Colorado and Lavaca Rivers and Matagorda and Lavaca Bays
Basin and Bay Area Stakeholder Committee (BBASC)
Wednesday, July 20, 2011 at 9:30 a.m.
City of Austin Learning and Research Center, Austin, TX

Meeting Minutes

BBASC Members Present: Chair Patrick Brzozowski, Vice-Chair Myron Hess, Bruce Arendale, Jim Dailey, Carroll Hall, David Hill, Deedy Huffman, Frank Lewis, Teresa Lutes, Jack Maloney (alternate for Dick Ottis), Bob Pickens, Andrew Sansom, Clarence Schomburg, Buddy Treybig, Suzanne Zarling

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

2) Discussion and agreement on agenda/ meeting goals
Margaret Menicucci gave an overview of the meeting goals and agenda. No changes were made.

3) Public comments (limit 3 min)
Steve Box commented that based on his observations of the BBASC proceedings, the scales have tipped too far toward meeting human needs and away from meeting the needs of the environment. Noting that the ecology of the system serves both humans and the environment, he appealed for a more balanced approach that does not result in the moving away from a sound ecological environment. Buddy Treybig later read from a prepared statement commenting on Matagorda Bay from the commercial fishermen perspective. His statement is posted on the group's website, under the meeting date, at http://www.tceq.texas.gov/permitting/water_rights/eflows/colorado-lavaca-bbsc.

4) Administrative business: Approval of minutes from June 29-30 meetings
Carroll Hall and Gregg Easley suggested minor changes in the draft June 29-30 meeting minutes. The BBASC approved the minutes as amended.

5) Continue development of bay and estuary environmental flow standards
Facilitators summarized that at the June 30 meeting, the BBASC reached consensus on environmental flow strategies (EFS) for Matagorda Bay which use the BBEST regime numbers found in Table 2.7.4 with the following exceptions:

- Adopt two different achievement guidelines:
  - a strategy achievement guideline, using BBEST regime numbers; and
  - a guideline against which new permit applications would be weighed, using the WAM 3 numbers, which Kirk Kennedy agreed to provide for the July 20th meeting.

Matagorda Bay – Achievement Guidelines, WAM 3 numbers
Kirk provided WAM 3 numbers the BBASC could insert into its EFS for the permitting achievement guideline for Matagorda Bay. This engendered discussion among the BBASC

about how to handle the fact that the WAM 3 numbers might change over time once the standards are developed:

- Consider language in the report that the permitting achievement guideline numbers reflect the WAM 3 numbers at the time of the BBASC report, and that future TCEQ updates of the WAM may result in number updates.
- The achievement guideline numbers for permitting should always reflect an achievement guideline of not less than the current permitted WAM 3. Don't add in new permits to make the achievement guideline numbers lower
- Make sure water that is provided by strategies remain dedicated to the environment.
- Concern about not getting water back if its not committed to environment now
- Can LCRA unused water be provided in strategies?
- Add a column for annual long-term target
- Report will reflect where annual minimum frequency numbers come from

Teresa volunteered to draft language that could be considered by the BBASC for inclusion in the report.

Matagorda Bay -- Long Term Volume and Variability

Bryan Cook explained the long-term volume and variability concept. He noted it was a way to look at really big floods. Volume is from the historical period at Bay City and in the same pattern as found historically (tested by WAM). The variability concept is a statistically derived number: the coefficient of variation (CV).

A proposal was made by a BBASC member to use two numbers for the volume and variability standard:

- As an aspirational number, use BBEST recommendation: Average at least 1.4-1.5 million af per year ± ; and also the BBEST CV above 0.8
- As a permitting number, use WAM 3 volume and variability

Discussion commenced about whether to recommend a long-term volume and variability number from WAM 3 as the permitting number:

- Kirk Kennedy reported that the actual WAM 3 number was 0.877 million af average/year.
- Dan Opdyke noted that this number would preclude all new permits.
- A suggestion was made to use both coefficient of variability and long-term average in the EFS for permitting.
- Long-term volume and variability recognizes the value of flows greater than MBHE 4
- Don't want to totally shut down small permits.
- If we protect long-term average and other numbers, don't need CV

Proposal:

- Use BBEST regime recommendation to average at least 1.4-1.5 million af/year as aspirational for the long term average volume

- Use 0.85 million af/yr as the permitting number for the long-term average, to allow some permitting
- Do not use a CV number, but use the work plan to identify whether a CV number should be used, and what it should be.

No decisions were made about the long-term volume and variability. Bryan was to provide information at tomorrow's meeting (July 21) that might help the BBASC understand better the implications of such decisions and appropriate numbers.

6) Review project analyses (off-channel reservoir, aquifer storage and recovery project) in relation to environmental flow standard recommendations

Facilitators indicated that this item was intended to allow the BBASC members to better understand the impacts of the BBEST environmental flow regime on two projects picked for analysis by the BBASC (from recommendations of the WAM subcommittee).

Lavaca off-channel reservoir (OCR).

Kirk Kennedy presented information to the BBASC about the water availability analysis for the OCR project. He compared the BBEST recommended environmental flow regime's impact on the project with and without pulses. The firm yield of the project would be reduced by approximately 600 acre-feet if pulses are included in proposed EFS. The modeling was made using the triggers from Lake Texana as the assumed hydrologic triggers.

Aquifer storage and recovery project (ASR)

Kirk explained his summary of the ASR project, and impacts on it of the BBEST environmental flow regime both with and without pulses.

7) Continue development of riverine environment flow standards

Pulse flows

To begin the discussion, the facilitators summarized concerns and issues about including a pulse-flow requirement in EFS that members of the BBASC had shared with other in communications prior to the meeting. These were:

- Ability to manage (from a permit operational perspective)
- Ability to change decisions that provide water to environment, human needs
- Satisfying environmental needs
- Satisfying human need
- Supporting BBEST, science
- Making decisions in the face of uncertainty.

The facilitators then asked the BBASC to comment on these and discuss additional concerns. These included:

- Clarify that the BBEST science is to support the BBASC decision, not the reverse
- Consider the value of taking (diverting) flood waters or controlling impacts (related to pulses)
- Concern about totally taking away pulses
- Concern that BBASC protect the flows but look at what degree of protection is needed
- Concerns about differences in the environmental flow regime between the Lower Colorado and the Lavaca on, e.g., channel maintenance and on duration of pulse
- Important to riverine and B&E environment
- Focus on projects above a certain threshold
- Critical role of pulses in the sound ecological environment (SEE); recognized by science
- Desire to protect the critical functions provided by the pulse
- If leave out pulses now, may not be able to get them back
- Make it manageable (needing to achieve a balance)
- Want to know what projects are out there at this time
- Degree of protection – what criteria do you use to adjust the level of protection or, for example, the duration of the pulse
- In the report, indicate as an underlying assumption that any pulse requirements in EFS would not require manufacturing a pulse.
- Degree of protection: what criteria do you use to adjust the level of protection or duration of pulse?

The BBEST environmental flows recommendation for the San Saba at San Saba gage was projected on the wall so that the BBASC could review which flow components they had agreed upon and which components still required discussion and decision making. Some questions followed.

Comment: The designation of some pulse flows as "overbank" raises a concern for some BBASC members that a permit holder would have to manage for an overbank flow, and possibly avoid diverting even while homes were being flooded.
Comment: It would take a really big pump to put a dent in a large "overbank" pulse.

Proposal for the 1-per-2-year and 1-per-5-year pulses:

- Do an initial analysis of a permit application that looks at whether the permit request seeks to divert a specific percentage of peak flow (for example 10%). If it sought to divert less than 10%, then there would be no need to impose further analysis of impacts on pulse or put pulse flow requirements in the permit. (ex. At San Saba, 3000 cfs is 10% of peak flow. Permits seeking to divert at less than 3000 cfs would not be subject to pulse flow analysis or permit conditions.) Some variation on this threshold would apply for on-channel reservoirs.

- For permit applications that seek to divert more than 10% of peak flow, do some modeling analysis to determine if the diversion would case a greater than 10% change in the pulse flows. If so, then may have permit conditions in the form of a standard.
- May change the threshold if a series of permits are requested in the same area.

No decisions were made on pulse flow EFS recommendations at this meeting.

Channel maintenance flows

The BBASC received information from the BBEST about what channel maintenance (CM) flows are, and about how they relate to other components of the BBEST environmental flow regime. Of flows in the river system: approximately 15-30% are contained within BBEST specific environmental flow regime numbers; approximately 7 to 23% are not encompassed in the BBEST EFR recommendation; and the remainder are recognized in the BBEST environmental flow recommendations as needed for channel maintenance flows, but not with specific numerical values proposed.

The BBASC had already identified, as part of the discussion on pulse flows, the following concerns about CM flows:

- CM flow is not quantified
  - Not sure how to include CM as a permit condition
  - Not sure how a diversion would be able to impact CM flows
- Differences in the environmental flow regime between the Lower Colorado and the Lavaca on, e.g., CM and on duration of pulse
- How to provide protection to CM without impairing good-sized projects
- Why define another requirement as CM if pulse flows protect CM?

  A. (Nolan R.) In the sediment world (geomorphology), when you take 80% of the water out of the channel, you start making a smaller channel. There is less habitat. The other components of the BBEST EFR matrix do not alone protect the channel configuration. If those flows identified by the BBEST were the only ones in the river, then the channel will not be maintained. The 1 pulse/year and the 1 pulse/five years can be thought of as flows that provide some channel maintenance flows, but alone these events do not maintain the channel, so the BBEST added the component with its channel maintenance recommendation. Flows other than high flow pulses also affect channel maintenance.

Pulse and Channel maintenance:

BBASC discussed a proposal suggested by Myron about handling channel maintenance flows and pulses:

- Since no specific numbers are recommended for channel maintenance flow, modeling might need to be done to consider the impact of a permit application. Modeling would be simple and not costly.

- For pulse flows, a threshold of 10 percent of the pulse flow could be used to exempt all but the largest projects from analysis. The 10 percent was suggested as a way to protect pulse flows but also let several permits out of the evaluation process.
- What does the pulse flow look like in an environmental flow standard?
  A: Separate them from the matrix and write a rule explaining how to implement
- The proposal would apply to all gages, although the wording for the Lower Colorado gages would be different

Proposal:
As part of the permitting process, there would be a site-specific evaluation of the impact on the two large pulses and channel maintenance flows (without putting a specific number in the recommendation)
Discussion:

- Provides variability on a permit-by-permit basis to look at higher pulse flows and channel maintenance. Takes into consideration overbank flows.

Q: Would you quantify these pulses?
A: Could give TCEQ some direction

- Be clear in report/standard that in the high pulse numbers, the standard is satisfied once volume or duration is reached. Both do not need to be satisfied.
- BBASC could ease the duration component.
- We should provide a detailed EFS to TCEQ because the agency is moving toward having specific rules and not making these environmental analyses on a permit-by-permit basis.

Lower Colorado

LCRA expressed concerns that Myron's proposal for pulse flows is not appropriate for the Lower Colorado, which functions differently. His proposal might work for the Upper Colorado and maybe the Lavaca.

Bryan explained why the Lower Colorado was different:

- It is highly managed. The approach of the MBHE study is very different from gages with less information. While it has two levels of pulse and channel maintenance, they are satisfied by the bay and estuary requirements of MBHE 3 and 4.
- Pulse flows are too complex to use in permitting analysis when the B&E numbers will suffice. Pulsing is hard to track. A bay and estuary condition is easier to track, and it covers the high pulse flows when it is imposed in a permit.
    - It is complex both from a reporting and accounting view, and from an operational view. While the operational difference is not large, it definitely creates paperwork issues. New permit holders will be small, not firm-yield permit holders. B&E standards are easier to follow.

BBASC discussion:

- Why not have a pulse flow standard and if B&E really covers this operationally you can use the B&E condition in the permit.
- Put pulses in place. We can back off later.
- Trying to account across a year. Contract is an issue. Why not have a threshold number so only large permits have to deal with this?
- Nothing shows we don't need a pulse flow
- Bryan: Kathy Alexander of TCEQ said pulses were added to the Sabine because of a lack of B&E conditions. LCRA permit 5731 didn't have pulse, just bay and estuary and channel maintenance.
- May be able to do a threshold number. Most permits will be small and can tie in a reporting requirement.

Overbank concern

- Overbank flows are ecologically valuable
- Concern if people were not allowed to divert even when there is flooding
- BBEST calculated specific pulses at specific locations. At certain gages those pulses were overbank.

All decisions about pulse flow and channel maintenance flow were deferred to the meeting being held the next day, July 21.

8) Approve final recommendations for environmental flow standards (not considered)
9) Public comments (limit 3 min.)
10) Meeting wrap-up & adjourn

Action Items July 20, 2011	**Who/When**
Develop a footnote (text) for use of WAM 3 achievement percentages for Matagorda Bay FWI recommendation related to updates or changes to WAM 3	Teresa L. By Thursday mtg.
BBEST members to provide some information on WAM 3 annual average flow volume and coefficient for variability	Bryan C. and other BBEST By Thursday mtg
New version of Lavaca at Edna OCR chart	Kirk K. Thursday mtg
Threshold proposal (related to size of diversion) for when to use pulse flow requirements for Lower Colorado gages and other gages	Suzanne Z., Teresa L., Myron H. others Thursday mtg.

Report language and ideas

While not specifically designated as consensus decisions, the BBASC did discuss the following possible report ideas:

- Consider language in the report that the permitting achievement guideline numbers reflect the WAM 3 numbers at the time of the BBASC report, and that future TCEQ updates of the WAM may result in number updates.
- Report should reflect where annual minimum frequency numbers come from
- In the report, indicate as an underlying assumption that any pulse requirements in EFS would not require manufacturing a pulse. For pulse flows, be clear in report/standard that in the high pulse flow numbers, the standard is satisfied once volume or duration is reached. Both do not need to be satisfied.