Planning for 1,600 Oil Wells in Greeley

The Case for Applying Local Zoning to the Oil and Gas Industry
Attorney Matthew Sura

Introduction...

- Former Director of Western Colorado Congress
- Graduate of University of Colorado Law School
- Attorney specializing in representation of landowners and mineral owners in oil and gas transactions and disputes
Outline of the Presentation

- Experience of Piceance Basin
- Background on state preemption
- Evaluating recent COGCC rulemaking and permitting decisions.
WCC Member Organizations (2008)

WCC member groups in San Miguel, Ouray, Montrose, Delta, Mesa, Garfield, and Routt counties.
There are now over 51,000 active wells in the state.
1969 Project Rulison
Thank you to SkyTruth for these images.
South of Rifle 1989 and 2004
10-acre density next to Colorado River
Characteristics of a good issue

1. Regional issue
3. Strongly felt - brings in more members
4. Addressing people's self interest
5. Timely/immediacy
6. Enough resources
7. Winnable
IMPACTS OF OIL AND GAS DEVELOPMENT

SURFACE
WATER
AIR
HEALTH
Surface impacts

- Land Impact
- Private Property Rights
- WILDLIFE
What if a complete stranger came on to your property and:

- disturbed 2-7 acres of your land,
- brought constant truck traffic through your property,
- dug waste pits for toxic chemicals, and
- installed heavy, loud equipment;
- then tossed you $2500 for your troubles?

Troubles that could be there for up to 30 years.
Home on the range or industrial site?
pipeline corridors across the landscape and through people’s yards,
IMPACTS TO THE LAND
IMPACTS TO WATER QUALITY
Hydraulic Fracturing
Example Horizontal Well
Denver Post study: From 2008-2010, average of more than a spill per day, average size of 5,300 gallons.
Leaking Waste Pits

Hydraulic fracturing pit.
Divide Creek in Silt Colorado, April 2004, contaminated with methane and ignitable. The accident also affected water wells in three homes.
Divide Creek in Silt Colorado, April 2004, contaminated with methane and ignitable. The accident also affected water wells in three homes.
GOOD MECHANICAL INTEGRITY
INSUFFICIENT CEMENT COVERAGE

CONDUCTOR PIPE

SURFACE CASING

PRODUCTION CASING

PRESSURE BUILDS UP

FRESH WATER AQUIFER ZONE

SHALLOW PRODUCING ZONE

TARGET PRODUCING ZONE
GJ voters may clear the water on drilling

Proposal to protect watersheds from contamination by oil, gas

By DANIE HARRELSION
The Daily Sentinel

Grand Junction voters could weigh in on a proposal this fall to protect their drinking water from contamination by oil and gas drilling and other industrial operations that could threaten the city’s water supply.

A local chapter of Western Colorado Congress kicked off its campaign Tuesday outside City Hall to collect the 1,580 signatures necessary to get its proposed city ordinance on the November ballot.

The Concerned Citizens’ Alliance aims to enhance the city’s ability to guard its water quality against the following “high-risk” activities:

- excavating a large amount
- using or transporting large amounts of hazardous materials; and
- timber, mining, feedlot operations and oil and gas drilling.

The proposed ordinance wouldn’t bar energy companies or other industry from the city’s watershed, said Matt Sura of the Grand Junction-based Western Colorado Congress.

It would empower the city to require drillers and other operations within the city’s watershed to take additional precautions to prevent pollution of the city’s water supply, Sura said.

See WATER, page 8A

See WATER, page 8A

See WATER, page 8A

See WATER, page 8A
supplying water quality “baseline” data and extensive planning documents before permit is issued;

prohibiting toxic chemicals to be brought into the watershed;

providing a list of best management practices that will reduce risk to water quality;
posting a bond that would cover 100% of potential damages;

hiring additional third-party monitors to ensure the operations will not harm our water supply; and

no measurable increase in pollution of Grand Junction’s water supply is allowed
Catholic questions about the environment

Q: What does the environment have to do with being a Catholic?
A: In his New Year’s message of 1990, Pope John Paul II said, “In our day, there is growing awareness that world peace is threatened not only by the arms race, regional conflicts and continued injustices among peoples and nations, but also by a lack of due respect for nature, by the plundering of natural resources and by a progressive decline in the quality of life...Faced with the widespread destruction of the environment, people everywhere are coming to understand that we cannot continue to use the goods of the earth as we have in the past.”

He continues, “Modern society will find no solution to the ecological problem unless it takes a serious look at its life-style. In many parts of the world, society is given to instant gratification and consumerism while remaining indifferent to the damage which they cause...Simplicity, moderation, and discipline, as well as a spirit of sacrifice, must become part of everyday life, lest all suffer the negative consequences of the careless habits of the few.”

A symposium on religion and science held in Santa Barbara in 1997, Bartholomew I, orthodox Church, declared, “to commit a crime against the natural world is a sin.”

Q: In Colorado communities are troubled by possible contamination of drinking water because of natural gas and oil drilling close to water sources. Does the church have a position on the right to clean drinking water?
A: “As a gift from God, water is a vital element essential to survival; thus, everyone has a right to it,” said Pope John Paul II in 2004. The Compendium of the Church says, “Satisfying the needs of all, especially of those who live in poverty, must guide the use of water and the services connected with it.

Care for God’s Creation

We show our respect for the Creator by our stewardship of creation. Care for the earth is not just an Earth Day slogan; it is a requirement of our faith. We are called to protect people and the planet, living our faith in relationship with all of God’s creation.

This environmental challenge has fundamental moral and ethical dimensions that cannot be ignored.

Q: What about so-called “endangered species” isn’t it only natural that certain species become extinct over time? If this wasn’t true, then there would still be dinosaurs roaming the earth today.
A: “Each of the various creatures, willed in its own being, reflects in its own way a ray of God’s infinite wisdom and goodness. Man the particular goodness of every creature, to avoid any disordered use of things which would be in contempt of the Creator and would bring disastrous consequences for human beings and their environment” (Catechism of the Catholic Church, 399). Yes, some animals become extinct over time due to weather changes, ice age and floods.

Today endangered species become extinct because of Global warming and global dimming. As temperatures, humidity, soil and vegetation change it can ruin a habitat for an endangered species in a limited range. Endangered species tend to have lower genetic diversity of their small numbers, which limits their ability to adapt to different climates. Endangered species often depend on one or a few species for food, some of which are also vulnerable to global warming.

Human population growth and ever-increasing consumption rates cause: severe deforestation, habitat fragmentation, water scarcity, climate change, loss of biodiversity and pollution. (Quote from National Wildlife Federation’s Endangered Species Act)

Q: Is there a hopeful environmental future for the future?
Activists: Keep water safe

Thousands opposed to drilling in watershed

By GARY HARMON
The Daily Sentinel

Environmental organizers on Tuesday turned in more than 4,000 signatures to City Hall, calling on the Grand Junction City Council to adopt a restrictive watershed drilling ordinance.

The Western Colorado Congress collected 4,150 signatures for the ordinance in about three weeks and in doing so, said board member Bill Grant, showed government officials and politicians that "there are some places that should not be drilled." Municipal watersheds, which are that...
**IMPACTS TO AIR QUALITY AND HEALTH**

**Local**
- Dust
- Toxic emissions
- Carcinogenic (Benzene)

**Regional**
- Front Range in Non-Attainment for Ozone
- NW Colorado in Non-Attainment for Ozone.

**Global**
- Methane is 20X more potent greenhouse gas than CO2.
Dust and emissions from heavy truck traffic
Compressor Engines
Condensate Tanks
Glycol Dehydrators
Industrial accidents
Well blow-out near Windsor, CO in February, 2013
## INCREASED RISK OF CANCER

Table 3. Increased risk of cancer from living near well and production facilities.

<table>
<thead>
<tr>
<th>Background cancer risk (chances per million)</th>
<th>Risk of cancer at 1,000 feet during lifetime exposure (70 years) (chances per million)</th>
<th>Risk of cancer at 500 ft during lifetime exposure (70 years) (chances per million)</th>
<th>Two-year exposure within 1,000 feet (300 meters) (chances per million)</th>
<th>Two-year exposure within 500 ft (chances per million)</th>
<th>Distance necessary to achieve background risk for exposure over two years</th>
<th>Distance necessary to achieve background risk for exposure over one year</th>
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Increased Risk to Public Health

People living within a half mile from oil and gas operations are at increased risk for health impacts

Theo Colborn, PhD

TEDX (The Endocrine Disruption Exchange)

www.endocrinedisruption.com/chemicals.gasresources.php
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Ground-Level Ozone

HOW GROUND-LEVEL OZONE IS CREATED

STORAGE TANKS & WELLS + TRANSPORTATION + HEAT = GROUND LEVEL OZONE

Source: EPA, ALA
## 2013 8-Hour Ozone (updated through September 30, 2013)

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<th>Site Name</th>
<th>1st Max 8-Hour (ppm)</th>
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Average Front Range 4th Highest 8-Hour Ozone Readings

Federal limit for Ozone
Colorado (Statewide)
2010 - Anthropogenic VOC Emissions
986 tons/day

- Point: 189 tons/day (19%)
- Non-Road Mobile: 91 tons/day (9%)
- O&G Point and Area: 37 tons/day (4%)
- Area: 463 tons/day (47%)
- On-Road Mobile: 206 tons/day (21%)
Colorado (Statewide)
2010 - Anthropogenic NOx Emissions
704 tons/day

- Point: 202 (29%)
- Non-Road Mobile: 133 (19%)
- O&G Point and Area: 149 (21%)
- Area: 195 (28%)
- On-Road Mobile: 25 (3%)
Elevated levels of surface ozone can cause:

- Shortness of breath
- Chest pain when inhaling deeply
- Wheezing and coughing
- Increased susceptibility to respiratory infections
- Inflammation of the lungs and airways
- Increased risk of asthma attacks

(American Lung Association)

→ Increased risk of death
~ 5000 people die in US prematurely every year due to elevated ambient air ozone (Bell et al., 2004)
NIOBRARA:

Oil boom on the Front Range
The Jake well, which was drilled in October 2009 in Weld County, produced an average of 1,750 barrels of oil per day for the first few days -- 50,000 barrels over first 90 days.

Today, oil is trading at $100 / barrel. At that price, the well paid for itself in three months ($5 million)
“Anadarko estimates Colorado has up to 1.5 billion barrel oil reserve”
Active wells in Weld County
STATE VS. LOCAL CONTROL

Argument for state control:
oil and gas commission has expertise and experience in a highly technical field. There is a need for uniformity

Argument for local government role:
Local land use conflicts are best solved by local government. Local government should be part of monitoring of the industry. Local process gives local community a voice. Zoning is a local government power.
Governor Hickenlooper’s Interview

http://denver.cbslocal.com/2013/02/26/hickenlooper-threatens-to-sue-any-town-city-that-bans-fracking/
The Governor... in his own words

“You can’t harvest the mineral rights without doing hydraulic fracturing, which I think we’ve demonstrated again and again can be done safely.”

“That’s a taking from their own citizens”

“We have to (sue every local government that bans hydraulic fracturing), we have no choice.”
2013 Local Moratoria and Bans

- Fort Collins: 5-year moratorium to study health effects of hydraulic fracturing.
  - Activists gathered 8,000 signatures to get it on the ballot.
- Loveland: 2-year moratorium to study health effects.
  - Currently being challenged and may not be voted on this November
- Boulder: 5-year moratorium referred by City Council.
- Lafayette: Ban on fracturing.
  - 2,000 signatures gathered
- Broomfield: 5-year moratorium
  - 3,000 signatures gathered to get it on the ballot.
202 NEW WELLS

- Sheep Draw (Fox Run) Directional: 16 wells
- Mid Town Directional: 37 wells
- Downtown Directional: 22 wells
- South Greeley Directional: 67 wells
- Gilbert Location: 16 wells
- C Street Directional: 32 wells
- Kelly Farms: 12 wells
Midtown Directional – 37 wells and associated equipment have been approved less than 400 feet from an apartment complex.
Mineral Resources
South Greeley Directional Location  5/30/13
South Greeley Directional

- 67 wells and associated equipment were approved by COGCC
- 600 feet from the Frontier Elementary School
- 350 feet from the playground
WAIT A MINUTE...

Didn’t the COGCC just pass minimum setback distances from homes and schools?
SETBACKS FROM HOMES

THE COGCC ALLOWS GAS WELLS 150 FEET FROM A RESIDENCE, SCHOOL, OR CHURCH.
The reason the COGCC does not allow gas wells closer than 150 feet from a home.
Issues the COGCC 150' rule does not consider...

- Odors
- Dust
- Noise
- Property values
- Quality of life
Setbacks – 600 series Rules

- **Schools and hospitals**: 1,000-foot setback

- **Urban Setbacks**: 500-foot setback
  
  Affects less than 4% of wells

- **Rural Setback**: 500-foot setback
  
  Allows an “exception” if the industry asks for it
  
  The only requirement is that impacts are mitigated to the greatest extent *economically practicable*
Exceptions, variances, and loopholes (Oh my!)

- Non-Urban Areas
- Expanding Existing Locations
- Surface Use Agreements
- Variance
604a.1.B. Non-Urban Mitigation Zone Locations.

Director may give an exception if the proposal mitigates potential adverse impacts to public health, safety, welfare, the environment, and wildlife to the maximum extent technically feasible and economically practicable ....
What is the problem with expanding existing locations?
Zoning is not a “takings”...

- Must be *complete* taking of value

- Government may restrict uses that are nuisances

- Look at
  - the character of the governmental action,
  - its economic impact,
  - and its interference with reasonable investment-backed expectations.
Looking at *Voss v. Lundvall Bros.*

- Overturned Greeley’s local ban
  - Held that Greeley could not completely ban oil and gas development

- BUT stated that Greeley could regulate oil and gas so long as local regulations are not in “Operational Conflict” with the state regulations
OPERATIONAL CONFLICT

- Defined in both Voss and Bowen/Edwards....

Operational conflict occurs when the specific local regulation “materially impedes or destroys the state interest.”
“STATE INTEREST”

as defined during *Voss* in C.R.S. § 34-60-102(1)

“to foster, encourage, and promote the development, production, and utilization of the natural resources of oil and gas in the state of Colorado; to protect the public and private interests against the evils of waste in the production and utilization of oil and gas by prohibiting waste...”
“STATE INTEREST”
is defined in C.R.S. § 34–60–102(1)

“To foster the responsible, balanced development, production, and utilization of the natural resources of oil and gas in the state of Colorado in a manner consistent with protection of public health, safety, and welfare, including protection of the environment and wildlife resources.”
“STATE INTEREST” is defined in C.R.S.§ 34-60-102(1)

To foster the responsible, balanced development, production, and utilization of the natural resources of oil and gas in the state of Colorado in a manner consistent with protection of public health, safety, and welfare, including protection of the environment and wildlife resources.”
To foster the responsible, balanced development, production, and utilization of the natural resources of oil and gas in the state of Colorado in a manner consistent with protection of public health, safety, and welfare, including protection of the environment and wildlife resources.”
Oil and gas development is an industrial use of the land that is a nuisance and potential health risk to nearby residents.

Local government is better able to address land use issues posed by oil and gas development.

The State COGCC has not been willing or able to pass regulations or make permitting decisions that are protective of communities.

Local government should have the right to treat the oil and gas like any other industry.
For more information contact

Matthew Sura
Attorney at Law
(720) 563-1866
mattsura.law@gmail.com