October 20, 2005

Lavaca Regional Water Planning Group
c/o Patrick Brzozowski
P.O. Box 429
Edna, Texas 77957

Re: Comments on Initially Prepared 2006 Lavaca Regional Water Plan

Dear Judge Stafford and Planning Group Members:

The National Wildlife Federation, Lone Star Chapter of the Sierra Club, and Environmental Defense appreciate this opportunity to provide written comments on the Initially Prepared Lavaca Regional Water Plan (Region P). We consider the development of comprehensive water plans to be a high priority for ensuring a healthy and prosperous future for Texas. Our organizations also appreciate the extensive efforts of the planning group to produce the initially prepared regional plan. As you know, our organizations - whether individually or collectively - have provided periodic input during the process of developing the plan. The written comments in this letter build upon those previous comments in an effort to contribute to a better plan for all residents of the Lavaca Region and for all Texans.

I. BACKGROUND

Our organizations support a comprehensive approach to water planning that considers all implications of water use and development. The process that Senate Bills 1 and 2 (SB1, SB2) established has the potential to produce major, positive changes in the way Texans approach water planning. Fully realizing that potential depends on the information that water plans provide, which must be sufficient to evaluate the likely costs and impacts that may result from each water management strategy. Only by providing sufficient information and evaluating it carefully can regional planning groups ensure compliance with the overarching requirement that "strategies shall be selected so that cost effective water management strategies which are consistent with long-term protection of the state's water resources, agricultural resources, and natural resources are adopted." 31 TAC § 357.7 (a)(9). Complying with this requirement can and will help regional water planning groups develop plans that actually contain workable water management strategies capable of implementation as opposed to a list of expensive and damaging proposals that will likely produce more controversy than water supply.

This letter comments on the initially prepared Lavaca Regional Water Plan in two different ways. First, we consider the extent to which the initially prepared plan complies with requirements in SB1 and SB 2, as well as the rules that the Texas Water Development Board (TWDB) adopted to implement those statutes. Second, our

comments also address important policy considerations that should inform the regional water plan that statutes or rules may not specifically address.

We recognize that the regional water planning group faces financial constraints that may restrict the group's ability to address some issues raised in these comments as much as you would like. We submit these comments in the spirit of an ongoing dialogue intended to make the planning process as effective as possible. We strongly support the state's water planning process and we want the regional water plans and the state plan to be comprehensive templates that all Texans can endorse. In the remainder of this letter, you will find a summary of key principles that inform our comments followed by specific comments that address different aspects of the draft water plan.

II. KEY PRINCIPLES AND GENERAL COMMENTS

A. MAXIMIZE WATER EFFICIENCY

We strongly believe that improved efficiency in the use of water must be pursued to the maximum extent reasonable. New provisions included in SB 2 and TWDB rules since the first round of planning require strengthened consideration of water efficiency. Potentially damaging and expensive new supply sources simply should not be considered unless, and until, all reasonable efforts to improve efficiency have been exhausted. In fact, that approach is now mandated.

The Texas Water Code, as amended by SB1 and 2, along with the TWDB guidelines, require regional water planning groups to consider water conservation and drought management and to incorporate both types of measures into their plans. After the first round of regional planning, the legislature added §16.053 (h)(7)(B) to prohibit TWDB from approving any regional plan that omits water conservation and drought management measures at least as stringent as those required pursuant to Tex. Water Code §§ 11.1271 and 11.1272. In other words, each regional plan must incorporate at least the amount of water savings that other law mandates. This is a common-sense requirement. We certainly should not be basing planning on an assumption of less water conservation than the law already requires.[1]

In addition, the Board's rules require the consideration of more stringent conservation and drought management measures for all water user groups with water needs. The rules provide that the planning group may choose not to include those more stringent measures if it adequately explains that decision. 31 TAC § 357.7(a)(7)(A)(ii)). Consistent with the TWDB rules, our comments treat water conservation and drought management as separate issues from reuse, which is discussed separately below. 31 TAC § 357.7 (a)(7)(A) of the TWDB rules sets out detailed requirements for evaluation of water management strategies consisting of "water conservation practices." 31 TAC §

[1] TWDB guidelines also recognize the water conservation requirements of Section 11.085 for interbasin transfers and require the inclusion of the "highest practicable levels of water conservation and efficiency achievable" for entities for which interbasin transfers are recommended as a water management strategy.

357.7(a)(7)(B) addresses water management strategies that consist of drought management measures. The separate evaluation of water management strategies that rely on reuse is mandated by 31 TAC § 357.7 (a)(7)(C).

Water is a finite resource. In order to meet the water needs of a growing population while ensuring the long-term protection of the state's natural resources and agricultural resources, we must use water as efficiently as possible.

It appears that the Regional Planning Group has reasonably evaluated irrigation water conservation issues and noted constraints on its implementation. However, as discussed below, we are concerned that the Regional Group's decision not to recommend irrigation conservation measures might result in a level of groundwater use that is not sustainable long-term.

B. LIMIT NONESSENTIAL USE DURING DROUGHT

Drought management measures aimed at reducing demands during periods of unusually dry conditions are important components of good water management. As noted above, SB2 and TWDB rules mandate consideration and inclusion in regional plans of reasonable levels of drought management as water management strategies. It just makes sense to limit some nonessential uses of water during times of serious shortage instead of spending vast sums of money to develop new supply sources simply to meet those nonessential demands during rare drought periods. Drought management includes documentation of the water savings each supplier anticipates as a result of drought measures. Because drought management measures are not included as water management strategies, the Initially Prepared Plan does not comply with applicable requirements.

C. PLAN TO ENSURE ENVIRONMENTAL FLOWS

Designing and selecting new water management strategies that minimize adverse effects on environmental flows is critical to the future of our state's rivers, estuaries, and the massive economies that depend on them. New rules applicable to this round of planning require a *quantitative analysis* of environmental impacts of water management strategies to ensure a more careful consideration of those additional impacts. The rules specifically require that each potentially feasible water management strategy must be evaluated by including a quantitative reporting of "environmental factors including effects on environmental water needs, wildlife habitat, cultural resources, and effect of upstream development on bays, estuaries, and arms of the Gulf of Mexico." 31 TAC § 357.7 (a)(8)(A)(ii). However, designing and selecting such strategies represents just one aspect of the planning necessary to meet environmental flow needs.

If existing water rights, when used as projected, would cause serious disruption of environmental flows resulting in harm to natural resources, then merely minimizing additional harm from new strategies would not produce a water plan that would be consistent with the long-term protection of natural resources or the economic activities that rely on them. Demonstrating such consistency is a prerequisite to approval of a regional water plan. As a result, regional water planning groups should recognize

environmental flows as a water demand critical to the state's ecology and economy, and should devise water plans that protect reasonable environmental flow levels. For example, Region K, in its initially prepared plan, has recognized environmental water needs as a category of water demand. We appreciate the careful consideration given in the initially prepared plan to the need to protect environmental flows. However, the required quantitative assessment of environmental flow impacts appears to be missing from the evaluation of potentially feasible management strategies.

D. MINIMIZE NEW RESERVOIRS

Because of the associated adverse impacts, new reservoirs should be considered only after existing sources of water, including water efficiency and reuse, are utilized to the maximum extent reasonable. When new reservoirs are considered, adverse impacts to regional economies and natural resources around the reservoir site must be minimized. Regardless of whether the proposed reservoir is located inside or outside the boundaries of the region, reservoir development must be shown to be consistent with long-term protection of the state's water, agricultural, and natural resources.

We support the planning group's decision not to include the Palmetto Bend Phase II reservoir on the Lavaca River as a water management strategy. As the initially prepared plan notes, there is no in-basin demand that could feasibly be met with water from the reservoir. Accordingly, we also feel that the site should not be recommended for designation as a unique reservoir site. One of the prerequisites for such a recommendation is the identification of the expected beneficiaries of the water supply to be developed. See 31 TAC § 357.9. Because there are no expected beneficiaries, the recommendation of such a designation is premature.

E. MANAGE GROUNDWATER SUSTAINABLY

Wherever possible, groundwater resources should be managed on a sustainable basis. Mining groundwater supplies will, in many instances, adversely affect surface water resources and constitute a tremendous disservice to future generations of Texans. Generally speaking, depleting groundwater sources will not be consistent with long-term protection of the state's water resources, natural resources, or agricultural resources. We support the planning group's adoption of a sustainable management approach. However, as discussed below, we do have some concerns about the absence of constraints on the "temporary overdrafting" recommended during drought conditions.

F. FACILITATE SHORT-TERM TRANSFERS

Senate Bill 1 directs consideration of voluntary and emergency transfers of water as a key mechanism for meeting water demands. Those approaches seem to have received little attention in the planning process to date. Water Code Section 16.051 (d) directs that rules governing the development of the state water plan shall give specific consideration to "principles that result in the voluntary redistribution of water resources." Similarly, Section 16.053 (e)(5)(H) directs that regional water plans must include consideration of "voluntary transfers of water within the region using, but not limited to, regional water banks, sales, leases, options, subordination agreements, and financing arrangements…." Thus, there is a clear legislative directive that the regional planning process must include

strong consideration of mechanisms for facilitating voluntary transfers of existing water rights within the region, particularly on a short-term basis as a way to meet drought demands.

In addition, emergency transfers are intended as a way to address serious water shortages for municipal purposes. They are a way to address short-term problems without the expense and natural resource damage associated with development of new water supplies. Water Code Section 16.053 (e)(5)(I), as added by SB 1, specifically directs that emergency transfers of water, pursuant to Section 11.139 of the Water Code, are to be considered, including by providing information on the portion of each non-municipal water right that could be transferred without causing undue damage to the holder of the water right. Thus, the water planning process is intended as a mechanism to facilitate voluntary transfers, particularly as a means to address drought situations, by collecting specific information on rights that might be transferred on such a basis and by encouraging a dialogue between willing sellers and willing buyers on that approach. It is not clear if there is significant potential for this approach in the Lavaca Region, but the issue merits discussion.

III. PAGE-SPECIFIC COMMENTS

CHAPTER 1, REGIONAL PLANNING IN TEXAS

Section 1.4.1, Page 1-6. Groundwater Sources. It would be helpful to include here an explanation of the basis for the groundwater availability determinations listed in this Section as coming from the 2001 Regional Water Plan and the 1997 State Water Plan. For instance, are these volumes based solely on annual recharge volumes?

Section 1.4.2, Page 1-7. Surface Water Sources. The plan states that there are no major springs in the region. In addition, Section 4.2.2, Page 4-3, second paragraph, states that there are no springs in the area expected to experience the highest water use demands. It appears from the book *Springs of Texas* by Gunnar Brune that, although never numerous, there were springs in the area until heavy groundwater pumping caused them to cease flowing. Continued recovery of groundwater levels could result in re-establishing some springflows in the area, which could make surface water rights more dependable.

Section 1.5.2, Page 1-11. Recreational and Natural Resources. The information on endangered or threatened species has limited utility. This discussion would be much more useful if it were to highlight species occurring in habitats dependent on the region's rivers and streams. Those are the habitats and the species most likely to be affected by water management decisions.

Section 1.7.1, Page 1-15. Unique Reservoir Sites. In order to make discussion of the permitting status of the Palmetto Bend Phase II Reservoir more complete, we suggest that

the text acknowledge that environmental flow protection is an outstanding permitting issue that would need to be addressed prior to construction.

CHAPTER 1, General.

This chapter is lacking in discussion of various components. There is almost no discussion of agricultural activity in the region. For the listed activities by county, it is apparent that livestock operations are significant. However, we did not find information about the location of those operations or about their water sources. That type of information is needed to evaluate the potential for adverse impacts, such as the impacts on livestock operations (relying on shallow wells) that might result from the temporary overdrafting of aquifers.

CHAPTER 2, PRESENTATION OF POPULATION AND WATER DEMANDS

We urge the planning group to acknowledge environmental flows as a category of water demand. There is precedent for such action: the initially prepared plan for the Lower Colorado River Basin (Region K) does include such recognition of environmental flows as a water demand. While we recognize limitations on the availability of information needed to quantify this water demand, the category could be acknowledged qualitatively during this round of planning with additional effort devoted to quantitative analysis in the future.

Section 2.2.2.2 (a)(3), Page 2-8. This section describes how the Year 2000 water use data takes into account the water use savings that have resulted to date from the 1991 State Water-Efficient Plumbing Act. However, there is no mention of how related reductions are incorporated into the future water demand projections. In other words, the plan needs to state **w**hat rate of plumbing fixture replacement was assumed in developing those projections. We request that the planning group include that information, in the form of per capita reductions in water use, in the plan. We believe that is valuable information to help the public understand those savings. The inclusion of information about per capita water use rates also would be helpful in identifying potential for additional water efficiency savings.

CHAPTER 3, ANALYSIS OF CURRENT WATER SUPPLIES

Section 3.2.3, Page 3-5. The second paragraph states that the TWDB estimates total groundwater availability for the region is 207,599 ac-ft/year, with 87,876 ac-ft/year for Jackson, 38,123 ac-ft/year for Lavaca and 81,600 ac-ft/year for Wharton. The following paragraph states that the planning group found support for an estimate of 81,600 ac-ft/year annually. However, it is not clear that the paragraph is referring only to Wharton County. Clarification would be helpful.

On page 1-7, the initially prepared plan indicates that groundwater pumping in Jackson County averaged about 75,000 acre-feet during the 1984 to 1997 period. Figure 3.6

appears to show a substantial recovery of groundwater levels in the Gulf Coast Aquifer in eastern Jackson County during that period for at least two of the four wells. For the other two wells, there are some variations in levels, but generally the levels at the beginning and end of that period appear to be relatively unchanged. Levels for all of the wells appear to have risen since 1997. The text on page 3-4 indicates that pumping during the 1997 to 2004 time period has averaged about 51,960 acre-feet/year in Jackson County. However, the proposed availability amount for the Gulf Coast Aquifer in Jackson County is 87,876 acre-feet/year or about a 17% increase in pumping over the average level for that 1984 to 1997 period and almost a 70% increase in pumping over the average level for the 1997 to 2004 period. It is not clear from the data provided that a pumping increase of that magnitude would not result in a long-term decline in water levels. We urge the planning group either to give further consideration to identifying the sustainable level of pumping in Jackson County or to provide further explanation of the basis for the determination that a pumping level of 87,876 acre-feet/year would be sustainable.

CHAPTER 4, IDENTIFICATION, EVALUATION, AND SELECTION OF WATER MANAGEMENT STRATEGIES BASED ON NEEDS

Section 4.2.2, Page 4-3, second paragraph. We appreciate the thoughtful discussion set out in the initially prepared plan. The endorsement of "pumping of additional groundwater beyond the sustainable yield" or "overdrafting the aquifer," as is stated on pages 4B.1-3 and 4B.1-5, is troubling and may not accurately reflect the planning group's intent. As we understand the discussion in the initially prepared plan, it seems that the underlying concept might more accurately be described as involving a conjunctive management approach. During non-drought years, a combination of surface water and groundwater supplies would be used, but with groundwater use levels somewhat below the sustainable yield level for the aquifer. During drought years, when surface water is not available or is very limited, pumping of groundwater above the annual limit that would be sustainable on an ongoing basis would occur. However, on an average basis, groundwater pumping would continue to be no higher than the sustainable levels.

We urge the planning group to consider describing a conjunctive management approach that explicitly endorses the limits on groundwater pumping needed to ensure that sustainable limits are not exceeded on any long-term basis. If groundwater levels recover to the point that surface flow contributions from groundwater are restored, a new balance might need to be struck to reflect the improve reliability of surface water rights and to provide appropriate protection for any such springs or seeps.

The plan states that there are no springs in the area with the highest water demands. Please see comment for Section 1.4.2, Page 1-7 above.

Section 4.4.4, Page 4-8. Impacts of Irrigation Return Flows. The plan states that there is no reduction of flow from the streams or from any springs as a result of the production of the groundwater. It would be helpful to have additional discussion explaining the absence of a potential for groundwater contributions to surface water flow

through seeps or other means. This is especially important given that recent estimates show that up to 25% of recharge to the Gulf Coast Aquifer in Wharton and Matagorda counties ends up as freshwater discharge to near-coast waters.[2] Historical contributions are noted in *Springs of Texas.* Declines in groundwater levels may have resulted in the loss of the potential for such contributions, but some specific explanation of the situation would be helpful.

Drought Management Measures. As required by 357.7 (a)(7)(B) of TWDB's rules, drought management is a water management strategy that must be evaluated. The initially prepared plan does not contain the required consideration of drought management.

CHAPTER 6, WATER CONSERVATION AND DROUGHT MANAGEMENT PLANS

The model water conservation plan templates provide useful information but do not appear to represent actual model water conservation plans, as contemplated by the Board's rules. See 31 TAC § 357.7 (c). The model drought contingency plan template for irrigation users appears to be very much developed for irrigators with a surface water reservoir as a supply source and with a complicated irrigation district structure. Accordingly, it does not appear to be a particularly good model for irrigation users in the Lavaca Region.

CHAPTER 7, LONG-TERM PROTECTION OF THE STATE'S WATER RESOURCES, AGRICULTURAL RESOURCES, AND NATURAL RESOURCES

(Page 7-1) **Section 7.1 Water Resources Within the Lavaca Regional Water Planning Area.**
To ensure consistency with long-term protection of the state's water resources, groundwater water sources should be managed on a sustainable basis. Although that is what we understand to be intended by the planning group, the issue should be discussed here. As noted elsewhere in these comments, we urge the planning group to explicitly indicate its intention regarding long-term sustainable management of groundwater supplies.

Section 7.1.3 Lavaca River Basin

The existing language in this section could be read as endorsing long-term overdrafting of groundwater resources. We urge the planning group to explicitly indicate its intention regarding long-term sustainable management of groundwater supplies.

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[2] Dutton, A.R., and Richter, B.C., 1990 Regional geohydrology of the Gulf Coast Aquifer in Matagorda and Wharton Counties, Texas: Development of a numerical model to estimate the impact of water management strategies: The University of Texas at Austin, Bureau of Economic Geology.

Section 7.2 Agricultural Resources within the Lavaca Regional Water Planning Area
Although protection of rice irrigation is acknowledged, there is no discussion about other aspects of agriculture in the planning area. In order to demonstrate consistency with long-term protection of agriculture, the presence or absence of impacts on other agricultural operations, including livestock operations, should be discussed.

CHAPTER 8, UNIQUE STREAM SEGMENTS, RESERVOIR SITES, AND LEGISLATIVE RECOMMENDATIONS

Section 8.1, Page 8-1. Unique Stream Segments and Reservoir Sites. The Initially Prepared Plan recommends the designation of the Palmetto Bend Phase II reservoir site on the Lavaca River as a Unique Reservoir Site. According to TWDB rules §357.9, the plan needs to include a description of the site, reasons for the unique designation, and expected beneficiaries of the water supply to be developed at the site. We believe any such site should be described with sufficient specificity to allow landowners in the area to know where the boundaries of the designation would be. The only stated reason for the proposed designation is that the site was evaluated as one of the management strategies for the region's agricultural shortages. However, for reasons described elsewhere in the plan, the planning group determined that the reservoir is not a viable water management strategy for agricultural users or other users in the planning region. Thus, there are no described reasons for the proposed designation and no identified beneficiaries for the water supply. Accordingly, we urge the planning group to reconsider this recommendation.

Section 8.1, Page 8-1. Unique Stream Segments and Reservoir Sites. It is disappointing to see that the Planning Group has again declined to recommend any stream segments for designation as unique stream segments. If the Texas Parks and Wildlife Department has provided information on stream segments it recommends for consideration, we urge the planning group to include that information in the regional plan.

Page 4B.1-1 Strategy P-JW-IL-1 Construction of Palmetto Bend Phase II on the Lavaca River. The first sentence of the "Environmental Impacts" discussion, which talks about water currently leaving the basin being returned, does not appear to fit here and should be deleted. The last sentence under the "Cost" heading notes that due to cost, any yield from the reservoir likely would be sold out of the basin. That sentence is very inconsistent with the discussions under the other headings all of which assume that the water would be used for irrigation within the region.

Page 4B.1-3. **Strategy P-W-I-1 Overdrafting the Aquifer, Wharton County Irrigation.**
As noted above, we urge the planning group to consider reconfiguring this strategy as one expressly acknowledging conjunctive management of surface and groundwater. We also urge the planning group to stress the concept that overdrafting of groundwater would occur only for short periods during serious drought periods with long-term management

of the aquifer being based on a sustained yield approach designed to avoid declines in groundwater levels.

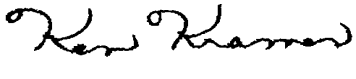
Page 4B.1-4. **Strategy P-JLW-IL-1 Reuse of Municipal Effluent.**
Some quantitative analysis of the impacts of reuse on stream flows is needed. As noted elsewhere in the plan, surface flow contributions from springs and seeps are either non-existent or greatly diminished, as a result return flows have increased importance in the region. TWDB rules expressly require a quantitative evaluation of environmental impacts, including impacts on environmental water needs. See 31 TAC § 357.7 (a)(8)(A)(ii).

Page 4B.1-5. **Strategy P-W-I-1 Overdrafting the Aquifer, Jackson County Irrigation.**
As noted above, we urge the planning group to consider reconfiguring this strategy as one expressly acknowledging conjunctive management of surface and groundwater. We also urge the planning to stress the concept that overdrafting of groundwater would occur only for short periods during serious drought periods with long-term management of the aquifer being based on a sustained yield approach designed to avoid declines in groundwater levels. Finally, as noted above, we urge the planning group to revisit the amount of pumping that would be sustainable on a long-term basis.

Thank you for your consideration of these comments and please free to contact us if you have any questions. We look forward to a continuing positive dialogue with the planning group during this and future planning cycles.

Sincerely,





Myron Hess	Mary Kelly	Ken Kramer
National Wildlife Federation	Environmental Defense	Sierra Club, Lone Star Chapter

cc: David Meesey, Region P liaison, TWDB
Kevin Ward, TWDB
Cindy Loeffler, TPWD
Mark Lowry, Turner, Collie, and Braden