Trinity and San Jacinto River Basins and Galveston Bay
Basin and Bay Area Stakeholder Committee
Wednesday, September 2, 2009 at 2:00 p.m.
San Jacinto River Authority Offices
Conroe, Texas

MINUTES

Call to order and Approval of meeting minutes
Chairman Vance called the meeting to order and the Committee approved the minutes from the July 1 meeting unanimously.

Public Comment
There was no public comment at this time.

Resignation of Ramon Miguez/Consideration of Denis Qualls
The Committee accepted the resignation of member Ramon Miquez and appointed this alternate, Denis Qualls, to the committee as his replacement.

Member James Murray noted that he would be resigning from the Committee and recommended in a formal letter to the chairs that his alternate, Glynna Leiper, as a replacement. The Committee agreed to take the issue up at the next meeting.

Update on BBEST Activities
Dr. Bill Espey, Chair of the Committee's BBEST, gave a general overview of the BBEST's activities to date. He noted that the group had initiated work to be performed under contract to perform the hydrological analysis for the instream and freshwater inflows components of an environmental flow regime. He explained that the BBEST members have worked closely with the contractors in the work they performed. He stated that the bay and estuary subcommittee has held two workshops in which they discussed and developed a salinity zonation approach to freshwater inflows as well as identifying key biological species to be considered. The bay and estuary subcommittee will be meeting on September 9, 2009 to discuss the freshwater inflows analysis report provided by the subcontractor. Dr. Espey discussed that the initial draft of the instream flow hydrology report was due on September 2, 2009 and the instream flow subcommittee was scheduled to meet on September 4 and 10, 2009 to review and comment on the report's findings, with the final report due September 11, 2009. He also discussed contact work being supported by the SAC to extract relevant ecological data discovered under the literature review work being performed. He stated that the BBEST has initiated work on the final recommendations report and that the months of September and October would include intense subcommittee work in order to achieve consensus. He concluded with a brief update to the next fiscal year budget noting that the BBEST had been allocated $79,000 for approximately 7 meetings.

Jim Lester, Vice Chair of the Committee's BBEST, gave an update on the activities of the BBEST's Bay and Estuary subcommittee and the findings from the two previous workshops. He noted that the group looked at the relationship between flow and salinity in comparison with the ecology of the bay system, utilizing the period of record from 1983 to 2005. The group looked at monthly changes in salinity to determine historical salinity patterns. He discussed the focal species selected by the group and noted the relationship of salinity ranges and coverage of habitat area for several of the selected species. He concluded by summarizing the next steps the subcommittee will take.

Subcommittee Update on Facilitation Services
Ken Kramer gave an update on the activities of the subcommittee looking into the potential use of professional facilitation services in the BBASC deliberations. He noted that the cost of such services would likely be around a minimum of $25,000. He noted that the key issue would be coming up with

adequate funding and restated a request to the group that if members had the capacity to contribute, they please let him know. He concluded by stating that the subcommittee would continue to explore alternate funding sources and would report back to the Committee at the next meeting.

Groundwater/Surface Water Interaction
Mike Turco, USGS and Member of the BBEST, gave a general overview of groundwater and surface water interactions. He identified three basic types of interaction: 1) gaining, 2) losing, and 3) disconnected, specifying that this type of interaction occurs most often during periods of drought. He discussed flow time/relation changes over time, partially penetrating and fully penetrating events. He emphasized two components of ground water flow: 1) base flow where ground water flows perpendicular to the river and 2) underflow in which groundwater moves parallel to the river in the same direction as stream flow. He discussed the effects on streamflow when groundwater is withdrawn, citing examples of rivers and lakes and what follows when groundwater pumping occurs. He discussed seepage and contaminant plumes in groundwater and how they might come into contact with surface water. Chairman Vance asked if human effects on ground/surface water interaction, i.e. pumping, could be significant enough to affect water planning. Mike responded that under most conditions, human interaction would not affect future water planning. Member Tom Michael stated that aquifer levels are dramatically different than they were in the past, noting that 100 years ago many aquifer levels would be above ground had pumping or withdrawals not occurred.

SAC Guidance Document Discussion: Use of Hydrologic Data in the Development of Instream Flow Recommendations for the Environmental Flows Allocation Process and the Hydrology-Based Environmental Flow Regime (HEFR) Methodology
Dan Opdyke, TPWD, gave an overview of the SAC guidance document on the use of hydrologic data and the "HEFR" methodology. He stated that there were four main components that went into the development of an environmental flow regime: hydrology, biology, water quality, and geomorphology. He discussed the rationale for utilizing a hydrology based approach, explaining that hydrologic data was widely available over a long period of time, fairly easy to work with, and consistently measured. He noted the following statement in the SAC guidance document: "The SAC believes that the HEFR methodology might prove useful as a first step in developing instream flow recommendations, and we recommend that the BBESTs consider its utility." He discussed the generic characteristics of a flow regime including the instream flow components as well as hydrologic or climatic conditions. He explained the basic steps to utilize HEFR which are 1) select a flow gage, 2) select a period of record, 3) parse hydrograph into flow components, and 4) generate statistical summaries in Excel, and went into detail on different considerations of each step. He concluded by summarizing essential considerations when applying the HEFR matrix, noting the need for flexibility in the interpretation of the results and the need to keep ecological goals in mind when utilizing HEFR. He also noted that the other components of an environmental flow regime (biology, water quality, and geomorphology) can be used to guide parameter selection in HEFR as a "pre-processing" tool, or as direct overlays to a HEFR generated flow recommendation, i.e. a "post-processing" tool.

Public Comment
There was no public comment at this time.

Agenda Topics for Next Committee Meeting
The Committee agreed to meet on Wednesday, November 4, 2009 at 1:00 PM at the San Jacinto River Authority. Potential agenda items include:

- Consideration of the resignation and replacement of member James Murray
- General overviews of additional SAC guidance documents
- BBEST update

Adjourn