Oil and Gas Development: Public Concerns, Future Directions
Charlie Montgomery, Colorado Environmental Coalition
Position on oil and gas drilling

- Not pro- or anti-development. If it’s going to happen, it should happen responsibly, guided by the highest standards of protection.

- Not out to ban drilling or fracking, but some places should be off-limits.

- Traditionally, focus on land, water, wildlife in rural areas of western Colorado. More recently, urban/suburban areas along the Front Range.
Colorado's suburban homeowners face invasion of oil and gas wells

By Mark Jaffe
The Denver Post, 7/17/2011
Growing concerns in Front Range communities

- Land ownership, split estate, rural vs. urban ... problem of drilling and fracking

- Noise, lights, vibrations, truck traffic (6 trips/day): “We thought we were going to live next to a green space, and now it's an industrial site.”

- Property values: “This has hurt our property value ... We've talked about moving, but we can't imagine selling in this economy. So, we'll stay for now.”
Hydraulic fracturing, or "fracing," involves the injection of more than a million gallons of water, sand and chemicals at high pressure down and across into horizontally drilled wells as far as 10,000 feet below the surface. The pressurized mixture causes the rock layer, in this case the Marcellus Shale, to crack. These fissures are held open by the sand particles so that natural gas from the shale can flow up the well.
What goes down the well: water and fracking fluid

- 1-5 million gallons per frack. 99% water and sand, 1% fracking fluid.

- Some fracking chemicals relatively safe: sodium chloride, guar gum, citric acid

- Some more ominous: hydrochloric acid, diesel fuel, BTEX (benzene, ethylbenzene, toluene, xylene), polycyclic aromatic hydrocarbons; methanol; formaldehyde; ethylene glycol
What comes up the well: oil/gas and “flowback”

- Wastewater with heavy metals (cadmium, barium, strontium), hydrocarbons (benzene), salts

- On average, 40-50% of water returns to surface

- Even if pure water were used to frack wells, indigenous toxic chemicals would flow up through well to surface.
Risks of exposure: water and air

- Risks of surface spills and releases from fracking fluids and indigenous chemicals

- Denver Post study: in 2008-2010 period, average of more than a spill per day, average size of 5300 gallons

- CU School of Public Health, 2011: VOC exposure in Garfield County at 5x federal hazard standard within a half-mile of fracking operations
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How best to manage risk and regulate the industry?

- Colorado vs. New York: balancing accelerated production with public health

- State vs. local rules

- State-regulated setbacks: a key issue in risk management
Colorado and New York: the public health question

Gov. Andrew Cuomo, Sept. 30: “Let’s get some facts and data and some science, and we’ll make the decision on the science, which is what should be done here.”

Gov. John Hickenlooper, Oct. 1: “If we say we’re not having any fracking here, you better have really good science that they’re at risk or fracking can’t be done safely.”
State vs. local authority to regulate

- Argument for state control: oil and gas commission has expertise in a highly technical field

- Cities and counties
  -- Regulation of land use, zoning: surface impacts
  -- Can exercise land use authority up to the point of “operational conflict” with state regulations
  -- Can local governments say where wells are drilled?
State regulated setbacks: how close to homes and neighborhoods?

- State proposal: no closer than 350 ft, unless homeowner consents

- Conservationists’ proposal: no closer than 1000 ft, unless stricter protections in place, homeowner consents

- Distances crucial, but so are best management practices and planning frameworks
Thank you!

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