



July 31, 2009

Texas Instream Flow Program
P.O. Box 13231
Austin, Texas 78711-3231

RE: Instream Flow Study of the Lower San Antonio River
and the Lower Cibolo Creek: Draft Study Design

Dear Sirs:

CPS Energy supports efforts by the Texas State Legislature, Texas Water Development Board (TWDB), Texas Commission on Environmental Quality (TCEQ), and the Texas Parks and Wildlife Department (TPWD) to develop a scientific research design that will help establish a better understanding of the river systems in Texas.

CPS Energy appreciates the opportunity to participate in the open stakeholder process and provide input into the development of an improved understanding of the hydrology and biology of the Lower San Antonio River System. CPS Energy holds significant water rights in the San Antonio River Basin and depends on a healthy river system to achieve its primary function of power generation for the citizens of San Antonio.

Agency staff has developed a draft study design that provides a very good framework for developing the science needed to provide the legislature with a science based evaluation of the environmental flows required to support a healthy river system. CPS Energy does have several areas of concern about the draft study design and issues raised during the stakeholder process.

1. The freshwater flow in the lower basin south and east of the USGS Elmendorf gage is tremendously influenced by activity and urbanization north and west of the Elmendorf gage. This fact is briefly discussed on page 7 of the draft study design and basically ignored during the rest of the study. In the TCEQ staff presentation on June 30, 2009, there was one statement about all water rights and Texas Pollution Discharge Elimination System (TPDES) permits for entities above the Elmendorf gage would be examined to determine impact of these water rights and industrial permits on the lower basin. The San Antonio River Basin operates as one entire system and it seems that artificially separating the system at the Elmendorf gage does not provide a complete understanding of the system dynamics. How does staff intend to account for the upper basin contributions to the lower basin?
2. There has been some discussion in stakeholder meetings about restricting the study to the area within the normal stream bed or the area between the normal high water marks. USGS defines this as their area of responsibility and one stakeholder and staff indicated that this study should be restricted to this narrow area. River systems are really the sum of all areas that drain into the river as well as the area covered by the water flowing in the river. Will staff be viewing the San Antonio River Basin as a holistic system or confine the study to the area below the normal high water mark?

3. River flows are influenced by several different things. Section 1.1.3 does a good job of describing the physical processes that influence variability in stream flows. The 2008 Bio-West study divided flow records into two periods using 1972 as the dividing year. Staff seems to support this scheme. The flow after 1972 has been greatly influenced by urbanization in Bexar County and increased population in the San Antonio region as well as higher than normal rainfall through much of the period. Population in San Antonio has increased from approximately 500,000 in 1950 to approximately 1.7 million in 2009 and the area covered by urbanization has increased over 350% since 1950. The San Antonio region is projected to continue to grow at approximately 3% per year and this growth will continue to contribute to changes in river flows. The San Antonio River existed before the city of San Antonio and the native flora and fauna developed long before Europeans settled in the region. It would be incorrect to look at the history of known flows as represented by the USGS record to develop a true understanding of the natural flow regimes and restricting the study to the last 40 years as suggested in the Bio-West study would skew the result. Central Texas is prone to great variability in rainfall and stream flow as shown in the record and recommendations of minimum and subsistence flows, as defined in the draft study design, should take the entire historic record and even the prehistoric record into consideration. How does staff intend to deal with the historic record of stream flows?
4. Figure 10 on page 26 shows a graphic representation of the conceptual model for the San Antonio Basin study. In the biotic response row aquatic flora is omitted. The draft study design discusses determining critical habitat for aquatic fauna at the defined flow regimes. Aquatic habitats consists of many and dynamic elements. Aquatic flora, in many aquatic systems, is both a diverse biotic community and a vital element of habitat for aquatic fauna. Staff should add aquatic flora to the list of biotic communities studied.
5. One of the themes expressed throughout the research design is the need to develop an understanding of the impact of varying flow regimes. It is important that this study examines overbank flow as well as subsistence flow, stream migration, stream capture, and sedimentation caused by overbank flows. At the stakeholder meeting on June 30, 2009, Mr. Walter Womack expressed concern that river segment 1, defined by staff as the lower area of the study region near the confluence with the Guadalupe River, was being excluded from the study design. Mr. Womack reminded staff that there is extensive sedimentation and active stream migration and capture taking place on his property. Staff stated that they had omitted segment 1 from the study due to the complexity of understanding the processes at work in the deltaic region of the river. Mr. Womack's concerns seem very valid and the offer of such an active depositional area with active stream capture for study by staff seems to be a very valuable asset to the study. Understanding this region would develop a better understanding of the dynamics of the entire river basin. Staff should reconsider omitting Segment 1 from the study. Segment 1 offers staff access to what staff defined as objectives of the study; understanding sediment transport, woody debris transport, stream migration and stream capture.
6. The draft study design discusses the goal of understanding various flow regimes. The assumption is that staff would make recommendations to the legislature about required environmental flows and that the legislature would authorize the readjustment of water rights to assure adequate flows in the river to support biotic communities. Water rights in

the San Antonio basin have priority dates all the way back into the 1700's. Many of the larger water rights are in the area above the Elmendorf gage. Staff is proposing that decisions be made in the lower basin that will influence water rights in the upper basin. All water rights holders and interests in the upper basin are not represented in the stakeholder group. All political subdivisions in the upper basin have not been involved in this process and may not have even heard about the potential impact of decisions made as a result of this process. The suggestion that water rights could be ultimately be amended and property rights and property values impacted by this process should be considered very carefully. How does staff intend to communicate the science and environmental flow regimes developed by this process and how this process will impact property rights and political subdivisions to the hundreds of water rights holders and the dozens of cities that could be impacted by decisions made about required flow rates downstream?

7. The Lower San Antonio River is a large geographic region. The study design breaks the basin into 8 reaches on the San Antonio River and 2 on the Lower Cibolo Creek. Staff stated that the study sites were selected primarily for convenience of access. The study segments are long and study sites selected for subjective reasons or convenience as stated on page 41 and 42 of the study design seem to reduce the objectivity of the study. Segment 3 for example is 69 miles long and the study site is near the bottom of the segment. The study site was chosen because of a specific mussel habitat and population that is not represented in the rest of the study segment. Selecting a study site specifically because it is different does not seem to be the best way to determine study results that can be generalized to the entire segment. The lack of randomness in site selection will skew the result of the scientific analysis. How will staff account for this sampling error and report results with any degree of confidence?

A river system is much more than the area between the normal high water marks. Hydrology in the lower San Antonio Basin is inextricably linked to activities in the upper basin. Staff has intentionally omitted interests in the upper basin claiming that the study area would be too large and that the conditions in the upper basin are beyond the scope of the enabling legislation. The effect of urbanization in the San Antonio region undoubtedly influences the flow of water in the lower basin, but changes in land use throughout the basin is omitted from the study. This will weaken the result and could have an adverse impact on acceptance of the validity of the study.

The study goal developed by the stakeholder group is to have "a naturally functioning and sustainable ecosystem that supports a balance of ecological benefits and economic, recreational, and educational uses." Many of the stakeholders seemed to think that naturally functioning meant that we should have some level of control over the river flows and debris transport. If engineering controls are put in place to manage river flows and transport mechanisms we will no longer have a naturally functioning river system. The San Antonio River system is actually the least controlled river system in the state. The fact is that the San Antonio region is subject to prolonged drought and sudden heavy rains as discussed in the draft study design. The San Antonio River is subject to very low flows, extreme flooding, stream migration, stream capture, and sediment and woody debris transport. Understanding that each of the above processes is a natural function of a river system means that attempts to control or modify these processes would create a controlled river system not a natural one. The goal here should be an attempt to reduce the impact of urbanization and changes in land use on the natural function of the river.

CPS Energy agrees with the goal of having “a naturally functioning and sustainable ecosystem that supports a balance of ecological benefits and economic, recreational, and educational uses.” The Texas Instream Flows Program will make a valuable contribution to this effort by developing a better understanding of the hydrology and biology of the San Antonio River System. This study will fall short of this goal, as pointed out in stakeholder meetings, by focusing on the stream bed rather than considering the entire basin and all of the surrounding area that contributes to the entire drainage basin.

Sincerely,

A handwritten signature in dark ink, appearing to read "Samuel F. Helmle". The signature is fluid and cursive, with a prominent initial "S".

Samuel F. Helmle
Environmental Analyst
Water and Air Quality

cc: Mr. Scott Smith