Hydraulic Fracking Violates the Rights of Nature

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Fracking is a RAPE of the Earth
Chronology of an “Environmental Ebloa”

- Shale: 400 million years in the making
- 1940s Discovery: “trapped” Oil & Gas lie 2 miles underground
- Early fracking was different
- 2003: Halliburton technology makes shale accessible
- Paved way for massive boom in US & globally
- Today is one of the worst threats to life on Earth
US Fracking sets stage for Disaster

- Over 1 Million Active Fracked Oil & Gas Wells
- Between 2-8 Million Gallons of FRESH Water per Frack (up to 18x per well)
  - 100 Trillion Gallons Nationally per year
- Over 750 Chemicals can be Used, Many are Toxic incl Benzene, Formaldahyde, Kerosene…
  - 400 Billion Gallons “Frack Fluid”
  - 2/3 Chemicals Remain or Stored Underground
  - 1/3 Chemicals in Open Air Pits
- Each well brings 400 Tanker Trucks
- Takes place on farms, schools, neighborhoods, offshore
Fracking Violates Rights of Water

- Leaks into Groundwater: Guaranteed
- CA growers use frackwater on 45,000 acres of crops.
- 1,000 cases of water contamination
- Radioactive water: some places 3,600% above federal limit water.

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6.2% of all well casings fail initially(*), leading to methane migration.
60% fail over 20 years. They all fail over time.

These numbers are from the PA DER. Why doesn’t the industry fix this systemic problem?

BECAUSE THEY CAN’T!

-- Dr. Anthony Ingraffea, Distinguished Professor of Engineering, Cornell University

* Source: PA DEP. See: http://youtu.be/7DX3f0DCZ3w#t=30m46s
Fracking Violates Rights of Air & Climate

- Leakage of methane – a greenhouse gas 25 times more powerful than carbon dioxide
- Evaporation “Frack Ponds” “off-gassing” of VOCs
- Cancer, Asthma, air pollution
Fracking Violates Soil, & Life

- Fracking causes earthquakes. Oklahoma is now the earthquake capital of the world (Casey Camp Horinek testimony)
- Fracking uses and brings to the Earth’s surface radioactive materials that cannot be safely disposed of (uranium, radon)
- "Flowback Fluid" 40% surges into soil, forming colloids that bind with microscopic pollutants
- Fraccidents, Farmland, Animal Deaths & Brine
Fracking Goes Global

Figure 1. Map of basins with assessed shale oil and shale gas formations, as of May 2013

Source: United States basins from U.S. Energy Information Administration and United States Geological Survey; other basins from ARIndustries Based on data from various published studies.