

**Request for Qualifications # 580-11-20110415
For Development of Instream Flow-Habitat Relationships
Supporting Flow Regime Recommendations**

925-35

Scope

The Texas Water Development Board (TWDB), on behalf of the Nueces River and Corpus Christi and Baffin Bays Basin and Bay Expert Science Team (Nueces BBEST), requests the submission of Statements of Qualifications (SOQs) from interested applicants for Development of Instream Flow-Habitat Relationships Supporting Flow Regime Recommendations by the Nueces BBEST. The selected Contractor will perform services in accordance with the Scope of Work summarized as follows at the direction of the Nueces BBEST or their designated representative(s).

Objective

Develop relationships between flow and instream habitat availability for focal species or habitat guilds at a subset of gages as a key component of the biological overlay. These relationships will help evaluate the ability of HEFR output to maintain sufficient habitat for focal species or habitat guilds and overall habitat diversity.

Methods/Parameters

1. Develop relationships between flow and instream habitat for focal species or habitat guilds (to be selected by the Nueces BBEST) at/near 6 US Geological Survey gages for which the Nueces BBEST is developing recommended flow regimes. Utilize methods appropriate for the data available with the goal of using site-specific data to the greatest degree possible. Gages expected to be analyzed are:
 - 08190000 Nueces River at Laguna
 - 08194000 Nueces River at Cotulla
 - 08210000 Nueces River near Three Rivers
 - 08195000 Frio River at Concan
 - 08208000 Atascosa River at Whitsett
 - 08201500 Seco Creek near UtopiaThe ultimate number and specific selection of gage sites to be analyzed will be determined in contract negotiations.

2. In cooperation with TWDB and Texas Parks & Wildlife Department (TPWD) staff, obtain cross-section profiles, depth, velocity, substrate type, and field discharge measurements at each gage. Contractor representative(s) shall be on-site for initial data collection at each site. Cross-sections at each site should follow these guidelines:
 - Obtain at least three cross sections for each habitat type of interest (riffle, run, and pool).
 - Cross sections should extend up to at least bankfull and ideally above it to accommodate uncertainty in field identification of bankfull level.

3. Utilize existing stage-discharge rating curves from the USGS gages or develop cross-section-specific rating curves from field data. If feasible in the time frame of the contract, the Nueces BBEST will provide (with TWDB and TPWD support) multiple discharge measurements and flow velocity profiles at as many selected sites as possible. Guidelines for rating curves:
 - If feasible, obtain at least three points on a rating curve or if a USGS gage curve is available then “ground truth” for the study reach.
 - If possible, utilize multiple velocity sets (at least two) provided by the Nueces BBEST.
 - Data collection to develop cross-section or site-specific rating curves should target flows in the range of draft HEFR base flow outputs for the 6 gages.

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4. Utilize habitat suitability curves from site-specific studies at the gages or in similar rivers. If none are available, utilize envelope curves developed by TPWD, Texas State University or develop suitability curves from habitat data available within the Nueces Basin. Contractor shall ensure Nueces BBEST engagement and obtain Nueces BBEST approval of habitat suitability curves prior to development of flow-habitat relationships.
5. Utilize appropriate methods to develop flow-habitat relationships using the data available. These might include hydraulic modeling tools such as PHABSIM, PHABSIM-analogs, or MesoHABSIM. The Nueces BBEST emphasizes that site-specific data should be utilized wherever possible in this contract.
6. Provide to the BBEST a report including all outputs, models and documentation of methods used, summary findings, site comparisons, methods justification, relevant supporting scientific literature, and issues encountered.
7. Timeline: Work to be completed by June 30, 2011
8. Participation in Meetings: Participate in two progress meetings with the Nueces BBEST or designated representative(s) in Austin, Texas. Participate in one meeting of the Nueces BBEST to present and discuss data collection, analyses, and results. It is expected that this meeting will occur on June 24, 2011.

SOQs shall be limited to 10 pages including resumes of proposed team members. SOQs will be accepted until **12:00 Noon Central Daylight Savings Time (CST) April 26, 2011** by Tina Newstrom, Texas Water Development Board 1700 N. Congress Ave., Room 610B, Austin, Texas, 78701 or emailed to tina.newstrom@twdb.state.tx.us. Email submittal of SOQ (file size less than 2M) is preferred.

SOQs will be scored by selected Nueces BBEST members to rank the submittals on the basis of the following criteria:

- 1) Ability to perform the services requested in a timely manner.
- 2) Familiarity with the aquatic biota and ecology of the Nueces River Basin.
- 3) Experience in development of habitat suitability curves and application of PHABSIM, PHABSIM-analogs, MesoHABSIM, and/or other comparable tools.
- 4) Familiarity with and participation in the Texas Instream Flow Program established by SB2 of the 77th Legislature and the environmental flows process established by SB3 of the 80th Texas Legislature.
- 5) Ability to clearly communicate the results of requested analyses in graphical, written, and oral formats.
- 6) Experience in performing work under contracts with the TWDB, TCEQ, and Texas Parks and Wildlife Department (TPWD).

Questions regarding the RFQ may be addressed to:

Sam Vaughn, P.E., Chair, Nueces BBEST

Phone: (512) 912-5142

Email: Sam.Vaughn@hdrinc.com

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Questions regarding the RFQ process or submission may be addressed to:

David Carter, TWDB

Phone: 512-936-9079

Email: David.Carter@twdb.state.tx.us

-OR-

Tina Newstrom, TWDB

Phone: 512-463-7825

Email: Tina.Newstrom@twdb.state.tx.us