

**PRESENTED AT**

49<sup>th</sup> Annual Ernest E. Smith Oil, Gas and Mineral Law Institute

April 12, 2023  
Houston, TX

**Revisiting “Waste”**

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Revisiting “Waste”  
*Recent developments in oil and gas waste litigation*

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## I. INTRODUCTION

Oil and gas development operations typically result in the production of three substances: oil, gas, and produced water. Generally speaking, produced water is considered a waste, and must be disposed of through reinjection into an underground formation. With respect to shale formations, in which a significant percentage of new producing wells are drilled, reinjection into the same formation from which the produced water came is either economically not feasible or entirely impossible. Therefore, many commercial disposal well operators choose to inject into shallower formations with adequate permeability and porosity to accept large volumes of produced water.

Shallower formations with significant permeability and porosity (such as the Delaware Mountain Group and Bone Spring formations) are at times also productive of oil and gas. The injection of commercial quantities of non-native wastewater into productive oil and gas formations can negatively impact or harm the productive reservoir. The displacement of oil and gas by wastewater injection such that the oil and gas cannot be economically recovered in the future is considered waste under Texas law. This paper considers the legal principles governing the interaction between producing operators, on the one hand, and commercial injectors disposing of wastewater into a productive formation on the other.

Among other items, this paper examines: (1) Texas Railroad Commission permitting and oversight of commercial injection wells; (2) traditional principles of ownership of pore space (*i.e.*, the underground formation) and minerals in place; (3) questions concerning the jurisdiction of district courts to adjudicate disputes concerning possible impacts to production by commercial injection; (4) obstacles and opportunities available to the producing operator to demonstrate liability and damages; and (5) affirmative defenses available to the commercial injector to shield liability.

## II. RAILROAD COMMISSION PERMITTING AND OVERSIGHT

The U.S. Environmental Protection Agency has delegated the authority to regulate injection and disposal operations related to oil and gas wastes and fluids to the State of Texas. Specifically, the Railroad Commission of Texas is charged with the permitting, oversight, and regulation of commercial disposal wells in the state. *Ring Energy v. Trey Res., Inc.*, 546 S.W.3d 199 (Tex. App.—El Paso 2017); TEX. WATER CODE § 27.031. The Railroad Commission has published at least two statewide rules designed to prevent reinjected fluids from wasting oil and gas resources.

Statewide Rule 7, entitled “Strata To Be Sealed Off,” requires the confinement of oil and gas to the original stratum until the substances can be produced and utilized without waste.

Operators must adequately protect producing strata from “infiltrating waters,” including produced and reinjected waters, to prevent waste. TEXAS ADMIN. CODE § 3.7.

Statewide Rule 46, entitled “Fluid Injection Into Productive Reservoirs,” specifically regulates wastewater injection into reservoirs capable of producing oil and gas in paying quantities. Among other things, Statewide Rule 46 requires disposal operators seeking to inject water into productive reservoirs to apply for and receive a permit from the Railroad Commission. TEXAS ADMIN. CODE § 3.46.

Consistent with Rule 46, the Railroad Commission has adopted a permit application for proposed injection wells within horizontal and vertical proximity to one or more productive reservoirs. Generally speaking, the Railroad Commission requires commercial disposal operators to apply for a permit to inject fluid into a reservoir productive of oil or gas through Form H-1. The requirement to apply for a permit through Form H-1 is triggered if the proposed injection interval includes a formation with productive wells within two miles on the injection location.

The instructions to Form H-1 require notification of the permit application to: (1) the owner of record of the surface tract on which the well is located; (2) each Commission-designated operator of any well located within one-half mile of the proposed injection well; and (3) the clerk of the city and county in which the proposed well would be located. Further, if the permit application is the first application for fluid injection authority within the reservoir, copies of the application must be sent to all operators in the reservoir. The applicant must include a signed statement indicating the date the copies of the application were mailed or delivered and the names and addresses of the persons to whom copies were sent.

The applicant must also attach to the permit application a plat of leases showing producing wells, injection wells, and offset wells, and identify ownership of all surrounding leases within one-half mile. The applicant must review the data of public record for wells that penetrate the proposed disposal zone within a quarter-mile radius of the proposed disposal well to determine if all abandoned wells have been plugged in a manner that will prevent the movement of fluids from the disposal zone into freshwater strata. The applicant must identify to the Railroad Commission any wells which appear from such review of public records to be unplugged or improperly plugged and of which the applicant has actual knowledge.

If the application is approved, the Railroad Commission issues authority to inject through a form *Permit to Inject Fluid Into a Reservoir Productive of Oil and Gas*. The permit includes several well parameters and standard conditions. The well parameters include top and bottom depth intervals and a maximum surface injection pressure for liquid. The conditions specify that “should it be determined that such injection fluid is not confined to the approved interval, then the permission given herein is suspended and the fluid injection operation must be stopped until the fluid migration from such interval is eliminated.”

Further, Statewide Rule 46 permits the Railroad Commission to modify, suspend, or terminate the permit for just cause and after notice and a hearing if: (1) any material change of conditions occurs in the operation or the injection well, or if there are material changes in the information originally furnished; (2) fresh water is likely to be polluted as a result of continued

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First appeared as part of the conference materials for the  
49<sup>th</sup> Annual Ernest E. Smith Oil, Gas and Mineral Law Institute session  
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