Trinity and San Jacinto River Basins and Galveston Bay
BBASC Meeting

Wednesday, October 7, 2015 at 1:00 p.m., San Jacinto River Authority Office
1577 Damsite Road, Conroe, Texas

Minutes

Members Present: John Bartos, Chair; David Parkhill (Alt. for Jace Houston); Carl Masterson (Alt. for Terry Anderson); Tom Michel; Pudge Willcox; Glenda Callaway; Ken Kramer; Lori Traweek; Glen Clingenpeel (Alt. for Kevin Ward); Gene Fisseler; Glenn Lord; Tracy Woody; Lisa Lattu (Alt. for Jun Chang); Wendell Null; Denis Qualls; Dan Buhman; Mike Rickman

Call to Order
Chair John Bartos called the meeting to order and the members introduced themselves.

Public Comment
No public comments were made at this time.

Approval of Meeting Minutes
The minutes from the February 4th, 2014 meeting were unanimously approved by members.

Status of Work Plan Approval by the Environmental Flows Advisory Group (EFAG)
Chair Bartos informed members no information had been received regarding approval of the Trinity work plan by the EFAG.

Work Plan Project Reports

I. Lidar Acquisition and Flow Assessment for Middle Trinity
Webster Mangham, Trinity River Authority, provided an overview to members concerning the completion of a project aimed at LiDAR acquisition and flow assessment in the Middle Trinity River. The study's tasks consisted of creating a data archive structure, collecting field data at three SB3 sites, data processing and modeling, and data analysis and reporting. Mr. Mangham presented results of HEC-WRAS modeling displaying cross-sections of channel morphology as it relates to SB3 pulse flows, overbanking flows, indicator riparian species needs, and sediment transport capacities for each field site. For site RM 080444 (Representative SB3 Measurement point: USGS gage 08057000 -- Trinity River at Dallas, TX), which is characterized by a breached lock, the study team found that sediment transport typically consisted of sand moving through riffles and depositing in pools, older trees were not inundated by pulse flow events though equipment was removed before the large May flood event, and sediment deposition measured at the benchmark was about 1 to 3/10 feet. He also noted that the river channel at site RM 080444 is changing rapidly and indicated limited benefits would be gained by continuing all study components at this site. For site 080295 (Representative SB3 measurement Point: USGS Gage 08065000 -- Trinity River Near Oakwood, TX) the study team observed increased transport of large cobble at higher flows and riparian inundation was affected by bank height. For site 080075 (Representative SB3 measurement Point: USGS Gage 08066500 -- Trinity River at Romayor, TX), sediment transport was consistent between all flows with coarse sand being the prominent size mobilized as well as some changes in chancel cross-sections due sand deposition. Recommendations for future study include repeated cross-sections at base flows for the three sites, additional riparian work at sites 080295 and 080075, incorporating a site upstream of the SB3 measurement point, linear surveys to determine SB3 flow connections with

floodplain/backwater habitats, additional LIDAR data collection, incorporation of TIFP data into analyses, and coordination with other basins to validate SB3 standards. Members inquired about the costs of continuing this study and whether LIDAR flights would be occurring in the next year? Mr. Mangham indicated that no budget has been explicitly outlined at this time, but that it could be structured according to the BBASC's priorities. In addition, he indicated that no LIDAR will be collected over the next calendar/fiscal year.

II. Freshwater Bioindicators in Galveston Bay

Dr. Antonietta Quigg introduced Dr. Jamie Steichen, Texas A&M University, Galveston (TAMUG), who provided members an overview on a study aimed at identifying freshwater bioindicators in Galveston Bay. The projects objectives were to test whether the bioindicators reported in the TSJ-BBEST report were representative of freshwater inflows to the bay as well as test if any additional species could be identified as bioindicators. The study team analyzed the relationships between environmental variables such as river discharge and salinity to species abundance of potential higher salinity bioindiators and lower salinity bioindiators for three geographic zones in Galveston Bay (Trinity Bay, upper Galveston Bay, and lower Galveston Bay.) Dr. Steichen indicated that the some of the recommended bioindicator species were excluded from the study if not enough data was available. The results of the principal component analyses and distance based linear model indicate strong relationships indicative of freshwater inflows to the bay for the lower salinity bioindicators, blue catfish and gulf menhanden, as well as the higher salinity indicators, pinfish, oyster drills, and dermo. Dr. Steichen informed members that additional species such as the Atlantic croaker, southern flounder, and spotted sea trout show promise of being potential lower salinity indicators as well, but additional work is needed. She also stated that some species need targeted sampling methods to evaluate effectively, such as for Atlantic *Rangia*. Members inquired as to how the freshwater bioindicators relate to the health of Galveston Bay and Dr. Steichen and Dr. Quigg responded that defining health of an ecosystem is complex and that because of the limited time for the study the scope of the project was narrowed.

III. Determination of Freshwater Inflow Volume

Zulimar Lucena, United States Geologic Survey, provided an update on a project aimed at determining freshwater inflow volume from the Trinity River into Trinity Bay. She indicated that calibration of the index velocity rating at the Wallisville USGS Gage (Task 1) was complete, and the gage should be fully operational within the next couple of weeks. She also presented to members that USGS had observed an interesting anomaly in the Wallisville gage data during recent flooding events. When flows were well above 20,000 cfs at the two upstream gages, located at Romayor and Liberty, the Wallisville gage never measured above 20,000 cfs. Members inquired if this anomaly was the result of an instrumentation malfunction. Mrs. Lucena indicated that the gage was measuring accurately and hypothesized that the water is passing through this area via another avenue such as Old River or lateral transfer through the delta. Additionally, she presented to members the USGS efforts on determining the relationship between suspended sediment concentrations and discharge. She indicated preliminary results show a strong statistical relationship between suspended sediment and discharge, though more work is needed. Furthermore, she recommended that future work focus on evaluating the hydrology of the Trinity Delta and accounting for the discharge not measured at Wallisville.

TWDB Funding and Next Steps/Future Environmental Flow Studies
Bill Espey, BBASC Chair, informed members that the review committee had provided comments to TWDB on the draft studies described above and their efforts were acknowledged by the group. Nolan Ralphelt, TWDB, provided an overview of the 2016-2017 funding process. He informed the BBASC that the total amount of funding available for the continued study of environmental flows is $2 million for all basins. He indicated that at present five out of seven of the SB3 basins have expressed interest in the funds and that the $2 million would be evenly split among interested basins, resulting in approximately $285,000 - $400,000 per basin. Additionally, Mr. Ralphelt informed the BBASC that the RFQ process can be bypassed by directly contracting with universities and federal/state agencies including river authorities, and that the deadline to spend the full funding amount is August 31, 2017. In addition, members were informed that an addendum would need to be submitted for selected studies outside the scope of the original work plan. At present, TWDB recommended stakeholder groups identify priority projects and develop scopes of works to submit to TWDB for approval as soon as possible. The next tentative TWDB board meeting date is December 21, 2015 with a deadline for submitting SOWs to TWDB by November 13, 2015. Mr. Ralphelt also indicated other board meeting dates would be available in January 2016. As during the previous funding cycle, members with potential conflicts of interest will need to recuse themselves from voting.

Members were in agreement to form a work group to prioritize projects, develop scopes of work, and provide recommendations to the BBASC. The work group includes the following BBEST Members: Bill Espey (work group Chair), Jim Lester, and Tony Smith, as well as the following BBASC members: Ken Kramer, Glenda Callaway, Denis Qualls, Glen Clingenpeel, and Lisa Lattu. The work group will coordinate with the study teams to develop budgets and scopes of work, before submitting these for approval to the full BBASC by the end of October.

Agency Updates and SB2 Middle Trinity Texas Instream Flow Program (TIFP) Studies
John Botros, TPWD, provided members an update on the status of ongoing SB2 Texas Instream Flow studies in the Middle Trinity River. He indicated that progress had been made on habitat, biological and water quality components of the study. He stated that the study design should undergo peer review soon and indicated that additional sampling events were planned if flows drop in October. A final report is due out December 2016. In addition, Leslie Patterson, TCEQ, informed members that the environmental flows basin webpages are being updated to make the pages more user-friendly.

Public Comments
Stuart Marcus, USFW Trinity River National Wildlife Refuge, informed members that a long-term project is in the initial phases of contracting with USGS to study freshwater inflows in the lower Trinity River between Romayor and I90. The goal of the project is to evaluate base flows and identify potential impacts of the Blues Bayou diversion project on freshwater inflows. Members requested a presentation over this project at the next meeting.

Glenda Callaway also informed members that the 10th Annual State of the Bay Symposium is scheduled for January 13th-14th, 2016 and will be held at the Moody Gardens Hotel and Convention Center in Galveston, Texas. Interested parties can get more information online at: http://www.gbep.state.tx.us/.

Next Meeting
A doodle poll will be distributed to members to determine the next meeting date.

Adjourn