

**Brazos River and Associated Bay and Estuary System
Basin and Bay Stakeholder Committee (BBASC)**

Wednesday, August 16, 2017 at 2:00 p.m.

Brazos River Authority Central Office located at 4600 Cobbs Drive, Waco, Texas

Minutes

Members Present: Dale Spurgin, Chair; Tom Michel, Vice-Chair; Phil Ford; Horace Grace; Ken Kramer; David Kuehler; Ivan Langford; Paul Irwin for Dan Loomis; Dwaine Schoppe for Glenn Lord; Curt Mowery; Tommy O'Brien; Eddie Saucedo; Gary Spicer.

Call to Order

Chair Dale Spurgin called the meeting to order and member attendance was taken.

Public comment

There were no public comments made at this time.

Approval of Meeting Minutes

BBASC members unanimously approved the October 1, 2015 meeting minutes.

Action on Free Range Livestock, Commercial Fishing, and Public Interest Nominations

Chair Spurgin informed members that there are four vacancies on the BBASC for the following stakeholder groups: free range livestock (2 vacancies), commercial fishing (1), and public interest (1). One nomination was received for the public interest vacancy and the nominee was provided the opportunity to present his qualifications for the position. Through majority vote, members confirmed Bruce Bodson as the new representative for the Public Interest group.

Selection of Officers: Chair and Vice-Chair

Chair Spurgin stated that he and Vice-Chair Tom Michel have served on the Brazos BBSAC as officers since the group began. Chair Spurgin asked whether members had suggestions for Chair and Vice-Chair nominees. Member Ken Kramer nominated Dale Spurgin as Chair and Tom Michel as Vice-Chair. Both were voted to continue serving in the same positions.

Presentation on SB3 Environmental Flows Validation Study

Ed Oborny, BioWest, and Dr. Jacquelyn Duke, Baylor University, provided a final presentation of the Environmental Flows Validation study. The stated goals of the project were to enhance the understanding of flow-ecology relationships and develop a methodology for testing established flow standards. The first round of this study was conducted in 2014-2015 in two river basins and the current round of the study was conducted in 2016-2017 in three river basins. The river basins included in the study are the Guadalupe-San Antonio Basin, Colorado-Lavaca Basin, and the Brazos Basin, including the Brazos Estuary.

Mr. Oborny presented the sampling activities and results of the Brazos estuary portion of the study. The team collected a variety of ecological, water quality, and discharge data from 5 primary sites and 4 secondary sites between the Rosharon gage to the mouth of the Brazos River. The study identified a significant relationship between salinity vs. flow tier and discharge. Low flows are associated with higher salinity and high flows are associated with lower salinity levels. In this portion of the study, no significant relationship was found between freshwater inflows and ecology. Ecology can be linked to salinity and season, but not freshwater inflows.

Mr. Oborny then presented the sampling activities and results of the aquatics portion of the study. 15,000 fish and 50,000 macroinvertebrates have been collected in the Brazos basin between 2014-2017. Sampling was performed at a variety of flow tiers to ensure adequate replication. The study sampled in riffle, run, backwater, and pool habitats. There were no overall statistically significant trends across all basins. However, some statistical relationships were identified at particular sites. A relationship was detected in the Lampasas and Leon Rivers between relative abundance of riffle species and flow (CFS). A relationship was also detected in these rivers for macroinvertebrates and flow (CFS). More intolerant species were detected following pulse flows. In the Little River, fluvial specialist showed response to flow (CFS). The study also identified pre- and post-flood ecological response in fluvial species and generalist species in the Lower Brazos. At the Brazos River-Hempstead and Rosharon sites, there was a higher abundance of swift water specialist and a decrease in abundance of generalist species post-flood. For results associated with flow tiers, the 1 per season and 2 per season tiers showed an ecological response. Differences in responses following a flow tier were evident between pre- and post-flood conditions. Flooding is outside of the bounds of the adopted flow standards. The study team also aggregated historical data and looked for additional relationships. A significant relationship was found between swift water fish and flow tier, specifically the 1 per season pulse.

Mr. Oborny presented information on the floodplain component that was studied in other basins. This component is included in the validation methodology, but it was not studied by this team in the Brazos basin because there have been a lot of floodplain studies done by other entities. Fish communities vary significantly between floodplain and riverine systems. The study found an ecological response depending on whether oxbows were connected or not connected from the mainstem of the river.

Dr. Duke presented the sampling activities and results of the riparian component of the study. In round 1, the team set transects perpendicular to the stream and sampled indicator species in various life stages. Then the team measured responses at a variety of flows that aligned with flow standards. During the current round of study, the study team altered the method to a corridor approach with three parallel tiers at set distances from the river. The study collected data for woody and herbaceous vegetation in different life stages, as well as abiotic factors. The abiotic factors that were analyzed included bank steepness, sinuosity, distance and channel width. The team determined that the environmental flow standards are not meeting the requirements of the riparian community overall. Dr. Duke stated that elements from the methods from round 1 and 2

could be combined for future studies. One drawback of this study was that the funding timeline did not allow for sampling over a full growing season.

Mr. Oborny spoke broadly about conclusions and potential applications of this research. The team developed a methodology that can be used to make informed recommendations for refinement of the standards. The team provided a methodology that is standardized, incorporates multiple components, and has a simple desktop approach. The methodology lays out three levels of validation aligned to each ecological component. The four steps to develop recommendations are questions, decisions, flow evaluation, and potential long-term monitoring. Mr. Oborny gave an example of a practical application of this methodology for aquatics with subsistence, base and pulse flows. The BBASC can use any available data if habitat information is available. Other data that may be analyzed in future studies include sediment transport, freshwater mussels, or channel morphology. Mr. Oborny emphasized that future study could benefit from sampling for a full growing season. Additionally, a long-term monitoring project would be valuable at several sites in this study.

Member Ivan Langford inquired whether the flows that were listed in the riparian component of the study were flood events. He asked if the data suggests that these high flows should be included in the flow standards. Dr. Duke replied that these flows will be required to sustain the riparian area at the current state. The season when high flows occur is important for the riparian area because of the growing season. Some of the flows are one per season and are most beneficial in the spring and fall. Member Ken Kramer asked why the study team has not been able to sample in the summer. Mr. Oborny replied that the structure of biennial funding and the Request for Qualifications (RFQ) process has prevented the team from sampling in the summer. A more robust sample set would be possible if the team could start sampling in February. Tom Gooch, BBEST member, commented that the BBEST could evaluate the study to better advise the BBASC. Chair Spurgin replied that the BBEST's expertise is valuable and the BBASC would consider funding options for the BBEST in the future. Chair Spurgin mentioned that the BBASC will be able to make recommendations to TCEQ regarding the flow standards in 2024. Member Kramer mentioned that the BBASC would want to start preparing recommendations prior to 2024.

Texas Water Development Board Update

Dr. Carla Guthrie, Texas Water Development Board (TWDB), informed members that TWDB was provided \$2 million in general revenue to support environmental flow studies and a portion of those funds will be allocated to continuing efforts of the SB3 process. The exact amount of funding that will be allocated for the SB3 adaptive management process was not yet established. Dr. Guthrie recommended that the BBASC develop a priority list of studies for consideration for the next round of funding. Chair Spurgin asked about the possibility of speeding up the procurement process or extending the study period so that the summer season could be sampled in future studies. Dr. Guthrie explained options to make the process more efficient so that the funds could be available for contractors more quickly. The process could be more efficient if there was more coordination across basins or if groups had cooperative

funding. SB3 work plans generally identified work on monitoring, validation, and strategies to provide flows.

Chair Spurgin asked whether the allocated funds could be used by the BBEST to assess the studies from the first two rounds of funding. Dr. Guthrie said this could be requested as a proposed study to fund. Mr. Gooch mentioned that the BBEST has not met in many years, so a meeting of the BBEST to ask for input would be helpful. Member Gary Spicer asked the contract group what time frame of sampling would benefit future studies. Mr. Oborny replied that sampling would ideally be done between March and October. Mr. Spicer mentioned that these studies could be funded on a shorter time scale. Dr. Guthrie said that changing timelines can be difficult considering the RFQ process. She also mentioned that TWDB can contract more quickly with government agencies and universities and can extend the study time for a year past the normal deadline. Chair Spurgin asked if government agency can then contract with a private entity. Dr. Guthrie believes this is a possibility, but would verify. Mr. Spicer asked about the benefit of continuing studies that have been funded previously. Dr. Guthrie said that it saves money with keeping the scope of work the same, but the contracting time would not change.

Chair Spurgin stated that the BBASC may want to explore the possibility of working with other basins since they are funding similar work. Chair Spurgin voiced that the goal of the BBASC would be to ensure the current study, if continued, could sample in the summer season. He also expressed interest in possibly allocating funds for the BBEST to assess completed studies. Chair Spurgin asked that the BBEST put together a proposal and budget for analysis of completed studies. Mr. Spicer mentioned that the assessment of completed studies could be done in future rounds of study since recommendations are not due at this time. Chair Spurgin mentioned that contracting with a government agency may help close the data gap because time extensions would be possible. Dr. Guthrie reiterated that the BBASC should prepare a document for TWDB with the top 1-5 projects prioritized with title, cost, and brief description, then TWDB could expedite the contracting process. A motion was made and approved to reach out to other basins for potential coordination of future studies. If coordination is not possible, the BBASC will revisit the work plan for other potential projects and consider funding the BBEST assessment project. The BBASC will communicate regarding potential projects via email or at future meetings.

Dr. Nolan Raphael stated that the draft report of the current study will be distributed to the reviewers by email and reviews will be conducted over a two week period.

Other Items

Ms. Jade Rutledge, Texas Commission on Environmental Quality (TCEQ), informed members that the TCEQ Environmental Flows basin webpages have been updated to make the pages more user-friendly.

Next Meeting Date and Future Agenda Items

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

Public comment

There were no public comments made at this time.

Adjourn