

**PERMITTING and
USES of
DOMESTIC
RECLAIMED
WATER**

Texas Commission on Environmental Quality

BENEFICIAL REUSE

- ✘ Economical use of treated wastewater in accordance with the purposes, applicable requirements, and quality criteria of Chapter 210, and which takes the place of potable and/or raw water that could otherwise be needed for another purpose. The use of reclaimed water in a quantity either less than or the economically optimal amount may be considered a beneficial use as long as it does not constitute a nuisance



REGULATING RECLAIMED WATER

- × 30 TAC Chapter 210 – Use of Reclaimed Water
- × 30 TAC Chapter 321 – Control of Certain Activities by Rules
 - + Subchapter P - Reclaimed Water Production Facilities



CHAPTER 210

- ✘ **SUBCHAPTER A**
- ✘ GENERAL PROVISIONS

- ✘ **SUBCHAPTER B**
- ✘ GENERAL REQUIREMENTS FOR THE PRODUCTION, CONVEYANCE, AND USE OF RECLAIMED WATER

- ✘ **SUBCHAPTER C**
- ✘ QUALITY CRITERIA AND SPECIFIC USES FOR RECLAIMED WATER



CHAPTER 210 CONTINUED

- × **SUBCHAPTER D**
- × ALTERNATIVE AND PRE- EXISTING RECLAIMED WATER SYSTEMS

- × **SUBCHAPTER E**
- × SPECIAL REQUIREMENTS FOR USE OF INDUSTRIAL RECLAIMED WATER

- × **SUBCHAPTER F**
- × USE OF GRAYWATER AND ALTERNATIVE ON-SITE WATER



CHAPTER 321

× SUBCHAPTER P

+ RECLAIMED WATER PRODUCTION FACILITIES

- × 210 is a rider to issued TPDES, TLAP permits or 321P authorization



APPLICABILITY

- ✘ Chapter 210 applies to the reclaimed water producer, provider, and user.
- ✘ Use of reclaimed water is permissible only: if the - use occurs after wastewater has been treated in accordance with the producer's wastewater permit
- ✘ - The Water Quality permit provides for an alternative means of disposal during times when there is no demand for the use of the reclaimed water.



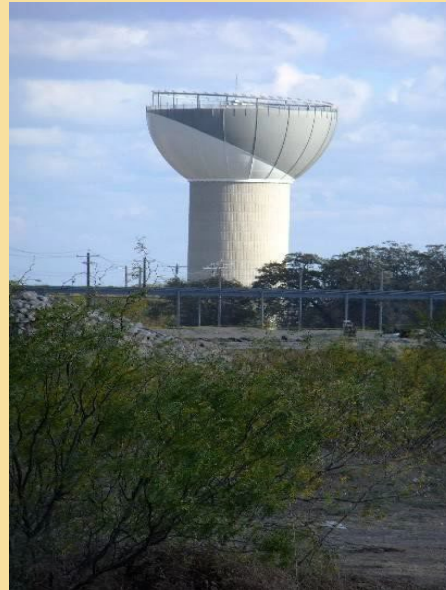
PRODUCER

- ✘ A person or entity that produces reclaimed water by treating domestic wastewater or municipal wastewater, in accordance with a permit or other authorization of the Agency, to meet the quality criteria established in this chapter.



PROVIDER

- ✘ A person or entity that distributes reclaimed water to a user(s) of reclaimed water. For purposes of this chapter, the reclaimed water provider may also be a reclaimed water producer



USER


- ✘ Person or entity utilizing reclaimed water for a beneficial use, in accordance with the requirements of this chapter. A reclaimed water user may also be a producer



DOMESTIC REUSE AUTHORIZATION

- Current wastewater permit
 - (TPDES or TLAP)
- Application on web (TCEQ-20427)
 - Keyword: **Reclaimed**
- No charge
- No expiration
- On demand use only

Region: _____



Authorization for Re-Use of Domestic Reclaimed Water

This application is for the beneficial reuse of domestic reclaimed water in accordance with 30 Texas Administrative Code (TAC) Chapter 210, Subchapters A, B, C, and D.

REASON FOR APPLICATION:
Select the reason you are submitting this application:

New authorization

Amendment of reuse authorization number: R _____



NOTIFICATION

- × The notification includes:
 - × (1) a description of the intended use of the reclaimed water, including quantity, quality, origin, and location and purpose of intended use;
 - × (2) a clear indication of the means for compliance
 - × (3) evidence in a water supply contract or other binding agreement of the provider's authority to terminate reclaimed water use that is noncompliant with this chapter; and
 - × (4) an operation and maintenance plan



GENERAL REQUIREMENTS

- ✘ Reuse of untreated wastewater is prohibited.
- ✘ Food crops that may be consumed raw by humans shall not be spray irrigated.
- ✘ There shall be no nuisance conditions resulting from the distribution, the use, and/or storage of reclaimed water.



MORE GENERAL REQUIREMENTS

- × Reclaimed water shall not be utilized in a way that degrades ground water quality to a degree adversely affecting its actual or potential uses.
- × Reclaimed water managed in ponds for storage must be prevented from discharge into waters in the state, except for discharges directly resulting from rainfall events or in accordance with a permit issued by the commission.
- × **All other discharges are unauthorized.**



DOMESTIC RECLAIMED WATER

- Type I
 - Public exposed
 - Human Contact
- Type II
 - Public NOT exposed
- WWTP on-site
 - Type II quality
 - No notification



WATER QUALITY

Type I

- BOD / CBOD 5 mg/l
- Turbidity 3 NTU
- *E. coli* 20/100ml
geo mean
75/100ml max
- 2 test per week

Type II

- BOD 20 mg/l *or*
- CBOD 15 mg/l
- BOD 30 mg/l (Pond)
- *E. coli* 200/100ml
geo mean
800/100 max
- 1 test per week



TYPE I USES

Public exposure possible

- Irrigation
 - Contact with edible part of food crop
 - Parks, athletic fields
- Impoundments
 - Wading, boating, fishing
- Toilet flushing



TYPE II USES

Irrigation – Controlled Access areas only

Pond Maintenance

Construction – dust suppression, soil compaction

Industrial Processes—cooling tower, manufacturing

Public exposure limited by

location

timing

fencing



WWTP ON-SITE USE

- ✘ Recordkeeping
- ✘ 210 rules apply
- ✘ No notification



BACTERIA MEASUREMENT

- ✘ Most Probable Number (MPN)
- ✘ Colony Forming Units (CFU)
- ✘ Bacteria of choice
 - + No update to authorization required
 - + Match permit

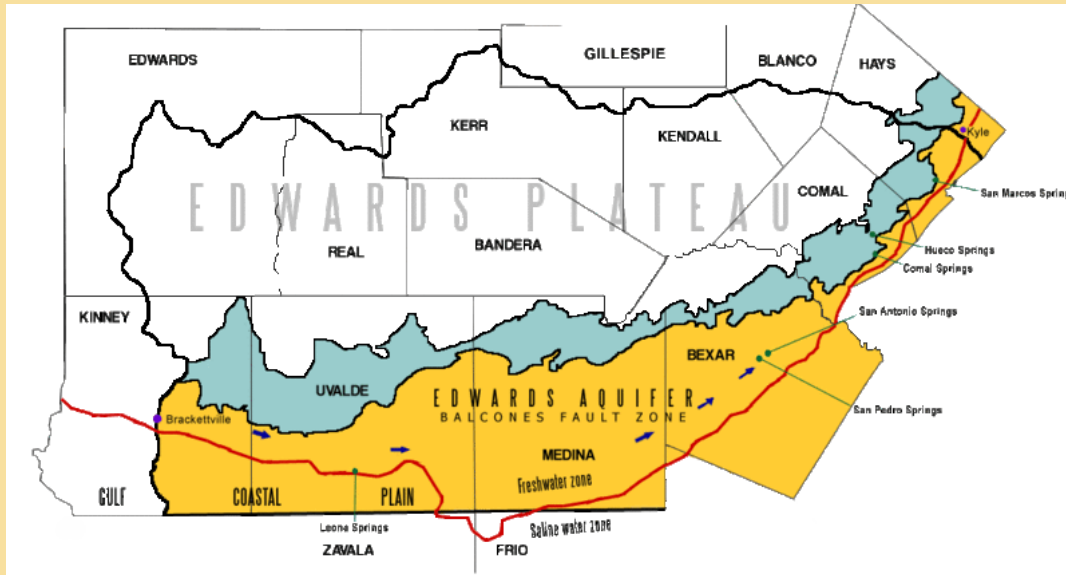


STRUCTURES & EQUIPMENT

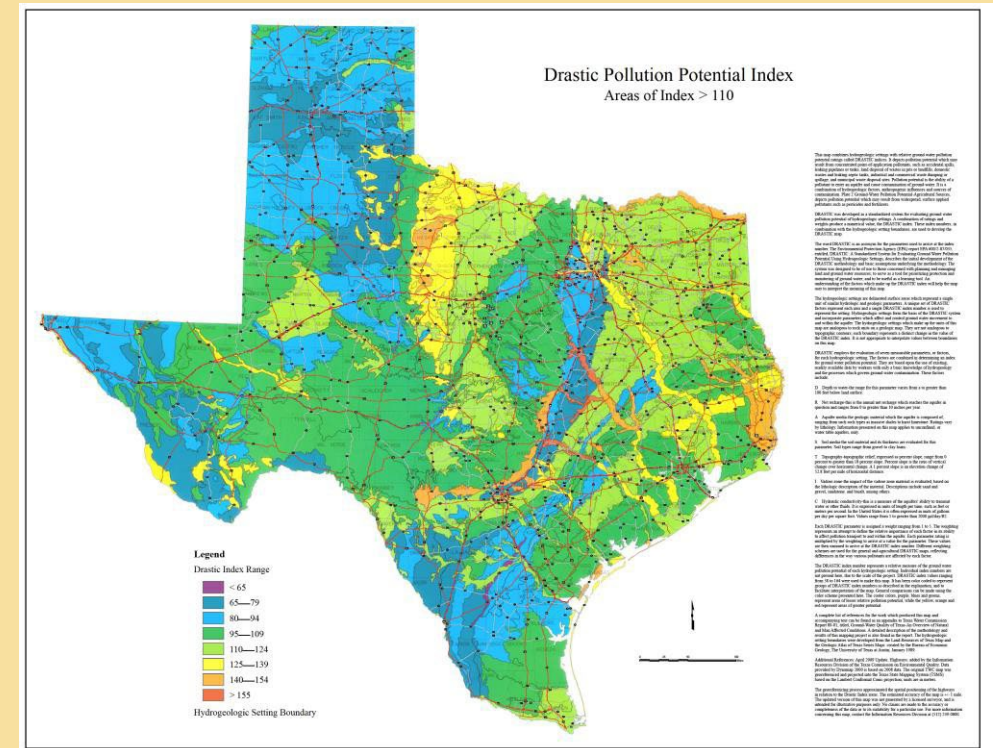


- ✘ Manufactured tank
- ✘ Permeability
 - + 10^{-4} normally
 - + 10^{-7} Edwards or
DRASTIC
- ✘ 30 TAC 217 & 290 for piping requirements
- ✘ Liner thickness from two to three feet

EDWARD'S AQUIFER & DRASTIC



✘ More stringent requirements



NEEDED SIGNAGE & PURPLE PIPE



- ✘ Must Prevent
 - + consumption
 - + cross connections

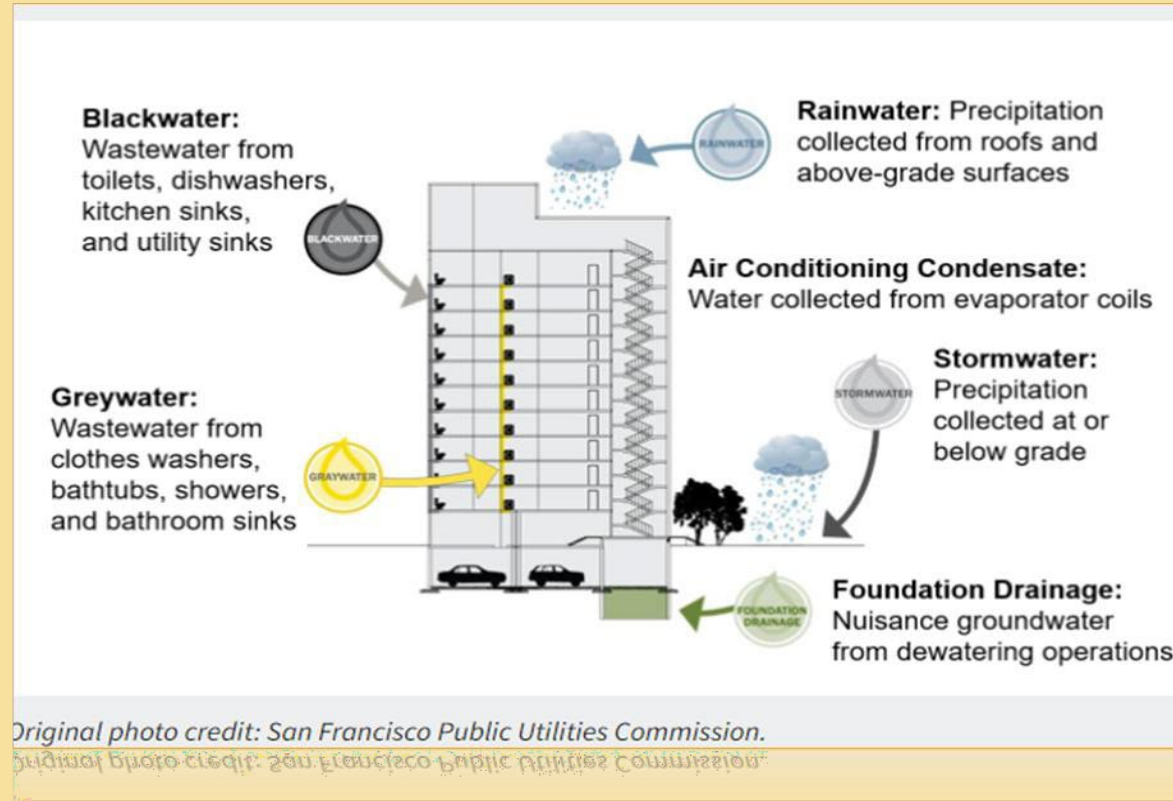


REPORTING

- ✘ Notify TCEQ 30 days before pumping
 - + No reporting while constructing
- ✘ Monthly reports (MER)
- ✘ Reclaimed + outfall \leq permitted flow (Producer)

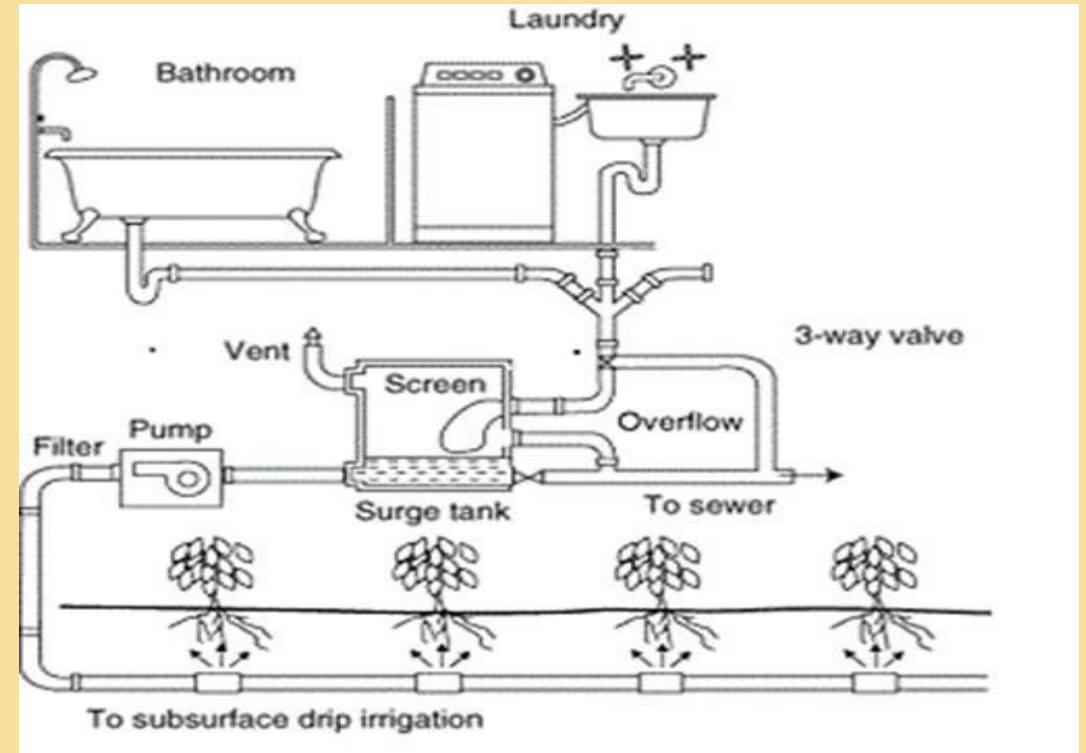


GRAY WATER AND ALTERNATIVE ONSITE WATER



GRAY WATER

- Private homes
- 400 gallons/day
- Irrigation
- Bypass back to sewer or septic tank
- Tank with filter
- Air-break – into container



HISTORY OF 321 SUBCHAPTER P

Reclaimed Water Production Facilities

2007 - Agency received petition for new rules to allow permittee to build a wastewater treatment plant for the purpose of reuse only within their collection system

2008 – Commission adopted Chapter 321, Subchapter P rules

Around 2021 – Commission started talking with groups about a petition to decouple these plants from the permitted wastewater treatment plant

2023 – SB 289 was passed to allow decoupling



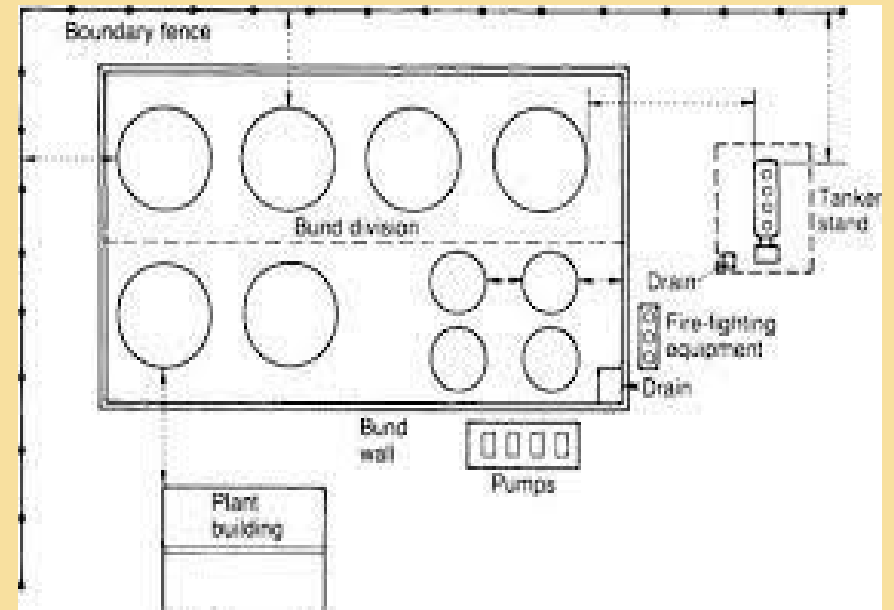
RECLAIMED WATER PRODUCTION FACILITIES

- ✘ 30 TAC 321P (current)
- ✘ Must be Coupled with a TPDES or TLAP permit
- ✘ Same ownership
- ✘ No notice if enhanced buffer zone
- ✘ Submit 321P application – Form 20537
- ✘ Plans and Specifications, and
- ✘ 210 application - Form 20427
- ✘ As one complete package



ENHANCED BUFFER ZONE

- ✘ 300 ft. if no enhancements made to plant
- ✘ 150 ft. if plant enclosed but no scrubbers installed
- ✘ 50 ft. if plant enclosed and odor control installed



CHAPTER 321 SUB P UPDATES FROM SB 1289

- ✘ No changes for the plants that are coupled
- ✘ SB 1289 allows for plant to be decoupled from existing TPDES or TLAP
- ✘ For decoupled plants
 - + What is plants ultimate disposal method of
 - ✘ Sludge
 - ✘ Treated effluent
 - ✘ Untreated influent



ADDITIONAL NEEDS FOR DECOUPLED PLANTS

- ✘ Copies of authorizations to take influent (sewer mining)
- ✘ Proof of enhanced buffer zone
- ✘ Submit 321P application – Form 20537
- ✘ Complete set of Plans and Specifications
- ✘ 210 application - Form 20427

- ✘ Submitted as one complete package



TIMELINE FOR REVISED 321 SUBCHAPTER P RULES

- ✘ Currently working on revisions to the current 321P rules, applications and updating the authorization
- ✘ Stakeholder meeting tentatively set for November 9, in Austin
- ✘ Draft rules publish in the Texas Register late Winter or early Spring, 2024
- ✘ Rules adopted late summer 2024



PLANNING FOR POSSIBILITIES

✘ Indirect Potable Reuse (IPR)

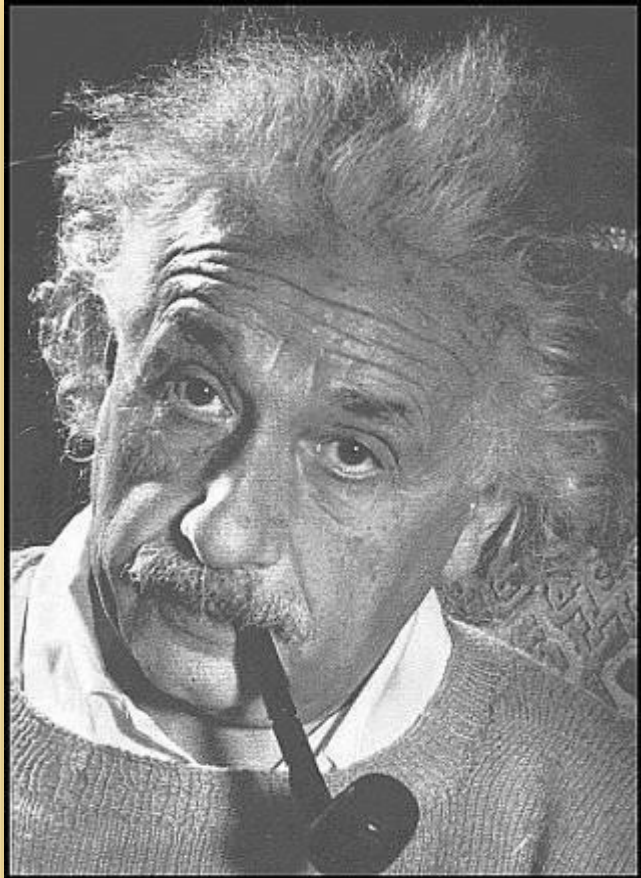
- + Send to a Receiving body
- + Treat at water Plant
- + Supplement current water
- + Possibly use current reclaimed water distribution network

✘ Direct Potable Reuse (DPR)

- + Discharge directly to water treatment plant
- + Discharge criteria standards by TCEQ Water Supply Division



QUESTIONS OR COMMENTS?



In life...

questions are guaranteed

answers are not

THANK YOU

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