

# Blanco TPDES Refinement Study



DRAFT Final Report

Presentation to:

Blanco Water Reclamation Task Force

Jun 16, 2021

# Blanco TPDES Refinement Study

## Overview of Scope of Work

**Task 1: Population and demand growth**

**Task 2: Evaluation of WWTP infrastructure and permits**

**Task 3: Cost estimate for no-discharge engineering options**

**Task 4: Evaluate and recommend TPDES permitting options**

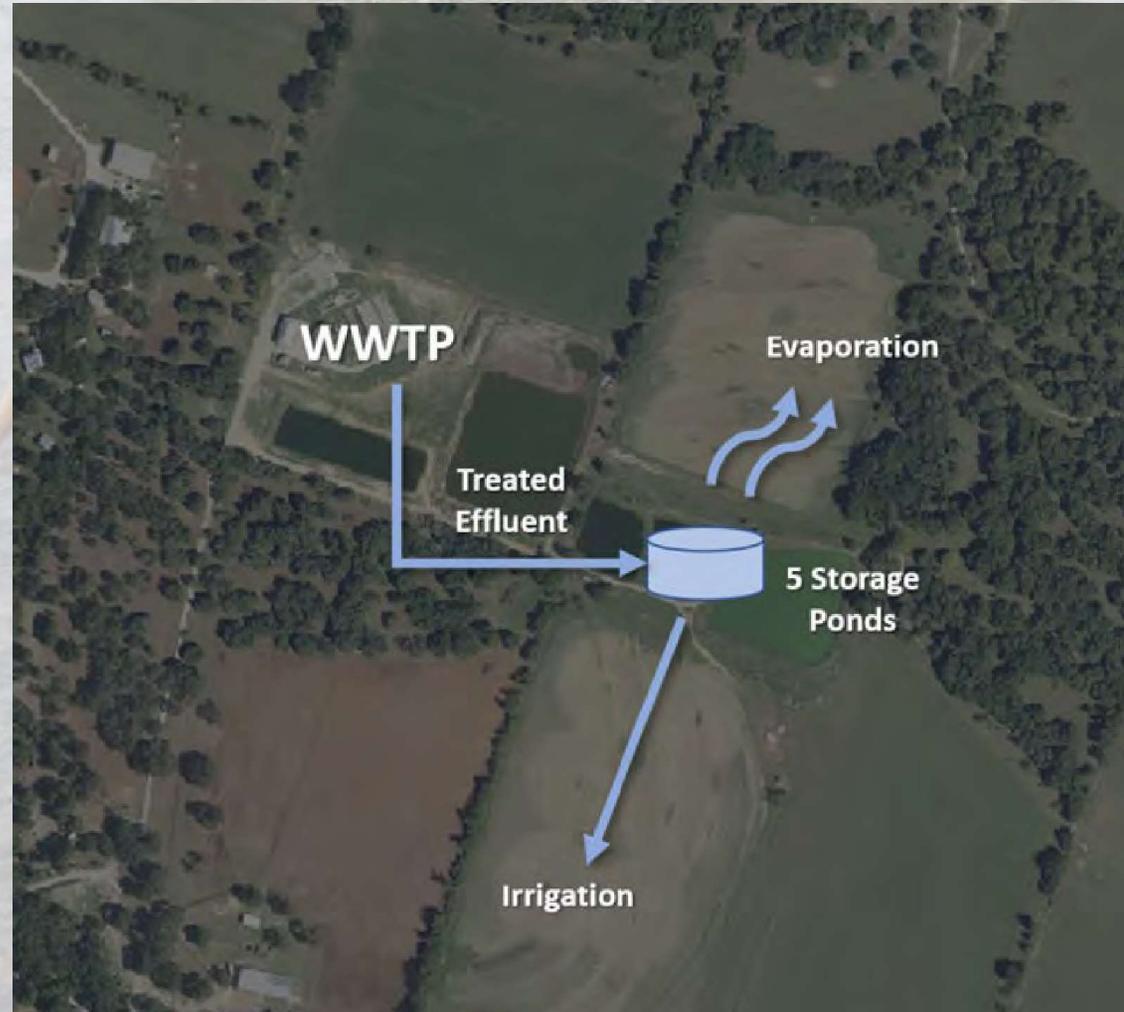
**Task 5: Reporting/Recommendations**



# Rec. 1: Drop the renewal application for TPDES

The City can build enough storage and irrigate enough land to avoid having to discharge, even under extreme wet conditions.

See water balance calculations in draft final report.



## Rec. 2: Double the size of effluent storage ponds

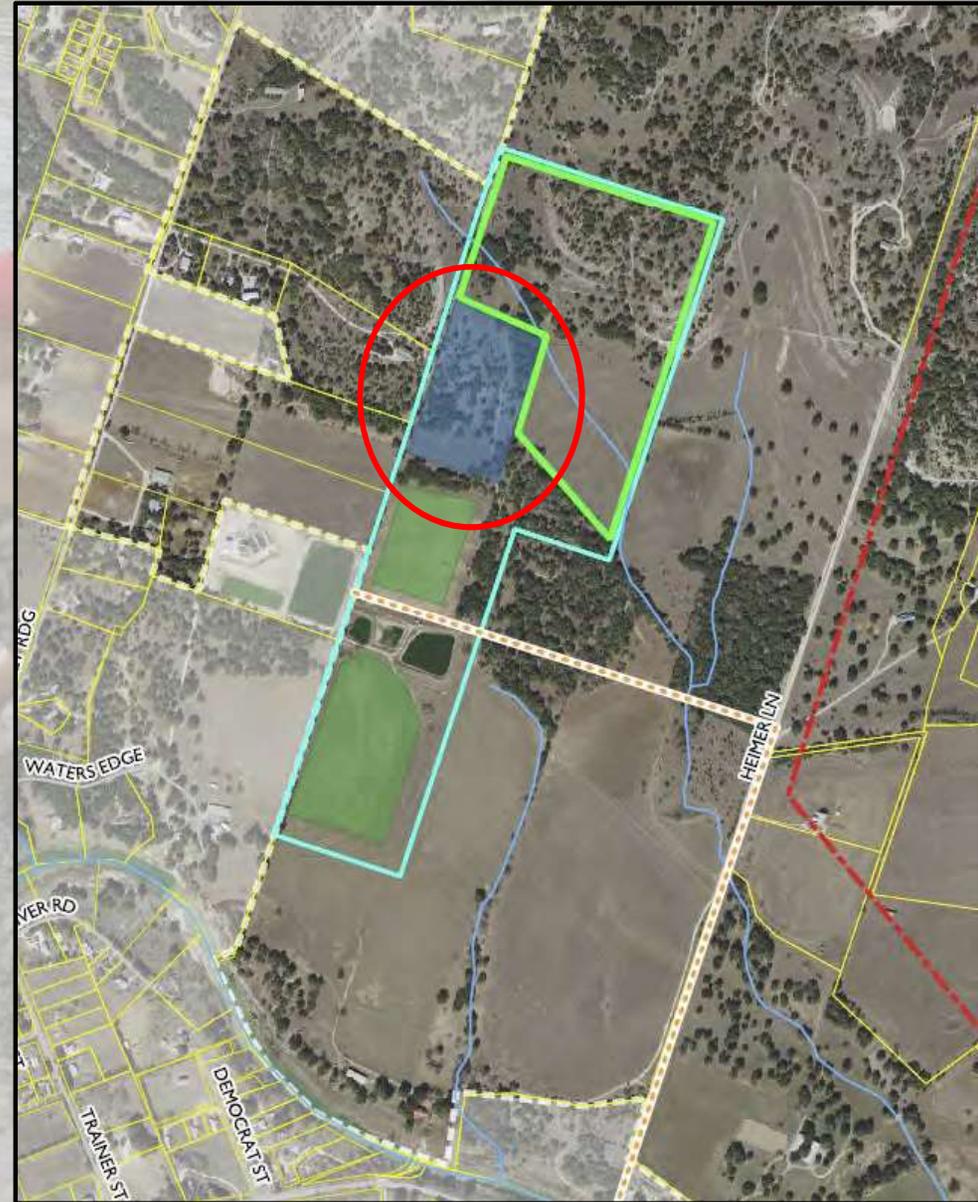
**Add 10 MG storage pond to the facility, to hold reclaimed water during wet conditions.**

- 7 acres
- 4.5 feet deep

**Consider lining, and perhaps chemical treatment, to maintain Type 1 standards**

**→ Reclaimed water**

**Cost: appr. \$500k.**



## Rec. 3: Secure additional land for irrigation

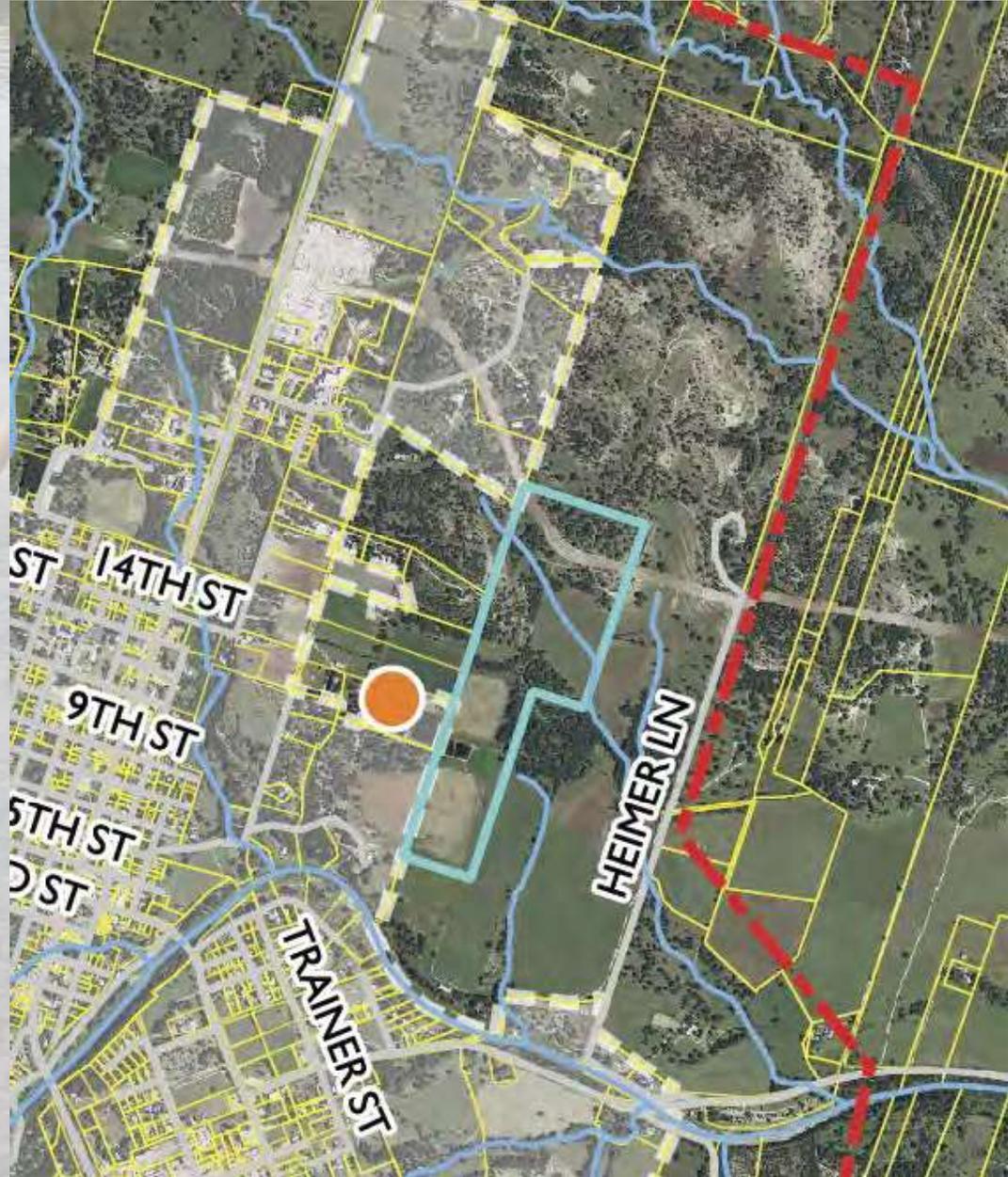
Only 26 acres currently under irrigation (City land)

Agreement in place for 48 additional acres

Negotiations underway for 65 more acres.

Possibly 70 more acres available.

Near-term goal: > 100 acres.



## **Rec. 4: Revisit City debt and refinancing opportunities**

**TWDB could possibly consolidate debt and issue further loans to fund recommendations.**

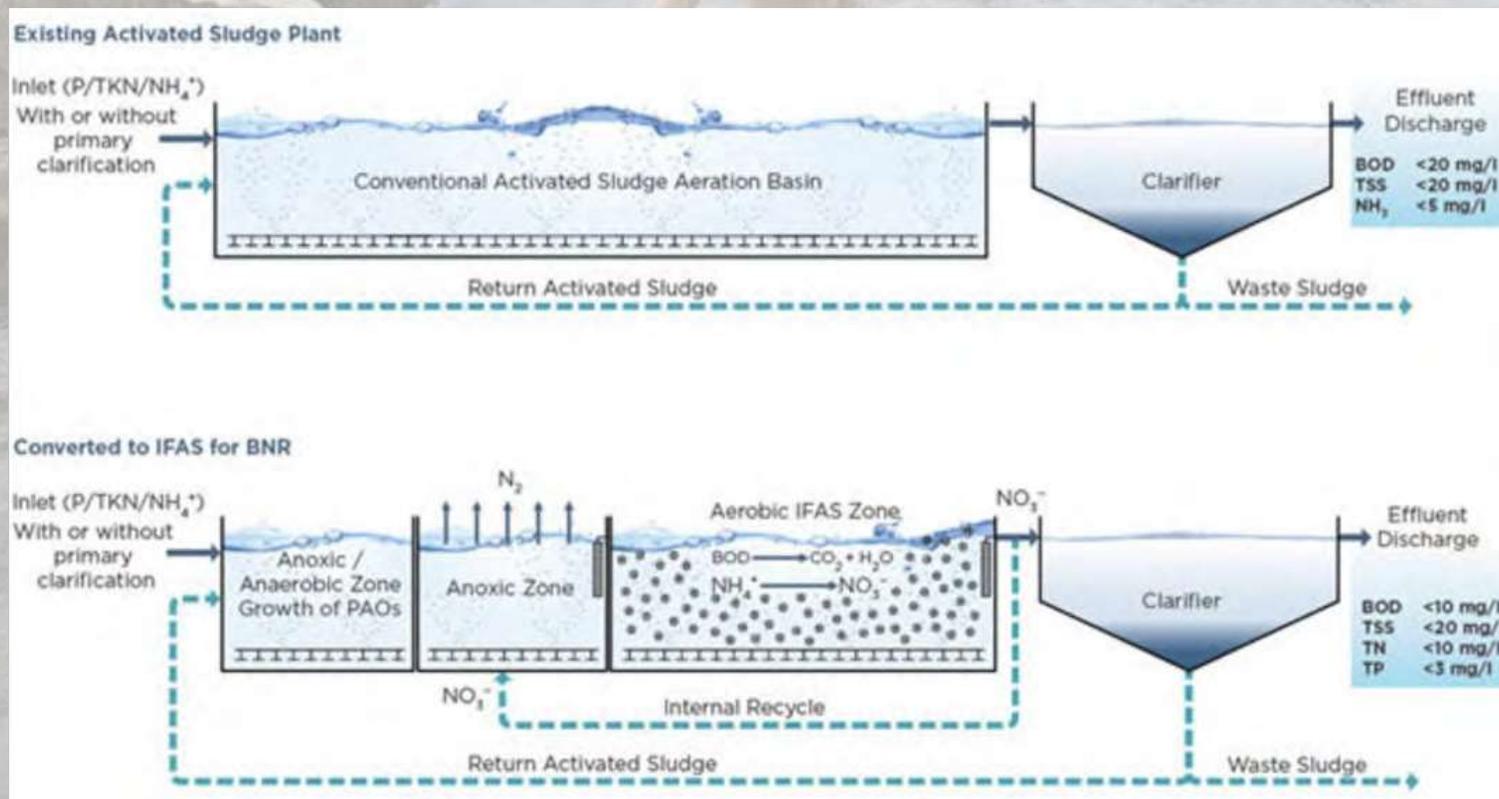
**Rebecca Trevino (CFO) has offered to speak with the City and/or Task Force to discuss options.**

**Depends who current loans are with.**

## Rec. 5: Continue reducing Total Phosphorus

The City has begun optimizing the dosing of alum to lower Total Phosphorus (TP) below 1mg/l (current) even further. The City should continue this effort and report findings.

The City should consider retrofitting Biological Nutrient Removal at the WWTP in order to further lower TP. Cost: app. \$200k.

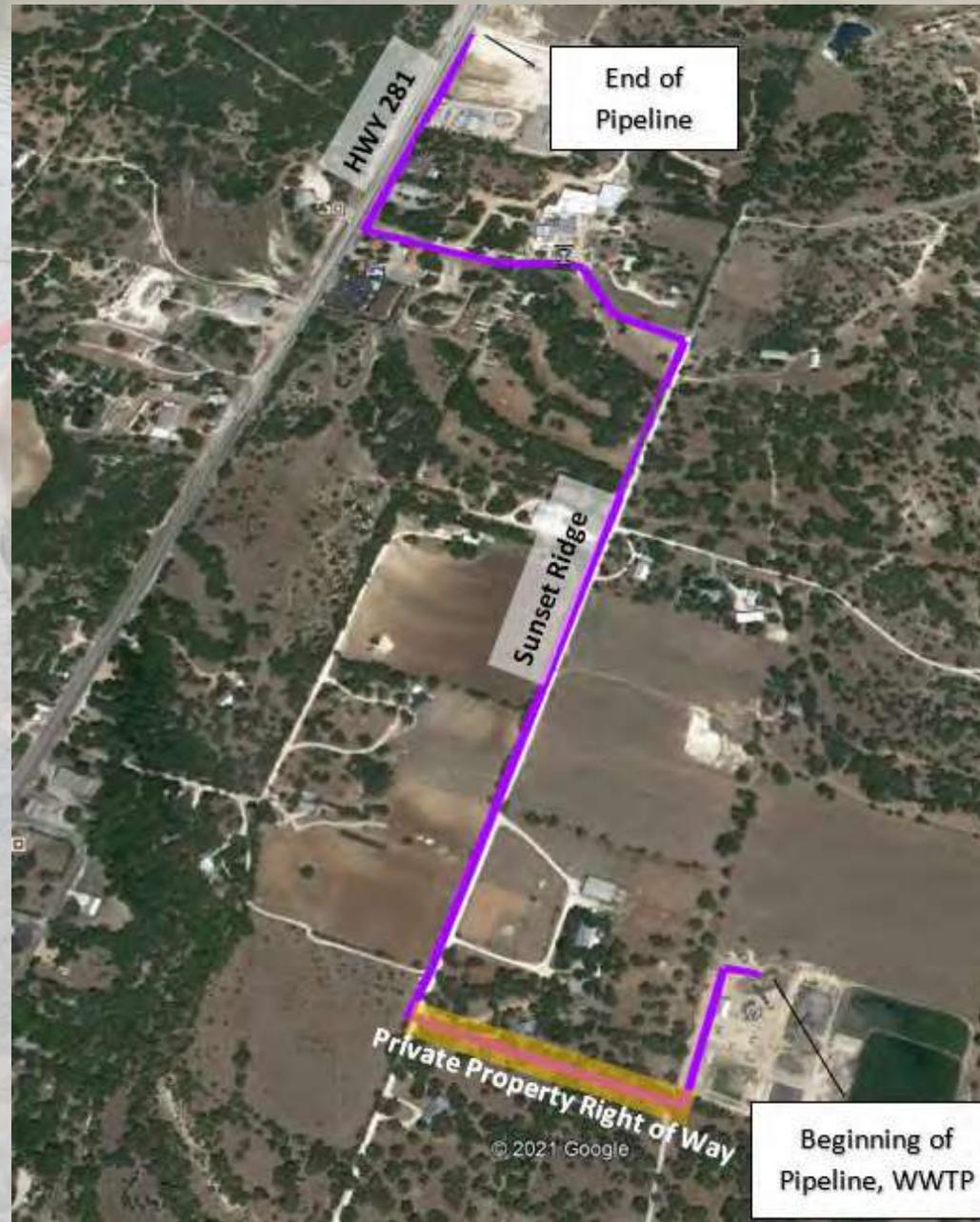


## Rec. 6: Seek potential buyers of the reclaimed water

There are a few opportunities for use (and sale) of the reclaimed water.

Run “purple pipe” up to highway 281 to a standpipe. Sell that water for industrial needs?

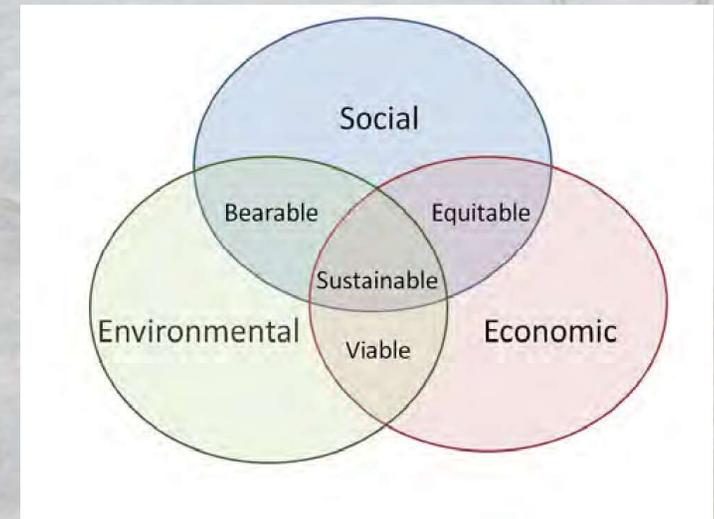
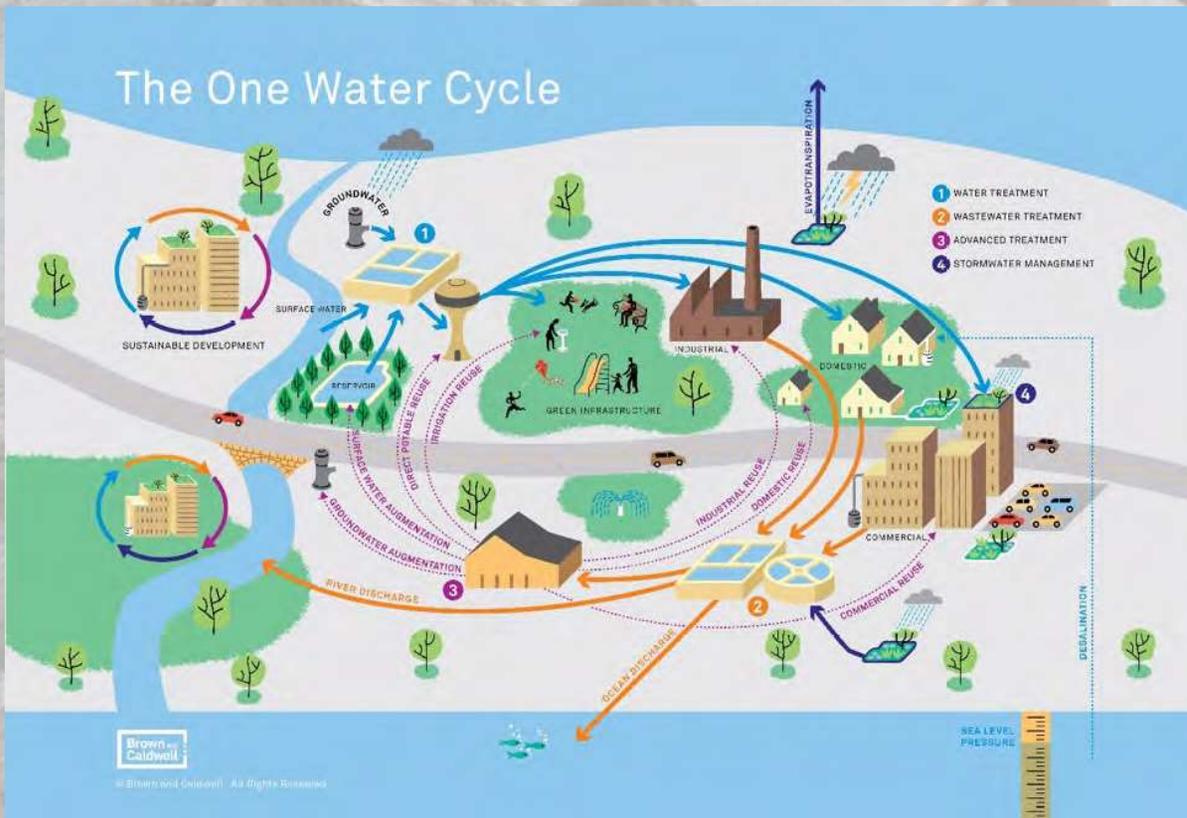
- Cost < \$5M
- Landowners to share cost?
- Step-by-step
- Might not need tank
- There are O&M costs



# Rec. 7: Work collaboratively on longer term strategies and One Water vision.

The One Water idea is more complex than the Water Cycle we learn about in school.

- Wastewater and water quality
- Vast and diverse water uses
- Costs, practicalities and sustainability
- Social/societal needs



# Q&A and discussion



## The Meadows Center for Water and the Environment **Blanco TPDES Refinement Study**

Submitted on June 14, 2021 to:

Nick Dornak via email at:  
Nickdornak@txstate.edu



**THE MEADOWS CENTER**  
FOR WATER AND THE ENVIRONMENT  
TEXAS STATE UNIVERSITY

Presented by :

**AquaStrategies**

and our team members:



and

Blue Creek Consulting, LLC