November 7, 2005

John W. Grant
Region F Water Planning Group
c/o Colorado Municipal Water District
P.O. Box 869
Big Spring, Texas 79721

Re: Comments on Initially Prepared 2006 Regional Water Plan for Region F

Dear Mr. Grant and 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 Regional Water Plan for Region F. 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 a better plan for all residents of Region F and for all Texans.

We do recognize that the draft Plan 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 draft Plan for Region F. 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 (SB1, SB2), 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 reasonable 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 that likely will produce more controversy than water supply.

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 SB2 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. Key principles that inform our comments are summarized below, followed by specific comments keyed to different aspects of 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 SB2 and TWDB rules since the first round of planning mandate strengthened consideration of water efficiency. 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 SB2, along with the TWDB guidelines, establishes 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 § 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 governed by 31 TAC § 357.7 (a)(7)(C).

While we commend the group for their attention to conservation in this plan, there is still more room for improved water efficiency. For example, the average municipal per capita water use for the Region, which is estimated to be 205 gallons per capita per day (gpcd) in 2010, is projected to decrease only to 194 gpcd in 2060. This is much higher than the projected statewide average of 162 gpcd and the recommended target level of 140 gpcd by the Water Conservation Implementation Task Force.

[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.

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 vast sums of money to develop new supply sources simply to meet those nonessential demands during rare drought periods.

C. Plan to Ensure Environmental Flows

Although critically important, designing and selecting new water management strategies that minimize adverse impacts on environmental flows is only one aspect of planning to meet environmental flow needs. 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 additional impacts. 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.

In addition, we believe that environmental flows should be recognized as a water demand and plans should seek to provide reasonable levels of environmental flows. As an example, we would note that the initially prepared plan for the Lower Colorado Region (Region K) does include such recognition of environmental flows as a water demand. Environmental flows provide critical economic and ecological services that must be maintained to ensure consistency with long-term protection of water resources and natural 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. 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.

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 applaud the planning group's general recommendation of balancing groundwater pumping with recharge. However, we remain concerned about availability determinations in some areas that rely on depletion of aquifer storage.

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[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).

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 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. Section 16.053 (e)(5)(I) 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.

We commend the group on their attention to voluntary transfers and redistribution scenarios to help meet anticipated water demands.

III. PAGE-SPECIFIC COMMENTS

For ease of tracking, we have identified our individual comments with a number enclosed in brackets.

EXECUTIVE SUMMARY

ES.1.3 Current Sources of Water

[1] Page ES-4: We commend the planning group for acknowledging the significance of numerous springs in the area that are important for water supply and natural resource protection.

ES.2.2 Demand Projections

[2] Page ES-4: Region F has a 35% increase in total projected water use from 2000 to 2010. The initially prepared plan (IPP) indicates that this is a result of the year 2000 water use data being inaccurate due to drought and low crop prices. This is a drought-based planning exercise. If usage was reduced in 2000 due to drought, it seems that a recurrence of drought conditions in 2010, 2020, or beyond also would result in a reduction in irrigation usage. Some additional explanation should be provided about why it is appropriate to assume that irrigation use during future droughts would exceed irrigation use during the current drought to this extent.

ES.3.1 Conservation and Reuse
[3] Page ES-7: We strongly support water conservation efforts. We believe that significant additional savings can be achieved in particular through additional water efficiency measures for municipal water use. The second sentence in this paragraph indicates a potential savings of 115,000 acre-feet by 2060. However, Table ES-1 and Chapter 6 seem to indicate recommendations for only 91,000 acre-feet of savings. We assume that the additional 24,000 acre-feet of savings may result from alternative electrical generation technology. At any rate, additional explanation should be provided to explain this apparent discrepancy.

ES.3.2 Recommended Water Management Strategies
[4] Page ES-8, Table ES-1: The Alternative Electrical Generation Technology has an extremely high cost associated with it. Two points should be considered here. First, it seems that this is the cost for developing new facilities that do not require additional water supplies. However, additional capital costs likely would be incurred even for expanding traditional generating capacity. As a result, it does not seem appropriate to count the full cost of the new facilities as being attributed to replacing water supplies. Thus, we believe some partitioning of these costs to reflect the incremental cost due to replacing water supplies may be appropriate. Second, the cost figures in this Table are almost 3 times more than the figures listed in Table 4.5-6. The reason for that difference is not apparent.

CHAPTER 1: DESCRIPTION OF REGION

1.1.2 Water-related Physical Features in Region F
[5] We appreciate the inclusion of Figures 1-8 and 1-9 which provide useful information about streamflow patterns in the region.

1.2 Current Water Uses and Demand Centers in Region F
[6] Page 1-19, 2nd paragraph: We commend the group on acknowledging the importance of water for recreational activities and for the health of fish and wildlife. We believe the health of those fish and wildlife resources also is important to economic activities in the region. Hunting, fishing, and nature-based tourism are increasingly important activities through much of rural Texas. As recognized by TWDB's rules, 31 TAC § 357.7(a)(1)(G), the health of businesses of those types, which are dependent on natural water resources (such as springs, streams, and lakes), are to be considered in the planning process. More can certainly be done in this respect, such as including recreation and instream flow uses as water needs to be planned for. We encourage the planning group to include these as water use categories and assess the extent to which those important needs can be met in the future.

1.3.3 Springs in Region F
[7] Pages 1-38 through 1-43: We commend the planning group and consultants for an excellent job in listing, describing and mapping the major springs in the region. As time and resources allow, it would be helpful to include more detail as to the current use of the springs by area wildlife, currents threats, if any, to individual springs, and, if possible, a forecast for the future. If the information is available, it also would be helpful to have additional discussion about the aquifer formations supplying the springs and about whether a groundwater district exists with authority to manage those aquifers. Finally, as time and resources permit, it also would be helpful to have information about lesser springs and seeps that nonetheless cumulatively serve important roles in maintaining surface flows or natural resources in the area. For example, on

page 1-67 there is a reference to springs and seeps contributing to the flow of the Concho River near Paint Rock.

1.4 Agricultural and Natural Resources in Region F

1.4.1 Endangered and Threatened Species

[8] Page 1-43: The description of natural resources in the region is incomplete. Simply listing threatened, endangered, and species of concern leaves a lot of species out. Many other species are economically important in the region. In particular, species that support hunting, fishing, and tourism merit discussion. Particular attention is appropriate for species that are dependent on surface water and springs. Key water-dependent habitats also should be acknowledged. For example, significant wetland areas should be acknowledged. They represent resources they could be significantly affected by water management decisions.

1.8 Water-Related Threats to Agricultural and Natural Resources in Region F

[9] Page 1-70: While it may be true, as the last sentence on this page states, that in most cases groundwater supplies have little effect on natural resources, there are many cases in which groundwater supplies do significantly affect natural resources through springs and seeps. In water-short areas of the state, such springs and seeps can be extremely important components of natural habitats.

1.8.2 Water Related Threats to Natural Resources

[10] Page 1-71: In addition to increases in certain types of brush, other changes such as loss of native grasses and other plant cover from other causes also may be contributing to changes from natural hydrological patterns.

CHAPTER 2: CURRENT AND PROJECTED POPULATION AND WATER DEMAND DATA FOR THE REGION

2.2 Population Projections

[11] Page 2.5, 2nd paragraph: This paragraph states that the counties in the eastern portion of Region F are seeing an influx of non-resident population from other parts of the state and that these people and their resulting water demand are not included in the TWDB approved projections. More information about this development would be useful here. Is this an influx of new permanent residents or primarily of folks with weekend homes in the area? It is not obvious why this population would not be reflected in census data and resulting population projections.

2.3 Historical and Projected Water Demands

[12] Page 2-5: Two categories that can be included in this section (they are not required by the TWDB) are Recreational and Environmental water demands. These two uses are important to this region and the state and should be planned for as important water uses.

2.3.1 Municipal Water Demand Projections

[13] Page 2-10: It would be useful to include a Table showing gpcd water use by WUG and by decade in conjunction with this section or in the appendix. It is helpful to have these data for reference purposes. In particular, the information is useful for helping the public to appreciate the potential for water savings through efficient plumbing fixtures.

[14] Page 2-11: The footnote to Table 2-4 referenced by an asterisk "*" is pretty difficult to understand. Further explanation of that adjustment would be helpful.

[15] Page 2-13: This section includes Table 2-6 "Expected Savings from Implementation of Plumbing Code for Region F Counties." This is useful information to include.

[16] Page 2-14: As noted above, the fact that irrigation water use was down because of drought conditions in 2000 does not seem like a good reason to reject those figures as the basis for predicting drought-year irrigation demand. If usage was reduced in 2000 due to drought, it seems that a recurrence of drought conditions in 2010, 2020, or beyond also would result in a reduction in irrigation usage. Because the planning process is a drought-based planning exercise, it seems appropriate to consider such drought-year demands in making projections. Based on Figure 2-5, the projected demands seem quite high in comparison to recent average use. Similarly, in looking at Table 1-9, surface water use for irrigation in 2000 does not appear to be out of proportion to surface water use for irrigation in other recent years.

2.3.4 Steam Electric Power Generation

[17] **Page 2-19**: We acknowledge that these projections came from TWDB. However, they seem quite high. Population in the region is only projected to grow about 17% from 2010 to 2060 and manufacturing demand in the region, which is small to begin with, is only projected to grow about 36% over that same period. These are the categories that are most likely to drive demands for electricity. By contrast, water demands for electrical generation are projected to grow by 98%. That level of projected increase in steam electric generation demand seems unjustified.

CHAPTER 3: WATER SUPPLY ANALYSIS

3.1 Existing Groundwater Supplies

[18] Page 3-2: The plan states that the availability volumes listed in Table 3-1 represent an acceptable level of aquifer withdrawal in each county based on policy decisions that attempt to maintain water levels in the aquifers at desired levels. It also states for the counties not governed by a groundwater district, aquifer availability is based on historical use trends. It seems that continuation of historical trends may not necessarily be consistent with achieving a desired future state for aquifer levels. It would be helpful if Figure 3.2 identified which counties fall under this last scenario with availability determinations based on historical use trends. It also would be helpful if the major springs, shown on Figure 1-18, could be depicted in Figure 3.2 and in the figures depicting the various aquifers that supply those springs.

[19] Page 3-2: The plan states that throughout much of the region, the desire is to maintain aquifers such that springflow and associated base flow to rivers and streams are protected. We believe that is an extremely important goal for ensuring that water planning and management are consistent with long-term protection of the region's and the state's natural resources, water resources, and agricultural resources.

[20] Unfortunately, it appears that the groundwater conservation district management policies in many of the counties in the region are not designed to ensure such long-term protection and, instead, allow for the planned depletion of stored groundwater reserves. We urge the planning group to include information, to the extent it is available, on how those different management policies would be expected to affect aquifer levels and outflows from the aquifers such as springs

and baseflow in the region. One of the key functions of the planning process is to help assure informed decision-making. Including this information would help inform the public about the implications of the decisions made. For example, for areas with policies likely to result in predicted water level declines, information about the implications of those policies might help to build support for conservation measures designed to help bring water use inline with recharge so as to minimize use of stored aquifer reserves.

[21] Page 3-2: The last sentence on this page notes that recharge figures for most aquifers were carried over from the 2001 water plan. It would be helpful to include here a brief summary of the original bases for those recharge calculations.

[22] Page 3-3: In Table 3-1, it is not clear whether the "annual recharge" heading refers to average annual recharge or to drought recharge.

[23] Page 3-8: We appreciate the inclusion of representative well hydrographs. They provide a very helpful visualization of water level trends.

3.2 Existing Surface Water Supplies

[24] Pages 3-32 through 3-35: It seems appropriate to use the WAM models as the starting point for the depiction of water availability as long as the WAMs accurately reflect existing water rights. We express no opinion on the specifics of how the rights are reflected. Adjustments to the WAM outputs as a result of understandings or agreements not reflected in the underlying rights then should be explicitly acknowledged. That seems to be the best way to ensure informed decisions and clear understandings. It seems preferable to have discussions now about the issues of water rights priorities rather than to have those discussions occur during a water supply crisis.

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

[25] General Comment Regarding the Absence of the Required Quantitative Environmental Analysis of Water Management Strategies: TWDB rules require a quantitative environmental analysis of potentially feasible water management strategies considered by the planning group. 31 TAC § 357.7 (a)(8)(A)(ii). Based on a review of the initially prepared plan, that required quantitative analysis is missing. Short, qualitative descriptions of environmental issues have been included with the discussion of each strategy. Although we appreciate the attempt to acknowledge a broad scope of issues, these qualitative descriptions do not provide the level of quantitative review that is needed for well-informed decisions. We also recognize that, as a result of changes to the Colorado Basin WAM, the ability to perform quantitative analyses is limited. We believe that unless the required analyses can be performed now, the recommendations of major surface water strategies must be qualified by expressly making them contingent on later review and approval by the planning group after completion of required quantitative reviews. That seems to be the only way to come close to complying with the requirement for quantitative analyses and the requirement to demonstrate that the strategies are consistent with long-term protection of the state's natural resources, water resources, and agricultural resources.

4.2.3 Subordination of Downstream Water Rights

[26] Page 4-12: In general, we agree with the approach used by Region F in presenting this strategy. Explicit discussion of the need for a water management strategy in the form of subordination arrangements ensures that the issues are clearly acknowledged. We believe that is very preferable to having them embedded in assumptions underlying the WAM. Very few readers could be expected to appreciate the significance of the issues in the absence of the type of clear discussion provided in the initially prepared plan.

[27] Page 4-14: The text indicates that all of the yields presented "have been adjusted to account for reduced yield due to drought conditions that have occurred since 1998." We do agree that it is appropriate to attempt to take the more recent hydrological data into account. However, more explanation is needed about the extent of those adjustments and about the validity of the manner in which they were calculated.

The text goes on to refer to Appendix 4E as providing information about those adjustments. Appendix 4E does provide information about differences between two new firm yield calculations. The comparison starts with an abbreviated "Firm Yield Natural Order 1940-1998" calculation and compares that to a "Firm Yield Natural Order 1940-2004" calculation. A total reduction in yield of 29,640 acre-feet between the two hypothetical yield figures is calculated. However, we were not able to locate a clear listing or statement of what adjustments actually were made. An adjustment of 29,640 acre-feet would not seem to be appropriate because the starting point for this comparison, "Firm Yield Natural Order 1940-1998," appears to overstate the calculated yield even when compared to the yield figures from the 2001 Region F Water Plan and likely overstates yield when compared to the Colorado WAM (even with subordination assumptions). The 2001 Water Plan total for these reservoirs is 197,355, but the total listed in Table 4E-1, using the 1940-1998 data, is 207,700. Thus, although the difference in the yield totals for the two hypothetical runs is 29,640, making that amount of adjustment likely would overstate the absolute yield impact of the recent conditions under application of the prior appropriation doctrine. In addition, safe yield amounts are used for planning rather than firm yield amounts. At any rate, we believe additional explanation is needed about the specific adjustments made and the rationale for those specific adjustments.

[28] Page 4-16: We appreciate the complexity of estimating a cost for this strategy. Contrary to the second-last sentence on this page, we do not believe that the still-to-be-completed estimate of socio-economic impacts of water shortages in Region F is likely to provide sufficient information for preparing such an estimate. Rather, it seems that information is particularly needed about how the strategy might affect water availability in Region K because that is likely to influence required payments. Accordingly, we would urge further discussion of how costs for this strategy might be estimated.

[29] Page 4-17: The last sentence of the second paragraph asserts that a comparison of stream flows with and without subordination would not be meaningful in the upper basin because the "without subordination" scenario is not realistic, considering historical operations. As noted in our previous letter of June 2004, we believe stream flow assessments should consider changes from some reasonable baseline condition that allows meaningful judgments to be made about ecological impacts. "Current conditions" is one such baseline that could be used. For example, stream flows predicted with 2060 water use and subordination could be compared to "current

conditions" streamflows and to 2060 water conditions without subordination.[3] In addition to performing quantitative assessments of individual strategies, we also believe that it is critical to provide streamflow assessments of the overall plan as part of the assessment of consistency with long-term protection of the state's natural resources, water resources, and agricultural resources. Unfortunately, no such assessment has been done. That issue is discussed further in our comments on Chapter 7.

4.3.1 City of Ballinger

[30] Page 4-30: The cross-reference to Section 4.8.2 for a discussion of the potential impacts of the regional desalination facility should be changed to Section 4.8.3.

[31] Page 4-32: The issue of impacts of reuse on environmental flows must be acknowledged and discussed. Reuse of a portion of the discharge would have the effect of reducing flows in the receiving stream below the discharge.

[32] Page 4-33: The discussion here refers to the "Region F recommended conservation strategies." There is no reference to a specific listing or discussion of those recommended strategies. On page 6-4 of the initially prepared plan, there is a very brief listing of three points as "the focus of the conservation activities for municipal users in Region F." In addition, at the top of page 6-5 there is language indicating that "savings for passive implementation of water-efficient clothes washers" also were included. Additional discussion of these concepts and the process for calculating potential savings is needed in order to provide a reasonable understanding of the conservation recommendations in the plan. We believe a clear understanding is essential to help WUGs develop water conservation plans.

[33] Page 4-34: Drought Management is required to be considered and evaluated as a water management strategy by the water planning group and must be included at least at the levels required by Section 11.1272 of the Water Code. See 31 TAC § 357.7 (a)(7)(B). The savings gained through implementation of the city's drought management plan should be quantified and included as a water management strategy. Information about the savings that have been realized through recent experience would provide valuable insight. Drought management has the potential to provide savings during those short-term periods that the supply of water is most limited.

[34] Pages 4-35 through 4-36: The conservation recommendations reflect a reasonable amount of savings at reasonable costs. Even at the 2060 estimated per capita usage rate of 155 gpcd, significant additional savings are possible as is illustrated by the success of the City of San Antonio in reducing per capita usage to below 140 gpcd.

[35] Page 4-36, Table 4.3-8: What is the rationale for including the rows "Surplus (Need) without conservation" and "Surplus (Need) with conservation" in this table? Those rows suggest that conservation has a lesser status than the other recommendations.

[3] It is not clear if "historical operations" assumptions would be appropriate when undertaking modeling to assess projected 2060 demands. Adjustments to historical operations might have to be made in order to provide the required yield.

4.3.2 City of Winters

[36] Page 4-43: The issue of impacts of reuse on environmental flows must be acknowledged and discussed. Reuse of a portion of the discharge component of the City's effluent would have the effect of reducing flows in the receiving stream below the discharge.

[37] Page 4-45, Drought Management: Drought Management is required to be considered and evaluated as a water management strategy by the water planning group and must be included at least at the levels required by Section 11.1272 of the Water Code. See 31 TAC § 357.7 (a)(7)(B). The savings gained through implementation of the city's drought management plan should be quantified and included as a water management strategy. Information about the savings that have been realized through recent experience would provide valuable insight. Drought management has the potential to provide savings during those short-term periods that the supply of water is most limited. From the per capita water use indicated in the "No Conservation" row in Table 4.3-15 for 2000, it appears that a combination of water conservation and drought management measures have greatly limited water use. Although it is possible that not all of the measures used in 2000 would be desirable for use during future droughts, the effectiveness of drought management should be acknowledged. Drought management also might prove to be more affordable than other strategies because it is implemented only when it is needed. More discussion of drought management is needed.

[38] Page 4-45, Recommended Strategies: Conservation should be added to the recommended strategies discussed here. Also, as noted above, drought management should be included. The planning group has recommended that the City of Winters use reuse as a strategy to increase the reliability of their water supply. Conservation is projected to save 76 acre-feet/year by 2060 and is less expensive than reuse. In fact, Table 4.3-16 shows that the City of Winters could meet its needs with subordination only and then use conservation as a safety buffer. An aggressive conservation program coupled with drought management could save even more water.

[39] Page 4-46, Table 4.3-15: More information is needed about the measures undertaken by the City to reduce per capita water use to 102 gpcd. Some of those measures might well be water conservation measures that would reasonably be expected to continue in effect in the future.

[40] Page 4-47, Table 4.3-16: What is the rationale for including the rows "Surplus (Need) without conservation" and "Surplus (Need) with conservation" in this table? Those rows suggest that conservation has a lesser status than the other recommendations. That seems particularly inappropriate here because conservation is shown to be much more cost effective than reuse.

4.3.3 City of Bronte

[41] Page 4-58, Table 4.3-24: Some explanation is needed regarding the varying Year 2000 per capita usage rates. The Region F estimate of gpcd for 2000 is given as 208. That figure appears to be the starting point for calculations of conservation savings, and, presumably, estimated demands. However, that figure is significantly higher than the 192 gpcd figure otherwise shown as the year 2000 water use projection. That 192 gpcd figure for 2000 then is shown as increasing to 208 gpcd in 2010 in the absence of conservation.

[42] Page 4-59, Drought Management: Drought Management is required to be considered and evaluated as a water management strategy by the water planning group and must be included at least at the levels required by Section 11.1272 of the Water Code. See 31 TAC § 357.7 (a)(7)(B).

The savings gained through implementation of the city's drought management plan should be quantified and included as a water management strategy. Information about the savings that have been realized through recent experience would provide valuable insight. Drought management has the potential to provide savings during those short-term periods that the supply of water is most limited. From the per capita water use indicated in Table 4.3-24 for 2000, it appears that drought management measures may have been effective in reducing water use. Drought management also might prove to be more affordable than other strategies because it is implemented only when it is needed. More discussion of drought management should be provided.

[43] Page 4-59, Table 4.3-25: What is the rationale for including the rows "Surplus (Need) without conservation" and "Surplus (Need) with conservation" in this table? Those rows suggest that conservation has a lesser status than the other recommendations. That seems particularly inappropriate here because conservation is shown to be much more cost effective and to have lower capital costs than new water wells.

4.3.4 City of Robert Lee

[44] Page 4-71, Drought Management: Drought Management is required to be considered and evaluated as a water management strategy by the water planning group and must be included at least at the levels required by Section 11.1272 of the Water Code. See 31 TAC § 357.7 (a)(7)(B). The savings gained through implementation of the city's drought management plan should be quantified and included as a water management strategy. Information about the savings that have been realized through recent experience would provide valuable insight. Drought management has the potential to provide savings during those short-term periods that the supply of water is most limited. Drought management also might prove to be more affordable than other strategies because it is implemented only when it is needed. More discussion of drought management should be provided.

[45] Page 4-71, Water Conservation and Table 4.3-34: The gpcd for the City of Robert Lee is very high, even for 2060. As a result, the potential for conservation is likely much higher than is shown here. The City of San Antonio has reduced per capita usage to below 140 gpcd. For an area with little water and financial resources, conservation is the most logical place to look for additional water supplies.

[46] Page 4-71, Recommended Strategies for the City of Robert Lee: The strategies listed here do not match those shown in Table 4.3-35. The strategies included in Table 4.3-36 don't seem to match Table 4.3-35 or the discussion on page 4-71.

[47] Page 4-73, Table 4.3-35: Why is "Surplus (Need) without conservation" and "Surplus (Need) with conservation" shown in this table if conservation is a recommended strategy for this WUG? It does not make sense to show this information with and without conservation if it is a strategy that has been recommended by the planning group. This way of presenting the information could create confusion.

4.3.5 City of Menard

[48] Page 4-77, Drought Management: Drought Management is required to be considered and evaluated as a water management strategy by the water planning group and must be included at least at the levels required by Section 11.1272 of the Water Code. See 31 TAC § 357.7 (a)(7)(B).

The savings gained through implementation of the city's drought management plan should be quantified and included as a water management strategy. Information about the savings that have been realized through recent experience would provide valuable insight. Drought management has the potential to provide savings during those short-term periods that the supply of water is most limited. Drought management also might prove to be more affordable than other strategies because it is implemented only when it is needed. As noted here, the City of Menard has successfully used drought management in the past as a method for limiting water demands. It would be useful to include information about the specific approaches used. More discussion of drought management should be provided.

[49] Page 4-83, Table 4.3-42: Why is "Surplus (Need) without conservation" and "Surplus (Need) with conservation" shown in this table if conservation is a recommended strategy for this WUG? It does not make sense to show this information with and without conservation if it is a strategy that has been recommended by the planning group. This way of presenting the information could create confusion.

4.3.6 City of Midland

[50] Page 4-89, Table 4.3-46: This table shows that Midland's gpcd would be reduced from 262 to 220 gpcd by 2060 through conservation measures. This is a good beginning. Fortunately, much more progress is possible. This would still leave Midland among cities with the highest use rates in the state. It also would represent a substantial increase in per capita use over the projections from the last round of planning in which Midland was in the top 10 water use ranking of the State Water Plan with a projected usage rate of 205 gpcd in 2050.[4] As illustrated by the success of the City of San Antonio, which has reduced per capita water use to less than 140 gpcd, a lot of additional potential savings likely could be realized for the City of Midland. Water in the Midland area is scarce and expensive to develop. Groundwater supplies are being depleted in the area. Ramping up water conservation efforts could save the citizens a considerable amount of money in the future by delaying or eliminating the need for more expensive water supply projects and could help to ensure a long-term water supply for the area.

[51] Page 4-90: Drought Management is required to be considered and evaluated as a water management strategy by the water planning group and must be included at least at the levels required by Section 11.1272 of the Water Code. See 31 TAC § 357.7 (a)(7)(B). Drought management has the potential to provide savings during those short-term periods that the supply of water is most limited. Drought management also might prove to be more affordable than other strategies because it is implemented only when it is needed. More discussion of drought management should be provided.

[52] Page 4-91, Table 4.3-47: Why is "Surplus (Need) without conservation" and "Surplus (Need) with conservation" shown in this table if conservation is a recommended strategy for this WUG? It does not make sense to show this information with and without conservation if it is a strategy that has been recommended by the planning group. This way of presenting the information could create confusion.

[4] Texas Water Development Board, *Water for Texas – 2002*, page 33.

4.3.7 Brown County Other

[53] Page 4-94, Water Conservation and Drought Management: Both water conservation and drought management are required water management strategies and must be evaluated. According to the discussion on page 4-91, water supply corporations provide most of the water in the area. Those entities could coordinate water conservation and drought management efforts.

4.3.8 City of Coleman

[54] Page 4-98, Table 4.3-53: This table shows the City of Coleman's per capita usage going from 177 in 2000 to 229 in 2010. The rationale for that projected increase must be provided and supported. The figures included here do not match those given on page 4-97. That discussion indicates that current per capita usage rates are at 145 gpcd. Those huge differences must be explained. Table 4.3-53 shows a reduction of 33 gpcd in usage rates from 2000 to 2060 through conservation measures, including savings from the plumbing fixtures code. Assuming, an appropriate starting point for the calculation, this is a good beginning but the overall per capita usage rate still would be a very high 196 gpcd. Fortunately, much more progress is possible. As illustrated by the City of San Antonio, which has reduced per capita water use to less than 140 gpcd, a lot of additional potential savings, beyond those shown here likely could be realized for the City of Coleman.

[55] Page 4-98, Drought Management: Drought Management is required to be considered and evaluated as a water management strategy by the water planning group and must be included at least at the levels required by Section 11.1272 of the Water Code. See 31 TAC § 357.7 (a)(7)(B). Drought management has the potential to provide savings during those short-term periods that the supply of water is most limited. As noted in the very brief discussion, the City of Coleman has successfully relied on drought management in the past to limit demands. Drought management also might prove to be more affordable than other strategies because it is implemented only when it is needed. More discussion of drought management should be provided.

[56] Page 4-99, Table 4.3-54: What is the rationale for including the rows "Surplus (Need) without conservation" and "Surplus (Need) with conservation" in this table? Those rows suggest that conservation has a lesser status than the other recommendation.

4.3.9 City of Brady

[57] Page 4-103 and Table 4.3-58: The per capita usage rate shown for the City of Brady is extremely high. Table 4.3-58 shows the City's per capita usage rate going from 303 in 2000 to 251 in 2060. However, the text on page 4-102 indicates that the most current usage rate is 215 gpcd. The basis for using the year 2000 figure of 303 gpcd as the starting point for the calculations, rather than the 215 gpcd figure, must be explained and supported. Table 4.3-58 shows a reduction of 52 gpcd in usage rates from 2000 to 2060 through conservation measures, including savings from the plumbing fixtures code. Assuming, an appropriate starting point for the calculation, this is a good start but the overall per capita usage rate still would be an extremely high 251 gpcd. That 2060 projection also is much higher than the apparent current usage rate of 215 gpcd. Fifty-years of conservation efforts reasonably could be expected to achieve better results. Fortunately, much more progress is possible. As illustrated by the success of the City of San Antonio, which has reduced per capita water use to less than 140 gpcd, a lot of additional potential savings, beyond those shown here likely could be realized for the City of Brady.

[58] Page 4-103 through 4-104: Drought Management is required to be considered and evaluated as a water management strategy by the water planning group and must be included at least at the levels required by Section 11.1272 of the Water Code. See 31 TAC § 357.7 (a)(7)(B). Drought management has the potential to provide savings during those short-term periods that the supply of water is most limited. As noted in the very brief discussion, the City of Brady has successfully relied on drought management in the past to limit demands. Drought management also might prove to be more affordable than other strategies because it is implemented only when it is needed. More discussion of drought management should be provided.

[59] Page 4-104, Table 4.3-59: What is the rationale for including the rows "Surplus (Need) without conservation" and "Surplus (Need) with conservation" in this table? Those rows suggest that conservation has a lesser status than the other recommendations.

4.4 Manufacturing Needs

[60] Page 4-129: Although we appreciate that it is difficult to do detailed analyses of industrial water conservation measures, it should be possible to do a reasonable assessment for major water user groups. TWDB rules require consideration of water conservation for all water users with needs. See 31 TAC § 357.7 (a)(7)(A)(i), (ii).

4.5 Steam-Electric Power Needs

[61] Page 4-134, Table 4.5-4: The projections of demands for steam electric generation seem unduly high. Population in the region is only projected to grow about 17% from 2010 to 2060 and manufacturing demand in the region, which is small to begin with, is only projected to grow about 36% over that same period. These are the categories that are most likely to drive demands for electricity. By contrast, water demands for electrical generation are projected to grow by 98%. That level of projected increase in steam electric generation demand seems unjustified.

4.6 Irrigation Needs

[62] Page 4-141: We commend the planning group for including this information about potential water savings from improved irrigation efficiencies and for the recognition of the need to use advanced conservation to help conserve supplies throughout the region.

[63] Page 4-148: The calculated application rate for drip irrigation listed in the second sentence on this page appears to be incorrect. Given the higher efficiency rate, the application rate for drip irrigation should be less than the 9.6 acre-inches calculated for furrow irrigation.

4.8.1 Colorado River Municipal Water District

[64] Page 4-165: In the discussion of issues associated with the Winkler County Well Field, some information is needed about how the projected annual withdrawal of 6,000 acre-feet will impact the associated aquifer water levels over the planning horizon.

[65] Page 4-170, Environmental Issues Associated with Water from Roberts County: There are issues regarding potential loss of spring flows in Roberts County, including springs that supply a portion of the baseflow of the Canadian River. [5] The Arkansas River Shiner is listed as a

[5] See Luckey, R. R., Gutentag, E. D., Heimes, F. J., and Weeks, J. B. 1986, Digital simulation of ground-water flow in the High Plains aquifer in parts of Colorado, Kansas, Nebraska, New Mexico, Oklahoma, South Dakota, Texas, and Wyoming: U.S. Geological Survey Professional Paper 1440-D, 57p.

threatened species pursuant to the federal Endangered Species Act.[6] It would be appropriate to acknowledge the existence of those issues here.

[66] Page 4-170, final paragraph: The last italicized heading on the page should refer to "Roberts County" rather than "Pecos County."

[67] Page 4-171: The last two sentences on the page suggest that water conservation may not have much impact on water needs for CRMWD because water quality issues often drive the needs. However, there would still seem to be significant benefit from water conservation because if less overall water has to be supplied, then the quantity of higher quality water required for blending with or replacing existing sources also would be lessened.

[68] Page 4-172, Table 4.8-25: Table 4.8-25 shows the City of Synder's per capita usage rate going from 227 in 2000 to 194 in 2060, as a result of water conservation programs. However, the year 2000 projection and footnote "b" note that year 2000 use was actually 194 gpcd. The basis for using the year 2000 figure of 227 gpcd as the starting point, rather than the 194 gpcd figure, must be explained and supported. Table 4.8-25 shows a reduction of 33 gpcd in usage rates from 2000 to 2060 through conservation measures, including savings from the plumbing fixtures code. Assuming, an appropriate starting point for the calculation, this is a good start but the overall per capita usage rate still would be a very high 194 gpcd, which, apparently, is the actual usage rate for 2000. Fifty-five years of conservation efforts would be expected to achieve more results than just returning to the per-person usage levels achieved five years ago. Fortunately, much more progress is possible. As illustrated by the success of the City of San Antonio, which has reduced per capita water use to less than 140 gpcd, a lot of additional potential savings, beyond those shown here could be realized for the City of Synder.

[69] Page 4-173, Table 4.8-26: Table 4.8-26 shows the City of Big Spring's per capita usage rate going from 210 in 2000 to 172 in 2060, as a result of water conservation programs. However, the year 2000 projection and footnote "b" note that year 2000 use was actually 198 gpcd. The basis for using the year 2000 figure of 210 gpcd as the starting point, rather than the 198 gpcd figure, must be explained and supported. Table 4.8-26 shows a reduction of 38 gpcd in usage rates from 2000 to 2060 through conservation measures, including savings from the plumbing fixtures code. Assuming, an appropriate starting point for the calculation, this is a good start but the overall per capita usage rate still would be a high 172 gpcd. Fortunately, much more progress is possible.

[70] Page 4-174, Table 4.8-27: Table 4.8-27 shows the City of Odessa's per capita usage rate going from 208 in 2000 to 178 in 2060, as a result of water conservation programs. However, the year 2000 projection and footnote "b" note that year 2000 use was actually 198 gpcd. The basis for using the year 2000 figure of 208 gpcd as the starting point, rather than the 198 gpcd figure, must be explained and supported. Table 4.8-27 shows a reduction of 30 gpcd in usage rates from 2000 to 2060 through conservation measures, including savings from the plumbing fixtures code. Assuming, an appropriate starting point for the calculation, this is a good start but the overall per capita usage rate still would be a high 178 gpcd. Fortunately, much more progress is possible.

[6] see US Fish and Wildlife website:
http://ecos.fws.gov/species_profile/servlet/gov.doi.species_profile.servlets.SpeciesProfile?spcode=E05X

[71] Page 4-175, Drought Management: Drought Management is required to be considered and evaluated as a water management strategy by the water planning group and must be included at least at the levels required by Section 11.1272 of the Water Code. See 31 TAC § 357.7 (a)(7)(B). Drought management has the potential to provide savings during those short-term periods that the supply of water is most limited. Drought management also might prove to be more affordable than other strategies because it is implemented only when it is needed. More discussion of drought management should be provided.

4.8.3 City of San Angelo

[72] Page 4-184, Table 4.8-33: Table 4.8-33 shows the City of San Angelo's per capita usage rate going from 200 in 2000 to 163 in 2060, as a result of water conservation programs. However, the year 2000 projection and footnote "c" note that year 2000 use was actually 162 gpcd, which is less than the usage rate projected for 2060. In addition, the text on page 4-183 notes that, as of 2002, per capita usage was actually 118 gpcd. Fifty-years of conservation effort should produce better results than an increase in actual per capita use rates. We recognize that a portion of the 118 gpcd rate results from drought restrictions. Although we believe those types of restrictions must be evaluated as part of a drought management strategy, we recognize that 118 may not be the appropriate starting point for the conservation analysis or the demand projection. However, 200 gpcd does not appear to be appropriate either. The year 2000 actual use rate of 162 gpcd likely should be used. The selection of that 200 gpcd usage rate as the starting point for the calculations must be explained and supported. Table 4.8-27 shows a reduction of 37 gpcd in usage rates from 2000 to 2060 through conservation measures, including savings from the plumbing fixtures code. Assuming, an appropriate starting point for the calculation, this is a good start but the overall per capita usage rate still would be a high 163 gpcd. Fortunately, much more progress is possible. In fact, San Angelo already has achieved lower rates in 2000 and much lower rates in 2002.

[73] Page 4-185, Drought Management: Drought Management is required to be considered and evaluated as a water management strategy by the water planning group and must be included at least at the levels required by Section 11.1272 of the Water Code. See 31 TAC § 357.7 (a)(7)(B). Drought management has the potential to provide savings during those short-term periods that the supply of water is most limited. As noted in the brief discussion, the City of San Angelo has successfully relied on drought management recently to help limit demands. Drought management also might prove to be more affordable than other strategies because it is implemented only when it is needed. More discussion of drought management should be provided.

Chapter 5: Impacts of Water Management Strategies on Key Parameters of Water Quality and Impacts of Moving Water from Rural and Agricultural Areas

[74] Page 5-2, Table 5-1: Brush control likely should be added to this table and the discussion in this chapter. Brush control has the potential, if not done very carefully, to cause significant adverse water quality impacts. For the long-term, if done as part of a comprehensive land stewardship program, water quality could be improved.

[75] Page 5-4, New and/or Expanded Use of Groundwater Resources: The plan states that while an increased use of groundwater can decrease instream flows if the baseflow is supported by spring flow, this type of impact is not expected to be a concern for Region F's recommended

strategies. Some additional explanation here of the basis for the stated absence of a concern would be helpful.

[76] Page 5-1, 5-4, Section 5.2 and 5.3. It is difficult to discern the difference between these two sections by their titles.

Chapter 6: Water Conservation and Drought Management Recommendations

[77] We commend the planning group for acknowledging the effectiveness of water conservation and drought management measures.

[78] Water supplies are tight throughout the region. It is very important to use water efficiently. Accordingly, we urge the planning group to consider a general recommendation for municipal water conservation measures for all user groups, regardless of need. The planning group made a similar recommendation for irrigation uses. See page 4-141 of the IPP.

[79] We believe the value of the Chapter 6 discussion would be greatly enhanced by including summary information, in a quantitative format, about the water conservation and drought management recommendations included in the plan. Indeed, that is just what we understand to be called for by Section 357.7 (a)(11) of the Board's rules, which requires "a chapter consolidating the water conservation and drought management recommendations of the regional water plan."

[80] The model water conservation plans are helpful. However, we believe it would be appropriate to include model plans that include examples of language that could be used in applying at least the conservation measures recommended by the planning group.

[81] Also, the TCEQ rule excerpts included as appendices included to the sample conservation plans appear to be outdated. The TCEQ rules recently were revised to incorporate, among other things, the requirement for specific quantified target goals.

[82] Draft Appendix 6C1 also appears to have an outdated version of TCEQ rules included.

[83] Appendix 6D: We commend the group for compiling potential drought triggers for use by public water suppliers and irrigation districts. The discussion as to the use of groundwater wells seems especially useful and informative.

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

[84] Page 7-3, Consistency with the Protection of Water Resources, New or Expanded Use of Groundwater: This section states that groundwater availability reported in the plan is the long-term sustainability of each aquifer, and is based on aquifer recharge capacity. We commend the planning group for recognizing the critical importance of sustainable management of groundwater resources. However, according to Chapter 3 of the plan, a number of counties in the region are basing aquifer availability on the use of stored aquifer capacity. We understand that, in some cases, there is a difficult balancing act that must take place between restrained use of groundwater resources and the economic viability of a region. However, the plan does not include any discussion of the bases on which certain districts have chosen managed depletion of

their groundwater resources through reliance on supplies in aquifer storage. Managed depletion is not consistent with the long-term sustainability of the region's aquifers, and is also not consistent with the **long-term** protection of the state's water resources, natural resources, or agricultural resources. Although it may not be feasible, in some areas, to move quickly to true sustainable management, in order to achieve a reasonable long-term future for local economies, true sustainable use of groundwater reserves should be the goal and efforts to achieve that goal should be supported and encouraged.

We also support the planning group's strong endorsement of water conservation. Particularly in the area of municipal water use, we urge the planning group to set more ambitious goals for water conservation. Achieving highly efficient water use is essential to ensuring long-term protection of the state's limited water resources.

[85] Page 7-4, Consistency with Protection of Agricultural Resources:
Again, we commend the planning group for its recognition of the critical importance of achieving highly efficient use of limited water resources in order to maintain the viability of irrigated agriculture for the long-term.

[86] Page 7-4, Consistency with Protection of Natural Resources:
The discussion of consistency with long-term protection of the state's natural resources is unduly narrow. Increasingly, rural areas of the state are relying more and more on hunting, fishing, and nature tourism as additional sources of income. The natural resources that support those activities should be considered and protected in the planning process. Protection of stream and river flows and the springs and seeps that help to maintain those flows is critical to protecting those natural resources.

In order to effectively assess consistency with long-term protection of natural resources, a comprehensive assessment of projected stream and river flows expected with implementation of the plan is needed that compares those flow levels to some reasonable criteria for natural resource protection. As we pointed out in our letter, and an attachment to that letter, in June, 2004, one such logical criterion is a "current conditions" baseline. Because we have a reasonable understanding of how natural resources are affected under current conditions, a comparison of projected flows against such a baseline provides a reasonable basis for attempting to understand the natural resource implications of changes in flow. Without that type of assessment, there really is no basis for the required determination that the plan is consistent with long-term protection of natural resources. We do recognize that questions about the Colorado WAM have left the planning group with limited time to perform such analyses.

CHAPTER 8: UNIQUE STREAM SEGMENTS/RESERVOIR SITES/LEGISLATIVE RECOMMENDATIONS

[87] Page 8-5, Recommendations for Ecologically Unique River and Stream Segments: It is disappointing to see that the Planning Group has again declined to recommend any stream segments for designation as unique stream segments. We understand the requirement in the Board's rules regarding analysis of potential impacts as providing recognition of the status of such segments as being ecologically unique and deserving of special consideration. However, that special consideration would not result in any type of mandatory protection beyond that established by statute.

8.3.4 Instream Flows

[88] Page 8-9: The last bullet point under this heading states opposition to adaptive management requirements. It appears, from the discussion immediately preceding this bullet point, that the concern is about adaptive management that might involve the reallocation of existing water rights to protect instream flows. We certainly understand that concern. We consider "adaptive management" to be an important, but broad, scientific concept that involves maintaining reasonable flexibility in managing water supplies. Adaptive management concepts are important because, as we learn more, we may be able to manage water more efficiently to meet all water needs, including environmental water needs. We urge the planning group to consider rephrasing this bullet point to focus more narrowly on the apparent concern about impacts on existing water rights. We would propose the following language for your consideration: "Opposes adaptive management requirements that involve involuntary reallocation of existing water supplies."

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
National Wildlife Federation

Mary Kelly
Environmental Defense

Ken Kramer
Sierra Club, Lone Star Chapter

cc: Sherry Cordry, TWBD Liaison
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