LOWER NECHES VALLEY AUTHORITY
MUNICIPAL • INDUSTRIAL • AGRICULTURAL WATER

August 19, 2010

Mr. Ron Ellis
Texas Commission on Environmental Quality
MC 160
P.O. Box 13087
Austin, TX 78711-3087

RE: Comments on Texas Commission on Environmental Quality rulemaking for the creation of new 30 Texas Administrative Code Chapter 298, Environmental Flows, Subchapter A, Sabine and Neches Rivers and Sabine Lake Bay; and Subchapter B, Trinity and San Jacinto Rivers and Galveston Bay.

Dear Mr. Ellis,

Thank you for the opportunity to provide comments in this process prior to initial publication of a proposed rule. East Texas is uniquely water rich in a state of ever growing water shortages and we should all be proactive in the development of a plan to responsibly manage our natural resources and maintain a sustainable balance for all.

The Lower Neches Valley Authority (LNVA or the Authority) believes that the staged, multi-committee approach prescribed for the SB3 process was, in theory, a sound and appropriate strategy to determine and ultimately balance the needs of the environment with the needs of man; however, as the process moved forward, it became painfully evident that there simply was not adequate data to develop a scientific causal link between flows and environmental health. As the SB3 process advances and the TCEQ attempts a "balancing act" through the rulemaking process, the Commission is evaluating near term demands as identified in the State Water Plan under SB1 against an environmental "demand" which is not fully understood. At present, the LNVA does not feel the Commission has adequate information to evaluate the true needs of the environment or consider the long range needs of water for other purposes. Without sufficient data the process has broken down, though not as a result of the prescribed strategy. Ultimately, TCEQ will have to look at (1) the data assembled by the various BBEST groups, (2) recommendations by the

Office Location 7850 Eastex Freeway, Beaumont, Texas 77708-2815 • (409) 892-4011
Mailing Address P. O. Box 5117, Beaumont, Texas 77726-5117 • FAX (409) 898-2468
Internet Address • http://www.lnva.dst.tx.us

BBASC, (3) physical and technological constraints through which water rights are permitted, (4) comments received through the rulemaking process to determine the appropriate path forward, and finally (5) recognize the need for flexibility in the rules to accommodate adaptive management as we gain a better understanding of true ecological relationships along the waterways.

At the public meeting in Austin on August 12, 2010, TCEQ put forth several questions. In consideration of the issues raised, LNVA believes that the Commission already employs appropriate tools, i.e. the Water Availability Model (WAM), in evaluating applications for new permits and that those measures could and should be continued with the new requirements, although a daily time-step may present an improvement for the purpose of modeling hydrologic variability. The most direct method of applying any new environmental standard would be to insert the requirement into the WAM as an in-stream flow (IF record) with a priority date corresponding to the new legislation and allow that flow requirement to propagate upstream. The environmental "set asides" which SB3 seeks to establish can adequately be addressed through the adoption of instream flow targets applied to specific locations in the basin and allowed to propagate upstream through the existing basin model and water availability simulation. By limiting the number of sites with streamflow targets, the WAM will be able to calibrate and distribute the demands for pro-rata sharing of contributions through ungaged tributaries. This method would also allow the environmental flow requirements to be applied without bias to all new permits, with or without appropriations requests. Additionally, this method of application through the WAM would relive the Commission of liability for trying to determine which projects, based on size or location, should be subject to the rules.

LNVA offers the following comments for your consideration on rulemaking specifically for the Neches River and Sabine Lake Estuary:

1. Angelina River subbasin of the Neches River Basin: LNVA recommends that TCEQ establish a minimum flow of 100 cfs for the Angelina River near Alto, Texas (USGS Gage # 08036500).

2. Upper Neches River subbasin of the Neches River Basin: LNVA recommends that TCEQ establish a minimum flow of 200 cfs for the Neches River near Rockland, Texas (USGS Gage #08033500).

3. Neches River Basin: LNVA recommends that TCEQ establish a minimum flow of 400 cfs for the Neches River near Beaumont, Texas (USGS Gage #08041780)

4. Sabine Lake Estuary: LNVA recommends that TCEQ not establish additional freshwater inflow requirements for the estuary.

LNVA has been involve in the Senate Bill 3 (SB3) process to evaluate and determine an appropriate flow regime to protect the environmental water needs and balance that with human demands for over 2 years. Through attendance and participation with both the Sabine and Neches Rivers and Sabine Lake Bay and Basin Expert Science Team (BBEST) and the Bay and Basin Area Stakeholders Committee (BBASC) it has become clear that both the Sabine and Neches Rivers and the Sabine Lake Estuary are well functioning, productive and healthy ecosystems today. It is also well established, particularly in Sabine Lake, that the ecosystems we see today are very different from that of 100 years ago. The area's environmental conditions are highly variable and the flora and fauna have proven their capacity for adaptability. With a changing backdrop of growth and development, the environment has evolved and prospered. Unfortunately, through the entire SB3 process definitive correlations between flows and environmental needs could not be established; though this should not be a surprise when the natural variability and resilience of the ecosystem is considered.

As the custodial steward of the bulk of the fresh water in the Neches Basin, holder of nearly 1.2 million acre feet of water rights and water supplier to the most heavily populated and industrialized region of the Basin, LNVA is ever conscious of protecting flows throughout the entire basin. LNVA provides fresh water to municipal, industrial and agricultural customers throughout Jefferson County and the eastern portions of Liberty and Chambers Counties. With the LNVA diversions located in the most downstream reach of the Neches River that is protected from saltwater intrusion, the water diverted by the Authority flows through and nourishes riverine habitat throughout the basin prior to use for human demands. In fact, since the construction of Sam Rayburn Reservoir and Dam B, important habitat areas like the Big Thicket National Preserve - Neches River Corridor no longer experience detrimental summer droughts because the bed and banks transmission of water supply to LNVA's customerssupport a year round minimum flow in the Neches River. Furthermore, the return flow from LNVA's municipal, industrial and irrigation customers provides a freshwater inflow to the coastal basin bayous that nourish the marshes and Sabine Lake estuary.

Because the bulk of development in the Neches Basin is near the mouth of the river, providing for these freshwater demands enhances support to the environment with flows throughout the entire basin to diversion points near Beaumont, Texas. By simply honoring existing surface water rights permits and their respective priority, the riverine and estuary environments are well supported through times of natural drought while high flow pulses and even overbank flooding may be attenuated by upstream control structures, but will certainly continue to occur on whatever schedule and regime nature provides.

With an eye on both balancing the environmental and human needs and utilizing the water rights procedures already established by the Commission, LNVA offers the following recommendations to TCEQ:

- establish minimum flows at three existing USGS gage locations in the Neches Basin,
- allow these requirements to propagate upstream in the current manner of evaluation for new permit requests and
- continue to evaluate permits against a drought of record standard to ensure a dependable supply while recognizing the variability of nature and allowing for pulse, peaking and flood flows on the "natural" schedule without attempted creation by man.

Specifically with regards to the locations and values of proposed minimum flows, the LNVA offers the following rationale to support its recommendations:

**Angelina River near Alto, Texas (USGS Gage # 08036500, TCEQ-WAM CP ANAL)**

The Angelina River is the primary tributary to the Neches River with a drainage basin of approximately 3,450 square miles. The downstream reach of the Angelina flows through Sam Rayburn Reservoir and joins the Neches River at the confluence just upstream of Dam B (Lake B. A. Steinhagen). Because the Angelina River drains roughly one-half the upper Neches Basin, it is appropriate to establish a minimum flow requirement for this sub-basin just above Sam Rayburn Reservoir. While the Hydraulically-Based Environmental Flow Regime (HEFR) tool used by the BBEST to statistically parse the historic flows at this gage site generally returned much lower values for subsistence (HEFR values ranging from 11 cfs to 55 cfs depending on the season) and base flows (HEFR values ranging from 36 cfs to 69 cfs in the summer) during drier months, LNVA recommends the establishment of a minimum flow of 100 cfs in the Angelina River near Alto, Texas in order to protect previously established rights of downstream permit holders while supporting a minimum flow to the riverine ecosystem both upstream and downstream of the gage station.

**Neches River near Rockland, Texas (USGS Gage # 08033500, TCEQ-WAM CP NERO)**

The Neches River above the confluence with the Angelina River is considered the "Upper" Neches River with a drainage basin of approximately 3,630 square miles. Because the "Upper" Neches River drains roughly one-half the upper Neches Basin, it is appropriate to establish a minimum flow requirement for this sub-basin near Rockland, Texas, just above the Angelina River confluence. While the HEFR tool used by the BBEST to statistically parse the historic flows at this gage site generally returned lower values for subsistence (HEFR values ranging from 21 cfs to 67 cfs depending on the season) and base flows (HEFR values ranging from 61 cfs to 151 cfs in the summer) during drier months, LNVA recommends the establishment of a minimum flow of 200 cfs in the Angelina River near Alto, Texas in order to protect previously established rights of downstream permit holders while supporting a minimum flow to the riverine ecosystem both upstream and downstream of the gage station.

**Neches River at Beaumont, Texas (USGS Gage # 08033500, TCEQ-WAM CP NEBA)**

While the Neches River at Beaumont was not a station evaluated during the work of the BBEST or BBASC, it is the most downstream freshwater location on the Neches River before the river is tidally influenced and affected by salinity. Flows passing this point will move downstream and enter the estuary as no freshwater intakes can be established and operated to divert fresh water from the tidal reach of the river. When the TCEQ issued a permit for the construction and operation of the Neches River Saltwater Barrier in 2002, the Commission recognized the need to maintain freshwater inflows to Sabine Lake and its estuary with the inclusion of a special condition stipulating a minimum pass-through release of 400 cfs when the barrier is operating in salt control mode. Because flows at Beaumont are immediately upstream of tidal waters and downstream of any established freshwater diversion points, it is appropriate to establish a minimum flow requirement for the Neches River at Beaumont, Texas.

As previously noted, the Sabine-Neches BBEST did not evaluate the Neches River at Beaumont, and thus the HEFR tool used by the BBEST to statistically parse the historic flows was not employed at this gage site; however, because a value has previously been established by the Commission, by a relatively recent permit and without any protests, LNVA recommends a minimum flow of 400 cfs in the Neches River at Beaumont, Texas in recognition of the existing Saltwater Barrier permit as it would apply to future permit applicants and the pass-through requirement would propagate upstream as an in-stream flow contribution to both the Neches River and Sabine Lake Estuary.

**Sabine Lake Estuary**

The Neches River contributes approximately 42% of the total annual flows to the Sabine Lake Estuary. With the existence, maintenance, potential future expansion of a deep draft ship channel through Sabine Lake and up the Neches River to the Port of Beaumont, freshwater discharges via the Sabine and Neches Rivers is not a realistic measure to control salinity in the estuary. Sabine Lake already receives more fresh water inflows than any other estuary in the State of Texas. The most appropriate action to support environmental health of the Sabine Lake Estuary is habitat restoration and construction of structures which retard salinity intrusion into the marshes while maintaining localized freshwater inflows from the bayous within the coastal basins. This proposed course of action for the important estuarine nurseries in the coastal mashes and wetlands is supported by an extensive study by the U.S. Army Corps of Engineers (USACE) which was conducted over a 10 year evaluation period to investigate the impacts and mitigation measures needed in association with the existing ship channel project and proposed improvements. Due to the tidal nature of the Sabine Lake Estuary, the tremendous exchange of water with each tide cycle, and the studies of the USACE in conjunction with the ship channel

project, LNVA recommends that TCEQ not establish additional freshwater inflow requirements directly to the estuary.

In closing, LNVA appreciates the efforts of TCEC staff and the opportunity to participate in the rulemaking process. If you have any questions regarding these comments, please feel free to contact me or Dawn Pilcher of my staff at (409) 892-4011.

Respectfully submitted,

Scott Hall

Scott Hall, P.E.
LOWER NECHES VALLEY AUTHORITY
General Manager