



**Railroad Commission of Texas**

# **Recycling O&G Fluids in Texas**

Leslie Savage  
Chief Geologist, Oil and Gas Division



# RECYCLING AMENDMENTS

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- Authorize certain on-lease, non-commercial recycling of hydraulic fracturing flowback fluid, with conditions
- Clarify permitting requirements for commercial or centralized recycling of hydraulic fracturing flowback fluid



# Rule 8 Background

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- Subsections
  - (b) No Pollution
  - (d) Pollution Control
    - Prohibited / Authorized Disposal
    - Prohibited / Authorized Pits
    - **Prohibited / Authorized Recycling**



# RULE 8: **New** Authorized Fluid Recycling

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## Non-Commercial Fluid Recycling –

The recycling of fluid produced from an oil or gas well, including produced formation fluid, workover fluid, and completion fluid, including fluids produced from the hydraulic fracturing process on an existing designated lease or drilling unit associated with a commission-issued drilling permit or upon land leased/owned by the operator for the purposes of operation of a non-commercial disposal well..., where the operator of the lease, drilling unit, or non-commercial disposal or injection well treats, or contracts with a person for the treatment of, the fluid and may accept such fluid from other leases and or operators.



# RULE 8: What's Recycling?

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Recycle- “To process and/or use or re-use oil and gas wastes as a product for which there is a legitimate commercial use and the actual use of the recyclable product.” As defined in this subsection, does not include injection pursuant to an enhanced recovery injection well permit.

Legitimate commercial use--Use or reuse of a recyclable product as authorized or defined in a permit:

(A) as an effective substitute for a commercial product or as an ingredient to make a commercial product; or

(B) as a replacement for a product or material that otherwise would have been purchased; and

(C) in a manner that does not constitute disposal.



# RULE 8: Authorized Reuse

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- Reuse as makeup water, or other use in the wellbore of an oil, gas or geothermal well.
- Reuse in any other manner pursuant to a permit issued by another state or federal agency
- Any reuse if the water is distilled
- **No discharge to waters of the state without permit**



# Rule 8 – Authorized Pits

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- Authorized pits include:
  - **Non-commercial Fluid Recycling Pit**
  - Reserve pit
  - Completion/Workover pit (*including frac flow-back*)
  - Mud circulation pit
  - Fresh makeup water pit
- Authorized pits must be closed in accordance with Rule 8
- §3.8(b) “No pollution” **ALWAYS** applies.



# RULE 8 - Recycling

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## Authorized

Non-Commercial Fluid Recycling Pit - Pit ... for the storage of fluid for the purpose of Non-Commercial Fluid Recycling or for the storage of treated fluid.

Provided that...





# Rule 8 - Recycling

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- Authorizes Non-Commercial Fluid Recycling Pits to store fluid from an oil or gas well that will be treated and reused if:
  - Pit is lined
  - Liner has a hydraulic conductivity of  $1 \times 10^{-7}$  cm/s or less
  - Two feet of freeboard is maintained
  - Pit is emptied and inspected annually or it has a leak detection system that is monitored monthly
  - District registration and landowner permission



# Rule 8 - Recycling

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- If a pit is not authorized by Rule 8, an application must be filed with, and approved by, the Commission before use of the pit can begin.



# Rule 8 - Recycling

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- No authorized pits may be placed in the 100-year flood plain
  - Can be approved by District Director
  - May request hearing if denied



# What's authorized, again?

## Non-Commercial Fluid Recycling:

- “On-Lease” fluid treatment for reuse
  - “Downhole”
  - Other State/Federal Permit
  - As distilled water
- Pit for storage and treatment

## Must Be Permitted:

- Commercial Recycling under Chapter 4, Subchapter B
- Waste Hauling under Ch.4, Subchapter B
- Reuses not authorized by Rule 8
- Discharge

# NEW COMMERCIAL RECYCLING RULES

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## CHAPTER 4, SUBCHAPTER B



# New Chapter 4, Subchapter B Divisions

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## Six Divisions for Commercial Recycling Rules

- 1. General Requirements**
- 2. On-Lease Solid Waste Recycling**
- 3. Off-Lease or Centralized Solid Waste Recycling**
- 4. Stationary Solid Waste Recycling**
- 5. Off-Lease Fluid Recycling**
- 6. Stationary Fluid Recycling**



# New Chapter 4, Subchapter B Divisions

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## Division 1. General; Definitions

Authorizes recycling of fluid received at a commercial disposal well, provided the operator of the well:

- treats, or contracts with a person for the treatment of the fluid;

- is responsible for all activities, including the recycling, that occurs on the lease;

- has obtained financial security;

- provides written notification to RRC 7 days before recycling operations are expected to begin and includes information on how fluids will be controlled and contained during recycling operations; and

- provides written notification to RRC within 7 days of concluding recycling operations.



# New Chapter 4, Subchapter B Divisions

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## Division 1. General; Definitions (cont'd)

- Requires a permit
- Must use a permitted Oil and Gas Waste Hauler





# New Chapter 4, Subchapter B Divisions

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## Division 1. General; Definitions (cont'd)

### General Standards for Permit Issuance

**Facility may only receive, store, handle, treat, or recycle waste:**

- (1) under the jurisdiction of RRC;
- (2) that is not a hazardous waste; and
- (3) that is not oil and gas NORM waste.

**Permit may be issued only if RRC determines that:**

- (1) the storage, handling, treatment, and/or recycling of oil and gas wastes and other substances and materials will not result in the waste of oil, gas, or geothermal resources, the pollution of surface or subsurface water, a threat to public health and safety; and
- (2) the recyclable product can meet engineering and environmental standards RRC establishes in the permit or in this subchapter for its intended use.



# New Chapter 4, Subchapter B Divisions

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## Division 1. General; Definitions (cont'd)

### General Standards for Permit Issuance

Permit will prohibit speculative waste accumulation

Engineering/geological work products must be signed by their respective Texas-registered professionals

All oil and gas waste and recyclable product must be stored in lined permitted pits or above-ground storage tanks.



# New Chapter 4, Subchapter B Divisions

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**Division 5. Off-lease commercial fluid recycling facility**--A commercial recycling facility that is capable of being moved from one location to another, but which is generally in operation in one location for a period of time longer than one year, but less than two years that recycles wellbore fluid produced from an oil or gas well, including produced formation fluid, workover fluid, and completion fluid, including fluids produced from the hydraulic fracturing process.

**Division 6. Stationary commercial recycling facility** - A commercial recycling facility in an immobile, fixed location for a period of greater than two years that recycles solid oil and gas waste or wellbore fluid produced from an oil or gas well, including produced formation fluid, workover fluid, and completion fluid, including fluids produced from the hydraulic fracturing process.

# Division 5. Off-Lease Commercial Recycling of Fluid

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- Application
- Minimum Engineering and Geologic Information
- Minimum Siting Information
- Minimum Real Property Information.
- Minimum Design and Construction Information
- Minimum Operating Information
- Minimum Monitoring Information
- Minimum Closure Information
- Notice (surface owner, adjoining surface owners, city/county clerk)



## Division 5. Off-Lease Commercial Recycling of Fluid

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- General Permit Provisions
- Minimum Permit Provisions for Siting
  - Only if facility is to be located in an area where there is no unreasonable risk of pollution or threat to public health or safety
  - Cannot be located within a 100-year flood plain, in a streambed, or in a sensitive area
  - Cannot be located within 150 feet of surface water or public, domestic, or irrigation water wells.
  - Other factors include volume and characteristics of the waste; proximity to surface water; depth to and quality of the shallowest groundwater; distance to the nearest property line or public road; proximity to coastal natural resources, sensitive areas, or water supplies, and/or public, domestic, or irrigation water wells.



## Division 5. Off-Lease Commercial Recycling of Fluid

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- Minimum Permit Provisions for Design and Construction
  - All areas must minimize contact of oil and gas waste and partially recycled waste with the ground surface, and prevent pollution
  - Monitor wells
- Minimum Permit Provisions for Operations
  - Only wastes and other materials authorized by permit may be received, permittee must test incoming oil and gas waste and keep records of amounts and sources of incoming wastes; and
  - Processing operation and resulting recyclable product must meet environmental and engineering standards established in the permit
  - Requirements, including limits on the volumes of oil and gas waste, partially treated waste, and recyclable product stored at the facility, to ensure no speculative accumulation

# Division 5. Off-Lease Commercial Recycling of Fluid

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- Minimum Permit Provisions for Monitoring
  - Permit for use of the treated fluid for any purpose other than re-use as makeup water for hydraulic fracturing fluids to be used in other wells may require laboratory testing.
  - A permit that requires laboratory testing shall require that the permittee use an independent third party laboratory to analyze a minimum standard volume of partially treated waste for parameters established in this division or in a permit issued by RRC
- Minimum Permit Provisions for Closure

# DIVISION 6. Stationary Commercial Fluid Recycling

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- Requirements generally the same, except for
  - Both personal and published notice - Must publish notice of the application in a newspaper of general circulation in the county at least once each week for two consecutive weeks.
  - More intensive Staff review of application.
  - Permit term of not more than 5 years.





# SUMMARY

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- Water quality standards dictated by reuse
- Location and Duration
  - Non-Commercial Fluid Recycling Authorized by Rule 8
  - Division 5: Off-lease for up to 2 years
  - Division 6: Stationary for 2 or more
- Site and Property Information, monitor wells and financial security required for Off-lease and Stationary recycling facilities
- Notice
  - Surface and Adjacent owners for Off-lease Landowners and
  - published notice for Stationary

# RECYCLING???

