

---

**From:** Alan Friedman <alfredo@comcast.net>  
**Sent:** Monday, November 13, 2017 2:39 PM  
**To:** Sidney Hill  
**Subject:** Comments on the Proposed Sandoval County Oil and Gas Ordinance  
**Attachments:** Aquifer Protection Submission.pdf

Mr. Hill - Attached are my comments on Aquifer Protection for the proposed Sandoval County Oil and Gas Ordinance.

Sincerely,

Alan Friedman  
52 Anasazi Trails Loop  
Placitas, NM 87043  
(505) 771-8819 Home  
(505) 239-7838 Cell

My name is Alan Friedman, I reside at 52 Anasazi Trails Loop in Placitas. I am currently a Director of the Anasazi Trails Water Cooperative. Our Water Cooperative obtains it's water from wells in the Albuquerque Basin Aquifer. I am a retired chemist, with a PhD in Organic Chemistry from the University of Minnesota.

Both the New Mexico Constitution Article XX, Section 21<sup>i</sup> and the Sandoval County Comprehensive Zoning Ordinance<sup>ii</sup> call for the protection of our water resources.

Any enacted Sandoval County Ordinance must enact measures to protect our water from pollution.

---

The Oil and Gas Ordinance currently being considered for enactment (The Stoddard Ordinance) does not contain measures to protect the aquifers of our County from pollution.

Scientific studies have shown that even recently constructed oil and gas wells, 5-10% leak into aquifers<sup>iii</sup>. In order to protect our aquifers from pollution, pollutants from those leaking wells must be detected by monitoring. Ongoing monitoring would detect a small problem before it became a disaster. Any Sandoval County Oil and Gas Ordinance enacted should provide for monitoring wells. The Rio Arriba County Oil and Gas Ordinance<sup>iv</sup>, Section 6.18, provides for water monitoring. The New Mexico Oil Conservation Division, the State organization charged with protecting water, does not monitor aquifers for leakage from oil and gas wells. The New Mexico Environmental Department has no authority to protect water from pollution caused by oil and gas activities. Protecting our water is a responsibility of our County.

Testimony has been given by several geologists that the aquifer overlying the Albuquerque Basin may be especially susceptible to pollution by oil and gas activities, especially horizontal drilling and stimulation. The Albuquerque Basin, unlike the San Juan Basin, is heavily faulted. These faults physically communicate with the aquifer, providing a channel for pollutants to migrate into the aquifer. Hydrocarbons, both liquid and gas, are lighter than water, and those products liberated by the stimulation process, would rise up the water column contained in the faults, polluting the aquifer.

Sandoval County has contracted with New Mexico Tech to provide a study (due the end of May 2018). This study is entitled, “Oil and Gas Resource Assessment of Sandoval County and Relationship of Potential Resources to Ground Water”. Among other aspects the study will “Describe modern drilling techniques and effects on oil and gas production and on aquifers in the Sandoval County setting”. The County will pay \$62,009.07 for this report, and any decisions on an Oil and gas Ordinance must be delayed until the findings of this report are evaluated.

---

<sup>i</sup> **NM Constitution, Article XX, Section 21: “Pollution Control** The protection of the state's beautiful and healthful environment is hereby declared to be of fundamental importance to the public interest, health, safety and the general welfare. The legislature shall provide for control of pollution and control of despoilment of the air, water and other natural resources of this state, consistent with the use and development of these resources for the maximum benefit of the people”

<http://www.sos.state.nm.us/nmconst2017.pdf>

<sup>ii</sup> **Sandoval County Comprehensive Zoning Ordinance, SECTION 2: “PURPOSE** The provisions of this Ordinance are designed to promote health and the general welfare of the County; to secure safety from fire, flood, and other dangers; to protect local water resources; to facilitate adequate provisions for transportation, water and wastewater systems, schools, parks and other community requirements; to conserve the value of property; and to provide for the compatible development of land and other natural resources in Sandoval County.”

[http://www.sandovalcountynm.gov/uploads/Downloads/Divisions/PlanningZoning/ordinance/czo\\_web.pdf](http://www.sandovalcountynm.gov/uploads/Downloads/Divisions/PlanningZoning/ordinance/czo_web.pdf)

<sup>iii</sup> **Proceedings of the National Academy of Sciences, July 29, 2014: The Integrity of Oil and Gas Wells** “...unconventional shale gas wells were six times more likely to show problems than conventional wells drilled during the same period: 6.2% compared with 1.0%, respectively. ...” <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4121783/>

<sup>iv</sup> **Rio Arriba County Oil and Gas Ordinance, Section 6.18: “GROUND WATER MONITORING REQUIREMENTS (A)** For all Oil or Gas Wells permitted, by this Ordinance, within a Critical Management Area Overlay Zone District anywhere in the County, the Operator shall be required to drill and maintain a ground water monitoring well prior to initiating construction of the Oil or Gas Facility or Facilities.”

[http://www.rio-arriba.org/pdf/2009-01\\_rio\\_arriba\\_county\\_oil\\_and\\_gas\\_ordinance.pdf](http://www.rio-arriba.org/pdf/2009-01_rio_arriba_county_oil_and_gas_ordinance.pdf)