

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

Tuesday, April 24, 2012 at 10:00 a.m.

Brazos River Authority Offices

Waco, Texas

Minutes

Call to order

BBASC chair Dale Spurgin called the meeting to order.

Review of agenda & meeting goals

Facilitator Margaret Menicucci reviewed the meeting agenda with the BBASC. No changes were made.

Public comment

Chris Wingert with West Central Texas Municipal Water District made two points for the BBASC to consider regarding the BBEST-recommended flow regimes. First, he said that the high flow pulses and overbank flows developed by the BBEST may be too high when compared to the historical record. He recommended lowering the BEST recommendations to more closely mimic recent streamflow patterns. Secondly, Mr. Wingert stated that the BBEST's criteria would be too difficult for reservoir operators and regulators to manage, using as an example multiple levels of pulses and the different ways to determine when a pulse episode has ended. He encouraged the BBASC to consider ways to simplify the criteria. Mr. Wingert's comments and associated analyses are posted to the BBASC web page at http://www.tceq.texas.gov/permitting/water_rights/eflows/brazos-river-and-associated-bay-and-estuary-system-stakeholder-committee-and-expert-science-team.

Tom Conry asked about the status of Texas Parks & Wildlife's (TPWD) comments on the BBEST report. Cindy Loeffler (TPWD) said that their comments have been drafted and are awaiting final approval. She said that they would be sent out before the BBASC's next meeting. Tom also mentioned that the Salado Salamander is likely to be listed as threatened or endangered by the U.S. Fish & Wildlife Service.

Approval of March 27, 2012 meeting minutes

The minutes of the March 27, 2012 meeting minutes were approved without changes.

Subcommittee updates

Funding/facilitation

BBASC vice-chair Tom Michel passed out an update of the contributions to the BBASC funds account administered by the fiscal agent, West Central Texas Council of Governments (WCTCOG). Tom also gave an update on the facilitation contract. He said that the language has been worked out and are awaiting signature by WCTCOG to make it final. A copy of the contract will be distributed later in the meeting for BBASC members to look at. Dale Spurgin reiterated that the contract would authorize compensation for facilitation services that have already been rendered.

Report writing

Tom Conry, chair of the report writing subcommittee, said that there are no updates at the present, though there may be some after the subcommittee meets during lunch.

Discuss and agree on facilitation support, technical assistance & report writing

No comments or discussion under this agenda item.

Dale Spurgin/Tom Michel

Discussion of recent TCEQ SB 3 rulemaking, and of surface water rights in Texas

Todd Chenoweth and Kathy Alexander of TCEQ, and Colette Barron Bradsby of TPWD briefed the BBASC about (1) TCEQ's recent SB 3 rulemaking in other basins that have made recommendations for environmental flow standards (EFS), (2) the legal structure of water rights administration in Texas, and (3) water availability in the Brazos Basin.

Colette gave a high-level overview of Texas surface water rights. In contrast to groundwater, surface water is owned by the state and considered public property. Rights to use surface water are given by permit or certificate of adjudication, and the TCEQ is charged with administering these rights. Texas' water rights permitting system is based on the prior appropriation doctrine ("first in time, first in right") which means more senior rights have priority of use over junior rights in times of shortage (i.e., senior rights are more reliable). Before 1967, Texas had a mix of riparian and appropriative rights. In 1967, a law was passed that required rights to be recorded based on prior appropriation. Up to 200 acre-feet of water annually for domestic and livestock uses is exempted from requiring a permit; these rights are outside of the prior appropriation system and have a preferred status and are commonly referred to as superior rights. For a water right to be granted, the following must be demonstrated: water availability, beneficial use, and protection of existing water rights and public welfare, and maintenance of existing environmental uses. Since 1985, law requires that water right permit applications must be assessed for impacts to instream uses, water quality, fish and wildlife habitat, and freshwater inflows to bays and estuaries. In the decision to grant a right, the TCEQ must weigh all public interest factors. Special conditions can be added to protect the environment and most commonly come in the form of flow restrictions. Laws such as these, including Senate Bill 3 (SB 3) in 2007, are not applied retroactively, but apply prospectively to permits issued after the effective date of the laws. Many of the surface water rights in Texas were granted prior to the enactment of environmental protection laws and for the most part did not contain any environmental permit conditions.

Kathy spoke on water availability in the Brazos River Basin. There are approximately 1,000 water right permits issued in the basin. Water availability figures are based on TCEQ's WAM Run 3, the model used for permitting, which uses a hydrological period of record from 1940-1997 and assumes full usage of authorized rights. Availability varies can vary based upon location in the basin, year, month, and season. Less water is available for permitting in the upper basin than at the mouth of the Brazos River. According to the model, approximately 4 million acre-feet of unappropriated water is available at the mouth of the river in an average year. As little as 3,000 acre-feet is available in a dry year. Across the period of record, there are about 150 months where the amount of unappropriated flow is less than ????

Todd next talked about EFS and the SB 3 rulemaking process and addressed questions previously asked by the BBASC. In the Brazos Basin, as in other basins where EFS have not yet been adopted, TCEQ's current practice for developing flow recommendations for most permit applications requesting a new appropriation of water is the Lyons Method. Larger proposed projects, such as reservoirs, typically involve site-specific studies that produce flow recommendations that can look somewhat different. However, once EFS for the basin are put in place by rule, the idea is that they then become the basis for flow special conditions in new permits. And these flow special conditions, at least in theory, should be less subject to protest since they've been vetted by way of the rulemaking process and the public input opportunities that are provided. For permits issued between September 1, 2007 (date SB 3 enacted) and the date Brazos Basin EFS are adopted, the TCEQ can reopen the permits and adjust the requirements by no more than 12.5%. Regarding whether EFS to be adopted in the Brazos Basin will apply to the BRA Systems Operation application, the application is currently at the State Office of Administrative Hearings, and this is one topic that will probably be discussed. It is uncertain what the outcome will be. Whether the law can be changed to allow all applications, past, present, and future, to be covered by SB 3 rules, it is doubtful since the fact that water use is a protected property right would probably serve as a barrier to changing the law.

As specified in the SB 3 legislation, the final EFS decision rests with the TCEQ, which is governed by its three commissioners. In the Sabine-Neches Basins, the BBASC asked the TCEQ to put off a decision on EFS until better science can be developed. The TCEQ did not follow this recommendation since SB 3 provides deadlines for the TCEQ to have rules in place. TCEQ staff, being charged to adopt EFS for the basins, took the BBEST recommendations and balanced them with human needs by assessing water availability for two hypothetical future water projects with the BBEST flow recommendations in place. Seeing that sufficient water would not be available to permit the two projects, staff relaxed some of the BBEST's recommendations to allow for the projects to be permitted. The resulting staff proposal was adopted by TCEQ commissioners. In the Trinity-San Jacinto Basins, the TCEQ received a "majority" recommendation from the BBASC and staff performed a similar balancing exercise to arrive at proposed criteria that would allow some future water projects to be permitted. At the prior proposal proceedings, TCEQ commissioners added language to the proposal allowing for consideration of a range of possible EFS options. Commissioners modified the proposed EFS by increasing them a certain amount and adopted the revised EFS. In the Colorado-Lavaca Basins, TCEQ staff proposed most of what the BBASC, which reached complete consensus, had recommended. The staff proposal differed in that it 1) removed flow pulses that could cause flooding, and 2) removed a narrative recommendation for East Matagorda Bay which was not quantitative and therefore not effective or enforceable as written. For the San Antonio Basin, TCEQ staff's EFS rule proposal is similar to what the BBASC recommended. In the Guadalupe Basin, staff relaxed the recommendations to allow hypothetical projects to be permitted. In effect, the BBASC base flow recommendations were simplified to one level instead of three, and the number of pulses were reduced. Both the Colorado-Lavaca and Guadalupe-San Antonio EFS rule proposals are currently out for public comment before a final determination is made by the commissioners.

The following summarizes points made during the question and answer session, which followed the presentation.

- In developing rules, TCEQ will analyze the BBASC EFS recommendations, and will consider the impact of the recommendations on future water rights permitting. This does not mean TCEQ always will grant future permits; TCEQ has denied permit applications.
 - TCEQ will use its WAM 3 permitting model in making this assessment. TCEQ's WAM 3 permitting model incorporates legal constraints by assuming full exercise of senior rights, including full consumptive use. However, it may not show what the river will look like at a specific time in the future.
- TCEQ staff will review the BBASC recommendations with practicality in mind: how will EFS recommendations, including triggers for their implementation, impact both large and small permit holders?
 - The BBASC may want to consider exceptions from pulse flow requirements for small rights.
- TCEQ has not adopted pulses that would result in floods (overbank flow). The Colorado-Lavaca BBASC recommended flows up to bank-full. TCEQ staff believes that the National Weather Service flood stage number the BBASC used resulted in some lowland flooding. TCEQ staff recommended using the NWS "action" stage and not the "flood" stage.
- Amendments that are subject to SB3 EFS:
 - Those portions of amendments that result in new appropriations will be subject to the EFS and will include flow restriction limits to ensure that the amendment would not impact the EFS.
 - SB3 flow standards would not apply to an amendment that does not authorize an increase in appropriation; if an amendment will cause the environment to see a different amount of water (e.g. changing a diversion point), TCEQ staff will follow the environmental analysis and permitting considerations set out in Texas Water Code §§11.147(b)-(e), 11.150, 11.151, and 11.152, which also could result in an environmental flow restriction.
 - Amendments resulting in an inter-basin transfer will not be subject to SB3 EFS, but would be evaluated for environmental impact based on Texas Water Code §11.085, unless the water that will be transferred is a new appropriation.

- In its rule proposals:
 - for the Guadalupe-San Antonio basins, TCEQ reduced the number of base flow levels and pulse levels based on balancing and from a perspective of practicality: to allow implementation. TCEQ staff did not think it would significantly impact the amount of water the river would see;
 - TCEQ used more complex numbers for EFS for base flows in the Colorado-Lavaca River basins because they were recommended by the BBASC and were supported by studies.
- Permit enforcement is through self-reporting, unless there is a water master, which results in closer monitoring. A water master is being considered in the Brazos. A water master can, in theory, make a more complex water regime recommendation more feasible.
- Q: What is the rule review process if TCEQ adopts EFS different from those proposed by BBASC? A: The SB 3 process requires reconsideration at least every ten years, or more often if recommended by the BBASC and approved by TCEQ. There should be enough time to develop new information for consideration in the process.
- The state can cancel water rights under limited circumstances. There must be 10-years of non-use. There are circumstances that may prevent cancellation even after 10 year of non-use. Those circumstances are set forth in Texas Water §§ 11.171 to 11.186.
- Q: The presentation mentioned some water rights that are exempt from permits. Please explain again. A: The Texas Water Code provides for limited “exempt” uses. For example, under Texas Water Code §11.142, a person may construct on the person’s own property a dam or reservoir with normal storage of not more than 200 acre-feet of water for domestic and livestock uses or for non-commercial wildlife management uses. The WAM takes these diversions into account. The agencies do not have a specific record of the number of exempt users or the amount of water used under the exemptions.
- What goes into the WAM, and how is it verified?
 - Determine the natural flow of the river as accurately as possible:
 - Start with the USGS gaged flow for a period of record that includes severe droughts.
 - Add back in diversions that have occurred, and subtract return flow that has been added to the river.

In conformance with the Texas Supreme court standards in the *Stacy* case, subtract the amount of permitted water in priority order to determine the amount of unappropriated water available.

BRA System Operation application in comparison to SB 3

BRA

Brad Brunett with BRA presented an overview of the System Operation Permit application. The slide presentation is posted to the BBASC web page. The presentation included, among other things, a comparison of the permit environmental flow requirements and the BBEST recommendations at the Glen Rose gage and timeline for the permit application process. A question and answer session followed.

Q: If System Operation Permit has a different set of numbers than the EFS adopted pursuant to SB3, which applies?

A: BRA responding: There are some different gages used. On gages, which are similar to those used by BBEST, may not go with the less stringent version. BRA has to evaluate. TCEQ responding: There is no definitive answer yet.

For pulse requirements, the System Operation Permit draft might require BRA to stop diverting earlier, and they cannot restart diversions until they meet the volume, peak and duration numbers. EFS haven’t required all of those to be reached.

Q: Can a release from a reservoir be characterized as a pulse?

A: If there is an upper reservoir event that could have been a pulse downstream, they may have to pass that water through. Hydropower releases could be the size of a pulse.

Discussion of BBEST report

Tom Gooch/David Dunn

David Dunn of the BBEST made a presentation focusing on Chapter 7 of the BBEST report. The slide presentation is posted to the BBASC web page. David Dunn and Tom Gooch answered BBASC questions following the presentation. The main points are summarized here:

- BBEST analysis did not include evaluation of projects on high aquatic integrity of Double Mountain Fork and Navasota River. The BBEST sediment analysis could have focused on the river segments immediately downstream of the projects, but those types of impacts are already well researched and documented. The current BBEST study shows that impact on flow/geomorphology is diminished as you move downstream.
- Impacts of incising: banks carve in, resulting in some immediate increased sediment, and with channel eventually widening. As the channel gets lower, it takes more flow to fill existing oxbows. But new oxbows also form.
- We are in the “infancy” of studying the influence of reservoirs on stream channels
- High pulses create more erosion, but transport more sediment
- 90 percent of sediment moves in 10 percent of the flows
- Flow recommendations were not based on sediment movement amounts, but the BBEST does recognize the need to have pulses for this purpose
- Sediment transport is important for formation of the delta
- Q: How do the flow duration curves in Chapter 7 of the BBEST report relate to the flow matrices developed by the BBEST? A: David Dunn noted that the line showing the BBEST environmental flow regime (EFR) includes the assumption that there is sufficient infrastructure to divert or impound all water in excess of the EFR and does not consider downstream water rights. You can't build a project big enough to impact all of the flows and some flows will remain in the channel because they must be passed for downstream water rights.
- Large projects (on-channel) would pass environmental flows through a conduit around or through a project or increase the size of the outlet works. Or, a project could be built off channel (for smaller projects) and then would manage its diversions in accordance with the EFS.
- Q: How does TCEQ consider the practicality of building a project? A: Todd Chenoweth responding –TCEQ looks at the ability to permit from a water availability viewpoint.
- Cost of a project is potentially impacted by the increased size of the conduit and gating to pass pulse releases. David Dunn could calculate the cost. Phil Ford noted that it will cost \$9 million to add a conduit into the existing Possum Kingdom project to pass up to 2500 cfs. Gates in the project can be used to pass greater amounts if the reservoir is full. There is enough information for Millican reservoir and Double Mountain Fork Reservoir to calculate the additional costs of constructing a project to pass needed EFR.
- BBEST has started to look at the SAC review of the BBEST Report. They do not expect to make changes to the report based on that review.
- Rosharon gage: BBEST made flow recommendations at that gage, but does not have sedimentation data. There is a limited period of record for that gage.
- There are more overbank and pulse flow recommendations in the upper basin. The BBEST started with 9 pulses at each location. Then they considered whether each pulse had a significant ecological function at each gage. They took out some pulses if there was not a significant ecological function at that location (generally 2 per year). The number removed varied based on hydrology of the gage.
- The BBEST recognizes that overbank flows have an ecological function. They are also aware, however, that TCEQ likely will not recommend overbank flows in its rules.

Questions for BBEST developed during the meeting:

Get BBEST interpretation of what the SAC is saying in its comments on Section 2.1 of the BBEST report.

Discuss and agree on process roadmap and mechanisms to meet additional technical needs

Facilitators

The BBASC discussed how to select projects for conducting analysis of the impacts of and on the BBEST EFR. BBASC considered both hypothetical projects and real projects for possible analysis, including, among others: Double Mountain Fork, Groesbeck off-channel, Brushy Creek, Cedar Ridge, Coryell County off-channel, and Allens Creek reservoir. The BBASC selected the Double Mountain Fork reservoir and the Allens Creek reservoir (analyzed as a hypothetical project). Double Mountain Fork was selected for several reasons: upper basin location; yield with EFR can be assessed; and BBEST has already completed some of the analysis of the project. Allens Creek was selected for several reasons: lower basin location; BRA has data on Allens Creek that would facilitate the analysis.

BBASC identified some questions about how to analyze the projects, including how many gages to review per project; and what type of analysis to use. A project analysis group including BRA staff, state agency staff, members of the BBASC and others who can provide technical support was formed to address those questions and begin analyzing the selected projects.

Agenda Items for the May 30-31 Meeting

Carry forward the discussion of consensus steps and goal development from the April 24 agenda.

Education on strategies to meet EFS recommendations.

Begin to develop EFS.

Discussion, as needed, of the BBEST report.

Update from the subcommittee analyzing the projects.

Update from the BBASC report subcommittee.

Action Items

What	Who	When
Project analysis, including budget estimates, output needed	Dale Spurgin and Matt Phillips (BBASC) Cindy Loeffler (TPWD); Yujuin Yang (TWDB); Brad Brunett (BRA), Tom Gooch or David Dunn (BBEST)	By May meeting
Strategies presentation/education	Suzanne & Margaret	By May meeting

Meeting evaluation

What worked	What should change
Picked projects to analyze	<ul style="list-style-type: none">• New lunch• Use green, yellow and red cards to move us to consensus

Confirm or set future meeting dates

Future meeting dates were set as June 27-28 and July 17 and 31.

Public comment

Joe Trungale, a member of two previous BBESTs, gave comments on the BBEST report on behalf of Friends of the Brazos (FOB), which feels that the report gives a good description of flows to maintain a healthy environment. First, in the context of section 1.3 of the BBEST report dealing with sound ecological environments, his opinion is that low biotic integrity, which is attributed to river segments such as the middle Brazos River, equates to an unsound environment. This is consistent with how FOB views the middle Brazos, and they also feel that it is an overappropriated river segment. Secondly, attainment frequencies of particular flow components (especially base flows), a feature of several other BBEST reports, should be considered as a part of the BBASC's evaluations of flow recommendations. The HEFR tables in Appendix G of the Brazos BBEST report contain the flow

attainment frequencies, and these historical frequencies should be mimicked in order to maintain a sound ecological environment. Lastly, FOB feels that habitat changes in the middle segment of the Brazos River are flow related and are a result of river operations, and that the BBASC should consider restoration in this portion of the river instead of maintaining the conditions that have brought about the changes. Mr. Trungale's comments will be posted to the Brazos BBASC web page.