

Wastewater Discharge Regulations and Impacts on Ranches, Surface Waters and Edwards Aquifer Recharge in the Texas Hill Country

OVERVIEW: The surface waters of the Texas Hill Country are world renown, providing exceptional recreational opportunities for Texans throughout. These clear flows add enormous value to ranches, parks and the quality of life of local Hill Country communities. Unfortunately, government adversely impacts that value by imposition of wastewater (sewage system) discharges directly into these same streams and rivers, resulting in degradation of water quality, devaluation of waterfront property, and damage to recreational opportunities.

Hill Country flows are the primary source of recharge of the Edwards Aquifer through cracks and fissures in limestone river and creek beds. Scientists confirm surface waters degraded by sewage system effluent also degrade the Edwards Aquifer, damaging pure water supplies. Senate Bill 1796 (Menéndez) and House Bill 3036 (King of Uvalde) filed in 2017 proposed to end wastewater discharges in streams and rivers in the contributing zone of the Edwards Aquifer and, by amendments, replace that outmoded practice with the modern practice of land applications systems that recycle and reuse wastewater effluent.

KEY POINTS:

- 1. The Edwards Aquifer is a critical sources of pure water for ranchers and communities in the Texas Hill Country.**
- 2. The TCEQ definition of the Edwards Aquifer Contributing Zone is not the entire contributing zone**
 - The Texas Commission on Environmental Quality defines the [contributing zone of the Edwards Aquifer](#), but it does not include all of the watershed that feed streams in the contributing zone.
- 3. The quality of water in the aquifer is driven by the quality of surface water in the contributing zone**
 - During dry periods, streams in the contributing zone may naturally stop flowing. With wastewater discharge, the only water in streams under those conditions would be wastewater effluent so no dilution of contaminants would occur.
- 4. Scientific evidence clearly demonstrates the sensitivity of the Edwards Aquifer to wastewater discharge**
 - Streams in the contributing and recharge zones of the Edwards Aquifer currently have exceptionally high water quality and clarity due to low nutrient levels, and are [very sensitive to wastewater discharge](#). Even highly treated wastewater will have extreme adverse water quality impacts due to phosphates and nitrates in treated effluent. These chemicals function as “fertilizer” in clear streams and rivers, causing microbial growth, algae blooms and choking moss beds.
 - Additional contaminants like pharmaceutical and personal care products in wastewater effluent may impact human health but are not currently regulated by the EPA or TCEQ.
- 5. There is no prohibition on wastewater discharge in the contributing zone.**
 - Although there are rules prohibiting wastewater discharges in the recharge zone, there are currently no prohibitions on discharge in the contributing zone of Edwards Aquifer. The TCEQ

has the authority to approve discharge permits over the objections of downstream landowners and ranchers.

- Impacts to privately owned wells are a great concern.
 - Contesting a wastewater discharge permit application is a daunting task for a downstream property owner, consuming large amounts of time and money.
- 6. Land application is the primary alternative to direct discharge of wastewater**
- Land application of wastewater effluent is more protective of water quality than discharge due to the infiltration of effluent on land and the absorption of the nutrients in effluent by green spaces.
 - Land application of treated wastewater effluent is currently required for wastewater disposal in the contributing zone of the Barton Springs Segment of the Edwards Aquifer and in the vicinity of the Highland Lakes due to these protections, although, according to experts, current rules for land application systems contain unnecessary redundancy provisions that inflate costs to build and maintain such systems.

ADVOCATES FOR THE LEGISLATION: Many Texans regard the Hill Country as the jewel of this State, due in no small part to the conservation efforts of its landowners and ranchers. These stewards enhance habitat for species, reintroduce native grasses, control cedar and protect springs, creeks and rivers. Yet government insults these efforts by forcing sewage effluent discharges in the pristine waters flowing through their properties.

After spending the past ten years fighting multiple discharge permit applications, ranchers have organized to ask Rep. King and Sen. Menéndez to sponsor H.B. 3036 and S.B. 1796 in order to put an end to the damaging effects of old technology discharges in the contributing zone. These landowners solicited the help of technical experts in wastewater management to add provisions to the bill easing the regulatory burden and reducing costs to build and maintain land application systems. These systems recycle and reuse effluent on land to maintain parks, golf courses and green space thereby keeping effluent out of our waterways and aquifers. In sum, the bill is a win/win for the Hill Country and Texas. By ending direct discharges, our waterways remain clean and clear, and through beneficial reuse and recycling of effluent on land, we free up additional supplies of clean water for the needs of the public and private sectors. Every Texan who appreciates the Texas Hill Country as an attribute to be preserved for generations will support S.B. 1796 and H.B. 3036