November 16, 2022

Chairman Charles Perry
Senate Water, Agriculture and Rural Affairs Committee
Via email: Katherine.Thigpen_SC@senate.texas.gov

Re: Environmental Defense Fund's Comments on Groundwater Management Interim Charge

Dear Chairman Perry and Members of the Agriculture and Rural Affairs Committee,

Groundwater is arguably the most important water supply in Texas, providing over 60% of the state's overall water supply and an average of 30% of the water flowing in our rivers. In some parts of Texas, like the Hill Country, where the majority of the state's rivers begin as headwater springs, 100% of the water flowing in most rivers and streams originates as groundwater.

Unsustainable Groundwater Management Threatens Rural Texas

Stable and secure groundwater supplies are essential for Texas' rural communities to thrive and grow into the future. But unfortunately, most aquifers in Texas are not being sustainably managed. Rather, they are managed in a way that will result in their eventual depletion. This will mean worsening economic and community impacts, particularly to rural communities that depend on groundwater for their sole water source, and increasingly fewer management options in the future, until groundwater supplies are either exhausted or no longer feasible to pump.

The reason groundwater management is on an unsustainable path is complex. Still, it boils down to; a lack of mandates in Chapter 36 of the Texas Water Code that require groundwater conservation districts to sustainably manage groundwater, lack of data and science that groundwater districts can use to inform sustainable management and planning, fear by groundwater conservation districts that limiting groundwater pumping to achieve sustainability will result in lawsuits over confiscation of property rights.

Sustainable, Science-Based Groundwater Management Protects Property Rights and Results in Sound Water Planning

The reality is that sustainable groundwater management will protect property rights. Because even though groundwater is privately owned, it is used by everyone over a basin. We must manage it smartly to ensure it is not depleted.

Accurate data and modeling are critical for groundwater conservation districts to develop local strategies to protect property rights and sustain groundwater levels, particularly when groundwater

is the only source of water available. Data and modeling are also integral to robust water planning in Texas. The state funds both the regional water planning process and the flood planning process – but NOT groundwater planning, even though groundwater availability, through the adoption of desired future conditions, is integral to state water planning. For Texas' state water planning to be meaningful, it must be informed by robust groundwater planning.

Texas prides itself on a water plan that ensures the state is prepared for drought – by identifying water strategies that will meet demand during a drought of record conditions. But many of these strategies are developed without understanding whether the water supply is sustainable in the future during periods of prolonged drought. In fact, groundwater strategies in the state water plan are premised on unsustainable planning goals that allow aquifers to decline over time. Because the state water plan does not consider how declining aquifer levels diminish surface water in reservoirs and rivers, surface water supply strategies are not as reliable as we might think.

Aquifers are Critical Water Infrastructure that Require Investments by the State

We often think of dams, reservoirs, and pipelines as water infrastructure. But in rural areas, where groundwater is the only source of water, aquifers are the water infrastructure for landowners, communities, and agriculture. Texas has poured hundreds of millions of dollars into funding water infrastructure projects across the state - to pump, divert, treat and deliver water to people's homes, hospitals and schools. But we spend very little in comparison on ensuring that the water that runs through these pipes will be there in the future.

To ensure that Texas continues to thrive, we must manage groundwater and plan for its use in a balanced, proactive, and sustainable way. This starts with the state investing in the science that informs groundwater management and planning. The state has created a good framework for managing groundwater, premised on bottom-up planning, local regulation, and, perhaps, most importantly – the best available science. But the state is not adequately investing in this science. There is very little state funding available to collect data that helps inform local management and planning decisions. There is no funding available for groundwater conservation districts to develop local models that help them understand how to better manage groundwater in their specific jurisdictions.

Although the Water Development Board provides groundwater conservation districts with regional groundwater availability models, these models are not useful for making decisions about local impacts. Such as impacts related to how the desired future condition or a large permit request will affect specific wells, landowners' property rights, or spring flow.
The Board's budget was substantially reduced in 2011, and its groundwater modeling program suffered. As a result, the Board's 2022 budget for the Technical Assistance and Modeling Program (which includes surface water and groundwater modeling) totals only approximately $2.6 million.

EDF urges this Committee to consider the following recommendations for the upcoming Legislative session to:

- Increase financial investment in groundwater science to a level that reflects just how important groundwater is to Texas. This means significant increases in appropriations and FTEs to the water development board's Groundwater Availability Modeling program so that they can develop groundwater data and state-of-the-art groundwater models at a pace in keeping with the demands and threats that our groundwater resources face.

- Provide funding to groundwater conservation districts to collect their own data and develop their own local models to inform decision-making.

- Appropriate funding to support groundwater planning and the development of desired future conditions, similar to how the state funds regional and flood planning.

- Require the Texas Water Development Board and the Texas Commission on Environmental Quality to work together to develop standard protocols that guide the incorporation of surface and groundwater resource data into the surface Water Availability Modeling and Groundwater Availability Modeling analyses. Additionally, the agencies should ensure that other water resource modeling tools accurately reflect the interconnectivity of the resources to the greatest degree possible. Finally, consider currently available data and share it with groundwater conservation districts that can use it to make informed policies protecting future property rights.

- Prioritize state funding for developing better science in areas with a strong degree of surface and groundwater interaction, including conducting streamflow gain-loss studies where adequate data is lacking and increasing long-term monitoring of spring flows.

- Amend Chapter 36 to make clear that a Groundwater Management Area's (GMA) responsibility is to determine a sustainable future condition for the aquifer, not to merely set the future condition of the aquifer according to projected water demands.

- Direct GMAs to assess how any proposed desired future conditions for aquifers that are dependent on precipitation for recharge would be affected by climatic variability, including severe droughts.

- Require that desired future conditions be physically measurable either directly or through an alternative measurable metric. GMAs should also be required to establish protocols for monitoring groundwater resource conditions to ensure that present conditions are consistent with established desired future conditions.

- Include a clear mandate for GMAs to evaluate the potential impacts of groundwater pumping on – and protect - critical hydrologic features, such as spring flows and other natural discharges to the surface, artesian pressure, and lateral recharge to neighboring aquifers from proposed desired future conditions.

I look forward to working with you on these critical issues.

Respectfully,

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