

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

Thursday, July 21, 2011 at 9:00 a.m.  
LCRA Dalchau Service 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, Joe King, Frank Lewis, Teresa Lutes, Jack Maloney (alternate for Dick Ottis), Bob Pickens, Andrew Sansom, Suzanne Zarling

---

**1) Call to order and introductions**

BBASC chair Patrick Brzozowski called the meeting to order.

**2) Discussion and agreement on agenda**

The facilitators confirmed the meeting agenda and goals with the BBASC. No changes were made.

**3) Public comments (limit 3 min.)**

None.

**4) Continued discussion on riverine gages and bay and estuary recommendations**

**Long term volume and variability – Matagorda Bay.** As a follow-up to the discussions on this item at the prior day's meeting, Bryan Cook provided information to help the BBASC members understand the implications of decisions relating to long-term volume and variability. He noted that his analysis showed that even without a coefficient of variability number:

- many of the very large flows still get to the bays;
- the variability number is affected by long periods of low flow.

BBASC members discussed their key issues and concerns about long-term volume and variability:

- Want to maintain large flows to the bay
- Not sure how to establish specific numbers
- Concern about setting a standard that won't change (for both human needs and environmental needs)
  - Hard to reverse if you are shorting the environment
  - Regional water planning needs some help for future projects. Is there a way technically to address? Bryan: Not sure

Proposal:

Back off about 5% from the 0.877 million af/yr long-term average under current permitting (WAM 3), to 0.833 million af/yr long-term average. The resulting reduction is about 43,000 af/yr average.

Discussion:

Whatever choice is made for a number, document the reasoning in the report.

Concerns about this proposal:

- Prefer a range because it is an average. Possibly use 0.877 - 0.833 million af. (This later was determined not to be a viable option)
- Problem with method used to select the number
- We are already way below where we need to be for a SEE
- May not be enough water for an economically viable project

- Excess flows permit is available for future projects and what is available with these numbers is not the only source for future water development
- Don't have information to gauge the impact of this number on the environment

BBASC discussed submitting the proposal to the BBEST for consideration. A BBEST representative responded that their recommendation is the 1.4-1.5 million af in the environmental flow regime in the BBEST report. They view the BBASC recommendation for the permitting standard as purely a balancing question. They may not be able to return a response to such a policy question

Alternate proposal: Use 0.85 million af/yr for the long-term average number.

Concern: Not quite enough water for development.

What are the consequences of not reaching an agreement on the long-term volume and variability number?

- Don't have this component in the recommended environmental flow strategy
- May impair the whole package

#### **Consensus:** Volume

The BBASC reached consensus to use 0.833 million af/yr as the long-term volume for permitting guidelines (line 10, col. 3 in Kirk Kennedy background material), but also reflect the following concerns in the BBASC report:

- The 0.833 million af/yr is a 5% reduction from the WAM 3 long-term average of 0.877. This may be reflected in a footnote to the Matagorda Bay EFS table.
- This change to the WAM 3 long-term average has been picked without being scientifically validated.
- There are uncertainties regarding the accuracy of the measurements of the flow meters used to calculate the long term average, and also as to the models used to calculate it.
- The recommended permitting long-term average is below what the bay needs.
- The recommended permitting long-term average may not be enough for a viable project.
- The recommended permitting long-term average is designed to provide some water for permitting.

Myron and Teresa agreed to bring back to the BBASC language for consideration on the remaining two items related to adoption of an EFS recommendation on Matagorda Bay:

- documenting the BBASC understanding that the permitting column is based on WAM 3 modeling, and the numbers could change as WAM models change; and
- actual rule language for the proposed EFS for Matagorda Bay.

#### **Consensus:** Coefficient of variability

The BBASC agreed on the following recommendation relating to the coefficient of variability for the Matagorda Bay EFS:

Do not include coefficients of variability in either the column showing the adopted BBEST numbers (aspirational standards used for strategies) or in the WAM numbers (permitting standards); however, expressly discuss the coefficient in the report.

## **Riverine Environmental Flow Standards**

### **Pulse flows**

The BBASC resumed discussion from yesterday about how to handle pulse flows that have not been included in their prior consensus agreements. Members discussed the need to treat different areas differently. The following discussion related to pulse flows of the Upper Colorado River basin. The members noted:

- there is not much water in the Upper Colorado. We need to make exceptions for small projects.
- Water at some gages has declined over the period of record, making it difficult to use exemptions.
- If there is not water in the Upper Colorado, why exempt any permits from the pulse flow requirement?
  - TCEQ might decide on its own exemption if the BBASC doesn't. A consensus agreement of our BBASC may have greater weight.
  - Shows a balancing
  - Concerns about drifting away from the BBEST science recommendations
  - 10% deviation acknowledges that the BBEST is not a precise value and likely doesn't substantially deviate from the environmental norm.
- Relating to the impoundment exemption amount:
  - Is such an exemption needed?
  - Trying to address the impact of the reservoir itself.
  - The permit process for an impoundment is rigorous.
  - Members considered possible appropriate sizes for the reservoir exemption of 5%, 10% and 20% of the one-per-two-year pulse flow volume (ranging from 1,000 af to 2,000 af to 4,000 af at an example Upper Colorado gage). They considered some general information from Kathy Alexander about the size of typical irrigation on-channel reservoirs.

#### **Consensus:**

The BBASC agreed to the following general structure to exempt some small permits from pulse flow requirements for one-per-two-year and one-per-five-year pulse flows that do not have overbank components in the Upper Colorado:

- Use the BBEST pulse flow recommendations, but apply them as follows:
  - Test 1: If an application will either (1) divert less than 10% of the peak flow for the one-per-two-pulse, or (2) create an on-channel impoundment which will impound less than 5% per year of the volume of the one-per-two-year pulse flow, the application would be exempt from the pulse flow requirements.
  - Test 2: If an application is not exempt under Test 1, determine if the application – in conjunction with other permits/applications subject to the standard – reduces the frequency of attainment of the one-per-two-year pulse or the one-per-five year pulse by  $\geq 10\%$ , or reduces the average annual volume by  $\geq 10\%$ . If it does, adjust the permit or impose conditions on the permit to protect the pulse flows.
- Include in report language that the applicants would be allowed to develop strategies to reduce impacts to the EFS.

#### **Overbank flows**

BBASC members expressed the following in response to the question: What is important to weigh in decisions on overbank flows?

- Natural and not man-made
- Flooding property
- Unclear on the role in environmental flow standards

- Does it have to be treated differently? (in response to this question, Suzanne Zarling read to the group the TCEQ language in the rule preamble adopting environmental flow standards for the Trinity-San Jacinto and Sabine-Neches. The TCEQ ultimately did not adopt EFS that would result in overbank flows, but acknowledged that such flows would occur naturally, and were environmentally important.)
- We want to be able to divert overbank flows
- Role in maintaining riparian corridors and delivering nutrients and sediments to the bays and estuaries
- Important to the environment and bay health
- Restrict development in the floodplain
- Definitional, but concerned about how you clearly address
- Overbank refers to flows above the “flood stage” of the National Weather Station, which means the stream is close to coming out of its banks.
- In the Upper Colorado, five of the 11 sites have some overbank in the pulse flow recommendations

Ideas for addressing overbank:

- Reconfigure volume, duration etc so they are not longer overbank – ask BBEST to do this
  - May cause some pulse flow recommendations to be eliminated, such as the one-pulse per five years – if they become a repeat of lower pulse flow recommendations
- Protect flow at the “in channel level” but not at an overbank level
- Reference the importance of overbank flows
- Acknowledge that man can’t intervene in flow in overbank situations, so don’t try to adopt a standard
- Give TCEQ guidance to analyze one-per-two-year and one-per-five-year pulse flows, but don’t set standards

Relating to reconfiguring overbank flows, BBASC members or others expressed the following ideas:

- Dan Opdyke said calculating the bank-full numbers could be done.
- It’s important that we not impose a number that is an overbank number.
- Reconfiguring could result in some of the very large (like one-per-five-year pulses) being eliminated from the matrix.
- But could maintain variability with multiple numbers to realize the intent of the BBEST recommendation.
- No need for standards for large pulses because projects which could impact these flows are not economically viable.

Proposal: Ask BBEST to provide BBASC with reconfigured numbers to show overbank reduced to the highest in-bank flow, and acknowledge the value of overbank flows to the environment.

In response to some concerns raised over the proposal, members consider how it might be improved:

- Would like to have the numbers to review
- Are any standards needed, since these flows are naturally provided?
- When the river is full, what about streams that are at capacity?
- If we alter a BBEST flow, what is the ecological value? For example, if this is one-pulse-per season, won’t that be occurring so we don’t need these other pulses?
- Could BBEST, after recalculation or reconfiguration, provide an opinion on whether the reconfigured pulses are sufficiently different that they continue to provide some value to the flow regime?

## Consensus:

BBASC reached the following consensus:

- Ask BBEST to provide the BBASC with reconfigured numbers to show overbank reduced to the highest in-bank flow; and
- Acknowledge the value of overbank flows to the environment in the report.

Myron will work on text to support the overbank decision, including reviewing the TCEQ preamble language read to the BBASC.

## 5) Strategies

Members brainstormed strategies that might be used to meet environmental flow needs. No action was taken on the following list. Ideas might be broadly used across the Colorado & Lavaca Rivers and Matagorda and Lavaca Bays unless specifically noted:

- Redirect flood flows from Brazoria County for use in East Matagorda Bay
- Manage Lower Colorado water deliveries to make sure water gets to bay
- Impose environmental flow standards on interbasin transfers
- Pump groundwater into East Matagorda bay
- Substitute other water for surface water supplies
- Make sure inter-coastal waterway doesn't impair water getting to East Matagorda Bay in any strategies chosen
- Change statute to allow EFS to apply to water rights amendments
- Dedicate some permitted uses to environmental flows or review permits
- Population control
- Use firm yield concepts for environmental flow
- Direct development to areas with water available
- Property owner incentives for conservation
- Riparian restoration
- Tax incentives to donate water right
- Money to purchase water rights
- Land management to create water
- Promote agricultural use exemption to conserve water
- Upper Colorado: Brush control of salt cedar – provide landowner incentives
- Upper Colorado: clean up salt on land
- Promote conservation by municipal consumers
- Coordinated management of groundwater and surface water
- Protect, increase spring flow
- Dry-year lease options to reduce water use by agriculture
- Water rate structure for water rights acquisition
- Water rate structures to incentivize conservation
- Grey-water infrastructure
- re-engineer inter-coastal water way to restore pre-ICW flow patterns
- Fund BBASC

What happens with strategies?

- They need to be fleshed out
- Need proponents
- Need to be marketed
- Where does responsibility for implementing strategies rest?

- Strategies go to Environmental Flow Advisory Group (EFAG) and to TCEQ. Different strategies might fall within the purview of each group (legislative recommendations, rules...)
- BBASC should flesh out the most promising strategies in its work plan

For the report:

Identify general strategies and identify site specific strategies. The report subcommittee will synthesize the list generated at today's meeting.

## 6) Report

Joe King provided the portions of the BBASC report that have been developed to date. The BBASC discussed and developed the following plan for completing the draft BBASC Report:

What	Who
Executive summary: introduction of overarching decisions and framework for the recommendations	Andy
Section 5: WAM information, and supporting materials	Steve, Teresa; Kirk to provide latest background/support information
Section 6: Projects evaluated <ul style="list-style-type: none"> <li>○ (this could be included in Section 5)</li> <li>○ Determine how best to provide analysis to TCEQ for its use and manipulation</li> </ul>	Steve, Teresa; Kirk to provide latest analysis
Section 7: Include a comparison of BBASC recommendations with BBEST regimes, and why BBASC made any deviations	Teresa Suzanne
Section 8: Strategies	Caroline

Report Editing. The BBASC members responsible for each section will coordinate any distribution of the report to BBASC members and requests for edits before the August 2 meeting. The BBASC as a whole will edit via projector during the August 2-3 meetings.

Acknowledgements: Include acknowledgements of the work of BBEST, alternates, facilitators, funding, hosting etc.

Work plan: members expressed concern about getting this done by the Sept. 1 deadline by which the BBASC environmental flow strategies were due to TCEQ and EFAG.

## 8) Riverine EFS: Hydrologic Triggers

Kirk Kennedy discussed the role of hydrologic triggers and provided analysis of possible triggers for use in the Upper Colorado and the Lavaca river basins and coastal basins. The BBASC discussed aspects of potential triggers:

- In response to a question about how a 12-month look-back trigger would be calculated, Kirk noted that the permit holder must do an accounting. The calculation would be done at the beginning of each season.

- It was noted that the Guadalupe-San Antonio BBASC also was looking at this method of hydrologic condition triggers. They are discussing developing software to easily accomplish the calculations.
- Lavaca has a water master, but not the Colorado. This would be an honor system in the Colorado. This is not different from the present, where all water rights operate on an honor system in the absence of a water master.
- TCEQ is used to issuing permits with conditions where there is not a water master.
- Would triggers be set for each gage? Kirk: yes
- Could we make it simpler? That is your choice.
- Why run 8, run 3?  
A: Run 3 is the permitting world, and these hydrologic triggers would be used to evaluate permit applications.

Lavaca and coastal basin triggers: Triggers for Texana could be used for the Lavaca-Navidad basin and coastal basins because of the homogeneity of the area conditions.

- Desire to set triggers that are consistent with current permit conditions for Lake Texana.
- Runs by Kirk came out similar to what Texana triggers now are.
- Patrick provided the following proposed triggers for the Lavaca and coastal basins, based on the current Lake Texana triggers:
  - > 44 feet msl = base high (100% of storage capacity)
  - > 43 feet msl = base medium (94.8% of storage capacity)
  - > 39.95 feet msl = base low (78.18% of storage capacity)
  - < 39.95 feet msl = subsistence

### 9) Meeting wrap up and adjournment

**BBASC Schedule:** After reviewing the items they needed to complete, the BBASC agreed to try to add a meeting on August 2, before the currently scheduled August 3 meeting. The remaining meetings would cover:

August 2 and 3: riverine flows (hydrologic conditions triggers, channel maintenance EFS, remaining issues on pulse flows, remaining items in EFS for Lower Colorado, Lavaca-Navidad, and coastal basins), report content.

August 18: Adopt final report.

<b>ACTION ITEM</b>	<b>WHO</b>	<b>WHEN</b>
Synthesize strategies brainstormed at 7-21 meeting into report	Report subcom, Caroline	
Reconfigured numbers for overbank: For each gage at which the BBEST pulse flow results in overbank, what is maximum flow that will keep each stream within its bank, and any suggested change in duration if such flow is adopted by BBAST as the pulse flow standard	BBEST	August 1
Draft report language acknowledging value of overbank	Myron	August 1
The BBASC members responsible for each section will coordinate any distribution of the report to BBASC members and requests for edits before the August 2 meeting. The BBASC as a whole will edit via projector during the August 2-3 meetings	BBASC report authors	August 1
Send comments on draft report sections already circulated to authors	BBASC members	August 1
Send comments on work plan to Dave Buzan	BBASC members	August 1

Revise draft of Matagorda Bay Freshwater Inflow standard	Myron, Teresa	August 1
Bring hydrologic trigger suggestions to August 2 meeting	Suzanne, Caroline	August 2

### Report Ideas, Parking Lot

#### **Report Ideas (cumulative from all meetings)**

- 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.
- For Matagorda Bay:
  - note that bays (would be different/are in peril) and we must find strategies to help
  - for operational purposes, would like the ability to have small departures if a permittee misses a season
- Will report of Lower Colorado look different because of its managed rather than free-flowing nature? How will the recommendations be set up?
- Identify general strategies and put those which are site specific in those areas.
- 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 will 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.
- Identify general strategies and identify site specific strategies. The report subcommittee will synthesize the list generated at the July 21 meeting.

#### **Parking Lot (cumulative from all meetings, currently not addressed) (*Items proposed for deletion because completed are noted in strikeout*)**

- ~~Matagorda Bay long term volume and variability regime element (Table 2.7.4): discussion tabled (added July 29/30)~~
- 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 flow

#### **Work plan Ideas**

Studies to determine desired flows to East Matagorda Bay