**Groundwater Contamination**

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| Testing pit water quality in New MexicoTaking pit water quality samples in San Juan County, New Mexico. |

The [New Mexico Oil Conservation Division](http://www.emnrd.state.nm.us/ocd/) has detected and documented more than 700 hundred incidents of groundwater contamination from oil and gas facilities across the state.  The data can be downloaded from the OCD web site (click here to download a [pdf version](http://www.emnrd.state.nm.us/ocd/documents/rptGeneralizedGWImpact_000.pdf) or an [Excel spreadsheet version](http://www.emnrd.state.nm.us/ocd/documents/GW_Impact_updTbl_000.xls)).

Prior to 1990, only 39 orders were issued against oil and gas companies for contaminating groundwater.  The earliest order was issued in 1954.  Since 1990, 705 incidents have been recorded, for a total of 743 documented groundwater incidents related to the oil and gas industry in New Mexico.

Of the 743 groundwater contamination incidents, more than half have been caused by contamination from oil and gas industry pits.

The Oil and Gas Accountability Project has created some graphs to summarize the OCD data.  These graphs show:

* [Groundwater contamination from all types of oil and gas facilities](http://www.earthworksaction.org/NM_GW_Contamination.cfm#ALLFACILITIES)
* [Groundwater contamination from different types (or locations) of oil and gas pits](http://www.earthworksaction.org/NM_GW_Contamination.cfm#PITS)
* [Oil and gas companies responsible for groundwater contamination from pits](http://www.earthworksaction.org/NM_GW_Contamination.cfm#COMPANIES)
* [NM counties with groundwater contamination from pits](http://www.earthworksaction.org/NM_GW_Contamination.cfm#COUNTIES)
* [Depth of groundwater contaminated by oil and gas pits and other facilities](http://www.earthworksaction.org/NM_GW_Contamination.cfm#DEPTH)

**Groundwater contamination from all types of oil and gas facilities**

Many different related to oil and gas development may result in groundwater contamination.  Any activity that involves the storage or transport of crude, natural gas, chemicals or produced water involves the possibility these substances escaping into the environment.

As seen from the following graph, oil and gas industry pits are the number one cause of groundwater contamination.  Pits are responsible for more than half of all documented cases of oil and gas industry groundwater contamination incidents in New Mexico.

* 398 of the 743 documented groundwater contamination incidents from oil and gas activities are caused by contamination from pits.  This is equal to 54%.
* 266 of the 743 documented groundwater contamination incidents are from oil and water pipelines.  This is equal to 38%.

Types or location of pits causing groundwater contamination

There are many different types of pits associated with oil and gas exploration and production.  Several different types of pits are found at well sites, such as flare or blow pits, drilling pits, and drip pits.  Pits are also located at other oil and gas facilities, such as tank batteries, pipelines, gas plants and refineries.

The OCD data show that by far, the majority of pits leading to groundwater contamination are located at well sites.  In the chart below, the category labeled "Unspecified" is primarily composed of pits located at well sites.

**Oil and gas companies responsible for groundwater contamination from pits**

Looking at the OCD data, there appears to be only a handful of companies that are responsible for the majority of groundwater contamination caused by the oil and gas industry in New Mexico.

* The top five offenders include:  Enterprise, BP America, XTO, Williams and PNM.  These companies are responsible for more than 60% of the groundwater contamination incidents related to oil and gas pits.

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NM counties with groundwater contamination from pits

Unfortunately, the OCD data do not contain complete information on the counties in which pit contamination events occurred.  The existing data show that:

* San Juan county, by far, had the most incidents of groundwater contamination related to oil and gas pits.

Depth of groundwater contaminated by oil and gas facilities

According to OCD data, most groundwater contamination from oil and gas facilities is very shallow (between 0 and 1 feet deep).  This is true for contamination from all oil and gas facilities, as well as oil and gas pits.

