

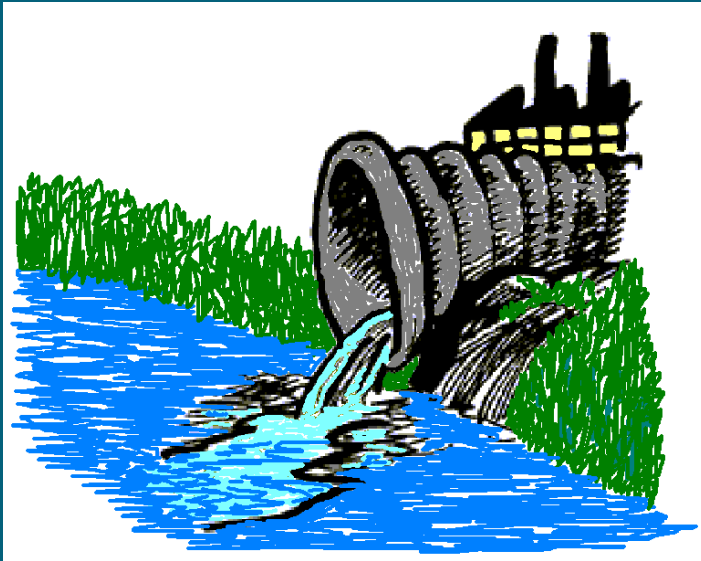
Reuse of Industrial Reclaimed Water

30 Texas Administrative Code Chapter 210, Subchapter E

Presented by Kara Denney
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What is industrial reclaimed water?

- Industrial reclaimed water is nondomestic wastewater re-used for a beneficial purpose.



Why re-use industrial wastewater?

- Safe reuse of industrial wastewater conserves raw or potable water.



Where are the requirements for reuse of industrial reclaimed water?

- The requirements are in 30 Texas Administrative Code (TAC) Chapter 210, Subchapter E, or “210E” for short.

Texas Administrative Code

TITLE 30 ENVIRONMENTAL QUALITY
PART 1 TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
CHAPTER 210 USE OF RECLAIMED WATER

Subchapters

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
SUBCHAPTER D ALTERNATIVE AND PRE-EXISTING RECLAIMED WATER SYSTEMS
SUBCHAPTER E **SPECIAL REQUIREMENTS FOR USE OF INDUSTRIAL RECLAIMED WATER**
SUBCHAPTER F USE OF GRAYWATER SYSTEMS

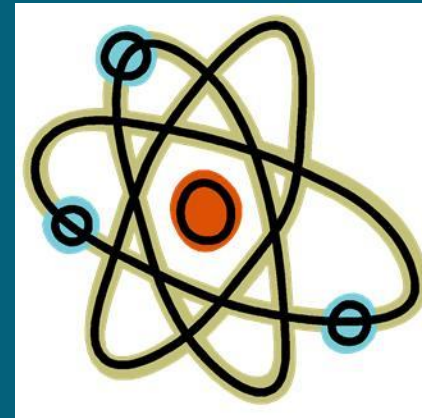
A 210E authorization is not needed for:

- Internal recycling systems
- Closed loop systems
- Use of industrial wastewater as makeup water within a facility



The following wastes are not eligible for reuse authorization under 210E:

- Wastewater containing:
 - Radioactive material
 - Dioxins or furans
 - Pesticides
- Wastewater classified as, or which is, hazardous as defined by 40 Code of Federal Regulations (CFR) Part 261



Wastes not eligible for reuse under 210E, continued:

- Septic tank, chemical toilet, grit or grease trap waste
- Barge cleaning or air scrubber wastewater
- Any wastewater eligible for coverage under either:
 - A permit by rule (30 TAC Chapter 321) or
 - A general permit for land application

Wastes not eligible for reuse under 210E, continued:

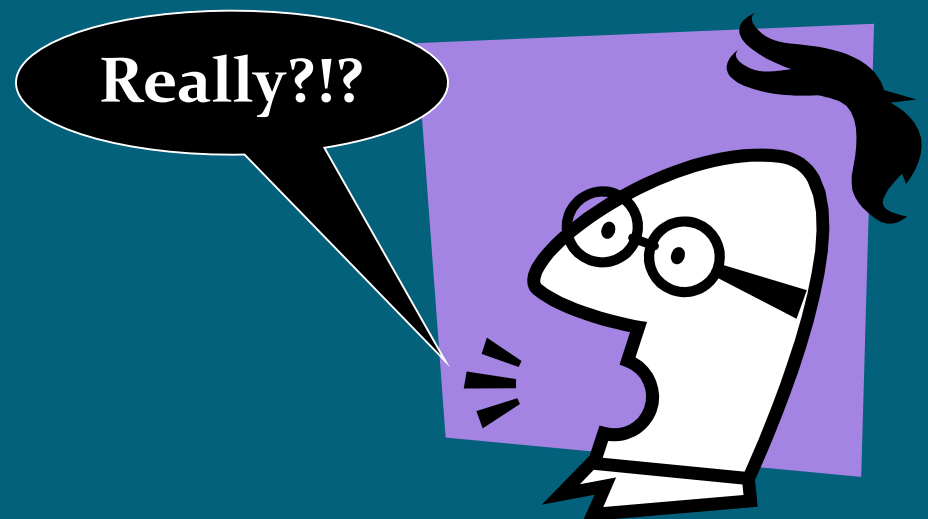
- Process wastewater regulated under 40 CFR Parts 400-471 (with some exceptions)
- Remediated or contaminated groundwater generated by facilities whose process wastewater is prohibited for authorization under 210E

Features of a 210E authorization:

- Authorizes reuse of industrial wastewater for beneficial land application – does not authorize discharge
- Issued to the producer
- Does not require producer to have a Texas Pollutant Discharge Elimination System (TPDES) permit or Texas Land Application Permit (TLAP)
- Does not expire
- Two levels of coverage available

Level I coverage does not require:

- Notifying the TCEQ
- Submitting an application
- Paying a fee
- Receiving approval from the TCEQ

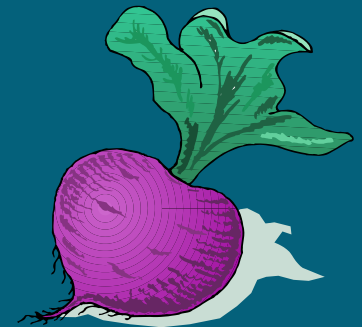
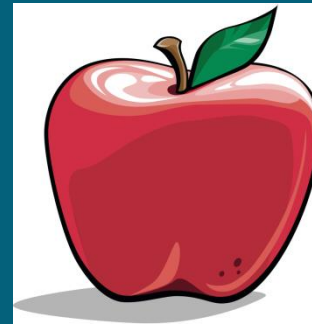
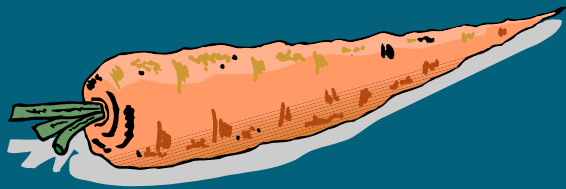


Level I coverage is available under four conditions:

- Wastewater is one of the specific types listed in 210.53(a)
- Wastewater is reused on site
- Wastewater is reused for one of the specific end uses listed in 210.56(b)(2)
- Producer has an authorized primary disposal method

Level I coverage – wastewater types

- Condensate – air conditioner, compressor, steam, or other condensate that forms on steam lines and is not process wastewater
- Wash water from whole fruit or vegetable washing
- Cooling water – non-contact or once through
- Filter backwash from water treatment (not RO reject)



Level I coverage – wastewater types continued

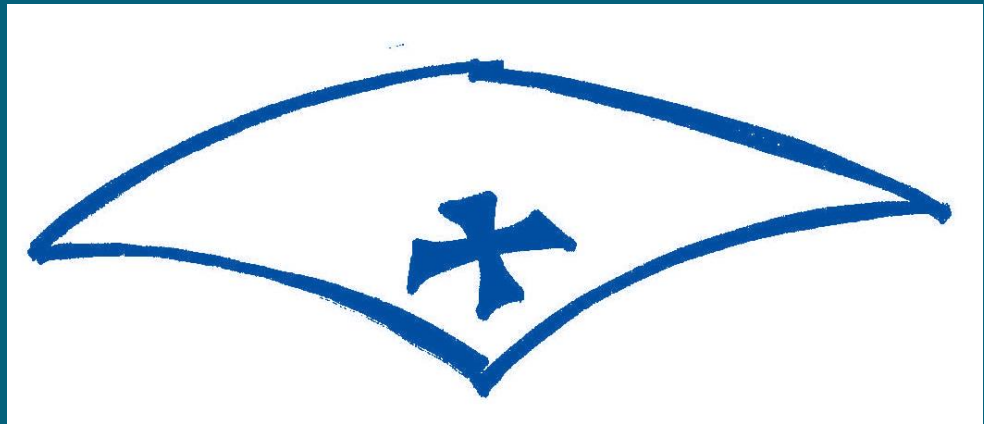
- Wash water from routine washing of buildings conducted without the use of detergents or other chemicals
- Wash water from routine washing of pavement
 - Conducted without the use of detergents or other chemicals
 - Where spills or leaks of toxic or hazardous waste have not occurred (unless spilled material has been removed)

Level I coverage – wastewater types continued

- Cooling tower blowdown with a total dissolved solids (TDS) concentration of less than 2,000 mg/L.
- Other industrial wastewater
 - With measured effluent concentrations at or below thresholds listed in Table 1 of 210E
 - That is not a waste source prohibited by 210E

Level I coverage – location of reuse

- Wastewater must be reused on site, which means within the boundaries of:
 - The industrial facility or
 - Property that is contiguous to the facility and that is owned or operated by the producer of the industrial reclaimed water



Level I coverage – end uses

- Irrigation
 - Landscaping
 - Non-food crops
 - Pastures for milking animals
- Fire protection
- Dust suppression and soil compaction
- Maintenance of impoundments



Level I coverage – primary disposal methods

- Disposal under a TPDES permit or TLAP
- Authority to route wastewater to a publicly owned treatment works (POTW), either by
 - Discharge to the sanitary sewer system or
 - Use of a licensed hauler
- Ability to recycle in a manner that does not discharge into or adjacent to water in the state



Level II coverage needed if any of the following are true:

- Industrial reclaimed water is not one of the specified wastes eligible for Level I coverage
- Industrial reclaimed water contains pollutant concentrations that exceed any of the Table 1 thresholds
- Reuse will be off site
- Reclaimed water contains any amount of domestic wastewater

Level II coverage requires the producer to:

- Submit an application to the TCEQ using Form 20094 – usually processed within 60 days of receipt
- Pay a \$100 application fee (but no annual fee)
- Have a primary disposal method
- Receive written authorization from the TCEQ prior to reusing the industrial wastewater

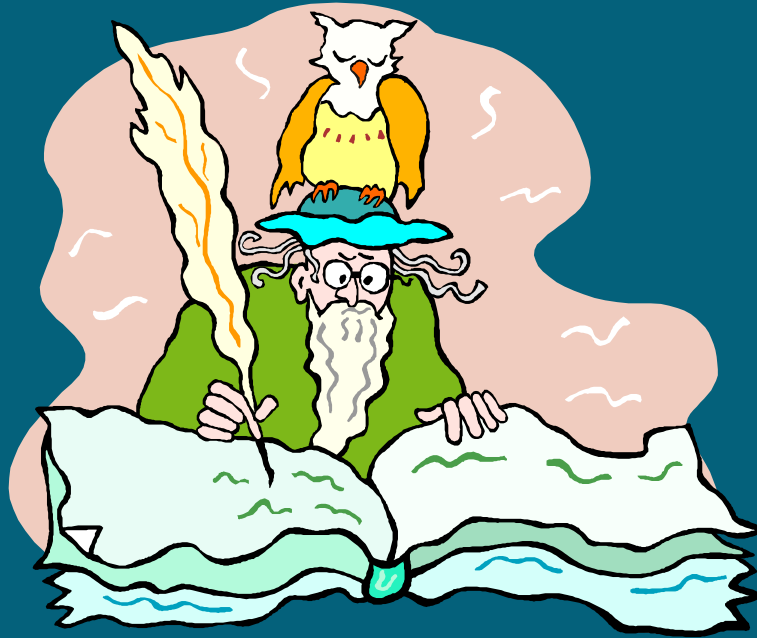


Level II coverage requires the producer to:

- Sample and meet effluent limitations for
 - Total organic carbon – 55 mg/L (1/month)
 - pH – 6.0-9.0 standard units (1/week)
 - Other pollutants as needed
- Use primary disposal method if any test results exceed limitations
- Maintain records of
 - All notifications made to the TCEQ under 210E
 - All monitoring activities
- Conduct annual testing of reclaimed water

Level II coverage requires the user to:

- Maintain an operating log that records land application activities

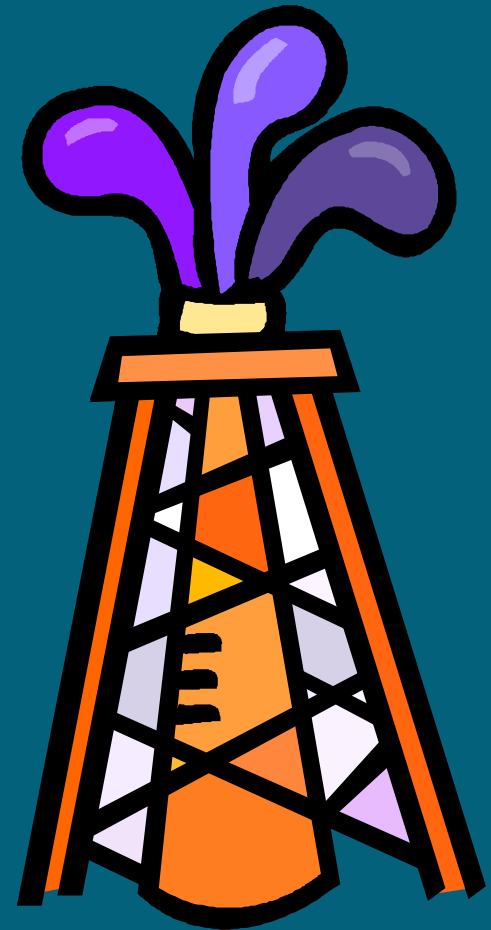


Other requirements in Chapter 210 may apply

- If end use is irrigation: see Subchapter B
- If any type of impoundment is used to store reclaimed water: see Subchapter B
- If reuse is off site: see Subchapters A and B
- If any amount of domestic wastewater is commingled with the industrial reclaimed water, see Subchapters A, B, and C

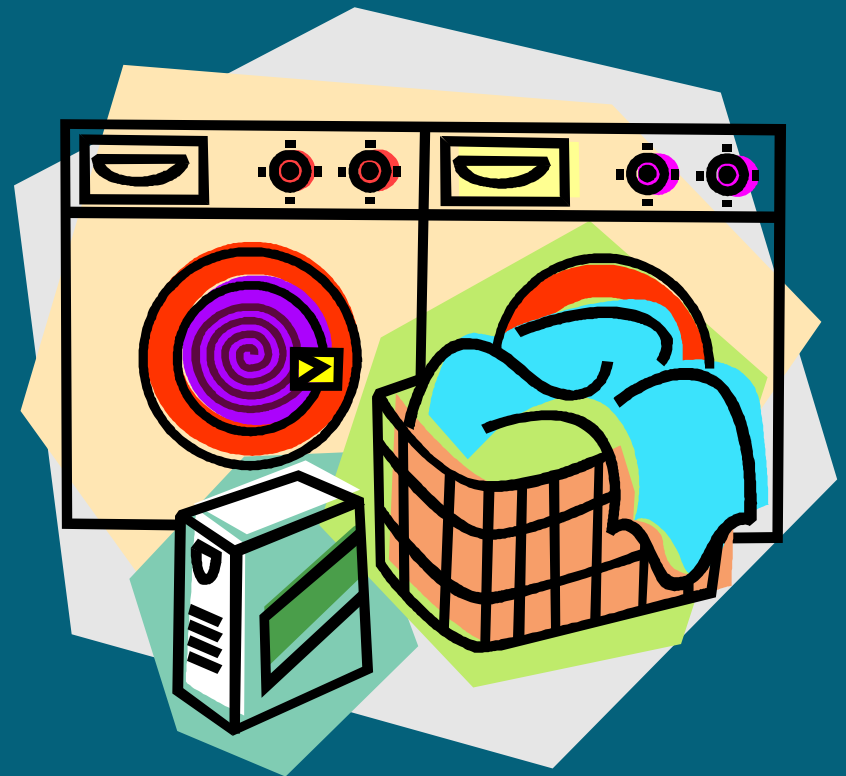
What about using industrial reclaimed water for hydraulic fracturing, aka “fracking”?

- A 210E authorization is required.
- Industrial reclaimed water may be used in the fracking operation only after the surface casing is installed so that groundwater is protected.



What about graywater?

- Reuse of graywater is subject to the requirements of 30 TAC Chapter 210, Subchapter F.



Contact information

- Kara Denney
- Water Quality Division
- TCEQ, MC-148
- P.O. Box 13087
- Austin, TX 78711-3087
- Phone: 512-239-4680
- E-mail: kara.denney@tceq.texas.gov