Colorado-Lavaca Basin and Bay Expert Science Team
September 21, 2010 8:30am-2:30pm
Action Items and Consensus Decision Points

The CLBBEST met September 21, 2010 at LCRA in Austin. Thom Hardy was unable to attend.

**Consensus Decision:**
The group adopted the minutes of the August 24, 2010 meeting.

**Consensus Decision: Budget**
Joe Turngale's expenditures for the HEFR analysis will be incorporated into the budget.

**Consensus Decision: Upper Basin Sites**
Dave Buzan provided an overview of the West Texas field trip, showing slides of many of the potential sites in upper basin. Based on the findings of the trip, it was determined that the team should consider modifying the approach for Elm Creek and the Colorado River at Silver. The group decided a narrative description and perhaps a simplified matrix such as subsistence flows and pulse flows may be appropriate. These streams have very low flow through much of the year, often only supporting perennial pools.

**Consensus Decision: Focal Fish- Upper Colorado and Lavaca River Basins.**
Dave Buzan presented a list of Focal Fish for the Upper Colorado and Lavaca River basins. For the Upper Colorado, focal species were identified for the following streams: Colorado at Silver, Colorado and Elm Ck at Ballinger, South Concho, Concho at Paint Rock, and Pecan Bayou. Selection of focal species was based on the goal of having 2-4 species identified for each habitat type (slackwater/backwater/pool, shallow riffle, shallow run, and deep run), species which have been collected in these reaches primarily by the CRWMD, Concho water snake forage species in reaches inhabited by the water snake, and covering an adequate variety of depths and velocities. The Concho water snake was added as a focal species in the shallow riffle habitat.

Dave Buzan provided a list of focal species for the Lavaca River Basin. Species on this list were reported to have been collected from the Lavaca and Navidad rivers in the literature and data from the Lavaca/Navidad environmental flows literature review. The velocity/depth habitat categories are assigned from Dr Tim Bonner's work on the Colorado. The BBEST added ribbon shiner and smallmouth buffalo to the list.

**Action Item: Focal Fish- Llano, San Saba, Pedernales, Lower Colorado**
Focal fish selection is needed for the Llano, San Saba, Pedernales, and Lower Colorado River. Bryan Cook will schedule a two hour meeting to include Dr. Hardy, Dr.

Bonner, Dave Buzan, Melissa Romigh, Ed Oborny, and John Botros to determine representative focal fish.

**Discussion: Stream Cross Sections**

A stream cross-section training will be held on September 23 on the San Saba River at Highway 16. The training will cover the cross section procedure developed by Dr. Hardy. Participation is encouraged. A prioritized list of sites will be developed.

**Consensus Decision: Riparian Approach**

Dave Buzan gave a presentation on relating the flow regime (frequency, magnitude, duration) to riparian condition. Dave utilized time series images from Google Earth to evaluate a broader stream reach and significant habitat features (e.g. riffles) at various flows. The group discussed two key areas: 1) The value of the Google Earth survey and 2) should it be used to identify changes in stream channel. Overall, it was decided that that Google Earth survey was appropriate to characterize riparian zone and opportunities for lateral and longitudinal connectivity. The Google Earth time series may not be the most appropriate tool to assess long term channel changes. Cathy, Dave, and Melissa will meet to determine an approach forward.

**Discussion: Freshwater Inflow**

The TWDB provided daily TxRR model data (estimated inflows) for all watersheds draining into East Matagorda, Matagorda, and Lavaca Bays. This data is essential for characterizing the ungaged inflow contribution to the estuary.

**Discussion: Water Quality**

A statistical analysis of water quality parameters (temperature, chloride, nitrate, dissolved oxygen deficit) to streamflow was completed for the initial gage locations. The 303 (d) list is being evaluated for water quality concerns related to streamflow. The Clean Rivers Program Basin Summary and Basin Highlights reports provide a good overview of water quality in the basin and will be utilized in report production.

**Consensus Decision: Hydrology**

Joe Trungale conducted HEFR analysis for all sites and presented his observations and findings at the meetings. Joe also displayed his Google Earth file structure that houses the HEFR analysis, photos, and other relevant data, by site. The HEFR analysis was run using a seasonal $75^{th}$ percentile to separate base and high flow pulses. This effort attempted to resolve the problem of HEFR not being able to identify 2 per season pulse events for some gages during some seasons. The approach resolved the issue at some sites and significantly increased the number of pulse events at others. The group

decided the hydrology sub-committee should meet and determine an appropriate path forward.

**Consensus Decision**: **Meeting Dates**
The next meeting will occur:
Tuesday, October 19, 2010 8:30am-2:30pm
Meeting will be held at LCRA Shapiro Building, Room 433