

Comments to the Texas Commission on Environmental Quality
City of Austin Petition – Related to the Beneficial Reuse of Treated Wastewater

Earlier this year, an effort that extends back as far as 25 years was “culminated” when TCEQ personnel responsible for such considerations agreed that the wastewater management strategy generally outlined in “This is How We Do It” (<https://waterblogue.com/2014/09/24/this-is-how-we-do-it/>) can be routinely permitted by TCEQ. The deliberations on this were carried out with David Galindo, Firoj Vahora, Louis Herrin and Bob Brush. They may be consulted to confirm the outcome of those discussions is as I present it.

The reuse concept envisioned in what will be termed below by the shorthand a “decentralized concept strategy” is as follows:

- Wastewater will be gathered and treated to the quality appropriate for dispersal in Chapter 222 drip dispersal fields in collective treatment units which would be owned and operated by the entity (the “operating entity”) which holds a TCEQ permit to operate a wastewater system to serve the development from which this wastewater would be gathered.
- The reclaimed water will be pumped from a storage tank at the treatment unit to drip dispersal fields which lie within easements granted to the operating entity.
- These easements may cover front yards, parkways, parks and other common areas, so may include areas on “private property”. These are generally areas which would be irrigated in any case, so that the reclaimed water would be dispersed over areas where it would defray demands on the potable water system.
- Being dispersed at a rate of no more than 0.1 gallon/sq. ft./day, as stipulated in Chapter 222, flowing to the dispersal fields every day, the vast majority of this reclaimed would defray demand on the potable water system pretty much gallon for gallon through the peak irrigation season, when that substitution of demand would blunt requirements for peak supplies, which would be of great value to the local and regional water economy.
- Functionally, the drip dispersal fields that lie on “private property” would be what is allowed under Chapter 285 on “private property”, except that in this case the installation of those dispersal fields would be much more closely inspected, the maintenance of those dispersal fields would be under organized, professional management, and the treatment of the water running into those dispersal fields would be under organized, professional management, including requirements for on-going monitoring, which is completely lacking under Chapter 285. Thus, the decentralized concept strategy would be somewhat more highly “assured” to meet the environmental protection requirements intended by the rules systems than is being routinely permitted under Chapter 285 all throughout the areas which are the intended target of the City of Austin petition. Indeed, much “lower quality” systems are routinely approved under Chapter 285, so what is proposed in the decentralized concept strategy represents a quantum leap in management quality than is being routinely approved all throughout the watersheds in which the decentralized concept strategy might be implemented instead.
- Because drip dispersal field areas that lie on “private property” would be installed there under easement right, the owners of those properties would not be co-applicants, or party to the regulation of this decentralized concept strategy in any other way, except as grantors of the easements.
- This decentralized concept therefore renders irrelevant the concept of dedicated “disposal” fields to which the water would have to be applied if it could not be “reused”. It eliminates the two-step concept that TCEQ appears to see as the “proper” course for developing a wastewater system – which is dedicated to the proposition of “disposal” of a perceived nuisance – and *then* appending onto that “disposal” system provisions for “reuse”. The dispersal fields provide reuse of the water to maximum extent when the evapotranspiration potential is present to “assimilate” the flow – again that is through the vast majority of the peak irrigation season, when substituting this reclaimed water for potable water would be most valuable – and it also provides “disposal”, via deep percolation losses beyond the root zone, when the

evapotranspiration potential is lower than the application rate. Again, this is exactly what is routinely permitted by TCEQ under Chapter 285, only in a wastewater system that is professionally overseen and maintained, not left to the whims of the individual users.

The City of Austin petition contains references to Chapter 210 “rights” to reuse water in manners that are worrisome in regard to maintaining the “approval” TCEQ has agreed it can grant to this decentralized concept strategy. To wit:

- An applicant and, to the extent applicable, user must maintain its authorization under 30 TAC Chapter 210 (Use of Reclaimed Water) during the term of the permit.
- A permittee that relies on firm reclaimed water demand must receive an authorization required by 30 TAC Chapter 210 (Use of Reclaimed Water) prior to initiating construction or, if already constructed, operating a subsurface area drip dispersal system.
- An applicant that relies upon firm reclaimed water demand to reduce the land required for the subsurface area dispersal system required under this Chapter, shall ensure that indoor and outdoor dispersal sites for the reclaimed water have the appropriate authorization under 30 TAC Chapter 210 (Use of Reclaimed Water).
- An applicant establishes that reclaimed water demand is firm when the applicant: (1) demonstrates to the satisfaction of the executive director that a user will accept a specific volume of reclaimed water on a periodic basis; or (2) demonstrates a specific amount of reclaimed water use by the applicant.
- An applicant may demonstrate its ability to transfer reclaimed water on a periodic basis when it requires a user to accept a specific amount of reclaimed water by contract or by appropriate regulation.
- Applicant must provide the executive director with a list of users, type of use, and areas that receive firm reclaimed water demand. Areas receiving firm reclaimed water demand for outdoor irrigation purposes must be shown on a map that also identifies the buffer zones in compliance with 30 TAC 309.22 (Reclaimed Water Dispersal Sites). If the users or areas change, the applicant is required to provide an updated list within 30 days. A change in user or area is not an amendment to the permit.
- Firm reclaimed water demand includes the uses described in 30 TAC §210.32 (Specific Uses of Reclaimed Water).
- Reclaimed water dispersal sites must meet the standards in 30 TAC §309.22 (Reclaimed Water Dispersal Sites).

Under the decentralized concept strategy, the reclaimed water formally remains under the “control” of the operating entity, so that a Chapter 210 authorization to reuse this water would be irrelevant. It may be construed from the above that reuse may be executed *only* under a Chapter 210 authorization, and thus would negate the hard-won agreement of TCEQ that the decentralized concept strategy could be routinely permitted, without such “complications”. It is requested that, if it were to accept the City of Austin petition and modify its rules accordingly, TCEQ consider how to structure those rules so that outcome can be avoided, so that this agreement would not be compromised.