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Mr. Bill Roberts  
Texas Water Development Board  
P.O. Box 13231  
Austin, TX 78711-3231

Dear Mr. Roberts and Planning Group Members:

We appreciate the opportunity to provide written comments on the Draft 2007 Texas Water Development Board (TWDB) Water Plan. It is difficult to imagine any issue having more importance than securing a fair and comprehensive plan for utilization of Texas public water resources and protecting the water resources and economies of all regions of the entire state. Efforts of the planning groups to achieve that goal are appreciated.

**Background -**

As home owners on the shore line of Sam Rayburn reservoir we believe that we can provide a perspective of the issues inherent in the draft Region I plan that are representative of thousands of property owners, and business enterprises that are dependent upon the recreational values associated with the large surface water reservoirs in East Texas. Please be assured the opinions and input expressed herein are not influenced in any way by monetary gain.

As the proposed Region I plan was studied the focus was placed on the Angelina County, City of Lufkin regions. Even so, some broad general conclusions can be drawn from the limited review.

**Issue: Planning Group Membership –**

An immediate conclusion can be made by examining the TWDB and the Pineywoods Ground Conservation District board memberships responsible for the plan preparation. The persons acting in an official capacity on the boards are associated with municipal interests, agribusiness (poultry production), timber interests, power generation utility interests, industrial interests, etc. The board members are certainly motivated to protect their turf as should be expected. However, no one on either of the boards would be considered a champion for the interests of ordinary citizens, small businesses, or a champion for the recreational opportunities inherent in our large E. Texas reservoirs - even though the recreation, tourism, and retirement community attractions in E. Texas are providing a substantial base or foundation for the growth of the service / consumer related businesses responsible for ever increasing tax returns in the region. The indisputable growth evident in sales tax returns in this region has taken place without any significant increase in local industry. Many of the numbers presented in the Region I plan that predict future demands seem to be inflated as a consequence of the board membership. Projected population increases are not hard fact and the projected estimates are influenced by wishful thinking - in some cases. As an example - the projected increase in Lufkin's population from the present to 2050 is a remarkable 256%. Your summary information lists the projected population increase in Region I as 34%. Apparently Region I planners anticipate the majority of the 34% increase in population will take place in the City of Lufkin and Angelina County.

**Issue: Reservoir Recreational Use Not Considered –**

There is a common misconception that Sam Rayburn reservoir was not created to provide water for recreation. An official USACE report contains the following – with reference to Rayburn. “The project was designed to control flood waters, generate hydro-electric power, provide water for municipal, industrial, agricultural, and recreational uses, and other purposes.” Some may consider the order given as the appropriate order of importance but court litigation may ultimately be required to decide the particular weight of each use – or order of importance. There are 19 parks on Sam Rayburn that provide boat-launching ramps. There are 15 USACE parks, 6 US Forest Service parks, and 3 privately owned parks. In recent history, visitors to just the USACE parks have ranged between 1.3 and 1.5 million per year. Obviously, the government of the Rayburn construction era would not have constructed these facilities if it were not intended for the reservoir to support recreational activities that benefit ordinary citizens.

*Planned Transport / Distribution of E. Texas Reservoir Water* - In 2004 the TWDB announced a loan of \$55,299,706 to the LNVA earmarked for construction of a surface water treatment plant and distribution system using Sam Rayburn Reservoir water to serve a partnership of LNVA, Lufkin, and other smaller entities including Zavalla and Huntington. The system will be designed to accommodate 25 mgd. Interestingly, a search of media archives produced no mention of the \$55 million dollar loan. When the TWDB press release author was asked about distribution of the press release she indicated that the press release was transmitted to Lufkin media, but not to media in Jasper or Beaumont. More recently the Lufkin Daily News published a TCEQ announcement in the Classified Section declaring their intention to create a Special Water Utility District that will have very significant powers. The announcement reads exactly as follows. “*The nature of the services to be provided by the Four Way Special Utility District is to purchase, own, hold, lease, and otherwise acquire sources of water supply; to build, operate and maintain facilities for the transportation of water, and to sell water to individuals, towns, cities, private business entities, and other political subdivisions of the State.*” The proposed district will also have the power of eminent domain and be able to issue bonds. Very few citizens are aware of the creation of the proposed special utility district with powers of eminent domain or the loan of \$55 million taxpayer dollars ear marked to tap Sam Rayburn. TCEQ, TWDB, LNVA have not been effective in informing the public of their actions even though the actions will undoubtedly affect the lives and well being of thousands of Texans..

The East Texas region plan refers to SB1 guidelines by source and user. The document states; “The supplies available by source are based on the supply available during drought of record conditions. For surface water reservoirs, this is the equivalent of firm yield supply or permitted amount (whichever is lower).” If the proper, or legal, interpretation of the quoted text makes it mandatory for the TWDB to consider record drought conditions when defining firm available supply, it appears that the board has not complied with SB1 in their plan. At best the SB1 guidelines for determining firm yield during drought are not robust. They invite varied interpretation that may result in litigation.

The estimates of firm yield do not seem to reflect the surface water volumes available during drought. The LNVA owns the water rights to Sam Rayburn. Currently, the LNVA permit will allow drawdown of Rayburn water down to an elevation of 149 feet. In 1996 Sam Rayburn was at a record low of 151.7 feet and had no recreational value whatsoever. As a consequence many local business enterprises failed. The permitted drawdown elevation is much too low – it should be changed to a level that will protect the recreational assets that are serving as a very important part of the foundation of the regions economic growth – Jasper and Lufkin in particular.

*Economic Effect of Reservoir Drawdown* - Consider the Sept 23<sup>rd</sup> edition of the Beaumont Enterprise with the front page Headline “**Business Dries up With the Lake**”. The current situation (10 feet below pool level) on T-Bend provides a vivid example of the legal destruction of home values and business enterprises dependent upon recreation to support the economy of the region - because River Authorities are in the business of obtaining revenue from the sale of water that is really a public resource. While local businesses around T-bend were failing, the Region I water development board members met and moved to give the planning for a pipe line from T-Bend to Lake Fork to facilitate the transport of water from E. Texas to Dallas a high priority. The people of E. Texas are not motivated to keep Dallas lawns green. The drawdown of E. Texas reservoirs to levels below elevations that will sustain local business interests, home values and tax bases that are directly and indirectly dependent upon recreational uses to support the economy of the region, without robust, scrupulous justification, will undoubtedly invite contentious litigation.

**Issue: Questionable Justification for Planned Rayburn Water Transport –**

The projected need for the \$55 million loan earmarked for transport of potable water from Rayburn to Lufkin is dubious. The proposed plant will be capable of accommodating 10-25 mgd. Comments have already been made on the projected 256% population increase in Lufkin. The Lufkin utility websites (waste water treatment and potable water distribution) posts Lufkin existing sewage treatment plant design capacity as 11mgd. Lufkin’s potable water distribution system is posted as providing a peak distribution of 13-14 mgd. Lufkin’s’ potable water distribution is estimated as 7.9 mgd - average. Even with the projected increase in population (36,000 to 94,000) the projected ground water demand should be sustainable. Please refer to a document prepared by a Texas A& M Professor of Agricultural Engineering, an A&M Professor and Attorney – Texas Water Resources Institute, and a Program coordinator for the Water Resources Institute. The Document Title is; “Questions about Groundwater conservation Districts in Texas”. The document lists Carrizo –Wilcox water extraction and pump rates as follows: 1990 – 450,000 acre-feet, 1995-490,000 acre-feet, Annual Recharge 640,000 acre-feet, and the document lists the projected safe annual yield as 850,000 acre-feet. Based on these figures, I believe the available margin is 312,387,287 gallons per day. (Check my math) These figures were based on data obtained during the period that the Lufkin Paper Mill was in operation and withdrawing 15 to 18.5 mgd from the aquifer as listed in 1998 & 1999 discharge records. Obviously, the shut down of the mill has a beneficial effect upon available ground water from the Carrizo that is not reflected in the A&M document. The April 17, 2005 edition of the Lufkin Daily News reported on a study discussion during a meeting of the regional planning group. The study reported cost comparison figures of \$46.31 million for Rayburn surface water transport versus \$1.5 million for development of Carrizo Wilcox aquifer. It might be possible for the City / County to make a deal with the Canadian owned Lufkin Paper Mill to use the mill’s idled well capacity and / or the existing pipe line and water rights to Lake Stryker and alleviate the relatively small (in comparison to \$55million) \$1.5million ground water development costs. The Canadian mill owners might possibly view such a proposal favorably if they were reminded of the substantial tax abatements they have received over the years - and are still receiving. The cost savings to those who pay taxes would be significant if such arrangements could be made.

**Issue: Unresolved Questions Rayburn Water Transfer –**

Potential customers for water along the proposed route from Rayburn to Lufkin are small with inconsequential volume demands. At present the lack of firm planning for a significant increase in wastewater treatment plant in Lufkin raises some questions we would like the TWDB to consider.

- What firm plans have been made to accommodate the increased load on the wastewater treatment facilities that 25mgd would create for the City of Lufkin?
- When will TCEQ receive and / or approve a permit application to accommodate the increased wastewater inherent in a 25 mgd transport from Rayburn to Lufkin?
- Is the proposed pipeline being built to accommodate real Lufkin's needs?
- Is it being built to ultimately become a part of an inter-basin transfer system to tie in with the pipeline from T-Bend to Lake Fork to Dallas?
- Are the Region I, TWDB planners, LNVA, Four Way Water Supply Utility District entities fully complying with SB 1, Texas Water Code requirements for obtaining interbasin transfer authorization?

**Issue: Realistic Region I Power Plant Water Needs –**

The largest projected water demand in the Region is for steam power plant support. A deficit of 71,570 acre-feet is projected for Region I. With consideration of information readily available in a US Department of Energy Document; "Power Plant Water Usage and Loss Study, August 2005", and the plans' stated deficit a calculation of plant production increase, associated with use of 71,570 acre feet, yielded a huge 2,277 mega-watt estimate of increased power plant capacity, assuming fossil fuel plant designs would be constructed. In terms of raw water usage (gallons per mega-watt hour) other power production plant designs such as Natural Gas Combined Cycle designs are much less demanding, - about ½ as demanding. In order to increase their confidence in the projected shortages, the TWDB may want to consider the information in the referenced document, sharpen their pencils, and secure an independent and unbiased estimate of projected water usage for Region I power plant water needs. Hopefully the TWDB understands that power plant condenser cooling water is typically not lost and is continuously reused as in the functioning power plants situated on lakes, and labyrinths of canals such as power plants serving the Houston metropolitan area, and Coletto Creek, Gibbons Creek, Fayette power plants.

**Issue: Desalination Planning Inadequate –**

Accepting the TWDB plan projected needs for water, as is, it seems that the benefits of major desalination project, or projects, designed to serve the projected needs have not been given real consideration. Even though Volume I (page 25) of the plan claims Texas is "leading the way" in large scale desalination, the claim is simply a statement that has good public relations value. It is certainly not factual. The governor directed "TWDB to develop a large scale demonstration project". The key words are "demonstration project" and "feasibility and pilot plant studies". The limited funding that has been made available for studies of desalination plants in Texas is actually little more than throwing a Hush Puppy to the hounds. Funding a demonstration of established, widely accepted technology, already employed in world wide practical applications, is not necessary and will not provide significant contributions to water supply. Desalination technology and know-how exists and expertise is readily available in mid- eastern countries and US locales that could be immediately brought to bear on Texas water supply problems - **if there were a will to solve water supply problems without destroying the quality of life of the multitude of people affected by E. Texas reservoir water level elevations.**

A search of Internet sources produces many examples of real existing major desalination production capacities and cost figures. As an example, the Ashkelon plant in Israel claims a record low water production cost of \$0.53 per cubic-meter. One cubic-meter is equivalent to 264

gallons, so the claimed cost per gallon is \$0.002. This single plant is capable of producing 110,000,000 cubic meters per year of potable water, which is equivalent to 89,213 acre-feet per year. The first 25 years of the plant operation is covered by contract of 1.5 billion euro (2.06 billion US). A report on the plant gives the total cost of the Asheklon project as \$250 million US. The contract for construction was awarded in September of 2003 and the construction was completed in August of 2005.

Based on the above figures, eleven such plants would produce 1,000,000 acre -feet of water per year at a cost of: 11X (250 million) = \$2.75 billion US.

**Conclusions / Recommendations –**

We have not mentioned water conservation because others have emphasized its importance.

The TWDB plan does not recognize the economic contributions provided by the recreational assets of E. Texas reservoirs to the state of Texas. Future planning group membership should include representatives from small businesses enterprises that are dependent upon regional recreational activity.

Legislation should be enacted that will establish minimum water elevation drawdown levels necessary for sustaining home values, tax bases, and recreational activities because River Authorities are in the business of extracting revenue from sale of a public resource. They currently have a legal right to draw reservoir water levels down to extremely low elevations without regard for local interests. River Authorities do not have adequate oversight from authorities concerned with public interests and their steering committees are typically weighted with members serving municipal and bureaucratic interests.

We recommend that an objective cost benefits study be funded comparing the cost & benefits to Texas of the construction of the Trans Texas Corridor to the costs and benefits of construction of a desalination system, or systems, capable of resolving the states water deficit problems. The Governors Texas Enterprise Fund would be ample to finance such a cost / benefits study and it would undoubtedly benefit the ordinary citizens of the state without subsidizing corporate interests.

The plan as written seems to invite unending contention and legal challenges that could be averted. The TWDB recommendation to “provide statutory provisions that eliminate unreasonable restrictions on the voluntary transfer of surface water from one basin to another” interbasin transfer should be discarded. The restrictions have a purpose. The citizens of Texas would be better served by the TWDB replacing their support for interbasin transfer with a commitment to develop large-scale desalination systems. Desalination could provide the deficit water needs without destroying the quality of life of the multitude of people that will be affected by transport of existing water sources and fluctuating reservoir water level elevations; if there were a will to solve water supply problems without destroying the quality of life of the multitude of people affected by Texas reservoir water level elevations.

Sam Rayburn Reservoir Friends, Inc.

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