

## **Proposed Strategy for Protecting Environmental Flows**

The Study Commission on Water for Environmental Flows (Flows Commission) submits to the 79th Legislature this report outlining a proposed strategy to address the protection of environmental flows. This strategy is based upon a consensus proposal that was developed by a stakeholder working group comprised of representatives of the water development and environmental communities, including members of the Flows Commission.

The Flows Commission notes that this proposed strategy provides a general policy framework, and emphasizes that this conceptual framework would require extensive and detailed development for statutory and/or regulatory implementation. Additionally, implementation of this proposal would require more effective water rights administration and enforcement systems than are currently available in most areas of the State.

Nothing in this proposed strategy would diminish the current jurisdiction or authority of the Texas Commission on Environmental Quality (TCEQ), the Texas Parks and Wildlife Department ( TPWD) ,or the Texas Water Development Board (TWDB). Nor would this proposal conflict with any current statutory provisions relating to bays and estuaries (B&E) studies or instream flow studies.

### **RECOMMENDATIONS:**

- A. Reauthorize the Study Commission on Water for Environmental Flows (Flows Commission) to continue its efforts to address environmental flow issues, including those listed below, as identified in the October 26, 2004 Science Advisory Committee Report on Water For Environmental Flows,

“While the State of Texas has pioneered tools to address freshwater inflow needs for bays and estuaries, there are limitations to these tools in light of both scientific and public policy evolution. To fully address bay and estuary environmental flow

issues, the foundation of work accomplished by the state should be improved. While the Texas Instream Flow Studies program appears to encompass a comprehensive and scientific approach for establishing environmental flow needs for rivers and streams across the state, more extensive review and examination of the details of the program, which may not be fully developed until the program is underway, are needed to ensure an effective tool for evaluating riverine environmental flow conditions.”

The Flows Commission will designate a statewide science advisory committee, the Texas Science Advisory Committee (TSAC), to advise and make recommendations to the Flows Commission, and to help provide overall direction, coordination and consistency relating to:

- environmental flow methodologies for B&E studies and instream flow studies;
- environmental flow programs at the TCEQ, TPWD, and TWDB; and
- the work of the Bay/Basin Expert Science Teams described in A(3) below.

The TCEQ, TPWD and TWDB will provide written responses to recommendations received from the TSAC through the Flows Commission, with such responses describing the agencies’ actions regarding each recommendation including justification for any recommendation not implemented.

1. The Flows Commission will appoint a Bay/Basin Area Stakeholders (BBAS) group for each bay/basin ecological area of the State as defined by the Flows Commission. Each BBAS will consist of appropriate environmental flow stakeholders, including but not limited to representatives from agriculture, recreational users, municipalities, soil and water conservation districts, industry, public interest groups, regional water planning groups, groundwater and surface water districts and authorities, and environmental interests.
2. A priority system is established herein (in Section B(1)) to prioritize the initial determinations of environmental flow needs on a temporal and geographic basis.

3. Each BBAS will establish a unique Bay/Basin Expert Science Team (BBEST) for its bay/basin ecological area, to be comprised of qualified experts in the fields of hydrology/hydraulics, water resources, aquatic and terrestrial biology, geomorphology, geology, water quality, computer modeling, and other technical areas relevant to the evaluation of environmental flows. In addition, the Texas Science Advisory Committee (TSAC) will appoint one of its members to serve as a liaison member of each BBEST, to facilitate coordination and consistency in environmental flow activities throughout the State. The TCEQ, TWDB and TPWD will provide technical assistance to the BBESTs.
  
4. Each Bay/Basin Expert Science Team (BBEST) will develop environmental flow regime recommendations for its bay/basin ecological area through a collaborative process, considering all available science and based solely on the best available science. Each BBEST will submit the science-based recommendations to its associated BBAS and to the Flows Commission. Neither the BBAS nor the Flows Commission are empowered to change the BBEST's recommendations.

The Flows Commission, with input from the Texas Science Advisory Committee (TSAC), will review the BBEST's science-based environmental flow regime recommendations and will submit them, with comments if appropriate, to the TCEQ .

5. The Bay/Basin Area Stakeholders (BBAS) group will review the BBEST's science-based flow regime recommendations and will consider them in conjunction with other factors, including future needs and economics related to water supply planning in the bay/basin. The BBAS will develop its own recommendations regarding environmental flows and strategies to meet those flow needs, and will submit these recommendations to the TCEQ and to the Flows Commission.

6. After submitting its environmental flows and strategies recommendations to the TCEQ, the BBAS, with the assistance of the BBEST, will prepare, and submit for the Flows Commission's approval, a Work Plan outlining specific monitoring, studies, activities, and a schedule for the continuing validation and/or refinement of the bay/basin environmental flow recommendations. The schedule is to include a periodic review of the bay/basin environmental flow needs and strategies at least every 10 years.
  
7. Upon receiving the environmental flow recommendations from the Flows Commission and from the BBAS, the TCEQ will initiate a rule-making process to determine the environmental flow requirements for that bay/basin, based on the flow regime recommendations from the BBEST and the BBAS. The TCEQ will independently determine the environmental flow requirements for the bay/basin ecological area taking into account the specific bay/basin characteristics, economics, all available scientific information, including any developed science from the Flows Commission, and other appropriate input.

This determination will be manifest in a rule for each basin that, among other actions, will establish a "floor" or environmental flow set-aside below which water could not be appropriate. This environmental flow set-aside would consist of a flow regime of different flow requirements that could vary spatially and/or temporally. This environmental flow set-aside will be included in the appropriate Water Availability Model (WAM) and used by the TCEQ to evaluate the availability of water for permitting.

As with existing water rights, the TCEQ will have primary enforcement authority with respect to all environmental flow set-asides. The TPWD will be granted the authority to act with respect to the set-asides in the same manner that water rights holders may protect their rights. The set-asides can only be altered by emergency conditions as established by law or through changes promulgated through the TCEQ rule-making

process as part of the periodic review stipulated in A(6) for each bay/basin ecological area. Set-asides will be reviewed at least every ten years in order to consider improvements in science related to environmental flows and projected human needs.

8. The overall environmental flow process outlined herein will allow local issues to be considered and local solutions for environmental flow requirements to be developed.
9. Adequate funding, including core funding from the State and funding from other appropriate and available sources, will be necessary to implement this process effectively.

B. The environmental flow process as outlined herein will be implemented for priority bay/basin ecological areas according to the following suggested schedule. This schedule was not developed in consultation with representatives from all of the affected bay/basins. Therefore, adjustments may be necessary. It is, however, imperative that appropriate deadlines be established by statute for the priority bay/basin ecological areas.

1. The recommended schedule for priority bay/basins is:

First Round:	Galveston, Sabine
Second Round:	Colorado, Guadalupe
Third Round:	Nueces, Rio Grande, Brazos

- a. September 1, 2005: Bay Basin Area Stakeholders (BBAS) are appointed for First Round Bay/Basins.
- b. November 1, 2005: The Bay Basin Expert Science Teams (BBEST) are established for First Round Bays/Basins.

- c. **October 31, 2006: BBEST recommendations finalized and submitted to BBAS, the Flows Commission, and TCEQ for First Round Bays/Basins.**
  - d. **February 28, 2007: BBAS comments/recommendations finalized and submitted to TCEQ for First Round Bays/Basins.**
  - e. **December 31, 2007: TCEQ adopts environmental flow “set-asides” for the First Round Bays/Basins.**
2. **Timelines will be established for remaining bay/basin ecological areas designed to result in environmental flow set-asides for those bay/basin ecological areas as soon as is reasonably possible. These timelines will be initially developed by the respective BBAS and BBEST for each bay/basin ecological area and then finalized through coordination with the TCEQ, TPWD and TPWD under the overall direction of the Flows Commission.**

**The proposed environmental flow process presented above assumes that the Flows Commission will remain in place, that environmental flow recommendations for a particular bay/basin ecological area will include a full flow regime for both instream flows and bay and estuary freshwater inflows, that an initial priority ranking of bay/basins is established, and that the determination of environmental flows is adaptive based on evolving science or other factors to be reviewed at least every ten years.**

- C. **This proposed strategy assumes that specific procedures will be established during implementation to address currently pending and future permit applications within a bay/basin ecological area prior to the establishment of an environmental flow set-aside as provided for in A.(7).**

**For such applications, permit conditions for environmental flow protection should be based on current law and existing practices as they may be refined, including**

use of newly developed instream flow desktop methods and/or revised bay and estuary inflow methodologies recommended by the TSAC. If, after a permit is issued, it is determined through TCEQ rule-making as outlined in Section A, that more water is needed for environmental flow protection, the TCEQ may increase the environmental flow requirement stipulated in the permit by no more than 10% to 15% of the total annual environmental flow amount.

- D. In view of the over-appropriation of water in some bay/basin systems, the Water Code should allow for a full range of options to meet environmental flow needs, including strengthening the Water Trust, facilitating and encouraging market mechanisms, mitigation measures and voluntary conversions of water rights. The Flows Commission will explore options relating to private non-profit water trusts, with incentives for private investment, as a means to help protect environmental flows.