

# A regional wastewater management stakeholder process and potential rule-making petition to the Texas Commission on Environmental Quality

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Chris Herrington, P.E.



# How is wastewater regulated in Central Texas?

# Current Options for Wastewater Disposal

Tx Commission on Environmental Quality (TCEQ) regulates wastewater

Discharge effluent directly to a water body



Irrigate treated effluent on the land (TLAP)



# Beneficial Reuse Authorizations

With either a TLAP or discharge permit, treated effluent (aka, reclaimed water) can be used **on-demand** to:

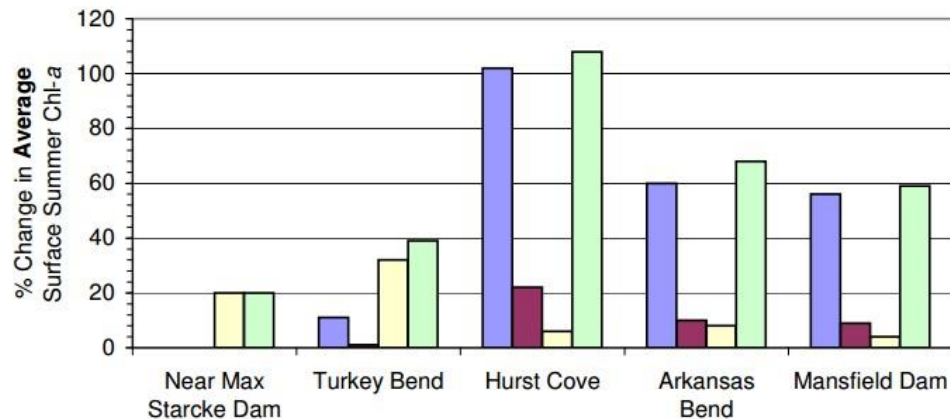
- Irrigate landscapes
- Flush toilets
- Fire protection
- Dust control
- Cooling towers
- Etc.



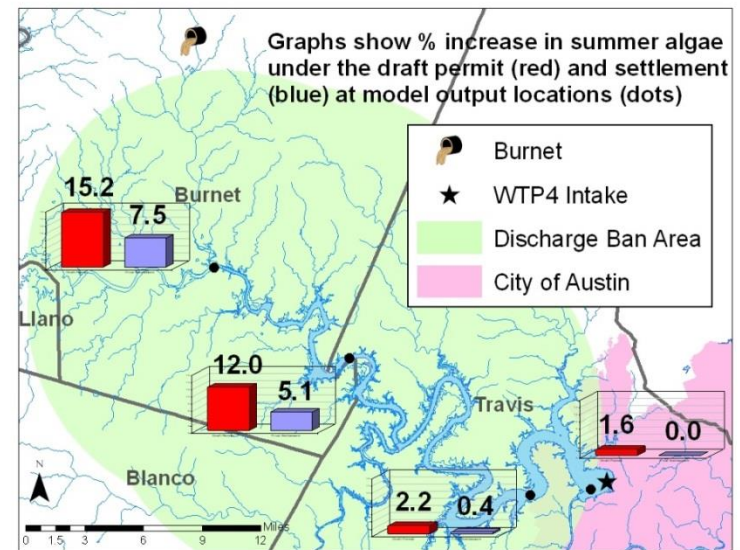
*Photo by Ed Clerico*

# Lake Travis Watershed Rule

TCEQ rules prohibit discharges directly to Lake Travis or within 10 miles of Lake Travis, so TLAP is only option

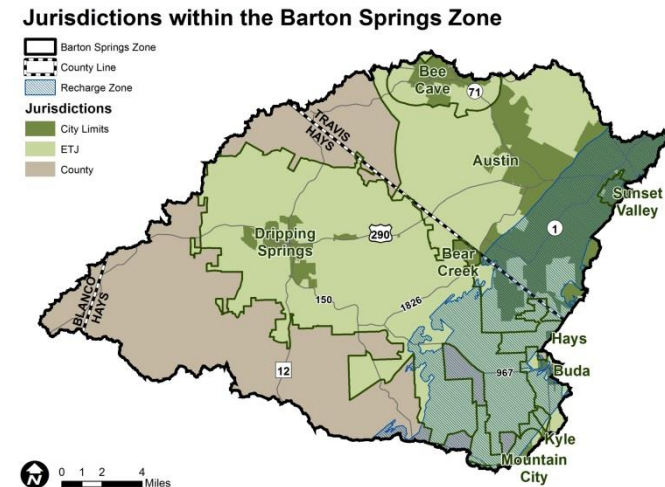
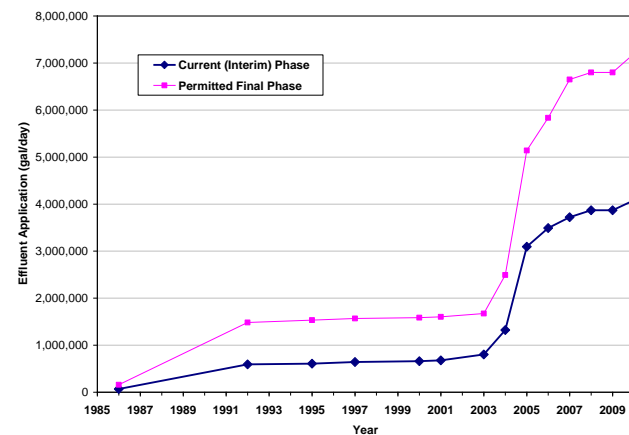
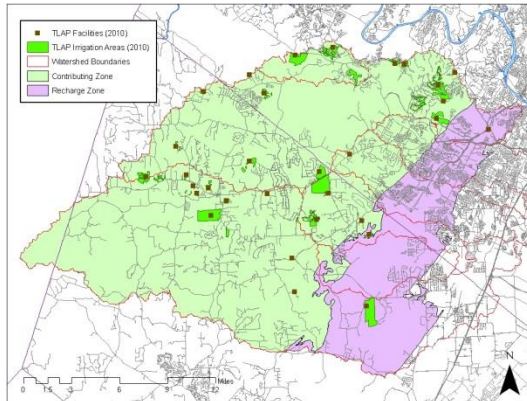


*Potential change in Lake Travis phytoplankton without Lake Travis Discharge Ban*



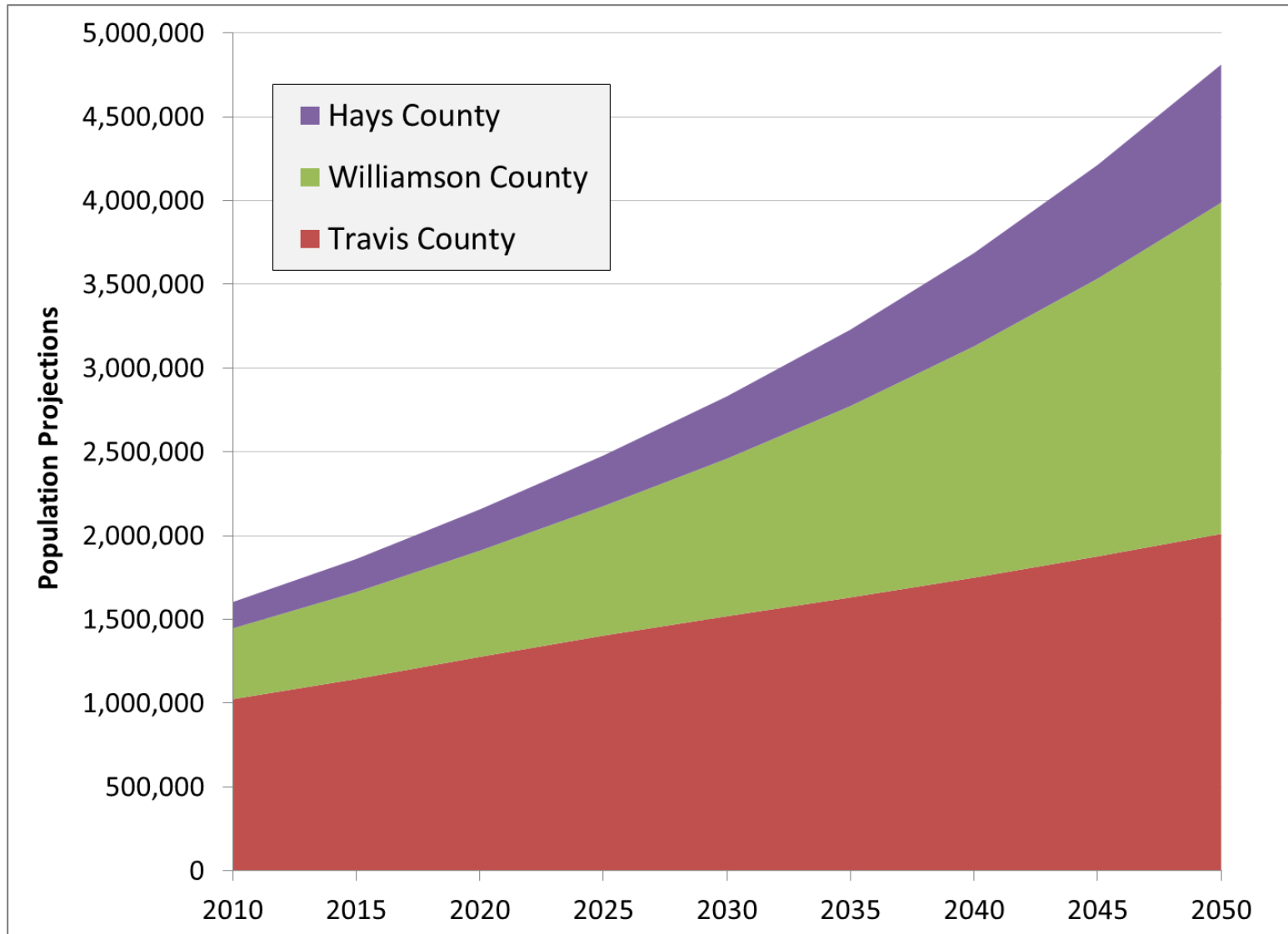
# Barton Springs Zone

- TCEQ rules prohibit discharge in the recharge zone, but not in the contributing zone
- In the BSZ, 29 of 30 wastewater permits are TLAP
- The 1 discharge permit allows for discharge only under very limited circumstances



What is the problem?

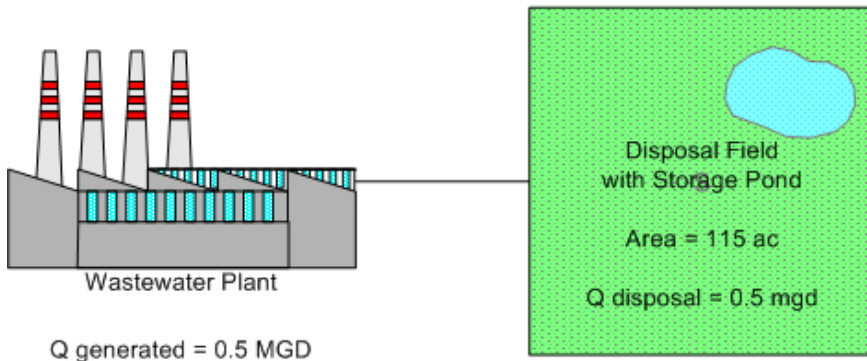
# Central Texas Population Growth





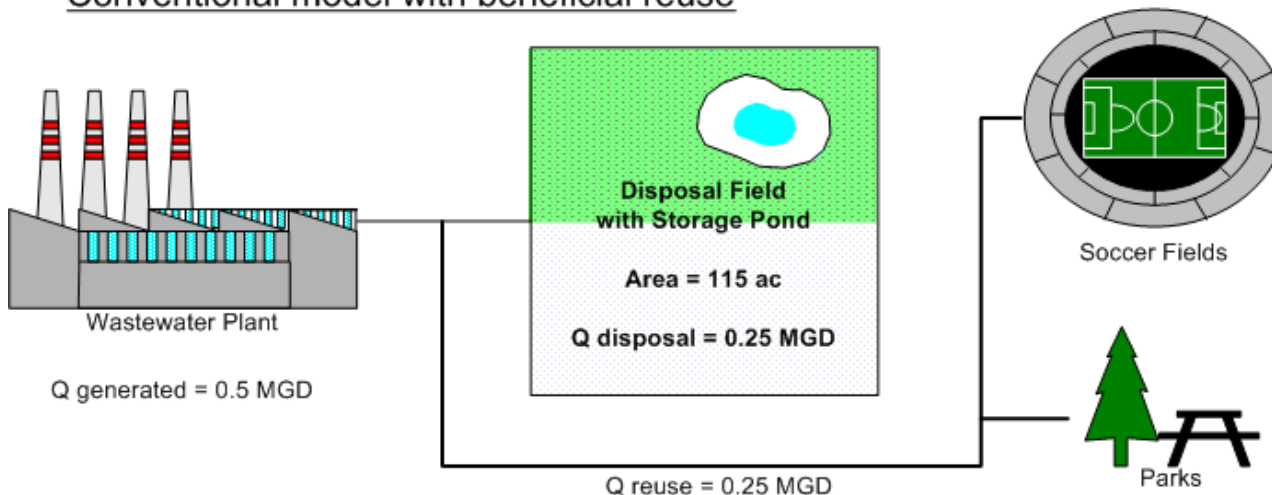
# Current TLAP Paradigm Examples

## Conventional model without beneficial reuse



*Effluent is completely “disposed” on dedicated disposal fields, storage pond fully utilized*

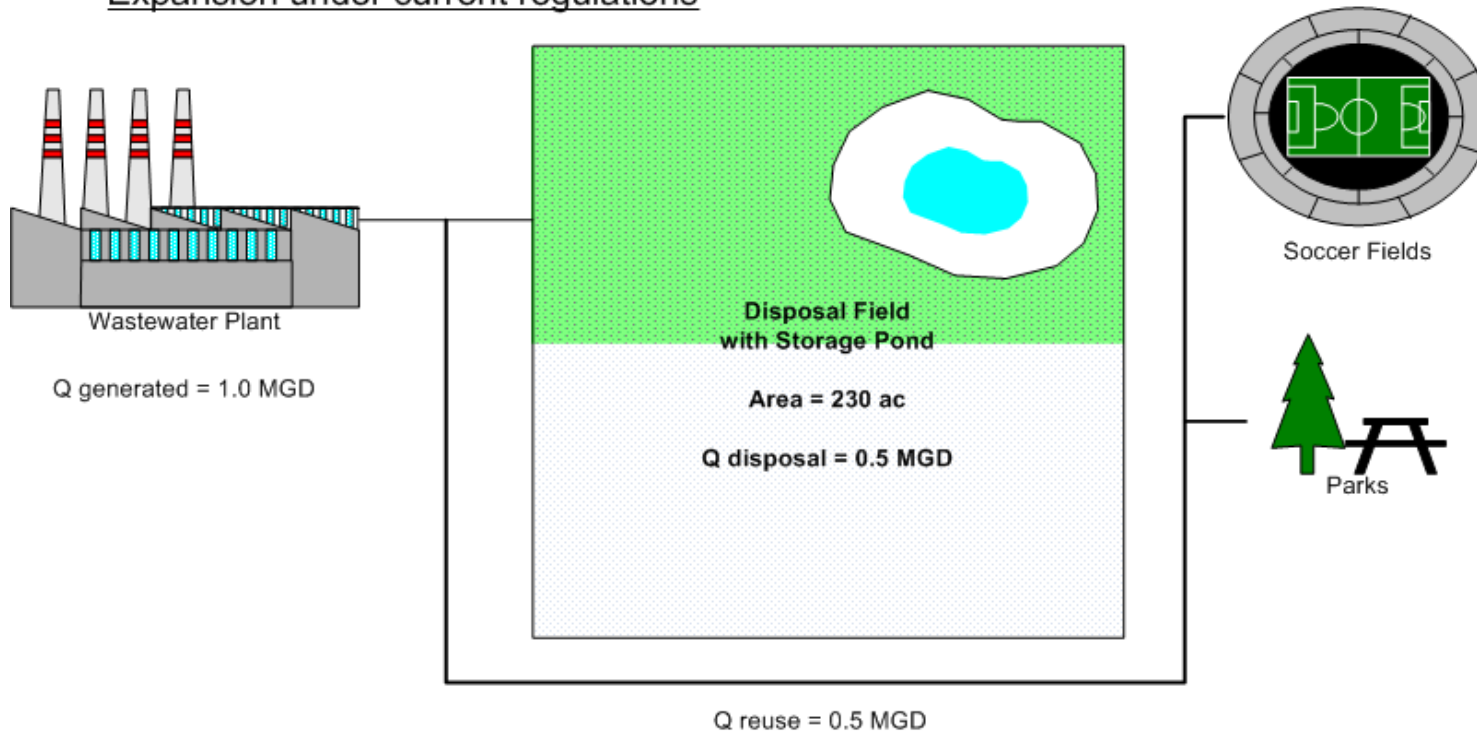
## Conventional model with beneficial reuse



*Some effluent is beneficially reused on soccer fields and parks such that disposal field and storage pond are only partially utilized, disincentivizing TLAP*

# Example expansion under current paradigm

## Expansion under current regulations



***Doubling wastewater treatment capacity requires doubling of irrigation area and storage volume even if beneficial reuse will result in only partial utilization. Cost of new land is a disincentive to expansion of existing TLAPs***

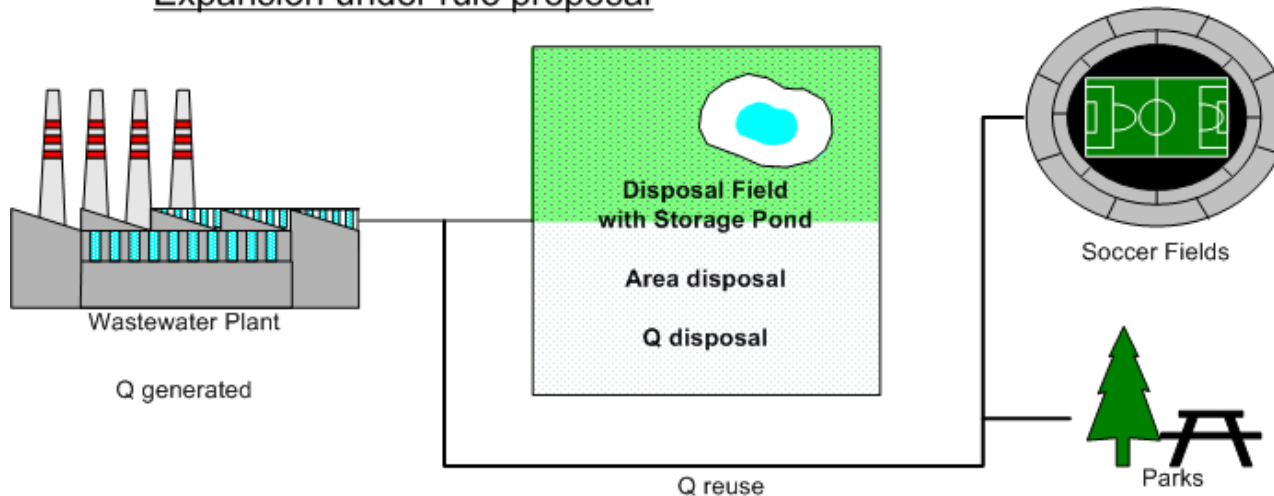
What is the proposed solution?

# Proposed Idea

- Ask TCEQ to add another “tool” to the wastewater toolbox with broad regional support
- Provide “credit” for beneficial reuse to reduce size of TLAP fields and ponds
- Create a flexible mechanism so that beneficial reuse can be added over time without triggering permit amendments
- Do not require permittee to own or lease beneficial reuse areas to take advantage of the credit
- Do not change requirements for beneficial reuse, except when using beneficial reuse as credit for TLAP

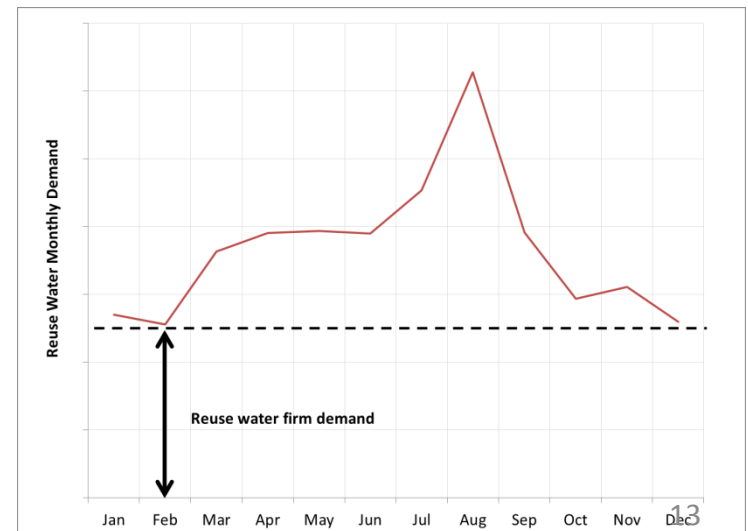
# Example Expansion under Rule Proposal

Expansion under rule proposal



*Area required for TLAP disposal is reduced by the amount of wastewater that can reliably be utilized for beneficial reuse*

$$Q_{\text{disposal}} = Q_{\text{generated}} - Q_{\text{reuse firm demand}}$$



# Proposed Rule Petition

Surgical modifications of 30 TAC 309 and 30 TAC 222

Reduce total wastewater volume in water balance calculations by amount of “firm beneficial reuse volume”

Establish “firm beneficial reuse volume” (even on land not owned by permittee) by:

- Providing evidence of historic use
- Include contracts for reuse with permit
- Local “ordinance” requiring specific amount of reclaimed water to be accepted by new customers as they come online

Apply most TLAP setback requirements to beneficial reuse “credit” areas

Require up-to-date list of beneficial reuse “credit” areas without permit amendments

Exclude “beneficial reuse areas” from technical report requirements at time of application EXCEPT when over the Edwards Aquifer

# Potential Benefits

- Another tool in the toolbox
- Remove barriers to TLAP expansion by reducing land costs
- Flexibility to accommodate growth as it happens
- Encourage investment in beneficial reuse infrastructure
- Generate new income from sale of reclaimed water
- Reduce need and likelihood of contested permits
- Protect high quality of Hill Country water resources
- Conserve drinking water supplies

# Timeline

- Aug 31 Mayors Adler and Purcell convened regional meeting
- Sep 14 First technical workgroup to review rule draft
- ~Oct Continue technical workgroup meetings as needed
- ~Nov Submit rule-making petition to TCEQ
- ~Jan TCEQ responds to rule making



# For More Information

Access documents at: <ftp://ftp.ci.austin.tx.us/wre/wastewater/>

Website coming soon

Contact Chris Herrington (City of Austin)

512-974-2840

[Chris.Herrington@austintexas.gov](mailto:Chris.Herrington@austintexas.gov)