

Proposed Editorial Changes to BBEST Work Plan Submission

Limited to Estuary Section

Changes in Red

Deletions in ()

- The report submitted by the Trinity-San Jacinto-Galveston Bay BBEST included two alternatives for freshwater inflow to the estuary. One was a set of annual flow quantities. The alternative was a seasonal flow regime. The initial TCEQ proposed rule consisted of the annual flow quantities. This was the proposal under consideration when this work plan was first developed by the T-SJ BBEST. Subsequent to the public comment period, TCEQ changed the proposed rule and adopted seasonal inflow quantities lower than those in the BBEST report for the Trinity and San Jacinto Rivers with the exception of no standard for the Trinity River in the fall season. Because the first draft of this work plan was developed prior to adoption of the rule, the BBEST did not initially consider any strategy to assess the efficacy of the specific values contained in the final rule on freshwater inflow to Galveston Bay or the potential impact of the absence of a standard for the Trinity River in the fall season. In light of the results of rulemaking, the present work plan recommends long term monitoring efforts that should be useful for such assessments.

Identified limitations to the salinity zonation approach

Analysis issues

- Full range of flows including magnitude-frequency-duration and seasonality-

The initial salinity zonation analysis results in recommendations for three seasons (Spring, Summer, Fall but not Winter) with a single magnitude, periodicity, annual occurrence (long term) and recommended annual frequency. Most BBEST members as well as the SAC in their comments on the BBEST report contend that this does not represent a regime as envisioned by the SB3 legislation. A flow regime should be developed that includes (winter) all seasons and flow events.

Identified limitations to the salinity zonation approach

Analysis issues

- Evaluation of the (annual) seasonal freshwater inflow targets (developed by Region H, endorsed by the conditional group, and) adopted by TCEQ (though not specifically as a permit requirement)-

Estuarine Ecology Section

Knowledge Gaps

In order to determine in the future whether the Galveston Bay system is maintaining a sound ecological environment or not, a scientific description of the baseline conditions corresponding to a “sound ecological environment” and acceptable ranges of variation from the baseline indicator conditions must be established. BBEST members should (be) develop a proposed framework of baseline indicator parameters, the baseline values of these indicators and the acceptable range of variations that should be (interpreted) interpreted as corresponding to a “sound ecological” condition. Baseline parameters and values should be draft and modified as appropriate when future data are collected and/or analysis conducted. Selection of parameters and values is expected to be an iterative process, requiring regular comparison and analysis. Modification of selected parameters and values should be expected. Baseline parameters and values that are selected will be expected to vary naturally. One requirement should be to differentiate (between) variation caused by freshwater inflow from variation caused by other factors.

Estuarine Ecology Section

Validation

- (If TCEQ adopts a freshwater inflow standard for Galveston Bay that has the potential for validation,) Identify data collection, analysis and research needed to validate whether freshwater inflow standards set by TCEQ are protecting sound ecological function. (There is not a process to evaluate the November 2010 proposed standards.)

The very fact that the eastern oyster, an important indicator and keystone species, has been undergoing a long-term decline over the greater part of the Galveston Bay ecosystem also calls into question the judgment that Galveston Bay is currently a sound **ecological** environment.

Refinement

It is premature to envision how monitoring of eastern oyster and Atlantic rangia populations in the Galveston Bay ecosystem might lead to refinement of the environmental flow regime. The proposed environmental flow standard for Galveston Bay is not sufficiently specified to allow a determination of **(when) whether** it is **being** violated **when a sample is collected**. **(Thus one cannot test the environmental impacts of failing to meet the standard.)**