From:	Ginger Ikeda
To:	#LandUsePlanner
Subject:	cement casings in wells
Date:	Monday, August 20, 2012 9:39:12 AM

Dear Planners,
I realize the comprehensive plan is well underway. Nevertheless, we should keep up to date with developing information. Here is this piece:

http://www.scribd.com/doc/65577477/How-Gas-Wells-Leak

New York and Texas are discussed, and they are geologically different than Colorado, but I believe the studies sited should raise some alarm bells for us.

Thanks for your attention.

--
Ginger

SHARE THE ROAD :)
Riders: Be Bright and Be Seen; Rules of the Road
Drivers: Put down the @%$ cell phone and Save a Life; 3 Feet Between; Pass <15 mph above bike's speed. THANKS!

"Unless someone like you cares a whole awful lot, nothing is going to get better. It's not!"
Dr. Seuss

From:	Ginger Ikeda
To:	#LandUsePlanner
Subject:	Fwd: Heads Up - The extent of SWEPI leasing in Huerfano County
Date:	Tuesday, August 28, 2012 11:00:07 AM

Hello, Planners,

Ongoing.... just fyi.

Thank you,

---------- Forwarded message ----------
From: **Citizens for Huerfano County** <citizensforhuerfanocounty@gmail.com>
Date: Mon, Aug 27, 2012 at 7:10 PM
Subject: Heads Up - The extent of SWEPI leasing in Huerfano County
To: Citizens for Huerfano County <citizensforhuerfanocounty@gmail.com>

Ever wonder how many Shell (SWEPI) Oil and Gas Leases there are in Huerfano County and who has them?

Oil and Gas Leases and other related documents are recorded with the county and are publicly available information. Huerfano County subscribes to a service for storing and searching such documents online called The County Recorder www.thecountyrecorder.com .

In **February, 2012**, SWEPI announced they had leased **130,000 acres** for oil and gas drilling in Huerfano County.

Since then they have continued acquiring and recording new Oil and Gas leases at an accellerating pace:

5 leases in March...
5 leases in April...
3 leases in May...
12 leases in June...
25 leases in July...
67 leases in August...

The total # of SWEPI documents (oil and gas leases and other related transactions) is now 206, up from 62 in February. The acres leased now is not known, will have more on that soon. Keep in mind there are 1.02 million arces in Huerfano County.

For comparison this article talks about the status of the land and mineral rights grab along the front range as of October, 2011: http://www.denverpost.com/business/ci_19169758

It is no longer be true that **"**The last frontier in the land rush is El Paso County" - **it is Huerfano County.**

Why should we care what people do with their own property? Because air and water (and pollution) do not recognize property boundaries!

Citizens for Huerfano County
PO Box 1193 | La Veta CO 81055
PH: 719.742.5538
Email: citizensforhuerfanocounty@gmail.com
Website: www.huerfaNOfrack.com
Follow us on Facebook: "Huerfanos Against Fracking" www.facebook.com/nofrack

Protecting Huerfano County from destructive oil and gas exploitation.

--
Ginger

SHARE THE ROAD :)
Riders: Be Bright and Be Seen; Rules of the Road
Drivers: Put down the @%$ cell phone and Save a Life; 3 Feet Between; Pass <15 mph above bike's speed. THANKS!

"Unless someone like you cares a whole awful lot, nothing is going to get better. It's not!"
Dr. Seuss

From:	Ginger Ikeda
To:	#LandUsePlanner
Subject:	fracking and air pollution, from NOAA
Date:	Friday, August 31, 2012 6:08:55 PM

Dear Planners,

I realize our guidelines are in place. However, I assume we are continuing to become informed and stay up to date, so here is a study that was noted in May 2012. It has just recently come to my attention, and I thought I would bring it to yours, in the event you had also missed it.

http://m.npr.org/story/151545578?url=%2F2012%2F05%2F17%2F151545578%2Ffrackings-methane-trail-a-detective-story

Thank you for ongoing efforts,

--
Ginger

SHARE THE ROAD :)
Riders: Be Bright and Be Seen; Rules of the Road
Drivers: Put down the @%$ cell phone and Save a Life; 3 Feet Between; Pass <15 mph above bike's speed. THANKS!

"Unless someone like you cares a whole awful lot, nothing is going to get better. It's not!"
Dr. Seuss

From: Dan Frazier
To: #LandUsePlanner
Subject: Fracking
Date: Tuesday, September 18, 2012 10:52:15 AM

Dear Planning Board,

In the future, when an aquifer is contaminated by fracking, what are you going to do?
How will you know who has created the pollution?
How will you prove it in court?
Who will clean it up?
Who will pay for it?
Will it even be possible to purify the water or stop the continued contamination?
Are you going to look back and say, “We should have done something.”?

No one has the right to poison our water. Don’t let the lawyers tell you otherwise.

Respectfully,

Dan Frazier
4853 Fountain St.
Boulder, CO 80304
303 443-8864

From:	cliffsmedley@netzero.net
To:	!CountyAttorney
Cc:	Adeletti, Matt; Boulder County Board of Commissioners
Subject:	To County Atty Pearlman - Fw: RE: New Encana wells on county open spac e
Date:	Tuesday, August 14, 2012 7:04:45 PM
Attachments:	RE New Encana wells on county open space.msg

Mr. Pearlman:

Why was my legal question directed to a communications specialist (a PR person) instead of an attorney???? Why do you even have PR people on staff? This is what hollywood characters do in order to avoid things.

I am writing directly to you and I hope to get a direct answer. My friends in Longmont were told that their local oil and gas regs are not suitable to restrict fracking because they were written at a time that did not envision the predominance of hydraulic fracturing? Now, your PR person is telling me that when we are speaking of leases, instead of regs, then those leases will apply to hydraulic fracturing. This cannot be both ways at the same time. Either Longmont's regs DO apply to fracking or these leases on County Open Space that were signed in the 1970's DO NOT apply to fracking. Which way is it?????

Please respond at your earliest convenience!

Sincerely,
Cliff Smedley

Please note: forwarded message attached

From: "Rowland, Dan" <drowland@bouldercounty.org>
To: "cliffsmedley@netzero.net" <cliffsmedley@netzero.net>
Cc: "Adeletti, Matt" <madeletti@bouldercounty.org>
Subject: RE: New Encana wells on county open space
Date: Thu, 2 Aug 2012 21:08:12 +0000

_____
Woman is 53 But Looks 25
Mom reveals 1 simple wrinkle trick that has angered doctors...
http://thirdpartyoffers.netzero.net/TGL3241/502af5818fad875815cf7st04vuc

From:	cliffsmedley@netzero.net
To:	Rowland, Dan
Cc:	Adeletti, Matt; Boulder County Board of Commissioners; eastbocounited@lists.riseup.net; bococcr@yahoogroups.com
Subject:	RE: New Encana wells on county open space
Date:	Tuesday, August 14, 2012 4:17:53 PM

Hello Mr. Rowland,

You seem to be parroting the industry line. This is quite disturbing since you are taking a county salary and you are supposed to be representing my interests!!!

Your statement that Hydraulic Fracturing has been utilized for "decades" is misleading. It has only been prominent for approximately the last 10 years. In Longmont the citizens found that the local regulations which were in place were deemed irrelevant because of exactly the issue that I have raised here. Namely, that hydraulic fracturing was not envisioned at the time those local regs were created. Similarly, these leases should not be applicable because they did not envision the harmful process that is being utilized. An analogy might be that I have the right to smoke in my back yard. However, if I invite all of my friends over and have a "smoke out" then there is a point where I am violating what I am permitted to do. Why is it that individuals have legal and regulatory limits whereas business operations have few real limits???? Please start representing my interests and the interests of the citizens of Boulder County NOW!!! You have some explaining to do regarding the issues I have raised and I look forward to hearing it!!!

Sincerely,
Cliff Smedley
209 Skylark Circle
Lafayette, CO 80026
303-808-0117

---------- Original Message ----------
From: "Rowland, Dan" <drowland@bouldercounty.org>
To: "cliffsmedley@netzero.net" <cliffsmedley@netzero.net>
Cc: "Adeletti, Matt" <madeletti@bouldercounty.org>
Subject: RE: New Encana wells on county open space
Date: Thu, 2 Aug 2012 21:08:12 +0000

Mr. Smedley,

Ben Doyle forwarded me your email.

It is my understanding that details on extraction methods would not typically be included in such an agreement. Fracking has been used in one form or another for decades, so it is not a surprise that the operator is employing that method with these wells. I don't think that alone would be any basis for blocking the activity at this point, assuming the company is otherwise in compliance with the surface use

agreements and applicable local, state and federal law. If you have further questions about this particular operation, please contact Matt Adeletti in the countyâ€™s Parks and Open Space Department at 303-678-6265 or madeletti@bouldercounty.org.

Thanks.

Dan Rowland | Communications Specialist

Boulder County | Board of County Commissioners

Office: 303.441.3399 | Mobile: 303.579.7573

On Aug 1, 2012, at 9:51 AM, "cliffsmedley@netzero.net" <cliffsmedley@netzero.net> wrote:

Dear Mr. Doyle,

I have just read the article about Encana drilling new wells on county open space (http://www.timescall.com/news/longmont-local-news/ci_21204071/encana-preparing-drill-five-new-wells-boulder-county). I am writing to ask if these previous agreements actually indicated that hydraulic fracturing would be used? If hydraulic fracking is not mentioned in that agreement then can this new activity be blocked because the agreement was signed by the Commissioners at the time without complete information?

Thank you for your assistance.

Sincerely,
Cliff Smeley
209 Skylark Circle
Lafayette, CO 80026
303-808-0117

53 Year Old Mom Looks 33
The Stunning Results of Her Wrinkle Trick Has Botox Doctors Worried
consumerproducts.com

From:	Martha Dick
To:	Boulder County Board of Commissioners
Subject:	Fracking
Date:	Tuesday, August 14, 2012 8:53:57 PM

We, the citizens of Boulder County, elected the commissioners to represent our concerns. Currently, it seems that the oil and gas industry is putting considerable pressure upon our officials to permit fracking and its associated danger to our open lands and communities. The damage such activity would cause is not trivial or short lived. Damage to the water table might be one of the most serious results. The recent droughts have shown just a hint of issues involved in water quality and quantity.

Please consider preserving Boulder County's natural features for generations when making such decisions.. We all will need safe water. Thank you for your efforts.

Sincerely,

Martha and Donald Dick

3992 Sunshine Canyon

Boulder, CO 80302

From:	Karey Christ-Janer
To:	Boulder County Board of Commissioners
Cc:	#LandUsePlanner
Subject:	A concern about Oil & Gas proposed Policy 4.04 (re: methane emissions)
Date:	Thursday, August 16, 2012 11:36:24 AM

Dear Commissioners---

I attended with interest yesterday's (August 15th) Land Use Commission discussion of draft oil & gas rules. I have a specific concern about the language in the below Policy section 4.04 regarding methane emissions (see struck-out verbiage below highlighted in red--see below).

First, I'd like to say that this provision is one of the very most important in my view, particularly to the extent that fugitive methane releases may exacerbate climate change. While I am sure good thought has been put to this, **I worry that by eliminating the words "minimizing" and "reduce or" may render this section impossible to achieve** (and therefore, potentially be viewed as impossible to enforce). Natural gas as we use it is approximately 90% methane. My concern is that this section is a bit like asking that when you pump gasoline into your vehicle that you emit absolutely no fumes, which is probably quite literally impossible.

I urge you to retain very strong language in this regard, but to utilize language that may be more realistic and/or less of a "target" for potential elimination or challenge by detractors who may arise in your processes.

Thanks so much for your time and attention.

Karey Christ-Janer
--Boulder property owner

Section of concern:

Policy GE 4.04: In addition to the county's expressed interest in ~~minimizing/~~ eliminating methane and other greenhouse gas emissions from oil and gas development into the atmosphere as noted in Policy 4.03, the county strongly supports all efforts at all levels to further study and ultimately ~~reduce or~~ eliminate **such** emissions **resulting from** oil and gas operations whether through legislative, regulatory, voluntary or other means.

From:	Don Coulson
To:	Boulder County Board of Commissioners
Subject:	Inspection?
Date:	Thursday, August 16, 2012 8:40:29 PM

Dear Commissioner:

I greatly appreciate your efforts with regard to the fracking issue, and would like to suggest one additional condition to the regulations under consideration.

the COGCC has but 17 inspectors covering the entire state. I suggest that BC hire at least one full time inspector, and that this person be trained by COGCC. Additionally, the cost of this hire should be recovered by the county in whatever form allows for the complete independence of the inspector.

No law, rule or regulation is worth the paper it's printed on if not enforceable. It's time for hardball. Just do it.

Tx;

Don Coulson

303 774 8334

341 Grant Street
Longmont 80501

From: chwolf@juno.com
To: Boulder County Board of Commissioners
Subject: approached to sign oil and gas lease in Boulder County
Date: Wednesday, August 22, 2012 7:36:53 PM

Hello,

My name is Cheryl Larsen. I'm a property owner in the far north east corner of Boulder County. We own our mineral rights (surface and ground). We are in unincorporated area of the county. Out in the rural areas. We sit on 35 acres as well as our neighbors .

We and our neighbors have been approached by a oil and gas company to sign a lease. If we sign this lease, will the oil and gas company be subject to the new regulations that Boulder County is reviewing? We feel that the new provisions would offer us more protection, but may come to late for all of us if we sign now. Will leases signed now be put under the new regulations??

I listened in to the meeting held 8-22-12 at 5:30 pm. A comment was made that most of the drilling is done in this county. I can tell you that is not true. It is just beginning. The march westward is coming from our east. This oil company is going after 320 acres IN Boulder County to drill on. This is just the first stage. We are all part of the western side of the Wattenberg field, and they feel this area could hold a large oil field. They have not submitted a plan yet due to the moratorium on drilling,but they want to start to drill as soon as that is lifted.

What should a landowner do? We have already tried to get a non-surface use agreement with them but they refused. I really do not want to be forced pooled either. We do have an attorney after researching all we could, it is just too complicated. All the contracts are pro oil company, not written for the land owner.

Any feedback would be appreciated.

Sincerely,

Cheryl and Ron Larsen

303-682-4002

From: vincentcasano14@comcast.net
To: jfryar@times-call.com; Boulder County Board of Commissioners
Subject: First do no harm
Date: Thursday, August 23, 2012 8:50:13 AM

Dear John Fryar,

Either out of ignorance or ambition, you have sinned against your community with ripples traveling much further. In big bold print, you quoted in the headline and in the article body about how caring the board of commissioners are about safety. As if their good hearts are the main theme of the story? These commissioners have sold us out twice recently: GMO and now Fracking. They are obviously corrupt and your integrity and karma have been greatly affected by your choice today. Today you were the writing hand of darkness, consciously or not, you must atone for this...

Sincerely,

Vincent Casano

From:	Briggle, Adam
To:	Boulder County Board of Commissioners
Subject:	Gas drilling message for Mr. Toor
Date:	Thursday, August 23, 2012 9:54:33 AM

Dear Will,

I am not sure if you remember me, but we served together on the CU Environmental Center Board about 10 years ago (I was an ENVS grad student in their first cohort). I saw the recent Denver Post story about drilling and the precautionary principle and thought I would reach out to let you know I have been studying and actively involved in local shale gas regulation here in Denton, TX (I am now at UNT). I have started a citizen's advisory committee: http://dentondrilling.blogspot.com/ and have written some essays on the topic - including precautionary approaches to drilling - which you can find here: http://www.slate.com/authors.adam_briggle.html.

If there is any way I can be of assistance to you as you confront this issue, please let me know. I hope that you are doing well!

Best,

Adam

Adam Briggle
A Rich Bioethics: Public Policy, Biotechnology, and the Kass Council
Department of Philosophy and Religion Studies
University of North Texas
www.phil.unt.edu, +1 940-369-5136

From: Don Barshay
To: Boulder County Board of Commissioners; council@bouldercolorado.gov
Cc: larry ferguson
Subject: significant "frackiing" info...
Date: Wednesday, August 29, 2012 8:49:57 AM

... in an article written by John Lennon's son Sean for The New York Times. don

Destroying Precious Land for Gas

By Sean Lennon, The New York Times

28 August 12

N the northern tip of Delaware County, N.Y., where the Catskill Mountains curl up into little kitten hills, and Ouleout Creek slithers north into the Susquehanna River, there is a farm my parents bought before I was born. My earliest memories there are of skipping stones with my father and drinking unpasteurized milk. There are bald eagles and majestic pines, honeybees and raspberries. My mother even planted a ring of white birch trees around the property for protection.

A few months ago I was asked by a neighbor near our farm to attend a town meeting at the local high school. Some gas companies at the meeting were trying very hard to sell us on a plan to tear through our wilderness and make room for a new pipeline: infrastructure for hydraulic fracturing. Most of the residents at the meeting, many of them organic farmers, were openly defiant. The gas companies didn't seem to care. They gave us the feeling that whether we liked it or not, they were going to fracture our little town.

In the late '70s, when Manhattanites like Andy Warhol and Bianca Jagger were turning Montauk and East Hampton into an epicurean Shangri-La for the Studio 54 crowd, my parents, John Lennon and Yoko Ono, were looking to become amateur dairy farmers. My first introduction to a cow was being taught how to milk it by hand. I'll never forget the realization that fresh milk could be so much sweeter than what we bought in grocery stores. Although I was rarely able to persuade my schoolmates to leave Long Island for what seemed to them an unreasonably rural escapade, I was lucky enough to experience trout fishing instead of tennis lessons, swimming holes instead of swimming pools and campfires instead of cable television.

Though my father died when I was 5, I have always felt lucky to live on land he

loved dearly; land in an area that is now on the verge of being destroyed. When the gas companies showed up in our backyard, I felt I needed to do some research. I looked into Pennsylvania, where hundreds of families have been left with ruined drinking water, toxic fumes in the air, industrialized landscapes, thousands of trucks and new roads crosshatching the wilderness, and a devastating and irreversible decline in property value.

Natural gas has been sold as clean energy. But when the gas comes from fracturing bedrock with about five million gallons of toxic water per well, the word "clean" takes on a disturbingly Orwellian tone. Don't be fooled. Fracking for shale gas is in truth dirty energy. It inevitably leaks toxic chemicals into the air and water. Industry studies show that 5 percent of wells can leak immediately, and 60 percent over 30 years. There is no such thing as pipes and concrete that won't eventually break down. It releases a cocktail of chemicals from a menu of more than 600 toxic substances, climate-changing methane, radium and, of course, uranium.

New York is lucky enough to have some of the best drinking water in the world. The well water on my family's farm comes from the same watersheds that supply all the reservoirs in New York State. That means if our tap water gets dirty, so does New York City's.

Gas produced this way is not climate-friendly. Within the first 20 years, methane escaping from within and around the wells, pipelines and compressor stations is 105 times more powerful a greenhouse gas than carbon dioxide. With more than a tiny amount of methane leakage, this gas is as bad as coal is for the climate; and since over half the wells leak eventually, it is not a small amount. Even more important, shale gas contains one of the earth's largest carbon reserves, many times more than our atmosphere can absorb. Burning more than a small fraction of it will render the climate unlivable, raise the price of food and make coastlines unstable for generations.

Mayor Michael R. Bloomberg, when speaking for "the voices in the sensible center," seems to think the New York State Association of County Health Officials, the American Academy of Pediatrics, the New York State Nurses Association and the Medical Society of the State of New York, not to mention Dr. Anthony R. Ingraffea's studies at Cornell University, are "loud voices at the extremes." The mayor's plan to "make sure that the gas is extracted carefully and in the right places" is akin to a smoker telling you, "Smoking lighter cigarettes in the right place at the right time makes it safe to smoke."

Few people are aware that America's Natural Gas Alliance has spent $80 million in a publicity campaign that includes the services of Hill and Knowlton - the public relations firm that through most of the '50s and '60s told America that tobacco had no verifiable links to cancer. Natural gas is clean, and cigarettes are healthy - talk

about disinformation. To try to counteract this, my mother and I have started a group called Artists Against Fracking.

My father could have chosen to live anywhere. I suspect he chose to live here because being a New Yorker is not about class, race or even nationality; it's about loving New York. Even the United States Geological Survey has said New York's draft plan fails to protect drinking water supplies, and has also acknowledged the likely link between hydraulic fracturing and recent earthquakes in the Midwest. Surely the voice of the "sensible center" would ask to stop all hydraulic fracturing so that our water, our lives and our planet could be protected and preserved for generations to come.

RECEIVED
COUNTY COMMISSIONERS OFFICE
SEP 04 2012
REC'D BY
TIME

August 30, 2012

Dear Commissioners:

In reviewing my files to respond ~~to a neigh~~ bors e-mail on Encana operations in our area I realized that I had failed to respond to a request from you for a missing page of the June 7 letter that I wrote to you regarding Fracking.

I apologize for the delay; I have included a copy of the June 7 letter as well as a copy of my response to my neighbors e-mail.

Take care.

Best regards,

Larry Box

cc: BOCC
LU
Carrie

June 7, 2012

Cynthia Danner-Weide, CPL
Land Negotiator
Encana Oil & Gas (USA) INC.
370 17th St, Suite 1700
Denver, CO 80202

Larry and Dianna Box
7224 Nebraska Way
Longmont, CO 80504-8441

CC:
Boulder Country Commissioners
Cindy Domenico, Deb Gardner, & Will Toor
Boulder County Courthouse
Third Floor
1325 Pearl Street
Boulder, CO 80302

Subject:
Notice of Intent to Propose IR-100 318A(I)e. boundary line well
Caldwell 4-6-26

Dear Ms. Danner-Weide:

Thank you for your letter dated June 5, 2012 regarding Encana Oil and Gas (USA) Inc's.
Notice of Intent to Propose IR-100 318A(I)e. boundary line well
Caldwell 4-6-26
Township 2 North, Range 69 West
Section 26: SHL in the SE/4SE/4 - BHL 1263' FSL & 2608' FEL
Boulder Country, Colorado

Please note that your letter addressed to us includes area code 80501. Our area code has been changed to 80504-8441.

We are adamantly opposed to all aspects of this project. In addition, we generally oppose any new well-fracking-operations in Boulder County. Because it could potentially have a negative impact on our property at 7224 Nebraska Way, Longmont, Colorado, we are specifically opposed to any well project that would include well-fraking-operations that could potentially cause fracked-strata on private or public land within 10 miles of our property at 7224 Nebraska Way.

Take care.

Best regards,

Larry Joe Box
Dianna N. Box
(Signed)

E-mail Harsch Heights Neighborhood Issue

To: Carole Johns
C: Doyen Jim Mitchell; Patricia Spears; Sue Merriam; Lesya

From: Larry Box larrybox@comcast.net

CC:
Boulder Country Commissioners
Cindy Domenico, Deb Gardner, & Will Toor
Boulder County Courthouse
Third Floor
1325 Pearl Street
Boulder, CO 80302

August 29, 2012

Your August 29 2012 E-mail
Subject: Trespassing and Moneys Due

Dear Carole:

Thank you for your note regarding Encana operations in our area.

When I initially received the request from Boulder County on my thoughts for the drilling of gas wells on Boulder County Open Space near our property, I responded in the affirmative; my comments included "My personal preference is that the wells not be drilled, but national priorities are that we need domestic energy sources and perhaps the funds from the wells could be used to purchase additional Boulder Country Open Space." Encana later offered something like $200 for our well-rights. Even though some of our neighbors signed up, I categorically rejected the offer. At that time I knew nothing of Fracking; now I am a little better educated. It seems that Encana wants to drill Fracking wells near out property (and may already have done so without our permission) that could impact strata under our property.

I am adamantly against that. My reasons are fundamental. Even though Fracking is a controversial issue, with excesses and deceptions on both sides, I do not think that there is currently a pressing national need for Fracking, especially near residential areas.

> In an AP article, *Experts: Some Fracking Critics Use Bad Science* (generally pro Fracking in my assessment) by KEVIN BEGOS, he included these comments (highlights and text color changes added by me): "Lubell said the situation, which happens on both sides of a debate, is called "motivated reasoning." Rational people insist on believing things that aren't true, in part because of feedback from other people who share their views, he said. Vengosh noted the problem of spinning science

> isn't new, or limited to one side in the gas drilling controversy. For example, **industry supporters have claimed that drilling never pollutes water wells, when state regulators have confirmed cases where it has**. He says the key point is that **science is slow, and research into gas drilling's many possible effects are in the early stages, and much more work remains to be done** "Everyone takes what they want to see," Vengosh said, adding that **he hopes that the Fracking debate will become more civilized as scientists obtain more hard data**.

To me that reads: Move slowly; the community risks are potentially high and not justified by a few dollars for Dianna and me. I tried to make my position crystal clear in my last response to Encana, which I copied to the Boulder County Commissioners. I have enclosed a copy of that response for your reference. In addition, if you have not already viewed it, I recommend that you view the Academy Award Nominee film *GASLAND; CAN YOU LIGHT YOUR WATER ON FIRE?* The DVD cover and summary description are enclosed.

This film is available from NetFlix as both a DVD and streaming. If you are not a NetFlix subscriber but would like to view the film, let me know and I will set it up for streaming and we can view it together. This film is controversial, but I think it is worth noting that with 109, 268 Netflix reviews it is rated 4.0 stars; and with 143 Amazon reviews it is rated 4.3 stars. Like the AP article, this film generates the same message for me: Move slowly; the community risks are potentially high and not justified by a few dollars for Dianna and me.

With regards to your specific request regarding our willingness to help fund a legal negotiation with Encana for payment of fees owed, we are not interested. However, if the legal action is amended to order termination of all Fracking operations that might have caused Fracked strata under our property, ban any future Fracking wells that could reasonably be expected to result in Fracked strata within ten miles of our property, and pay damages for previously withdrawing resources from under our property without our permission, then we would consider becoming part of the legal action,

I look forward to hearing from you.

Take care.

Warm regards,

Larry Box

Fileld: Encana Carole E-Mail Response.doc

Enclosures: Encarta Response *and GASLAND*:
Encl. 1, Encarta Response:

June 7, 2012

Cynthia Danner-Weide, CPL
Land Negotiator
Encana Oil & Gas (USA) INC.
370 17th St, Suite 1700
Denver, CO 80202

Larry and Dianna Box
7224 Nebraska Way
Longmont, CO 80504-8441

CC:
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Subject:
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Caldwell 4-6-26

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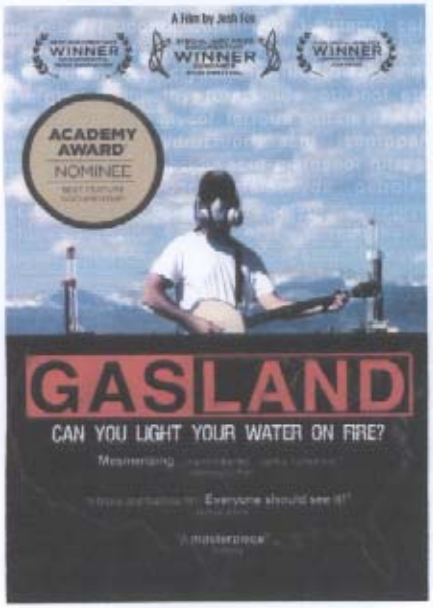
Take care.

Best regards,

Larry Joe Box
Dianna N. Box
(Signed)

Encl. 2, *Gasland*



Netflix Rating: Average of 109,268 reviews 4.0 stars out of five

Amazon Rating Average of 143 customer reviews 4.3 stars out of five

2010 107 minutes

In this Oscar-nominated documentary, director Josh Fox journeys across America to examine the negative effects of natural-gas drilling, from poisoned water sources to kitchen sinks that burst into flames to unhealthy animals and people.

Cast:

Josh Fox, Dick Cheney, Pete Seeger, Richard Nixon, Aubrey K. McClendon, Pat Fernelli, Ron Carter, Jean Carter, Norma Fiorentino, Debbie May, Mike Markham, Marsha Mendenhall, Dave Neslin

Director: Josh Fox

Genres: Documentary, Science and Nature Documentaries, Political Documentaries

From: Carole Johns [mailto:freedomfinancialoffices.cj@gmail.com]
Sent: Wednesday, August 29, 2012 7:43 PM
To: larrybox@comcast.net; Doyen Jim Mitchell; patricia spears; SUE MERRIAM; Lesya
Subject: Trespassing and moneys due

Neighbors!

As most of you know, the Krolls and the Johns' did NOT sign the Encana lease as presented. Linda secured a "stay of execution" until the end of August. In the meanwhile we have been in contact with the Colorado Oil and Gas Commission and Paul Zogg (attorney). Without going into the details, which Linda understands far better than I, here is what we have been told by the COGC.

> 2. *We are part of a 160 acre quarter section, already, with oil wells on it. Should we be participating in those wells? How do we know if those wells are pulling oil and gas from our property? We each just have an acre of property in this neighborhood, so the numbers are very small. But, we want to be sure everything is being done properly. How could we sign an oil lease if our oil was already being pumped? And, if it's being pumped, already, aren't we supposed to get a little bit of royalty?* ***You are correct - your property is located in the SW/4 of Section 26 in which there are 2 producing wells. According to the COGCC database, you should be receiving payments from both of those wells. The well to the WSW of you (in the NWSW Section 26) is operated by Encana and the well to the SSW (in the SESW of Section 26) is operated by Merit Energy. It is fine if you***

have not leased your minerals to either company. However, both those operators still owe you proceeds from those producing wells. Even though those wells have been producing your minerals, you can still lease to Encana at this time, provided you have not leased your minerals to another company.

Paul is very busy and has referred us to a colleague who believes he can resolve (negotiate/mediate) the issue in approximately 6 hours@$150/hr. We are all most likely due back royalty payments. The amount due to you will depend on your property size and the duration of property ownership. It is inevitable that we will be force pooled. We have been advused that the process has already started and to expect certified letters.

Whether you have signed the lease or not, the operators owe us proceeds and will be contacted by the attorney demanding payment to avoid charges of "trespassing". Linda has left a message for the Landman (now a lady) to see if this can all we worked out without an attorney. We anticipate that an attorney will be necessary to contact Merit Energy.

Please let us know if you are interested in participating in the fees and possible rewards. We will be contacting those we do not have email addresses for as well.

The puzzle will be how much we are due.

We hope to contract the attorney on Tuesday and proceed immediately. Please let me know if you are interested in participating in the (gold?) mine.

--

Carole Johns
Registered Investment Representative
Certified QuickBooks® ProAdvisor
Freedom Financial Offices
303.651.1641

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- **Life Changes?**
- **Estate Planning?**
- **General Finances?**

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From:	Dan Frazier
To:	Boulder County Board of Commissioners
Subject:	Duty
Date:	Monday, September 10, 2012 12:50:31 PM

Commissioner's Duty

"I (commissioner's name), swear and affirm, that I will support the constitutions of the United States and the State of Colorado, and that I will faithfully perform the duties of the office of Boulder County Commissioner, upon which I am about to enter."

Vision Statement.

In keeping with this vision statement, Boulder County's leaders have developed the following guiding values:

Guiding Values:

We are a caring county government that values and respects diversity and builds on the strengths of individual employees, the organization and the community.

We are a safe, healthy and environmentally responsible county. Our stewardship honors our past and sustains and improves the quality of life for present and future generations.

We value and provide opportunities for citizens to actively participate in partnerships that enhance and enrich government services.

We are motivated, progressive and visionary. We continually challenge ourselves to improve services by being innovative, collaborative and creative.

We are valued and well trained. We use our experience, knowledge and a team approach to provide excellent service with openness, responsiveness, efficiency and accountability.

We work with passion, integrity and a positive attitude, in a supportive, fun environment. We are proud of our accomplishments and celebrate the achievements of our goals.

"Protecting the rights of even the least individual among us is basically the only excuse the government has for even existing."

Ronald Reagan

"When a stupid man is doing something he is ashamed of, he always declares that it is his duty."

Shaw, George Bernard

"If I do my full duty, the rest will take care of itself."

Patton, George S.

“Imagine the appeals, dissents and remandments, if lawyers had written 'The Ten Commandments'.—“Harry Bender

You need to be well informed. Don’t believe me. Do your own research. If you have not seen them yet, you should watch Gasland and The Sky is Pink.
http://www.gaslandthemovie.com/

Then explore where your curiosity leads you.

Respectfully,
Dan Frazier
4853 Fountain St.
Boulder, CO 80304
303 443-8864

From:	Christel Markevich
To:	Boulder County Board of Commissioners
Subject:	Keep Boulder County Frack Free
Date:	Saturday, September 15, 2012 9:49:49 PM

Dear Planning Commissioners,

As a citizen of Boulder County, I support a ban on hydraulic fracturing (fracking) in Boulder County.

I urge you to support a ban on fracking and to refrain from doing anything with Boulder County's comprehensive plan that will enable fracking or make an eventual ban more difficult.

Sincerely,

Christel Markevich
207 Cumberland Gap Road
Nederland, CO 80466

From: Jim
To: Boulder County Board of Commissioners
Subject: Fwd: Letter of opinion regarding BC Land use regulations of Oil& Gas Industry
Date: Tuesday, September 18, 2012 10:15:33 AM

Hello,

Having reviewed the Land use regulations that are being proposed concerning the Oil & Gas Industry I would like to express my extreme dissatisfaction of the basis for those regulations. It has been stated "Boulder County recognizes the extent of state authority over these operations and seeks to create local regulations that harmonize with state regulations". I wish to take issue with this policy of acceptance when it is clear that such acceptance will adversely impact the health and well being or Boulder County. This is clearly not good stewardship.

There are times when it is imperative that local governments take a stand against unreasonable and publicly unsupported regulations and this is such a time. The adverse health impacts to citizens along with the clear environmental degradation that results from our continued drilling for finite resources warrants a firm and strong stand against such activities. The very fact that the Oil and Gas Industry needs an exemption from the Clean Air and Clean Water acts is indicative of the dangers inherent in drilling activities. As long as local governments continue to be compliant and fail to to protect citizens we will continue to degrade our environment and raise sick children. It is time to draw a line in the sand and take a stand. To sacrifice the health of Boulder County out of a fear of being sued is deplorabe and unacceptable. Oil and Gas regulation is deplorable and unacceptable. Nothing short of a complete ban on hydraulic fracturing would be appropriate and I urge you with every ounce of my being to reject the proposed regulations and demand that any development plan include such a ban.

It is time to take a stand against ignorance and cronyism. Do not allow the state to dictate what we can and cannot do in Boulder County.

Jim Wilson
Boulder CO.

From: Dan Frazier
To: Boulder County Board of Commissioners
Subject: Fracking
Date: Tuesday, September 18, 2012 10:50:06 AM

Dear Commissioners,

In the future, when an aquifer is contaminated by fracking, what are you going to do?
How will you know who has created the pollution?
How will you prove it in court?
Who will clean it up?
Who will pay for it?
Will it even be possible to purify the water or stop the continued contamination?
Are you going to look back and say, "We should have done something."?

No one has the right to poison our water. Don't let the lawyers tell you otherwise.

Respectfully,

Dan Frazier
4853 Fountain St.
Boulder, CO 80304
303 443-8864

From:	Wendy Phillips
To:	Boulder County Board of Commissioners
Subject:	Gas and oil
Date:	Tuesday, September 18, 2012 11:58:05 AM

Our family (4 separate households) has owned properties in Boulder County and it's various municipalities for 30 years. We are united in being totally and unconditionally against all fracking activities in the county.
Raven and Phillips Families

Sent from my iPhone

From: lejmcnitt@gmail.com on behalf of Lauren McNitt
To: Webster, James B.
Subject: Draft Regulations - bond requirement
Date: Tuesday, September 18, 2012 12:35:38 PM

Jim,

Regarding the problems presented with harmonizing local regulations with the state's authority to regulate in matters of oil and gas exploration and development:

It is my understanding that the Oil and Gas conservation Commission regulations require a surface damage bond to be posted by oil companies.[i] It is also my understanding that this bond is really quite nominal and would in no way cover the damages potentially resulting from oil and gas development in Boulder County. Can Boulder County require an additional bond to be posted that would more realistically reflect the potential costs of a major accident in Boulder County? Can an argument be made that given the overall costs of oil and gas development, a bond that more realistically reflects potential harm of that development would not be an impediment to reasonable access to development rights?

Thank you for consideration of these issues. If you can get back to me with the amount of bond that a gas company is required to post, I would appreciate it.

Lauren McNitt

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[i] From the Oil and Gas Conservation website at http://oil-gas.state.co.us/general/typquest.html: "The law creating the COGCC requires oil companies to post a bond with the COGCC that is intended to protect surface owners from "unreasonable crop losses or land damage from the use of the premises" when a company and the surface owner have not otherwise reached agreement on surface use compensation. The COGCC's statute recognizes the existing law that provides for reasonable surface use to access the mineral estate. Therefore, only if crop losses or land damages are "unreasonable" based on what is needed to access the mineral estate does the law provide for compensation to the surface owner. No surface owners have claimed compensation under a surface damage bond for unreasonable crop loss in several years."

From:	Leonard Sitongia
To:	Boulder County Board of Commissioners
Subject:	Draft Oil and Gas Regulations
Date:	Wednesday, September 19, 2012 11:05:08 PM

Hello,

I live at 500 Wagonwheel Gap Rd, in Boulder County. I would like to comment on this issue.

We need to focus on becoming the heroes that future generations will look back to with a positive impression, rather than the people who enabled get-rich-quick schemes by powerful corporations. I've read that extracting natural gas through fracking can have detrimental effects and there are a possibility of serious risks. We need to make use of the precautionary principle. I've also read that the known reserves might last only 11 years. It is really worth the potential damage for 11 years of natural gas power? I've read that extracting natural gas releases methane, which is a very damaging greenhouse gas. Corporations are holding sway in these times, and they are pushing for this simply to extract the most dollars they can before their era comes to an end. We don't have to wait for that progression, we can act how to use alternative energy sources. There are reports of an analysis that a well-defined number of wind turbines can provide for the world's energy needs. Let's get on with achieving that instead of waiting to be forced to do the same thing later at a higher cost.

==Leonard E. Sitongia
One Inextricable Beam
http://www.onebeam.net/

From:	Andrew Casper
To:	Boulder County Board of Commissioners
Cc:	Hackett, Richard; Case, Dale; Webster, James B.; Doyle, Ben
Subject:	Boulder County Draft Oil and Gas Regulations
Date:	Friday, September 21, 2012 4:23:20 PM
Attachments:	image001.png image002.png image003.png image004.png COGA to Boulder County Planning.pdf

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Attached is a letter from COGA concerning Boulder County's proposed oil and gas regulations.

Andrew Casper

Regulatory Counsel

Colorado Oil & Gas Association

1660 Lincoln Street, Suite 2710

Denver, CO 80264

p: 303-861-0362 f: 303-861-0373

Follow COGA online at

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COLORADO
OIL & GAS
ASSOCIATION

1660 LINCOLN ST.
SUITE 2710
DENVER, CO 80264
Phone 303.861.0362
Fax 303.861.0373
WWW.COGA.ORG

September 21, 2012

VIA EMAIL – commissioners@bouldercounty.org

Boulder County Planning Commission
Courthouse Annex
2045 13th Street
Boulder, Colorado 80302

Re: Initial Draft of Proposed Boulder County Oil and Gas Regulations

Dear Planning Commissioners:

Please accept this letter on behalf of the Colorado Oil and Gas Association ("COGA") in response to Boulder County's proposed Oil and Gas Regulations ("Regulations") published in the late afternoon of September 17, 2012. We appreciate the opportunity to comment on these regulations and look forward to discussing them further with you.

As an initial matter, COGA will have a representative at the September 24, 2012 Planning Commission meeting. COGA, cannot, however, provide comprehensive and specific substantive comments on each provision of the Regulations at the September 24, 2012 meeting due to the voluminous and complex nature of the proposed Regulations. A six-day comment period for over sixty-six pages of draft Regulations, policies and land use provisions is an insufficient amount of time to respond to this complex draft Regulation. Appropriate analysis will require comparing the Regulations to the Colorado Oil and Gas Conservation Commission's regulations ("COGCC"), pertinent Colorado Department of Public Health and Environment regulations ("CDPHE"), certain Occupational Safety and Health Association ("OSHA") regulations, as well as other federal and state laws. COGA will endeavor to provide additional substantive comments to Boulder County no later than September 28, 2012, but reserves the right to supplement such comments going forward.

To assist in this review, COGA requests a meeting, or a series of meetings, with the Planning Commission staff and Boulder County attorneys to discuss COGA's general concerns and specific comments, at the earliest opportunity. The meetings would ensure that there is a collaborative effort between industry and Boulder County to compose a set of Regulations that may address the County's interests while providing for the efficient and economical development of the resources belonging to mineral interest owners in Boulder County.

At this time, COGA submits the following general comments to the Regulations:

1. There are a multitude of provisions in the Regulations that have already been determined by the Colorado courts to be operational conflicts with and/or preempted by the COGCC regulations, as well as other state agency regulations. In the *Bowen/Edwards*[1] decision, the Colorado Supreme Court elaborated on the nature of permissible local regulation. Certain technical matters were specified by the Court to "require uniform state regulation" by the COGCC. Examples of these are: locating wells, spacing wells, drilling wells, pumping wells, prevention of waste, plugging wells, prevention of waste, safety precautions, and environmental restoration. Each of these items are covered in the proposed Regulations. Outside these enumerated areas, the Court stated that local regulation could "be designed to harmonize oil and gas" activities with land use plans and the state's interest in development but that "to the extent that such operational conflicts might exist, the county regulations must yield to the state interest."

It is clear that local governments, including Boulder County, may not prohibit drilling or use zoning to control well location, adopt regulations that conflict with COGCC regulations, or adopt regulations in technical areas reserved to the COGCC (even if currently unregulated). Boulder County is attempting to do just that by proposing Regulations regarding noise abatement, air emissions, water well sampling and monitoring, aesthetic mitigation, among numerous others. Based on the foregoing, Boulder County may face challenges to any provision of the Regulations that operationally conflicts with existing state statutes, rules, or regulations, or is otherwise preempted by the COGCC or other agency under Colorado law.

2. The Regulations already recognize that operational conflicts exist in relation to COGCC and other state agency regulations. Due to the operational conflicts that already exist, the proposed Regulations provide a "hearing process" for those operators who believe there is an operational conflict to have such concerns determined by the Board of County Commissioners. Any determination of an operational conflict can only come from the Colorado courts, not the Board of County Commissioners who approved the potentially preempted Regulations in the first place and who do not have jurisdiction to determine points of law.

3. The "carrot and stick" approach relating to the Expedited Development Plan Review is unreasonable in that it forces operators to agree to restrictive and overbearing regulations. There are numerous deficiencies with the Expedited Development Plan. The review and approval of the Expedited Development Plan will still take forty-five days after Boulder County Planning deems an application complete, which appears to be a subjective determination, to obtain an approval of the proposed operation. Forty-five days does not result in any form of expedited approval as it may be longer than the APD approval process at the COGCC. Further, if the request for the Expedited Development Plan is denied or not approved within forty-five days, it is automatically set back to the "Standard Development Plan Review" process with no "right of judicial review." *See 20-*

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[1] *Bowen/Edwards v. La Plata County*, 830 P.2d 1045 (Colo. 1992).

601(D) and 20-603, pages A-10 and A-14 of the Proposed Regulations. This language is an express denial of an operator's due process rights to a final decision from a local governing body.

4. The new definition of "Major Oil and Gas Operations" potentially adds another layer of unnecessary permitting to an operator's proposed operators. The language of "…and any other oil and gas operation the location of which is not dependent upon development of the mineral resource or subject to Article 20." is arbitrary and vague and could be used by Boulder County to classify many of the facilities or operations utilized by operators in their exploration, development or production phases as Major Oil and Gas Operations requiring the lengthy use by special review approval process.

The points set forth above provide general examples of our overall objections to the proposed Regulations. As stated above, COGA will be providing additional analysis and response to the Regulations within the next week.

Finally, based on the following language, COGA understands that no formal action will be taken on the Regulations at the September 24, 2012 Planning Commission meeting:

> "…we recognize it is only a first draft and look forward to receiving input from the public, Industry, State and Planning Commission before bringing the Draft Regulations to the Board of County Commissioners for final adoption. We do not anticipate that Planning Commission will be able to take their final action on the Draft Regulations at this initial hearing."

See Page 2, September 17, 2012 Agenda Packet. COGA is relying on this language to ensure that the Boulder County Planning Commissioners take the appropriate amount of time to review all substantive, technical, and operational comments submitted by COGA, as well as its members and others that operate or own minerals in Boulder County, before taking any action on the proposed Regulations. With over a one hundred year history of hydrocarbon production in Boulder County, COGA is hopeful that any Regulations developed will ensure that oil and gas development and operations will continue in a safe and mutually beneficial manner.

Please contact me with any questions you may have, and we will follow up to schedule a meeting aiming for the week of October 1, 2012.

Sincerely,

Andrew Casper
Regulatory Counsel

From:	Jim
To:	Boulder County Board of Commissioners
Subject:	Fracking information
Date:	Monday, September 24, 2012 9:29:49 AM

Thought you would find this of value when looking at regulations, etc.

http://www.scientificamerican.com/article.cfm?id=safety-rules-for-fracking-disposal-wells-often-ignored

I want to be helpful. Thanks

Jim Wilson
Boulder, CO

From:	Tricia Olson
To:	Boulder County Board of Commissioners
Subject:	Comments for Planning Commission Hearing Sep 24 2012
Date:	Monday, September 24, 2012 7:01:54 AM
Attachments:	092412PlanningCommissionVerbalTestimony_TO.docx 092412PlanningCommissionHearingaddlComments_TO.docx

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Attached are two documents:

1) The comments I plan to make at the Hearing today, and
2) Additional hasty comments.

Tricia Olson

Testimony to the Boulder County Planning Commission, 9/24/12

My name is Tricia Olson, and I live in the Southmeadow subdivision in Gunbarrel, 7446 Park Pl.

I commend staff for their efforts and intent. Crafting this document, however, is a big undertaking, and the document itself mentions that it is a first draft. Please treat it as a first draft, not a final draft.

The major issue for me to address this afternoon is enforcement of regulations that may ultimately be passed. Enforcement of County regulations may be tricky, but the work done by the staff, Planning Commission and Commissioners will be for nothing without good enforcement. We already know that the state regulations are weak, state inspections few and far between, and state fines tiny and inconsequential to oil and gas operators. Boulder County must compensate, in line with the Comprehensive Plan's statement that Boulder County should "exercise its fundamental duty to protect public health, safety and welfare and the environment from adverse effects of oil and gas exploration and development." No one else is going to do it.

As a given, we should assume that there will be violations and non-compliance. Focusing on fracking disposal wells only, there is a study by Propublica, given a different heading by Propublica[1] but titled "Safety Rules for Fracking Disposal Wells Often Ignored" by Scientific American. It is dated 4 days ago and tries to quantify the deliberate circumvention of rules and safeguards. After analyzing more than 220,000 well inspection reports and reviewing federal audits, Propublica came to the conclusion that fundamental safeguards are sometimes ignored or circumvented. The article described difficult to uncover attempts to fool testing devices and mentioned that they uncovered more than 1,000 instances where operators pumped waste into wells at pressure levels they knew could lead to leaks. In at least 140 cases, companies injected waste illegally or without a permit. This is the kind of behavior we must anticipate with both punitive measures, independent testing and inspections.

By the way, the consequences for the violations in the study were minimal. Where it can, Boulder County should set a higher bar.

[1] The Trillion-Gallon Loophole: Lax Rules for Drillers that Inject Pollutants Into the Earth

But the regulations as proposed don't. Enforcement of these regulations, as defined on page A-29, seems to rely only upon the Director using the financial guarantees, a fund essentially, provided for on page A-27 to pay to correct or fix violations, nothing punitive at all.

This fund even has a cap and could conceivably actually run out eventually. What then? I'm not an expert in financial securities, but Page A-27 states that operators can provide an "irrevocable letter of credit as financial security;" that doesn't seem good enough to me. Consider Aubrey McClendon and fracking operator Chesapeake Energy.

In addition, as I interpret it, this proposal seems to permit these funds to be released too soon. Every fracking pad has the potential to become a Superfund site. Financial guarantees should stay in place until after an operator has left, all operations ceased satisfactorily within the county and all sites restored, really restored.

And what about penalties and punitive fines? When

- it's easier and more profitable to break the rules than comply,
- there's no real penalty,
- and an operator *really* only has to comply if caught,

violations should be expected. Actually, they are. The document itself provides for them in the annual report to be made by an operator concerning air quality (Expeditied DPR).

Beyond penalties and fines, there also should be the ability to rescind the approval of a permit.

The way I read it, applications for Expedited DPRs are supposed to demonstrate compliance with a host of desirable standards. However, during the application period, presumably before the well is operating, no one can really demonstrate compliance, so companies are just making promises of compliance on their applications.

To enforce these promises, lying on the application, any certification, or report of any kind is and should be treated as perjury and considered cause to rescind the permit itself. This should be true for both the Expedited or standard DPRs. A reasonable person recognizes that "things happen," but deliberate circumvention or disregard of rules or repeated violations should also be cause to rescind a permit.

Inspection and testing are critical to enforcement. With only 17 state inspectors last I heard, Boulder County is right to seek a Memorandum of Understanding with the state regarding inspection. The cost should be borne by extractors and royalty-interest owners.

Regarding the subject of inspections, there may be a problem in this draft.

- On page A-27, under Right to Enter, lines 24-25 state "Any site under an approved development plan may be inspected by the county at any time…" So far, so good.
- However, if you look down the page just 19 lines later, under Duration of the Approved Development Plan, lines 43-44, it states that an Approved Development Plan is effective for just two years.
- Does this mean that the right to enter and inspect at any time is effective for just two years? From page A-23 and A-24, are we to infer that all the general oil and gas facility operational requirements have a two year lifespan?

Perhaps two years was meant to apply to the Approval of Permit; I don't know.

It would take too long, so I won't go into examples, but I think that the document also depends too much on operator-generated assessments and reports. Periodic tests should be conducted by independent sources, and perhaps infra-red cameras should be used to document emissions, and other monitoring equipment put in place. Notice should not be required for inspection.

In my mind, all of these issues require more time for review, and it is my hope that you will agree.

If time, additional notes related to enforcement, inspections and testing:

- Regarding inspections and testing I am also specifically concerned with the water well testing on page A-14, where no further testing would be required if there were no significant changes from the baseline testing after a third test/6 years. Six years is not enough when talking about contamination and water migration. Casings fail eventually, and water migration might take longer than six years.
- As a side note, we need to remember Memorandums of Understanding are generally not enforceable. Relying on MOUs with industry is not real protection.
- For enforcement purposes and clarity, I hope production is added to the definition of oil and gas operations, page A-32. Again, for enforcement purposes, it would be good to see a definition of "Substantial modification."

September 24, 2012

Dear Planning Commission, Boulder County Staff, and Boulder County Commissioners,

This proposal is complex, and I can only make hasty comments at this time. Although I have many concerns with enforcement, testing, and inspections, I am not including those topics, as I intend to speak on them at the Hearing.

The Introduction

- As in the first versions of the changes to the BCCP, the introductions over-emphasize the nature of the relationship to the COGCC (e.g. use of word "harmonize"). This could be limiting should circumstances change legally; it addition, it might serve as legislative intent. The goal of these regulations is to provide regulations for oil and gas within Boulder County, not to reiterate that the county will follow state statute in such a pointed and submissive manner. It is a given that Boulder County will follow state statue as it understands it. In addition, it is the County's charge to protect health, welfare, etc. While protection is mentioned in the COGCC's charge, the agency is not performing its duty.
- The document repeats the idea that multiple local ordinances and regulations are innately bad, that development of the resources is more important than the health of human beings and our environment (page 5, paragraphs 4 and 5). Repeat it often enough, and add a few court decisions, it is taken for truth, but the County doesn't need to repeat it.

The use of water

- The document does not seem to address the use of water. It should be mandated that no Boulder County public water will be used, nor will water pipelines or other infrastructure be permitted if the water would be used for fracking and related water-ruining activities.

Other miscellaneous issues that might be addressed

- I didn't see proximity to schools mentioned.
- What about economic impacts to other land uses and to citizens?
- I didn't see that transportation is addressed other than MOUs for road maintenance.
- Shouldn't mines, airports, utility lines, firing ranges and perhaps other industrial uses be considered as hazardous when considering siting?

Water injection wells

- The subject of class 2 water injection wells should be considered for special regulation, especially with regard to bodies of water and old and abandoned well sites. Numerous articles have appeared recently on class 2 wells, regarding safety and water contamination. It is a serious issue.

- Water injection wells and other major oil and gas operations are mentioned on page 10 as “to be permitted under the normal special review process for industrial activities.” To be permitted whatever the hazard???

Definitions

- The definition of oil and gas operations should include production.
- A definition for substantial modification should be included and include refracing.
- Under definitions on page A-32, Residential is shown as “All property within unincorporated Boulder County, Colorao.” ???

Notice

- Notice should be sent to residents, not just surface owners, within a larger circle. Health effects have been noted within a half mile = 2640’. In addition, shallow water wells can be impacted from farther away. (lines 32-42 on page A-5)
- In addition, more information should be provided, to include how many wells are planned and a timetable.

Two types of permitting: Expediting and Standard

- It is difficult to assess the consequences and differences. Could staff perhaps prepare a table or comparison document? While equal outcomes are the goal, it doesn’t appear that they’re equal. For example, air quality.
- It appeared that there were more emergency preparedness items under the Standard plan…
- It appears that many considerations, including mitigation, for the standard process are missing for the expedited process: rural and ag land, cultural sites, recreation, etc.
- Shouldn’t there be a public safety plan involved?

Silica Sand

I assume “fugitive dust regulations” is meant to address silica sand. Do those regulations need to be updated to include it?

Air Emissions

- What about using infra-red cameras to monitor emissions and flaring?

Operational Conflict Waiver on A-26

- This appears to strongly codify all of the unnecessary, potentially limiting language in the introduction. Again, the goal of these regulations is to provide regulations for oil and gas within Boulder County, not to reiterate that the county will follow state statute. That is a “given.“
- Because the COGCC seems to have little interest in the protection of public health, safety, and welfare and sees operational conflict in anything that might cost the industry a bit more, would this particular wording mean that every standard in this document would be waived? Many industry best practices are more expensive…

Other Waivers (Page A-26)

- The word “economical” should be removed from line 45. The interests of the public and the environment are more important than ensuring the cheapest mode of production for industry.
- The word “unreasonable” should be removed from line 49. The word indicates that some damage to the public health, safe, welfare and environment is reasonable.

Experts

- It’s a good idea to enlist expertise; however, there should be no conflict of interest.

Pipelines

- Are there risks to having so many pipelines laid??

Tricia Olson
7446 Park Pl
Boulder, CO 80301
(303) 530-7107
olynmawr@msn.com

From:	Nancy Hall
To:	Fogg, Peter
Subject:	Comments for Planning Commission forgot the attachment
Date:	Monday, September 24, 2012 1:07:05 PM
Attachments:	Sept24Comments-NHALL.docx

Dear Pete,

I'm sorry to bother you at this late moment - we're all scrambling, I'm sure.
Is it possible for you to forward the attached comments to the Planning Commission before
the hearing? (Not that they'll receive it, but it's worth a try).
I will also bring paper copies.

I can't do any justice to issues that I consider important in 12 minutes, though I have 3 poolers lined up.
Can you tell me if/how I can get permission to run over?

Thanks so much for all your hard work.

Sincerely,

Nancy Hall

Docket DC-12-0003, Sept 24, 2012 - Comments on first draft regulations

Nancy Hall, 12892 Sheramdi St., Longmont, unincorporated Boulder County

PREFACE: Despite the inadequate time available to study this draft, I have identified significant problems which I believe demonstrate that this draft is not ready for prime time. I appreciate and applaud the land use staff for doing so much in so little time, however there is much left to do to bring these regulations into line with the comprehensive plan. I am not allowed enough time to present all these items verbally, so I will present my request first: please remand the draft to the staff, with directions pursuant to today's public comments, and directions to take more written comments into account.

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Inconsistency with BCCP

Submissive language

Language in the introductory memo and the draft regulations accepts certain assumptions that are contrary with the expressed views of the public and the planners and the BCCP, to wit:

- that myriad local regulations are a Bad Thing. The fact is that we are driven to this process because the state is failing in its duty to protect the environment, the climate, the health and safety of the people. The state is not representing the people and so the county must - through its fundamental duty to protect the residents - step in.
- that the "local interests" are not "state's interests". If the constitution applies, then the state's interest IS the people's interest, and not the interest of large corporations. We all know that the residents of this county want the county government to argue this in court rather than to submit to corporate interests that pretend to be the "state's interest".
- that it is a goal of the county to "harmonize" its regulations with state regulations. This is not the objective as stated in the BCCP and this language weakens the regulations.

The COGCC cannot possibly protect the environment and the health, safety and welfare of the people; that is a conflict of interest, and history proves this. Thus it falls to the power and authority of local governments to protect the health and safety of the residents. This is what the people want, this is what the comprehensive plan demands, and this is what you must demand of the regulations.

The regulations must not contain any language that implies that we <u>accept as</u> <u>sufficient protection</u> any provisions that allow drilling here. Thus, words like "ensure", "avoid", and "harmonize" must go. At best these regs <u>mitigate</u> and the language should be honest about that.

Some specific examples with recommended changes

- Purpose: 20-100 B, page A-2, lines 14-22. This section is objectionable. The last sentence is certainly inconsistent with the BCCP and suggests that the code proposed here is sufficient to protect the residents, who do not believe that to be true.

  Suggestion: retain only the first sentence. It is informative and not judgmental. If that is unacceptable, I offer this alternative:

  <u>"Development plan review is the permitting procedure for oil and gas operations.</u>
  <u>This process is in place to recognize these operations involve industrial type and to provide a framework for mitigating adverse impacts to public health, safety, welfare, and environment of the County."</u>

- Purpose: 20-100 C, page A-2, lines 24-32. This entire section should be stricken. It goes without saying that our objective is not to break the law; it is submissive, it could tie the hands of the county in future, and in general it both weakens the document and is inconsistent with the BCCP.

- 20-800 Standard Conditions of Approval: page A25, line 16: **Spills**: this is inconsistent with stated Planners' intention to require notice of ANY spill. The state requires only spills of 210 gallons or more be reported, and applicable state and federal laws do not exist or have no teeth at present. *Any* spill of produced water can threaten the waters of the state or residents, and similarly for drilling fluids and frack fluids.

- 20-1000 Other Waivers: line 45: Remove "economical". That is not consistent with the BCCP.

- 20-1000 Other Waivers: line 49: Is there such thing as "reasonable" damage?
  Suggested rewording:
  "will not increase the risk to public health, safety, welfare and the environment; …"

Inappropriate Legislative Intent Record

Submissive language also runs through the introductory memo, which, if it serves as legislative intent in a court of law, must be fixed:

- Page 5, 4th and 5th paragraphs contain such submissive language. Page 7, 1st paragraph, "avoids or mitigates" should read "mitigates".
- Page 7, the first paragraph under THE "DRAFT REGULATIONS"… -- this whole paragraph should be striken, and it should go without saying that we do not set out to break existing laws.
- Page 8, bullet 2: "ensure oil and gas operations are conducted in the least impactful manner" should be replaced with "reduce impacts of oil and gas operations".
- Page 8, bullet 2: "chemicals contained onsite" should read "chemicals contained or used onsite"
- Page 8, first full paragraph: strike. It goes without saying that we don't set out to break the law. It is NOT the objective of the county to "harmonize" with the COGCC; if that were the case we could dismiss all this work and let the COGCC's be the only rules that apply.
- Replace the entire paragraph with simple fact:
  "New or expanded permitting process includes:"
- Page 8, bullet 5: Delete "This timing provision and the preapplication process of the Draft Regulations are intended to allow the County to harmonize …. COGCC. " The precautionary principle is consistent with BCCP objective, not harmonization.
- Page 10, bullet 2: remove "ensure".

Major Oil and Gas Facilities- Injection wells

Section 4-506, Page A-35, line 4: Injection wells, which may be used for waste disposal or for stimulation, are not normal industrial activities; they have very much in common with fracking and drilling, and pose many of the same threats, and additional public risks (earthquakes). Thus, while they do not have to be sited near any given mineral estate, *injection wells must be subjected to the same or more stringent constraints as production wells - in addition to being limited to GI zones*. This may require a new review process, and must demand - at a minimum - the same standards applied to production wells.

Comparison of EDPR and SDPR

In the meager time since the draft has been available to the public, it has been very difficult to absorb and understand. This cannot have been easy for Planners either.

It is not at all clear that the two processes will achieve the same objectives, as stated in the introductory material.

Based on 20-500 General Application Submittal Requirements (A-7 and A-8) and the review standards for the two processes, the following standards apply:

Topic	EDPR standards	SDPR standards
Site plan	20-601 B (A-9)	20-703 A (A-18) ag land 20-703 C (A-19) cultural & historic 20-703 E (A-20) geologic hazard 20-703 F (A-20) land disturbance 20-703 G (A-21) natural resources 20-703 H (A-21) recreation 20-703 I (A-21) scenic and rural 20-703 J (A-22) surrounding land use 20-703 M (A-23)wetlands protection 20-703 O (A-23) pipelines
Air quality	20-602 A (A-10)	20-703 B (A-18)
Emergency Response	20-602 B (A-12)	20-703 D (A-19)
Transportation plan	20-602 D (A-14)	20-703 K (A-22)
Water quality	20-602 C (A-13)	20-703 L (A-23)
Operation plan	20-800 (A-24)	20-800 (A-24)

- This suggests that the EDPR is less protective in a number of areas not addressed by the site plan requirements of the EDPR: pipelines, wetlands, surrounding land use, scenic and rural values, recreation, natural resources/communities, geologic hazards, land disturbance, cultural and historic resources, and agricultural land use.

(The EDPR discussion contains no Requirements section analogous to 20-701, Application Requirements Specific to SDPR, which makes their section numbering confusing; it would be easier to follow if a 20-601 placeholder had been used, pushing Application Process to 602 and Requirements to 603.)

The Application Requirements Specific to the Standard DPR are missing two sections that are listed in the General Requirements (20-500 General Application Submittal Requirements (A-7 and A-8)) and in the Standards (20-703 Review Criteria and Standards Specific to SDPR, A-18-23) section for the SDPR:

- <u>MISSING: Air Quality Plan, and Operation Plan</u>.

Comments re: EDPR standards:

- Operators do risk assessments : Page A-13, line 11: Should be done by qualified, independent and disinterested environmental engineer; not by operator.
- Water well sampling: Page A-13, lines 28-33: Well owners should chose the tester, not the operator; should be qualified disinterested environmental engineer, not the operator. There should be some assurance that the samples will be valid; maltreatment of samples that renders their tests invalid should carry a punitive cost and immediate re-sampling and testing, by a different lab if appropriate. Results should be sent directly from testing lab to well owners and to the county, not through the operator.
- 6 year limit: Page A-14, lines 7-11: Why 6 years? Casings deteriorate with time; the risk increases with time.
- Consequences of sampling results, Page A-14, lines 10-12: What happens if samples indicate significant changes? Should have presumption of guilt in this case (burden is on operator to show that he isn't the cause of the problem).

Comments re: SDPR standards:

- Land disturbance needs to address returning soil to its original tilth

Comments re: 20-800 Standard Conditions of Approval, pages A-24-26

- Chemical Disclosure, Page A-24, line 16: Info must be updated as chemicals change.
- Dust Suppression, Page A-24, line 29: Needs to address silica-sand dust also – not just road dust. This should be an absolute no-silica-dust requirement. It also needs to preclude dumping of produced water on roads or creation of toxic dust via dried muds (spread anywhere).
- Electrification, Page A-24, line 33: Electrification should require solar to be the primary source, and either solar or wind offsets for the balance.
- Lighting, Page A-24, line 44: During drilling and completion, etc, lighting shall be directed away from residences. In fact it should not be allowed 24-7. They do this only to make it cheaper; disallowing 24-7 operation does not prevent them from extracting the resource.
- Noise is MISSING: Page A-25, line 2: I propose moving lines the noise provisions from the Compatibility Siting Criteria of SDPR (page A-22, lines 38-45) to 20-800. They must be made conditions of approval common to both processes.
- Spills, Page A-25, line 16: This is *not consistent* with Planners' intention to require notice of all spills. The state requires only 210 gallons or more be reported, and none of the stated federal laws apply at present.
- Well Abandonment, Page A-25, line 48: Compliance with COGCC isn't enough here, as they take forever to upgrade their standards; so-called best practices are sometimes stronger, and we know that all concrete "protections" are a huge source of risks. So we should require a <u>Well Abandonment</u> Plan in both EDPR and SDPR, and require that the most protective of Environmental Best Practices, Golden Rules, Industry Best Practices, industry standards and COGCC rules be followed or some such thing. Also, we should require financial assurance sufficient to plug each well, according to the most the COGCC has spent on a well-plugging. Why? Because state rules require bonds so low that they just walk away from the bond and the state picks up the cost ($2K-$5K per well bond, $10K-$100K to plug).

Public Safety

Neither EDPR nor SDPR takes into account proximity to public gathering places such as schools, churches,hospitals, airports, retail/commercial establishments, rail/bus terminals, firing ranges, etc. These must be considered from the standpoint of explosion/blowout/loss of circulation/silica dust, cement failure/unexpected pressures, etc.

- 20-601 Process Specific to Expedited, B Eligibility, setbacks, Page A-9, line 12: "occupied structures" is defined to mean residences. It must include hotels, schools, libraries, churches, public gathering places such as rail/bus terminals, parks,etc
- General Requirements, Page A-8, line 29: Insert : Public Safety Mitigation Plan
- Standards for EDPR and SDPR: Page A-13, line 36, page A16, line 9: Insert Pubic Safety Mitigation Standards

Existing Wells

Existing wells pose public safety and water-quality risks through communication during drilling and fracking, including re-fracking and re-drilling.

"Substantial modification", which triggers County review is not defined, and is apparently up to the Director. The following suggestions will assist the Director and reduce the chance that risks associated with old wells be overlooked.

Addition risk to public must trigger County review

Amendments to a DP, determining what is a substantial modification, Page A-28, line 9: "extent of land use impacts" should read "extent of land use impacts <u>or risk to public safety or emergency response</u>"

Form 2A must trigger County review

Amendments to a DP, determining what is a substantial modification, Page A-28, line 1: In general, filing of an APD (Form 2) with the COGCC requires a DPR as these draft regs now read. In addition to adding a well to a pad, the following must be explicit substantial modifications:

- any operation that requires a Form 2A to be filed with the COGCC, and
- re-fracking a well.

Ambiguous definition of activity triggering review for existing non-conforming well

20-300, Pre-Existing Uses, determining when a non-conforming well requires a DPR, Page A-3, line 1: language is ambiguous: "extended, expanded, or altered in a manner that …" is ambiguous: does it mean "(extended), (expanded), or (altered in a manner …)" or "(extended, expanded or altered) in a manner that …" ?

Closed wells must be addressed

Industry knows that one of their biggest causes of contamination and risks to safety is well casings and caps. Concrete degrades over time, and even new well casings may have pockets or other defects. According to some industry sources, as many as 6% of new casings fail and 60% fail after 20 years.

Submittal Requirements, Page A-7, line 26: "A map showing the location of other wells and other oil and gas *operations*." : "Operations" implies on-going. Must explicitly include closed, abandoned, shut-in wells.

This information is needed for determining the adequacy of emergency response plans and water quality plans, among other things.

Industry knows that one of their biggest causes of contamination and risks to safety is well casings and caps. Concrete degrades over time, and even new well casings may have pockets or other defects. According to some industry sources, as many as 6% of new casings fail and 60% fail after 20 years.

Require re-capping old wells

The County should require that nearby old wells be recapped to new standards as a condition of approval, cost not to be borne by the County nor taken from the financial assurance.

Waste Disposal

Waste disposal is not specifically addressed. The requirements should include a waste disposal plan to show that there will be no adverse water, soil, or air impacts. Operators must promise never to dump waste water or drill muds onto the ground.

BoCo should disallow "land farming" or "land spreading" of drilling wastes. At the very least, in a public hearing they should have to say what they are doing with the toxic sludge.

- General Requirements, Page A-8, line 29: Insert: Waste Disposal Plan
- Standards for EDPR and SDPR, Page A-14, line 36, and A-16, line 9: Insert: Waste Disposal Standards

Mineral Rights

- Page A7, line 8: "certification" that an operator holds the necessary right needs to carry penalty of perjury. Perhaps "affidavit" would be better, else it offers no protection to any surface owners in the area.
- Nowhere is there explicit support for surface owners who wish to avoid forced pooling. Forced pooling will happen before any of this process starts. Is there no means to require notice of intent and proof of ownership before any forced pooling process can begin?

Water Use

Nowhere does the draft address the issue of water consumption. The county must not sell water to frackers or permit enabling facilities to be used. This might be addressed in "pipelines", or elsewhere. Whether the County owns appropriately-adjudicated water rights today is not the issue; the issue is that the policy not to sell or to support this should be codified. Consumption of groundwater for fracking could be addressed (if for no other reason than to make people aware) in requirements of groundwater-depletion studies over time. While courts have ruled that waters that require more than 100 years to affect tributaries are not "non-tributary", the fact is that no-one knows how long it takes for such depletion to take place when it is done on this scale, and evidence of groundwater depletion due to extraction of liquid hydrocarbons and produced water is mounting.

Residents

I am disturbed by the exclusion of residents from "affected parties" in all noticing requirements. Surface owners might live in Hawaii, while the residents - who are under contract to the owners and are the ones who vote – are those who will be unable to sleep for weeks on end due to noise and lighting, who suffer the health effects of living near a well, and who raise their children here.

Not only must they be included in all noticing, they also must be given more than 500 feet or 1500 feet of setback. Colorado School of Public Health scientists have determined that health risks are increased for resident within ½ mile of a producing well. The County should use at least ½ mile radius/setback everywhere residents and public gathering places are concerned.

Enforcement

The enforcement provisions look weak and problematic.

- Once the financial assurance is returned, there is no leverage for enforcement. It appears to be returned after 2 years, regardless of the continuance of operations.
- There is no inflation hedge for the financial assurance. There is no provision for determining if the financial assurance plus 10% was reasonably estimated or was woefully low.
- There is no provision for updating the financial assurance when the technology, industry standards, state and federal requirements, and associated costs change.
- Cost of inspections must be recovered from industry.
- There appears to be no provision for revoking a permit.
- There is no mention of fines or punitive damages.

Community Engagement

20-400 General Application Procedure, Page A-4, lines 1,2. "Boulder County requires applicants to engage with local communities and residents and other stakeholders at each phase …". The devil is in the details and the details don't live up to this promise.

- communities are engaged and comments solicited before they are given any plans on which to comment
- EDPR offers only one engagement, SDPR requires two, but still without project plans conveyed to interested parties
- renters are excluded
- communities must be given access to plans at no expense to them or to the County
- community feedback belongs in evidentiary record
- interested parties include residents within at least ½ mile, including those who live in incorporated municipalities and in neighboring counties

Miscellaneous Topics

I offer here several errors that might at first glance seem minor but in fact could be material. There are no doubt more such problems; this is what I was able to find in the short time I had to study this draft.

"Operations" should be "facilities"

Page A7, line 26, "oil and gas operations" should read "oil and gas facilities, COGCC-permitted facilities and COGCC-recorded historical facilities"

Severability

Article 20 contains no severability clause.

Preclude other reviews?

20-400 A., page A3, lines 21-22: No other form of discretionary land use review … is required…. On the face of it this seems to be inconsistent with the need for transportation plan reviews, special review for Major Oil and Gas Operations, for other permits for building/construction incidental to oil and gas operations as noted in the next sentence and in 20-1200, p 27, lines 36-37.

Pipelines

Section 4-514 Page A-35, line 31: There is no mention of overlap with or amendments to land use code Article 8, Location and Extent Areas & Activities of State Interest, which addresses "public or quasi-public utilities", including gas pipelines, among other things. This should be addressed, particularly 8-206 and 8-403 B & C, and 8-404 A.

Inadequate time for public comment

The public has not had ample opportunity to review and comment on this draft, giving it the diligence it is due. The supporting/introductory material lacks outlines, tables, flow charts to aid in its understanding.

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SEP 24 2012
BOULDER COUNTY
LAND USE

September 24, 2012

Planning Commission and Staff,

I want to thank you for all of the thoughtful hard work that has gone into this Comprehensive Plan Document. This is a very lengthy and complicated document and process.

As this will affect lives in Boulder County for decades to come, it is imperative this document can put into place procedures for any and all circumstances and eventualities.

As my time is limited, I will only address a few of the number of areas of concern I have.

One of my concerns is with the Standard Development Plan Review (Standard DPR) and the Expedited Development Plan Review (Expedited DPR) process. As this is a **very** complicated document, this portion, as currently presented, is very hard to read and evaluate. For the public to better understand these review processes, it is in need of tables, charts, and flow graphs to properly disseminate, evaluate, compare and contrast the two approaches. It is not at all clear that the outcomes are the same. (i.e. Protection of residents, ecosystems, local economies, roads, etc.)

In order to evaluate whether the two approaches are consistent with the BCCP, we need a table showing where the BCCP goals are addressed in each of the DPRs.

If the goal is for both the Standard and Expedited DPR to be the same, why is the EDPR the preferred method?

Another of my concerns is with the notification process.

Notices need be sent to all persons whose lives will be affected. This would include residents, workers, students, etc., not only landowners or property owners. Also more information from the application should be provided directly to these populations. (How many wells, whether horizontal drilling will occur underneath their property. There should be no surprises, they should allow for testing, verification, etc.)

As the Colorado School of Public Health data has shown, peoples health has been negatively impacted from at least ½ mile (2640 ft.) away.(1500' is far too short a distance.). All populations within 2640 ft. radius need to be notified of proposed applications. **Every** precaution needs be taken to protect all aspects of our health, safety, and welfare.

Thank you,

Audy Leggere-Hickey

3794 Davidson Pl.

Boulder CO>80305

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Injection Wells
The Hidden Risks of Pumping Waste Underground

The Trillion-Gallon Loophole: Lax Rules for Drillers that Inject Pollutants Into the Earth

The remains of a tanker truck after an explosion ripped through an injection well site in a pasture outside of Rosharon, Texas, on Jan. 13, 2003, killing three workers. The fire occurred as two tanker trucks, including the one above, were unloading thousands of gallons of drilling wastewater. (Photo courtesy of the Chemical Safety Board)

by Abrahm Lustgarten
ProPublica, Sept. 20, 2012, 12:12 p.m.

On a cold, overcast afternoon in January 2003, two tanker trucks backed up to an injection well site in a pasture outside Rosharon, Texas. There, under a steel shed, they began to unload thousands of gallons of wastewater for burial deep beneath the earth.

The waste – the byproduct of oil and gas drilling – was described in regulatory documents [1] as a benign mixture of salt and water. But as the liquid rushed from the trucks, it released a billowing vapor of far more volatile materials, including benzene and other flammable hydrocarbons.

The truck engines, left to idle by their drivers, sucked the fumes from the air, revving into a high-pitched whine. Before anyone could react, one of the trucks backfired, releasing a spark that ignited the invisible cloud.

Fifteen-foot-high flames enveloped the steel shed and tankers. Two workers died, and four were rushed to the hospital with burns over much of their bodies. A third worker died six weeks later.

What happened that day at Rosharon was the result of a significant breakdown [2] in the nation's efforts to regulate the handling of toxic waste, a ProPublica investigation shows.

The site at Rosharon is what is known as a "Class 2" well. Such wells are subject to looser rules and less scrutiny than others designed for hazardous materials. Had the chemicals the workers were disposing of that day come from a factory or a refinery, it would have been illegal to pour them into that well. But regulatory concessions won by the energy industry over the last three decades made it legal to dump similar substances into the Rosharon site

– as long as they came from drilling.

Injection wells have proliferated over the last 60 years, in large part because they are the cheapest, most expedient way to manage hundreds of billions of gallons of industrial waste generated in the U.S. each year. Yet the dangers of injection are well known: In accidents dating back to the 1960s, toxic materials have bubbled up to the surface or escaped, contaminating aquifers that store supplies of drinking water.

There are now more than 150,000 Class 2 [3] wells in 33 states, into which oil and gas drillers have injected at least 10 trillion gallons of fluid. The numbers have increased rapidly in recent years, driven by expanding use of hydraulic fracturing to reach previously inaccessible resources.

ProPublica analyzed records summarizing more than 220,000 well inspections conducted between late 2007 and late 2010, including more than 194,000 for Class 2 wells. We also reviewed federal audits of state oversight programs, interviewed dozens of experts and explored court documents, case files, and the evolution of underground disposal law over the past 30 years.

Our examination shows that, amid growing use of Class 2 wells, fundamental safeguards are sometimes being ignored or circumvented. State and federal regulators often do little to confirm what pollutants go into wells for drilling waste. They rely heavily on an honor system in which companies are supposed to report what they are pumping into the earth, whether their wells are structurally sound, and whether they have violated any rules.

More than 1,000 times in the three-year period examined, operators pumped waste into Class 2 wells at pressure levels they knew could fracture rock and lead to leaks. In at least 140 cases, companies injected waste illegally or without a permit.

In several instances, records show, operators did not meet requirements to identify old or abandoned wells near injection sites until waste flooded back up to the surface, or found ways to cheat on tests meant to make sure wells aren't leaking.

"The program is basically a paper tiger," said Mario Salazar, a former senior technical advisor to the Environmental Protection Agency who worked with its injection regulation program for 25 years. While wells that handle hazardous waste from other industries have been held to increasingly tough standards, Salazar said, Class 2 wells remain a gaping hole in the system. "There are not enough people to look at how these wells are drilled ... to witness whether what they tell you they will do is in fact what they are doing."

Thanks in part to legislative measures and rulemaking dating back to the late 1970s, material from oil and gas drilling is defined as nonhazardous, no matter what it contains. Oversight of Class 2 wells is often relegated to overstretched, understaffed state oil and gas agencies, which have to balance encouraging energy production with protecting the environment. In some areas, funding for enforcement has dropped even as drilling activity has surged, leading to more wells and more waste overseen by fewer inspectors.

"Class 2 wells constitute a serious problem," said John Apps, a leading geoscientist and injection expert who works with the U.S. Department of Energy's Lawrence Berkeley National Laboratory. "The risk to water? I think it's high, partially because of the enormous number of these wells and the fact that they are not regulated with the same degree of conscientiousness."

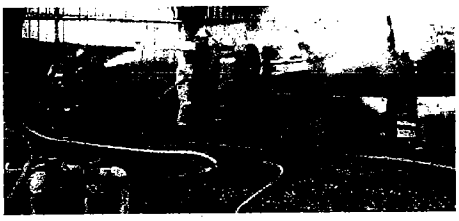
In response to questions about the adequacy of oversight, the EPA, which holds primary regulatory authority over injection wells, reissued a statement it supplied to ProPublica for an earlier article [3] in June.

"Underground injection has been and continues to be a viable technique for subsurface storage and disposal of fluids when properly done," a spokesperson wrote. "EPA recognizes that more can be done to enhance drinking water safeguards and, along with states and tribes, will work to improve the efficiency of the underground injection control program."

Some at the EPA and at the Department of Justice, which prosecutes environmental crimes, say the system's blind spots suggest that many more violations likely go undiscovered – at least until they mushroom into a crisis.

That's what happened at Rosharon.

The accident prompted the EPA to examine what else had been



dumped at the site, ultimately exposing a scheme [4] by a company that was not involved in the explosion, Texas Oil and Gathering, to pass off deadly chemicals from a petroleum refining plant as saltwater from drilling.

The switch saved the company substantial fees by allowing it to dispose of the material in a Class 2 well, instead of a more stringently controlled well for hazardous waste, federal investigators said.

Texas Oil and Gathering's owner and operations manager were convicted of conspiring to dump illegal waste and violating the Safe Drinking Water Act. Both declined to comment for this article.

Texas officials acknowledged that they had not looked beyond the paperwork submitted by the operators using the well. The delivery trucks weren't inspected; the wastewater was not sampled.

"Staff had no reason to believe at the time that such testing was necessary at this facility," Ramona Nye, a spokeswoman for the Railroad Commission of Texas, which regulates the oil and gas industry activity in the state, wrote in an email. "The likelihood of unpermitted material being disposed of is low."

William Miller, the EPA's chief investigator on the case, points out that the only reason anyone was held accountable for injection-related violations was because the site blew up.

"If you can get the stuff down the well how is anyone ever going to know what it was?" said Miller, who retired from the EPA in 2011. "There is no way to recover it. It's an easy way to commit a crime and not have any evidence left of it afterwards."

States and Industry Resist Environmental Protections

One reason that Texas Oil and Gathering was able to dump toxic waste for years without getting caught is that environmental regulations governing how the oil and gas industry disposes of material underground were weakened almost as soon as they were written.

A series of injection accidents beginning in the 1960s – involving pesticide waste in Colorado, dioxins in Beaumont, Texas [5], and drilling waste that spread for miles through a drinking water aquifer in Arkansas – prompted lawmakers to impose tougher rules on injection wells.

Wells were divided into classes [6], depending on the source of the waste they handled. Class 1 wells for chemical, pharmaceutical and other industrial wastes, along with Class 2 wells for the oil and gas industry, were subjected to tough controls under the Safe Drinking Water Act of 1974. From the start, the EPA says, oil and gas waste was treated as less toxic than waste from other industries, but all such material was seen as dangerous to drinking water.

Companies drilling the wells were required to do geological modeling to ensure that surrounding rock layers would not allow waste to escape through fissures or fault lines. They also were required to check for the presence of other wells that could be a conduit for contamination. The EPA set baseline standards and mandated periodic inspections for defects. In many cases, states oversaw their implementation.

The ink had barely dried on the new regulations when the oil and gas industry – aided by sympathetic state regulators who thought their existing oversight was sufficient – began arguing that its waste should be treated differently.

Industry officials lobbied for state oil and gas agencies, some of which already had rules in place, to oversee Class 2 wells, not federal or local environmental officials. Some argued state energy regulators had greater expertise in well construction and regional geology.

In 1980, California Rep. Henry Waxman sponsored a measure that allowed the EPA to delegate authority to oversee Class 2 injection to state oil and gas regulators, even if the rules they applied varied from the Safe Drinking Water Act and federal guidelines.

A few years later, Dick Stamets, New Mexico's chief oil and gas regulator at the time, told a crowd of state regulators and industry representatives that the Waxman amendment was a biblical deliverance from oppressive federal oversight for the drilling industry.

"The Pharaoh EPA did propose regulations and there was chaos upon the earth," Stamets said. "The people groaned and labored, and great was their suffering until Moses Section 1425 (the Waxman amendment) did lead them to the Promised Land."

In the late 1980s, the EPA moved to impose more stringent measures on injection wells after Congress banned injection of "hazardous" waste. The new rules barred underground dumping unless companies could prove the chemicals weren't a health threat. To earn permission to inject the waste, companies would have to conduct exhaustive scientific reviews to dispose of hazardous materials, proving their waste wouldn't migrate underground for at least 10,000 years.

The energy industry moved preemptively to shield itself from these changes, too. The Safe Drinking Water Act prohibited the EPA from interfering with the economics of the oil and gas industry unless there was an imminent threat to health or the environment. The industry argued that its waste was mostly harmless brine and that testing and inspecting hundreds of thousands of wells for waste that would qualify as "hazardous" would delay drillers or cost them a fortune.

"It would have been crippling to U.S. oil and gas production," said Lee Fuller, vice president of government relations for the Independent Petroleum Association of America. Fuller was a former staff member for the Senate Environment and Public Works Committee, whose ranking member at the time, the late Texas Sen. Lloyd Bentsen, led the fight against the hazardous waste rule. "So yes, the industry was very aggressively seeking some mechanism to address those consequences."

Bentsen had won the industry a temporary reprieve in 1980 by persuading Congress to redefine any substance that resulted from drilling – or "producing" – an oil or gas well as "non-hazardous," regardless of its chemical makeup, pending EPA study. In 1988, the EPA made it permanent, handing oil and gas companies a landmark exemption [7]. From then on, benzene from the fertilizer industry was considered hazardous, threatening health and underground water supplies; benzene derived from wells for the oil and gas industry was not.

The effect was that the largest waste stream headed for underground injection, that from the oil and gas industry, was exempted from one of the most effective parts of environmental rules governing hazardous waste disposal.

"A blanket exemption without any sense of what the actual chemistry of these wastewaters is, is very concerning," said Briana Mordick, a geologist at the Natural Resources Defense Council.

Other protections also began to unravel, widening the gap between Class 1 and Class 2 well regulations. Both regulators and the industry regularly refer to drilling waste as "salt water" even though, according to a 2002 EPA internal training document [8] obtained by ProPublica, "on any given day, the injectate of a Class II-D well has the potential to contain hazardous concentrations of solvents, acids, and other... hazardous wastes."

Once the wastes were defined as nonhazardous, there was little justification for holding Class 2 wells to the same rules as other waste being injected deep underground.

Today, for example, Class 1 wells for hazardous waste [9] are tested for pressure continuously and are supposed to be inspected for cracks and leaks every 12 months. Oil and gas wells – though the goal is to inspect their sites annually – have to be tested only once every five years.

Injection wells are known to cause earthquakes, so Class 1 wells usually have rigorous seismic and geologic siting requirements. Often, Class 2 wells do not. An EPA staff member might spend an entire year reviewing an application for a new hazardous waste well. Class 2 wells are often permitted in bulk, meaning hundreds can be green-lighted in a matter of days.

Where Class 1 hazardous waste is injected, companies have to inspect a two-mile radius for old wells, making sure contaminants will have no avenue to shoot back up into drinking water aquifers or to the surface. The minimum standard for oil and gas companies is to inspect within 400 yards, even though it is widely believed, according to internal EPA memorandums obtained by ProPublica, that such a rule is arbitrarily defined, runs against "much

existing evidence [10]" and "may not afford adequate protection [11]" of drinking water.

EPA officials acknowledge that their Class 1 regulations represent the best practices to keep water safe and that the risk of a Class 2 well leaking is no different than the risk of a Class 1 well leaking. The contrast in regulations reflects "varying legal authorities, not varying levels of confidence," an agency spokeswoman wrote in an email, referring to the mandate not to let environmental rules interfere with the nation's drilling progress.

State injection regulators counter that much drilling-related waste is put in the same geologic formations that produce oil and gas, in which contaminants like benzene naturally occur. The water close to these wells is often already undrinkable, they say, so lesser protections make sense.

According to the EPA's most recent inventory, the number of Class 2 wells is near an all-time high.

Oklahoma, Texas, Kansas and California use tens of thousands of Class 2 wells to push out oil and gas or dispose of fracking fluids and "produced" water, as the waste derived from drilling is called. In North Dakota, injection permits have increased [12] tenfold, with more wells being permitted in one month – September 2011 –than is typical in an entire year. New Mexico [13] issued twice as many permits last year as it did in 2007. Ohio injected twice as much waste in 2011 as it did in 2006 and is evaluating applications for dozens of new injection sites. largely for waste exported by Pennsylvania and New York, where such wells are deemed unsafe.

As much as 70 percent of the waste destined for Class 2 facilities would be considered toxic if it were not for the loopholes in the law, according to Wilma Subra, a chemist and activist who sits on the board of STRONGER [14], a partnership of oil and gas industry representatives and state regulators aimed at bolstering state standards.

Recently, Stark Concerned Citizens, an anti-drilling group, asked Ohio regulators why radioactive materials such as radium weren't identified or disclosed when injected into Class 2 wells.

"The law allows it," Tom Tomastik, a geologist with Ohio's Department of Natural Resources and a national expert on injection well regulation, replied in a Sept. 17 email. "It does not matter what is in it. As long as it comes from the oil and gas field it can be injected."

Well Operators Game Safety Tests

When Carl Weller showed up, shovel in hand, at a Kentucky farm field dotted with injection wells in June 2007, he was acting on a tip. Weller, a contracted EPA injection inspector, was an expert in testing for what regulators call "mechanical integrity," using air pressure to check if wells have leaks or cracks.

Such tests are among the only ways to know whether cement and steel well structures are intact, preventing brine and other chemicals from reaching drinking water.

Using his shovel, Weller dug around the top of a well, unearthing the steel tubing near the surface. A few inches down, he came across an apparatus he had never seen before: A section of high-pressure tubing ran out of the well bore and connected to a three-foot-long section of steel pipe, sealed at both ends. The apparatus appeared designed to divert air pumped into the well into the pipe instead, making the well test as if it were airtight.

"The only reason that I know of that that device would be installed would be to perform a false mechanical integrity test, more than likely because the well itself would not pass," Weller testified in 2009 as part of a case against the well's operator. The EPA did not make Weller available to comment for this article.

When EPA inspectors kept digging, they found the buried devices on 10 more wells.

The case stunned regulators. Weller had been inspecting the site's injection wells, which were used to enhance the recovery of oil, for the better part of a decade, certifying them as safe. After the EPA's discoveries, workers at the company that operated the wells, Roseclare Oil, accused its manager [15], Daniel Lewis, of having conspired to cheat the tests for much of that time.

In 2009, Lewis was convicted [16] of a felony charge for gaming the safety tests on Roseclare's wells and was sentenced to 3 years probation and a $5,000 fine. He maintains his innocence, saying the wells were rigged by his father, who ran the company's local operations until his death, but said such practices were typical in Kentucky's

oil and gas industry. "I'd say it's pretty common," said Lewis, whose probation was commuted in 2011. "But it's not something people go around talking about either."

From Lewis' perspective, injection well operators sometimes have little choice but to try to fool inspectors. Many wells are decades old and were drilled before the current regulations were written. Some are decrepit, their cement aging and cracked. They also can't be easily – or cheaply – repaired.

Lewis, who is now a part-owner of Roseclare and continues to run its operations, said that before wells were due for EPA inspections he would pretest them himself. If one failed, he'd enter problem-solving mode, prepping the site for the EPA's arrival. Two of his employees testified that he ordered them to fabricate and install the diverters.

"You go and work in it and try to get it to hold and it won't hold," Lewis said of the wells. "What are you going to do? It's kind of a 'Don't ask, don't tell.'"

Randy Ream, the Assistant U.S. Attorney for Kentucky's Western District who prosecuted the case against Lewis, called his scheme unusually elaborate but agreed that efforts to get around the rules for injection wells are common. Sometimes, he said, they result in the contamination of private drinking water wells.

"We have people who have constructed wells that are not certified injection wells, or we have people who will put their brine in a tank and carry it over and put it in somebody else's well," Ream said. "One guy, he's got oil coming out of his shower head."

"There is just so much brine," Ream added, "and you have to get rid of it."

So Many Wells, So Few Inspectors

One obstacle to more effective enforcement in Kentucky and elsewhere, Ream said, is that regulators cannot always keep up with well tests and inspections.

According to EPA records, Kentucky has 3,403 Class 2 wells, which are supposed to be tested for mechanical integrity once every five years. But since 2007, an average of just 253 wells a year have been tested, less than half as many as there should have been to remain on schedule.

A spokeswoman for the EPA's regional office in Atlanta said in an email that only half of Kentucky's injection wells are actively used and only active wells can be tested. She said mechanical integrity tests are performed on each well every 36 months, but did not address the discrepancy between this schedule and the number of tests reflected in EPA data.

The EPA employs just six people to check its wells across the southeast, not just in Kentucky, but in Tennessee and Florida, too. Those same people are also responsible for working with state inspection programs in North and South Carolina, Georgia, Alabama and Mississippi, which have their own inspection staffs.

Most states aim to visit injection sites at least once a year, and some meet or exceed that schedule, EPA records show. Ohio, for example, recently added staff dedicated exclusively to injection oversight and visits its active injection sites every 12 weeks. (Ohio also insists that Class 2 wells meet many of the more stringent testing and permitting regulations it uses for Class 1 hazardous waste wells.)

"Ohio's [rules] are based on what we felt we needed to develop to continue to alleviate any concerns," said Tomastik, of Ohio's Department of Natural Resources. "Obviously without regulatory presence in the field, the operator is not concerned about operating within the requirements."

But understaffing seems to be endemic across drilling states, especially where state regulatory agencies are responsible for checking both producing oil and gas wells and injection wells for waste or to enhance production.

In Montana, EPA auditors [17] noted that inspectors are choosing which wells to inspect and have a "significant" workload. In North Dakota, EPA auditors also noted [12] the pressures of "exponential" growth and an "increasing workload."

To meet the goal of inspecting each well annually, Texas inspectors would have to visit eight wells a day, every

day, including Sundays and Christmas. That's after Texas' Railroad Commission hired 65 staffers last year to help inspect the state's 428,000 wells.

Nye, the commission's spokeswoman, said the state had sufficient funding and inspected each of its commercial disposal wells twice last year.

"The Commission has a stringent and comprehensive review process for these wells," Nye wrote in an email. "Railroad Commission staff work diligently to ensure saltwater disposal wells are not and will not be a problem."

But inspectors don't check on private disposal wells, which are far more numerous, with the same regularity. Nor do they keep a schedule for when officials should conduct such visits.

Other states are struggling under similar burdens. In Wyoming, inspectors would also have to check eight wells a day for each well to be checked once a year – a pace possible if wells are clustered together, experts said, but otherwise difficult to achieve. In West Virginia and Kansas, inspectors would have to check seven wells per day.

Visiting injection wells often ranks low among inspectors' priorities unless there is an accident or spill, according to a 2007 Texas auditor's report [18]. The most urgent responsibility for regulators, beyond responding to emergencies, is typically overseeing the development of new oil and gas wells.

The result is that several years can pass between inspections of many injection well sites. In 2010, state regulators visited less than half of the Class 2 sites that a federal well inventory shows they were responsible for monitoring, ProPublica's analysis showed. EPA inspectors checked on such wells even less frequently, visiting less than one-quarter of the sites under their jurisdiction in 2010.

"I don't give a darn whether you have federal regulations, or a squeaky clean permitting system," said Bill Bryson, a member of the Kansas Geological Survey and the former head of Kansas' oil and gas commission. "If you don't have somebody going out and looking at the wells it doesn't do any good, and if you don't have the right people looking ... it doesn't do any good either."

Much of the problem with oversight comes down to money, critics say. In some states, budgets and staff for oil and gas agencies have dropped relative to the number of new wells being drilled over the last nine years.

Kansas employs about the same number of inspectors as it did in 2003, even though it drills four times as many new wells. New drilling has nearly doubled in Louisiana over the same period, but the state's enforcement staff has remained static and its oil and gas budget has increased modestly. In Illinois, drilling has nearly doubled, while the number of enforcement staff has been reduced.

Since the Underground Injection Control program is run under a federal mandate, states rely partly on money from the EPA to fund oversight and enforcement. Federal dollars make up 20 percent of Texas' budget, for example. But in the last 22 years, the EPA's annual operating budget for injection has remained about the same: $10 million. Taking inflation into account, funding has dropped at least 40 percent from 1990 to 2012, though the regulations for all well classes have only grown more complex.

"The UIC program has been flat funded for years," said Dan Jarvis, the field operations manager for Utah's Division of Oil, Gas and Mining. "With more manpower, obviously you put them on the ground and you're going to have better compliance. Our field people are some of the greatest guys going, but they are overworked."

The EPA declined to disclose the operating budget for regional offices that monitor waste wells under federal jurisdiction or oversee state injection programs. Documents show, [19] however, that in 2011 the agency suspended its travel budget for visits to some of the states that have the largest injection programs, including Louisiana, Texas and Oklahoma.

"Do you think we are doing more now than we were doing 30 years ago? No, there is no money," said Salazar, the former EPA injection expert. "There are not enough people to know what is going on. It is the ideal storm for industry. Less and less people, more and more things that the EPA has to do."

Ultimately, much of the responsibility for meeting EPA standards falls to companies themselves. Some operators routinely exceed the minimum requirements of injection regulations, says Hughbert Collier, who runs a Texas environmental engineering firm that consults with injection well operators. They conduct their own integrity tests

every year and make sure employees visit well sites once a month.

But operators inclined to cut corners have little to hold them back.

"What most people would be surprised about is that regulators don't have real good control over everything that goes on in the regulated community," said Miller, the former EPA criminal investigator in Texas. "Most of our environmental law requires self-reporting and that requires honest people."

When violations are identified – such as the 140 times waste was illegally injected and noted in the regulatory reports – the consequences can be minimal, and only in rare cases do transgressions rise to the level of criminal prosecution. In the three years of national data reviewed by ProPublica, which included more than 24,000 formal notices of violations, only one case was referred to criminal investigators.

Usually, violations result in citations or informal warnings. If operators do not address violations, then modest fines may be levied; in some cases, wells are temporarily shut down. There is no central source of information on the size of fines, but an audit of Louisiana's injection program [19] provides a glimpse: In 2011, the state collected an average of $158 for each violation.

After three deaths, two federal worker safety investigations and a criminal prosecution, few injection sites nationwide received as much regulatory scrutiny as those in Rosharon, Texas. Yet, despite all the attention, the wells there later failed on the most basic level.

On Feb. 17, 2010, thousands of gallons of waste that had been deposited into these wells gurgled to the surface [20] in what the Railroad Commission described as a "breakout." Materials injected far below the earth had managed to migrate back up to the surface, perhaps through an old well missed by regulators.

As of this June, investigators were still analyzing whether the chemicals injected underneath the site had reached water supplies.

Jesse Nankin contributed research for this report.

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2. http://www.propublica.org/documents/item/435925-csb-report-blsr-report.html
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From:	Jill Sowell
To:	Boulder County Board of Commissioners
Subject:	Ban Fracking Now
Date:	Monday, September 24, 2012 9:46:58 PM

Dear Boulder County Commissioners,

Hydraulic fracturing (fracking) can contaminate our drinking water and harm our communities. Furthermore, the proposals to allow Boulder County Open Space to be fracked are inappropriate on land purchased with tax payer funds to be preserved for public recreation and the environment.

As your constituent, I urge you to impose a moratorium on fracking in Boulder County, so that you can investigate all options to place a permanent ban on fracking.

Jill Sowell
904 Rex St.
Louisville, CO 80027