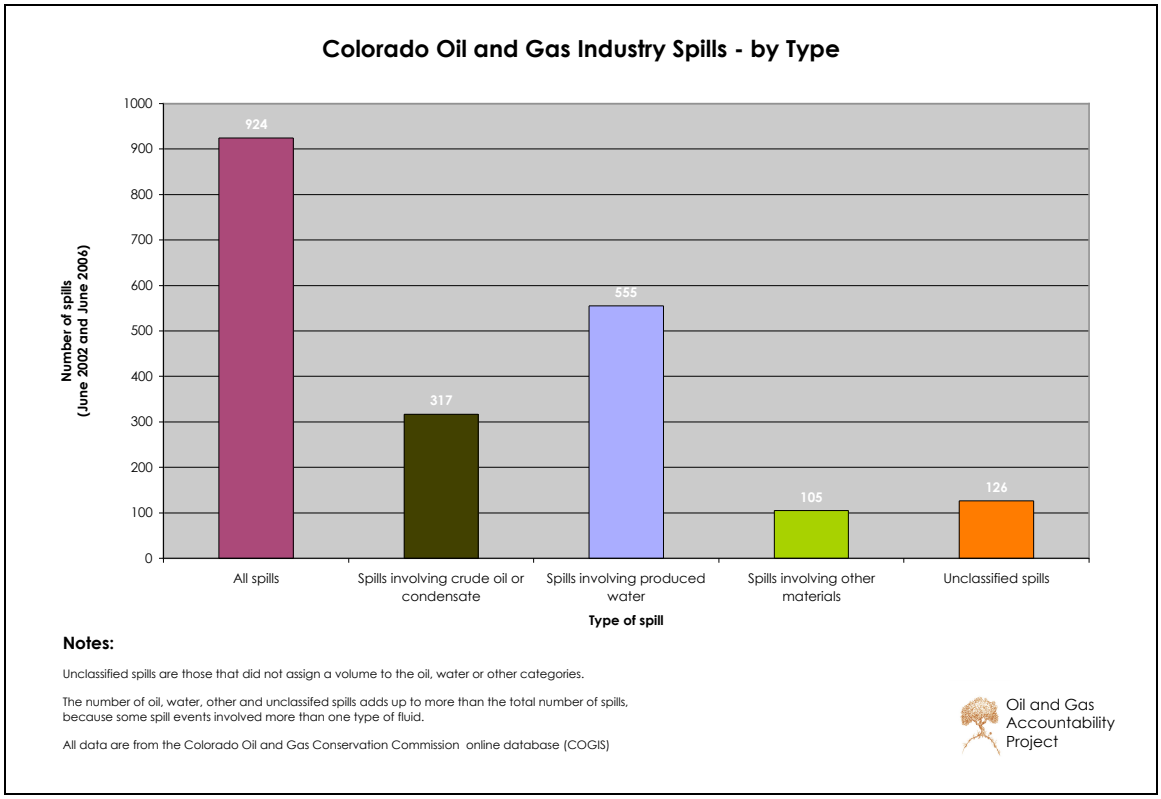
**Oil and Gas Accountability Project**
P.O. Box 1102 Durango, CO 81302
Ph: 970-259-3353 • Fax: 970-259-7514 • Web site: www.ogap.org
OGAP is a program of EARTHWORKS (www.earthworksaction.org)

# Colorado Oil and Gas Industry Spills
# A review of COGCC data (June 2002 – June 2006)

In Colorado, the Colorado Oil and Gas Conservation Commission (COGCC) requires companies to report spills of fluids related to any unauthorized release of exploration and production (E&P) wastes that are 5 barrels or more in volume. In some cases, smaller spills are reported, e.g., if the spill enters surface or groundwater.

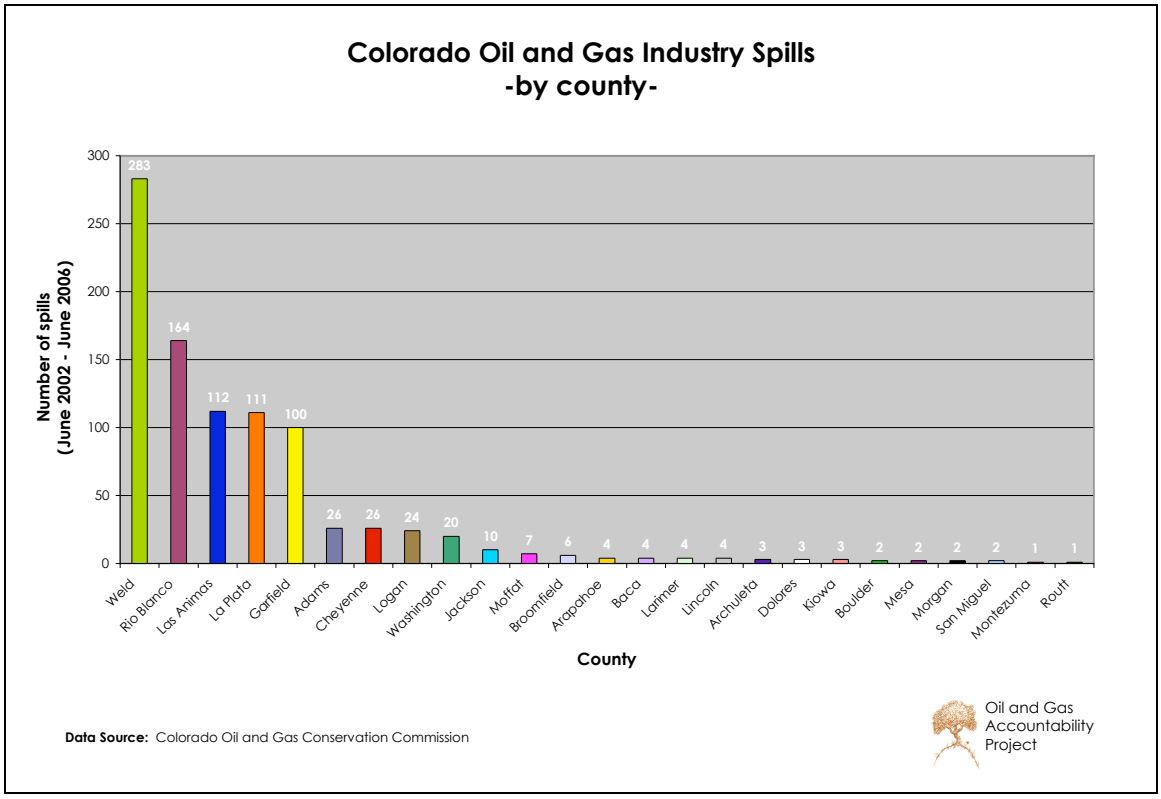
In the four-year period between June 2002 and June 2006, there were approximately 924 spills.[i] Spilled products included: crude oil/ condensate, produced water, and "other" products. The "other" products included diesel fuel, glycol, amine, lubricating oil, hydraulic fracturing fluids, drilling muds, other chemicals, and natural gas leaks.

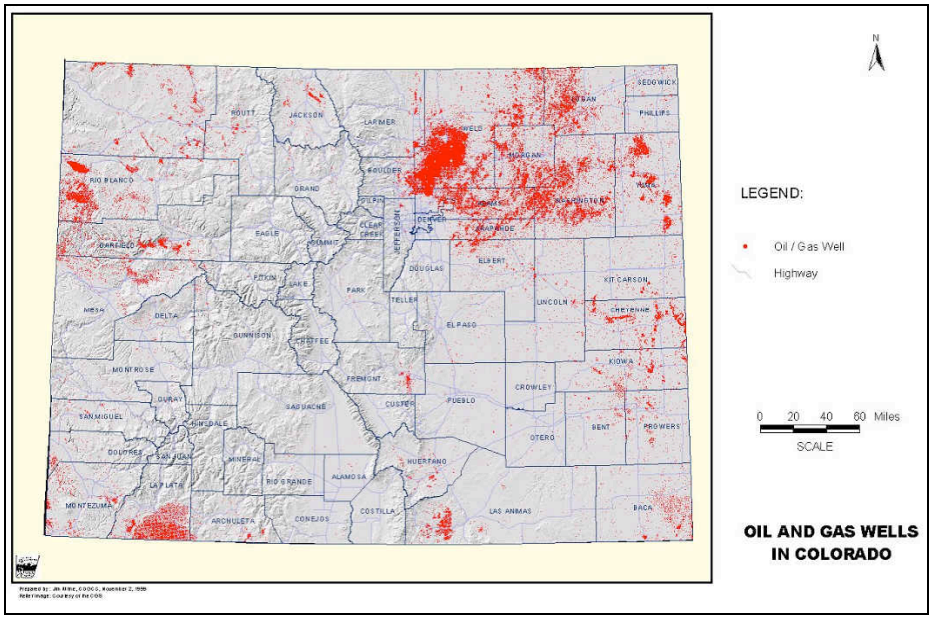



Roughly estimated,[ii] 60% of the spills involved produced water; 34 % involved crude oil or condensate; and 11% involved spills of "other" substances. (Numbers add up to greater than 100% because some of the spills involved more than one type of fluid).

## Summary of types of spills and their effects on water

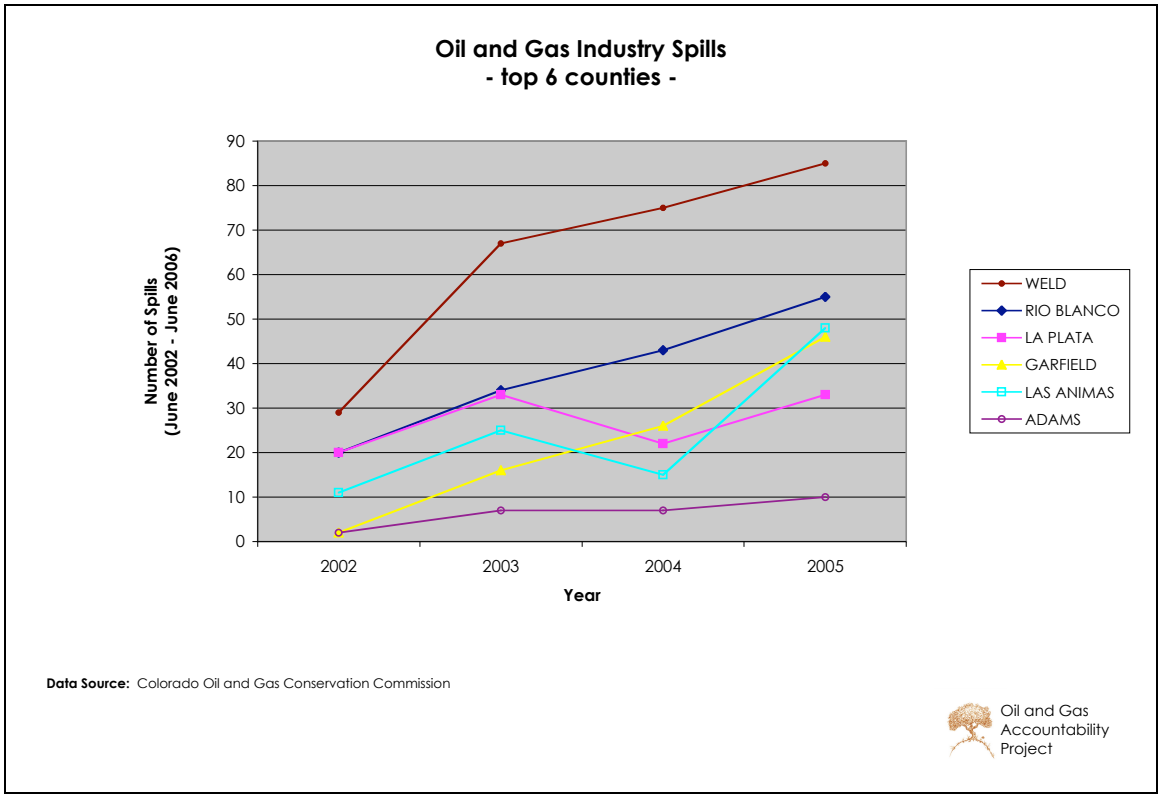
| Type of spill | How many | % affecting water |
|---|---|---|
| All spills | 924 | 20 |
| Oil/gas condensate | 317 | 15 |
| Produced water | 555 | 10 |
| "Other" | 105 | 17 |
| Unclassified | 126 | 73 |



Not surprisingly, the frequency of spills is not evenly distributed across the state. The number of spills seems to track fairly closely with the number of wells in any given county/region. For example, Weld County has the most wells in the state (40%), and also accounted for the greatest percentage of spills (30%).

As development increases, the number of spills also seems to be on an upward trend.




## WATER CONTAMINATION from oil and gas industry spills

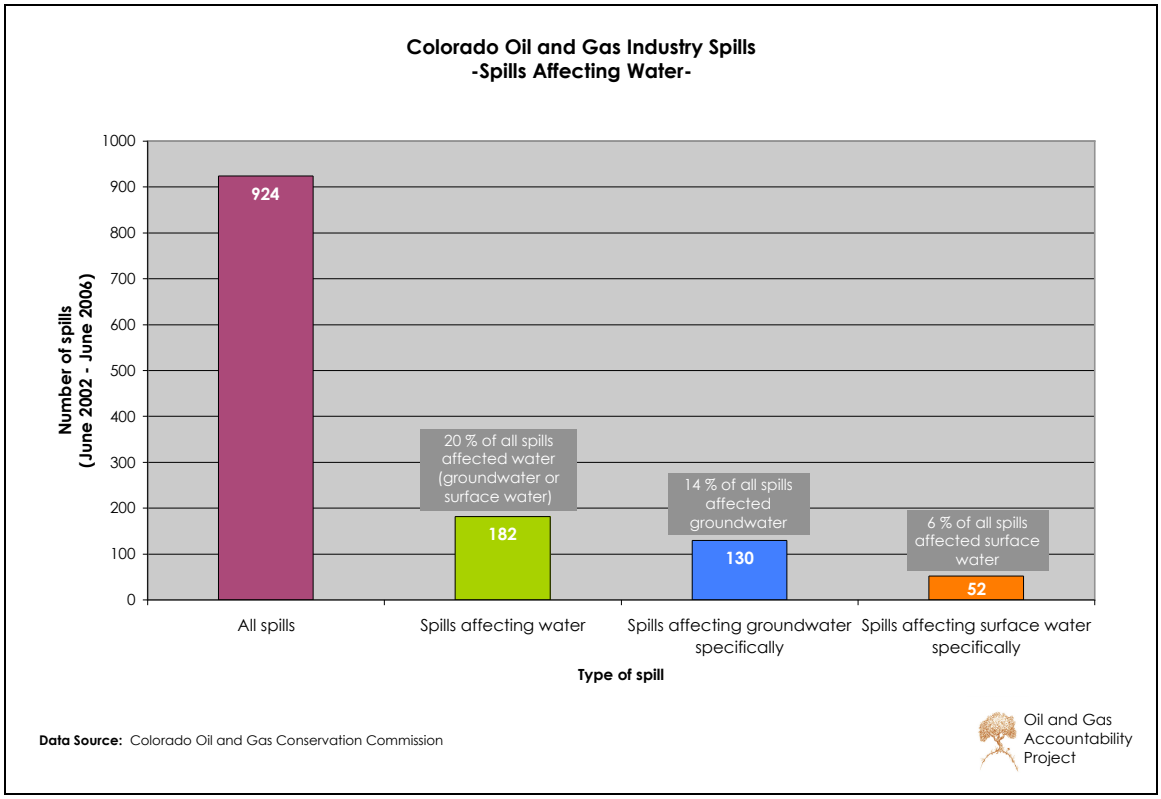
In Colorado, between June 2002 and June 2006, 20% of all oil and gas industry spills contaminated water: 14% of all spills affected groundwater; and 6% of all spills affected surface water.

The majority of oil and gas industry spills affecting groundwater occurred in Weld County (120 of the 131 spills that contaminated groundwater). Weld County also experienced 14 spills that entered surface water. In Weld County, 47% of all spills between June 2002 and June 2006 affected water.

La Plata county had the most spills affecting surface waters. Out of 111 spills in La Plata county, 17 (15%) affected surface waters.

## Counties with oil and gas industry spills affecting water

| # of spills affecting groundwater | | # of spills affecting surface water | |
|---|---|---|---|
| Weld | 121 | La Plata | 17 |
| Adams | 4 | Weld | 14 |
| Garfield | 2 | Garfield | 6 |
| Broomfield | 2 | Las Animas | 5 |
| Las Animas | 1 | Rio Blanco | 5 |
| Boulder | 1 | Washington | 2 |
| | | Larimer | 1 |
| | | Jackson | 1 |
| | | Cheyenne | 1 |
| | | Arapahoe | 1 |
| **Total** | 131 | **Total** | 53 |




## ENDNOTES

[i] Approximately 924, because the COGCC contains some duplicated information on spills. In our analysis, we tried to remove any duplicated entries, but cannot guarantee that we caught every one.

[ii] It is difficult to accurately portray the percentage of spills of crude oil/condensate, produced water, and other fluids for a number of reasons. First, not all spill reports in the COGIS database had values for the amount of material spilled. This is how we defined if

the spill was crude oil, produced water or other, i.e., if there was a spill volume associated with one of the categories. Second, the database contains inconsistencies in how the spills are classified. For example, spills of drilling or hydraulic fracturing fluids are sometimes classified as "produced water" and sometimes classified as "other." Attempts were made to go through the information and accurately classify all of the spills.