September 29, 2005

Mr. Jim Thompson, Chairman
North East Texas Regional Water Planning Group
c/o Northeast Texas Municipal Water District
P.O. Box 955
Hughes Springs, TX 75656

Re: Comments on Initially Prepared North East Texas Regional Water Plan

Dear Chairman Thompson and North East Texas Planning Group Members:

The National Wildlife Federation, Lone Star Chapter of the Sierra Club, and Environmental Defense appreciate the opportunity to provide written comments on the Initially Prepared North East Texas Regional Water Plan. We consider the development of comprehensive water plans to be a high priority for ensuring a healthy and prosperous future for Texas. We recognize and appreciate the contributions that you have made towards that goal. As you know, our organizations have provided, either individually or collectively, periodic input during the process of developing the plan. These written comments will build upon those previous comments in an effort to contribute to making the regional plan better for all residents of the North East Texas Region and for all Texans.

We recognize that the Initially Prepared Plan (IPP) is subject to revision prior to adoption, and is subject to continued revision in the future, and provide these comments with such revisions in mind. Our organizations appreciate the amount of effort that has gone into developing the Initially Prepared Plan. Your consideration of these comments will be appreciated.

I. BACKGROUND AND OVERVIEW

Our organizations support a comprehensive approach to water planning in which all implications of water use and development are considered. Senate Bills 1 and 2 (SB 1, SB 2), and the process they established, have the potential to produce a major, positive change in the way Texans approach water planning. In order to fully realize that potential, water plans must provide sufficient information to ensure that the likely impacts and costs of each potential water management strategy are described and considered. Only with that information 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 charge is essential in order to develop true plans that are likely to be implemented as opposed to a list of potential, but expensive and damaging, projects. Comprehensive regional water plans have the potential to provide clear and effective guidance for development of water supplies within the region.

This document includes two types of comments. We consider the extent to which the Initially Prepared Plan complies with the requirements established by SB1 and SB 2 and by the Texas Water Development Board (TWDB) rules adopted to implement those statutes. In addition, our comments address important aspects of policy that might not be controlled by specific statutes or rules.

We do recognize that the financial resources available to the planning group are limited, which may restrict the ability of the group to fully address some issues as much as you would like. These comments are provided 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 can be endorsed by all Texans.

Section II of the letter summarizes key principles that inform our comments and how they relate to the Initially Prepared Plan. The last section of the letter, Section III, consists of page-specific comments on the Initially Prepared Plan.

II. KEY PRINCIPLES

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 mandate 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. Consistent with TWDB's rules for water planning, we consider water conservation measures that improve efficiency to be separate and distinct from reuse projects. We do agree that reuse projects merit consideration. However, the implications of those projects are significantly different than for water efficiency measures and must be evaluated separately.

The Texas Water Code, as amended by SB1 and SB 2, along with the TWDB guidelines, establish stringent requirements for consideration and incorporation of water conservation and drought management. As you know, Section 16.053 (h)(7)(B), which was added after completion of the first round of regional planning, prohibits TWDB from approving any regional plan that doesn't include water conservation and drought management measures at least as stringent as those required pursuant to Sections 11.1271 and 11.1272 of the Water Code. In other words, the regional plan must incorporate at least the amount of water savings that are mandated by other law.[1]

In addition, the Board's guidelines require the consideration of more stringent conservation and drought management measures for all other water user groups with water needs. Section 31 TAC

[1] 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. 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)(A) of the TWDB rules sets out detailed requirements for evaluation of water management strategies consisting of "water conservation practices." Section 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).

Both water efficiency and reuse merit consideration, but they must be evaluated independently in determining what mix of approaches to include in a regional plan. Under the right circumstances, reuse is an appropriate water management option, but it does not increase the actual efficiency of water use. 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. We certainly acknowledge the consideration given to municipal water conservation into the 2005 Initially Prepared Plan. However, we have questions about some cost calculations and believe much more progress is possible and needed, particularly in considering the potential of water conservation to help meet water needs for manufacturing.

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, Senate Bill 2 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 hefty sums of money to develop new supply sources simply to meet those nonessential demands. Because drought management measures are not included as water management strategies, the Initially Prepared Plan falls short of complying with applicable requirements.

C. Plan to Ensure Environmental Flows

Designing and selecting new water management strategies that minimize negative impacts on environmental flows is critically important. New rules applicable to this round of planning require a quantitative analysis of environmental impacts of water management strategies[2] in order to ensure a more careful consideration of those impacts. However, this is only one aspect of planning 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, merely minimizing additional harm from new strategies would not produce a water plan that is consistent with long-term protection of natural resources or that would protect the economic activities that rely on those natural resources.

Accordingly, environmental flows should be recognized as a water demand and plans should seek to provide reasonable levels of environmental flows. Environmental flows provide critical

[2] The rules 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).

economic and ecological services that must be maintained to ensure consistency with long-term protection of water resources and natural resources.

We were unable to locate sufficient quantitative analysis of environmental impacts of the proposed water management strategies. It appears that the Initially Prepared Plan does not include the necessary information to demonstrate consistency with long-term protection of the state's water resources, natural resources, or agricultural resources.

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. In addition, any proposed reservoir development must be shown to be consistent with long-term protection of the state's water, agricultural, and natural resources. We acknowledge and commend the strong endorsement of these concepts in the Initially Prepared Plan. However, we do have strong concerns about the inclusion of the Prairie Creek Reservoir.

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. In addition, mining of groundwater will adversely affect springs and seeps and, as a result, surface water flows. Our understanding is that the regional plan generally allows for a 50-foot decline in water levels over the 50-year planning period. We urge the planning group to consider adopting a long-term sustainable approach that balances pumping with recharge and that protects springs, seeps, and surface flows.

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. 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 ways to facilitate 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 way 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 appears that the potential may exist for some such transfers within the planning area. Overall water supply surpluses are predicted for numerous counties within the planning region. We urge the planning group to give further consideration to such transfers.

III. PAGE-SPECIFIC COMMENTS

For ease of tracking, we have identified each page-specific comment with a number in brackets.

EXECUTIVE SUMMARY

[1] (Page vi). As noted on this page, over 50% of the projected water demands are for manufacturing uses. Accordingly, consideration of water conservation measures applicable to manufacturing demands is critically important in order to achieve efficient water use within the region.

[2] (Page viii). As noted on this page the initially prepared plan does not identify water conservation or drought management as water management strategies to meet projected water needs. As discussed further below, we believe that this is a serious deficiency in the initially prepared plan.

[3] (Page xi). The statement “that a consumption of 115 gallons per capita per day (gpcd) should be established for all municipal water user groups” is confusing. How was this minimum level applied in the planning process?

[4] (Page xii). We are confused by the high per acre-foot costs reported for water conservation. Those costs appear to dramatically inconsistent with the costs calculated by GDS Associates, Inc. for the Texas Water Development Board and with the costs reported in other initially prepared plans. From a review of a number of calculation sheets (Advanced Water Conservation Worksheets), it appears that the amortized costs per acre-foot for various water conservation measures may have been inadvertently added rather than being averaged (on a weighted basis). As a result, the costs of the conservation measures appear to be overstated by a factor of 3 or more. For example, the actual cost per acre-foot of conservation savings for the City of Scottsville appears to $685 rather than the $2,412 that is reported. Further discussion of this issue is provided below in our comments relating to individual water user groups.

[5] (Pages xvi and xvii-xviii). On page xvi, the planning group endorses the development of the Prairie Creek Reservoir to “enable the SRA to supply projected future manufacturing needs in Harrison County.” From our review of the initially prepared plan, we did not find any projected manufacturing needs in Harrison County. In fact, on a county-wide basis a sizeable supply surplus is predicted for Harrison County. See page 4-32. The projected water needs by Water User Group in Harrison County for all use categories are shown as totaling 756 acre-feet in 2060. (Table 4.6 on page 4-5 of the IPP.) All of those needs are shown as being met through means other than Prairie Creek Reservoir. On pages xvii and xviii, the initially prepared plan

lists recommendations that "should apply to all reservoirs considered in NETRWPG area." Those recommendations include, among many others, a provision that all alternative sources of supply first be exhausted. The recommendation of development of the Prairie Creek Reservoir and these reservoir recommendations appear to be in direct conflict.

[6] The recommendation for the development of the Prairie Creek Reservoir has not been justified. It does not meet any identified water need. It's inclusion in the plan has not been shown to be consistent with long-term protection of the state's agricultural resources or natural resources.

CHAPTER 1: Description of Region

Section 1.1 (e) Natural Resources

[7] (Page 1-13). The importance of bottomland hardwood forests both as wildlife habitat and as a valuable resource for timber production is not clearly acknowledged in this section. More discussion of those issues would help to support the discussion in Chapter 7 about the consistency of various activities with long-term protection of the state's natural resources and agricultural resources.

[8] (Page 1-33). The information about springs in the region is extremely general. We were not able to locate any discussion of the recognition of "major springs." Section 357.7 (a)(1)(D) of the Board's rules require a description of major springs that are important for water supply or natural resource protection purposes. The consideration of the importance of springs for natural resource protection is a new requirement during this round of planning. We urge the planning group to identify springs that are "major springs" for purposes of natural resource protection, whether as discrete habitats or as sources of baseflows for surface streams, or to include information demonstrating that no springs meet that criterion. That analysis is necessary to comply with applicable requirements.

[9] (Page 1-38). Section 1.3 (c) Surface Water Quality. The information included here is outdated. TCEQ has issued two 303(d) lists since the 2000 list reproduced here. We urge the planning group to include the most recent information.

[10] (Page 1-55). Section 1.4 (e) Environmental Water Demands. We acknowledge and commend the planning group for including this brief acknowledgement of environmental water demands. Protection of environmental flows also is important for supporting the growing nature tourism industry in the area.

[11] (Page 1-57). Section 1.6 Threats to Agricultural and Natural Resources. Another threat to natural resources in the area is the potential loss of bottomland hardwood forests either as a result of direct inundation from new reservoirs or as a result of loss of out-of-bank flows as a result of the construction of new reservoirs upstream.

[12] (Page 1-58). Section 1.6 (c) Groundwater. It would be helpful to have more specific information about which aquifers have experienced water level declines and about the areas affected.

[13] (Page 1-60). Section 1.6 (g) Wetlands. Information is needed about specific wetlands in the region. Information should be provided about significant wetlands associated with specific seeps or springs and with rivers or streams because those are the wetlands with the greatest potential to be affected by water management decisions. Such information would provide a baseline against which to assess proposed water management strategies, including new reservoirs proposed for construction within the region. It also constitutes information needed to assess the implications of the plan for consistency with long-term protection of natural resources and to provide a meaningful quantitative evaluation of potentially feasible water management strategies.

CHAPTER 2: Population and Water Demand Projections

[14] Table 2.20 This Table is well-organized and generally provides clear information. However, it is not clear how the planning group's assumption about 115 gpcd was implemented in this Table. Was the base assumption for water use in 2000 adjusted upward or was an upward adjustment added at some future time increment?

[15] In addition, some explanation is needed for the representation in Table 2.20 that some water user groups would experience zero future savings as a result of implementation of the plumbing fixtures code and that others would experience extremely small savings over the next 55 years. Presumably, this results from the planning group's assumption of 115 gpcd as an absolute minimum use level. Water conservation technology has made significant advances in a short period of time. Additional advances are inevitable as a growing population places increasing demands on a limited resource. For example, federal efficiency standards for clothes washers will go into effect in 2007, lowering per person water use automatically as old washing machines are replaced. As a result of those continued efficiency improvements, a minimum usage rate of 115 gpcd that might seem reasonable today, or even for 2010, easily could be reduced by 2060 to a rate of 100 gpcd or lower. We urge the planning group to allow the effects of the application of technology to lower 2060 projected water use below 115 gpcd for individual municipal water user groups.

CHAPTER 3: Evaluation of Current Water Supplies in the Region

[16] (Page 3-6). Section 3.1 (c) Sulphur River Basin
It would be helpful to provide some explanation in Table 3.4, perhaps as a footnote, for the available supply for the Chapman/Cooper Lake/Reservoir North Texas MWD System going from 51,600 acre-feet in 2050 to 0 acre-feet in 2060.

[17] (Page 3-9). **Section 3.2 Groundwater Supplies**
In discussing an approach to groundwater availability determinations that simply sets available supply as being equal to existing pumping, the initially prepared plan characterizes the approach as being "considered conservative." Whether that approach is conservative or not, depends greatly on the level of existing pumping. As noted on pages 1-32, 1-33, and 7-2 of the plan, some areas in the region already have experienced water level declines. For those areas, this approach to availability determinations would not seem to be conservative.

[18] (Page 3-11). The planning group generally chose to set groundwater availability at a level that would result in the lesser of a 50-foot drawdown in aquifer level or of a 10% decline in saturated thickness. In instances when availability determined accordingly to those criteria was not sufficient to meet demands, the planning group chose to allow greater drawdowns. We did not find information indicating the extent of the predicted drawdowns in those areas where the availability determinations were increased.

[19] We urge the planning group to reconsider this planned-depletion approach. It is not consistent with long-term protection of the state's water resources, natural resources, and agricultural resources. The region has ample alternative sources of water. It is not necessary to plan to deplete groundwater sources. Declining water levels will adversely affect springs and seeps and the natural resources they support. We were unable to locate any discussion of the likely impact of groundwater pumping on springs, seeps, or on surface flows supported by springs and seeps. Section 357.7 (a)(8)(B) of the Board's rules requires a quantitative analysis of "groundwater surface water interrelationships." In addition, many small wells are shallow. Declining aquifer levels could cause those wells to go dry necessitating expensive efforts to deepen wells used to support small-scale livestock and domestic uses. We urge the planning group to include discussion of that issue.

[20] (Page 4-42). In discussing groundwater-based strategies, the initially prepared plan states: "for purposes of this planning effort the strategy of 'developing additional ground water supply' includes all available ground water aquifers in all applicable river basins in all applicable counties for a given WUG." We recognize the desire to provide individual WUGs with flexibility to make management decisions down the line. However, in the absence of reasonable predictability, the value of the planning process is seriously undermined. We do recognize that most of the identified needs for additional groundwater supply are small. However, we would urge the planning group to consider identifying one or two specific potential groundwater sources for each WUG, so that a reasonable quantitative analysis of overall impacts on aquifer levels can be undertaken in order to support the required assessment of consistency with long-term protection of the state's water resources, agricultural resources, and natural resources.

[21] (Pages 4-47 through 4-50). Tables 4.41 and 4.42 provide a handy snapshot of recommended water management strategies. We commend the planning group and consultants for including them. If it would not be too difficult, we would encourage the inclusion of a summary footnote giving more information about each recommended strategy for addressing the larger water needs, perhaps those in excess of 500 acre-feet.

[22] (Page 4-50). In the paragraph following Table 4.42, the environmental impacts associated with groundwater development are discussed. That discussion fails to acknowledge the potential impact of groundwater pumping on springs and seeps and associated natural resources. We would urge the planning group to acknowledge those potential impacts.

[23] (Page 4-51). Red River Redevelopment Authority. Some additional explanation is needed regarding the current status of water rights for Caney Creek Lake and Elliot Creek Lake and how they relate to the Red River Redevelopment Authority (RRRA). The discussion indicates that the lakes were built to support the Red River Army Depot's mission, but does not discuss the

existing status of water rights. Also, it does not appear that water conservation was evaluated as a potential water supply alternative. Whether the water use would be authorized pursuant to existing water rights permits or new permits, Section 11.1271 of the Water Code would apply. As a result, water conservation is a required water management strategy that must be evaluated and included. See 31 TAC § 357.7 (a)(7)(A)(i), (ii).

[24] (Pages 4-63, 4-64, 4-72, 4-73, 4-75, 4-76, 4-85, 4-86). City of Scottsville; City of Lindale; Crystal Systems Inc.; Lindale Rural WSC; City of Winona; Star Mountain WSC; City of Mineola; City of Yantis. For these eight water user groups (WUGs), the text on the listed pages indicates that water conservation was considered as an alternative water management strategy. However, for all except the City of Mineola there is no discussion of that evaluation or how the decision was made to select additional groundwater development as the recommended strategy over water conservation. A review of the information included in the appendix reveals what appears to be some erroneous cost information. From a review of the calculation sheets for these WUGs (Advanced Water Conservation Worksheets), it appears that the costs per acre-foot may have been inadvertently added for several measures (e.g. rebates for efficient washing machines) rather than being averaged (on a weighted basis) as we believe is appropriate.[3] For example, the average cost per acre-foot of conservation savings for the City of Scottsville, based on the information presented, appears to be $685 rather than the $2,412 that is reported. That unit cost also is more in line with costs calculated in other regional plans. This result seems only logical because the most expensive subset of conservation activities listed has a unit cost of $780 per acre-foot. It doesn't seem plausible that the inclusion of additional measures each of which has a lower unit cost would result in more than tripling the unit cost for conservation savings.

In the Table below we have presented what we believe are more accurate costs for advanced water conservation measures.[4] We urge the planning group to provide corrected cost estimates and to re-evaluate the recommended strategies accordingly.

Table IPP, D-1 Calculation of weighted average cost of advanced water conservation for several water user groups in the Region D IPP.

water user group	page of IPP	IPP presented cost of advanced water conservation ($/ac-ft)	weighted average cost of measures presented for advanced conservation ($/ac-ft)
City of Scottsville	4-63	2,412	685
City of Lindale	4-64	3,693	692
Crystal Systems Inc.	4-72	2,441	703
Lindale Rural WSC	4- 73	2,441	703
City of Winona	4-75	2,456	713
Star Mountain WSC.	4-76	2,441	703
City of Mineola	4-85	3,749	727
City of Yantis	4-86	2,478	726

[3] A simple analogy also may help to explain our position on why the unit cost should be calculated as a weighted average. Suppose, the goal is to obtain 2 pounds of meat and suppose chicken and beef cost $4 and $5 per pound, respectively. If you purchase one pound of each the total cost is $9, but the unit cost per pound of meat is the average for the two or $4.50. Here, "purchasing" differing amounts of savings through various water conservation measures would result in an overall unit cost that represents an average of the unit costs for the various measures.

[4] In this case we have weighted each conservation measure according to the amount of savings indicated in the relevant advanced water conservation worksheet for that measure.

[25] (Pages 4-63) City of Scottsville. The unit cost calculated for a new well is given as $332 per acre-foot. However, that cost is based on a well producing 65 acre-feet per year. If the unit cost is calculated based on the actual projected need of 7 acre-feet per year ($21,438.86 ÷ 7 = $3062.69), the water conservation option actually is much less expensive.

[26] (Page 4-75). City of Winona. The unit cost calculated for the purchase of groundwater is given as $1,124 per acre-foot. The projected need is 5 acre-feet in 2060. That need could be met through water conservation more cheaply than through the purchase of groundwater.

[27] (Page 4-85). The City of Mineola has a high per capita usage rate of 184 gpcd, which argues in favor of pursuing water conservation as a water management strategy.

[28] (Page 4-86). City of Yantis. The unit cost calculated for the development of groundwater is given as $578 per acre-foot based on the production of 38 acre-feet per year. The projected need is 18 acre-feet in 2060. Although water conservation alone is not projected to be adequate to meet the full need, it does appear to cost competitive on a per acre-foot basis when only the actual projected need is considered and the more appropriate cost of conservation of the above table is applied.

[29] (Page 4-80, 4-83). City of Canton; City of Grand Saline. The text on these respective pages indicates that water conservation was considered as an alternative water management strategy. The discussion suggests that water conservation was not chosen because “the projected savings is minimal in comparison to the predicted shortage and the cost of conservation is much higher than that of ground water.” Unfortunately, it appears that the Advanced Water Conservation Worksheet for these two WUGs was inadvertently left out of the initially prepared plan. So, the precise basis for those statements is not clear. However, there is no reason that water conservation should not be chosen simply because it would not be adequate to fully meet the need. Water conservation should be considered as a strategy for meeting a portion of the need. Again, because the worksheet is missing, the precise cost information is not available. However, based on what appears to be a consistent error made in calculating the costs for water conservation for the other WUGs discussed above, it seems virtually certain that the estimated cost for water conservation is overstated by a factor of 3 or more. As a result, water conservation may well be reasonably cost-competitive with the development of additional groundwater supplies.

In addition, these two WUGs, have very high water use rates, with the City of Canton at 238 gpcd and Grand Saline at 173 gpcd, which further supports strong consideration of water conservation as a recommended water management strategy. We urge the planning group to include the missing cost information and to re-evaluate the recommended strategies, accordingly.

[30] (Page 4-65). Able Springs WSC. A shortage of 143 acre-feet is predicted for 2060. The recommended supply strategy is the purchase of water from the Sabine River Authority that would be imported into the region from Toledo Bend Reservoir, which is further downstream in the same river basin. That may prove to be a good option. However, we were not able to locate any substantive evaluation of the project to import the water. Such an evaluation is required.

[31] Able Springs WSC is located in Hunt County. According to the table on page 4-34 of the IPP, Hunt County is projected to have a surplus of 19,502 acre-feet in 2060. A large part of that projected surplus (14,090 acre-feet) is held by the City of Greenville. Given the reasonably close proximity of the two entities, a voluntary transfer of water from the City of Greenville also appears to merit evaluation.

[32](Page 4-66). Cash WSC. A shortage of 3,121 acre-feet is predicted for 2060. The recommended supply strategy is the purchase of water from the Sabine River Authority that would be imported into the region from Toledo Bend Reservoir, which is further downstream in the same river basin. That may prove to be a good option. However, we were not able to locate any substantive evaluation of the project to import the water. Such an evaluation is required.

[33] Cash WSC is located primarily in Hunt County. According to the table on page 4-34 of the IPP, Hunt County is projected to have a surplus of 19,502 acre-feet in 2060. A large part of that projected surplus (14,090 acre-feet) is held by the City of Greenville. Given the reasonably close proximity of the two entities, a voluntary transfer of water from the City of Greenville also appears to merit evaluation.

[34] (Page 4-67). Combined Consumers WSC. A shortage of 3,477 acre-feet is predicted for 2060. The recommended supply strategy is the purchase of water from the Sabine River Authority that would be imported into the region from Toledo Bend Reservoir, which is further downstream in the same river basin. That may prove to be a good option. However, we were not able to locate any substantive evaluation of the project to import the water. Such an evaluation is required.

[35] Combined Consumers WSC is located primarily in Hunt County. According to the table on page 4-34 of the IPP, Hunt County is projected to have a surplus of 19,502 acre-feet in 2060. A large part of that projected surplus (14,090 acre-feet) is held by the City of Greenville. Given the reasonably close proximity of the two entities, a voluntary transfer of water from the City of Greenville also appears to merit evaluation.

[36] Omission from Chapter 4**:** As required by 357.7 (a)(7)(B) of TWDB's rules, drought management is a water management strategy that must be evaluated. That provision, along with Section 16.053 (h)(7)(B) also requires that drought management be included as a water management strategy for each entity required to prepare a drought management plan pursuant to Section 11.1272 of the Water Code.

Although the planning group may decide, provided it documents the basis for that decision, not to include drought management as a water management strategy *beyond* those measures specifically required by Section 11.1272, it must *at least* include the Section 11.1272 level of drought management as a water management strategy. SB2 made inclusion of drought management measures at least at the level required by Section 11.1272 a mandatory prerequisite for approval by TWDB of a regional water plan. See Tex. Water Code Ann. § 16.053 (h)(7)(B). The initially prepared plan does not comply with that requirement. For each entity required to

prepare a drought contingency plan pursuant to Section 11.1272, the water plan must include a water management strategy reflecting the drought period savings from that drought plan.

CHAPTER 5: Impacts of Water Management Strategies on Key Parameters …

Section 5.1 Impacts-Water Quality

[37] (Page 5-3). The potential for "overdrafting" of aquifers to cause water quality degradation is acknowledged. Given the decision of the planning group to allow for such overdrafting in the planning of management of groundwater, it is important that this issue be discussed in reasonable detail. Unfortunately, no such discussion is included in the plan.

[38] (Page 5-4). Most of the diversions noted in the table at the top of the page do suggest only very slight changes in reservoir levels. However, the proposed increase in diversions from Lake O' the Pines, which would equal over 26% of permitted yield, might have significant impacts on water quality. Some reasonable discussion of that potential is required.

[39] (Page 6-1). **Section 6.0 Introduction.** The text correctly notes that water conservation strategies must be included for each water user group to which Section 11.1271 of the Water Code applies. Unfortunately, the initially prepared plan fails to include such required strategies for various manufacturing and steam electric water uses supplied with surface water.

[40] (Page 6-1). The text states with respect to drought management that it must be <u>considered</u> for each identified need. That is correct. However, the text fails to note that drought management strategies must be <u>included</u> "for each user group to which Texas Water Code § 11.1272 applies." 31 TAC § 357.7 (a)(7)(B). From our review of the initially prepared plan, we were unable to find the required consideration of drought management as a water management strategy or the required inclusion of that strategy for uses of surface water to which Section 11.1272 applies. That is a significant shortcoming in the plan, particularly because the Texas Legislature made the inclusion of such drought management measures an essential prerequisite to TWDB approval of regional plans. See Tex. Water Code § 16.053 (h)(7)(B).

[41] (Page 6-1). Even if the region does have the "lowest per capita municipal use of any region in the state," wasteful use is still wasteful. At least those individual entities that have high per capita usage rates, and such entities do exist in the North East Texas Region, should implement water conservation programs. We urge the planning group to take a strong stand towards prompting those users to do just that.

[42] (Page 6-2). The first full paragraph on this page fails to acknowledge the decision of the planning group not to account for savings from implementation of the plumbing code requirements when the effect would be to drop gpcd rates below 115 even in 2060. As noted above, we urge the planning group to revisit that decision.

[43] (Page 6-3). As noted in our comments for the individual WUGs, the calculated unit costs for advanced water conservation appear to be in error and overstated by a factor of 3 or more.

[44] (Page 6-5). **Section 6.4 Water Conservation and Drought Management Recommendations**
We urge the planning group to consider a high water conservation goal. In particular, we urge the planning group to consider a statement similar to that included in the initially prepared plan of the South Central Texas Regional Water Planning Group (Region L), which establishes water efficiency goals as follows:

> "For municipal water user groups (WUGs) with water use of 140 gpcd and greater, reduction of per capita water use by 1 percent per year until the level of 140 gpcd is reached, after which, the rate of reduction of per capita water use is one-fourth percent (0.25) per year for the remainder of the planning period; and
>
> For municipal WUGs having year 2000 water use of less than 140 gpcd, reduction of per capita water use by one-fourth percent per year."

Initially Prepared 2006 South Central Texas Regional Water Plan at p. 6-1.

CHAPTER 7: Description of How the Regional Water Plan is Consistent with Long-Term Protection of the State's Water Resources, Agricultural Resources, and Natural Resources

[45] One of the key changes that SB2 made to the water planning process was to create a specific statutory criterion mandating that a regional water plan may not be approved by TWDB unless it is shown to be consistent with long-term protection of the state's water resources, agricultural resources, and natural resources.

[46] (Page 7-2). The text acknowledges that groundwater level declines have already occurred in the Carrizo-Wilcox Aquifer in Smith and Cass Counties. We are concerned that the proposed goal for groundwater management would allow for the lesser of a 50-foot drawdown in aquifer level or of a 10% decline in saturated thickness during the 50-year planning period. Those types of water level declines would not be sustainable long-term and likely would result in adverse impacts to springs, seeps, and to surface water supplies. In addition, the plan acknowledges that for some areas, unspecified water level declines in excess of those standards are expected.

[47] (Page 7-3). Here, the text describes the proposed groundwater management approach as being "based on the long-term sustainability of the aquifer." In our view, planning for groundwater level declines as acknowledged here is not sustainable for the long-term. People should be able to rely on our groundwater aquifers without significant decline for the foreseeable future. The last sentence of the first paragraph states that "[n]o strategies are recommended to use water above the acceptable sustainable level." However, that statement seems to be directly contrary to the discussion on page 3-10 which acknowledges that in instances when availability determined accordingly to those criteria was not sufficient to meet demands, the planning group chose to allow greater water level declines. We believe further analysis is needed to demonstrate consistency with long-term protection of the state's water resources.

[48] (Page 7-3). **Section 7.3 Consistency with Protection of Agricultural Resources**
The single sentence included in this section addresses the availability of water for irrigation demands. However, agricultural resources involve much more than just irrigation. For example, groundwater level declines can adversely affect agricultural operations, particularly those that rely on shallow wells to meet domestic needs or water livestock. Similarly, declines in water levels in aquifers or declines in surface flows can adversely affect agricultural operations that rely on surface flows as a source of livestock water. In addition, reservoir projects can adversely affect agricultural operations through loss of land for timber or crop production. This analysis should be expanded to address those issues because the current discussion is not adequate to support a finding of consistency with long-term protection of agricultural resources. We acknowledge the thoughtful discussion of the potential impacts of the Marvin Nichols Reservoir on agricultural resources and natural resources that occurs later in this chapter. That discussion serves as an example of the type of issues that should be considered here.

[49] (Page 7-3). **Section 7.4 Consistency with Protection of Natural Resources**
Key issues that could affect natural resources include loss or reduction in springflows or surface flows. As noted elsewhere in these comments, we believe additional discussion is required about the impacts of groundwater pumping on springs, seeps, and surface streams. Similarly, information is needed about changes in surface flows that would be expected as a result of activities like development of the Prairie Creek Reservoir. Similarly, discussion is required about the impact on timber resources and the wildlife habitat, especially bottomland hardwood forest and other wetland habitats, expected from that reservoir. As a result, the information included in the initially prepared plan is not adequate to support a finding of long-term consistency with protection of the state's natural resources.

[50] (Page 7-9) **Section 7.6 Marvin Nichols I Reservoir and Impacts on Water Resources, Agricultural Resources and Natural Resources.**
This section includes valuable information about the potential impacts of the Marvin Nichols I Reservoir. It serves as a good example of the type of information needed to assess consistency of water management strategies with long-term protection.

CHAPTER 8: Recommendations Including Unique Stream Segments, Unique Reservoir Sites, and Legislative and Regional Policy Issues

Section 8.1 Legislative Designation of Ecologically Unique Stream Segments
[51] (Page 8-1). We are disappointed that the planning group has again chosen not to recommend the designation of any ecologically unique stream segments. We believe the legislature has made the limited implication of such designations very clear. However, we do appreciate the thoughtful discussion of the issue provided in the initially prepared plan.

Section 8.2.5 Recommendations for Unique Reservoir Site Identification, Development and Reservoir Site Preservation
[52] (Page 8-36). We support the decision of the planning group not to recommend designation of unique reservoir sites. In particular, we support the explicit recognition of the need to involve affected landowners in the process that could lead to having their property included within an area officially designated as a site for a reservoir. We believe landowners would be more directly

affected by a unique reservoir site designation than by a unique stream segment designation and must be given an opportunity for meaningful participation.

[53] (Page 8-37). The endorsement of the development of the Prairie Creek Reservoir, at this juncture, is at odds with the basic concepts adopted by the planning group regarding reservoir construction. The second sentence in the second last paragraph indicates that the Reservoir would enable the Sabine River Authority to supply "projected future manufacturing needs in Harrison County." We were unable to locate information in the plan identifying such future needs. In fact, on page 4-32 of the plan, a water supply surplus of over 27,000 acre-feet is identified for Harrison County in 2060. In addition, we were not able to locate the required evaluation of the development of Prairie Creek Reservoir as a water management strategy. There is a general discussion of the potential reservoir site, at pages 8-28 and 8-29, but it does not provide the level of analysis required for evaluation of water management strategies.

Thank you for your consideration of these comments and please feel 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: Virginia Towles, TWDB
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