Colorado and Lavaca Rivers and Matagorda and Lavaca Bays
Basin and Bay Area Stakeholder Committee (BBASC)

Thursday, June 16, 2011 at 9:30 a.m.
LCRA Dalchau Service Center
3505 Montopolis Dr., Austin, Texas

Meeting Minutes

BBASC Members Present: Chair Patrick Brzozowski, Vice-Chair Myron Hess, Robert Colura (alternate for Jim Dailey), Ronald Gertson, Carroll Hall, David Hill, Deedy Huffman, Joe King, Frank Lewis, Teresa Lutes, Jack Maloney (alternate for Dick Ottis), Bob Pickens, L.G. Raun, Caroline Runge, Andrew Sansom, Clarence Schomburg, Haskell Simon, Buddy Treybig, Karen Bondy (alternate for Suzanne Zarling)

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1) Call to order and introductions
BBASC chair Patrick Brzozowski called the meeting to order.

2) Discussion and agreement on agenda **Facilitators**
The designation of an alternate for David Hill was added to the agenda.

3) Public comments (limit 3 min.)
None.

4) Administrative business: Approval of minutes from May 13 meeting
Approval of the previous meeting minutes was deferred to after lunch. Deedy Huffman noted that her alternate, Dan Hall, was not included on the attendees list in the minutes. Myron Hess pointed out that in the second bullet under "Discussion on other flow components. Pulse flows.", "central tendency" should be "upper bound". With these changes, the May 13 meeting minutes were approved.

David Hill introduced his proposed alternate, Andy Hennessey, to the BBASC. Andy oversees TPDES permitting at Formosa Plastics. He has a geology and environmental science background. Andy was unanimously approved as David's alternate.

Carroll Hall asked how the BBASC and BBEST Work Plan items will be consolidated. Patrick replied that the BBASC will deliver their work up through today's meeting to the BBEST. The BBEST will add those to their list, add any additional items, and propose a prioritization. Preliminary BBASC approval of the total compilation will need to happen by June 29. Ultimately, the BBASC is responsible for the final Work Plan.

5) Subcommittee and other updates

- **Facilitator steering subcommittee report** **Brzozowski**
  Myron Hess said that there was nothing to report.

- **WAM subcommittee**
  Patrick reported that the subcommittee met prior to the meeting. They're recommending to the BBASC that the hypothetical aquifer storage and recovery (ASR) project on the Pedernales River at Johnson City be evaluated, and that the size and scope of the project be determined by the BBEST. The project would be evaluated as to its effect on unappropriated flows and pulse flows in particular. The subcommittee also recommends that the analysis done on the Lavaca River site be used as a surrogate for the sites on Garcitas and Tres Palacios Creeks. Members approved these recommendations, and no additional analyses were suggested.

- **Work plan subcommittee &/or BBEST report on Work Plan**
  In addition to what was discussed about the work plan earlier, Patrick encouraged the group to review the existing list of BBASC Work Plan items as represented in the previous meeting minutes and provide any additional input to BBEST chair Dave Buzan by the end of the meeting. Once the BBEST provides a draft Work Plan for BBASC review (prior to June 29), the Work Plan subcommittee will review and make recommendations to the BBASC on moving forward toward finalization of the document.

6) Discuss report **King**

Joe King gave a presentation on the proposed table of contents for the report. This prompted a discussion of how the Work Plan would fit into the BBASC report, focusing on whether it should be a chapter, appendix or separate document. The members agreed that, at this point, the Work Plan could be included at the end of the report in a format that would allow it to stand alone, if needed. A possible report title could be: BBASC Environmental Flow Standards Recommendations and Initial Work Plan.

Questions and comments related to this discussion included:

- There is no statutory due date for the Work Plan; the BBASC can recommend a time period shorter than ten years for reviewing environmental flow regime recommendations, the EFS and strategies.
- The Work Plan, once written, is stable and guides the work to be done in the 10 year period following the BBASC's submission of the Report
- The availability of funds provides the impetus for this BBASC to develop the Work Plan at this time
- The BBASC and BBEST members serve for 5-year terms.

7) Develop preliminary bay and estuary environmental flow standards

<u>BBEST Presentations:</u>

BBEST members, David Buzan and Bryan Cook, presented (1) an overview of the BBEST freshwater inflow recommendations [the environmental flow regime (EFR)] for East Matagorda Bay, Matagorda Bay and Lavaca Bay, and (2) analysis of the attainment frequency of the BBEST recommendations using the WAM 3. *BBASC members' questions and discussion were as follows.*

Q. Do WAMS capture seasonality of use?
A. Yes, on a monthly basis.

Lake Texana operations are in the WAM.

The data provided in the BBEST analysis are a starting place for balancing human and environmental needs, and can be used to identify where strategies might be used.

Regarding Lavaca Bay, the numbers show differences between proposed Texana 2 (an on-channel reservoir), and, alternatively, an off-channel reservoir (OCR) with and without the BBEST EFR recommendations engaged. Bryan explained that there is no set answer about what percentage of time flows must meet the BBEST EFR before the system no longer is considered a sound ecological environment (SEE). The analysis does show that the percentage of time flows meet the BBEST EFR is better with the OCR than with Texana 2. BBASC members clarified that the Texana 2 permit has a provision requiring that environmental flow requirements be determined before construction.

Regarding Matagorda Bay:

- in the WAM run 3 analysis, flows are not meeting the BBEST EFR recommendations at a rate that would produce a healthy bay
- permit 5731 does not impact the bay much in this scenario because of its diversion restrictions
- WAM run 3 is a worst case scenario assuming that all permitted withdrawals are fully used and there are no return flows.

Q. Do the projections for the 2020 Water Management Plan (WMP) for the Colorado River [one of the scenarios analyzed using WAM run 3] provide for an SEE?
A. The bay will hold on, but not be as productive as today.

BBASC Discussion of Ideas and Concerns

BBASC members then discussed expectations and concerns regarding developing the freshwater inflow standard recommendations for the bays. *Questions and comments of the BBASC are summarized below. Where possible, the answer indicates whether it was provided by a BBEST member or a BBASC member.*

Q. What is the impact of Texana 2 versus the OCR?
A. Texana 2 would have some environmental flow restrictions so the BBEST EFR recommendations could be met more often than represented. The OCR provides less yield, which means you may need an additional project to satisfy human demands.

Q. What are the various Matagorda Bay Health Evaluation (MBHE) levels?
A. [BBESTresponse] Level 1 is the lowest level of protection; level 4 is high inflows for a very productive eastern arm of Matagorda Bay.

Q. If historic flow frequency and distribution have sustained the ecology, what is the impact of different flow regimes?
Q. Should the target be a set water amount or should it be a regime?
Q. How do we manage it from a permitting and implementation standpoint?

BBASC comment: Any project will reduce freshwater inflow numbers.

Q. Is there just one SEE? Does it need to be the historic environment? Is a more saline Matagorda Bay not an SEE?
A. One BBASC perspective:
- It will have different species, but still may be sound
- Another environment may be acceptable; existing environment is not the only SEE
- Human need means less water to the bay and estuary
- We still need to conserve water but need to recognize that there will be less water for the bays and estuaries or there will be no new permits.

Another BBASC perspective:
- There can be future projects while preserving the environment, as shown by permit 5731
- Do not need to protect all historical flows
- There will be less water and the system will change; the question is how much change
- BBASC decisions can be reviewed in the future.
- Higher salinities will impact nursery function of the bays and estuaries

Q. Is the SEE defined as that environment which exists or which we find appropriate?

Q. How much longer will there be an SEE; the bays are deteriorating.
A. [BBEST response]

- We don't know the ecological impact of deviating from the BBEST flow regime
- We know the natural flow regime is the most protective of the natural environment
- Moving away from it changes the ecological system and structure
- As you have either more or less water, you change the natural environment and increase the probability that you are moving away from an SEE

BBASC comment: But we have to make a decision.

Another factor when considering change in the system is what is the rate of change; the system can adapt over a longer period of time as compared to rapid change. And what is the health?

BBASC comment: Our job is to balance, not just consider the SEE. We have talked a lot about impacts to the SEE; need to quantify impacts on water supply in order to balance.

- What is the impact of BBEST regime on Texana 2, OCR, an aquifer storage and recovery project (ASR)?
- How much would regional water planning (RWP) projects impact BBEST regime?
- How much would BBEST regime reduce RWP strategies?
- In the Lavaca basin, we know the impact of instream flow requirements but not the impact of the bay and estuary (B&E) requirements.
- B&E requirements can impact the entire river

BBASC comment: Regarding Matagorda Bay: no need to back off of the BBEST freshwater inflow requirements because of the reality of virtually no unappropriated flow in the Colorado.

Discussion followed:

- BBASC recommendations could impact future revisions of the water management plan and, therefore, impact future needs not just of new permits but of existing permits
- Region K consultant applicants said they will incorporate SB 3 determinations in water availability analyses
- Does RWP have more projects than the excess flow permit?
- Uncertainty of how SB3 impacts RWP. For example, if under future conditions the attainment frequency of fresh water inflows is lower, does this impact RWP projects?
- Concern that BBASC recommendations will be used outside of the TCEQ permitting process
- BBASC recommendations only impact new permits and since there isn't unappropriated flow for new permits, there are no projects to be impacted in the Colorado
- Even if we adopt BBEST regime, 2020 Colorado WMP projections show we won't meet the BBEST EFR recommendations with expected use of current permits
- We know we may not meet recommendations; adaptive management and strategies can be used to meet environmental flow standards (EFS) if water is not available
- BBASC charge is to set the target; it may be above what is possible with unappropriated water but BBASC will identify strategies to meet the EFS; we must set EFS that are appropriate for future generations and figure out how to meet them
- Let's not set EFS at a low number just because those are the numbers we know we can meet
- Concerned that if there is not enough water, how do you meet the EFS
- Use strategies, like conservation and dedicated return flows
- Need to shoot for SEE in the EFS and figure how to meet them
- We don't know if less water in a different regime would produce an SEE, so "holding the line" may not be the best choice in balancing. We will learn more as we study over time. We can set as goals, but change in the future.
- If we accept the BBEST regime, have we done our job balancing?

- Hasn't BBEST done this with the WAM runs?
- We have an imbalance of information – we know what comprises SEE; do we know what comprises human needs?
- Be careful of unintended consequences
- Are the thresholds in the Colorado River and Matagorda Bay so high (MBHE level 3 and level 4) that they are the types of pulses that won't be impacted by future diversions
- If MBHE levels 3 and 4 are so high, would we need standards to protect them?
    A. [BBEST response] BBEST can do some sensitivity analysis regarding pulses; consider whether there are merits to different implementation scenarios from different flow regimes

Summary comments by David Buzan [BBEST]:

- BBASC is trying to understand what is the risk of changing the BBEST EFR recommendation related to protecting the SEE when BBASC sets its EFS
- No one is arguing about the standards, but is concerned about how they apply to existing and future water rights.
- WAM runs define human needs. Balancing does include information from the WAM runs

Q. Is the BBEST saying its EFR recommendations are the only means of protecting the SEE?
A. [BBEST response] No. But because of the extent of the study, BBEST could not recommend that another regime would be as protective.

[BBASC comment] There is not just uncertainty about the impact of the BBEST regime, but also confusion. Materials provided need a reference point. Can BBEST reduce the number of variables in the analysis?

ACTION: Based on the discussion, the BBEST offered to try to develop a process that would help the BBASC understand the impacts of changes from the BBEST EFR and develop freshwater inflow recommendations. BBEST representatives said they had enough information about BBASC's concerns and expectations to proceed. BBEST will come back with a process suggestion before the next meeting.

Proposal regarding East Matagorda Bay

Some BBASC members proposed that the BBASC (1) support the BBEST recommendation on East Matagorda Bay regarding maintaining existing flows and (2) support Work Plan components previously described for East Matagorda Bay. An initial proposal stated: Current inputs of water from coastal watersheds for East Matagorda Bay should be continued.

Discussion included:

- Concern that oysters/crabs etc. are surviving but not doing well or thriving
- Concern that a potential decrease in irrigation return flows may impact flow to East Matagorda Bay, and that the language would not allow reduction of water supplied to irrigation
- Concern that if BBASC adopted the statement, it would be a prohibition against future small permits in the coastal basin
- Unsure whether additional freshwater to this bay would be helpful

[BBEST comment]: The BBEST report said that when there is more fresh water in the bay, there are more shrimp. This statement opens the door to looking at strategies.

BBASC developed the following test statement:
The current inputs of water to the East Matagorda Bay should be continued and the augmentation of fresh water inflows would be desirable to improve the ecological environment.

ACTION: The Report Drafting Subcommittee will work on the phrasing of a recommendation, taking into consideration the discussion of the BBASC and that the recommendation is not intended to impact small permits or water management.

8) Discuss Strategies

Science Advisory Committee member, Mary Kelly, gave a presentation describing (1) the statutory framework regarding the BBASC developing strategies and (2) several types of strategies used to meet environmental flow requirements. Questions and discussion from the BBASC followed. *Questions below were answered by Mary Kelly.*

Conservation/mitigation: look at total economic impact on the region

The Guadalupe/San Antonio BBASC is looking at three strategies and how they may impact achieving the environmental flow standards:

- Dedication of return flows
- Purchase of existing water rights
- Dry-year options

ACTION: Myron Hess will get this information for the BBASC to review.

Q. Is municipal/industrial conservation a strategy?
A. Yes, particularly in times of drought.

Q. Explain the Texas Water Trust.
A. It is set up to receive water rights for environmental flows. It currently contains only two water rights. It does not have funding to buy or lease water rights.

In the upper basin of the Colorado, they have worked with the Natural Resources Conservation Service to obtain funding for strategies such as brush control.

Preliminary strategies can be included in a Work Plan and revisited and revised.

Recent state legislation provides a tax exemption for land stewardship such as brush control (similar to an Ag exemption).

In lower basin (and up and down the basins) protect spring flows to protect base flows.

Q. Is the BBASC looking for general or specific strategies?
A. If you know an area will have problems meeting environmental flow requirements, then you can identify specific strategies. The Report to TCEQ can also list more generic strategies.

Possible BBASC approach to the strategies discussion in the report:

- Broad concepts discussion
- Obtain information from Mary re: strategies
- Strategies are voluntary and should not be controversial

ACTION: The BBASC Report Committee will work with Mary to develop a draft chapter on strategies and report back at the next meeting.

9) WAM Run Updates and BBEST Updates

Kirk Kennedy presented updated information regarding WAM runs associated with the gage on the Lavaca River at Edna. These runs are being used to analyze a possible OCR in the Lavaca basin.

The BBEST also was asked to look at the impact of basing the subsistence flow recommendation at this gage and six others on the Q95 flow data rather than the TCEQ critical flow (called 7Q2) data, which the BBEST had used. David Buzan handed out information about the BBEST consideration of this issue. A BBASC discussion followed.

The BBEST explained:

- Q95 is the flow exceeded 95% of the time (derived from HEFR)
- SAC said the Q95 was better scientifically, as opposed to the regulatory 7Q2
- BBEST reached consensus that the flow at Q95 levels at the seven gages is protective of an SEE so long as when flow goes down to low base flow (also referred to as base dry), diversions are not allowed
- If diversions are allowed all the way down to the subsistence flow, you will force a drier situation faster

The BBASC reached consensus on the following:
For the gages with 7Q2 as the subsistence flow component (with the exception of the San Saba gage at San Saba) the BBASC would adopt the Q95 flow with the BBEST implementation recommendations.

There was a question about the values on the San Saba gage at San Saba, so this gage will be revisited after a discussion with the BBEST.

The BBASC members summarized what actions they were expecting from the BBEST before the June 29th meeting:

- A possible process for how the BBASC could look at and make decisions on inflow requirements to the bays and estuaries
- A list of Work Plan items; to be provided to the BBASC by June 23rd
- A proposal about the scope of a hypothetical ASR project on the Pedernales River
- A re-do of the analysis of the Lavaca at Edna gage, including the Q95 flow data

BBASC Comment: The BBEST recommendation [regarding flows to the bays and estuaries] may be something the group could adopt if it can discuss what the recommendations mean and how they are implemented.

David Buzan distributed a handout explaining BBEST comments to an inquiry about the impact of lower irrigation return flows on base flows. Discussion included:

- [Per BBASC] subsistence flows appear to be going down, but there will be a spring pulse (from return flows) as long as rice is grown in the lower basins
- BBEST likely would not be able to reach consensus that lower flows protect an SEE

10) Continue developing riverine environmental flow standard recommendations including discussion of balancing needs

- **Pulse flows**
- **Channel maintenance flows**
- **Subsistence flows**
- **Lower Colorado gages**
- **Lavaca River**
- **Other**

The BBASC addressed subsistence flows during the update provided by the BBEST. As the meeting wrapped up,

- Myron Hess provided a draft proposal on implementation of the 1-per-2-year and 1-per-5-year pulse flows

- David Buzan provided a BBEST handout on pulse and channel maintenance flows for consideration later or as possible language in the Report

11) Public comments (limit 3 min.)
None.

12) Meeting Wrap-up
The next BBASC meeting is scheduled for June 29, 2011, at 9:30 a.m. in Austin. The BBASC members agreed to continue that meeting on June 30, 2011. The location will be provided by e-mail.

Attachment 1
Attachment 1
Action Item List, Additions to the Work Plan, Parking Lot, Report Ideas

Action Items

(items from June 16 meeting and pending items from prior meetings)

June 16 meeting:

Report Committee:

- Develop language on East Matagorda Bay recommendation for BBASC review
- Draft chapter on strategies

Myron Hess: Get information about strategies being developed by the Guadalupe San Antonio BBASC for review.

Get information from Mary Kelly on water trust, including examples of rules

BBEST: prepare information for the June 29th meeting:

- A possible process for how the BBASC could look at and make decisions on inflow requirements to the bays and estuaries (distribute before meeting)
- A list of Work Plan items; to be provided to the BBASC by June 23rd
- A proposal about the scope of a hypothetical ASR project on the Pedernales River
- A re-do of the analysis of the Lavaca at Edna gage, including the Q95 flow data
- Review of Q95 information for San Saba at San Saba

Prior meetings:

- Patrick to write up a summary of hydrologic triggers (existing) for the four streams related to Lake Texana
- BBEST review of whether flows missing at Wharton and Bay City
- Get Lavaca achievement numbers for next meeting bay and estuary item

Work Plan Items

These represent items from current meeting only. See notes from May 25 meeting for more comprehensive list submitted to BBEST.

Study the impact of changes to the recommended flow regime on the SEE for bays

Parking Lot

These are items identified at prior meetings but not yet addressed.

- Understanding the mass balance of the Colorado systems – currently – understanding impacts of return flows, delivery commitments. How much water is available to meet environmental needs
- Discussion item for report: value of return flows – positive and negative
- Permits to which pulse flows would apply
- Hydrologic conditions as triggers
- How to implement subsistence flows

Report Ideas (from prior meeting)
No new report items were generated at the June 16 meeting. This item shows an item from a prior meeting.

The BBASC discussed that the charts from presentations on 5-25 showing unappropriated water available with and without EFR might be useful in the report to show how the BBASC gets to its recommendations.