The Fallacy of Vested Groundwater Ownership

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In Texas, surface-water withdrawals are regulated based on a permit system that recognizes the common source for this resource. If many competing interests were allowed to pump more water than a lake contains, it would become dry. The lake water comes from upgradient areas (streams) and moves into downgradient areas. The permitting process recognizes each watershed as an integral part of the entire drainage system and applies pumpage limits based on availability and needs for the entire system.

Groundwater likewise can occur as common, shared pools within which water flows from upgradient areas toward downgradient areas. Groundwater can become unavailable for all sharing that pool if only one user, or any combination of users, withdraws more than can be replenished. Additionally, the pool can dry up or become seriously depleted if upgradient sources of groundwater are over pumped. Although not as dynamically mobile as surface water, groundwater is indeed a moving resource. Just as surface water flows downstream under the pull of gravity, groundwater moves downgradient, from areas of relatively high water level toward those of lower elevation.

Groundwater sustainability requires an understanding and respect for that resource's spatial and temporal limits. Such limits depend on the amount of recharge (aquifer inflow) minus the amount of discharge (aquifer outflow) associated with any given time interval, plus or minus acceptable changes of water in storage. The magnitude and timing of changes in groundwater storage determine the nature (including direction and duration) of water-level variations in response to natural and human-induced variations in recharge and discharge. In summary, groundwater should be considered a shared resource, whose availability depends on a willingness and ability to equitably manage the time and spatial distribution of its occurrence and availability.

As demonstrated above, the amount of groundwater beneath one's property and the extent to which it remains available depends largely on hydrologic activity nearby and upgradient of that property—property that vested-rights advocates seemingly assume will remain forever capable of continuously yielding groundwater at historical or even higher rates. Regardless of whether the vested "ownership" promised by SB 332 is adopted, groundwater will never "behave" as a static commodity that is permanently and continuously available for all property-owning individuals and entities regardless of withdrawals by others.

Maintaining the long-term sustainability of groundwater is the responsibility of all current and future users within any hydraulically connected environment through which groundwater passes during its journey between areas of recharge and discharge.