

Memorandum

To: Texas Environmental Flows Advisory Group
From: Texas Environmental Flows Science Advisory Committee
Date: 07 August 2012
Re: Review comments on the Final Trinity/San Jacinto Work Plan dated April 24, 2012

Preface

The Texas Environmental Flows Advisory Group (EFAG) requested that the Texas Environmental Flows Science Advisory Committee (SAC) review the Work Plan for the Trinity and San Jacinto (T-SJ) Basin and Bay system. The EFAG requested the SAC to review this document pursuant to Texas Water Code 11.02361 (e)(1) and (p) as presented below:

Sec. 11.02361 (e)(1): “The science advisory committee [SAC] shall (1) serve as an objective scientific body to advise and make recommendations to the advisory group on issues relating to the science of environmental flow protection...”

Section 11.02362 (p): In recognition of the importance of adaptive management, after submitting its recommendations regarding environmental flow standards and strategies to meet the environmental flow standards to the commission, each basin and bay area stakeholders committee, with the assistance of the pertinent basin and bay expert science team, shall prepare and submit for approval by the advisory group a work plan. The work plan must:

- (1) establish a periodic review of the basin and bay environmental flow analyses and environmental flow regime recommendations, environmental flow standards, and strategies, to occur at least once every 10 years.
- (2) prescribe specific monitoring, studies, and activities; and
- (3) establish a schedule for continuing the validation or refinement of the basin and bay environmental flow analyses and environmental flow regime recommendations, the environmental flow standards adopted by the commission, and the strategies to achieve those standards.

In August 2011, the Trinity/San Jacinto Basin and Bay Environmental Science Team (BBEST), in behalf of the Trinity/San Jacinto Basin and Bay Area Stakeholders Committee (BBASC), presented to the EFAG, Texas Commission on Environmental Quality (TCEQ), and the SAC a Draft Work Plan for review. It was understood at the time that this Draft Work Plan was to be considered and possibly revised by the BBASC pursuant to the preparation of the final Work Plan.

The SAC offered its *preliminary* comments on the BBEST's submittal, fully recognizing the draft nature of the document and with the expectation that the BBASC may make considerable modifications before finalizing the Work Plan. This initial review was completed by the SAC and provided to the EFAG and the BBASC on 31 August 2011. A copy of the SAC's initial review memorandum is attached to the BBASC's 2012 Final Work Plan Report as Appendix A.

To refine and revise the Draft Work Plan document, the BBASC formed a Work Plan Subcommittee in late 2011 that was charged with finalizing the Work Plan with technical support and input from the BBEST. The resulting Final Work Plan Report, dated April 24, 2012, was adopted by the BBASC and subsequently submitted to the EFAG, TCEQ and the SAC. This memorandum summarizes the SAC's review of this Final Work Plan Report and associated documents.

The SAC previously published a guidance document entitled "Considerations and Development of Work Plan for Adaptive Management" (Report #SAC-2010-02). This document has been available to the T/SJ BBEST and BBASC, and has been referred to pursuant to this review.

Summary

The basic structure and content of the Final Work Plan Report is essentially the same as the Draft Work Plan Report, except for some revised language in the Estuary section dealing with Salinity/Hydrology and the addition of a Recommendations section at the end of the document which provides a more detailed specification of the priority work elements that should be considered for implementation within the first five years. Additional work element tables and an appendix containing the BBEST's response to an inquiry from the BBASC Work Plan Subcommittee also are included with the Final Work Plan Report.

Following is a summary of the background information relating to the recommendations in the Final Work Plan as compiled by the SAC to assist in understanding the basis for the identification of the priority work elements.

- The Final Work Plan package as provided to the SAC includes the narrative Work Plan Report dated April 24, 2012, two appendices, and an Excel workbook containing three worksheets.
 - Appendix A is a copy of the SAC's review comments dated August 31, 2011 for the previous version of the T-SJ Work Plan dated August 3, 2011.
 - Appendix B is the BBEST's response to an inquiry from the BBASC Work Plan Subcommittee that was requested to seek further detail on specific elements of the Work Plan.
 - The worksheet titled *Full Schedule* in the Excel workbook is a long-term schedule extending over 50 years that is referred to as Figure 1 (Attachment A) in Appendix B. This schedule encompasses 64 work elements for the Work Plan as identified by the BBEST and included in Table 4 of the 2011 and 2012 Work Plan Reports, plus one additional work element (inserted between BBEST Items 6 and 7) that apparently was identified by the BBASC Work Plan Subcommittee as a priority work activity. For each of the work elements in the schedule, the estimated cost for performing the work is provided along with the potential agencies or entities that might undertake the work, a general description of the work scope, an assignment as to whether the element is to be undertaken in the near-term, mid-term or long-term, and a horizontal bar on the time schedule showing approximately when the work element would need to be undertaken. Arrows on the near-term portion of the time schedule generally depict the flow of information and interdependency among the different work elements.
 - The worksheet titled *BBASC Priority Schedule* in the Excel workbook is a near-term 5-year schedule with an additional mid-term longer period included that is referred to as Figure 2 in Appendix B. This schedule encompasses 18 priority work elements for the Work Plan as identified by the BBASC Work Plan Subcommittee. Although each of

these 18 work elements has been assigned a number ranging from 1 to 13 by the BBASC Work Plan Subcommittee, information provided to the SAC indicates that these numbers were not intended to represent any form of priority among the different elements. For each of the work elements in the schedule, the estimated cost for performing the work is provided along with the potential agencies or entities that might undertake the work, a general description of the work scope, an indication as to whether the element is to be undertaken in the near-term or mid-term, and a horizontal bar on the time schedule showing approximately when the element would need to be undertaken. Arrows on the near-term portion of the time schedule generally depict the flow of information and interdependency among the different work elements.

- The worksheet titled *Budget Breakdown* in the Excel workbook is a table containing the 18 priority work elements identified by the BBASC Work Plan Subcommittee with a general description of each, their assigned 1-to-13 identification numbers, and the BBEST's estimated cost for performing the work.
- In the Integration section of the Work Plan Report, which begins on page 47, each of the 64 work elements listed in Table 4 of the Report is assigned a priority of 1, 2 or 3, with a 1 indicating the highest priority. These priorities apparently were assigned by the BBEST, and then adopted by the BBASC pursuant to its approval of the Final Work Plan package as provided to the SAC.
- The Work Plan Subcommittee of the BBASC subsequently identified its list of 18 priority work elements from the 64 work elements included in Table 4 of the Work Plan Report. While these 18 priority work elements are not assigned individual priorities, the intent is that they would all be undertaken within the first five years (near-term). These 18 priority work elements are included in Table 5 of the Work Plan Report as "Formally adopted work elements for inclusion in the Work Plan". The basis for how the BBASC Work Plan Subcommittee selected these 18 work elements is not described in the Work Plan Report, and their inclusion as priority work elements in the Work Plan is not fully consistent with the 1-2-3 priorities initially assigned to the 64 work items in Table 4 by the BBEST. For example, only about two-thirds of the items included in the BBASC's list of 18 priority work elements were assigned a priority of 1 by the BBEST, with the remainder having priorities of 2 or 3 assigned about equally by the BBEST.
- In the BBEST's response to Question 3 of the inquiry from the BBASC Work Plan Subcommittee (Appendix B of the WorkPlan), the BBEST identified 12 of the 64 work elements in Table 4 of the Work Plan Report as additional work elements that should be undertaken within the first five years (near-term) along with the 18 priority work elements identified by the BBASC Work Plan Subcommittee. As with the other 18 work elements, these 12 additional work elements have not been assigned individual priorities by the BBASC Work Plan Subcommittee, yet they are included in Table 5 of the Work Plan Report as "Formally adopted work elements for inclusion in the Work Plan" (for a final total of 30 adopted work elements). Table 5 also presents the estimated cost for each of the work elements, potential agencies or entities that might undertake the work, a general description of the work scope of each element, a horizontal bar on the time schedule showing approximately when each work element would need to be undertaken within the next five years, and arrows generally depicting the flow of information and interdependency among the different work elements.
- The time periods for undertaking the 30 formally-adopted work elements shown on the time schedule in Table 5 of the Work Plan Report do not conform to the 1-to-13 numbers assigned to the work elements by the BBASC Work Plan Subcommittee nor to the 1-2-3 priorities initially assigned by the BBEST, with some lower-priority work items being

undertaken before some higher-priority work items with respect to the BBEST priority system. While this is confusing, apparently the BBEST determined that information from some of the lower-priority work items needed to be available before some of the higher-priority work items could be undertaken. This suggests that the priorities may not have been assigned correctly to begin with.

- Table 6 of the Work Plan Report simply lists all of the work elements included in the Table 4 master list that are not priority items to be undertaken during the first five years of Work Plan implementation, but that are to be considered in future revisions of the Work Plan.

With its final version of the Work Plan, the BBASC, with support from the BBEST, has documented and presented an organized approach for undertaking 30 priority work elements during the first five years of Work Plan implementation. Sequencing of these work elements and their interdependencies are indicated on a detailed near-term schedule, with the durations of the individual work elements identified. This aspect of the Work Plan appears to provide a reasonable course of action for undertaking studies and data collection to provide information considered useful for supporting the refinement of environmental flow standards.

While the Work Plan provides a general and very brief description for each of the priority work elements included in the five-year program (Table 5) and for the additional tasks to be considered in future revisions of the Work Plan (Table 6), details are lacking regarding the specific objectives of the individual work elements and specifically how, when and where the various studies are to be conducted. The SAC can only assume that these details will be developed and refined for the individual work elements as the Work Plan is initiated and ultimately implemented and that the specific work scopes will be structured and coordinated in a manner that fulfills the objectives of the overall program. In this regard, the Work Plan does not include one or more specific tasks whereby the results from the 30 priority work elements to be undertaken during the first five years (Table 5) are actually consolidated and used to revise or refine the environmental flow standards adopted by the TCEQ for the T-SJ Basin and Bay System. This may be implied from the extensive narrative discussion in the Work Plan of the overall effort, but it is imperative that a focused effort be undertaken at the end of the first five years to formulate the products of the proposed studies into meaningful recommendations for either supporting or revising the existing environmental flow standards.

The fact that the BBASC has not assigned individual priorities to each of the 30 adopted work elements of the Work Plan may prove troublesome in the future with regard to funding. As limited sources of funding may become available, it may only be possible to undertake some of the work elements during the first five-year term of Work Plan implementation, and without some indication of priorities, the determination of which work elements to initiate will be left to further deliberation among researchers. The issue of priorities was originally noted by the SAC, and it remains unresolved.

Finally, the SAC notes that the BBASC has presented a discussion of how the Work Plan might be implemented considering the roles of the BBASC and the BBEST. The SAC is reviewing the potential roles of the BBASCs and BBESTs in general with regard to the possibility of their continuing involvement in the implementation of Work Plans after they are completed and adopted. The SAC intends to compile the suggestions outlined in all of the Work Plans that have been prepared to date and may issue guidance as to the SAC's recommendations for how this process could proceed within the existing institutional framework of the State.