

Kellie Martinec

From: Rosetta@prairielandsgcd.org
Sent: Monday, September 29, 2014 10:56 AM
To: rulescoordinator
Cc: jimconkwright@prairielandsgcd.org
Subject: Prairielands' GCD Comments to RRC Rules 3 9 and 3 46 Seismic Events for Disposal Wells
Attachments: RRC Rules 3 9 and 3 46 seismic events for disposal wells - Prairielands GCD.pdf

Please see attached Prairielands' GCD Comments to RRC Rules 3.9 and 3.46 Seismic Events for Disposal Wells.

Thank you.

Rosetta Douthitt - Office Administrator
Prairielands Groundwater Conservation District
P.O. Box 3128 | 205 S. Caddo Street
Cleburne, Texas 76033 | www.prairielandsgcd.org
Office: 817-556-2299 | **Fax:** (817) 556-2305



Prairielands Groundwater Conservation District
P.O. Box 3128 | 205 S. Caddo Street | Cleburne, TX 76033
Ph: 817-556-2299 | Fax: 817-556-2305
www.prairielandsgcd.org

September 29, 2014

Rules Coordinator
Railroad Commission of Texas
Office of General Counsel
P.O. Box 12967
Austin, Texas 78711-2967

Re: Comments on proposal to amend 16 T.A.C. § 3.9 and 3.46; O&G Docket No. 20-0290951

To the Honorable Railroad Commission of Texas and Staff:

The Prairielands Groundwater Conservation District ("District") greatly appreciates this opportunity to provide formal comments on the proposed changes to Rules 3.9 and 3.46 (regarding "Disposal Wells" and "Fluid Injection into Productive Reservoirs"). The District is pleased to see that the Railroad Commission of Texas (the "Commission") is taking steps to better address the issue of seismic activity occurring throughout the state as a result of Class II injection wells authorized by the Commission.

Overall, the District supports the Commission's efforts and the proposed changes to the rules. Our area of the state has seen a substantial increase in seismic activity since the advent of the Barnett Shale play over the last decade and the associated production and disposal activities, and our residents welcome the Commission's recent efforts to address these problems. However, given the District's legislative mandate to protect the groundwater resources underlying Ellis, Hill, Johnson, and Somervell Counties, the District submits the following comments for the Commission's consideration to allow for the better regulation of disposal wells to ensure that waste injectate is confined to the injection interval and groundwater resources are not endangered by the migration of fluids or the transmission of pressure caused by the injection wells.

The proposed rules require an applicant for a disposal well permit to include with the permit application the results of a review of information from the USGS regarding the locations of any historical seismic events within the estimated radius of the 10-year, five pounds per square inch pressure front boundary of the proposed disposal well location. The proposed rule defines the pressure front as the zone of elevated pressure that is created by the injection of fluids into the subsurface. The issue with this calculation is based on many input parameters, all of which are subject to being contested. Operators will use best case inputs, and opponents will use worst case inputs. TCEQ and USEPA typically require use of very conservative (worst-case) inputs. Therefore, the District recommends that the proposed rules be revised to require the applicant to show how he performed the calculation, specifying what was considered.

The proposed rule changes also authorize the Commission to require an applicant for a disposal permit to demonstrate that the fluids will be confined if the well is to be located in an area where conditions exist that may increase the risk that fluids will not be confined to the injection interval, stating that such conditions may include complex geology, proximity of the base rock to the injection interval, transmissive faults, and/or a history of seismic events in the area as demonstrated by information available from the USGS. However, ensuring that the injected fluids will be confined to the injection interval is important for all disposal wells.

Additionally, in reality, it is unlikely that the Commission can or will use its limited staff resources to proactively determine whether such conditions exist for each application to warrant an ad hoc request to the applicant to provide additional information demonstrating that the fluids will remain confined to the interval. Instead, the burden will be on those third parties independently reviewing and possibly protesting an injection well application to show that such conditions exist. This will result in not only increased costs for potential protesting parties, but also increased costs for the Commission in resulting contested case hearings, and it makes more sense for the Commission to require that an applicant make this demonstration on the front end of the application process. Therefore, the District recommends that the proposed rules be revised to state that all applicants for a disposal well permit shall demonstrate in their application for a disposal well that fluids will be confined to the injection interval. If the Commission does not agree that all disposal well permit applicants should be required to make these groundwater quality protection demonstrations, the Commission should through this rulemaking or through regulatory guidance provide additional clarity on areas and formations that the Commission believes fall within the category of those having "complex geology," "transmissive faults," and other such conditions and require all applicants for disposal wells in such areas and formations to provide the additional information demonstrating fluid confinement.

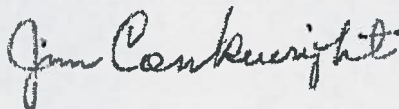
Pursuant to Rule 3.46, the Commission regulates injection into productive formations for either enhanced recovery or for disposal. The Commission explains in its summary of the rules as published in the Texas Register that the new proposed language in Rule 3.46 relating to seismic activity would apply only to those wells permitted under 3.46 for disposal purposes. However, studies show that enhanced recovery may cause seismic activity as well. While seismic activity caused by enhanced recovery is less prevalent due to the fact that the reservoir is typically underpressured at this stage of operations, the risk nonetheless exists and the precautionary measures applicable to disposal wells should be extended to enhanced recovery wells. As set forth in the Texas Register, the estimated costs to persons required to comply with these proposed rule changes are approximately an additional \$300 for each application during the first five years the rules are in effect. The policy considerations relative to the prevention of pollution of surface and subsurface waters of the state and promotion of safety greatly outweigh this estimated economic burden suffered by the applicant in order to engage in wastewater disposal or enhanced recovery operations under the rule.

Furthermore, the District would like to emphasize the increasing demand for brackish groundwater across Texas. According to a 2003 study conducted by LBG-Guyton Associates for the Texas Water Development Board, approximately 2.7 billion acre-feet of brackish

groundwater exists collectively in all but four of the state's major and minor aquifers and in all of the sixteen regional water planning areas. The volume of brackish groundwater is almost evenly divided between the major and minor aquifers at 1.35 billion acre-feet each. Currently, the desalination and subsequent use of groundwater with greater TDS levels is occurring in Texas; already more than 100 groundwater desalination treatment plants operate in the state. Therefore, in light of the reality that brackish groundwater resources are being increasingly looked at as potential, viable water supply sources, the groundwater quality protection and confinement of wastewater injectates as authorized by these rules needs to be at the forefront of the Commission's policy considerations in the regulation of these potential sources of contamination.

Thank you again for the opportunity to provide these comments and participate in this important process. We appreciate the good work that the Commission Staff has done drafting the proposed amendments.

Sincerely,

A handwritten signature in cursive script that reads "Jim Conkwright".

Jim Conkwright
General Manager