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Lone Star Chapter

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Con Mims, Chair
South Central Texas Regional Water Planning Group
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San Antonio, TX 78283-9980

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Re: Comments on Initially Prepared 2010 South Central Texas Regional Water Plan

Dear Mr. Mims and Planning Group Members:

The Lone Star Chapter of the Sierra Club appreciates the opportunity to review and comment on the Initially Prepared 2010 South Central Texas Regional Water Plan (Region L). The planning group, along with their consultants, has prepared a well-organized document that provides an understanding of the plan components and documents potential impacts.

The Sierra Club acknowledges the positive steps taken in the development and preparation of the plan, including the incorporation of drought management strategies, brush management/land stewardship efforts and the designation of unique stream segments. We also greatly appreciate the more thorough quantitative assessment of the environmental impacts of the plan as it relates to freshwater inflows to bays and estuaries. This assessment provides a more accurate depiction of the potential impact the South Central Texas Regional Water Plan may have on freshwater inflows to San Antonio Bay. It also highlights our overarching concern regarding the Plan.

In 2004, the National Wildlife Federation (NWF) released a report called *Bays in Peril: A Forecast for Freshwater Inflows to Texas Estuaries*. The report used a standard TCEQ water availability model (WAM) run for the Guadalupe and San Antonio Rivers to forecast inflows to the estuary if all the existing water permits were fully used and if reuse of wastewater were increased to 50%. The report then evaluated the predicted inflows against each of two ecologically significant criteria: a drought criterion and a freshwater pulse (or higher flows) productivity criterion based on the results of the state's freshwater inflows studies. In the report, San Antonio Bay received a ranking of Danger because of the potential impacts to the bay resulting from increased reliance on existing water rights.

The quantitative analysis prepared by the Region L consultants is based on the NWF analysis. It compares the number of occurrences of six months or longer periods below drought tolerance levels during critical months (March-October). Under Natural Conditions, there were <u>three</u> times during the period of analysis (1934-1989) when inflows to the estuary fell below drought tolerance levels. Under Current Usage, the model predicts the number of times these flow

conditions would have occurred would have increased to five; and with implementation of the regional water plan and the full use of existing water rights, the number of times the bay doesn't get enough water during drought increases to eight.

The 2010 Initially Prepared South Central Texas Regional Water Plan, with its reliance on increased groundwater pumping that reduces baseflows in rivers and stream in the San Antonio and Guadalupe Basin, its reliance on the full utilization of existing water rights, and its reliance on additional surface water withdrawals from the Guadalupe River, is likely to have significant impacts to San Antonio Bay, if implemented.

The environmental flows process created by Senate Bill 3 is now beginning for the Guadalupe and San Antonio River basins. This new process will help to more precisely define needed freshwater inflows and to identify mechanisms for achieving those inflows. It will be imperative that the next water plan uses this information to better address the issue of insufficient freshwater inflows to our bays and estuaries.

Finally, we note at least two places in the document (Pages 4B.1-15 and 4B.1-32) where the 2006 Regional Water Plan is referenced. We believe the reference should be to the 2011 Regional Water Plan.

Page Specific Comments

Executive Summary

[1] (Page ES-20, first bullet): *Implementation of the 2011 Regional Water Plan is likely to result in increased instream flows in the San Antonio River.* It may be helpful to the reader to explain the reason for increased flows; it is not readily intuitive.

[2] (Page ES-20, third bullet): Emphasizing the beneficial use of existing surface water rights does minimize the development of new water supplies and associated environmental impacts. However, if existing rights were issued without environmental flow protections, the use of existing rights may have significant adverse effects.

[3] (Page ES-20, fourth bullet): *Plan avoids large-scale development of new mainstem reservoir.* The inclusion of Palmetto Bend II as an alternate strategy makes this statement invalid.

[4] (Page ES-20, eighth bullet): Potential reductions in freshwater inflows to bays and estuaries also result from the implementation of existing GBRA appropriations.

[5] (Page ES-21, second bullet): Large demands for electrical power should be acknowledged as additional environmental "concerns" for seawater desalination.

Section 4B.1.2 Water Management Strategy Descriptions

4B.1.2.6 Drought Management
[6] (Page 4B.1-14): The carryover paragraph from the previous page notes "*Drought management is an interim strategy to meet near-term needs through demand reduction until such time as economically viable long-term water supplies can be developed*."

We feel that such an approach does not accurately depict the role drought management plays as a water management strategy. Drought management in and of itself is an economically viable long-term water strategy that allows a water supplier to forego the development and maintenance of new sources by reducing non-essential water uses during times of drought.

As publicly noted by the San Antonio Water System, drought management efforts in 2009 resulted in a savings of between 24,000 and 30,000 acre-feet at a unit cost of $25 per acre-foot. We cannot imagine a more economically viable long-term strategy.

4B.1.2.11 Brush Management
[7] (Page 4B.1-16): We appreciate the efforts of the planning group to further inclusion of brush management (land stewardship) as a water management strategy.

4B.1.2.13 Storage above Canyon Reservoir
[8] (Page 4B.1-17): We appreciate the consideration of this strategy as an Aquifer Storage and Recovery system rather than one relying on off-channel reservoirs.

4B.1.2.14 GBRA-Exelon Project
[9] (Page 4B.1-17) We have grave concerns regarding the potential implementation of this water management strategy. As noted in the first paragraph of these comments, the full utilization of existing water rights on the Guadalupe River is predicted to have significant impact to species that rely on sufficient freshwater inflows to San Antonio Bay.

4B.1.2.24 GBRA Simsboro Project
[10] (Page 4B.1-23): According to a letter from Region K Chairman, John Burke to Chairman Con Mims, dated February 10, 2010, the Simsboro Project creates a potential conflict between Region L and Region K.

4B.1.2.39 Lavaca River Off-Channel Reservoir
[11] (Page 4B.1-29): According to Appendix D, water demands in Calhoun County for industrial use in 2060 are predicted to be 209 ac-ft (Note: Table 4A-1 in Section 4A shows this demand as 245 ac-ft). According to our records, until the January 2010 meeting of the Region L planning group, this small amount was to be met by means of purchase from the Lavaca-Navidad River Authority.

At the January 2010 meeting of the Region L planning group, this strategy (supplying 10,000 acre-ft to meet a 209 ac-ft need) was presented as a possible recommended strategy. While the Lone Star Chapter of the Sierra Club understands that there may have been circumstances

beyond the control of consultant and the planning group, we are surprised that such a strategy was presented to the planning group on the same day it was to vote to approve the plan.

During this round of planning, the consultants and leadership of the South Texas Regional Water Planning Group have provided ample opportunity for planning group members and the public to understand and comment on various proposed water management strategies. We are disappointed that little opportunity was provided for fully vetting this controversial project.

4B.1.2.40 Palmetto Bend – Stage II
[12] See comments for 4B.1.2.39 Lavaca River Off-Channel Reservoir

4B.1.2.44 Rainwater Harvesting
[13] (Page 4B.1-31): We appreciate the comment noting rainwater harvesting's ability to supplement supplies from wells completed in the Trinity Aquifer. This is an important component of this strategy.

Section 4C Technical Evaluations of Water Management Strategies

Section 4C.2 Drought Management
[14] There were several changes to the discussion of Drought Management in the April 2009 Study 3: Enhanced Water Conservation, Drought Management, and Land Stewardship. These changes do not appear to have been transferred to Section 4C.2, including the discussion of the refined methodology for SAWS.

[15] (Page 4C.2-3): …*the WUG is planning to manage water shortages through drought contingency plan activation or water rationing if needed.* We feel the inclusion of the term "water rationing" presents a distorted picture of drought management as a water management strategy. First, we are not aware of any municipal water suppliers in the planning region that actually utilize water rationing as part of their drought contingency plan. Second, drought management, as used as a water management strategy in the plan only calls for a five percent reduction in use; this is very unlikely to result in the need for water rationing whereby water users are allocated only a certain amount of water for a given period of time.

[16] (Page 4C.2-5): The first paragraph discusses the methodology used to determine risk factors. As we have noted in two comment letters to the consultant and members of the regional planning group (February 5, 2008 and November 4, 2008), we have concerns with the method used to develop the Risk Factor. The Risk Factor is determined from a Risk Curve that is calculated using variations in annual per capita water use from 1964-2005.

We feel that utilizing such historical per capita water use may unnecessarily bias the Risk Curve. In more recent years, the variances in per capita water use have declined with the increased awareness and implementation of water conservation activities. Such decreases in variance should lessen the slope of the Risk Curve, and consequently, diminish the Risk Factor.

[17] Our second concern relates to the determination of the Impact Factor. While we have made this comment previously, we feel it warrants repeating. The Impact Factor is obtained from the

Texas Water Development Board and is used by the Board for calculating the economic impacts of not meeting water needs. The use of this Factor is inappropriate to determining the costs related Drought Management.

Drought Management efforts focus on directing available supplies from nonessential uses to more critical uses during times of shortage. The calculations used by the Board include factors such as lost sales for manufacturing. It is not reasonable to assume that the economic impacts of having water unavailable temporarily to fill a fountain, keep a lawn green, or wash a car are the same as having water unavailable to run a manufacturing line. In fact, most drought management plans do not reduce water available for manufacturing.

Section 4C.10 GBRA-Exelon Project

[18] (Page 4C.10-16): *After a review of the habitat requirements for each listed species, it is not anticipated that this project will have any permanent adverse effect on any federally listed threatened or endangered species, its habitat, or designated habitat, nor would it adversely affect any state listed species.* Given current litigation, we do not believe this to be a prudent statement.

Section 4C.14 GBRA New Appropriation (Lower Basin)

[19] (Page 4C.14-2): The first paragraph notes that the appropriation is subject the full application of environmental flow standards adopted pursuant to Section 11.1471 of the Texas Water Code. For clarification, and by agreement of the Guadalupe Basin Water Needs Workgroup, Section A(2) of the Recommendations (October 12, 2009) should be added to this section.

[20] (Page 4C.14-14): *After a review of the habitat requirements for each listed species, it is not anticipated that this project will have any permanent adverse effect on any federally listed threatened or endangered species, its habitat, or designated habitat, nor would it adversely affect any state listed species.* Given current litigation, we do not believe this to be a prudent statement.

Section 4C.15 GBRA Mid-Basin (Surface Water)

[21] (Page 4C.15-2): The first paragraph notes that the appropriation is subject to the full application of environmental flow standards adopted pursuant to Section 11.1471 of the Texas Water Code. For clarification, and by agreement of the Guadalupe Basin Water Needs Workgroup, Section A(2) of the Recommendations (October 12, 2009) should be added to this section.

Section 4C.16 GBRA Mid-Basin (Conjunctive Use)

[22] (Page 4C.15-2): The first paragraph notes that the appropriation is subject the full application of environmental flow standards adopted pursuant to Section 11.1471 of the Texas Water Code. For clarification, and by agreement of the Guadalupe Basin Water Needs Workgroup, Section A(2) of the Recommendations (October 12, 2009) should be added to this section.

Section 7. Consistency with Long-Term Protection of the State's Water, Agricultural, and Natural Resources

[23] We appreciate the commitment by the consultants and the planning group to this section. It is well researched, organized, and informative.

[24] (Page 7-85): Emphasizing the beneficial use of existing surface water rights is cited as an environmental benefit. Yet, Section 7.1.3.4.2 Discussion of Estuary Inflow Assessment highlights how increasing the use of existing water rights in the regional water plan results in increased low-inflow periods in San Antonio Bay. We do not see this as a benefit, only a trade-off.

Thank you for the consideration of these comments. Please feel free to contact us if you have any questions.

Sincerely,

Tyson Broad
Research Associate

cc: Matt Nelson, TWDB
Cindy Loeffler, TWDB
Sam Vaugh, HDR Consulting