Upper Rio Grande, Basin and Bay
Expert Science Team (Upper BBEST)

Sul Ross State University
Room UC 210, Alpine, TX
May 16-17, 2011

MINUTES

Members Present: Kevin Urbanczyk, Chair; Ryan Smith; Gary Bryant; Jeff Bennett.

Call to Order
Cory Horan, TCEQ, called the meeting to order.

Public Comment
None.

Approval of Minutes
The minutes from the April 22, 2011 BBEST meeting were distributed and discussed. The minutes were approved with slight revisions.

Work Component Status and Discussion
Member Jeff Bennett discussed the status of adding the additional data to that used in the 2006 gain/loss studies over a 196 mile reach of the Rio Grande. He said the USGS would not release the data until the update is completed. He added the group would have to use hydrograph separation of the gage data. He talked about the results of four low flow studies he completed on the Rio Grande.

Members discussed the low flow of the Pecos River and how groundwater discharges into the Pecos River are consumed for irrigation. Members discussed what maps were available: irrigation districts, groundwater flows, agriculture returns, and aquifer boundaries. The group decided to request the state agencies to supply GIS information and a map for the Devils, Pecos and Rio Grande Rivers.

Members and TPWD discussed available gage data for sites in the Pecos River, Devils River, and Rio Grande; as well as Independence Creek.

Ryan Smith stated that he was putting gage information into a table for review. Members discussed the following six gages as gages of interest:

- Rio Grande above Rio Conchos
- Rio Grande below Rio Conchos
- Above Alamito Creek
- Below Terlingua Creek
- Rio Grande at Johnson Ranch
- Rio Grande at Foster Ranch

Members discussed the three separate biological systems present. Ken Saunders talked about the timeline for the hydrologic regime affecting fish and the need to correlate to discharges. He stated he had a large amount of fish data needing to be processed. He added the

preliminary review of the data shows a definite shift in the fish population in the Pecos upstream of Independence Creek. His goal is to complete a total species list by basin, define trends over time, and separate by habitat and spawning guilds. He will also email members any papers available on historical trends. Jeffery Bennett volunteered to organize the bibliography in terms of stream segments. Mr. Horan will check with TCEQ staff to determine available water quality and biological data on the Pecos River and Devils River.

Discussion continued on additional issues to be addressed and individual assignments were reviewed. All data files and GIS layer files should be submitted to Leslie Hopper, Rio Grande Research Center at Sul Ross State University.

Members discussed the HEFR model and the information Dan Opdyke, TPWD, needs to run the HEFR model for the group. They discussed what method to use for hydrograph classification (IHA or MBFIT), how to define the base and high pulse thresholds, and the seasonal aspect of the group's focus which Mr. Opdyke will need prior to the HEFR analysis. The BBEST members will determine the necessary parameters and meet with him to discuss the HEFR parameters by the end of the month.

Chair Urbanczyk and Leslie Hopper agreed to be the clearing house for the multiple sources of data. All data should be electronically to submitted to Ms. Hopper.

Budget Overview and Discussion
Leslie Hopper presented an update on the budget. Ms. Hopper stated that the current draft goes over budget. She will draft a budget reducing the hours allotted for each meeting and distribute to the members for comment. Discussion, revisions, and subsequent approval will be via email. Ms. Hopper revised the draft budget and members discussed the effect of reducing hours allotted for each meeting and other revisions.

Work Component Status and Discussion *Continued*
Cory Horan discussed establishing a schedule to set milestones to work toward. Members discussed the status of the benthic samples. The number of samples to be identified will be limited due to the September 1, 2011, time constraint. Work will begin on the primary samples first. Base maps should be submitted to Leslie within two weeks so members will be familiar with the base maps by the next meeting. Member Jeff Bennett stated that the Rio Grande hydrology should be completed and at a minimum, water quality tables and graphs simulated by the end of July. It was suggested to use the different sections of the report to structure and define a timeline.

Members talked about defining sound ecological environment, whether a separate definition is needed for each basin, and how conclusions of previous international committees should be considered in the BBEST's definition of sound ecological environment.

Members discussed groundwater / surface water interaction with respect to the springs, irrigation districts and gage data. A spreadsheet of the draft timeline as well as the list of the 13 gages to date was distributed to members and group discussion followed.

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Sediment Transport and the Ecological Effect of Overbank Flows
Jeff Bennett presented a slideshow on sediment transport on the Rio Grande. He talked about the increase of sediment over time and the resulting degradation of water quality and riparian habitat. He talked about the different flow components should be evaluated and their relationship to the aquatic communities. He added that overbank flows will happen. But, there is no need to increase the flows. Members discussed how to provide a quantitative recommendation that adequately reflects an ever changing number that is a response to existing conditions.

Hydrology - Stream Flow components and how they apply to the Three Reaches - Smith
Member Ryan Smith presented a criteria table created similar to those used from previous BBEST reports and members discussed the options for each criteria. Members discussed flows found at each of the three reaches in their charge and which gages can be used to establish the necessary standards for each flow. They talked about the different flow conditions and populated the table to reflect conditions in the three reaches in their charge. The table will be used as a tool by each subcommittee to determine whether the system is a sound ecological environment. They discussed how the table as is would apply to the Devil's River. However, the subcommittees for the other two systems need to customize the table for their system to show whether or not they are not a sound ecological environment.

HEFR Overview
Member Ryan Smith presented a brief overview of HEFR. Members discussed HEFR and the parameters required. They talked about the impact of the dams on the period of record and the need for multiple runs to compare the full period with selected periods. They talked about IHA and MBFIT, the tools that can be used to classify flow recorded for each day of the period of record as one of the four flow components. This result ultimately determines which component is the dominant source of water. Members discussed seasonality and how HEFR uses either the percentage approach or frequency approach to define the pulses.

Committee Issues and Individual Assignments
- Water Quality: data and period of record for stations on the Devils River, Pecos River and Rio Grande – TCEQ, Liz Verdecchia, IBWC;
- Gage Data: , number, data, period of record and CWQMN for gages including IBWC gages on Devils River, Pecos River and Rio Grande – Ryan Smith;
- GIS information and working maps (for multiple data) for three rivers – Kevin Urbanczyk
    - Gages, drainage areas, irrigation districts, aquifers;
- Irrigation Districts – Gary Bryant;
- Maintain the references used and Bibliography – Jeff Bennett;
- Species List and habitat guilds –Ken Saunders
    - Basin lists, and trends
    - Reproduction mechanisms
    - Timeline series of changes over time and longitudinally;
- HEFR Analysis - Dan Opdyke
    - Members will determine parameters and meet with Dan Opdyke before June 1st.

Set Next Meeting
The next meeting is scheduled for Monday and Tuesday, June 6-7, 2011 in Fort Stockton. The following meetings are tentatively scheduled for the dates and locations listed below. Members will be notified with the time and location.

- Monday/Tuesday, July 11-12, 2011 at Sul Ross University
- Thursday/Friday, August 11-12, 2011 at Sul Ross University

Agenda Items:

- Hydrology – overview
- Work Maps- discussion of completed maps at next meeting.
- Rio Grande Status Report – Hydrology and Water Quality
- Table Revision for each river system - subcommittees
- Water Quality framework/overlay - completion scheduled for end of July
- Budget approval
- Time Schedule- finish setting firm dates and approve

Public Comment
There was no public comment.

Adjourn