

## Memorandum

**To: Texas Environmental Flows Advisory Group**  
**From: Texas Environmental Flows Science Advisory Committee**  
**Date: 31 August 2011**  
**Re: Review comments on the DRAFT Trinity/San Jacinto Work Plan dated August 2011**

### 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 and Galveston Bay 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 Expert Science Team (BBEST), in behalf of the Trinity/San Jacinto Basin and Bay Area Stakeholders Committee (BBASC), presented to the EFAG, TCEQ and SAC a **DRAFT** Work Plan for review. The SAC understands that this Draft Work Plan will be considered further by the BBASC in the future.

Respecting the draft nature of the report, the SAC offers these *preliminary* comments on the document and with the expectation that the BBASC may make considerable modifications before finalizing the Work Plan. This review has been conducted by the SAC to assist the EFAG in evaluating the current status of Trinity/San Jacinto Work Plan development. 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.

### Summary

The SAC finds that the DRAFT T/SJ Work Plan provides a thorough discussion of the many scientific and technical issues involved in setting environmental flow standards and in

conducting adaptive management activities as appropriate. However, we also find that the Draft Work Plan is lacking in the specification of a feasible and cost-effective set of priority studies that could be carried out within the level of resources and time likely to be available for work plan implementation. We recognize that this may be a function of the process adopted by the T/SJ BBASC for preparing the Work Plan (i.e. the BBEST identifies a wide range of possible studies without consideration of cost or other factors, and that range is then narrowed down by the BBASC for the Final Work Plan). Nevertheless, we urge the BBASC to develop a Final Work Plan that identifies a reasonable set of priority, cost-effective studies that includes specification of where in the basin those studies are needed and how they could be carried out.

The Draft Work Plan does address the issue of review cycle as required by SB 3, recommending a five year cycle be adopted. Furthermore, there is a recommendation that the environmental flow review be closely coordinated with the Senate Bill 1 Regional Water Planning process which is also on a five year cycle.

The T/SJ Draft Work Plan also discusses the issue of how SB 3 work plans in general might be implemented. The T/SJ Draft essentially concludes that the T/SJ Work Plan should be implemented by the Texas Water Development Board (see Draft Work Plan, at page 5). It also suggests an annual review by the BBEST, and another one year period of work by the BBEST near the end of the five year cycle in which new science would be reviewed and recommendations for flow regime modifications, if any, would be developed. This is a different model than proposed in the Sabine/Neches Work Plan, which appears to give more implementation responsibility to the BBASC, via direct work by BBASC members and contracts with state agencies or others. The SAC believes this may be an issue appropriately addressed at the EFAG level.

### **Additional Discussion**

The SAC believes that the Draft Work Plan identifies the full range of near-term, mid-term and long-term issues involved in adaptive management to protect a sound ecological environment in the Trinity/San Jacinto basin and bay system. For example, the Draft Work Plan does an excellent job of defining the work required to characterize baseline hydrology and instream ecology, both critical components of flow standards and adaptive management. Table 4 on pages 50-58 makes a rough cut at categorizing the issues into near-, mid-, or long-term and assigns rough respective priorities among the many studies proposed. However, the Draft Work Plan does not then go back to the actual state of the data and the adopted standards to identify *where* in the basin the various studies might actually take place and *how* they might be implemented, or how much they would cost. Also, we are not entirely sure how the report is using the descriptors near-, mid-, and long-term. In the instream section, it appears that these are nothing more than length of time anticipated for a given study element. However, in the estuarine section (p. 35), they are clearly defined to be a designation of level of effort rather than study length. This apparent inconsistency should be resolved in the final plan.

**We believe that the steps outlined at the bottom of page 5 of the Draft Work Plan are indeed those necessary to develop a feasible and realistic work plan; we just don't believe those steps have been completed, at least at this point in the T/SJ Work Plan development process.**

There also does not appear to be a strong attempt in Table 4 to set priorities among the various discipline-based groups of studies. For example, the SAC questions whether the extensive work proposed on water quality may be as high a priority as other studies such as hydrology and

ecology. For the most part water quality conditions at low flows have been found to be acceptable. The chance of finding a different result at a slightly different low-flow condition seems relatively small.

We agree with the broad discussion of the multiple factors that determine the ecological health of the estuary. It is not just inflows to the estuary, but also what is carried by the inflows that should be addressed. However, we caution the T/SJ BBASC and BBEST to be realistic as they assess the ability to start from scratch with studies of these multiple factors, at least in the context of the work plan process and the resources likely to be available for Work Plan implementation. We further note that some other basins have had success in using the salinity zone method to derive an inflow regime based on selected indicator species. Hence, we suggest that the T/SJ group, while recognizing the inherent shortcomings, not completely abandon their earlier salinity zonation work.

The section entitled "Integration" (page 47) starts the process of identifying the priority studies that might actually be performed and which organizations might perform them. However, there is no estimate of costs, no timelines (i.e., near-, mid-, and long-term are not defined), and there is not sufficient specificity to imagine what might actually occur.