**Public Comments for the 2017 State Water Plan**

The Regional Water Planning Groups (RWPGs) play a critical role in our state’s water planning process, and I appreciate the huge effort that is involved in drafting the *2017 State Water Plan*. My comments reflect the vision for a *State Water Plan* that recognizes the need to protect long-term spring-flow, healthy water catchment areas and sustained groundwater resources for current and future generations. My comments include broad recommendations for the improvement of the regional planning process, specific policy commendations drawn from policies outlined in the Hill Country *Regional Water Plans*, recommendations for additional study and research, and comments on specific Hill Country Water Management Strategies. I recognize that some of these recommendations may require action by the Legislature and may not be the sole responsibility of the Texas Water Development Board (TWDB); however, the TWDB should press for the incorporation of these recommended concepts, as they are able.

**Broad Recommendations:** Only by constantly seeking improvements to the regional water planning process can we ensure that the *State Water Plan* continues to improve in its ability to ensure water supply for future generations.

* In order to provide water for future generations, I recommend that the TWDB adopt and apply a set of **guiding principles** that will serve as a blueprint for long-term water sustainability. For example: *The economy and land values of Texas depend on meeting its water needs in a way that does no harm to rivers, streams, springs, and aquifers.*
* Considering the challenge and cost of providing surging numbers of new water customers with finite water supplies, outdated infrastructure-intensive water management strategies need to be minimized in favor of innovative localized modern ***water neutral* solutions** that have been proven around the country. The TWDB should prioritize and encourage decentralized systems and new technologies that capture, use, and reuse water in place. Where this is not practicable, priority should be given to a water neutral growth policy that requires offsetting the projected water demand of new development with water efficiency measures to create a “Net-Zero” or neutral impact on overall service area demands.
* Additional definition is needed for Water Management Strategies (WMS). The Regional and *State Water Plan* is being criticized as less a planning document and more a **‘wish list’** beset with duplicative and expensive over-planning. In 2013, the Texas Legislature provided for requirements that WMS be prioritized in order to better manage the growing list of strategies. Better definition of WMS categories and vigorous prioritization will help control the redundant and exceedingly lengthy lists.
* The two-tier system of **WMS categorization needs to be revisited** and strengthened in such a way that *Recommended Strategies* promote healthy sustainable watersheds, fulfill all of the TWDB’s minimum prioritization criteria, and are not duplicated by a similar strategy that would fulfill the same need. The *Alternate Strategy* category should be reserved for those strategies that are duplicate or do not fulfill the TWDB’s minimum criteria.
* The RWPG **consulting firms** are excellent, and provide a valuable service in the planning process. However, to avoid the perception or temptation of **conflict of interest**, the TWDB, like other agencies, should create and enact a conflict of interest policy.

**Specific Policy Recommendations:** The *State Water Plan* has numerous Specific Policy Recommendations that I support. I would like to commend the TWDB for the inclusion of these policies, and encourage their adoption as part of the Regional and *State Water Plans*.

* The TWDB should prioritize strategies that protect the inherent **interconnectivity of surface water and groundwater.**
* The TWDB should de-prioritize water management strategies that dewater one region to meet the speculated need of another in the form of inter-basin pipeline transfers or otherwise.
* The TWDB should discontinue the practice of considering Water Management Strategies that rely on groundwater that has exceeded its **MAG limitations.**
* It is vital that the state assess the **sustainability of water-consuming growth patterns** that regional water planning efforts will directly or indirectly support.
* **Counties** **should have additional authority** for land use planning and for regulating development based on water availability and protection of water resources.
* **Eminent Domain** powers should be recognized as contributing to the disruption of the values that undisturbed landscapes bring to natural hydrologic and ecologic functions. Given the TWDB’s lack of authority to ignore current legal precedent, they should use their prioritization powers (HB-4, 2013) to minimize projects where using eminent domain would be necessary.
* **Rainwater harvesting** should be widely encouraged to meet rural and urban domestic water demands, as well as use for limited irrigation, such as vineyards, orchards or small farms under drip irrigation. Livestock and wildlife can also be provided supplemental water by rainwater harvesting.
* The **revision of population and demand estimates** should be put before the public for review before being presented to the planning groups for consideration and adoption.
* Due to the importance of spring-flow on the base-flow of our rivers, it is reasonable that the TWDB encourage Hill Country Groundwater Conservation Districts to consider **management rules based on spring-flow.**
* The TWDB should encourage better communication between the two regional planning processes developed by the Legislature (**RWPGs and GMAs**) to improve conflicting methodologies of reaching long-term planning goals.
* The Hill Country contains some of the most ecologically pristine areas in the State. The preservation of this natural environment via designation of **Unique Stream Segments** is an important component of the Region’s economy. I recommend that the Regional Water Planning Groups actively promote the designation of its listed unique stream segments in the 2017 legislature as Region L successfully did in the 2015 Legislature.
* The TWDB should support vegetative management programs that improve the land’s ability to absorb, retain, filter and slow rainwater. A **balanced approach to brush control** can be beneficial, however, a narrow goal only to “encourage the enhancement of runoff (**WSEP**)” must be avoided. Any program to incentivize land practices for the benefit of water supply must be for the purpose of improving the overall health and function of water catchment areas for the long-term.
* The TWDB should continue to encourage funding for projects that empower landowners to better manage their lands for the long-term health of our water supply.
* Water-user groups should develop more uniform **conservation oriented management** plans and should be required to bring down their **Gallons per Capita per Day** usage to reflect the climatic realities of specific regions.

**Study and Data Needs:** The State should fund or conduct these specific studies to shed more information on specific water resource issues that are critical to future TWDB decisions.

* **Aquifer Science -** The Hill Country is underlain by limestone aquifers in which there are many remaining hydrological questions. A basic, unbiased, scientific study that encompasses the hydrologic characterization of the inter-formational flow between these adjacent and associated aquifers and their contribution to surface water flows is needed in order for the local groundwater management entities and the Regional Water Planning Groups to make informed management decisions and recommendations that maintain sustainable systems.
* **Trinity Aquifer -** The Hill Country Regional Water Planning Groups should explore the creation of a Regional Trinity GCD. A small regional GCD was recommended by the TCEQ for Hays, Travis and Comal Counties in 2010. This concept should be revisited and studied for the broader Hill Country Trinity region.
* **Headwaters Groundwater/Spring-flow Analysis -** Surface water base-flow in most Hill Country Rivers is derived almost exclusively from groundwater discharge through springs. However, development of management practices is impaired by a lack of understanding about how groundwater level elevations relate to spring-flow rates. Few monitoring wells are in place that can provide continuous water level readings, and no attempt has thus far been made to relate this data to spring-flows. A study is needed to evaluate this critical interaction so that future management decisions can be based on a more substantial level of scientific knowledge.
* **Groundwater/Surface Water Relationship -** The TWDB should embrace this concept and focus water availability studies on this topic. This water supply policy definition can best be achieved when the relationship between groundwater and surface water is fully understood.
* **Unpermitted Withdrawals of Riparian Water -** A significant amount of unpermitted riparian water is withdrawn from rivers that is unaccounted for in the Water Availability Models. State water agencies should devise a survey method to establish a reasonable estimate of these diversions.
* **Optimization of Water Conservation and Efficiency -** A number of water utilities and communities in Texas have established enviable track records of success in reducing per capita water use and promoting a water conservation ethic, thereby stretching existing water supplies. However, this record of success is not universal in Texas, and indeed many communities and utilities have made minimal or no efforts to advance water conservation and efficiency. A study is needed of the additional opportunities in the Hill Country and in Texas to advance water conservation and efficiency, the potential for reducing future water demands through enhanced conservation and efficiency, and the steps needed to achieve that goal.
* **Conservation and Drought Management** - There is a need for the funding of educational programs by State agencies to assist Regional Water Planning Groups in educating both the public and private sectors about conservation and drought management. The TWDB should push for the funding of programs such as the *State Water Conservation Education Program*, and the *Water IQ-Know Your Water* campaign, formally established (but unfunded) by the Texas Legislature with the passage of SB 3/HB-4 in 2007.

**Regionally Specific *Water Management Strategy* Evaluations:**

**REGION J:**

* In Region J, 31 out of a total of 69 strategies (45%) are categorized as Conservation, Reuse, or Rainwater Strategies.
* Region J should be commended for recommending these conservation, reuse, and rainwater harvest strategies as net-zero water supply projects.
* The remaining 55% of the strategies consist of infrastructure improvements, groundwater expansion, desalination, and aquifer storage and recovery projects. Of those projects, the majority represents groundwater expansion.
* I recommend in *those* cases that alternative supplies such as rainwater projects be explored. Rainwater projects represent fiscally comparable and resource viable alternatives to aquifer reliance.
* Region J should be commended for recommending strategies that exclude inter-basin pipeline construction, and recommending those that have only nominal environmental impacts.

**REGION K:**

* In Region K, 13 out of a total of 62 strategies (20%) in the *Recommended Water Management Strategy Summary Table* (Appendix 5B) are categorized as Conservation, Reuse, Drought Management, or Rainwater Strategies.
* Region K should be commended for recommending these conservation, reuse, and rainwater harvest strategies as net-zero water supply projects.
* The remaining 80% of the strategies consist of infrastructure improvements, transmission pipelines, groundwater expansion, desalination, and aquifer storage and recovery projects. Of those projects, majority represents groundwater expansion.
* I recognize that this Board is mandated to plan for future need. However, to the extent possible, groundwater into long distance transmission pipeline Water Management Strategies should be reevaluated on the basis of MAG limitations, recharge rates, and aquifer health. The following is a prime example:
* Hays County Pipeline (Wimberley-Woodcreek) – Groundwater Importation (4000 ac-ft/yr)
* I recommend in *those* cases that alternative supplies such as rainwater projects be explored. Rainwater projects represent fiscally comparable and resource viable alternatives to aquifer reliance.

**REGION L:**

* In Region L, 11 out of a total of 61 strategies (18%) in the *2016 SCTRWP - Recommended* *Potentially Feasible Water Management Strategies* – (Appendix E) are categorized as Conservation, Reuse, or Rainwater Strategies.
* Region L should be commended for recommending these conservation, and reuse strategies as net-zero water supply projects.
* The remaining 82% of the strategies consist of infrastructure improvements, groundwater expansion, desalination, and aquifer storage and recovery projects. Of those projects, the majority represents groundwater expansion with an emphasis on transmission pipelines.
* I recognize that this Board is mandated to plan for future need. However, to the extent possible, groundwater into long distance transmission pipeline Water Management Strategies should be reevaluated on the basis of MAG limitations, recharge rates, and aquifer health. The following are prime examples:
  + Vista Ridge Project (34,894 ac-ft/yr)
  + TWA Regional Carrizo – MAG Limited (15,000 ac-ft/yr)
  + Hays Forestar Project (12,356 ac-ft/yr)
  + CRWA Wells Ranch Project – Phase 2 (7,829 ac-ft/yr)
  + TWA Trinity Project (5,000 ac-ft/yr)
  + New Braunfels Trinity (1,090 ac-ft/yr)
* I would recommend in the above cases that alternative supplies such as rainwater projects be explored. Rainwater projects represent fiscally comparable and resource viable alternatives to aquifer reliance.

Thank you for your consideration,