Draft Recommendations Report

May 4, 2010

SABINE AND NECHES RIVERS AND SABINE LAKE BAY BASIN AND BAY AREA STAKEHOLDER COMMITTEE

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Statutory Background

- Senate Bill 3 is the third of three omnibus water bills related to the State of Texas meeting the future needs for water
  - Senate Bill 1 (1997)
    - Established a bottom-up approach to water resource planning
  - Senate Bill 2 (2001)
    - Addresses groundwater issues
    - Established the *Texas Instream Flows Program* to develop the information to determine the needs of water for the environment
  - Senate Bill 3 (2007) – 80th Regular Session of the Texas Legislature

Senate Bill 3

- Prior to SB 3, balancing the effect of authorizing a new use of water with the need for that water to maintain a sound ecological system was done on a case-by-case basis in water rights permitting
- ***Consequence****: made water resources planning under SB 1 difficult – the effect of a water management strategy on the environment is not known at the planning stage*
- SB 3 was intended to address this by …

Intent of Senate Bill 3

- Senate Bill 3 was intended to create a basin-by-basin process for developing "environmental flow standards"
  - to provide the appropriate amount of instream flows and freshwater inflows
  - by balancing the environmental need with the need for water for humans and other purposes.

Sabine-Neches BBASC Charge

- Review the Sabine-Neches BBEST environmental flow recommendations
- Weigh the environmental need for water with needs for other purposes, including human needs
- Make recommendations on "environmental flow standards" for the Bay-Basin complex

Study Area

- Defined as the
  - Sabine River Basin (approximately 10,000 sq. miles)
  - Neches River Basin (approximately 10,000 sq. miles)
  - Sabine-Neches Estuary (Sabine Lake)

Comments on Sabine-Neches BBEST Environmental Flows Recommendations

- Fundamental Comment
  - While SB 3 requires the BBASCs to weigh the environmental need for flows with the need for water for other purposes,
  - the Sabine-Neches BBEST developed a flow regime based on the Hydrology-Based Environmental Flow Regime (HEFR).
  - *The result is an environmental flow regime that mimics historical flows which may or may not represent the least amount of water that can be reserved for the environment and still have a sound ecological system.*

Comment: Sabine-Neches BBASC *agrees* with the Sabine-Neches BBEST that

- The current conditions of the Sabine and Neches Rivers and the Sabine Lake Estuary are sound;
- The flows in the Sabine and Neches Rivers and inflows to the Sabine Lake Estuary will change over time; and
- Future study, data gathering and adaptive management are necessary to determine whether or not changes in environmental flows will maintain a sound ecological environment.

Comment: Sabine-Neches BBASC *disagrees* with the Sabine-Neches BBEST in that

- The Sabine-Neches BBEST's definition of a sound ecological system does not focus on the current makeup of important species and does not adequately cover all of the important habitat types in the study area;
- The flow regime produced by the Sabine-Neches BBEST is more reflective of the existing flows than environmental need for flows; and
- Estuary soundness can best be addressed through physical changes to reduce saltwater intrusion into the surrounding tidal wetlands rather than imposing the HEFR-created flow regimes from the most downstream gages.

Impact of Sabine-Neches BBEST Flow Regime

- The Sabine-Neches BBEST environmental flow recommendations as applied to reservoir projects with new and/or amended permits would require releasing massive amounts of water that might otherwise be stored for future use within the project, resulting in:
  - significant affect on reservoir water levels and availability of firm yield for water supply;
  - more frequent triggering of drought contingency restrictions;
  - adverse impacts on reservoir recreation;
  - thwarting of economic development; and
  - negative affects on reservoir fisheries.

Consideration of Water Needs for Other Uses

- Water Supply
- Economic Value of Reservoir Recreation
- Reservoir Fishery Resources

Water Supply

- The Sabine-Neches BBASC study area contains substantial water resources that are important existing and projected water supplies.
- The flow regime derived using the default HEFR analysis would substantially reduce water supply (depending upon the assumptions, by as much as 70% of the Texas yield of Toledo Bend Reservoir, and as much as 50% of new reservoir projects).
  - This would reduce the economic viability of these basins, significantly reducing the long-term ability to provide for the future needs of the State of Texas.

Economic Value of Reservoir Recreation

- The Sabine-Neches BBEST flow regime recommendations, if adopted by TCEQ as environmental flow standards, would severely impact lake levels for those reservoirs requiring new and amended permits.
- The harm to Sabine and Neches Basins reservoir recreation and the resulting economic consequences, both local and state, under the estimated frequency of low water levels to accommodate the Sabine-Neches BBEST recommendations has not been studied but these consequences could be significant.
- The economic consequences could include depressed waterfront property values, decreased tourism and the resulting trickledown effect to local businesses, jobs, and the local tax base.
- *The potential economic impact of environmental flow standards on reservoirs should be studied before environmental flow standards are enacted.*

Reservoir Fishery Resources

- A sound ecological environment is one that supports a healthy diversity of fish and aquatic life in a holistic approach that includes rivers, tributaries, lakes, and estuaries.
- Reservoirs should be included, along with rivers and estuaries when assessing environmental health.

Other Factors (some unique in the Sabine and Neches Basins)

- Sabine River Compact;
- The Sabine River is shared with Louisiana;
- Federal Energy Regulatory Commission (FERC) requires relicensing of the Toledo Bend Project by 2013;
- SB 2 instream flow studies are underway in the Lower Sabine Basin;
- Legal Liability; continued …

Other Factors, continued

- U.S. Army Corps of Engineers (USACE) Sabine-Neches Waterway (SNWW) Channel Improvement Project is underway;
- Cutoff Bayou (change in the proportion of flows to Louisiana and Texas in the Lower Sabine River);
- Lower Neches Saltwater Barrier; and
- Proposed Lower Sabine Saltwater Barrier.

Recommendations

- Based upon its review of the Sabine-Neches BBEST environmental flow analyses and environmental flow recommendations,
- and considering them in conjunction with other factors ,
- the Sabine-Neches BBASC makes the following recommendations to the Environmental Flows Advisory Group and the Texas Commission on Environmental Quality:

Recommendation 1

- *The BBASC recommends the following definition for balancing the needs of Texas citizens with a sound ecological environment for the Sabine and Neches River Basins and Sabine Lake*
- A sound ecological environment is one that:
  - supports a healthy diversity of fish and other aquatic life;
  - sustains a full complement of important species;
  - provides all major aquatic habitat types including rivers and streams, reservoirs, and estuaries;
  - sustains key ecosystem processes; and
  - maintains water quality adequate for aquatic life.

Recommendation 2

- *Neither environmental flow standards nor environmental flow set asides should be established until more information is available to determine the amount of water needed to support a sound environment.*

Recommendation 3

- *The Sabine-Neches BBASC recommends that efforts be undertaken to initiate and complete the instream flow studies required under SB 2 (2001) in order to develop the type of data required to better understand the amount of instream flow needed for a sound ecological system in order to balance the environmental need for water with other needs for water as directed by SB 3 (2007).*
- *The SB 2 studies should include the upper Sabine River Basin and Neches River Basin, in addition to the ongoing Lower Sabine River Priority Instream Flow Study.*

Recommendation 4

- *The Sabine-Neches BBASC recommends continued efforts in Texas, coordinated with Louisiana, to protect and restore Sabine Lake Estuary wetlands identified by the USACE.*

Recommendation 5

- *The Sabine-Neches BBASC and Sabine-Neches BBEST should proceed with the development of a Work Plan that:*
  - *Establishes a five-year review cycle of the basin and bay environmental flow analyses and environmental flow regime recommendations, integrated with the SB 1 Regional Planning five-year cycle;*
  - *Suggests adjustments to the SB 2 instream flow program to obtain information useful to the SB 3 process; and*
  - *Prescribes specific monitoring, studies, and activities that are closely aligned with existing programs as much as possible (e.g. Texas Clean Rivers Program).*

Recommendation 6

- *TCEQ along with the Sabine-Neches BBASC and Sabine-Neches BBEST should address the implementation of environmental flow standards and set-asides, in advance of weighing the environmental flow needs against the need for water for other purposes.*

Recommendation 7

- *The Sabine-Neches BBASC recommends that no requirement to produce overbank flows or high flow pulses be imposed on a reservoir owner until a liability shield is in place.*

Conclusion

- The Sabine-Neches River Basins and Sabine Lake Estuary have abundant uncontrolled runoff that provides plentiful and variable environmental flows.
- Texas has a strong, vibrant economy for which surface water supplies play a major role.
- *Given that Texas' population is projected to double within the 50-year SB 1 regional planning horizon, prudent water resource management suggests further studies need to be undertaken to address the gaps in our knowledge regarding environmental needs to make an informed decision in the SB 3 balancing exercise.*