounts.

A more complete breakdown of these estimates will be included in the formal proposal from NRC, with categories including: direct labor, overhead, travel, meeting expenses, and general and administrative costs.