



**TeXas Economists**  
**An Association of Professional Applied Economists**

April 24, 2001

Ms. Phyllis Thomas  
Texas Water Development Board  
P.O. Box 13231  
Austin, Texas 78711-3231

**Board Members:**

**Dr. Ari M Michelsen**  
*El Paso*

**Dr. Milton Holloway**  
*Austin*

**Dr. Ronald Lacewell**  
*College Station*

**Dr. Don Ethridge**  
*Lubbock*

**Dr. Richard Conner**  
*College Station*

Re: Comments to Proposed changes to §355.91, §355.93, and §355.100 concerning the Regional Water Planning Grants and Proposed changes to §§357.2, 357.4 - 357.7, and 357.10 - 357.13 concerning the Regional Water Planning Guidelines

Dear Ms. Thomas,

TeXas Economists (TXE) appreciates the opportunity to respond to the above referenced proposed rule amendments adopted for publication by the Board on March 21, 2001. Our comments compliment and build on two letters sent to Craig Pedersen and the Board, one dated February 7, 2001 and the other dated March 13, 2001, both of which are incorporated herein by reference. The comments below represent the opinions of the Board of Directors and officers of TXE.<sup>i</sup>

**Officers:**

**Dr. Gene Nelson**  
*President*

**Dr. Milton Holloway**  
*General Manager*

In general we are opposed to the limited language in the proposed amendments which relate to the concerns raised in the two referenced letters. The inclusion of benefit/cost analysis in the proposed rule change is allowed only under special circumstances rather than being a requirement or even an encouraged activity of the regional planning groups. Further, there is no language addressing the need for the Water Development Board to use benefit-cost criteria in the development of a state plan. Benefit/cost analyses of water management strategies, under the proposed changes for guidance to regional planning groups, are not reimbursable “unless the water management strategy must receive a state or federal permit and the executive administrator agrees with the regional water planning group that these analyses would make a material difference in the determination of water management strategy feasibility.”

The main problem with this approach is that it assumes that the regional planning groups and/or the Executive Administrator will know whether doing

such an analysis will “make a material difference” without first doing the analysis—such a requirement defies logic and is shortsighted.

The proposed rule change would, as we suggested in our referenced letters, require the modification of cost calculations to be presented in discounted terms. We support this language, to wit, “*The amendments to §357.7(a)(8) require the regional water planning groups to include in their regional water plans a clear discussion of the cost, quantity, and environmental impacts associated with each water management strategy evaluated in terms of present costs and discounted present value costs. The method of analysis must be determined before the analysis begins.*” Specific directions should be given by the TWDB regarding the specification of costs as discussed in (1) below.

We believe the experience of the last 40 or so years in U.S. water planning should not be ignored regarding basic benefit-cost analysis and that the State of Texas should apply standard methods of economic analysis to the selection of long term strategies for water project investments.

Indeed we believe the language of SB 1 requires that the planning work pay attention to the economics of water resource use, to wit:

"The state water plan shall provide for the orderly development, management, and conservation of water resources and preparation for and response to drought conditions, in order that sufficient water will be available at a reasonable cost to ensure public health, safety, and welfare; **further economic development**; and protect the agricultural and natural resources of the entire state.

(b) The state water plan, as formally adopted by the board, **shall be a guide to state water policy.**" (SB 1, Sec. 16.051).

Economic development of the state will not be served if poor economics underlies the regional and state plans. If the wrong projects, specified on the basis of inaccurate shortage projections, without consideration of the economics of shortage management during droughts are the basis for the plans, then **economic development will be discouraged, not encouraged**. If the state encourages the wrong projects, in the wrong places, and in the wrong time period, economic growth will be discouraged. We can not know if we have the right projects, in the right place, at the right time unless we do the economic analysis up front. To delay the economic analysis until the permitting stage of specific projects, as has been suggested by the WDB staff, is to deny the regional and state plan developers the opportunity to properly compare available alternatives to meet expected demands. Delay until permitting the stage also denies planners the opportunity to select a set of projects that maximize the expected returns from scarce investment dollars.

Along these lines, we propose the following edits or modifications to your suggested rule amendments:

1. A simple way to include discounting is to use the Water Management Strategies table for reporting project/strategy cost. Instructions should be included for the regional planning groups to properly calculate the net present value of time distributed costs:

*“In the Water Management Strategies table, include a field showing the discounted present value of capital and O&M costs as a component of the “cost” evaluation parameter of water management strategies that have costs associated with them. Capital expenditures (not an annual amortization cost) and O&M cost should be reported in the future year in which they are expected to occur and then discounted using a WDB specified discount rate so that the Water Management Strategies table reports present value rather than just capital costs”*

2. The rule amendment related to allowing the opportunity to request additional funding for benefit-cost analysis under certain circumstances is too restrictive. We suggest that the TWDB require planning groups to consider benefits and costs of each purpose for the major projects even if all benefits and costs are not quantified. The TWDB may want to recommend a benefit/cost analysis on particular projects, such as a project of some volumetric size or cost level or larger. In any case, the TWDB needs to have a handbook or guidelines of appropriate procedures for doing benefit/cost analysis. We offer to work with the TWDB in development of a set of procedures that are as simple as possible but that address the principal needs and uses of benefit/cost analysis. Suggested wording in the amendments as follows with the triggers on size for B/C analysis open to discussion:

***“The regional water planning groups are expected to consider benefit/cost analysis for each project purpose and to complete a benefit/cost analysis if the project/strategy is 50,000 acre feet or more, total present value of the project or strategy is \$1 million or more, unless it can be shown that there are no reasonable alternatives to projects/strategies currently identified in the first round of regional planning.”***

3. We would like to return to the matter of the effect of price on demand for water. We are proposing that this be included in the rule amendments so that TWDB staff would provide demand projections to the regional planning groups that include price and income effects on future demands. Non-price conservation effects would be excluding from demand projections so that the planning groups can consider conservation programs as a strategy. Specifically, *round one* project costs could be used to get an approximation of future rising raw water cost that can translated into consumer price and thus the future price effect on demand. Income effects would be added by use of projected per capita incomes, which would increase future demands. This would address the criticism of not including economics in the demand projections.

***“The round one project costs and estimates of the price and income elasticity of demand (from TWDB studies and the literature) can be used to estimate future per***

***capita demand effects of rising consumer prices and income growth. Total demands would be calculated as population times per capita demand".***

The expected result is that some regional demands will grow and others fall compared to current projections. This will encourage regions to consider needed reordering and/or rescaling of projects/strategies resulting in improved water plans that are more cost effective and responsive to state and/or federal financing.

4. The proposed rule change does not deal explicitly with uncertainty of drought and the associated value of meeting various percentages of the shortages of the drought of record. The assumption that regional planners need to plan to meet 100% of water demand under drought of record conditions should be subjected to an economic test. What are the benefits and costs of meeting 80%, 90% or 100% of the demand under drought of record conditions? What are the probabilities of experiencing the drought of record in various parts of the State? The regional planning groups should be allowed to make judgements based on economic and other grounds as to what share of such demands are worth meeting. In determining the benefits, the regional planning groups should be provided the probabilities of experiencing droughts of record by the WDB. We propose the following language:

***"The regional planning groups should examine the benefits and costs of meeting 80%, 90% and 100% of demand during the drought of record and if they determine that the net benefits of meeting less than 100% of demand under drought of record conditions are greater than meeting 100%, then the regional plan need not construct strategies to meet 100% of demand. Benefits should be determined using a probability of the occurrence of drought provided by the WDB."***

Again, we appreciate the opportunity to comment on and provide our suggestions on your proposed rule amendments. We would be pleased to work with the TWDB on any of the points above.

Sincerely,

Milton L. Holloway  
General Manager

CC: TXE Board of Directors

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<sup>1</sup> TeXas Economists is a Texas non-profit trade association whose purpose is to promote the ethical, competent and professional use of economic principles in both public and private sector decisions concerning the use of scarce economic and financial resources, and to enhance the professional, social and economic well being of its members.