

## Sessom Creek Sediment Export Study (HCP 160-17 TESS)

### Request for Proposal Summary

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#### PRELIMINARY SCOPE OF WORK

The Edwards Aquifer Habitat Conservation Plan (EAHCP) contains measures aimed at reducing the harmful impacts of excessive sedimentation to the covered species that rely on the Comal and San Marcos Rivers (§§5.3.6 & 5.4.4). Presently, the EAHCP is engaged in an adaptive management process that seeks to reduce sediment exports from the Sessom Creek drainage to the upper reaches of the San Marcos River. It is anticipated, that sediment reducing engineered solutions (BMPs, stream restoration, etc.) will be functioning in the watershed by 2020. The goals of this study are to (1) collect data on sediment/constituent loading from Sessom Creek, (2) calculate sediment/constituent loading curves from Sessom Creek, and (3) conduct data analysis to better understand the physical factors contributing to sediment exports from the Sessom watershed. It is anticipated that the study will span March 2018 – December 2019, with field data collected from May 2018 – August 2019.

#### Task 1. Methodology Development

Proposers should demonstrate their understanding of Sessom Creek watershed erosion issues and provide a sufficient literature review of relevant sediment measurement and data handling techniques in stream systems. Proposals should adequately describe the methods and costs associated with each of the study goals.

##### 1.1 Collect data on sediment/constituent loading

Proposals should include detailed descriptions on field data collection methods and post-collection sample handling and analysis. At minimum, this should include information on the location(s) for sampling, sampling equipment, event sampling plans, anticipated sampling frequency, and methodologies for sample analyses. Proposals should address quality control of field and laboratory methods. While the focus of the study is on sediment export from Sessom Creek, the contractor may include additional constituents (non-volatile suspended solids, nutrients, etc.) to further understand the negative impacts on the receiving waters. The proposal should include the rationale for all analyses. Additionally, it is anticipated that continuous discharge will need to be collected as part of the project. Methods for collecting discharge should be included in the project.

##### 1.2 Calculate sediment/constituent loading curves

Proposals should include detailed descriptions on data processing and statistical techniques to develop sediment/constituent loading curves (sediment concentration curve as a function of discharge). The proposal should include a literature review of data handling methodology and display a thorough understanding of the various techniques available to estimate loads over time.

##### 1.3 Data analysis and examination of the factors that contribute to sediment exports

Proposals should include an analysis plan that examines the physical factors that contribute to sediment exports from Sessom Creek. This can include examination of watershed land use, watershed topography, antecedent soil conditions, discharge considerations, intensity and duration of storms, etc.

### **Request for Proposal Distribution**

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The Sessom Creek Sediment Export Study request for proposal for the 2018 Applied Research Program was distributed to approximately 230 recipient e-mail addresses representing environmental consulting firms, academic researchers, professional mailing lists, and other relevant network contacts. Organizations and individuals with backgrounds in aquatic ecology, aquatic entomology, and allied fields in the United States were among the RFP distribution list recipients.

Mailing lists used included the Ecological Society of America ECOLOG-L list-serv (18,708 recipients); the Society for Freshwater Science BENTHOS-L list-serv; and a Texas Entomology mailing list, TX-ENTO.

Expanded efforts to increase the potential pool of applicants for EAHCP Applied Research opportunities resulted in an increase in RFP distribution list coverage.

### **Applied Research Proposal Timeline**

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October 18<sup>th</sup>: Close date for request for proposal submission

November 8<sup>th</sup>: Science Committee receives proposal review procedure instructions

November 9<sup>th</sup>: Science Committee will receive redacted Scopes of Work for review

November 22<sup>nd</sup>: \*Noon - Science Committee deadline for submitting review forms.