From:	William Chapman
То:	Boulder County Oil and Gas Comment
Subject:	Fracking and domestic water wells:
Date:	Tuesday, September 27, 2016 5:22:25 PM

Water wells along the front-range, are usually drilled in shale formations, not sand and gravel. Shale formations transfer fracking liquid much farther than in sand and gravel formations. Simply because of the tightness of the shale. Shale will not absorb the fracking liquid; therefore, the fracking liquid will cover a larger area.

Just another reason to protect the front range from fracking!

Thank you,

William Chapman

From:	Bobby Brown
To:	Boulder County Oil and Gas Comment
Subject:	Oil and gas development
Date:	Wednesday, September 28, 2016 8:28:32 AM

Dear Commissioners:

I hope you will continue to stand strong against the powerful interests that are arrayed against the people and our right to clean air and water. I am 100% behind you on doing all you can to stand up against these powerful

interests.

The people must--and will--win in the end, but it will be a very long war. Bobby Brown

From:	Adam Stenftenagel - Snugg Home
To:	Boulder County Oil and Gas Comment
Subject:	Please do everything you can to prevent fracking in Boulder County
Date:	Wednesday, September 28, 2016 9:32:37 PM

If you haven't read the latest article from Bill McKibben, it's a must.

https://newrepublic.com/article/136987/recalculating-climate-math

Studies have shown that burning natural gas from fracking is 4 times worse than burning coal due to the methane emissions.

We absolutely must do everything in our power to stop any new oil and gas drilling or exploration or the entire planet will become useless. You may not legally be able to outright ban new drilling, but can you increase the permit fees for fracking so exorbitantly that it's cost prohibitive for the oil and gas companies? Or how about a carbon tax on fracking that is 60% of revenues? We have got to pull out all the stops on this.

Let's think outside the box and really be a leader on this.

Thanks for working hard to keep fossil fuels in the ground in Boulder County. My colleagues and I are doing everything we can to eliminate the demand for oil and natural gas and hopefully make your jobs easier.

Adam Stenftenagel Co-Founder / CEO Snugg Home PO BOX 82 Boulder, CO 720-663-7836 x101 www.SnuggHome.com I have not yet received a response to this inquiry.

ТΒ

Todd Bryan, Ph.D.

Strategic Partner

RESOLVE

Boulder, Colorado

303-440-8190

From: Boulder County Board of Commissioners
[mailto:commissioners@bouldercounty.org]
Sent: Friday, September 16, 2016 4:07 PM
To: Todd Bryan
Subject: RE: County Commissioners Contact Us/Feedback Form. [#156]

Hello,

Thank you for contacting the Boulder County Commissioners' Office.

We have received your email.

Thank you,

Board of Commissioners

From: Boulder County BOCC [mailto:no-reply@wufoo.com] **Sent:** Friday, September 16, 2016 4:02 PM **To:** Boulder County Board of Commissioners **Subject:** County Commissioners Contact Us/Feedback Form. [#156]

Name *	Todd Bryan
Organization (optional)	Resolve
Email *	tbryan@resolv-advisor.org
Phone Number (optional)	(303) 440-8190
My Question or Feedback	Oil and gas devevelopment
most closely relates to the	
following subject: (fill in the	
blank) *	
Comments, Question or Feedb	ack *
I'm leading a research project tha	t is looking at community engagement practices in
oil and gas development in Colora	do, Pennsylvania, and Texas. The lead
organization in the research is Res	sources for the Future and it is funded by the
Alfred P. Sloan Foundation and the	e George and Cynthia Mitchell Foundation. I've
reached out to Dale Case who is t	he LGD for Boulder County but have not received
a response. I would like to talk to	someone at the county level who can discuss the
County's policy and process for m	oving forward following the moratorium override
by the Colorado Supreme Court. V	Ve have interviewed industry, local and state
government, and citizens in Weld,	Adams, Arapahoe, Broomfield and Garfield
counties. It would be helpful to ta	Ik with someone on Boulder County too,
particularly the LGD and a commis	ssioner who has been active in this discussion.
Btw, I'm a 26-year resident of Bou	ulder. Thanks!
Please check box below *	· I acknowledge receipt of the Open Records
	Notification

From:	Sarah Kuyper
To:	Boulder County Oil and Gas Comment
Cc:	Richard Kuyper
Subject:	NO Fracking PLEASE
Date:	Thursday, October 06, 2016 12:16:15 AM

Hello and thank you for allowing written comments via email. Our small home is in Fourmile Canyon, which has had many wake up calls from Nature these past few years. PLEASE, we don't want to add any unnatural manmade problems to our lives and those of others who cherish living in incorporated Boulder County. Fracking is obviously still controversial and its unintended consequences are still too destructive to the health and safety of people and the environment. Please don't allow this to happen.

Thank you for assuring the protection of this beautiful and natural part of the world.

Respectfully,

Sarah and Richard Kuyper Homeowners of 4950 Four Mile Canyon Currently living overseas while serving members of the USAF PSC 9 BOX 3509 APO AE 09123

From:	Carrie Fross
To:	Boulder County Oil and Gas Comment
Subject:	Regulations
Date:	Thursday, October 06, 2016 6:59:39 AM

I am an enthusiastic supporter of the oil and gas regulations that are reported in the Daily Camera today, Oct 6, 2016.

Because I am worried about the air, soil and water pollution risks that drilling poses, I appreciate the notices that will be sent to land owners, the public hearings that may be held and the reviews that can be required.

Thank you for drafting this thoughtful set of regulations.

Carrie Fross, 4911 Tesla Court 80301

From:	<u>charlesjfarrell@yahoo.com</u>
То:	Boulder County Oil and Gas Comment
Subject:	Oil and gas reg comments
Date:	Thursday, October 06, 2016 1:17:17 PM

Thank you for sending out the draft regs. I appreciate all the work and thought that went into the regs.

My primary comment, and I may just have missed this item in the regs, is a provision for noise. I would like a noise assessment and abatement item to be included in the standards. The noise can severely impact folks who live near the site and severely impact property values.

If that was included in the regs, I apologize for the additional commentary. Thank you for your consideration.

Charles Farrell 6583 Magnolia Dr

Sent from my iPhone

From:	Bob Cannistraro
То:	Boulder County Oil and Gas Comment
Subject:	comment
Date:	Friday, October 07, 2016 10:10:27 AM

I saw the regs outlined in the Daily Camera - it all sounds good especially the leak detection part. What about safety regs? I assume you saw the Denver Post series.

I have been in the energy business all may career (41 years) and believe the production of natural gas can be done safely and can be a benefit to our quality of life. We just need more oversight.

Thank you.

Bob Cannistraro 6225 Misty Way 80503

This email has been checked for viruses by Avast antivirus software. <u>https://www.avast.com/antivirus</u>

Oct 9, 2016

Commissioner - Boulder County Board of Commissioners - District 2 Deb Gardner 1325 Pearl Street Boulder, CO 80302-5247

Dear Commissioner - Boulder County Board of Commissioners - District 2 Gardner,

I urge you to protect our drinking water, our clean air and our property by extending the moratorium on fracking in Boulder County.

We have seen the harmful impacts that fracking has on our neighboring communities: it is bad for health, lowers property values and contaminates air and water.

As you know, the current moratorium on fracking will expire in a few short months. In order to protect the things that make Boulder County great, we need to extend the moratorium for three years.

I urge you to protect Boulder County residents and the environment by extending the moratorium on fracking.

Sincerely,

Ms. Maeve Fields 7820 Durham Way Boulder, CO 80301-4121 maevefields@gmail.com

From:	Anne Carto
To:	Boulder County Oil and Gas Comment
Subject:	COGA Comment to Docket DC-16-0004
Date:	Monday, October 10, 2016 5:18:50 PM
Attachments:	COGA Boulder Co Whitepaper 10.10.16.pdf
	COGA Letter Boulder Co. Planning Commission 10.10.16.pdf
	FINAL - COGA 10-10-16 redline of 10-5-16 draft Boulder Proposed Regulatipdf

Attached are the Colorado Oil & Gas Association's comments to Docket DC-16-0004: Proposed Amendments to Oil and Gas Development Regulations.

Included you will find a letter to the Planning Commission, a redline of the proposed regulations, and our "Oil & Gas Regulation in the State of Colorado White Paper" that directly addresses the proposed regulations.

We look forward to answering any questions the Planning Commission may have during Wednesday's Public Hearing.

Thank you,

Anne Carto

Community Outreach Manager

Colorado Oil & Gas Association

p: 303-861-0362 c: 303-503-8367

COGA Confidentiality Notice - This e-mail transmission, and any documents, files or previous e-mail messages attached to it, may contain information that is confidential or legally privileged. If you are not the intended recipient, or a person responsible for delivering it to the intended recipient, you are hereby notified that you must not read or play this transmission and that any disclosure, copying, printing, distribution or use of any of the information contained in or attached to this transmission is **Strictly Prohibited**. If you have received this transmission in error, please contact the sender and delete the communication and its attachments immediately. Thank you. October 10, 2016

VIA EMAIL – NO ORIGINAL TO FOLLOW

Boulder County Planning Commission and Staff ATTN: Kimberly Sanchez, Chief Planner & David Hughes, Deputy County Attorney 2045 13th Street, Suite 200 Boulder, Colorado 80302

RE: Colorado Oil & Gas Association – Comments to Docket DC-16-0004: Proposed Amendments to Oil and Gas Development Regulations

Dear Planning Commission Members, Ms. Sanchez and Mr. Hughes,

The Colorado Oil & Gas Association ("COGA") respectfully submits this letter to the Boulder County Planning Commission members, Planning Staff and County Attorney's office for review prior to the Boulder County Planning Commission Hearing on Wednesday, October 12, 2016, at 1:30 p.m.

Upon review of Docket DC-16-0004: Proposed Amendments to Oil and Gas Development Regulations ("Proposed Regulations"), it is clear that Boulder County has put substantial effort and time into crafting thorough and unique regulations as applied to oil and gas development in Boulder County. COGA appreciates the outreach of the Boulder County Planning Department staff throughout the drafting process and the opportunity to participate in two industry stakeholder meetings to discuss numerous issues and concerns that the industry has with the Proposed Regulations. COGA, and its members participating in the meetings, have found these meetings to be fruitful and helpful in understanding the intent and purpose of many of the Proposed Regulations.

COGA has several key concerns with the Proposed Regulations which are addressed in the COGA White Paper, attached hereto as Attachment A, and the redline to the October 5, 2016 draft of the Proposed Regulations, attached hereto as Attachment B. COGA developed the White Paper in order to provide respectful feedback on: (1) the legal dividing line between the Colorado Oil & Gas Conservation Commission's ("COGCC") primary jurisdiction over oil and gas development and operations in the State of Colorado and Boulder County's land use authority as it applies to oil and gas development and operations, and (2) the areas of the Proposed Regulation that cause operators the highest level of concern and may well be illegal under the law of operational preemption. *See Attachment A, COGA White Paper for further details.* COGA also developed the redline,

with substantial comments to each Section in the track changes "bubble format," in order to provide alternative language and different viewpoints on the original language in various Sections within the Proposed Regulations. *See Attachment B, COGA 10-10-16 Redline Draft to Proposed Regulations for further details.*

A brief summary of the key concerns with Boulder County's Proposed Regulations are as follows:

- The regulations in key areas fail to comply with current Colorado law regarding the primary jurisdiction of the COGCC;
- The regulations illegally give the County the ability to mandate siting of oil and gas location;
- The regulations include Best Management Practices or Mitigation Measures that exceed or overlap state agency regulations;
- The regulations include air and water quality standards that exceed or overlap state agency regulations and are operationally preempted;
- The regulations include pipeline permitting requirements that place an extraordinary burden on applications for proposed transmission pipelines;
- The regulations include bonding requirements that are not permitted under current Colorado law and that overlap with state agency bonding requirements;
- The regulations include a potential automatic *de facto* denial of any special review permit for oil and gas operations deemed "incompatible" by the Planning Staff; and the factors that may be considered in this determination include a number of issues over which the State has primary authority; and
- The regulations include a permitting process with an indefinite length of time associated with receipt of an approval/denial of a special review permit.

COGA looks forward to addressing the Planning Commission at the October 12, 2016 hearing and engaging in conversation with the Commissioners and Staff regarding its concerns. Please contact me with any questions you may have about this submission.

Sincerely,

Jaul P. Halay

Dan Haley President and CEO

Enclosures:

- Redline of Proposed Regulations
- COGA White Paper

cc: Ben Pearlman – Boulder County Attorney
 Dale Case – Boulder County Planning Director
 Jamie Jost – Jost Energy Law, P.C.; Counsel to COGA
 Mark Mathews – Brownstein, Hyatt, Farber, Schrek LLP; Counsel to COGA

Exhibit B New Article 12 Special Review for Oil and Gas Operations

12-100 Purpose

- A. The County's objective is to protect public health, safety, welfare, and the environment to the maximum extent permitted by law. Oil and gas exploration and development is industrial in nature, intensive, and has the potential to significantly impact the surrounding community and environment. Boulder County Citizens have raised concerns about health problems, air pollution, water contamination, noise, odor, vibration, property damage, and other impacts that may be caused by oil and gas development, particularly the extraction method known as hydraulic fracturing or fracking. Traditional zoning would separate these industrial uses from residential and rural areas. However, due to the unique circumstance of the severed mineral estate, complete separation of uses may not be possible and <u>T</u>this Article has been promulgated to address this inherent incompatibility oil and gas exploration and development in Boulder county and to minimize potential land use conflicts between those activities and current or future land uses.
- B. Although Colorado state agencies and the federal government also have controlling authority to regulate certain aspects of oil and gas operations, these agencies they may not adequately review the impact that individual proposed oil and gas development operations may have on local residents. Boulder County believes that aA responsible review of such development should include (1) the submission of all necessary information related to proposed oil and gas development and its potential impacts; (2) thorough analysis and review of such information; (3) multiple opportunities for public input, especially from those who are near the proposed development; and (4) action on the proposal, including a thorough evaluation of and determination about all necessary or warranted mitigation measures. These local land use regulations are intended to provide close scrutiny of all proposed oil and gas development and multiple opportunities for public input prior to any decision being made. They also allow staff, the Planning Commission, and the Board of County Commissioners to consider site-specific circumstances related to each development application and to customize avoidance-andminimizationn, and mitigation measures to best address each of the site-specific se circumstances. Finally, these regulations will help to ensure close inspection and -monitoring, and enforcement of all post-permit approval compliance with all requirements and mitigation measures imposed by these land use regulationsthis Article 12.

12-200 Authority of Article

This article is authorized by C.R.S. §§ 25-8-101 et seq., 29-20-101 et seq., 30-28-101 et seq., 34-60-101 et seq., 25-7-101 et seq., and other authority as applicable.

12-300 Effective Date; Pre-Existing Uses

A. This Article shall become effective on the date specified in the adopting resolution of the Board. The provisions of this Article shall apply to all <u>new</u> oil and gas <u>operations locations</u> for which a complete application for special review has not been accepted by the County as of the effective date. **Comment [A1]:** The term "inherent incompatibility" cannot be included in any adopted regulations since Boulder County is mandated with determine the compatibility of a site specific land use with surrounding uses under this Article 12. This inclusion would immediately place an operator in a position of denial for any special use application. What is the factual basis for the conclusion that oil and gas operations in Boulder are "inherently incompatible?"

Comment [A2]: Questionable use of language since the LGD can be involved in ANY Form 2 or Form 2A with the COGCC.

Comment [A3]: This might mislead citizens to believe Boulder County has more enforcement authority than it does. Boulder County cannot require an operator to cease its operations as part of its enforcement authority under this Article. The operator will have authority to conduct its operations under the approved COGCC permit. Boulder County may, however, immediately contact the COGCC and request a cease and desist order under the proper COGCC procedures. Boulder County also doesn't have enforcement authority over areas that are operationally preempted through COGCC regulation.

Comment [A4]: Will this be prospective date? It would be helpful to know what planning staff will be asking for.

Comment [A5]: We need to clarify that the new regulations apply only to new oil and gas operations and not existing locations, which are set forth in 12-300.B.

Comment [A6]: Any permit under this Article 12 should be tied to an Oil and Gas Location, as defined by the COGCC 100 Series Rules, and not "oil and gas operations" which contain any other terms that are well outside the scope of Boulder County's authority to regulate.

Comment [A7]: What if a complete application has been accepted but not approved by the County as of the effective date? Presumably such an application would not be subject to the new Article, but this should be clarified.

A-1

- B. Oil and gas operations locations that were legally established prior to the effective date of this Article but do not conform to this Article shall be allowed to continue provided that the post-effective date operation remains effectively the same as the pre-effective date operation. If there is a substantial modification to an existing location, then operator shall comply with Section 12-900.D., as determined by the Director.
- G. Should the Applicant dispute the Director's determination that a pre-effective date operation is not effectively the same as the post effective date operation, the Applicant may appeal the Director's determination to the Boulder County Board of Adjustment. During the course of any Board of Adjustment Proceeding or subsequent appeal, the application shall not be processed.

12-400 Application Procedure for Special Review

- A. Review and Community Engagement
 - 1. Special Review Required. All <u>new</u> oil and gas operations locations on public and private land within the unincorporated areas of Boulder County must comply with this <u>Article</u>. Prior to the commencement of any <u>new</u> oil and gas operations locations in the unincorporated County, an Applicant must submit a special review application and the Board must approve the application according to this Article. No other form of discretionary land use review under this Code is required for oil and gas operations covered by this Article 12. Special review approval is also required prior to, <u>or concurrent to at operator's discretion</u>, the issuance of any County building permits, or associated pipeline, grading, access, floodplain, transportation impact fee, or other County permits necessary for the oil and gas operation. Oil and gas operations that may not require a building or other associated County permit must still obtain special review approval under this <u>Article</u>.
 - 2. Community Engagement. Boulder County requires Applicants to engage with local communities, residents, and other stakeholders prior to exploration or development activity. The purpose of this engagement is to provide sufficient opportunity for comment on plans, operations, and performance, to listen to concerns of the community, and to address all reasonable concerns <u>related to the site specific development</u> as a result of a proposed <u>locationoperation</u>.
 - 3. Surface Use Agreements. Oil and gas <u>operatorsdevelopers</u> commonly enter into surface use agreements with landowners at or near the location of the development. The County encourages such agreements but recommends that they not be finalized until the Applicant has completed special review, at which time the impacts related to the proposed siting of the <u>locationoperation</u> will be analyzed. <u>The County recognizes</u>, however, that a private landowner can enter into a surface use agreement with an <u>operator without County involvement</u>.
 - 4. APD approval. Application and Permit to Drill ("APD") approval from the COGCC is not local approval, and compliance with all terms and conditions of special review approval is required in addition to the requirements of APD approval. The County strongly recommends that applicants apply to the County for special review prior to applying for APD to avoid the potential for conflicting requirements and mitigation measures. The County recognizes, however, that-the COGCC permits are-have primary authority over oil and gas locations operations for all matters outside of these land use regulations.

A-2

Comment [A8]: There is no definition of "substantial modification." Clarity, certainty and consistency calls for a nondiscretionary definition for an Applicant to understand.

Comment [A9]: What does this mean? Is an operator going to have to inventory its existing locations and ensure that the Director determines the operations to be the same as they were prior to the effective date?

Comment [A10]: Will Boulder County allow for comprehensive development plans to be utilized as an alternative to individual special review permits for each oil and gas location/operation?

Comment [A11]: In order to ensure that an operator is tracking for a reasonable approval time, Boulder County should allow concurrent review of the operator's plans for all necessary permits. Comment [A12]: There is no exemption for any form of oil and gas operations.

Applicants who choose to proceed with APD prior to special review do so at their own

B. Operator Registration. All operators planning oil and gas locationsoperations within the County must complete an Operator Registration Form before requesting a pre-application conference. The Operator Registration Form must contain the following information:

- Company name, address, email and mobile cellphone contact information for two individuals associated with the company who live within or near Boulder County and who will serve as 24 hour emergency contacts.
- 2. Comprehensive planning information as follows:
 - a. Based on an operator's business plan as of the date of the request, a good faith estimate of the number of wells the operator intends to drill in the next five years within unincorporated Boulder County. A publicly traded company's well estimates may be based on reserves classified as "proved undeveloped" for SEC reporting purposes.
 - b. A map showing the location within unincorporated Boulder County of the Operator's existing well sites and related production facilities; sites for which the operator has approved or has submitted applications for drilling and spacing orders, or Form 2s or Form 2As; and sites the operator has identified for development on its current drilling schedule for which it has not yet submitted applications for COGCC permits.
- 3. Well estimates provided under this subsection must be made using reasonable business judgment based on information known to the operator as of the date the estimates are requested. Well estimates are subject to change at any time at the operator's sole discretion. The operator must update the Form at the time of any changes.
- C. Special Review Process. The special review process is a regulatory process based primarily upon subjective or context-specific criteria for new or substantially modified oil and gas operations. Special review applications require staff review, public hearing, and recommendation by the Planning Commission followed by review, public hearing, and decision by the Board of County Commissioners. Some applications may also require review by the Parks and Open Space Advisory Committee as provided for in subsection (I).

D. Pre-Application Conference.

- Timing. A pre-application conference as defined in Article 3-201 of this Code must be held at least forty-five (45) days prior to the Applicant submitting an application for special review.
- 2. Conference. At the pre-application conference, the Director and the Applicant will discuss the points contained in Article 3-201 of this Code and review the County's special review process so that the Applicant can blan conduct construct and maintain its proposed oil and gas locationoperation in a manner that ensures compliance with the special review regulations and applicable state and federal regulations. The pre-application conference allows the Applicant and Director to Identify potential site-specific concerns and issues that relate to the special review process, to discuss project impacts and potential mitigation methods, and to discuss coordination of the County process with the State permitting process, if the State permitting process has not already been completed. Applicants are encouraged to, but are not required to, conduct the pre-application of the pre-application conference with the County prior to completing well siting decisions.[∞] Completion of the pre-application conference.

A-3

Comment [A13]: This statement may be viewed as an immediate denial or delay in any spacing review permit if the COGCC APD is done first, and fails to recognize COGCC preemption. It also misstates the law of operational preemption – Boulder County may not enact regulations or impose conditions that conflict with COGCC regulations except in matters of purely local concern.

Comment [A14]: The County may wish to replace "near" with a specific radius, e.g. "within Boulder County or within a 90 minute commute."

Comment [A15]: Boulder has codified Rule 302.c., with modifications. There will be no requests for this information as allowed by Rule 302.c. – this regulation requires the submittal of the information prior to applying for any pre-application conference under 12-400.D.

Comment [A16]: The number of wells will be dependent on the sites. The timing of this provision is not optimal at the time of registration. Once an operators know the sites, it can provides more specifics as to the number of wells. Precise economic analysis cannot be determined without knowing to the location of the oil and gas sites.

Comment [A17]: The term "plan" intends to have the conference prior to any siting determination. The term "conduct" provides more flexibility.

- 3. Site Visit. At the discretion of the Director after consultation with the landowner, the Director may require a site visit as part of the pre-application conference with the Applicant to evaluate the oil and gas location, any alternative oil and gas locations on the landowner's property, -well locations, compliance with this Article, or mitigation measures that may be required to adequately ensure compliance with this Article.
- E. Applicant Neighborhood Meeting. The Applicant must conduct a neighborhood meeting with adjacent and surrounding land-owners and other interested parties at a convenient public location. The meeting must occur between 30 and 45 days in advance of an application being submitted. The neighborhood meeting must be noticed to the County and to all individuals entitled to notice pursuant to Section 12-400(H)(2) at least thirty-fourteen (1430) days prior to the meeting. At the neighborhood meeting, the Applicant must may provide an overview of its proposed oil and gas operations on theoperationelithe oil and gas location, including, but not limited to, well siting and well locations, issues that arise from application of this Article to the proposed operation, and suggested mitigation to adequately ensure compliance with this Article. The Applicant must provide a_summary of the neighbor comments and any agreed uponadditional mitigation measures to the Director within ten (10) days of the meeting.
- F. Application Submission. The application must include documentation establishing how the proposed location operation complies with all applicable requirements of Section 12-600. The Applicant must submit the application and supporting documentation in electronic format with four (4) additional copies of the application materials in paper format to the Land Use Department. The application must contain a certification from the Applicant that the proposed operatiolocation complies with all applicable provisions of this Article and that the information in the application must be are application, is true and accurate. The application must be signed by a person authorized to sign on behalf of the Applicant and who will be the primary contact during the course of processing the application. The County must be application process to specify the new point of contact.
- G. Completeness Determination. Upon acceptance of the application, the Director will determine if Land Use staff needs consultants or staff other than the Land Use Department to assist the Director with the completeness determination. Upon review of the application materials by the Director and any necessary outside consultants, the Director shall determine within fourteen (14) days whether a special review application is complete. Upon prior notice and discussion with Applicant and an appropriate time to cure any concerns, table Director may reconsider his completeness determination at any time-during the application process, including upon the request of a referral agency.
 - Application Deemed Incomplete. If the Director finds that the application is incomplete, the Director shall inform the Applicant of the deficiencies. No further action shall be taken on an incomplete application until all of the specified deficiencies have been addressed, or waived under this Gode, to the Director's satisfaction. ShouldCode, Should the Applicant fail to correct deficiencies within twenty-four (24) months, the application shall expire and the Applicant may submit a new application and fee as specified in section (F) above. The twenty-four (24) month time frame may be extended by the Director according to Article 4-604(D). Should the Applicant dispute the Director's completeness determination at any time, the Applicant may appeal the Director's determination to the Boulder County Board of Adjustment. The Boulder County Board of Adjustment shall hear the appeal at its next meeting or within fourteen (14) day, whichever is sooned. During the course of any Board of Adjustment Proceeding or subsequent appeal, the application shall not be processed.

A-4

Comment [A18]: This language should be modified to ensure that the regulations do not allow for siting authority to sit within Boulder County's discretion. The issue of siting is solely within the COGCC's jurisdiction.

Comment [A19]: A neighborhood meeting may not be an issue, but the meeting prior to the filing of the application is unnecessary. This could happen after the filing of the application and after the completeness review, during the referral period.

Comment [A20]: This is the Section that Boulder County will use to determine their compatibility analysis.

Comment [A21]: Please provide clarification as to what the additional 4 copies will be used for. These may be voluminous in nature and operators would like to understand what happens with the 4 copies. Are they retained or recycled at the end of the process?

Comment [A22]: These may be two different people. Operators may have different regulatory personnel signing versus who should be the primary contact.

Comment [A23]: Please provide clarification as to what is entailed in this amendment? It will not be kicked out or back, correct? This should be a simple notice

Comment [A24]: An operator needs certainty when planning for a permit and addressing local permitting issues with internal management and investors. A completeness determination should be an expedited part of the review process by the internal planning staff. This is especially true in light of an unknown waithist period.

Comment [A25]: An Applicant should have the opportunity to cure any perceived defect with an application prior to the Director withdrawing the completeness determination. This is especially true if it is day 89 of the 90 day referral period (or as modified as proposed herein).

Comment [A26]: Note: Article 2-900 that defines the duties and responsibilities of the Boulder Board of Adjustment does not list Article 12 within its scope of its authority its ability to administer or enforce Article 12.

- Application Deemed Complete. If the Director finds that the application is complete within the fourteen (14) day period, containing all documentation required by this Article, the Director shall process the application.
- H. Notice.
 - The Applicant must mail notice to surface owners, to surrounding landowners, and to residents as identified in this section after the neighborhood meeting but no less than <u>fiveten</u> (<u>510</u>) days prior to the application being submitted to the Department. If approved by the Director, the Applicant may provide notice using alternative notice methods.
 - 2. Notice of the application must be made as follows:
 - To the surface owner(s) of the parcel(s) of land on which the oil and gas location operation is proposed to be located; and
 - b. To the owners of the parcels of land within one-half mileone thousand feet (2,6401,000) -ffeet) of the parcel oil and gas location on which the oil and gas operation is proposed to be located; and
 - c. To the physical address of all parcels within one half mile (2,640one thousand (1,000) feet) offeet of the parcel ooil and gas location n which the oil and gas operation is proposed to be located if Boulder County Assessor's records indicate a mailing address for the parcel owner that is different than the physical address.

The Land Use Department shall provide the list of addresses of record for property owners within one half<u>one thousand feet mile ((1,000,2,640</u>-feet) of the parcel on which the oil and gas <u>locationoperation</u> is proposed to be located to the Applicant at the pre-application conference so the Applicant can provide notice as required by this Section.

- 3. The notice must contain the following:
 - a. A message in bolded 14-point or larger font on the front page of the notice that states as follows: "Attention: An oil and gas operation location consisting of [number of wells] is being proposed in your area-within 1,000 feet of your parcel. Please read this notice carefully." Slight variations in this notice language may be approved by the Director at the Applicant's request.
 - b. A description of the proposed operation site location, including the legal description; parcel number; a street address for the site, if available from the County's rural addressing system; the company name of the operator; the name of a company contact; the current business address, telephone number, and email address for the Applicant; a vicinity map; and a brief description and overview of the proposed oil and gas operation, including details of the drilling techniques (i.e., a detailed description of the type and estimated duration of any proposed hydraulic fracturing).
 - c. Information concerning the facilities and equipment proposed at the site oil and gas location when operational, and proposed access roads and gathering lines.
 - d. The anticipated submittal date of the application to the Department.
 - A statement that public comments on the application may be submitted to the County Land Use Department after the application submittal date.

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Comment [A27]: This will be a second notice as these parties would also have had notice of the neighborhood meeting under Section 12-400.E.

Comment [A28]: The notice radius should reflect the COGCC requirements for notice, which is 1,000' from a building unit for an oil and gas location.

Comment [A29]: Boulder County should not include regulations referencing or requiring durational limitations on an Applicant. This is preempted and outside of Boulder's land use authority.

- f. A statement concerning the County's right to enter property that is the subject of the application as follows: "For the purpose of implementing and enforcing the County's special review for oil and gas operation regulations, County staff may from time to time need to enter onto the property that is the subject of a special review application."
- g. The current mailing address, website address, email, and telephone number for both the <u>Local Government Designee for the</u> County Land Use Department and the <u>Local Government LiasionLiaison for the</u> COGCC, as well as a statement that additional information on the application will be available from the County Land Use Department.
- 4. Notice Review and Approval. Prior to mailing the required notice, the Applicant must submit a sample of the notice form for review and approval by the Director. <u>The Director shall approve the notice form within three (3) business days from receipt.</u>
- Posting Public Notice Signage Onsite. Within five (5) days <u>afteref</u> submitting the application, the Applicant must post a public notice sign or signs on the site of the proposed operation oil and gas location that meet the following requirements:
 - a. The sign must be posted in a location visible to the public (i.e., visible from a public road) and approved by the Director. If the Director determines that a single sign will not provide adequate public notice, multiple signs meeting the requirements of this section may be required.
 - Signs must be four feet by six feet in area. The background must be bright yellow and the lettering must be in black.
 - c. In lettering clearly visible and proportionate to the size of the sign, the sign must contain the following:
 - "Attention: An oil and gas locationoperation consisting of potentially [number of wells] is being proposed in your area. Please read this notice carefully."
 - ii. "The applicant has applied for Special Review, [docket number]"
 - "Information regarding this application may be obtained from the Boulder County Land Use Department at [phone number]"
 - d. The contents and design of the sign must be approved by the Director prior to posting. <u>The Director shall approve the contend and design of the sign within three</u> (3) business days from receipt.
 - e. The approved sign or signs must be posted <u>and kept</u> on the site until the special review process is completed. The Applicant must repair or replace signs that are damaged or defaced within five (5) days <u>of learning of damage or defacement</u>.
- I. Referral Agency Comments. Following the determination that an application is complete, the Director shall forward one copy to the County Transportation and Parks and Open Space Departments; Boulder County Public Health; the appropriate fire district; County Sheriff; and any appropriate municipality for comment. If the proposed well site is on or within 1,000500 feet of County Parks and Open Space property, the Director shall refer the application to the Parks and Open Space Advisory Committee for a public hearing. After the public hearing for the Parks and Open Space Advisory Committee, the Parks and Open Space Advisory Committee for a souring the protection of environmental, ecological, wildlife, historical, archeological, and agricultural resources of the open space. The Director may also refer the application to other government agencies or entitles for review and comment. Referral comments on the proposed development shall be returned to the Director within ninety-thirty

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Comment [A30]: These specifics could prove burdensome and costly for each location with the detail required.

Comment [A31]:

Comment [A32]: This is a lot of detail for signage. This should be parsed down.

Comment [A33]: This distance should reflect Section 12-400.H. Please confirm that other areas of the Code mandate the required footage from County Parks and Open Space property for other industries or zoning purposes.

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Comment [A34]: We believe that this was referring to the Open Space Committee hearing as it does not fit within the special review hearing under this Article. Please confirm. (3090) days of date of referral, unless the referral agency makes a reasonable request to the Director for additional time.

- J. Consultant Review. Where reasonable and necessary and discussed in advance with Applicant, the Director may submit the application for review and recommendation by consultants retained by the County with the necessary expertise to review technical or other aspects of the application. Among other consultant reviews, third party consultant review may be required to evaluate the risks and associated mitigation plans addressing the use of hydraulic fracturing near residential development. The Applicant shall be notified if the Director decides to retain a consultant, shall be given the opportunity to provide input concerning consultant selection and scope of work₃ and shall escrow funds sufficient to cover the anticipated cost of the consultant review and shall be refunded any excess escrowed funds.
- K. Site Visit. If not conducted with concurrently with the pre-application conference, tThe Department maywill conduct a site visit to allow the Director to determine compliance with these standards. The Department may coordinate the a-site visit with other County departments of governmental agencies.
- L. Planning Commission Notice and Hearing. Not less than fourteen (14) days prior to the Planning Commissioner's public hearing, a legal notice of the public hearing shall be published in a newspaper of general circulation within the County, and written notice to the surface owners and surrounding property owners of the time and place of the Planning Commission's public hearing shall be provided pursuant to Section 12-400(H). The Planning Commission shall hold a public hearing on the application and shall make a recommendation of approval, approval with conditions necessary to ensure compliance with this Article, or denial, and the recommendation shall be forwarded to the Board of County Commissioners for review at the next regularly scheduled meeting.
- M. Notice of Board of County Commissioners' Hearing. Not less than fourteen (14) days prior to the Board of County Commissioners' public hearing on the standard permit review, a legal notice of the public hearing shall be published in a newspaper of general circulation within the County, and written notice to the surface owner and surrounding property owners of the time and place of the Board's public hearing shall be provided pursuant to Section 12-400(H).
- Board of County Commissioners Hearing and Decision. The Board of Commissioners shall N. conduct a noticed public hearing for review of a special review application. Any action taken by the Board of County Commissioners will be based on the entire record of proceedings on the matter, as that record is maintained by the Land Use Department Director and/or the Clerk of the Board of County Commissioners, including but not limited to: recordings or transcripts of public hearings; all written comments of referral agencies; the review and recommendations of the Land Use Department; and all written commitments, statements, or evidence made or submitted by or in behalf of the Applicants, landowners or interest holders or their agents, and interested members of the public who are within 1,000 feet of the oil and gas location. -The Applicant shall have the burden of proof to show that the applicable criteria for approval have been met. On the basis of the evidence received at such public hearing(s), the Board shall make its determination to approve, approve with conditions necessary to ensure compliance with this Article, or deny the application. The Board's action shall contain appropriate findings or reasons in support of its decision. The Board shall render its decision on the special review application in writing within five (5) days following the conclusion of the public hearing.

Comment [A35]: This requirement is concerning due to the confirmation of the Planning Staff that most applications, including the first few to be submitted under the new regulations, will be referred out to consultants for review as the expertise is not present in the planning staff.

Comment [A36]: An Applicant should not be required to pay for consultants as part of the local review process, especially in light of the unknown timing on receipt of a permit under the proposed process.

Comment [A37]: This timing assists in providing certainty to Applicants that, once recommended by the Planning Commission, it will be immediately placed on the BOCC's agenda at the next regularly scheduled meeting.

Comment [A38]: It is understood that a public meeting is open to all citizens of Boulder County, however, the record should be based on the citizens within the notice radius.

Comment [A39]: This should be deleted because, in order to get to the BOCC, this would have already have been met at the planning level.

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12-500 Application Submittal Requirements

Unless the submittal requirement is waived or modified by the Director based upon the Applicant's request at any point in the application process, the Applicant must submit the information and documents specified in this section with the special review application for oil and gas operations. The Director may waive or modify the submission requirements in this section if (1) because of the nature of the Application, the requested information is unlikely to be useful to the Board in applying the special review criteria or determining appropriate mitigation measures; (2) the usefulness of the information is substantially outweighed by the hardship placed on the Applicant in providing the information. Should the Applicant request a modification or waiver and dispute the Director's determination a submission requirement under this section should not be modified or waived, the Applicant may appeal the Director's determination to the Boulder County Board of Adjustment. During the course of any Board of Adjustment Proceeding or subsequent appeal, the application shall not be processed.

- A. County Application Form.
- B. Ownership. Certification of ownership of the mineral estate or of all necessary lease interests in the mineral estate. Identification of all persons with a real property interest in the subject property.
- C. Date of APD Filing. Anticipated or actual date of associated APD filing with the COGCC. If the APD filing has occurred prior the filing of the application, the Applicant must include a written explanation regarding why the Applicant chose to proceed with APD prior to special review.
- D. Surface Agreements. A copy of any <u>non-confidential</u> surface use agreement(<u>s</u>), or <u>Memorandum</u> of <u>surface</u> use agreement recorded with the <u>Boulder County Clerk</u>, the Applicant entered into related to the <u>project-oil and gas location</u>.
- E. Proof of pre-application Conference. Date the Applicant conducted the pre-application conference with the Department.
- F. Proof of Notice. Certification of proper notice, including Director approval of the notice, as required by Section 12-400(H).
- G. Verification of Legal Access and Use of Private Roads. Information demonstrating that the Applicant has the right to use private access roads that are necessary for the <u>oll and gas</u> operations on the <u>oil and gas location</u> and that the Applicant has entered into an agreement with the private road owner regarding maintenance, improvements necessitated by the proposed <u>oil and gas</u> operation, and reimbursement for damages. Recorded or historically used easements providing access to or across the parcel(s) must be provided.
- H. Proximity of Other Wells and Other Oil and Gas Operations. A map showing the location of all producing, closed, abandoned, and shut-in wells and any other oil and gas operations within one (1) mile of the site.
- 1. Site Plan and Parcel Information. The following information must be included:
 - Facility siting. The proposed location of wellhead, pumping units, tanks, treaters, staging and storage areas, temporary use areas and permanent well pads for all phases, fencing, and equipment associated with the oil and gas operation.

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Comment [A40]: Is there a required procedure for such waiver or modification request? Also, for the granting of waiver or modification, will the standard be "for good cause shown" as in Proposed 12-700?

Comment [A41]: Does Boulder County plan on providing a specific form for this certificate of ownership?

Comment [A42]: There may not be full title done on the mineral interest of the oil and gas location. This requirement is also unreasonable and unnecessary.

Comment [A43]: This is unreasonable and unnecessary. There is no requirement that the local permit must be applied for or received prior to the governing COGCC permit.

Comment [A44]: Many surface use agreements are confidential and cannot be submitted under this requirement. If a Memorandum of SUA has been recorded, then that may be submitted.

Comment [A45]: This should be limited to the oil and gas location since that is the site being approved by Boulder County, not the entire project.

Comment [A46]: Does Boulder County plan on providing a specific form for this certificate of proper notice?

Comment [A47]: This language should be deleted as Boulder County has no authority to interfere with the private agreements, and the terms of such agreements, with a private road owner.

- Alternative site analysis. Submission of an alternative site analysis that identifies and examines the feasibility of <u>any at least three (3) alternativeany alternative</u> well locations reviewed by Applicant, that would allow for extraction of the resource and that considers concentration of multiple wells on a single well pad versus smaller well pads with fewer or single wells.
- Existing structures. Identification of all existing occupied structures and other improvements. within one-one-half (1) mile from any wellhead, pumping units, tanks, and treaters.
- Water bodies. Any surface water bodies including, but not limited to, ditches and reservoirs as identified and mapped on the County's Ditch and Reservoir Directory, within <u>one-half one</u> (1) mile of the wellhead, pumping units, tanks, and treaters.
- Water wells. Any domestic or commercial water wells or irrigation wells within one-half mile of the wellhead, pumping units, tanks, and treaters.
- Geologic hazards. All high hazard geologic areas as defined in the Comprehensive Plan within one-half mile of the wellhead, pumping units, tanks, and treaters.
- Floodplain. Mapping of all floodplains and floodways as defined in Article 4-400 within onehalf mile of the wellhead, pumping units, tanks, and treaters.
- 8. Comprehensive Plan natural resources. All mapped significant natural communities, natural landmarks and natural areas, rare plant areas, significant riparian corridors, or critical wildlife habitat as each is defined in the Comprehensive Plan, in effect as of the effective date of this Article within <u>one-half one (1)</u> mile of the wellhead, pumping units, tanks, and treaters.
- 9. Drainage. Drainage patterns, ditches, wetlands or aquatic habitat, vegetative cover, wildlife habitat and wildlife migration routes, and geologic features as defined in the Comprehensive Plan or identified onsite and within one-half mile of the location on which the operation is proposed.
- 10. Site disturbance. Dimensions of the site, indicating area in square feet and acres, and the area of the site to be disturbed for permanent operations and temporary operations.
- Easements and Rights-of-Way. Utility line easements and rights-of-way within 150 feet of the proposed site and access road.
- 12. Existing and Proposed Lines. Existing and proposed pipelines, tanks, wells, gathering lines, and flow lines.
- Existing and Proposed Roads. Existing and proposed roads within the parcel and on the site as well as ingress and egress from public and private roads.
- Topography. Existing and proposed topography at five-foot intervals to portray the direction and slope of the area within 1,0500 feet of the operation.
- J. Agricultural Land Mitigation Plan. An assessment of any agricultural lands potentially impacted by the proposed operation and a plan for mitigating impacts in compliance with Section 12-600.

Comment [A48]: Does Boulder County have a specific form it will be using for this plan? An Applicant should not have to assume that its plan form will work, only to be rejected, especially given the extensive, unknown timeline of receipt of a final decision on a special review permit.

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K. Air Quality Plan. A plan establishing compliance with the air quality provisions of Section 12-600.

L. Emergency Preparedness Plan. Each Applicant with an oil and gas location operation in the County is required to implement an emergency preparedness plan for each oil and gas operation location, unless an overall emergency preparedness plan for an Applicant's oil and gas locations within Boulder County has been approved by the Director. The emergency preparedness plan must consist of at least the following information:

- Name, address and phone number, including 24-hour emergency numbers for at least two persons located in or near Boulder County who are responsible for emergency field operations. The Applicant is responsible for ensuring that at least one of these emergency contacts can respond to a phone call within thirty (30) minutes.
- 2. Once construction is finalized on an oil and gas location, aAn as-built facilities map in a format suitable for input into the County's GIS system depicting the locations and type of above and below ground facilities including sizes and depths below grade of all onsite and offsite oil and gas gathering and transmission lines and associated equipment, isolation valves, surface operations and their functions. The as-built map must be submitted within sixty (60) days of removal of the completions crew from the specific oil and gas location. The information concerning pipelines and isolation valves shall be held confidentially by the County's Office of Emergency Management, and shall only be disclosed in the event of an emergency. The County shall deny the right of inspection of the as-built facilities maps to the public under C.R.S. § 24-72-204.
- as well as <u>T</u>transportation routes to and from exploration and development sites, for emergency response and management purposes
- 3.4. The information concerning pipelines and isolation valves shall be held confidentially by the County's Office of Emergency Management, and shall only be disclosed in the event of an emergency. The County shall deny the right of inspection of the as-built facilities maps to the public under G.R.S. 5 24 72-204.
- 4-5. Detailed information addressing each potential emergency that may be associated with the operation. This may include any or all of the following: explosions, fires, gas, oil or water pipeline leaks or ruptures, hydrogen sulfide or other toxic gas emissions, or hazardous material vehicle accidents or spills. For each potential emergency, threshold / trigger levels shall be pre-identified that govern when an emergency state is declared by the Applicant.
- 5-6. The plan must include a provision that any spill outside of the containment area or that has the potential to leave the facility or to threaten a water body or groundwater must be reported to the emergency dispatch and the Director immediately.
- 6.7. Detailed information identifying access or evacuation routes, and health care facilities anticipated to be used.
- 7-8. Project specific emergency preparedness plans are required for any project that involves drilling or penetrating through known zones of hydrogen sulfide gas.
- 8-9. The plan must-may include a provision that obligates the Applicant to reimburse the appropriate emergency response service providers for costs incurred in connection with

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Comment [A49]: Does Boulder County have a specific form it will be using for this plan? An Applicant should not have to assume that its plan form will work, only to be rejected, especially given the extensive, unknown timeline of receipt of a final decision on a special review permit.

Comment [A50]: See comments to 12-600 provisions.

Comment [A51]: Does Boulder County have a specific form it will be using for this plan? An Applicant should not have to assume that its plan form will work, only to be rejected, especially given the extensive, unknown timeline of receipt of a final decision on a special review permit.

Comment [A52]: An as-built can only be created upon completion of the oil and gas location, wells and associated facilities.

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¢	Comment [A53]: This information would not be on an as-built.
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any emergency. <u>The appropriate emergency response service providers may provide</u> information regarding alternative methods for reimbursement of their services.

9,10. Detailed information that the Applicant has adequate personnel, supplies, and funding to implement the emergency response plan immediately at all times during construction and operations.

10.11. The plan must include provisions that obligate the Applicant to keep onsite and make immediately available to any emergency responders the identification and corresponding Safety Data Sheets (SDS) of all products used, stored or transported to the site. The SDS must be updated weekly and provided immediately upon request to the Director, a public safety officer, a County Public Health representative, or a health professional. In cases of spills or other emergency events, the plan must include provisions establishing a notification process to emergency responders of potential products they may encounter, including the products used in the hydraulic fracturing fluids.

11.12. The plan must include a provision establishing a process by which the Applicant engages with the surrounding neighbors to educate them on the risks and benefits of the onsite operations and to establish a process for surrounding neighbors to communicate with the Applicant.

M. Land Disturbance Mitigation Plan. An assessment of areas of land disturbance, an analysis of the species, character and density of existing vegetation on the site, a summary of the potential impacts to vegetation as a result of the proposed operation, and a plan, including proposed landscaping, revegetation, and other mitigation measures, demonstrating compliance with the standards of Section 12–600. If site work has been done less than one year before the application submittal, the condition of the property prior to site work shall be used as a baseline. The application shall include any COGCC required interim and final reclamation procedures.

N. Operations Plan, A plan describing the proposed operations including the method, schedule, and duration of time for drilling, completion, transporting, production and post-operation activities.

O. Transportation Plan. The Applicant must submit a report plan establishing compliance with the transportation standards in Section 12-600 and which contains the following information:

 Map indicating proposed trip routes for all traffic serving the oil and gas-operation location during all phases of well development and operations.

Indicate for each segment of the proposed route in Boulder County the types, sizes, weight, number of axles, volumes, and frequencies (daily, weekly, total) and timing (times of day) of all vehicles to be used for the proposed oil and gas operation location.

Identify all measures necessary to ensure the safety and quality of life experience of other users of the county transportation system, adjacent residents, and affected property owners, including without limitation:

> a. operational measures to minimize impacts to the public including, but not limited to, time of day, time of week, vehicle fuel and emissions reduction technology, noise minimization, and traffic control safety measures;

> b. maintenance practices on the proposed route, including without limitation, grading of unpaved roads, dust suppression, vehicle cleaning necessary to minimize re-entralned dust from adjacent roads, snow and ice management,

> > A-11

Comment [A54]: It is likely this information and education occurs at the neighborhood meeting prior to filing the application. Would Boulder County accept this meeting as part of the process?

Comment [A55]: Does Boulder County have a specific form it will be using for this plan? An Applicant should not have to assume that its plan form will work, only to be rejected, especially given the extensive, unknown timeline of receipt of a final decision on a special review permit.

Comment [A56]: The COGCC also requires a reclamation plan. Reclamation of an oil and gas location falls within the realm of the COGCC authority.

Comment [A57]: Does Boulder County have a specific form it will be using for this plan? An Applicant should not have to assume that its plan form will work, only to be rejected, especially given the extensive, unknown timeline of receipt of a final decision on a special review permit.

Comment [A58]: An Applicant may have an estimate of the duration for drilling, et al, but Boulder County cannot mandate a duration of time/drilling obligation on the oil and gas operations.

Comment [A59]: Does Boulder County have a specific form it will be using for this plan? An Applicant should not have to assume that its plan form will work, only to be rejected, especially given the extensive, unknown timeline of receipt of a final decision on a special review permit. sweeping of paved roads/shoulders, pothole patching, repaving, crack sealing, and chip sealing necessary to maintain an adequate surface of paved roads along the proposed route; and

any necessary physical infrastructure improvements to ensure public safety for all modes of travel along travel routes to and from the site.

P. Water Supply. Applicant must submit estimated water supply requirements and usage for the proposed development including:

- An estimate of the amount of water needed for the through all phases of the oil and gas operation on the oil and gas location;
- A list of all available physical water sources of water supply for the project, and if multiple sources are available, and analysis of which source is least detrimental to the environment;
- A description of the physical source of water supply that the Applicant proposes to use to serve the oil and gas operation on the oil and gas location;
- Water conservation measures, if any, that may be implemented within the oil and gas operation on the oil and gas location; and
- An estimate of the amount of water that will be used at the site, where and how the water will be consumed, the amount of wastewater produced, and disposal plans for wastewater.

Q. Offsite Transport Plan. A plan identifying the alternatives for transporting water and oil and gas resources to and from the site. The plan must include:

- Pipeline Option. A plan demonstrating how pipelines may be used to transport the resource, including -all flowlines, gathering lines, and pipelines located within Boulder County that may be used to serve the site and establishing compliance with the pipeline provisions of Section 12-600.
- Vehicle Option. A plan demonstrating how truck transportation may be used to transport the resource as an alternative to pipelines. The plan must include the information in subsection (O) above with respect to trucks uses to transport water and oil and gas.

R. Electrification Plan. A plan identifying all sources of electricity that will be brought to or used at the site during all phases, including drilling, completion, and operations.

S. Cultural and Historic Resources Mitigation Plan. A cultural, historical and archeological survey of the parcel or parcels to be used for the proposed oil and gas operation that demonstrates compliance with the standards of Section 12-600.

T. Geologic Hazard Area Mitigation Plan. A geologic hazard mitigation plan identifying hazard types and areas on the parcels demonstrating compliance with the standards of Section 12-600.

U. Natural Resources Mitigation Plan. A plan identifying natural resources on the parcels and , information demonstrating compliance with Section 12-600.

V. Recreational Activity Mitigation Plan. Information identifying recreational activities, such as public trails and open space, in the area of the proposed oil and gas <u>operationlocation</u>, and a plan demonstrating how impacts will be mitigated and compliance with the standards of Section 12-600.

W. Scenic Attributes and Rural Character Mitigation Plan. An assessment of scenic attributes and rural character potentially impacted by the proposed oil and gas operation and a plan for mitigating impacts in compliance with Section 12-600.

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Comment [A60]: Does Boulder County have a specific form it will be using for this plan? An Applicant should not have to assume that its plan form will work, only to be rejected, especially given the extensive, unknown timeline of receipt of a final decision on a special review permit.

Comment [A61]: Does Boulder County have a specific form it will be using for this plan? An Applicant should not have to assume that its plan form will work, only to be rejected, especially given the extensive, unknown timeline of receipt of a final decision on a special review permit.

Comment [A62]: Does Boulder County have a specific form it will be using for this plan? An Applicant should not have to assume that its plan form will work, only to be rejected, especially given the extensive, unknown timeline of receipt of a final decision on a special review permit.

Comment [A63]: Does Boulder County have a specific form it will be using for this plan? An Applicant should not have to assume that its plan form will work, only to be rejected, especially given the extensive, unknown timeline of receipt of a final decision on a special review permit.

Comment [A64]: This plan is concerning as it relates to seismicity, which is monitored and governed by the COGCC, CDPHE and other state and federal agencies.

Comment [A65]: Does Boulder County have a specific form it will be using for this plan? An Applicant should not have to assume that its plan form will work, only to be rejected, especially given the extensive, unknown timeline of receipt of a final decision on a special review permit.

Comment [A66]: Does Boulder County have a specific form it will be using for this plan? An Applicant should not have to assume that its plan form will work, only to be rejected, especially given the extensive, unknown timeline of receipt of a final decision on a special review permit.

Comment [A67]: Does Boulder County have a specific form it will be using for this plan? An Applicant should not have to assume that its plan form will work, only to be rejected, especially given the extensive, unknown timeline of receipt of a final decision on a special review permit. X. Surrounding Land Uses Mitigation Plan. Information identifying surrounding land uses within one-half (1/2) mile of the proposed oil and gas locationoperation, an assessment of any potential impacts to surrounding land uses, and a plan mitigating impacts in compliance with Section 12-600.

Y. Water Quality Plan, A plan establishing compliance with the water quality provisions of Section 12-600. The plan may include details such as the Applicant's plans for water quality testing, prevention of illicit or inadvertent discharges, stormwater discharge management, containment of pollutants, and spill notification and response as required by federal and state agencies. The Applicant shall provide the County with the information it provides to the COGCC ensuring compliance with the water quality protection standards contained in Rule 317(B). Rule 910, and any other applicable COGCC rules governing water quality protection. The Applicant shall provide all water well test results. The Applicant shall provide its plans concerning downhole construction details and installation practices, including casing and cementing design, and shall inform the County how the plans establish that the operation does not create significant degradation to surface waters or drinking water aquifers.

Z. Wetlands Protection Plan. Information identifying wetlands in the area and demonstrating compliance with the standards of Section 12-600.

AA. Additional Information. If the Director determines that the County needs additional information to determine whether the proposed oil and gas operation meets the criteria in Section 12-600, the Director may require the Applicant to submit such information prior to the determination of the completeness approval in order to avoid delays in the permitting process.

12-600 Special Review Standards

All special review applications shall be reviewed according to the following standards, which the Board, considering the advice of the Director, has determined to be applicable based on the nature and extent of the proposed development. When two or more of the standards listed below conflict, the Board, based upon advice of the Director, shall evaluate the applicability and importance of each of the conflicting standards under the facts of the specific application and make a reasonable attempt to balance the conflicting standards in reaching a decision. The Board's decision will be based upon compliance with all special review standards it determines are applicable. In evaluating compliance with these standards, the Board shall take into consideration the number of wells proposed on an <u>oil and gas location well pad and</u> the parcel. Depending on site specific factors, a greater number of wells on a site is likely to have a greater impact and, as a result, may require more mitigation measures than a pad or parcel with fewer wells.

- A. Adequate Water Supply. Development applications for proposed oil and gas operations must demonstrate that the available water supply is the least detrimental to the environment among the available sources and adequate to meet the needs of the development. Special review approval may be conditioned upon sufficient proof of adequate water supply.
- B. Agricultural Land. Oil and gas operations shall, to the maximum extent practicable, avoid the loss of agricultural land, including farm or ranch land, or any other vegetated land; shall minimize impacts on agricultural operations; and shall avoid impacts to livestock, grazing permits or leases, or grazing permittees or lessees.

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Comment [A68]: Does Boulder County have a specific form it will be using for this plan? An Applicant should not have to assume that its plan form will work, only to be rejected, especially given the extensive, unknown timeline of receipt of a final decision on a special review permit.

Comment [A69]: Does Boulder County have a specific form it will be using for this plan? An Applicant should not have to assume that its plan form will work, only to be rejected, especially given the extensive, unknown timeline of receipt of a final decision on a special review permit.

Comment [A70]: See comments in 12-600 to water quality provisions.

Comment [A71]: Does Boulder County have a specific form it will be using for this plan? An Applicant should not have to assume that its plan form will work, only to be rejected, especially given the extensive, unknown timeline of receipt of a final decision on a special review permit.

Comment [A72]: Boulder County stated that this section will be used to determine the "compatibility" of an oil and gas operations plan. There is significant concern about using the term "compatibility" as an attempt to trump COGCC rules and regulations, which have primary authority over oil and gas operations in Colorado. Further, all of these standards can be used to deny oil and gas operations by their very nature of being perceived as "inherently incompatible" as stated in 12-100.A.

Comment [A73]: See prior comment.

Comment [A74]: This standard is subject to the regulations of COGCC, CDPHE and DOW resources. This inclusion falls within the aforementioned concern of "compatibility" being used outside the scope of Boulder's land use authority.

- C. Air Quality The installation and operation of any oil and gas operation shall, to the maximum extent practicable, avoid causing degradation to air quality. To the maximum extent practicable, the installation and operation of any oil and gas operation must eliminate, capture, or minimize all emissions and dust associated with onsite activities and traffic on access roads must be minimized.
- D. Cultural and Historic Resources. Oil and gas operations shall, to the maximum extent practicable, avoid causing degradation of cultural or historic or archaeological resources, sites eligible for County landmarking, or sites in the National Historic Register.
- E. Emergency Prevention and Response. Oil and gas operations shall, to the maximum extent practicable, avoid risks of emergency situations such as explosions, fires, gas, oil or water pipeline leaks, ruptures, hydrogen sulfide or other toxic gas or fluid emissions, and hazardous material vehicle accidents or spills. Oil and gas operations shall ensure that, in the event of an emergency, adequate practices and procedures are in place to protect public health and safety and repair damage caused by emergencies.
- F. Floodplains and Floodways. Oil and gas operations are prohibited in floodways. Oil and gas operations may not be located in a floodplain unless the Applicant can demonstrate that extraction of the resource is impossible from an area outside of the mapped floodplain.
- G. Geologic Hazard Areas Other than Floodplains and Floodways. To the maximum extent practicable, oil and gas operations shall not be located in geologic hazard areas as mapped in the Comprehensive Plan.
- H. Land Disturbance. The installation and operation of any oil and gas operation shall, to the maximum extent practicable, avoid causing degradation to the surface of the property used for the oil and gas operation other than the uses allowed by the surface owner in any surface use agreement or as allowed by the COGCC when utilizing a surface bond. Considerations for application of this standard include, but are not limited to, the natural topography and existing vegetation, unnecessary or excessive site disturbance, and minimization of the amount of cut and fill.
- I. Natural Resources. The installation and operation of any oil and gas operation shall, to the maximum extent practicable, avoid causing degradation to mapped significant natural communities, natural landmarks and natural areas, rare plant areas, significant riparian corridors, prominent natural features such as distinctive rock and land forms, rivers and streams and other landmarks or other identified visual or scenic resources, or critical wildlife habitat as defined in the Comprehensive Plan or identified on the site.
- J. Pipelines. Any newly constructed or substantially modified pipelines on site must meet the Additional Provisions listed at Article 4-514(E)(5)(a) – (f). -If the special review application creates a need for new or substantially modified pipelines located off the site of the special review application but within Boulder County, the special review application must be processed in tandem with the separate application for special review required for such offsite pipelines under Article 4-514(E). In such case, any approval of the special review application for oil and gas operations shall be conditioned on approval of the separate special review application for the associated Gas and/or Hazardous Liquid Pipelines, and vice versa.
- K. Recreational Activity. Oil and gas operations shall, to the maximum extent practicable, avoid causing degradation to the quality and quantity of recreational activities in the County. Considerations for application of this standard include, but are not limited to, designated

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Comment [A75]: This standard is subject to the regulations of COGCC and CDPHE. This inclusion falls within the aforementioned concern of "compatibility" being used outside the scope of Boulder's land use authority.

Comment [A76]: The use of the term degradation is subjective and may be used to deny oil and gas operations by their very nature of being perceived as "inherently incompatible" as stated in 12-100.A.

Comment [A77]: The use of the term degradation is subjective and may be used to deny oil and gas operations by their very nature of being perceived as "inherently incompatible" as stated in 12-100 A.

Comment [A78]: See COGA White paper comments on Floodplains.

Comment [A79]: The use of the term degradation is subjective and may be used to deny oil and gas operations by their very nature of being perceived as "inherently incompatible" as stated in 12-100.A.

Comment [A80]: This standard is subject to the regulations of COGCC, CDPHE, CPW and other state agencies. This inclusion falls within the aforementioned concern of "compatibility" being used outside the scope of Boulder's land use authority.

Comment [A81]: The use of the term degradation is subjective and may be used to deny oil and gas operations by their very nature of being perceived as "inherently incompatible" as stated in 12-100.A.

Comment [A82]: Boulder County has determined that pipelines may be utilized as a mitigation measure, yet requires pipelines to be subjected to the lengthy permitting process. Pipelines provide a significant reduction in many impacts from oil and gas development and should be allowed to be permitting on an expedited basis with special review permit under this Article 12.

Comment [A83]: Pipeline construction and modifications are jurisdictional and subject to the regulations Colorado Department of Transportation, Colorado Public Utilities Commission, CDPHE and COGCC. Where does this leave Article 4-603? Will Article 4-603 be deleted?

Comment [A84]: The use of the term degradation is subjective and may be used to deny oil and gas operations by their very nature of being perceived as "inherently incompatible" as stated in 12-100.A environmental resources, trails, and recreational uses, as identified in the Comprehensive Plan or identifiable on or near the site.

- Scenic Attributes and Rural Character. Oil and gas operations shall, to the maximum extent
 practicable, avoid causing degradation to the scenic attributes and rural character of the area.
- M. Surrounding Land Uses. Oil and gas operations shall be, to the maximum extent practicable, sited and operated in a manner so that the operation is compatible with surrounding land uses. In applying this standard, separation from surrounding land uses shall be considered the most effective measure to ensure compatibility between proposed oil and gas operations and existing land uses. Considerations for application of this standard also include, but are not limited to, impacts on used or occupied structures; the natural topography and existing vegetation; the location of surrounding land uses; prevailing weather patterns, including wind directions; and hilltops, ridges, slopes, and silhouetting.
- N. Transportation, Roads, and Access. Oil and gas operations shall, to the maximum extent practicable, be designed and implemented to minimize impacts to physical infrastructure of the county transportation system, ensure public safety, and maintain quality of life for other users of the county transportation system, adjacent residents, and affected property owners. Where available, existing private roads must be used to minimize land disturbance unless traffic safety, visual concerns, noise concerns, or other adverse surface impacts dictate otherwise.
- Water Quality. Oil and gas operations shall, to the maximum extent practicable, avoid causing degradation to surface or ground waters within Boulder County.
- P. Wetlands Protection. Oil and gas operations shall, to the maximum extent practicable, avoid causing degradation to wetlands within Boulder County. Among other methods to achieve compliance with this standard, the proposed oil and gas operation shall not alter historic drainage patterns and/or flow rates or shall include acceptable mitigation measures to compensate for anticipated drainage impacts.

12-700 Conditions of Approval Applicable to All Special Review Approvals

The following oil and gas facility operational requirements and mitigation measures are likely necessary to meet the approval criteria in 12-600. Accordingly, unless specifically waived by the Board for good cause shown, all of the following shall apply to all oil and gas operations in the form of conditions of approval applicable to each special review permit:

- A. Anchoring. All mechanized equipment associated with oil and gas operations must be anchored to minimize transmission of vibrations through the ground and prevent flood hazards.
- B. Applications and Permits. The Applicant must provide copies of local, state and federal applications required for the operation, and permits, when issued, to the Director.
- C. Certification. An authorized representative for the Applicant must submit monthly annual reports to the Director certifying compliance with all air quality requirements imposed by the State and the County as conditions of approval and documenting any periods of non-compliance, including the date and duration of each deviation and a compliance plan and schedule to achieve

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Comment [A85]: Please provide examples of "designated environmental resources" for clarity.

Comment [A86]: The use of the term degradation is subjective and may be used to deny oil and gas operations by their very nature of being perceived as "inherently incompatible" as stated in 12-100.A.

Comment [A87]: Boulder County stated that this section will be used to determine the "compatibility" of an oil and gas operations plan. There is significant concern about using the term "compatibility" as an attempt to trump COGCC rules and regulations, which have primary authority over oil and gas operations in Colorado. Further, all of these standards can be used to deny oil and gas operations by their very nature of being perceived as "inherently incompatible" as stated in 12-100.A.

Comment [A88]: This standard is subject to the regulations of COGCC, CDPHE, DOW and other state agencies. The use of the term degradation is subjective and may be used to deny oil and gas operations by their very nature of being perceived as "inherently incompatible" as stated in 12-100.A.

Comment [A89]: This standard is subject to the regulations of COGCC, CDPHE, CPW, DOW and other state agencies. The use of the term degradation is subjective and may be used to deny oil and gas operations by their very nature of being perceived as "inherently incompatible" as stated in 12-100.A.

Comment [A90]: Many of these COA overlap the COGCC or other state agency regulations. Boulder County should be aware of the operational conflict and preemption tests applied by the Colorado Supreme Court in the cases referenced in the COGC White paper. Further, an Applicant could be viewed as being subject to dual enforcement under many of the conditions of approval set forth in this section between Boulder County and the COGCC regulations. This does not allow an Applicant any clarity, consistency or certainty as it relates to oil and gas development in Boulder County. Comment [A91]: This COA is governed by COGCC regulations.

Comment [A92]: Does Boulder County have a specific form it will be using for this certification? An Applicant should not have to assume that its certification will work, only to be rejected. compliance. The reports must contain a certification as to the truth, accuracy and completeness of the reports.

- D. Color. Facilities must be painted in a uniform, non-contrasting, non-reflective color that blend with the surrounding landscape.
- E. Discharge Valves. Open-ended discharge valves on all storage tanks, pipelines and other containers must be secured where the operation site is unattended or is accessible to the general public. Open-ended discharge valves must be placed within the interior of the tank secondary containment.
- F. Dust Suppression and Fugitive Dust. Dust associated with on-site activities and traffic on access roads must be minimized throughout construction, drilling and operational activities such that there are no visible dust emissions from access roads or the site to the extent practicable given wind conditions. The Applicant must comply with permit and control provisions of the <u>COGCC</u>, Colorado Air Quality Control Program, <u>and</u> Boulder County Public Health's best management practices for dust suppression.
- G. Emergency Preparedness Plan. The Applicant must implement the Emergency Preparedness plan approved by the Director. The plan must be updated on an annual basis, or as conditions change, such as responsible field personnel and ownership.
- H. Exhaust. The exhaust from all engines, motors, coolers and other mechanized equipment must be vented up or in a direction away from the closest occupied structures.
- Flammable Material. Oil and gas operations must comply with COGCC rules concerning control
 of fire hazards.
- J. Flares and Combustion Devices. All flares shall be designed and operated as follows:
 - 1. The flare must be fired with natural gas.
 - 2. The flare must be designed and operated in a manner that will ensure no visible emissions during normal operation. Visible emissions means observations of smoke for any period or periods of duration greater than or equal to one (1) minute in any fifteen (15) minute period during normal operation, pursuant to EPA Method 22. Visible emissions do not include radiant energy or water vapor.
 - The flare must be operated with a flame present at all times when emissions may be vented to it.
 - 4. All combustion devices must be equipped with an operating auto-igniter.
 - 5. If using a pilot flame ignition system, the presence of a pilot flame must be monitored using a thermocouple or other equivalent device to detect the presence of a flame. A pilot flame must be maintained at all times in the flare's pilot light burner. If the pilot flame goes out and does not relight, then if no telemetry system is in place, a visible alarm shall be in place on-site and activated.
 - 6. If using an electric arc ignition system, the arcing of the electric arc ignition system must pulse continually and a device must be installed and used to continuously monitor the electric arc ignition system.
- K. Hydrocarbon Emissions Leak and Detection and Repair. The Applicant must develop and maintain a leak detection and repair program approved by the Director using modern leak detection technologies, such as infra-red cameras, for equipment used on the well site. Any leaks discovered should be reported to the County immediately. Operators must repair leaks as

Comment [A93]: This COA is governed by COGCC regulations.

Comment [A94]: This COA is governed by COGCC and CDPHE regulations.

Comment [A95]: This COA is governed by COGCC and CDPHE regulations.

Comment [A96]: This COA is governed by COGCC regulations.

Comment [A97]: This COA is governed by COGCC and CDPHE regulations.

Comment [A98]: This COA is governed by CDPHE regulations.

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quickly as practicable; if more than 48-hours repair time is needed after a leak is discovered, an explanation of why more time is required must be submitted to the Director.

- L. Lighting. Except during drilling, completion or other operational activities requiring additional lighting, down-lighting is required, meaning that all bulbs must be fully shielded to prevent light emissions above a horizontal plane drawn from the bottom of the fixture. A lighting plan must be developed to establish compliance with this provision. The lighting plan must indicate the location of all outdoor lighting on the site and any structures, and must include cut sheets (manufacturer's specifications with picture or diagram) of all proposed fixtures. Lighting must be no greater than required for safe operation.
- M. Log. The Applicant must maintain a log for each well completion operation at each gas wellhead affected facility. The log must be completed on a daily basis and must contain the records specified in 40 C.F.R. § 60.5420(c)(1)(iii).
- N. Maintenance of Machinery. Routine field maintenance of vehicles or mobile machinery must not be performed within three hundred (300) feet of any water body.
- O. Noise Any equipment used in drilling, completion, or production of an oil and gas operation must comply with the maximum permissible noise levels set forth at C.R.S. § 25-12-103.
- P. Notice of Commencement. The Applicant must mail notice to the Department; surface owners of the parcels of land on which the oil and gas operation is located; owners of the parcels of land within one half1_000 feet mile (2,640 feet) of the parcel on which the oil and gas operation location is located; and the physical addresses of all parcels within one half mile1_000 feet (2,640 feet) of the parcel on which the oil and gas operation is located at least thirty (30) days prior to the commencement of the drilling and completion phase. The notification must include contact information for the Applicant; the American Petroleum Institute (API) well number; the latitude and longitude coordinates for each well in decimal degrees to an accuracy and precision of five (5) decimals of a degree using the North American Datum of 1983; and the planned-planned date of the beginning of drilling and estimated date of completion.
- Q. Performance Guarantee. If approval is conditioned upon revegetation, road improvements, or similar specific site improvements, the Applicant will be required to submit a letter of credit in a form satisfactory, or other form of financial assurance for road improvements, to the County for the full cost of such road improvements prior to issuance of a special review construction permit. The Applicant may apply to the Director for release of the letter of credit upon completion of the improvements.
- R. Reclamation Plan. Any special review approval must include any COGCC required interim and final reclamation procedures.
- Removal of Debris. Oil and gas operations must comply with COGCC rules concerning removal of debris. Burning of trash must not occur in association with an oil and gas operation per C.R.S. 25-7-128(5).
- T. Removal of Equipment. <u>All equipment used for drilling, re drilling and maintenance of the facility must be removed from the site within thirty (30) days after completion of the work, unless otherwise agreed to by the surface owner and the Director.</u> Permanent storage of equipment on well-pad sitesoil and gas locations is not allowed.
- U. Representations. The approved special review application is subject to all conditions and commitments of record, including verbal representations made by the Applicant, and record and

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Comment [A99]: This COA is governed by COGCC regulations.

Comment [A100]: Applicant's are required to keep these logs pursuant to COGCC regulations.

Comment [A101]: This COA is governed by COGCC regulations for oil and gas operations.

Comment [A102]: This COA is governed by COGCC regulations.

Comment [A103]: This COA is governed by COGCC regulations.

Comment [A104]: This COA is governed by COGCC regulations.

Comment [A105]: This is an unwarranted representation as there will be numerous rounds of verbal communications during this process which could lead to numerous changes. The record is the record. If this is included, it should be limited to "verbal representations made at any public hearing on the special review application." in the application file, and without limitation must encompass compliance with all approved mitigation plans.

- V. Spills and Leaks. Chemical spills and releases must be reported and cleaned up according to applicable state and federal laws, including the Oil and Pollution Act and the Clean Water Act, as applicable. Operators must report spills and hydrocarbon emissions leaks to the Director immediately and no later than twenty –four (24) hours of the time the leak or spill is discovered.
- W. Stormwater Control. A stormwater control plan that establishes that all operations shall use most effective performance techniques and best management practices to minimize impacts to surface waters from erosion, sediment, and other sources of pollution such as chemicals. The stormwater control plan required by COGCC Rule 1002(f) may be provided to establish compliance with this stormwater control plan provision. Prior to commencement of operations, the Applicant must also provide the Director with a letter from the Water Quality Control Division of the Colorado Department of Public Health and Environment showing that the project is covered under the Colorado Discharge Permit System (CDPS) general permit for Stormwater Discharges Associated with Construction Activities (state stormwater discharge permit), when applicable.
- X. Temporary Access Roads. Property subject to temporary access roads associated with oil and gas operations shall be reclaimed and re-vegetated to its original state within sixty (60) days after discontinued use of the temporary access roads.
- Y. Transportation Fees All applicable transportation fees shall be paid prior to issuance of a special review construction permit, including without limitation:
 - 1. access permit fees;
 - 2. oversize/overweight permit fees;
 - 3. right of way construction permit fees; and
 - fees to mitigate the cumulative impacts of heavy truck traffic on the county transportation system.
- Z. Transportation Infrastructure. Any costs to improve county transportation system infrastructure necessitated by the proposed oil and gas operation shall be the responsibility of the Applicant. All transportation system infrastructure improvements and associated costs shall be determined by the County Transportation Department. The County shall perform the work or arrange for it to be performed. If the Applicant disagrees with the infrastructure improvements or associated costs as assessed by County Transportation, it may request that County Transportation approve a different route for its proposed oil and gas operation that avoids the need for such improvements. Alternatively, the Applicant may engage a licensed civil engineering firm to perform a study to independently evaluate county transportation system infrastructure improvements necessitated by the proposed oil and gas operation.
- AA. Transportation Permits. Applicant shall obtain all applicable transportation permits, including but not limited to County access, driveway, utility construction, and oversize and overweight permits, as well as all appropriate Colorado Department of Transportation (CDOT) access permits pursuant to the CDOT State Highway Access Code. Access roads on the site and access points to public roads as identified in the application materials shall be reviewed by the County Transportation Department and shall be built and maintained in accordance with the engineering specifications and access road standards defined in the Transportation Standards.
- BB. Vegetation. An analysis of the existing vegetation on the site establishing a baseline for revegetation upon temporary or final reclamation or abandonment of the operation.

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Comment [A106]: This COA is governed by COGCC, CDPHE and federal agency regulations.

Comment [A107]: This COA is governed by CDPHE regulations.

Comment [A108]: While outside the scope of this Article, the transportation fees are unreasonable as related to the individual number of wells and should be reviewed on a well pad basis. Comment [A109]: See comments in Section 12-900.B. below.

Comment [A110]: There are numerous concerns with this provision as they place 100% responsibility on an operator for a shared County road.

Comment [A111]: As drafted, this language is discriminatory to the oil and gas industry. If the County can attribute the need for improvements solely to oil and gas operations, then the County must present substantial supporting evidence that the operation will cause significant effects. Industry recognizes effects occur on County roads, and are open to reviewing and analyzing the effects, however, a subjective determination by the County Transportation Department is concerning without early input and discussion with the Applicant.

- CC. Vehicle Tracking Control Practices. Vehicle tracking control practices must be used to control potential sediment discharges from operational roads, well pads, and other unpaved surfaces. Practices could include road and pad design and maintenance to minimize rutting and tracking, controlling site access, street sweeping or scraping, tracking pads, wash racks, education, or other sediment controls. Traction chains from heavy equipment shall be removed before entering a County road.
- DD. Water Quality. A water quality control plan that establishes that all operations shall use most effective performance techniques and best management practices to minimize impacts to water quality, including plans for water quality testing, prevention of illicit or inadvertent discharges, and containment of pollutants as required by state and federal agencies.
- EE. Weed Control. Oil and gas operations must comply with COGCC rules concerning weed control.³⁷ which recommend Applicants consult with Boulder County concerning weed control measures. The Applicant is responsible for ongoing weed control at all locations disturbed by oil and gas operations, pipelines, and along access roads during construction and operation, until abandonment and final reclamation is completed per County or other applicable agency regulations. The appropriate weed control methods and species to be controlled must may be determined through review and recommendation by the County Weed Coordinator by reference to the Boulder County Noxious Weed Management Plan and, where appropriate, in coordination with the requirements of the surface owner.
- FF. Well Abandonment or Decommissioning. The Applicant must comply with any COGCC rules regarding well abandonment, decommission or reclamation. Upon plugging and reclaiming abandonment of a well, the Applicant must provide the County with surveyed coordinates of the abandoned decommissioned or reclaimed well. Unless otherwise requested by the surface owner, the Applicant must leave onsite a permanent physical marker of the well location.

12-701 Potential Site Specific Mitigation Measures

Application of these potential mitigation measures will be site-specific and based on the land use impacts of the particular oil and gas operation, the environmental impacts of the particular oil and gas operation, the Applicant's ability to undertake particular mitigation measures given the current state of technology, and consideration of any associated standards or rules adopted by the COGCC, the Air Quality Control Commission, or the EPA.

A. Air Quality.

 Minimization of Hydrocarbon Emissions. To protect air quality, hydrocarbon emissions control measures may be required, including, but not limited to, one or more of the following:

- a. <u>Where technically and economically feasible or practicable</u>, <u>e</u>Electrification from the power grid or from renewable sources of all permanent operation equipment with engines or motors that can be electrified.
- b. Pipelines for water delivery to the site.
- c. Pipelines for transportation of oil and gas away from the site.

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- d. Limitations on truck traffic to and from the site.
- e. Implementation of "tankless" production techniques.
- f. Environmentally sensitive and efficient production techniques, such as using natural gas onsite rather than flaring.

Comment [A112]: This COA is governed by COGCC and CDPHE regulations.

Comment [A113]: This is not an accurate statement. Rule 603,f. provides: "603.f. Statewide equipment, weeds, waste, and trash requirements. All locations, including wells and surface production facilities, shall be kept free of the following: equipment, vehicles, and supplies not necessary for use on that lease; weeds; rubbish, and other waste material. The burning or burial of such material on the premises shall be performed in accordance with applicable local, state, or federal solid waste disposal regulations and in accordance with the 900-Series Rules. In addition, material may be burned or buriad on the premises only with the prior written consent of the Surface Owner."

Comment [A114]: This COA is governed by COGCC and CDPHE regulations.

Comment [A115]: There is a recognition that these are not mandated Mitigation Measures for all special review applications, however, there is a concern that the "potential" application will become a "mandated" application of the mitigation measures.

Comment [A116]: These potential mitigation measures are governed by COGCC and CDPHE regulations.

Comment [A117]: Please see comments below regarding pipelines.

Comment [A118]: Please see comments below regarding pipelines.

Comment [A119]: These potential mitigation measures are governed by COGCC and CDPHE regulations.

- g. For well pads that are not electrically operated, use of quiet design mufflers (also referred to as hospital grade or dual dissipative) or equivalent.
- h. Use of acoustically insulated housing or covers to enclose the motor or engine.
- Manufacture test or other data demonstrating hydrocarbon destruction or control efficiency that complies with a design destruction efficiency of 98% or better.
- Bleed and vent restrictions on continuous bleed pneumatic devices, intermittent vent pneumatic devices, compressor engines, heater treaters, dehydrator reboilers, process heaters-pilot flames.
- k. Proof that any flare, auto ignition system, recorder, vapor recovery device or other equipment used to meet the hydrocarbon destruction or control efficiency requirement is installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manuals.
- I. Emissions controls of 90% or better for glycol dehydrators.
- m. Zero-emission desiccant dehydrators.
- n. Hydrocarbon control of 95% or better for crude oil, condensate, and produced water tanks with uncontrolled actual emissions of VOCs greater than five (5) TPY.
- Year-round application of odor requirements as set forth in 5 C.C.R. 1001-9, § XII (as amended).
- Electronic surveillance monitors to detect when pilot lights on control devices are extinguished.
- q. Drilling, completion and operation of wells using closed loop pitless systems for containment and/or recycling of all drilling, completion, flowback and produced fluids.
- r. Emission controls of hydrocarbon emissions of 95% or better for centrifugal compressors and reciprocating compressors.
- s. Dry seals on centrifugal compressors.
- t. Routing of emissions from rod-packing and other components on reciprocating compressors to vapor collection systems.
- u. Reduction or elimination of emissions of associated gas from hybrid gas-oil wells (i.e. gas that is co-produced from a well that primarily produces oil), including prohibition of uncontrolled venting.
- v. Emission control of 90% or better during liquids unloading (i.e. maintenance activities to remove liquids from existing wells that are inhibiting production), including the installation of an automated plunger lift.
- w.Reduction or elimination of emissions from pipeline and/or gathering line maintenance activities such as pigging, including routing emissions to a vapor collection system.
- x. Proof of compliance with State-required dust control measures and imposition of an opacity requirement as tested using EPA Method 9
- y. Odor reduction or elimination outside a specified distance from the well site.
- z. Use of an automated tank gauging system.
- 2. Hydrocarbon Emissions Leak Detection and Repair and Air Quality Monitoring. The Applicant may be required to develop and maintain an acceptable leak detection and repair program using modern leak detection technologies such as infra-red cameras for equipment used on the well site. Operators may be required to repair leaks on a schedule approved by the Director. Continuous ambient air quality monitoring to measure hydrocarbon emissions and meteorological data may be required.

Comment [A120]: These potential mitigation measures are governed by COGCC and CDPHE regulations. Comment [A121]: These potential mitigation measures are

governed by COGCC and CDPHE regulations.

Comment [A122]: These potential mitigation measures are governed by COGCC and CDPHE regulations.

Comment [A123]: These potential mitigation measures are governed by COGCC and CDPHE regulations.

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Comment [A129]: These potential mitigation measures are governed by COGCC and CDPHE regulations.

Comment [A130]: These potential mitigation measures are governed by COGCC and CDPHE regulations.

Comment [A131]: These potential mitigation measures are governed by COGCC and CDPHE regulations.

Comment [A132]: These potential mitigation measures are governed by COGCC and CDPHE regulations.

Comment [A133]: These potential mitigation measures are governed by COGCC and CDPHE regulations.

Comment [A134]: These potential mitigation measures are governed by COGCC and CDPHE regulations.

Comment [A135]: These potential mitigation measures are governed by COGCC and CDPHE regulations.

Comment [A136]: These potential mitigation measures are governed by COGCC and CDPHE regulations.	
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Comment [A138]: These potential mitigation measures are governed by COGCC and CDPHE regulations.	
Comment [A139]: These potential mitigation measures are governed by COGCC and CDPHE regulations.	
Comment [A140]: These potential mitigation measures are governed by CDPHE regulations.	

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Water Quality Monitoring and Well [resting]. To protect local water quality, the Board may require the Applicant to implement a water quality monitoring and well testing plan. Water quality testing and control measures may be required, including, but not limited to, one or more of the following:

В.

1. Notice to Well Owners. Sixty (60) days prior to completing or hydraulic fracturing a well, the Applicant must identify and provide notice to all water well owners with wells located within one-quarter (%) mile of the projected track of the borehole of a proposed well and those who have requested notice under 12-400(H)(3)(a). The notice must contain the following provision: "Boulder County informs owners of water wells near the (name of well) that in order to establish base line water well data, it would be prudent to conduct a water well test, in conformance with Boulder County Land Use Code Section 12-700, prior to the anticipated (completion) / (hydraulic fracturing) on (date)."

 Abandoned Oil and Gas Well Assessment Assessment and monitoring of plugged and abandoned decommissioned or removed from use and dry and abandoned-removed from use oil and gas wells (abandoned or decommissioned wells) within one-quarter (%) mile of the projected track of the borehole of a proposed well. This may include:

- a. Based upon examination of COGCC and other publicly available records, identification of all abandoned wells located within one-quarter (%) mile of the projected track of the borehole of a proposed well.
- b. Risk assessment of leaking gas or water to the ground surface or into subsurface water resources, taking into account plugging and cementing procedures described in any recompletion or plugged and abandoned (P&A) report filed with the COGCC.
- c. Notification of the Director and COGCC of the results of the assessment of the plugging and cementing procedures.
- d. Permission from each surface owner who has an abandoned well on the surface owner's property to access the property in order to test the abandoned well. If a surface owner has not provided permission to access after thirty (30) days from receiving notice, the Applicant shall not be required to test the abandoned well.
- e. For each abandoned well for which access is granted, a soil gas survey of the abandoned well prior to production from the proposed well and again one (1) year and then every three (3) years after production has commenced.
- f. Notification of the results of the soil gas survey to the Director and the COGCC within three (3) months of conducting the survey or advise the Director that access to the abandoned wells could not be obtained from the surface owner.
- 2. Water Well Sampling. Based upon records of the Colorado Division of Water Resources, the Applicant may be required to identify and offer to sample all water wells located within one-quarter (¼) mile of the projected track of the borehole of a proposed well as follows. Sampling requirements may include:
 - Sampling wells on either side of the borehole track and in different aquifers, where applicable.
 - b. For each water well sampled, at least 30 notice to respective surface owners and opportunity to respond to the notice regarding sampling the water well or advise the Director that Applicant could not obtain access to the abandoned wells from the surface owner.
 - c. Testing prior to setting of the conductor casing.
 - d. Testing for the analytes listed in Table 1.
 - e. Reporting the location of the water well using a GPS with sub-meter resolution.

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Comment [A141]: These potential mitigation measures are governed by COGCC, CDPHE, and DOW regulations.

Comment [A142]: The use of "abandoned" wells here makes it seem as if we are leaving the well with no reclamation. The more accurate term is removal from use of decommission despite the report with the COGCC is "Plugged and Abandoned Report."

Comment [A143]: These potential mitigation measures are governed by COGCC regulations.

Comment [A144]: Any water quality monitoring and well testing regulation and/or mitigation measure should be in compliance with COGCC Rule 609 or Rule 318A, as applicable.

- Field observations. Reporting on damaged or unsanitary well conditions, adjacent potential pollution sources, odor, water color, sediment, bubbles, and effervescence.
- 4. Post Completion Testing. Within one (1) year after completion of the proposed well, post-completion testing using the same analytical parameters as above and repeated three (3) and six (6) years after the completion of the well. Additional post-completion tests if changes in water quality are identified during follow-up testing or in response to complaints from water well owners.
- Test results. Provide copies of all test results described above to the Director, the COGCC, and the water well owners within three (3) moths after collecting the samples.
- Resolution and mitigation. If sampling shows water contamination, mitigation of the contamination may be required. Mitigation measures may include the following:
 - a. If free gas or a dissolved methane concentration level greater than one (1) milligrams per liter (mg/l) is detected in a water well, determination of the gas type using gas compositional analysis and stable isotope analysis of the methane (carbon, oxygen, and hydrogen).
 - b. If the test results indicate thermogenic or a mixture of thermogenic and biogenic gas, an action plan to determine the source of the gas.
 - c. Immediate notification to the Director, the COGCC, and the owner of the water well if the methane concentration increases by more than five (5) mg/l between sampling periods, or increases to more than ten (10) mg/l.
 - Immediate notification to the Director, the COGCC and the owner of the water well if BTEX and/or TPH are detected as a result of testing.
 - e. Reasonable good faith efforts to conduct initial baseline testing of the identified water wells prior to the setting of the conductor casing at the site. Post-completion tests for the same analytical parameters listed above.
 - f. Further water well sampling in response to complaints from water well owners.
 - g. Timely production and distribution of test results, well location, and analytical data in electronic deliverable format to the Director, the COGCC and the water well owner.
- Qualified Independent Professional Consultant, All abandoned well assessments and water well testing must be conducted by the Applicant or, if requested by a surface owner, by a qualified independent professional consultant approved by the Director.

Comment [A145]: Any water quality monitoring and well testing regulation and/or mitigation measure should be in compliance with COGCC Rule 609 or Rule 318A, as applicable

Comment [A146]: Any water quality monitoring and well testing regulation and/or mitigation measure should be in compliance with COGCC Rule 609 or Rule 318A, as applicable.

Comment [A147]: Any water quality monitoring and well testing regulation and/or mitigation measure should be in compliance with COGCC Rule 609 or Rule 318A, as applicable:

Comment [A148]: Any water quality monitoring and well testing regulation and/or mitigation measure should be in compliance with COGCC Rule 609 or Rule 318A, as applicable.

Comment [A149]: Any water quality monitoring and well testing regulation and/or mitigation measure should be in compliance with COGCC Rule 609 or Rule 318A, as applicable.

GENERAL WATER QUALITY	Alkalinity Conductivity & TDS pH Dissolved Organic Carbon (or Total Organic
	Carbon) Bacteria
	Hydrogen Sulphide

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MAJOR IONS	Calcium
	Chloride
	Fluoride
	Magnesium
	Potassium
	Sodium
	Sulfate
	Nitrate + Nitrite (total)
METALS	Arsenic
	Barium
	Boron
	Chromium
	Copper
	Iron
	Lead
	Manganese
	Selenium
	Strontium
VOLATILE ORGANIC COMPOUNDS	Methane
	BTEX compounds
	(Benzene, Toluene,
	Ethylbenzene, Xylene)
	Total Petroleum
	Hydrocarbons (TPH)
OTHER	Water Level
	Stable isotopes of water
	(Oxygen,
	HydrogenCarbon).

- C. Land Disturbance and Compatibility. Conditions of approval that will reduce impacts to the site, natural resources, environmental resources, agricultural resources, floodways and floodplains, wetlands, and recreational activities, and will enhance compatibility with the surrounding area or scenic and rural character may be required, including, but not limited to, one or more of the following:
 - Location. A change of the proposed location of the well pad that allows for extraction of the resource and mitigates the land use impacts.
 - 2. Reduction. A reduction of the number of wells on a single pad.
 - 3. Disruption if surrounding occupants of residential structures are significantly adversely affected by drilling and completion-activities that are expected to last more than sixty (60) days, reasonable disruption payments to those occupants. The amount of disruption payments may be calculated using market data prepared by a qualified independent professional consultant, with consideration given to existing surface use agreements with such occupants. Consideration shall be given to the cost of replacement housing, the effect of disruption of health or lifestyle, moving costs, transportation costs, and other factors affecting residents. If owners or lesses are engaged in agricultural production, disruption payments based on may also be based on diminishment in crop-production due to drilling and compaction activities.

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Comment [A150]: Boulder County stated that this section will be used to enhance the "compatibility" of an oil and gas operations plan. There is significant concern about using the term "compatibility" as an attempt to trump COGCC rules and regulations, which have primary authority over oil and gas operations in Colorado. Further, all of these standards can be used to deny oil and gas operations by their very nature of being perceived as "inherently incompatible" as stated in 12-100.A.

Comment [A151]: Siting of an oil and gas location is not within the authority of Boulder County. The siting of an oil and gas location rests within the primary jurisdiction of the COGCC.

Comment [A152]: This provision is concerning as Boulder County does not have legal authority to require a private operator to pay a private surface owner or "surrounding occupants" for the use and development of its real property rights. This section is unreasonable and should be deleted. An Applicant will have already informed the people attending the neighborhood meeting, which would include "surrounding" occupants, if they choose to attend upon receipt of notice of such meeting. There should be no attempted extention of an Applicant to make monetary payments to "surrounding occupants" for the use and development of its real property rights and the real property rights of the mineral interest owners. There are numerous miligation measures that will be placed on any special review permit approved under this Article 12. Those mitigation measures are intended to reduce the disruption to "surrounding occupants." A potential requirement to pay monetary amounts if drilling and completion lasts more than 60 days is unreasonable and unnecessary.
- 4.3. Pad dimensions. Adjustment of pad dimensions to the minimum size necessary to accommodate operational needs while minimizing surface disturbance.
- 5.4. Structures and surface equipment. Adjustment of structures and surface equipment to the minimal size necessary to satisfy operational needs.
- 6-5. Shared infrastructure. Use of shared existing infrastructure by oil and gas operations, minimizing the installation of new facilities and avoiding additional disturbance to lands in a manner that reduces the introduction of significant new land use impacts to the environment, landowners and natural resources.
- 7.6. Landscaping and irrigation.
 - a. Landscaping plans including drought tolerant species that are native and less desirable to wildlife and suitable for the climate and soil conditions of the area.
 - b. An irrigation plan may be required where buffering is accomplished with vegetation.
- 8-7. Buffering from Sensitive Visual Areas, Buffering from sensitive visual areas (i.e., roads, property lines, or residences) by providing landscaping, berming, or other types of screening materials along the perimeter of the site between the surface equipment and the sensitive visual area.
- 9-8. Vegetation. Maximization of the amount of natural screening available for the facility. Natural screening includes, but is not limited to, the use of existing vegetation as a background, the construction of the operation near screening stands of vegetation, or placement in valleys allowing topographic screening. Construction of the operation in a manner that minimizes the removal of and damage to existing trees and vegetation. If the operation requires clearing trees or vegetation, feathering and thinning of the edges of the cleared vegetation and mowing or brush-hogging of the vegetation while leaving root structure intact, instead of scraping the surface.
- 10.9. Equipment. Use of buried or low profile tanks and less intrusive equipment.

12-800 Judicial Review

A final decision by the Board of County Commissioners on a special review application is subject to judicial review in a court of competent jurisdiction under C.R.C.P. 106(a)(4).

12-900 Procedures Following Approval of a Special Review Application

- A. Right to Enter. Any site under an approved special review may be inspected by the County at any time to ensure compliance with the requirements of the approved special review, provided that four (4) hours prior notice is given to the contact person at the telephone number supplied by the Applicant. The Applicant shall provide the telephone number of a contact person who may be reached twenty-four (24) hours a day for purposes of being notified of any proposed County inspection under this Section. Each approved special review shall contain the following statement: "Applicant consents to allow the County the right of inspection of this approved operation provided the County contacts the Applicant with four (4) hours prior notice of such inspection." County Inspections shall be coordinated with the Applicant to ensure Applicant presence onsite and to ensure the site visit is conducted in accordance with all applicable Applicant safety requirements.
- B. Effect of the Approved Special Review. After approval of a special review application and following compliance with any applicable conditions of approval, the County Land Use Department shall issue a construction permit for the proposed oil and gas operation within five

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Comment [A153]: Siting of an oil and gas location is not within the authority of Boulder County. The siting of an oil and gas location rests within the primary jurisdiction of the COGCC.

Comment [A154]: Siting of an oil and gas location is not within the authority of Boulder County. The siting of an oil and gas location rests within the primary jurisdiction of the COGCC,

Comment [A155]: Siting of an oil and gas location is not within the authority of Boulder County. The siting of an oil and gas location rests within the primary jurisdiction of the COGCC.

Comment [A156]: "Sensitive visual areas" should be defined with particularity and with careful consideration.

Comment [A157]: This is subject to COGCC regulations.

Comment [A158]: An Applicant should be able to have applied, and have ready in the "queue" all of the permits referenced in this Section. If not, this adds additional unnecessary delay to the overall permitting process in Boulder County. The timeline for a special review permit is already an unknown (likely 6 months or longer). If an operator cannot apply for the permits listed in this section at the same time the special review permit passes completeness, or before, the operator is forced to start a new permit process for each of the other permits listed herein. Again, this unnecessary and unreasonable delay on the allowance of oil and gas operations in Boulder County could be viewed as a de facto ban on oil and gas development due to the newer-ending permitting process. (5) days of such approval. Following receipt of the permit, the Applicant shall be entitled to have processed approved any necessary building, grading, access, floodplain, or other County permits and, following the receipt of these additional permits, is authorized to otherwise proceed with the proposed oil and gas operation. The approval of the special review application under this Article does not result in the vesting of development rights, nor does it authorize the violation of any County or state regulations or preclude the County from refusing to issue any other permit or authorization if the plans and specifications do not comply with applicable County regulations.

- C. Duration of the Approved Special Review. An approved special review application shall remain effective for a period of three (3) calendar years following the date of the Board'sfinal plan approval. If the operation is not commenced within the three (3) calendar years, effective period of the special review, the permit shall expire and the Applicant will have to reapply for a new permit prior to undertaking operations.
- D. Amendments. Any proposal to change an approved special review application approved after the effective date of these Regulations shall require an application to the Department to determine whether the proposed change constitutes a substantial modification to the approved special use.
 - 1. In determining whether the proposed modification to a special review approval is substantial, the Director shall consider the record of the special review approval, including any express conditions, limitations, or agreements governing the approved special review application, in addition to the nature, character, and the extent of additional land use impacts of the proposed modification. <u>Unless approved in the original special review permit as to the number of wells on the oil and gas location, the addition of more than five (S) a new wells on wells on the oil and gas location, the addition of more than five (S) a new wells on wells on an existing pad shall be considered a substantial modification to the entire pad and the entire pad shall be required to come into compliance with this Article, to the extent practical. Other changes shall be considered substantial if they significantly-alter the nature, character, or extent of the land use impacts <u>considering past usage prior to of the special review approval by more than 50% of the original use</u>. A substantial modification shall not include any modification that is made to enhance best management practices or mitigate environmental impacts with new or innovative technology.</u>
 - 2. If the Director determines that the change constitutes a substantial modification, no such change shall be allowed to proceed until an application to amend the approved special use₃₇. The amendment to the application which shall be treated as an expedited new new applicationnew application and be processed within thirty (30) days but only for the portion of the application requiring amendment, is filed with the Director and Director approval granted in accordance with this Article. The Applicant or its successor may appeal the Director's decision to require an amended special review to the Board of County Commissioners, provided that any such appeal shall be in writing and shall be filed with the Director no later than thirty (30) days following the date of the Director's decision to require a special use amendment. The Board of County Commissioners shall hear the appeal within fourteen (14) days or at the next hearing. Following the hearing, the Board of County Commissioner's determination on an appeal shall not be considered a final decision subject to judicial review under Section 12-1100.

Comment [A159]: There is no definition of substantial modification. In order to have clarity, certainty and consistency, there should be a definition for an Applicant to understand. This should not be a discretionary definition.

Comment [A160]: Incorporating a % into the review of "substantial modification" assists both the County and the Applicant in the understanding as to what would be considered for an amendment.

12-1000 Enforcement

If the County determines at any time that there is a violation of an approved special review application, the Director shall be entitled to commence one or more of the following enforcement measures and remedies.

- A. Written Order Suspending the Approval. The Director may issue a written order to the Applicant (or owner, Applicant, or agent, as applicable) identifying the violation and suspending the approved special use and all activity otherwise allowed by the special use approval. -If the violation presents an immediate threat to the health, safety or welfare of the public, the Director may immediately issue the written order to the Applicant in writing and, upon receipt, the Applicant must cease all activities and operations immediately until the violation is remedied. In all other instances, Pprior to issuing a written order, the Director shall provide written notice to the Applicant describing the violation, and stating a reasonable time within which the violation or filed a written appeal with the Board of County Commissioners, the written order shall be delivered to the Applicant in writing, and, upon receipt, the Board of County Commissioners of the threatened or actual issuance of the written order shall be acted upon pursuant to Section 12-1300(B) below.
- B. Appeal Hearing Before Board of County Commissioners. If the Applicant files a timely appeal with the Board of County Commissioners of the Director's determination to issue a written order suspending the special use, the Board shall schedule a hearing on the appeal at the soonest possible time of which the Applicant shall receive reasonable prior notice. If the Board confirms at the hearing that the violation has occurred and has not been corrected, the Board in its discretion may confirm issuance of a written order finding a violation of the special review permitsuspending the special use-or the determination to draw upon the financial guarantee, if applied to road transportation matters, or the determination to request the COGCC to draw on the Applicant's COGCC required financial assurance. The Board, in its discretion, may also give the Applicant additional time to correct the violation, or may specify the time at which the Director may take appropriate action to have the violation corrected.
- C. Other Enforcement Remedies. In addition to the foregoing enforcement measures, Boulder County has the right to any and all other enforcement measures and remedies provided by law, including but not limited to seeking relief through the courts to enforce an approved special review., or to stop or abate any oil and gas operations occurring or about to occur without the requisite special use or other county approvals.

12-1400 Definitions

Terms used in this Article 12 are defined below. Any terms not specifically defined for purposes of Article 12 -may be defined in Article 18.

Abandonment. The permanent abandonment of a well, which shall be determined at the time of the Applicant's filing of the appropriate abandonment form with the COGCC.

Adequate Water Supply. A water supply that will be sufficient for build-out of the proposed development in terms of quality, quantity, dependability, and availability to provide a supply of water for the type of development proposed, and may include reasonable conservation measures and water demand management measures to account for hydrologic variability.

Agent. One authorized to make binding representations on behalf of the Applicant.

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Comment [A161]: Boulder County cannot require an operator to cease its operations as part of its enforcement authority under this Article. The operator will have authority to conduct its operations under the approved COGCC permit. Boulder County may, however, immediately contacting the COGCC and request a cease and desist order under the proper COGCC procedures.

Comment [A162]: Any definition herein included in the COGCC 100 Series rules should reflect the COGCC definitions applicable to oil and gas operations. Adversely Affected or Adverse Impact. The impact of an action, after mitigation, that is considerable or substantial, and unfavorable or harmful, including social, economic, physical, health, aesthetic, historical and/or biological impacts, including but not limited to, effects on natural resources, the structure or function of affected ecosystems, or persons, structures or communities...

Applicant. Person, corporation or other legal entity possessing the legal right to develop the mineral resource who has applied for an oil and gas operationspecial review permit for an oil and gas location.

BTEX and/or TPH. Benzene, Toluene, Ethylbenzene, Xylene and Total Petroleum Hydrocarbons.

Chemical(s). Any element, chemical compound or mixture of elements and/or compounds.

Closed Loop Drilling Process or System. A closed loop mud drilling system typically consists of steel tanks for mud mixing and storage, and the use of solids removal equipment, which normally includes some combination of shale shakers, mud cleaners and centrifuges sitting on top of the mud tanks. This equipment separates drill cutting solids from the mud stream coming out of the wellbore while retaining the water or fluid portion to be reused in the continued drilling of the well bore. The solids are -placed in containment provided on the site. The system differs from conventional drilling where a reserve pit is used to allow gravitational settling of the solids from the mud which can then be reused. A Closed Loop Drilling System does not include use of a Conventional Reserve Drilling Pit.

COGCC. The Colorado Oil and Gas Conservation Commission.

Combustion device. Any ignition device, installed horizontally or vertically, used in exploration and production operations to combust otherwise vented emissions from completions.

Corridor. Tracts of land within which a pipeline right-of-way is located.

County. Boulder County, Colorado, and its officers, staff, employees and agents.

Degradation. Lowering in grade or desirability; lessening in quality.

Department. Boulder County Land Use Department.

Drilling Operation. Any work or actual operation undertaken for the purposes of carrying out any of the rights, privileges or duties of a lessee for drilling of an oil well, gas well, or cathodic protection well_s, including but not limited to the actual operation of drilling in the ground.

Equipment. Machinery or structures located on well pads, rights-of-way, or other land uses in the oil and gas operation, including, but not limited to, wellheads, separators, dehydration units, heaters, meters, storage tanks, compressors, pumping units, internal combustion engines, and electric motors.

Flow Line. Those segments of pipe from the wellhead downstream through the production facilities ending at: in the case of gas lines, the gas metering equipment; or in the case of oil lines the oil loading point or LACT unit; or in the case of water lines, the water loading point, the point of discharge to a pit, the injection wellhead, or the permitted surface water discharge point. Flow lines are defined and regulated by the COGCC. Pipeline connecting individual well sites to gathering lines.

Gas Well. <u>A well, the principal production of which at the mouth of the well is gas, as defined by the Act. Well capable of producing natural gas.</u>

Gathering Line. A pipeline and equipment described below that transports gas from a production facility (ordinarily commencing downstream of the final production separator at the inlet flange of the custody transfer meter) to a natural gas processing plant or transmission line or main. The term "gathering line" includes valves, metering equipment, communication equipment, cathodic protection facilities, and pig launchers and receivers, but does not include dehydrators, treaters, tanks, separators, or compressors located downstream of the final production facilities and upstream of the natural gas processing plants, transmission lines, or main lines. Gathering lines are defined and regulated by the Colorado Public Utilities Commission and CDPHE. Pipeline transporting produced gas, oil, or water from multiple well sites to a centralized facility.

Grading Plan. Plan view and cross-section of existing and proposed land contours, cuts and fills, topsoil storage location and stabilization methods, and maximum slopes.

Ground Water. Subsurface waters in a zone of saturation.

Heavy Equipment. Drilling rigs, completion rigs, construction equipment, and individual truck/trailer combination vehicles with a gross vehicle weight exceeding five tons.

Improvement. Any new construction activity, grading or land development, or addition of equipment or materials to a site.

Mitigation. One or more of the following actions which are prioritized in order of preference:

Avoiding Impacts. Avoiding an impact by not taking a certain action or parts of an action; or

Minimizing Impacts. Limiting the degree or magnitude of the action or its implementation, or by changing its location; or

Rectifying or Remediating Impacts. Repairing, rehabilitating, or restoring the impact area, facility or service; or

Reducing or Eliminating Impacts. Decreasing or removing the impact over time by preservation and maintenance operations; and

Other Provisions for Addressing Impacts. Using alternative means not contemplated by this Article to provide equivalent biological, social, environmental and/or physical mitigation effects.

Most Effective Performance Techniques and Practices. The application of proven and emerging techniques, technologies or other Best Management Practices used in conducting oil and gas exploration and development which avoid, neutralize, exclude, eliminate, mitigate or minimize adverse on and offsite impacts to public health and the environment, landowners, and natural resources, and which may reduce conflicts between potentially impacted landowners and the oil and gas industry.

Occupied Structure. Any building or structure that requires a certificate of occupancy or building or structure intended for human occupancy.

Oil and Gas Facility, Equipment or improvements used or installed at an oil and gas location for the exploration, production, withdrawal, gathering, treatment, or processing of oil or natural gas. Oil and Gas Facilities

Comment [A163]: This definition should mirror the COGCC definition as the COGCC governs the siting and governance of the Oil and Gas Facility. Formatted: Font:Bold

The site and associated equipment used for the production, transportation, treatment, and/or storage of oil and gas and waste products; or

An individual well-pad-built with one or more wells and operated to produce liquid petroleum and/or natural gas, including associated equipment required for such production; or

An individual well pad with one or more wells for exploration of oil and gas; or

Gathering lines, and ancillary equipment-including but not limited to drip stations, vent stations, pigging facilities, chemical injection stations and valve boxes; or

Temporary storage and construction staging yards in place for less than six months; or

Any other oil and gas operation which may cause significant degradation.

Oil and Gas Location. A definable area where an operator has disturbed or intends to disturb the land surface in order to locate an oil and gas facility.

Oil and Gas Operations. The exploration for oil and gas, including the conduct of seismic operations and the drilling of test bores; the siting, drilling, deepening, recompletion, reworking, or abandonment of an oil and gas well, underground injection well, or gas storage well; production operations related to any such well including the installation of flowlines and gathering systems; the generation, transportation, storage, treatment, or disposal of exploration and production wastes; and any construction, site preparation, or reclamation activities associated with such operations. Exploration for oil or gas, including but not limited to conventional oil and gas; the siting, drilling, deepening, recompletion, reworking, refracturing, closure or abandonment of an oil and gas well; oil and gas facilities; construction, site preparation, reclamation and related activities associated with the development of oil and gas replacement of equipment used in oil and gas facilities; or any change in or alteration to oil and gas facilities that may result in an emissions increase.

Oil Well. - A well, the principal production of which at the mouth of the well is oil, as defined by the Act. Well capable of producing crude petroleum oil.

Operation. Oil and Gas Operations.

Owner or Applicant. <u>The person who has the right to drill into and produce from a pool and to</u> appropriate the oil or gas produced therefrom either for such owner or others or for such owner and others, including owners of a well capable of producing oil or gas, or both.Person who has the right to drill into and produce from a pool and to appropriate the oil or gas produced either for such owner or Applicant or others.

Permanent Equipment. Equipment located onsite for a duration greater than six (6)one (1) year months effective one (1) year after the drilling and completion of a welldate of first production of a well.

Person. Any individual, partnership, corporation, association, company, or other public or corporate entity, including but not limited to the State or Federal governments, and any of their political subdivisions, agencies, or instrumentalities.

Pit. Any natural or man-made depression in the ground used for oil or gas exploration or production purposes excluding steel, fiberglass, concrete or other similar vessels which do not release their contents to surrounding soils.

Practicable. Able to be done or put in practice successfully.

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Comment [A164]: This definition should mirror the COGCC definition as the COGCC governs the siting and governance of the Oil and Gas Location.

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Comment [A165]: This definition should mirror the COGCC definition as the COGCC has primary authority over Oil and Gas Operations.

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Comment [A166]: This definition should mirror the COGCC definition.

Regulation(s). Article 12 of the Boulder County Land Use Code.

Referral Agency. An agency, organization, or technical consultant deemed appropriate and necessary, by the County, to review an application and provide professional analysis and recommendations, including without limitation other County offices and departments, municipal, state, or federal agencies having an interest in or authority over all or part of the application or permit, and professional or legal consultants.

Residential. All residential zoned property within unincorporated Boulder County, Colorado,

Right-Of-Way. The legal right to pass through grounds or property owned by another, or land, property or interest therein, usually in a strip, acquired for or devoted to transportation or conveyance purposes.

Site. The areas that are directly disturbed during the drilling and subsequent operation of, or affected by production facilities directly associated with, any oil well, gas well, or injection well and its associated well pad.Lands, including the surface of a severed mineral estate, on which exploration for, or extraction and removal of, oil or gas is authorized under a lease.

Surface Owner. The oowner of the surface property on which the facility-oil and gas location will be located or constructed.

Surrounding. Within one half mile1,000 feet of a proposed oil and gas operation.location.

Temporary Use Area. Disturbed lands immediately adjacent to the well pad or right of way used by an Applicant during the construction or maintenance of a well, pipeline or other facility that will be reclaimed for permanent operations.

TPY-Tons per year.

Transmission Line. Pipeline transporting oil, natural gas or any other products derived from oil and gas production, which is defined as a transmission line by the U.S. Department of Transportation regulations under the Natural Gas Pipeline Safety Act of 1968, as amended.

VOC. Volatile organic compounds.

Water or Water Body. Any surface waters which are contained in or flow in or through Boulder County, excluding ephemeral streams, roadway ditches, water in sewage systems, water in treatment works of disposal systems, water in potable water distribution systems, stock ponds or irrigation ditches not discharging to live streams, and all water withdrawn for use until use and treatment have been completed.

Water Supply Entity. A municipality, county, special district, water conservancy district, water conservation district, water authority, or other public or private water supply company that supplies, distributes, or otherwise provides water at retail.

Well, or Wellhead. AnWell. An oil or gas well, a hole drilled for the purpose of producing oil or gas, a well into which fluids are injected, a stratigraphic well, a gas storage well, or a well used for the purpose of monitoring or observing a reservoir. Equipment attached to the casing of an oil, gas or injection well above the surface of the ground.

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Comment [A167]: As crafted, this defines every piece of property within Boulder County as "residential." This is not correct. Well Blowdown. Maintenance activity designed to remove unwanted fluids from mature wells during which time gas is often vented to the atmosphere.

Well Completion. An oil well shall be considered completed when the first new oil is produced through wellhead equipment into lease tanks from the ultimate producing interval after the production string has been run. A gas well shall be considered completed when the well is capable of producing gas through wellhead equipment from the ultimate producing zone after the production string has been run. A dry hole shall be considered completed when all provisions of plugging are complied with as set out in these rules. Any well not previously defined as an oil or gas well, shall be considered completed ninety (90) days after reaching total depth. If approved by the Director of the COGCC, a well that requires extensive testing shall be considered completed when the drilling rig is released or six months after reaching total depth, whichever is later. The process that perforates well casing, stimulates the reservoir using various techniques including but not limited to acid treatment and hydraulic fracturing, allows for the flowback of petroleum or natural gas from wells to expel drilling and reservoir fluids, and tests the reservoir flow eharacteristics, which may vent produced hydrocarbons to the atmosphere via an open pit or tank.

Well Pad. Area in which permanent operations for the well take place including, at a minimum, that portion of the pad area occupied by permanent production equipment. Well pads may contain one or more wellheads and associated equipment.

EXHIBIT A.2

Amendment to Article 2

Amend Section 2-800(C)(1) as follows:

C. Duties and Responsibilities

1. The Board of Adjustment holds regular meetings to hear appeals of any order, requirement, decision, or determination made by the Land Use Director or County Engineer in administering or enforcing Article 4 related provisions (i.e., definitions in Article 18) of this Code, to hear appeals of the Director specified provisions of Article 12, and to consider certain variances from the requirements of Article 4 of this Code.

Amend section 2-800(c)(2) by adding the additional section:

g. from any provision of Article 12.

Amendment to Article 3

3-300 Application Submittals and Processing

- A. The Director may create a waitlist for accepting applications. When the Director establishes a waitlist, Land Use shall inform prospective applicants regarding the waitlist and notify Applicants when they have reached the front of the waitlist so that their applications may be accepted and processed. With the exception of special review applications for oil and gas operations under Article 12 of this Code, pProspective applicants shall generally be placed on the waitlist on a first come, first served basis. However, the Director may prioritize items basis on special circumstances, such as reconstruction-related permit applications submitted after a natural disaster.
- B. When the Director establishes a waitlist, no time limit for processing applications shall apply until the application is removed from the waitlist and accepted for processing.

Amendments to Article 4-500 (use definitions)

- Amend Article 4-508 Mining Uses by deleting current Sections 4-508(B) and 4-508(C) and replacing with new Section 4-508(B):
 - B. Oil and Gas Operations

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Comment [A168]: Overall, this waitlist should not apply to a special review permit for oil and gas operations. This could cause an infinite delay in the ultimate development of private property mineral rights and the valuable hydrocarbon resources necessary for our State and Nation. Further, this waitlist could be viewed as nothing more than a ban on oil and gas operations and development for an unknown period of time, which is illegal under Colorado law.

Comment [A169]: This language could be viewed as nothing more than a ban on oil and gas operations and development for an unknown period of time, which is illegal under Colorado law.

- Definition: See Article 12-1400 1.
- Districts Permitted: By special development plan-review for oil and gas operations in all 2. districts (Article 12)
- 3.
- Parking Requirements: None Loading Requirements: None 4.
- Additional Provisions: None 5.
- Re-order remaining items and update cross-references as needed.
- 2. Amend Article 4-514 Utility and Public Service Uses:

Amend the definition of the use entitled "Gas and/or Hazardous Liquid Pipelines" so that it reads as follows:

- Ε. Gas and/or Hazardous Liquid Pipelines
 - Definition: Pipelines for the collection and transmission of crude oil, natural gas or other 1. hazardous liquids, but not including gathering lines or flowlines.
 - Districts Permitted: In all districts by Special Review, or review under Article 8 (areas and 2. activities of state interest), as applicable. If known, gGathering lines, and flowlines, flow lines and pipeline transmission liness which are part of a new oil and gas development operationslocation and which are located on or adjacent to the same parcel or parcels as an the well head, pumping units, tanks and/or treatersoil and gas location will referenced in the bspecial use permit application e-subject to Special Review-under Article 12 of this Code -and dobut are not required not required to obtain separate permits for such lines. Boulder County recognizes that the gathering lines, flow lines and pipeline transmission lines may be operated by an entity outside of the Applicant.
 - 3. Parking Requirements: None
 - Loading Requirements: None 4.
 - 5. Additional Provisions:
 - This use is not required to be located on a building lot, or comply with the a, minimum lot size requirement for the district in which it is located.

The Applicant must provide written notice of the application to all property owners within 500 feet of the centerline of the proposed pipeline.

c. Siting.

i. Such lines shall, to the maximum extent practicable, be sited to avoid areas containing residential, commercial, and industrial buildings; places of public assembly; and surface water bodies. In no instance may a Gas and/or Hazardous Liquid Pipeline be located closer than fifty (50) feet from a residential, commercial, or industrial buildings; a place of public assembly; or a-the high-water mark of any surface water body. This distance shall be measured from the nearest edge of the pipeline. Pipelines and gathering lines that pass within 150 feet of general residential, commercial, and industrial buildings or the high water mark of any surface water body shall incorporate leak detection and repair, secondary containment, or other mitigation, as appropriate.

ii. Such lines shall, to the maximum extent practicable, be sited to avoid areas that will impact county open space or road rights-ofwayparksway parks. Surface impacts and habitat fragmentation and disturbance must be minimized where such pipelines are permitted. iii. To the maximum extent practicable, Applicants shall share existing pipeline rights-of-way and consolidate new corridors for pipeline rightsof-way to minimize surface impacts.

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Comment [A170]: Boulder County should not require a special review permit for gathering lines, flowlines or pipelines as other state and federal agencies govern the permitting of such lines. It is recognized that certain locations of pipelines fall under the land use authority of Boulder County, but not to the extent of requiring the special review permit process to apply.

- Iv. To minimize negative impacts to the channel, bank, and riparian areas, when crossing streams, rivers or irrigation ditches, operators must use boring technology or alternative Director-approved most effective performance techniques and practices.
- d. Construction.
 - I. Flow lines, gathering lines, and transmission lines shall be buried below the level of cultivation, and must be installed so that the cover between the top of the pipe and the ground level, road bed, river bottom, or underwater natural bottom is at least four (4) feet deep, unless otherwise agreed to between the landowner and Applicant via private agreement.
 - ii. The Department may require an Applicant for a pipeline to provide a risk-based engineering study for all or part of its proposed pipeline right of way that may require the implementation of more stringent construction or operation standards or space between the pipeline and other structures.
 - III. During pipeline construction for trenches that are left open for more than five (5) days and are greater than five feet in width, install wildlife crossovers and escape ramps where the trench crosses well-defined game trails and at a minimum of one-quarter mile intervals where the trench parallels well-defined game trails.
 - All pipe installed in a ditch must be installed in a manner that minimizes the introduction of secondary stresses and the possibility of damage to the pipe.
 - v. Any pipe installed underground must have at least twelve (12) inches of clearance between the outside of the pipe and the extremity of any other underground structure, except that for drainage tile the minimum clearance may be less than 12 inches but not less than two (2) inches. Where twelve (12) inches of clearance is impracticable, the Director may approve a request by the operator to reduce the minimum clearance if adequate provisions are made for corrosion control.

Records. A complete record that shows the following must be maintained by the operator for the life of each pipeline facility and provided to the County in electronic format compatible with the County's geographic information system for reference in case of emergency:

- The total number of girth welds and the number nondestructively tested, including the number rejected and the disposition of each rejected weld.
- ii. The amount, location, and cover of each size of pipe installed.
- iil. The location of each crossing of another pipeline.
- lv. The location of each buried utility crossing.
- v. The location of each overhead crossing.

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vi. The location of each valve and corrosion test station.

Where appropriate given the context of the application, in reviewing an application or formulating a condition of approval the Director may consult the pipeline guidelines published by the U.S. Department of Transportation Pipeline and Hazardous Materials Safety Administration for acceptable separation distances between residential, institutional, recreational, commercial, or industrial uses and hazardous operations, available at 24 C.F.R. Part 51.

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Comment [A171]: The typical records retention is determined by federal and state agency requirements.

EXHIBIT A.3

Amendment to Board of Adjustment provisions

Modify Section 4-1201(D) as follows:

D. No-<u>Appeals</u> to the Board of Adjustment or requests for variances before the Board of Adjustment are permitted for <u>related to</u> any matters under Article 12, Development Plan <u>Special</u> Review for Oil and Gas Operations, <u>must be specifically permitted under Article 12</u>.

Add new section 4-1204 as follows:

4-1204 Appeal

A. Any party to a proceeding before the Board of Adjustment may appeal the Board of Adjustment's final decision under C.R.C.P. 106(a)(4).

EXHIBIT A.4 Development Standards

Modify Section -7-904(D)(4) as follows: 4. A Development Plan Review ("DPR") Special Review permit authorizing oil and gas operations subject to a stormwater control plan approved under Article 12-800 700 or 701 of this Code (conditions of approval applicable to all county oil and gas operations DPR permits), shall be considered the equivalent of a County Engineer stormwater quality under this Article 7-904, and a separate permit application under this Article 7-904 for such operations shall not be required.

EXHIBIT A.5

Clerical changes necessary to conform rest of Land Use Code to DC-16-___

- Delete references to "to "Development Plan review for Oil and Gas Operations" and replace with "Special Review for Oil and Gas Operations"
- Delete references to "Development Plan Review" and "DPR" and replace with "Special Review."
- 3. Update Table of Contents and associated cross-references in Code as necessary.
- 4. Update use tables as necessary.

1

 All other clerical amendments necessary to conform entire Land Use Code to primary text amendments approved in this DC-16-_____.

OIL & GAS REGULATION IN THE STATE OF COLORADO WHITE PAPER

The Colorado Oil and Gas Association ("COGA") appreciates the opportunity to present this White Paper to Boulder County.

In the past few years, the Colorado Oil and Gas Conservation Commission ("COGCC") has implemented numerous precedent-setting regulations, including baseline groundwater testing and monitoring, air regulations targeting methane leak detection and repair, spill detection and reporting, and large scale facility requirements in urban mitigation for the oil and gas industry.¹ The COGCC, with a staff of almost 100 experienced oil and gas personnel, has implemented these regulations to provide operators, local government and citizens with consistency, clarity and certainty regarding virtually every technical aspect of oil and gas operations. Before implementing its proposed oil and gas regulations ("Proposed Regulations") in the Boulder County Land Use Code ("Code"), Boulder County should carefully consider the extent to which its Proposed Regulations could conflict with these extensive state regulations.

The purpose of this White Paper is two-fold. COGA first provides an overview of the law of preemption, which precludes local governments from regulating areas of oil and gas operations that the state regulates. The White Paper then explains some of the state regulations already in place, showcasing the depth and breadth of the existing regulatory framework, and points out certain Proposed Regulations that likely conflict with state regulations and may therefore be preempted by state authority.

I. <u>Boulder County is Preempted from Implementing Regulations that Conflict</u> with State Law.

Before implementing the Proposed Regulations, Boulder County should understand that Colorado law precludes local governments from regulating areas of oil and gas operations that are already regulated by state authority. The law of preemption, as recognized by statute and Colorado courts, plainly establishes what aspects of oil and gas operations local governments may and may not regulate.

¹ <u>http://cogcc.state.co.us/reg.html#/rules; https://www.colorado.gov/pacific/cdphe/aqcc-regs.</u>

The state's broad authority to regulate oil and gas arises under the Colorado Oil and Gas Conservation Act ("Act"), which mandates that the state foster the responsible development of Colorado's oil and gas natural resources.² Specifically, the Act requires the COGCC to regulate oil and gas development in Colorado to ensure: (i) the efficient exploration and production of oil and gas resources in a manner consistent with the protection of public health, safety and welfare, (ii) the prevention of waste, (iii) the protection of mineral owners' correlative rights, and (iv) the prevention and mitigation of adverse environmental impacts.³

The Colorado Supreme Court recently addressed the scope of the COGCC's authority to regulate oil and gas operations under the Act in two decisions, *Fort Collins v. COGA*⁴ and *Longmont v. COGA*.⁵ These cases define a new preemption balance between state and local government regulation of oil and gas development and clarify what local governments can regulate, how they can regulate, and how their regulations can be challenged.

The *Longmont* decision arose from Longmont's decision to ban hydraulic fracturing and the storage and disposal of fracking wastes. The *Fort Collins* decision resulted from a five-year moratorium enacted by Fort Collins in 2013 on hydraulic fracturing and storage of fracking waste product. In each case, the trial court held on summary judgment that the ban and the moratorium were operationally preempted by state law. On appeal, the Colorado Supreme Court upheld the decision of each trial court, concluding that Longmont's ban and Fort Collins's moratorium operationally conflicted with applicable state law and were therefore preempted.

These decisions impact local government regulation of hydraulic fracturing in two important ways. First, the cases articulate a clear statement of the operational conflict test. Clarifying decades of confusing law on the issue, the Court explained the operational conflict test as: "considering whether the effectuation of a local interest would materially impede or destroy a state interest, recognizing that a local ordinance that authorizes what state law forbids or that forbids what state law authorizes will necessarily satisfy this standard."⁶ Under this test, local government law can be preempted in two ways: (i) if it directly conflicts with state law; or (ii) if it indirectly conflicts with state law by materially impeding a state interest. As the Court made clear, this test applies beyond bans and moratoria to all efforts by local governments to regulate any aspect of hydraulic fracturing.

Applying this test, the Court held that Longmont's ban and Fort Collins's moratorium were operationally preempted because the cities' restrictions materially impeded the state's interest in regulating oil and gas by undermining the state's interest in the uniform

² Colo. Rev. Stat. § 34-60-101, et seq.

³ Colo. Rev. Stat. §34-60-102(1)(a).

⁴ City of Fort Collins v. Colo. Oil and Gas Ass'n, 2016 CO 28.

⁵ City of Longmont v. Colo. Oil and Gas Ass'n, 2016 CO 29.

⁶ 2016 CO 29, ¶42.

⁷ 2016 CO 29, ¶42.

regulation of oil and gas development. The Colorado Supreme Court's analysis relied upon the state's interest in oil and gas development as expressed in the "exhaustive set of rules and regulations to prevent waste and to conserve oil and gas in the State of Colorado while protecting public health, safety, and welfare."⁸ These "pervasive rules and regulations," according to the Court, would be rendered "superfluous" by the ban and moratorium.⁹

Second, and just as important as offering a clear operational conflict test, the Court also clarified how this operational conflict test is applied. The Court rejected arguments by the cities that an operational conflict can only be shown through a fact-based, evidentiary hearing, ruling instead that "in virtually all cases," the operational conflict test "will involve a facial evaluation of the respective statutory and regulatory schemes, not a factual inquiry as to the effect of those schemes 'on the ground."¹⁰ Under this holding, challenges to local government oil and gas regulation should be resolved on summary judgment within a few months of the filing of a complaint by the trial court comparing the language of the applicable state regulation with the local government ordinance and determining whether they facially conflict.

In the wake of these decisions, local government authority to implement oil and gas regulation is limited to areas that do not conflict with state law and that do not impinge upon the technical and operational areas that are solely within the jurisdiction of the COGCC to regulate. This means that local governments may not adopt regulations that facially conflict with state requirements or that render those state requirements "superfluous."¹¹ For example, under the *Longmont* and *Fort Collins* cases, no local government may impose more extensive setbacks or mitigation requirements than provided by the state (COGCC rules specify "statewide location requirements" (Rule 603) and setbacks and mitigation measures for oil and gas facilities and drilling and servicing operations (Rule 604)).

Additionally, local governments may not enact regulations mirroring state law and then seek to enforce those provisions. The Colorado Court of Appeals has specifically rejected the authority of a statutory town to enforce COGCC requirements on oil and gas operations.¹² That decision is consistent with the Colorado Supreme Court decisions in *Longmont* and *Fort Collins*, under which duplicative regulations were deemed to impede the COGCC's comprehensive authority to permit oil and gas wells and to achieve uniform regulation of fracking and oil and gas operations in general.

⁸ 2016 CO 29, ¶52; 2016 CO 28, ¶29.

⁹ 2016 CO 29, ¶53; 2016 CO 28, ¶30.

¹⁰ 2016 CO 29, ¶ 15; 2016 C 28 ¶21.

¹¹ Of course, this means not only that local governments may not in the future adopt unlawful regulations, but also that existing regulations adopted by local governments that facially conflict with state requirements or render state requirements "superfluous" are operationally preempted and open to legal challenge. It is possible that some of the current Code provisions fall into this latter category. A list of Code provisions potentially preempted by state regulations is attached as Appendix A.

¹² Town of Frederick v. N. Am. Res. Co., 60 P.3d 758, 765-766 (Colo. App. 2002).

Finally, local governments also may not implement broad "performance-based" oil and gas regulations purporting to ensure compatibility with surrounding uses or to protect public health, safety and welfare that conflict with the state's interests. Although such regulations are cloaked in land-use terms such as "compatibility," regulations of this sort nonetheless seek to give local governments decision-making control in areas such as environmental impacts of operations or final siting authority that are heavily regulated by Preemption law is about who gets to make the ultimate decisions, and the state. performance-based regulations may unlawfully attempt to shift final authority to the local governments. Moreover, performance-based standards may interfere with the COGCC's interest in the uniform regulation of oil and gas operations covered by the comprehensive state regulations. While local governments can, under their general police power, require permits for certain aspects of oil and gas facilities, regulate road traffic and transportation improvements associated with oil and gas operations, and require building permits for above-ground structures, they cannot adopt regulations that essentially switch ultimate decision-making authority from the state to themselves under the guise of performancebased standards.

Colorado courts have not hesitated to strike down local government laws that they view as preempted by State statute and regulations. Colorado courts have done so in both facial and as-applied challenges to local government regulations. For example, in *Town of Frederick*,¹³ the court of appeals affirmed the trial court's facial invalidation of several Town regulations because they were in conflict with state regulations. Those included the Town's setback requirements for the location of wells that conflicted with COGCC Rule 603a; the Town's noise abatement requirements that went beyond those required by the State; and the Town's visual impact requirements that conflicted with the detailed requirements in five COGCC rules. *See also Bd. of Cnty. Comm'rs. v. BDS Int'l*,14 (holding that a county cannot reserve the right to determine financial requirements where the COGCC has reserved for itself the sole authority to impose fines.)

Colorado courts have been even more willing to strike down local government regulations on operationally preemption ground in as-applied challenges. While courts have sometimes required further evidence in a facial challenge to determine whether certain performance standards conflict with State law, they have readily struck down conflicting local government regulations and permit conditions on an as applied basis. *See e.g., Bd. of Cnty. Comm'rs. v. Vandemoer*,¹⁵ (court strikes down local government's ban of sprinkler systems on county roads after hearing on preliminary junction because it operationally conflicted with state law allowing such usage); *Commerce City v. State*,¹⁶(upholding trial court's decision that sections of local government law on automated vehicle identification system were operationally preempted because they conflicted with state law, including local regulations concerning use of signage, lack of warning to first-time traffic violators, and size of fines). These decisions all presage the *Longmont* holding that local government

- ¹⁴ Bd. of Cnty. Comm'rs. v. BDS Int'l, 159 P.3d 773 (Colo. App. 2006).
- ¹⁵ Bd. of Cnty. Comm'rs. v. Vandemoer, 205 P.3d 423, 427 (Colo. App. 2008).
- ¹⁶ Commerce City v. State, 40 P.3d 1273, 1285 (Colo. 2003).

¹³ Town of Frederick, 60 P.3d at 765-766 (Colo. App. 2002).

regulations, whether challenged facially or on an as- applied basis, will be struck down if they conflict with state law.

Because of the *Fort Collins* and *Longmont* decisions, operators, local governments and citizens in Colorado have a clear statement articulated by the highest state court as to what the operational conflict standard is and how it will be applied. The Colorado Supreme Court also explicitly recognized the "exhaustive" and "pervasive" set of state rules and regulations governing virtually every aspect of oil and gas development. While the Court recognized that local governments have some authority to regulate the land use aspects of oil and gas activity, there is no doubt that such scope of authority is confined to a limited area of regulation that does not operationally conflict with state law.¹⁷

II. <u>Several aspects of the Proposed Regulations are Likely Preempted by</u> <u>Comprehensive State Regulations.</u>

The purpose of this section of the White Paper is to present the extensive nature of COGCC regulations in certain areas that are also addressed in the Proposed Regulations. As discussed above, any local government regulation that conflicts with state law will be null and void under the operational conflict preemption doctrine. Given this established law, it is startling that the Proposed Regulations provide, "[t]he County strongly recommends that applicants apply to the County for special review prior to applying for [Application and Permit to Drill] to avoid the *potential for conflicting requirements and mitigation measures*."¹⁸ Because conflicting requirements are unlawful, that statement strongly suggests that application of some of the Proposed Regulations may result in terms and conditions that are illegal under the preemption doctrine.

A. Siting of Oil and Gas Operations.

The Act and COGCC regulations plainly give the state authority to site oil and gas operations.¹⁹ This has been confirmed by the Colorado Supreme Court in *Longmont v. COGA*. There, in characterizing *Voss v Lundvall Bros*,.²⁰ the Court stated: "[W]e

¹⁷ While state law plainly preempts local governments from regulating in many areas of oil and gas operations, local governments do have meaningful involvement in the COGCC permitting process. Indeed, the COGCC actively facilitates collaborative development of oil and gas within a local jurisdiction's boundaries by providing local governments with many opportunities to be involved in the state permitting process. Boulder County and other local governments have express authority to participate in the COGCC regulatory process and to cooperate with the operation seeking a permit at the early stages of oil and gas development. For example, the COGCC has enacted numerous regulations over the past few years that allow local governments immediate notice of Form 2, Applications for Permit to Drill ("APD") and Form 2A, Oil and Gas Location Assessment (Form 2A or Oil and Gas Location), permits. COGCC 300 Series and 500 Series Rules (as of March 16, 2016). COGCC Rules 303, 305A, 305, 306, 507 and 508 also provide express authority for a local government, through a Local Government Designee ("LGD"), to provide early and immediate input on Large Scale Facilities in Urban Mitigation Areas, other Oil and Gas Locations or APDs, and drilling and spacing units proposed by operators within the boundaries of their jurisdictions. See Appendix B.

¹⁸ Proposed Regulation, 12-400 A (4)(emphasis added).

¹⁹ Colo. Rev. Stat. §§34-60-103(6.5), 35-60-106 (1)(f),(2)(a),(2)(c).

²⁰ Voss v Lundvall Bros,830 P.2d 1061, 1065 (Colo. 1991).

concluded that the state's interest in the efficient and fair development of oil and gas resources in the state, including the location and spacing of individual wells, suggested that the matter was one of state concern . . . In our view the same reasoning applies to the state's interest in hydraulic fracturing.²¹

The Proposed Regulations appear to intrude upon the state's authority to decide all oil and gas siting issues. The Proposed Regulations give the County authority to impose site-specific mitigation measures that include the ability to change the proposed location of the well pad.²² Several of the "special review standards" listed in the Proposed Regulations also appear to give the County siting authority, including the County's virtual ban on operations in floodplains (discussed below), the mitigation criteria for land disturbance, and the requirement that operations shall be compatible with surround land uses, as determined by the County.²³ The County may not grant to itself under the Proposed Regulations final siting authority that alters the state's siting authority for oil and gas operations.

B. Floodplains

Boulder County proposes an outright ban on oil and gas operations in floodplains "unless the Applicant can demonstrate that extraction of the resource is impossible from an area outside of the mapped floodplain."²⁴ This regulation forbids what the COGCC regulations permit. On March 2, 2015, the COGCC adopted regulations in response to the 100-year flood of 2013. The COGCC officially defined "Floodplains" in its 100-series rules and regulations as "any area of land officially declared to be in a 100-year floodplain by and Colorado Municipality, Colorado County, State Agency, or Federal Agency." COGCC Rule 603.h explicitly permits operations in floodplains if operators follow certain well control and safety requirements. The County's Proposed Regulation on floodplains clearly falls within the operational conflict test by forbidding what state law expressly authorizes.

C. Best Management Practices (BMPs)

The use of Best Management Practices is the defining factor in what makes Colorado the most thoroughly and robustly regulated state in the country with respect to oil and gas. The state's BMPs are specifically designed to accomplish two important objectives: (i) create and maintain an operating environment that prioritizes and ensures safety at all times and at all phases of operations, and (ii) minimize, where possible, any inconveniences or impacts to the community that could possibly occur as a result of oil and natural gas development.

21 2016 CO 29, ¶ 22.

- ²² Proposed Regulation, 12-701 (C) (1).
- ²³ Proposed Regulations, 12-600 (F), (H), and (M).
- ²⁴ Proposed Regulation, 12-600 (F).

Many of the applicable BMPs are governed by the COGCC²⁵ and the Colorado Department of Public Health and Environment ("CDPHE"). BMPs are defined by the COGCC as practices that are designed to prevent or reduce impacts caused by oil and gas operations to air, water, soil, or biological resources and to minimize adverse impacts to public health safety and welfare, including the environment and wildlife resources.²⁶ Additionally, the COGCC specifies that in minimizing adverse impacts, cost-effectiveness and technical feasibility must be taken into consideration.²⁷ Similarly, BMPs for water quality are defined by the CDPHE as a practice or combination of practices that are determined to be "the most effective, practicable (*including technological, economic; and institutional considerations*) means of preventing or reducing the amount of pollution." ²⁸ Under COGCC and CDPHE regulations, changing the configuration of the BMPs would require technical expertise applied on a site-by-site basis.

The Proposed Regulations frequently use a concept similar to BMPs, but there the practices are labeled "Most Effective Performance Techniques and Practices" and are *not* made upon a determination that the practices are practicable in terms of technological, economic, and institutional considerations.²⁹ This could lead the County to require "Most Effective Performance Techniques and Practices" that materially impede the state's interest in recovering oil and gas resources by imposing practices that are cost-prohibitive for oil and gas development or that are technologically and/or institutionally impracticable.

D. *Air Quality*

Air quality for oil and gas operations is regulated by the CDPHE and partially the COGCC. The State of Colorado, through regulation by the CDPHE, has the most stringent air regulations in the United States, with the EPA using Colorado's air quality regulations as a model for its own rulemakings. On February 23, 2014, Colorado's Air Quality Control Commission ("AQCC") voted to adopt new precedent-setting rules targeting air emissions from the oil and gas industry. These regulations fully adopted federal regulations (EPA's NSPS OOOO) and added controls and strategies to reduce fugitive Volatile Organic Compounds ("VOCs") and hydrocarbon emissions from condensate tanks and other sources. Colorado's regulations include mandatory installation of emission control devices and implementation of leak detection and repair programs. Key elements of the 2014 air quality regulations³⁰ include, among several other components, leak detection and repair ("LDAR"), storage tank regulations, and expanded applicability to include pneumatics. Additionally, there are plentiful COGCC Rules that address air quality.³¹ Boulder County should review each and every one of the CDPHE and COGCC rules relating to air quality

- ²⁵ COGCC Rules 604, 802, 803, 804 and 805.
- ²⁶ See COGCC 100 Series, Definitions.

- ²⁸ 5 C.C.R. §1002-31.5(6)(emphasis added).
- ²⁹ See Proposed Regulation, 12-400.
- ³⁰ <u>https://www.colorado.gov/pacific/cdphe/aqcc-regs.</u>
- ³¹ COGCC Rule 604.c.l and 805.b.(1) (3).

²⁷ See id.

and emissions when analyzing the inclusion of air quality standards in its Code. While local governments can regulate in the air quality space, regulations that extend so far beyond the state regulations that they effectively prohibit the practicable extraction of oil and gas are likely operationally preempted.

E. *Pipelines*.

Pipelines are regulated in varying capacities by the CDPHE, CDOT, COPUC and certain federal agencies, depending upon the type of pipeline. In February 2016, the COGCC issued an Operator Guidance ("Guidance") that explains the differences between the different types of lines.³² In this Guidance, the COGCC unequivocally defers the regulation of gas gathering lines to the COPUC and confirms that regulation of gathering lines is beyond the scope of the COGCC policy.

Boulder County proposes that all oil and gas pipelines be subject to special review, the contours of which are unclear.³³ Because this area is heavily regulated by state and federal agencies, local governments should be wary of establishing regulations related to pipelines and gathering lines. Indeed, local government regulation in this area is likely preempted by state and Federal law by another preemption doctrine: express preemption.

F. *Water Quality*

The COGCC has comprehensive regulations regarding water monitoring and testing, disposal, and use of water in oil and gas operations.³⁴ It also regulates thoroughly spill notification and remediation of groundwater contamination.³⁵ The COGCC also regulates the management of Exploration & Production Waste ("E&P Waste") and produced fluids (produced water) in the 900-series rules that govern the treatment of produced water and E&P waste relating to the permitting, lining and closure of pits, spills and releases of E&P waste and produced fluids, remediation and closure of sites, and closure concentrations.³⁶ The CDPHE also has regulations regarding produced water or E&P waste.

As with air quality, Boulder County should review these rules relating to water use and quality when considering appropriate water quality standards for its Code. The Proposed Regulations appear to grant the County extensive authority to require sampling and remediation of groundwater and to evaluate water quality information as part of the approval process.³⁷ These regulations are likely preempted as conflicting with state authority to regulate water quality aspects of oil and gas operations.

³³ Proposed Regulation, 12-600 (J).

³⁴ COGCC Rules 609 and 318A.f.

³⁵ COGCC Rule 909.

³⁶ COGCC Rules 901 through 910.

³⁷ Proposed Regulations, 12-600 (0), 12-700 (DD), 12-701(B), 12-500(Y).

G. *Compatibility*

The Proposed Regulations allow the County to approve, deny or condition a permit based on its "compatibility" with nearby land uses.38 The Proposed Regulations will determine compatibility of Applications based upon the Special Review Standards set forth in 12-600. This is an illegal expansion of issues that local government's authority may legally consider, because it allows the County to consider virtually every aspect of oil and gas operations in considering permit applications. , including many technical and environmental areas already subject to extensive COGCC regulations. As the Colorado Supreme Court determined in the *Longmont* and *Fort Collins* decisions, local governments may not impose regulations or conditions of approval on permits that conflict with state statute and regulations. Yet this is precisely what the broad definition of "compatibility" (as informed by the provisions of 12-600) allows.

H. Fees and Bonding Requirements

The COGCC regulations require oil and gas operators to provide financial assurance or a "bond" to the COGCC to ensure performance of the Act's standards and regulations promulgated thereunder, as well as to fund the Oil and Gas Conservation and Environmental Response Fund, which performs site reclamation and remediation and conducts other authorized environmental activities.³⁹

Provision 12-700 (Q) of the Proposed Regulations provides: "If approval is conditioned upon revegetation, road improvements, or similar specific site improvements, the Applicant will be required to submit a letter of credit in a form satisfactory to the County for the full cost of such improvements prior to issuance of a special review construction permit." This regulation is duplicative of the bonding required by the COGCC, renders the COGCC bonding "superfluous," and is therefore likely to be operationally preempted. Indeed, local governments may not impose fees or bonding requirements on areas within COGCC jurisdiction. See *Bd. of Cnty. Comm'rs. v. BDS Int'l*,⁴⁰ (holding that a county cannot reserve the right to determine financial requirements where the COGCC has reserved for itself the sole authority to impose fines); *Town of Milliken v. Kerr-McGee*⁴¹ (relevant inquiry is whether the Town's inspection fees concern "matters that are subject to rule, regulation, order, or permit conditions administered by the commission.")

IV. <u>Conclusion</u>

The COGCC, the CDPHE and other state agencies regulate Colorado oil and gas operations under some of the nation's most rigorous regulations for oil and gas development. To avoid operational conflict preemption under established Colorado law, local governments

³⁸ Proposed Regulation, 12-701 (C).

³⁹ COGCC Rule 701, et seq.; Colo. Rev. Stat. §34-60-124.

40 Bd. of Cnty. Comm'rs. v. BDS Int'l, 159 P.3d 773 (Colo. App. 2006).

41 Town of Milliken v. Kerr-McGee, 2013 WL 1908965, *1 (2013)

that enact oil and gas regulations under their land use authority must ensure that such regulations do not conflict with state regulations. To that end, it is crucial that Boulder County has a thorough understanding of the issues and legal implications set forth in this White Paper. The information and principles provided herein also inform all other parties involved as they review and provide input on any revisions to the Code's oil and gas operations regulations that Boulder County proposes to enact.

<u>Appendix A</u>

Code provisions potentially preempted by COGCC and/or CDPHE regulations

- Section 12-400 (E),(H): Applicant Neighborhood Meeting, Notice
- Section 12-500(I), (K),(M),(Q), (R), (U), (X),(Y): Site Plan and Parcel Information, Air Quality Plan, Land Disturbance Mitigation Plan, Offsite Transport Plan, Electrification Plan, Natural Resources Mitigation Plan, Surrounding Land Uses Mitigation Plan, Water Quality Plan
- Section 12-600(C), (I), (J), (M), (O): Air Quality, Natural Resources, Pipelines, Surrounding Land Uses, Water Quality
- Section 12-700(A),(C),(E),(F),(I),(Q),(S),(T),(V),(W),(BB),(DD),(EE): Anchoring, Air Quality Certification, Discharge Valves, Dust Suppression and Fugitive Dust, Flammable Material, Performance Guarantee, Removal of Debris, Removal of Equipment, Spills and Leaks, Stormwater Control, Vegetation, Water Quality, Weed Control
- Section 12-701(A), (B), (C): Air Quality, Water Quality Monitoring and Well Testing, Land Disturbance and Compatibility
- Section 12-1000: Enforcement
- Section 12-1400: Definitions, certain of these, particularly Most Effective Performance Techniques and Practices
- Amendment to Article 4-514 Utility and Public Service Uses, "Gas and/or Hazardous Liquid Pipelines"

Appendix B

<u>COGCC Regulations Requesting Local Government Comment, Consultation and</u> <u>Collaboration</u>

- Rule 303.b.(1).J, K requires operators to certify that the appropriate LGD has been notified of and has been given opportunity to comment and consult on a Form 2A under Rule 305A and 305.a. and b. COGCC Rule 303.b.(1).J, K.
- Rule 305A.a., b. and c. requires operators to deliver a written Notice of Intent to Construct a Large Urban Mitigation Area facility no later than 90 days from initiating the Form 2A process and such notice must include an offer to meet and consult on the specific location of the Form 2A. COGCC Rule 305.A.a., b. and c.
- Rule 305.a. and b. require operators to notify the LGD if an Oil and Gas Location will be located within an Urban Mitigation Area and provides building unit owners within 1,000 feet of an Oil and Gas Location with the LGD's contact information if there are concerns. The rule further provides for the notice of a Large Urban Mitigation Area facility to the LGD. The LGD, if on its own volition or on a request from a building unit owner, may provide comment and input on an operator's Form 2A early in the permitting process or may provide input on the Large Urban Mitigation Area facility prior to an operator submitted a Form 2A. COGCC Rule 305.a., b.
- Rule 306 provides that local governments that have appointed a Local Governmental Designee and have indicated to the Director a desire for consultation shall be given an opportunity to consult with the Applicant and the Director on an Application for Permit-to-Drill, Form 2, or an Oil and Gas Location Assessment, Form 2A, for the location of roads, Production Facilities and Well sites, and mitigation measures or Best Management Practices during the comment period under Rule 305.d. COGCC Rule 306.
- Rule 507 mandates that any operator requesting an order from the COGCC for a drilling and spacing unit application and any application for a state unit submit notice to the applicable Local Government, Colorado Department of Public Health and Environment, and Colorado Parks and Wildlife. COGCC Rule 507.c.
- Rule 508 allows for a Local Government to request a local public forum if an operator is seeking an increased density application from the COGCC. The provisions of this Rule 508 only apply to applications that would result in more than one (1) well site or multi-well site per forty (40) acre nominal governmental quarter- quarter section or that request approval for additional wells that would result in more than one (1) well site or multi-well site per forty (40) acre nominal governmental quarter-quarter section, within existing drilling units, not previously authorized by Commission order. A local public forum may be used to address impacts to public health, safety and welfare, including the environment and wildlife resources, which may be raised by an application for increased well density. A local

public forum shall be convened on the Commission's own motion, or upon request from the local governmental designee or the applicant. COGCC Rule 508.a.

Appendix C COGCC and CPDHE Rule References

- I. Large Scale Urban Mitigation Area (Siting)
 - 100-Series Rules: Defined large scale oil and gas facility in an urban mitigation area (Large UMA Facility) as any facility that proposes eight or more new wells or the cumulative new and existing on-site storage capacity for produced hydrocarbons exceeds 4,000 barrels. COGCC Rule 100 Definition of Large Urban Mitigation Area Facility.
 - Rule 305A: Any operator seeking to develop a Large UMA Facility is required to notify the local government with land use jurisdiction and offer to consult on siting and best management practices. The operator is also required to provide notice to the surface owner on which the Large UMA Facility is proposed. This notice must be provided 90 days prior to submitting a Form 2A oil and gas location assessment to the COGCC. The local government receiving the Notice of Intent to Construct a Large UMA Facility may immediately initiate a consultation and collaboration process with the operator and ensure that its concerns about the proposed facility, best management practices and mitigation measures are addressed. Consultation is not required if the local government with land use authority has opted out of the consultation process OR if the local government with land use authority and the operator seeking to develop have an existing agreement, like an existing local government permit or Memorandum of Understanding, in place to guide the siting of a proposed location. COGCC Rule 305A.
 - Rule 604.c.(4): Operators are required to incorporate Required Best Management Practices in to their Form 2A Oil and Gas Location Assessment permit application. The local government has the opportunity to consult with the operator prior to initiating the Form 2A process and to comment on the Form 2A with respect to Best Management Practices and mitigation measures it believes should be applied to the final Form 2A. The Director of the COGCC may also require site specific mitigation measures as conditions of approval on an operator's permit, including conditions regarding noise, ground and surface water protection, visual impacts, and remote stimulation operations. COGCC Rule 604.c.
- II. <u>Floodplains</u>. COGCC Rule 603.h. specifically provides for Statewide Floodplain Requirements as follows:
 - (1) The following requirements apply to new Oil and Gas Locations and Wells:

A. Effective August 1, 2015, Operators must notify the Director when a new proposed Oil and Gas Location is within a defined Floodplain, via the Form 2A.

B. Effective June 1, 2015, new Wells must be equipped with remote shut-in capabilities prior to commencing production. Remote shut-in capabilities include, at a minimum, the ability to shut-in the well from outside the relevant Floodplain.

C. Effective June 1, 2015, new Oil and Gas Locations must have secondary containment areas around Tanks constructed with a synthetic or geosynthetic liner that is mechanically connected to the steel ring or another engineered technology that provides equivalent protection from floodwaters and debris.

(2) The following requirements apply to both new and existing Wells, Tanks, separation equipment, containment berms, Production Pits, Special Purpose Pits, and flowback pits:

A. Effective April 1, 2016, Operators must maintain a current inventory of all existing Wells, Tanks, and separation equipment in a defined Floodplain. Operators shall ensure that a list of all such Wells, Tanks, and separation equipment is filed with the Director. As part of this inventory, Operators must maintain a current and documented plan describing how Wells within a defined Floodplain will be timely shut-in. This plan must include what triggers will activate the plan and must be made available for inspection by the Director upon request.

B. Effective June 1, 2015 for new and April 1, 2016 for existing, tanks, including partially buried tanks, and separation equipment must be anchored to the ground. Anchors must be engineered to support the Tank and separation equipment and to resist flotation, collapse, lateral movement, or subsidence.

C. Effective June 1, 2015 for new and April 1, 2016 for existing, containment berms around all Tanks must be constructed of steel rings or another engineered technology that provides equivalent protection from floodwaters and debris.

D. Effective June 1, 2015 for new and April 1, 2016 for existing, Production Pits, Special Purpose Pits (other than Emergency Pits), and flowback pits containing E&P waste shall not be allowed within a defined Floodplain without prior Director approval, pursuant to Rule 502.b.

E. An Operator may seek a variance from the effective date for the requirements for existing facilities referenced in subparts 603.h(2)B, C or D by filing a request for an alternative compliance plan with the Director on or before February 1, 2016. COGCC Rule 603.h.

- IV. <u>Best Management Practices (BMPs).</u> COGCC Rule 604.c. addresses Mitigation Measures and BMPs, including almost all of those addressed in the Boulder County Code as noted above.
 - Rule 604.c.(2) provides for Well or Production Facility proposed to be located within a Designated Setback Location for which a Form 2, Application for Permit—to-Drill or Form 2A, Oil and Gas Location Assessment, is submitted on or after August 1, 2013 the following BMPs will apply to the location:
 - A. Noise. Operations involving pipeline or gas facility installation or maintenance, or the use of a drilling rig, are subject to the maximum permissible noise levels for Light Industrial Zones, as measured at the nearest Building Unit. Short-term increases shall be allowable as described in 802.c. Stimulation or re-stimulation operations and Production Facilities are governed by Rule 802.
 - B. Closed Loop Drilling Systems Pit Restrictions.
 - i. Closed loop drilling systems are required within the Buffer Zone Setback.
 - ii. Pits are not allowed on Oil and Gas Locations within the Buffer Zone Setback, except fresh water storage pits, reserve pits to drill surface casing, and emergency pits as defined in the 100-Series Rules.
 - iii. Fresh water pits within the Exception Zone shall require prior approval of a Form 15, Earthen Pit Report/Permit. In the Buffer Zone, fresh water pits shall be reported within 30days of pit construction.
 - iv. Fresh water storage pits within the Buffer Zone Setback shall be conspicuously posted with signage identifying the pit name, the operator's name and contact information, and stating that no fluids other than fresh water are permitted in the pit. Produced water, recycled E&P waste, or flowback fluids are not allowed in fresh water storage pits.
 - v. Fresh water storage pits within the Buffer Zone Setback shall include emergency escape provisions for inadvertent human access.
 - C. Green Completions Emission Control Systems.
 - i. Flow lines, separators, and sand traps capable of supporting green completions as described in Rule 805 shall be installed

at any Oil and Gas Location at which commercial quantities of gas are reasonably expected to be produced based on existing adjacent wells within 1 mile.

- ii. Uncontrolled venting shall be prohibited in an Urban Mitigation Area.
- iii. Temporary flowback flaring and oxidizing equipment shall include the following:
 - aa. Adequately sized equipment to handle 1.5 times the largest flowback volume of gas experienced in a ten (10) mile radius;
 - bb. Valves and porting available to divert gas to temporary equipment or to permanent flaring and oxidizing equipment; and
 - cc. Auxiliary fuel with sufficient supply and heat to sustain combustion or oxidation of the gas mixture when the mixture includes non- combustible gases.
- D. Traffic Plan. If required by the local government, a traffic plan shall be coordinated with the local jurisdiction prior to commencement of move in and rig up. Any subsequent modification to the traffic plan must be coordinated with the local jurisdiction.
- E. Multi-well Pads.
 - i. Where technologically feasible and economically practicable, operators shall consolidate wells to create multiwell pads, including shared locations with other operators. Multi-well production facilities shall be located as far as possible from Building Units.
 - ii. The pad shall be constructed in such a manner that noise mitigation may be installed and removed without disturbing the site or landscaping.
 - iii. Pads shall have all weather access roads to allow for operator and emergency response.
- F. Leak Detection Plan. The Operator shall develop a plan to monitor Production Facilities on a regular schedule to identify fluid leaks.
- G. Berm construction. Berms or other secondary containment devices in Designated Setback Locations shall be constructed around crude oil, condensate, and produced water storage tanks and shall enclose an area sufficient to contain and provide secondary containment for one-hundred fifty percent (150%) of the largest single tank. Berms or other secondary containment devices shall be sufficiently impervious to contain any spilled or released material. All berms and containment devices shall be inspected at regular intervals and maintained in good condition. No potential ignition sources shall be installed inside the secondary containment area unless the containment area encloses a fired vessel. Refer to API Bulletin D16:

Suggested Procedure for "Development of a Spill Prevention Control and Countermeasure Plan," 5th Edition (April 2011). Only the 5th Edition of the API bulletin applies to this rule; later amendments do not apply. All material incorporated by reference in this rule is available for public inspection during normal business hours from the Public Room Administrator at the office of the Commission, 1120 Lincoln Street, Suite 801, Denver, Colorado 80203. In addition, these materials may be examined at any state publications depository library and are available from API at 1220 L Street, NW Washington, DC 20005-4070.

- H. Blowout preventer equipment ("BOPE"). Blowout prevention equipment for drilling operations in a Designated Setback Location shall consist of (at a minimum):
 - i. Rig with Kelly. Double ram with blind ram and pipe ram; annular preventer or a rotating head.
 - ii. Rig without Kelly. Double ram with blind ram and pipe ram.

Mineral Management certification or Director approved training for blowout prevention shall be required for at least one (1) person at the well site during drilling operations.

I. BOPE testing for drilling operations. Upon initial rig-up and at least once every thirty (30) days during drilling operations thereafter, pressure testing of the casing string and each component of the blowout prevention equipment including flange connections shall be performed to seventy percent (70%) of working pressure or seventy percent (70%) of the internal yield of casing, whichever is less. Pressure testing shall be conducted and the documented results shall be retained by the operator for inspection by the Director for a period of one (1) year. Activation of the pipe rams for function testing shall be conducted on a daily basis when practicable.

- J. BOPE for well servicing operations.
 - i. Adequate blowout prevention equipment shall be used on all well servicing operations.
 - ii. Backup stabbing valves shall be required on well servicing operations during reverse circulation. Valves shall be pressure tested before each well servicing operation using both low-pressure air and high-pressure fluid.
- K. Pit level indicators. Pit level indicators shall be used.
- L. Drill stem tests. Closed chamber drill stem tests shall be allowed. All other drill

stem tests shall require approval by the Director.

M. Fencing requirements. Unless otherwise requested by the Surface Owner, well sites constructed within Designated Setback Locations, shall be adequately fenced to restrict access by unauthorized persons.

- N. Control of fire hazards. Any material not in use that might constitute a fire hazard shall be removed a minimum of twenty-five (25) feet from the wellhead, tanks and separator. Any electrical equipment installations inside the bermed area shall comply with API RP 500 classifications and comply with the current national electrical code as adopted by the State of Colorado.
- O. Loadlines. All loadlines shall be bullplugged or capped.
- P. Removal of surface trash. All surface trash, debris, scrap or discarded material connected with the operations of the property shall be removed from the premises or disposed of in a legal manner.
- Q. Guy line anchors. All guy line anchors left buried for future use shall be identified by a marker of bright color not less than four (4) feet in height and not greater than one (1) foot east of the guy line anchor.
- R. Tank specifications. All newly installed or replaced crude oil and condensate storage tanks shall be designed, constructed, and maintained in accordance with National Fire Protection Association (NFPA) Code 30 (2008 version). The operator shall maintain written records verifying proper design, construction, and maintenance, and shall make these records available for inspection by the Director. Only the 2008 version of NFPA Code 30 applies to this rule. This rule does not include later amendments to, or editions of, the NFPA Code 30. NFPA Code 30 may be examined at any state publication depository library. Upon request, the Public Room Administrator at the office of the Commission, 1120 Lincoln Street, Suite 801, Denver, Colorado 80203, will provide information about the publisher and the citation to the material.
- S. Access roads. At the time of construction, all leasehold roads shall be constructed to accommodate local emergency vehicle access requirements, and shall be maintained in a reasonable condition.
- T. Well site cleared. Within ninety (90) days after a well is plugged and abandoned, the well site shall be cleared of all non-essential equipment, trash, and debris. For good cause shown, an extension of time may be granted by the Director.
- U. Identification of plugged and abandoned wells. The operator shall identify the location of the wellbore with a permanent monument as specified in Rule 319.a.(5). The operator shall also inscribe or imbed the well number and date of plugging upon the permanent monument.
- V. Development from existing well pads. Where possible, operators shall provide for the development of multiple reservoirs by drilling on existing pads or by multiple completions or commingling in existing wellbores (see

Rule 322). If any operator asserts it is not possible to comply with, or requests relief from, this requirement, the matter shall be set for hearing by the Commission and relief granted as appropriate.

- W. Site-specific measures. During Rule 306 consultation, the operator may develop a mitigation plan to address location specific considerations not otherwise addressed by specific mitigation measures identified in this subsection 604.c.
- COGCC Rule 604.c.(3) provides for additional mitigation measures within the Exception Zone Setback as follows:
 - A. All mitigation measures required pursuant to subsection 604.c.(2), above,

and:

- B. Berm Construction:
 - i. Containment berms shall be constructed of steel rings, designed and installed to prevent leakage and resist degradation from erosion or routine operation.
 - ii. Secondary containment areas for tanks shall be constructed with a synthetic or engineered liner that contains all primary containment vessels and flowlines and is mechanically connected to the steel ring to prevent leakage.
 - iii. For locations within five hundred (500) feet and upgradient of a surface water body, tertiary containment, such as an earthen berm, is required around Production Facilities.
 - iv. In an Urban Mitigation Area Exception Zone Setback, no more than two (2) crude oil or condensate storage tanks shall be located within a single berm.
- COGCC Rule 604.c(4) also provides BMPs and mitigation measures for Large UMA Facilities discussed above. Large UMA Facilities are to be operated using the best available technology to avoid or minimize adverse impacts to adjoining land uses. To achieve this objective, the Director will require a combination of best management practices and required mitigation measures, and may also impose site specific conditions of approval related to operational and technical aspects of a proposed Large UMA Facility.
 - A. All Rule 604.c.(3) Exception Zone Setback mitigation measures are required for all Large UMA Facilities, regardless of whether the Large UMA Facility is located in the Buffer Zone or the Exception Zone.
 - B. Required Best Management Practices. A Form 2A for a Large UMA Facility will not be approved until best management practices addressing all of the following have been incorporated into the Oil and Gas Location Assessment permit.

- i. Fire, explosion, chemical, and toxic emission hazards, including lightning strike hazards.
- ii. Fluid leak detection, repair, reporting, and record keeping for all above and below ground on-site fluid handling, storage, and transportation equipment.
- iii. Automated well shut in control measures to prevent gas venting during emission control system failures or other upset conditions.
- iv. Zero flaring or venting of gas upon completion of flowback, excepting upset or emergency conditions, or with prior written approval from the Director for necessary maintenance operations.
- v. Storage tank pressure and fluid management.
- vi. Proppant dust control.
- C. Site Specific Mitigation Measures. In addition to the requirements of subsections A. and B. of this Rule 604.c.(4), the Director may impose site-specific conditions of approval to ensure that anticipated impacts are mitigated to the maximum extent achievable. The following non-exclusive list illustrates types of potential impacts the Director may evaluate, and for which site-specific conditions of approval may be required:
 - i. Noise;
 - ii. Ground and surface water protection;
 - iii. Visual impacts associated with placement of wells or production equipment; and
 - iv. Remote stimulation operations.
- D. In considering the need for site-specific mitigation measures, the Director will consider and give substantial deference to mitigation measures or best management practices agreed to by the operator and local government with land use authority.
- V. <u>Air Quality</u>.

Colorado Department of Public Health and Environment – Air Quality Control Divisions governs air quality of oil and gas operations in Colorado. There are massive amounts of regulations that operators must comply with for almost every aspect of oil and gas development. While too many to include in this whitepaper, it is imperative that Boulder County be aware of Regulation 3, 5 and 7 when reviewing its own oil and gas regulations. *See* <u>https://www.colorado.gov/pacific/cdphe/oil-and-gas-industry-air-permits;https://www.colorado.gov/pacific/cdphe/oil-and-gas-odor-and-dust-permitting.</u>

COGCC Rule 604.c. mandates Closed Loop Drilling Systems and Pit Restrictions, Green Completions for Emission Control Systems, and Leak Detection Plans in Buffer Zone and Exception Zone areas. The CPDHE through its Regulation 7, 5 CCR 1001-9 and Regulation 3, 5 CCR 1001-5 address various air quality issues and best management practices including detection, recordkeeping and monitoring. and reporting. COGCC Rule
805.b.(1), (2) and (3) also addresses, via BMPs or otherwise, the issues of odors and air emissions in accordance with CPDHE Regulation No. 2, 5 C.C.R. 1001-4, Regulation No. 3 (5 C.C.R. 1001-5), and Regulation No. 7 Section XVII.B.1 (a-c) and Section XII, as well as Green Completions for purposes of air quality concerns.

VII. <u>Water Monitoring, Testing, Supply and Usage for Drilling, Completion, and</u> <u>Operation Phases</u>.

COGCC Rule 609, and a similar Rule 318A.f., governs groundwater baseline sampling and monitoring associated with oil and gas operations in Colorado. Rule 609 (and 318A.f.) applies to Oil Wells, Gas Wells, Multi-Well Sites, and Dedicated Injection Wells, but do not apply to an existing Oil or Gas Well that is re-permitted for use as a Dedicated Injection Well or to Oil and Gas Wells, Multi-Well Sites, or Dedicated Injection Wells that are regulated under Rule 608.b., Rule 318A.e.(4), or Orders of the Commission with respect to the Northern San Juan Basin promulgated prior to the effective date of this Rule that provide for groundwater testing. Further, nothing in the rules preclude or limit the Director from requiring groundwater sampling or monitoring at other Production Facilities consistent with other applicable Rules, including but not limited to the Oil and Gas Location Assessment process, and other processes in place under 900-series E&P Waste Management Rules (Form 15, Form 27, Form 28).

Rule 609 is very clear on the sampling locations and timing of sampling. Rule 609.b. provides as follows:

b. Sampling locations. Initial baseline samples and subsequent monitoring samples shall be collected from all Available Water Sources, up to a maximum of four (4), within a one-half (1/2) mile radius of a proposed Oil and Gas Well, Multi-Well Site, or Dedicated Injection Well. If more than four (4) Available Water Sources are present within a one-half (1/2) mile radius of a proposed Oil and Gas Well, Multi-Well Site, or Dedicated Injection Well, the operator shall select the four sampling locations based on the following criteria:

(1) Proximity. Available Water Sources closest to the proposed Oil or Gas Well, a Multi-Well Site, or Dedicated Injection Well are preferred.

(2) Type of Water Source. Well maintained domestic water wells are preferred over other Available Water Sources.

(3) Orientation of sampling locations. To extent groundwater flow direction is known or reasonably can be inferred, sample locations from both downgradient and up-gradient are preferred over cross-gradient locations. Where groundwater flow direction is uncertain, sample locations should be chosen in a radial pattern from a proposed Oil and Gas Well, Multi-Well Site, or Dedicated Injection Well. (4) Multiple identified aquifers available. Where multiple defined aquifers are present, sampling the deepest and shallowest identified aquifers is preferred.

(5) Condition of Water Source. An operator is not required to sample Water Sources that are determined to be improperly maintained, nonoperational, or have other physical impediments to sampling that would not allow for a representative sample to be safely collected or would require specialized sampling equipment (e.g. shut-in wells, wells with confined space issues, wells with no tap or pump, non-functioning wells, intermittent springs).

c. Inability to locate an Available Water Source. Prior to spudding, an operator may request an exception from the requirements of this Rule 609 by filing a Form 4, Sundry Notice, for the Director's review and approval if:

(1) No Available Water Sources are located within one-half (1/2) mile of a proposed Oil and Gas Well, Multi-Well Site, or Dedicated Injection Well;

(2) The only Available Water Sources are determined to be unsuitable pursuant to subpart b.5, above. An operator seeking an exception on this ground shall document the condition of the Available Water Sources it has deemed unsuitable; or

(3) The owners of all Water Sources suitable for testing under this Rule refuse to grant access despite an operator's reasonable good faith efforts to obtain consent to conduct sampling. An operator seeking an exception on this ground shall document the efforts used to obtain access from the owners of suitable Water Sources.

(4) If the Director takes no action on the Sundry Notice within ten (10) business days of receipt, the requested exception from the requirements of this Rule 609 shall be deemed approved.

d. Timing of sampling.

(1) Initial sampling shall be conducted within 12 months prior to setting conductor pipe in a Well or the first Well on a Multi-Well Site, or commencement of drilling a Dedicated Injection Well; and

(2) Subsequent monitoring: One subsequent sampling event shall be conducted at the initial sample locations between six (6) and twelve (12) months, and a second subsequent sampling event shall be conducted between sixty (60) and seventy-two (72) months following completion of the Well or Dedicated Injection Well, or the last Well on a Multi-Well Site. Wells that are drilled and abandoned without ever producing hydrocarbons are exempt from subsequent monitoring sampling under this subpart d.

(3) Previously sampled Water Sources. In lieu of conducting the initial sampling required pursuant to subjection d.(1) or the second subsequent sampling event required pursuant to subsection d.(2), an Operator may rely on water sampling analytical results obtained from an Available Water Source within the sampling area provided:

- A. The previous water sample was obtained within the 18 months preceding the initial sampling event required pursuant to subsection d.(1) or the second subsequent sampling event required pursuant to subsection d.(2); and
- B. the sampling procedures, including the constituents sampled for, and the analytical procedures used for the previous water sample were substantially similar to those required pursuant to subparts e.(1) and (2), below. An operator may not rely solely on previous water sampling analytical results obtained pursuant to the subsequent sampling requirements of subsection d.(2), above, to satisfy the initial sampling requirement of subsection d.(1); and
- C. the Director timely received the analytical data from the previous sampling event.

(4) The Director may require additional sampling if changes in water quality are identified during subsequent monitoring.

Hello,

I am a resident of Boulder County in Erie Village, Erie, CO, USA. My house is 500 ft from the line with Weld County, and about 1400 ft from the new 15 well Woolley Becky Sosa pad site (being developed by Crestone Peak Resources) at County Line and WCR 10 1/2 in Weld County.

Needless to say, I am very concerned about the fracking that will be occurring across the street. I am a biomedical scientist and have been reading peer reviewed articles regarding the health impacts of residents who live within 1/2 mile of fracking wells. The health impacts are astounding and I am very frustrated by the situation.

While the Town of Erie has an operator agreement with Crestone requiring them to send notifications to everyone within 1/2 mile of the operation, Crestone seems unable to follow through with this. Please make consequences so that the development company actually follows through with this requirement!

As someone living within 1400 ft of a large development pad site, I support the disruption payments 100%. Our family is going to face noise, vibration, and poor air quality from the drilling for an estimated 9 months. If we feel that our home is unlivable because of the drilling in Weld County, we will be hard pressed to find affordable alternative accommodations for that length while still remaining current on our mortgage payments.

Thank you for requiring them to monitor and report air quality. I feel that the impacts on air quality from drilling and fracking operations are frequently overlooked. It is a serious issue, one that researchers are tackling these days. Numerous peer reviewed studies are reporting adverse consequences of living close to fracking wells. It is an issue that I feel O&G simply brushes aside. My husband, son, and cat all suffer from asthma. I am very concerned about the decrease in air quality that the three of them will be exposed to. Hopefully, this the monitoring and reporting requirement would help alleviate the concerns of future households in a situation similar to mine.

Thank you Boulder County. Should this pass, this gives me a glimmer of hope for the future! O&G operations should not be conducted so close to households. It is my hope that the stricter regulations are adopted.

Thank you, Eileen Krenzel Rojas, Ph.D.

From:	Megan Wilder
То:	Boulder County Oil and Gas Comment
Subject:	Reinstate the fracking ban for Boulder County
Date:	Tuesday, October 11, 2016 11:47:27 AM

Our best efforts to put two anti-fracking initiatives on the 2016 statewide ballot have now failed. So it is essential that Boulder County finds a way to protect its citizens and our environment from short-sighted oil and gas extraction by fracking. As a volunteer involved in collecting signatures for the two anti-fracking initiatives, I've talked to hundreds of extremely concerned Coloradoans. The vast majority want fracking to stop. Those who didn't know much about fracking were easily convinced of its destructive effects once it was explained to them. There is a silent majority out there who want our lands to be protected.

Please work with all other counties and cities which previously had fracking bans in place to find a solution to this problem. Please help to convince the CO legislature that citizens want protection from fracking.

Megan Wilder Boulder County

From:	Rebekah Vicknair
То:	Boulder County Oil and Gas Comment
Subject:	Oil & Gas Development comment
Date:	Tuesday, October 11, 2016 12:02:12 PM

The proposed regulations offer no permitting timeline whatsoever. Property owners and oil and gas companies alike deserve some certainty for their economic well being as long as they are following state law and local land use law.

Respectfully, Bev Stokes

Bev Stokes bevstokes726@gmail.com 303-776-0814

From:	Michael McBurnie
То:	Boulder County Oil and Gas Comment
Subject:	Oil and Gas Regulations
Date:	Tuesday, October 11, 2016 7:02:53 PM

As a residence of Boulder County (Nederland) and an employer of health care and educational specialists in CO and 10 other states, (corporate office is in Boulder) please do not allow any Oil industry activities in our county.

Business and people move here because of the natural beauty, outdoor lifestyle and as a business for the high quality of educated potential employees.

Thousands of dollars in revenue that support the county come from wonderful outdoor space, clean water, land and air. Business are here because of this and tourists visit for the same reason.

Boulder County would be hurt economically by allowing Oil and Gas interests. There are plenty of other locations in CO that have little population and none of the amenities that the Boulder area has, let them drill in those counties that want there business. We do not want this activity changing our county.

Please vote to block any Oil and Gas interests from getting a foothold in our county.

Sincerely,

Michael McBurnie Chairman MyTherapyCompany 303-258-0727 Hello County Commissioners,

Once again, a hearing at 1:30 pm for those who have the luxury of taking time off of work to attend public hearings.

We're back to regulations again, and those of us who have attended Democracy School (<u>http://celdf.org/how-we-work/education/democracy-school/</u>) know that regulations are there to regulate the amount of **harm** done to us. It is a shocking fact once you absorb this truth.

It might behoove the Commissioners to take this training to find out how our rights have been taken away by corporations and corporate entities such as cities, counties, state governments, etc.

You can take the training online here: <u>http://celdf.org/how-we-work/education/democracy-school/democracy-school-online/</u>

Meanwhile, try as you might, regulations will still allow fracking to occur in Boulder County. Here we must bow to our oil and gas masters. It is so sad that our Democracy allows them to own us.

I hope you take advantage of the free CELDF course to learn how to fight against tyranny.

Teresa Foster Longmont

From:	phillipbarber@aol.com
To:	Boulder County Oil and Gas Comment
Subject:	oil and gas regulations
Date:	Wednesday, October 12, 2016 9:18:13 AM

Dear Commissioners:

I am an oil/gas lawyer who represents individuals, municipalities and occasionally small oil and gas companies. Oil/gas exploration and production is an industrial activity that should be done as far away from people and open space as possible. Be aware that companies are placing 10, 20 or more wells and production equipment on a single well pad these days, supported by roads, surface equipment, tanks and pipelines.

Please do everything in your power to oppose this development in our community. Prices are low and companies are going out of business. So, if you can's stop them, please consider buying or condemning these rights.

Thank you.

Phil Barber Phillip D. Barber, P.C. 1675 Larimer Street, Ste. 620 Denver, CO 80202 Phone: 303-894-0880 Fax: 720-904-5755 phillipbarber@aol.com I just received notice today that there is a meeting concerning the expiring tracking moratorium. I would like to put in my vote: I am a Boulder resident and oppose any fracking efforts in Boulder County.

Thank you.

Best, Tanya Markle For our water.

For our climate.

For our children.

Ban fracking! More than irresponsible, it's reprehensible to allow fracked gas. 400 parts per million and growing. We can't allow corporations to pollute our water, air, and raise our temperatures.

From:	Ann Griffin
То:	Boulder County Oil and Gas Comment
Subject:	Keep Boulder County Frack Free
Date:	Wednesday, October 12, 2016 10:49:23 AM

Dear Commissioners,

To not only honor the sanctity of human bodies, spirit and minds, but to keep a community healthy, most of all to uphold the rights of people to have clean water, air and peace of mind - for all this keep Boulder County Frack Free.

Sincerely, Ann Griffin, Lafayette

Amelia Hurst
Boulder County Oil and Gas Comment
Stand Up For Our Moratorium!
Wednesday, October 12, 2016 11:01:47 AM

For the sake of our health, our coughing children, our clean water, our chance at a sustainable future with unpolluted soils, animals and food... Please do not crack our bed rocks and please, please, please do everything it takes to keep fracking out of Boulder County, as a citadel on the hill to a fight that is of critical importance to our nation right now!

Thank you for heeding the voice of the people you represent in this decision and the wisdom of not collapsing under the pressure of great money and corporate interest.

Amelia Hurst 720.443.7052

From:	Brook Stableford
To:	Boulder County Oil and Gas Comment
Cc:	Frack Free Colorado
Subject:	New Moratorium for Boulder County
Date:	Wednesday, October 12, 2016 11:02:17 AM

Dear Boulder County Planning Commission and County Commissioners,

Please create a new moratorium on fracking in Boulder County. Our county is for us, not to be poisoned by the oil and gas industry that too often makes a few rich while poisoning the masses.

Fracking wells are prone to accidents that toxic chemicals into our air, water and soil both due to the nature of the fracking process and inevitable human error, and it is cheaper for the oil and gas industry to have accidental leaks than it is to prevent them. Fracking is very noisy, often 24 hours a day, and too often the pads are placed close to residential areas.

"In the past year, Erie has taken public input at various meetings from scores of residents upset with the spike in drilling in Erie, and specifically with its impact on noise, air quality, pollution, potential chemical risks and various other quality-of-life and safety measures."

http://www.dailycamera.com/erie-news/ci_28670568/erie-moves-new-fracking-codealong-despite-anadarko

Private property owners have little to no power to fight placement of fracking wells on their property which reduce property value and places an unfair and undue burden on property owners.

Please protect the citizens you were hired to protect and resist the pressures of the wealthy oil and gas industry who will claim that protecting human health and environment is an undue burden on them.

Thank you for your consideration.

Brook Stableford



Julia Johnson
Boulder County Oil and Gas Comment
NO to Oil and Gas Development!
Wednesday, October 12, 2016 11:11:54 AM

We have got to stop retarding our evolution towards Green energy production.

Two weeks ago the country of India opened up a solar panel energy grid that provides energy to 300,000 households. It is an embarrassment to our great nation that we are so far behind the wave of the future.

Let's follow the lead of the progressive countries such as Germany and India and regain our dignity. Say NO to lifting this moratorium. No fracking or drilling in Boulder County or anywhere in Colorado or abroad for that matter.

Water is quickly becoming more precious than oil or gas. Please keep us safe and healthy by protecting our water aquifers and air.

Please employ people to perform R&D for developing alternative solutions to oil and gas drilling.

My best to you, Julia Johnson 8493 Stoneridge Terrace Boulder, CO 80302

From:	Cindy Copeland
То:	Boulder County Oil and Gas Comment
Subject:	Boulder County"s proposed oil and gas rules
Date:	Wednesday, October 12, 2016 11:12:48 AM

Boulder County should include language requiring that the Colorado Air Quality Control Commission's and EPA's oil and gas regulations are adhered to by all sources. The Boulder County Commissioners should ensure that the Colorado Air Quality Control Commission is regularly and diligently inspecting all sources and taking enforcement action when permit requirements and regulations are not being followed by the sources. Since there are so many oil and gas sources in the state, unfortunately permit violations go unnoticed at times, which results in excess and uncontrolled air emissions.

Cindy Copeland Independent Air Quality Consultant Sierra Club Rocky Mountain Chapter's Beyond Oil and Gas Team Member No fracking in Colorado! We need alternative fuel sources. Dont jeopardize our health. We moved to beautiful Colorado for a reason!

DJ Shoaf

Sent from my iPhone

From:	Dave Auerbach
То:	Boulder County Oil and Gas Comment
Subject:	Extend the moratorium
Date:	Wednesday, October 12, 2016 11:19:44 AM

Commissioners,

You've made a stand against the Dakota pipeline several states away. But if you allow fracking in Boulder County, what good is your stance? Fracking will ruin this county forever. Our climate is in peril thanks to fossil fuel extraction and largely because of fracking. This is our public land, not multi national oil companies. Do not allow this. David Auerbach Gunbarrel

Sent from my iPhon

From:	windjourney@gmail.com
To:	Boulder County Oil and Gas Comment
Subject:	No fracking!
Date:	Wednesday, October 12, 2016 11:25:24 AN

As a long time citizen of Boulder I absolutely and completely reject fracking in Boulder County and everywhere. We cannot let the oil and gas industry destroy this beautiful land for the sake of profit. I expect the elected leaders of Boulder County to take a stand against fracking. Be brave, stand strong and do not say yes to fracking. Be the leaders you were elected to be. The people of Boulder County have made it clear over and over again that we do not want fracking. If you say yes then further poisoning of our land and water will be on your heads and consciences. And rest assured, if you say yes we will fight back and do everything in our power to keep O&G companies from fracking with Boulder.

Boulder could be a leader in the resistance of fracking. You can make this happen!

Thanks Elicia Arwen

--

The only testing ground for the heroic is the mundane. The only preparation for that one profound decision which can change a life, or even a nation, is those hundreds and thousands of half-conscious, self-defining, seemingly insignificant decisions made in private. Shimon Apisdor From:Anna GayerTo:Boulder County Oil and Gas CommentSubject:A vote against Fracking in Boulder County!Date:Wednesday, October 12, 2016 11:48:41 AM

I am a real estate agent and I know the impact of massive fracking in Weld County on the environment and quality of life there. The risks are too high. Do not allow these interests into our County!



Anna Gayer

Residential Sales Expert Cell 720-291-9886 Fax 303-499-1755 annagayer@comcast.net www.anna.gayer.homesincolorado.com RE/MAX Executive Club Award 2013-2015

From:	Jeremy Carlson
To:	Boulder County Oil and Gas Comment
Subject:	Fracking: a short-term gain (maybe), a long-term disaster
Date:	Wednesday, October 12, 2016 11:59:31 AM

To: Boulder County Planning Commission and County Commissioners

Thank you for the opportunity to speak up concerning fracking in Boulder County.

I believe that while fracking may offer short-term benefits in the form of fuel, jobs, and profits for energy companies, the long-term effects are likely to be disastrous increased risk of exposure to toxic chemicals, pollution of our air, and contamination of our groundwater make this an unwise prospect.

Boulder County has long worked to thing of the bigger picture, particularly with respect to our environment. As someone who grew up in Boulder, and lives now in Louisville, I urge you to keep fracking out of Boulder County!

Sincerely, Jeremy Carlson

929 La Farge Ave Louisville, CO 80027

From:	Boulder County BOCC
То:	Boulder County Board of Commissioners
Subject:	County Commissioners Contact Us/Feedback Form. [#181]
Date:	Wednesday, October 12, 2016 12:05:55 PM

Name *	Nanner Fisher
Email *	nannerfisher@gmail.com
Phone Number (optional)	(720) 771–7823
My Question or Feedback most closely relates to the following subject: (fill in the blank) *	Fracking Moratorium
Comments, Question or Feedback *	Please see attached document citing studies on Health, Environmental and Real Estate Impacts of Fracking. Thank you.
Attach a File (optional)	fracking_studies_links.docx 109.72 KB · DOCX
Please check box below *	• I acknowledge receipt of the Open Records Notification

Bans/Moratoriums on Fracking Worldwide

Entire country: Germany Scotland France Bulgaria

Bans/Moratoriums on Fracking in US

California- 5 counties Maryland- statewide ban New York-statewide ban Colorado- several counties Texas- several counties Pennsylvania-statewide moratorium Washington, DC- banned in George Washington National Forest Hawaii- statewide New Mexico- New Mexico County Vermont- statewide

http://www.reuters.com/article/us-germany-fracking-idUSKCN0Z71YY http://www.onegreenplanet.org/environment/countries-except-unitedstates-that-have-banned-fracking/ https://keeptapwatersafe.org/global-bans-onfracking/https://keeptapwatersafe.org/global-bans-on-fracking/ https://en.wikipedia.org/wiki/Hydraulic_fracturing_by_country

Studies on Health, Environmental and Economic Impacts of

Fracking

http://concernedhealthny.org/compendium/ http://ajph.aphapublications.org/doi/abs/10.2105/AJPH.2016.303398 http://seek.niehs.nih.gov/texis/search/?pr=internet-all&guery=fracking http://ehp.niehs.nih.gov/ehp281/ http://www.psr.org/assets/pdfs/fracking-compendium.pdf http://www.annualreviews.org/doi/full/10.1146/annurev-environ-031113-144051 https://nicholas.duke.edu/cgc/pnas2011.pdf https://www.epa.gov/hfstudy http://www.dec.ny.gov/press/100055.html http://www.dec.ny.gov/energy/75370.html http://www.dec.ny.gov/docs/materials_minerals_pdf/findingstatehvhf6 2015.pdf http://www.sourcewatch.org/index.php/Fracking_studies http://www.news.cornell.edu/stories/2012/03/reproductive-problemsdeath-animals-exposed-fracking http://environmentalintegrity.org/wp-content/uploads/FRACKINGS-TOXIC-LOOPHOLE.pdf https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3222989/ https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3915249/ http://www.gao.gov/products/GAO-12-732 https://www.ncbi.nlm.nih.gov/pubmed/24087919 https://www.osha.gov/dts/hib/hib_data/hib19890126.html http://www.jhsph.edu/news/news-releases/2016/study-frackingindustry-wells-associated-with-increased-risk-of-asthma-attacks.html http://ehp.niehs.nih.gov/1307732/ http://ajph.aphapublications.org/doi/abs/10.2105/AJPH.2012.301017

Studies on Demographic and Real Estate Impacts of Fracking http://aresiournals.org/doi/abs/10.5555/reli.21.2.k3t42212626i4783

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4816143/ http://www.dukechronicle.com/article/2016/01/study-shows-frackingleads-to-falling-property-value http://www.fcgov.com/oilandgas/pdf/hunsperger-report.pdf http://energyindepth.org/wp-content/uploads/2014/09/A-review-ofhydrofracking-and-its-potential-effects-on-real-estate.pdf

Earthquakes in the US

USGS releases first study showing natural and induced earthquake potential hazards (Induced earthquakes are triggered by human activities, with wastewater disposal being the primary cause for recent events in many areas of the CEUS. Wastewater from oil and gas production operations can be disposed of by injecting it into deep underground wells, below aquifers that provide drinking water). https://www2.usgs.gov/blogs/features/usgs_top_story/induced-earthquakes-raise-chances-of-damaging-shaking-in-2016/

From:	Teresa F
To:	Boulder County Oil and Gas Comment
Subject:	Recalculating the Climate Math - Bill McKibben
Date:	Wednesday, October 12, 2016 12:07:48 PM

Dear County Commissioners,

I know you're trying to do the right thing to stop the Oil/Gas madness from invading Boulder County, but I want to bring to your attention the numbers that Bill McKibben discussed in his recent New Republic article: <u>https://newrepublic.com/article/136987/recalculating-climate-math</u>

Here are some excerpts:

The future of humanity depends on math. And the numbers in a <u>new</u> <u>study</u> released Thursday are the most ominous yet. Those numbers spell out, in simple arithmetic, how much of the fossil fuel in the world's existing coal mines and oil wells we can burn if we want to prevent global warming from cooking the planet. In other words, if our goal is to keep the Earth's temperature from rising more than two degrees Celsius—the upper limit identified by the nations of the world—how much more new digging and drilling can we do?

Here's the answer: **zero**

That's right: <u>If we're serious about preventing catastrophic warming</u>, the new study shows, we can't dig any new coal mines, drill any new fields, build any more pipelines. Not a single one. <u>We're done expanding the fossil fuel frontier</u>. Our only hope is a swift, managed decline in the production of all carbon-based energy from the fields we've already put in production.

.....

"This is literally a math test, and it's not being graded on a curve. It only has one correct answer. And if we don't get it right, then all of us—along with our 10,000-year-old experiment in human civilization—will fail."

Wow, are you hearing what I'm hearing?

McKibben is saying that humanity is toast if we don't keep it in the ground. That means that you are affected as well as us! We're talking the end of civilization.

So I'm asking that you go to any lengths to keep it in the ground. Take a firm stand - don't let them do it. Show true leadership. Do the right thing.

Teresa Foster Longmont, CO Dear Commissioners,

I appreciate the difficult legal situation that you are in with regards to fracking in Boulder County. I implore you to continue to be leaders and to push the envelope in every way possible to protect our county from the proven and disastrous environmental, health and economic costs of fracking. Simply imagine that this were happening in your own backyard — as it could to so many unfortunate Coloradans — and act accordingly. It may seem like the courts and the Governor, at the behest of Oil & Gas interests, have gotten the better of us, but you can still stand up to them with the toughest possible regulations to protect the people and places you are sworn to represent.

Many thanks,

Emily Utz 36-year resident of Boulder County Hello,

As a citizen of Boulder County I'd urge you to side with your conscience and climate science in the upcoming decision regarding oil and gas development regulations. With recent Colorado Supreme Court decisions and the failure of oil and gas related ballot measures, it's imperative that Boulder remain a stalwart advocate for clean air, water, land and power. Our lives are in your hands.

Please vote to keep fossil fuels in the ground at all costs.

You are not alone. The citizens of Boulder County — and the globe at large — will support you no matter what comes, and no matter how hard the industry or the courts come after you. Side with the people, side with the future.

Thank you,

Katie

Katie Falkenberg

Radicle Vision design + technology solutions

@fffalcon | 646-543-9753

"The only recognizable feature of hope is action." -Grace Paley

jackrv@aol.com
Ider County Oil and Gas Comment
king Moratorium
nesday, October 12, 2016 1:04:06 PM

Too bad the fracking meeting took place on a Jewish holy day!!

A few of our neighbors who loved Longmont had to leave the area (didn't know them).

It was because they developed pneumonic health problems and had to leave.

The above reminds me of the "old" smoking days when a very few scientists said it was ok to smoke. We all know what smoking has done and continues to do to ones health.

Fracking does cause health problems and it is time that the Oil & Gas industry developed integrity and thought less about the "mighty dollar", there is something called alternative energy!!!!!

Hope the ban can continues for many, many years.

Jack Belchinsky DDS CAPT.0/6 USPHS/Army (ret.)

From:	Patty Sunfield
То:	Boulder County Oil and Gas Comment
Subject:	No Fracking in Boulder County
Date:	Wednesday, October 12, 2016 1:13:37 PM

We are in severe drought and Fracking takes our water and heavily pollutes it. It causes earthquakes and climate changes. We must and believe in alternative energy methods. Adhere to this. It is only about \$\$\$\$ Hickenlooper must be challenged. Boulder Native Patty Sunfield, LPC, LAC

Sent from my Verizon Wireless 4G LTE Droid

Dear Boulder Coujty Commissioners,

I am concerned about fracking.

I worked on propositions 75 and 78, collecting signatures, but we failed. I studied fracking and believe the state set-backs of 500 feet and 1000 feet are inadequate. If, in fact, the proposed 2500 feet is unrealistic, lets compromise with 1750 feet. Studies show that hospital admissions among residents increase with the density of fracking. Air pollution from a wide variety of chemicals are the likely cause, but the stress of noise and traffic should not go unnoticed. Water pollution has been a serious concern in some parts of the country as well.

Climate change is the elephant in the room. It must be addressed. The younger generations alive today are not "throw-away" people. They all need a place to live that will provide clean food, water, air, and weather that supports crops, and existing cities along the ocean's shores. If it becomes a little more difficult to deliver natural gas, this will only encourage us to use more safe renewable energy.

I understand that the courts have ruled that the state regulations take precedence. Thank you for doing what you can to make Boulder County a healthy place to live.

Chris Hansen 4556 Sprucedale Place Boulder, CO 80301 Cell Phone: 720-934-1033 Email: <u>hansenco420@gmail.com</u>

Chris

From:	ollimaleya@aol.com
To:	Boulder County Oil and Gas Comment
Subject:	Extend the Moratorium!
Date:	Wednesday, October 12, 2016 1:48:08 PM

Okay, so Longmont's ban lost in court.

First of all, we're talking moratorium, not ban. Secondly we're Boulder and Boulder has more money and will put up a good fight, and thirdly, with oil prices low and land this close to the mountains less fertile ground for drilling, oil and gas are less likely to make an issue of it.

Carolyn Usher 2210 Balsam Dr Boulder

From:	Tracee Bentley
To:	Sanchez, Kimberly; Boulder County Oil and Gas Comment
Cc:	Ben Norris
Subject:	CPC Commnmets on Proposed Oil & Gas Regulations
Date:	Wednesday, October 12, 2016 1:52:22 PM
Attachments:	Boulder County Comments 10122016.pdf

Dear Planning Commission & Ms. Sanchez:

Attached please find comments from the Colorado Petroleum Council regarding your draft amendments to oil and gas development regulations. Please let me know if you have any questions.

Thank you,

Tracee Bentley

Tracee Bentley

Executive Director

1660 Lincoln Street, Ste 2320

Denver, CO 80264

720.214.7177

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Tracee Bentley Executive Director Colorado Petroleum Council

1660 Lincoln Street, Suite 2320 Denver, CO 80264

Telephone Email www.api.org

720-214-7176 BentleyT@api.org

October 12, 2016

Boulder County Planning Commission and Staff Attn: Ms. Kimberly Sanchez Chief Planner 2045 13th Street, Ste. 200 Boulder, CO 80302 oilgascomment@bouldercounty.org

VIA EMAIL

SUBJECT: Proposed Amendments to Oil and Gas Development Regulations (Docket DC-16-0004)

The Colorado Petroleum Council ("CPC"), a division of the American Petroleum Institute ("API"), respectfully submits the following comments on the Boulder County proposed regulations regarding oil and natural gas development. CPC welcomes and appreciates the Planning Commission's consideration of comments ahead of your hearing on Wednesday, October 12, 2016, and we believe our comments will help inform any final action by the Commission.

I. Interest of the Colorado Petroleum Council

API, doing business in Colorado through its Denver offices as CPC, is the primary national trade association of America's technology-driven oil and natural gas industry. API's approximately 650 members are involved in all segments of the industry, including the exploration, production, refining, shipping, and transportation of crude oil and natural gas. In Colorado alone, 111,500 jobs were supported by the oil and natural gas industry in 2012. These jobs provided \$29.6 billion in state economic activity and over \$1.6 billion in state revenue that same year.¹ CPC members have invested billions of dollars in Colorado's oil and natural gas industry. Together with its member companies, CPC is committed to ensuring a strong, viable oil and natural gas industry capable of meeting the energy needs of our Nation and Colorado in a safe and environmentally responsible manner.

¹ See, e.g., http://www.energyfromshale.org/americas-communities/colorado.



II. Provisions of the Proposed Regulations Are Preempted by State Law, and Will Lead to Costly and Unnecessary Litigation

Colorado's Oil and Gas Conservation Act (the "Act") was enacted by the legislature to "foster the responsible, balanced development, production, and utilization of the natural resources of oil and gas in the state of Colorado in a manner consistent with protection of public health, safety, and welfare, including protection of the environment and wildlife resources," to "protect the public and private interests against waste," and to "enforce the coequal and correlative rights of owners."² Pursuant to the Act, the Colorado Oil and Gas Conservation Commission ("COGCC") has enacted detailed and comprehensive regulations of oil and gas development in Colorado. Among other provisions, the regulations include well permitting requirement; standards for casing and cementing of wells; minimum setbacks from buildings, roads, and utility lines; site reclamation standards; fire and blow-out prevention measures; aesthetic and noise control standards; measures for the protection of wildlife; bonding requirements; and public disclosure of chemical additives used during well stimulation.³ The regulations also allow local governments to create Local Government Designees, who are authorized to receive information from the COGCC and well operators, and to participate in the development of comprehensive drilling plans.⁴ Compared to other states, it is the experience of API member companies that Colorado possesses some of the very strongest, if not the strongest, regulations regarding oil and natural gas development in the nation, including unequaled provisions related to local government participation and input.

The Colorado Supreme Court has very recently held that counties and municipalities cannot completely prohibit oil and natural gas development within their borders, and cannot regulate oil and natural gas activities in a manner that conflicts with state law or regulations. Building on common law preemption principles announced as far back as 1992, the Court earlier this year announced two decisions, *City of Fort Collins v. Colo. Oil and Gas Ass'n* and *City of Longmont v. Colo. Oil and Gas Ass'n*,⁵ that confirmed the fundamental principle of state law primacy with respect to oil and natural gas development: local governments, including county governments, cannot prohibit what the state permits, regulate in a way that conflicts with any state law, or otherwise interfere with the state's interest in natural resource development and its uniform statewide regulation.

² COLO. REV. STAT. § 34-60-102.

³ See 2 Colo. Code Regs. §§ 404-1:303, 1:404, 1:603, 1:606A, 1:701-712, 1:801-805, 1:1001-1004, 1:1201-1205.

⁴ *Id*. at §§ 404-1:214, 1:216.

⁵ 2016 CO 28, 29.


Unfortunately, many provisions of the proposed regulations violate this principle. Even a cursory review of the proposed regulations reveals several facially problematic provisions that are unlikely to survive judicial scrutiny. While some of these are discussed in more detail in Section IV below, CPC believes the following provisions of the proposed regulations, without limitation, are unlawful under Colorado preemption doctrines, as recently confirmed by the Colorado Supreme Court in *Fort Collins* and *Longmont*:⁶

- APD approval, § 12-400(A)(4)
- Completeness Determination, § 12-400(G)
- Emergency Preparedness Plan, § 12-500(L)
- Air Quality, § 12-600(C)
- Floodplains and Floodways, § 12-600(F)
- Natural Resources, § 12-600(I)
- Pipelines, § 12-600(J)
- Water Quality, § 12-600(O)
- Wetlands Protection, § 12-600(P)
- Conditions of Approval Applicable to All Special Review Approvals, § 12-700, especially §§ 12-470(E)-(F), (H), (J)-(K), (T)
- Enforcement, § 12-1000
- Amendments to Art. 4-514(E)(2)

CPC also notes that while the above provisions are likely vulnerable to facial challenges, nothing would preclude affected companies from pursuing as-applied challenges to specific proposed regulations if they were enforced in a manner that conflicted with state law or rendered it superfluous. Indeed, given the extreme breadth of many of the proposed regulations, it is hard to imagine a scenario in which no provision is applied in a conflicting manner at some point in the future. While the effects of the proposed regulations on human health and the environment are speculative at best, it is a near certainty that they will lead to more costly – and avoidable – litigation for the County.

⁶ In contrast to how Colorado stands apart as one of the strongest regulations in the nation, its conflict preemption principles as applied to oil and natural gas regulations are utterly unremarkable. API's experience with these issues in many other states would also lead us to conclude that these provisions, if enacted at the local level in Michigan, New Mexico, Ohio, Virginia, or West Virginia, to name just a few, would also be invalidated by the courts.



III. Boulder County Has Failed to Justify the Need for Additional, Duplicative Regulation of Oil and Natural Gas Production

While the preemption issues discussed above are the most likely to be litigated – at taxpayer expense – the threshold question of whether additional, duplicative regulations in Boulder County are even warranted has simply not been addressed in a thoughtful way. The summary assertions found in the "Purpose" section of the proposed regulations are familiar to API in the sense that many of these sentiments appear in other legal and regulatory documents aimed at stopping or curtailing oil and natural gas development across the country, but whatever these possess in emotional or political appeal they lack in scientific merit.

For example, section 12-100(A) states, without support, that oil and natural gas development is "intensive" and "has the potential to significantly impact the surrounding community and environment," a description that could be applied to a nearly limitless array of activities not singled out for stricter local regulation in Boulder County, including wind energy development, craft brewing, or lawn care. Unsurprisingly, this section cites "concerns" raised by local residents, yet does not mention any number of peer-reviewed scientific assessments that find no connection between such concerns and oil and gas development, including the U.S. Environmental Protection Agency's own draft assessment on water quality impacts of hydraulic fracturing that found no widespread, systemic impacts to drinking water. And Section 12-100(B) maintains that the COGCC does not adequately review local impacts, without discussion of the many specific COGCC regulations allowing for public input and participation that are unrivaled in any other set of state regulations. Without adequate justification for additional regulation anywhere in the record (and in fact, the record is completely devoid of analysis of how the proposed regulations will promote protection of human health and the environment), it seems more likely that the proposed regulations are driven by local animus towards the industry, not science or other sound policymaking concerns.

IV. Other Specific Comments on the Proposed Regulations

• *Emergency Preparedness Plan.* The requirements described in section 12-500(L) are potentially preempted by state law, overbroad, and may actually decrease public safety by forcing compliance with unworkable and inflexible response plans. For example, the requirements of section 12-500(L)(4) could create response plans that are far too prescriptive or narrow to be implemented in the event of an actual incident. CPC recommends that these and related provisions be removed and replaced with references to COGCC regulations regarding emergency response plans.



• *Air Quality.* Section 12-600(C) is potentially preempted by state and federal law, and may decrease the safety of certain operations by imposing blanket requirements on "all emissions," even where, for example, flaring or venting of natural gas may be required to prevent or minimize the likelihood of an incident. CPC recommends removing this provision, or adding an express exception for health and safety related operations.

• *Natural Resources*. Section 12-600(I) contains numerous overly broad, vague, and undefined terms, including "significant natural communities," "natural areas," "distinctive rock ... forms," and "other identified visual ... resources." CPC recommends that this section be limited to significant riparian corridors and critical wildlife habitats.

• *Pipelines.* In addition to potential preemption by state law, this provision is also potentially preempted by federal law. CPC recommends it be removed, or revised to apply only to pipelines not under federal jurisdiction.

• *Enforcement*. While CPC is not aware of any jurisdiction in the country where upstream oil and gas operations are lawfully subject to county enforcement actions, the provisions in section 12-1000(A) authorizing county-level "stop work" orders could actually give rise to unsafe operating conditions in the event they conflict with state authorized operations or are based on unsupported concerns. CPC recommends section 12-1000 be removed.

* * *

Thank you for the opportunity to provide comments. If you have any questions, please do not hesitate to contact me at (720) 214-7176, or bentleyt@api.org.

Sincerely, Tracee Bentley

Executive Director Colorado Petroleum Council

From:	Russell Mendell
To:	Galvan, Alexis
Subject:	Oil and gas comments Boulder County
Date:	Wednesday, October 12, 2016 1:57:18 PM
Attachments:	Frackin wastewater testimony.docx

I appreciate the efforts of Boulder County Staff to protect Boulder County residents the dangers of fracking. That said the current regulatory framework does not do enough protect the residents from many of the toxic threats that this type of industrial activity poses.

Due to time constraints I will focus my comments specifically on the need to add an additional application requirement for the county require full tracking and accounting for all wastewater produced by oil and gas operations within Boulder County. The waste from from fracking wells is known to be acutely hazardous to human and animal health and must be regualted as such.

Fracking wastewater also known as flowback or produced water includes patented toxic chemical mixtures and formation water brine which contains carcinogenic chemicals and radioactivity. Mixed together they can often produce unexpected chemical reactions that can be extremely hazardous for human health.

Just a whiff of the chemical mixture alone nearly killed Durango nurse Cathy Behr. She suffered lung, heart and liver failures an was put on life support after inhaling near an oil and gas worker with fracking chemicals on his clothes. The oil and gas industry refused to release what was in their mixture to the doctors treating Cathy, calling their toxic brew a propietary secret.

A study done by Cornell University scientist found that fracking wastewater spilled on pasture had contributed to the death of livestock in 6 states, including Colorado. In one case fracking fluids released into a field killed 17 cows in one hour. In 1979 the EPA approved surface dumping for an oil and gas wastewater and the problem with animals drinking it has been rampant across the country. Some have also noticed the correlation between a decline in wildlife along Colorado's Western Slope, such as mule deer, with the increase of fracking and open wastewater pits. In California it was found that years after, that hazardous wastewater had been dumped into an aquifer that feeds one of the US's foremost agricultural regions. I personally have witnessed trucks dumping fracking wastewater on roads in Weld County. It is well known that this is a common practice in Colorado. Companies dump wastewater onto roads fo so called dust mitigation and use open-air evaporation pits to turn the waste into salts that are later dumped on farm fields and roads.

It is outrageous that we allow this. Yet the state and federal government have no accounting for the billions of gallons of hazarodus waste produced by fracking in Colorado alone. This is why the NRDC in May of this year issued a lawsuit against EPA for failing to regulate fracking waste. If Boulder County does not require a proposal and reporting for how fracking waste will be handled, the county risks similar lawsuits.

Imagine I told you I want to build a nuclear power plant, but had no plans with what to do with the waste. Would you allow me to set up shop? This is the kind of unbelievable exemptions we give the fossil fuel industry in this state. We must ensure that another Cathy Behr type incident does not occur as a result of Boulder County not doing due dillegence with regards to fracking waste. It must not be dumped or improperly treated anywhere and it would be wise to require companies to fully reclaim all water used, to safe drinking water standards.

But the first step is to require all compaines that plan to operate in Boulder County to write a detailed proposal with how they plan to deal with fracking wastewater, including consent forms from all involoved parties. This is a small but important step that will help protect Colorado's residents, livestock and wildlife from just one aspect of fracking's toxic toll. Please update the proposed regulations to reflect this change. It will not protect Colorado's air and the climate, which is why I support the extension of a moratorium on oil and gas operations in Boulder County until all these issues of public health and safety can be accounted for. <u>https://www.washingtonpost.com/news/energy-</u> environment/wp/2016/05/04/environmental-groups-sue-epa-seek-stricter-rulesover-fracking-waste-linked-to-earthquakes/?utm_term=.5e571d806009

http://www.denverpost.com/2008/07/23/oil-secret-has-nasty-side-effect/

http://energyblog.nationalgeographic.com/2013/10/04/fracking-water-its-just-so-hard-to-clean/

http://www.ecowatch.com/cornell-study-links-fracking-wastewater-withmortality-in-farm-animals-1881571389.html

Fracking is Largely Unprofitable (with Wattenberg and Bakken Case Studies)

Wendell G Bradley, PhD 608 Meadow Dr Windsor CO 80550 wendellgbradley@gmail.com Ph: 970-686-6078

> **RECEIVED** County Commissioners Office

> > OCT 12 2018

REC'D BY_____

Fracking Is Largely Unprofitable.

Abstract: A simple, nontechnical, depletion model shows that incomes from hydraulic fracturing (fracking) of oil-well fields are likely insufficient to cover preparation, extraction and production costs, thus current fracking is largely uneconomic.

Introduction: Nearly every region of the country has had a recent encounter with fracking that has raised questions about its overall benefit. To the extent fracking is not 'economic' its Operators cannot, for example, rightfully claim possession of recoverable reserves (per SEC rules) or beneficial trade-offs given its substantial health, safety and environmental risks, and cannot justify any related eminent domain condemnations or forced leasing of properties.

The ensuing analysis develops a simple, generic model for assessing drilling's fundamental issue of cost vs income. At current oil prices, the analysis shows that economic wells are scarcely found. The Wattenberg Oil Field (Denver-Greeley area of CO) is offered as a case study. The model/method is readily applicable to other Oil Fields.



Qualls #3D-28H: An empirical, time-based decline in production for a horizontally drilled and fracked Wattenberg shale oil well near Longmont, CO.

Discussion: The above graph's quick drop-off in production with time is representative of shale, oil well production. Note how the amount produced during the early months (area under first part of curve) approximately equals the amount produced during all the subsequent months (area under rest of the curve). Indeed, by the end of a 3-year production lease, a well may have already devolved to 'stripper' status and been removed from the Operator's portfolio.

A simple well-depletion model is

.

y = a/x

where y represents the barrels of oil produced per month, x represents the corresponding month numbers, and a is the depletion parameter determined by graphical fit to the data pairs. The amount A of oil produced over the time period from x_0 to x is:

$$\mathbf{A} = \int \mathbf{y} \, d\mathbf{x} = \int \mathbf{a} / \mathbf{x} \, d\mathbf{x} = \mathbf{a} \, \ln \, (\mathbf{x} / \mathbf{x}_0)$$

All data derives from the Colorado Oil and Gas Commission's Scout Cards and Monthly Well Production records as reported by the well Operators, themselves. The pre-stable production contributions A_1 (those before the depletion model applies) are simply added to the modeled production as follows

$$\mathbf{A} = \mathbf{A}_1 + \mathbf{a} \ln \left(\mathbf{x} / \mathbf{x}_1 \right) \tag{I}$$

Calculations must be done individually for large numbers of wells in a production field to understand its oil-economics. An individual data set is required to establish each well's A_1 , a, and x/x_1 in the above equation.

Results: A case study (utilizing the high-producing Qualls well of Colorado's 'Wattenberg' field) demonstrates method/model for calculating well productions and corresponding incomes.

http://cogcc.state.co.us/cogis/FacilityDetail.asp?facid=12337259&TYPE=WELL

 $A_1 = 9359 \text{ bbl}$ a = 28,000 bbl l = 4400 ft

The graph's first two points (402, 1) and (8957, 2) show pre-stable production and l is the horizontal drill length. The graph's red line represents the above depletion model y = 28,000 bbl /x. It applies from month 3 to month 12. The model can now be used to mathematically project productions, dollar incomes, and depletion ratios. Because the focus, here, is on fundamentals and clarity, natural gas fractions of well production, which do not contribute substantially to Operator net income (may even be negative), are not included.

Production data for a second area well, Eifert PC E #11-63 HN (near Greeley, Colorado), yields:

http://cogcc.state.co.us/cogis/FacilityDetail.asp?facid=12334525&TYPE=WELL

 $A_1 = 2928 \text{ bbl}$ $a = 18,000 \ l = 4249 \text{ ft}$

Oil depletion curves are generally symmetric enough to the x- and y-axis to fit the above hyperbolic model. Hundreds of Wattenberg wells were analyzed. The production range of better-than-average wells fell near the Eifert example. Both wells showed hyperbolic depletion and proved sub-economic, if drilled at current costs/prices (as shown below).

The expected Qualls production A is calculated from equation (I) for a 5-yr lease:

$$A = 9359 bbl + 28,000 bbl [ln(60/3)] = 93,359 bbl 5 yr$$

For 10 years of production,

Since it is the logarithm of x that appears in the model, A does not change dramatically with x even with a doubling in time, say, from 5 to 10 years. Note how this well's monthly production has fallen from 9039 to 1631 bbls; decreased by 82% in just 9 months.

To put a Wattenberg, horizontal well into production, the Operator's cost (land acquisition, site preparation, leasing, drilling, and completion) **is about \$1100/ft**. Operator Tekton (Windsor, CO), for example, completed two horizontal wells in April, 2013 for \$9 million with lateral lengths of 4,100 ft (1).

Income is calculated from i = pA, where p is oil's current price (\$50/bbl). Since well productions increase essentially linearly with horizontal drill length, incomes per unit length are the relevant measure for comparisons.

$$i/l = (p/l) A = p/l [A_1 + a \ln (x/x_1)]$$

For the *high-producing* Qualls well (A = 93,359 bbl from above),

$$i/l = $1061/ft$$
 5 yrs

For the better-than-average 'Eifert' Well,

$$i/l = $775/ft$$
 5 yrs

For an average Wattenberg well:

$$i/l \simeq p(a/l)ln(x/x_1) =$$
\$707/ft 5 yrs

The last equation presumes a one-month stabilization period and a comparatively unimportant, pre-stable dollar contribution, $p(A_1/l)$ (typically amounting to less than 10%). It also incorporates an averaged a/l = 4.16 bbl/ft across the Wattenberg Field (100 distributed wells).

Conclusion: The analysis shows that 5 years of well income is generally insufficient to recover a well's \$1100/ft material cost.

Drilling for product in the Wattenberg is mostly unprofitable; uneconomic even for a relatively high-producing Wattenberg well. Only a rare, very high-producing Wattenberg well would prove profitable at oil's current price of \$50/bbl. Indeed, *an oil price of about \$78/bbl is necessary to break even on material well-cost vs sales-income for an average Wattenberg well* under a 5-year lease.

$i/l \simeq$ \$78/bbl [4.16 bbl/ft ln(30)] = \$1100/ft

The Wattenberg's income deficiency substantially worsens once the operating costs of any taxes, oil-separation, transportation-to-hub, payment of royalties (about 20%), and interest on capital (perhaps 20%) are included. These unavoidable costs are accountable only 'post-model' because they are both Operator and pad-specific. They can reduce a well's net income considerably (by nearly 50% in some cases) greatly exacerbating the already deficient *i*/*l* from sales in the above comparisons, **thus raising the Wattenberg's break-even price to about \$100/bbl**. Tekton Windsor, for example, has implicitly acknowledged deductions that decreased its net income by

\$37.5/bbl (2). Also, a 5-year lease on a well sold into stripper status after 3 years would not be contributing to an Operator's income.

Chesapeake Energy, even with its vertically integrated operations, had already given up on the basin entirely, citing unfavorable economics—even before the recent collapse in price (3).

The above analysis can be readily applied to hyperbolically declining shale oil fields elsewhere. Its utilizations of calculus and curve-fitting are at the advanced level of high school mathematics and require no specialized knowledge of either 'oil economics' or fracking.

Acknowledgement: Special thanks to Nick Luca for his calculations (100 wells) to get the

Wattenberg's a/l value.

Update: the above work was based on 2014 and earlier data. In this section, the model will generate results including 2015-16 data. During this more recent period, wells have increased in both size (horizontal length) and complexity; depletions are more rapid due to addition of more stages in initial fracking and increased use of proppant sand. Also, drilling costs have decreased due to greater efficiencies, but mostly from lowered rig rental costs in response to lower oil prices. As a result of this period's larger well pads and drilling reaches (areas), additional costs accrue, including those from more complex acquisition, leasing and gathering arrangements which, alone, can add about \$2.5 million per well. Capital costs for Exploration and Production will typically add about 20% to overall costs due to interest payouts. An additional 20% payout in royalties is acknowledged on Wattenberg AFEs (Authority For Expenditures) as an WI/NRI entry. The magnitudes of these additional completion costs are confirmed by the extensive Katz Study (4).

The updated material D&C (Drilling and Completion) cost of \$822 per foot and averaged well length of 6800 feet are taken from the recent SEC (Securities Exchange Commission) filing of Wattenberg operator, Extraction Oil and Gas (5). Upon adding the \$2.5 million, plus 20% each for capital and royalty costs (detailed above), the *total* D&C cost c/l for an average Wattenberg well becomes \$1150 per ft. A new, average 'a-value' (see equation I) of 50,000 bbls was determined (as above) from graphical analysis of 2015-16 production data as reported to the Colorado Oil and Gas Commission. From that analysis, it was determined that with more extensive fracking (60 vs 20 stages), wells depleted more rapidly--in about 20 months with a 1 month stabilization--thereby decreasing the average value of $ln(x/x_1)$ in equation I to about ln (10) = 2.3. At break-even, $c/l = i/l = (p/l)[a \ln(x/x_1)]$

\$1150/ft = (p/6800 ft) [50,000 bbl (2.3)]

Solving for **p** yields **oil's break-even price for Wattenberg fracking (2015-16):**

p = \$68/bbl

The oil-production numbers listed by Extraction O&G in their SEC filing were not used because their derivation is not explained. For example, Extraction's SEC reserve consultant, Ryder Scott, uses Barrels of Oil Equivalent (BOE) which is not appropriate in current cost/income analyses, since an Operator derives solid income (sales) only from separated oil, not the caloric value of combined oil and gas, or BOE. That device leads to the convenient, much lower break-even oil price of about \$54/bbl. Thus, updated (2015-16) conditions do not significantly change the overall conclusion: Fracking for Wattenberg oil remains uneconomic at the current, long standing, and predicted oil price of about \$50/bbl.

The Bakken: This work's production model was applied to the Bakken Formation of North Dakota (ND) using aggregated monthly, Operator reported data as recorded by the ND State Industrial Commission, Oil and Gas Division. County totals averaged 2494 bbl/mo/well for the year 2016 (through July only), 2819 bbl/mo/well for Dec 2015, and 3054 bbl/mo/well for 2014. On an annualized basis, these amounts are: A (2014) = 36,650 bbl/well, A (2015) = 33,830 bbl/well, and A (2016) = 29,930 bbl/well. Note the yearly decrease in A values.

The production equation $\mathbf{A} = \mathbf{a} \ln(\mathbf{x})$ for an average Bakken well in year 2016 becomes:

29,930 bbl =
$$\mathbf{a} \ln (12/2)$$
.

Thus, \mathbf{a} (2016) = 16,600 bbl and the production equation for an average Bakken well in 2016 becomes,

$$A = 16,600 \text{ bbl } \ln (x)$$

For a 20 month period of depletion, an average horizontal well-length of 6800 feet, and \$50 oil, the income per length equation yields,

$$i/l = (p/l) a \ln(x) = [(\$50/6800 bbl ft) 16,600 bbl] \ln (20) = \$366/ft$$

Since the cost per unit length (c/l) for total completion of a ND well (including material, land acquisition, royalty, and capital costs) is at least \$1000/ft, the break-even price **p** for oil can be determined from

$$c/l = i/l = (p/l) a \ln (x)$$

Solving for the break-even price p for ND oil wells on average

p = \$1000/ft (6800ft)/[(16,600 bbl)(3)] = \$137/bbl

This very high break-even price apparently results from the large number of weak-well completions resulting in low a-values on average. Wells in some counties, like McKenzie, can have 10 times the production of some in, for example, McHenry and can be profitable, even at \$50 oil. Nevertheless, average ND oil is not worth producing at the current, long standing, and anticipated price of \$50/bbl.

Once produced, however, unprofitable oil will be transported for sale to recoup whatever is possible from the bad investment. It is doubtful that new investors are yet aware of "the Bakken's" (ND oil's) average lack of profitability shown above, since that area has been invested as a great boon, thus assumed to be a positive venture with high overall, all-around benefits. ND oil's overall lack of worth is excerbated once the additional costs of its known contributions to climate change are accounted.

Endnotes

. . .

1. http://www.goldinvest.de/index.php/deutsche-rohstoff-ag-tekton-energy-beginnt-

horizontalbohrprogramm-27793 See note 2 for cost (\$4.5 million each well).

2. "\$55,000/day" = [\$82.49/bbl (hub) - \$37.5/bbl (deductions)] x "1228 bbl/day"

http://institut-seltene-erden.org/deutsche-rohstoff-ag-anleihe-uber-eur-100-millionen-zur-

finanzierung-des-horizontalbohrprogramms-von-tekton-energy/

3. Dow Jones News wire, Chesapeake Energy selling Half-million acres in Colorado, Wyoming.

Denver Post. 5/26/2012.

http://www.denverpost.com/breakingnews/ci_20714526/chesapeake-energy-selling-half-millionacres-colorado-wyoming

4. Katz, Joseph M, et al. University of Pittsburg, Katz Grad School off Business, The Economic Impact of the Value Chain of a Marcellus Shale Well. 8/2011.

<u>https://www.sec.gov/Archives/edgar/data/1655020/000104746916015459/a2229677zs-1.htm</u>
pp. 102-3.

10/12/2016, Testimony to the Boulder County Planning Commission

My name is Tricia Olson, and I live at 7446 Park Place in unincorporated Gunbarrel.

First, I assume that everyone on this Planning Commission is aware of the impacts that come from industrial oil and gas development, health risks, air pollution, contamination of the ground and water, the potential for fires and explosions, increased radioactivity, the nuisances, the impact of methane on the climate, and long-term threats to local economies in mineral-rich sacrifice zones from an over-leveraged boom/bust industry. If you're not, then please let us know, so that we can pass on the appropriate data and studies.

All those negative impacts mean making regulations as strong as they can possibly be, even though we are aware that most of these regulations will not truly protect the environment or the health and safety of Boulder County residents.

I commend the staff for its work on these draft regulations. However, there are a few additional items to consider for improvement. I also plan to submit additional comments in a day or two.

- 1. Bankruptcies and abandonment of wells are a real risk with companies in this debtridden industry. The regulations seem to assume that the applicant will still be available to plug a well. In fact, as companies go bankrupt or out of business, there are numerous orphaned wells throughout the continent – Wyoming, Texas, North Dakota, Oklahoma, etc.¹ The bonds put up by companies are nowhere near the costs required to clean up and plug these hazardous well, and the considerable costs fall on the taxpayer. An operator should be liable for these costs. At minimum, the County should require that applicants provide documents proving solid financial health with the application submission. The "letter of credit" for site improvements mentioned on page A-16 is not good enough.
- 2. The draft regulations frequently mention pipelines and gathering lines, and they are addressed specifically on page A-31. However, what the regulations don't do is sufficiently address the safety of the gathering lines and pipelines. Most of these, if not all, will eventually spill and leak, and siting must be based on public safety. To do that, someone in the county should identify current lines as to age, location, diameter, wall thickness, Typical and maximum operating pressures, what they carry, and depth of cover. In order to determine appropriate setbacks, the county needs the same information during special review permitting process for new lines, along with an estimated worst case spill volume in the area of the development. As it is in these regulations, pipelines and gathering lines can be a mere 50' from a home.
- 3. Fracking and oil and gas development is now associated with radioactivity waste. Just north of Rocky Flats, we don't need more radioactivity. These regulations should require baseline testing, appropriate monitoring to determine the radioactivity of the waste material from the well and surrounding soils, and plans for disposal, including a timeline for the disposal of radioactive waste.

¹ http://www.dailyranger.com/story.php?story_id=23587&headline=oil-slump-leaves-wyoming-other-states-in-trouble-on-orphan-wells

- 4. The regulations require notice to and input from the Parks and Open Space Advisory Committee. I suggest that the same be afforded to the school boards in Boulder County. This may be especially relevant for Heatherwood and Douglas Elementary Schools.
- 5. In addition, prevailing winds really do need to be considered in siting, and notification should be given to residents for certain well operations, such as scrubbing or snubbing. A woman named Terri in Windsor wrote to me, and I quote, "No one tells you that the oil and gas industry has to scrub and snub their wells all the time. When they do this, they open the hatches, and the VOC's are going everywhere. I was over a mile away, and the COGCC couldn't believe how far the gases had traveled."
- 6. I haven't read Boulder County's fugitive dust regulations, but they should not allow the use of frack fluids in dust suppression.
- 7. Regarding nuisance factors: Residences should be shielded from both the noise and bright lighting associated with these operations.
- 8. I applaud the inclusion of reasonable disruption payments on page A-22. This reminds me of the Porter Ranch leak in California earlier this year. I suggest, however, that 60 days might be a little too long for some situations and that health emergencies and major leaks should be included in reasonable disruption payments. Also, there should be some allowance in the case that livestock is impacted.
- 9. In the event of the contamination to well water, replacement water supplies should be required.
- 10.I don't know what actions the county can take, but flaring is "waste of the resource," and the legislative declaration in C.R.S. 34-60-102(1)(a)(II) declares that it is in the public interest to "protect the public and private interests against waste in the production and utilization of oil and gas;" Flaring should be minimized and discouraged.

Dear Commissioners,

I am writing as a resident of Gunbarrel and Boulder County. Please, extend the moratorium on fracking, and consider banning it outright. Protect our water, our open spaces, our children and our air. We ought to be leaders in addressing climate change here in Boulder, and put resources into a more sustainable and equitable future.

Thank you,

Jennifer Garone

No More Fracking in Boulder County. Please extend the moratorium. Think of our children,

PLEASE

Liliana Nealon Boulder, CO 80301

Micah Parkin
Boulder County Oil and Gas Comment
350 Boulder County
Statement from 350 Boulder County RE: draft oil and gas regulations
Wednesday, October 12, 2016 3:10:20 PM

Statement from 350 Boulder County

delivered by Micah Parkin on Oct. 12, 2016

to Boulder County Planning Commission regarding updated draft oil and gas regulations

Dear Planning Commission Members,

Thank you for holding a public hearing regarding the updated draft oil and gas regulations, and thanks to the County Commissioners and staff for their work on this as well. 350 Boulder County represents about 2,000 members in the County who are deeply concerned about the impacts of fracking on our land, water, air, climate, quality of life, public health and safety.

While we very much appreciate staff's efforts to create as protective regulations as the COGCC and state will allow, it must be pointed out that just two weeks ago **research from Oil Change International** made clear that **in order to stay below 1.5-2 degrees C global temperature rise**, which countries around the world have agreed upon last December at climate talks in Paris in order to avert the most severe consequences of climate change, **no new fossil fuel production can be brought online**.

Using the industry's own figures, the report shows that burning the oil, gas and coal in the fields and mines that are already either in production or being developed, is likely to take the global temperature rise beyond 2C. Even if all coal mining were to be shut down today, the oil and gas lined up so far would take global temperature rise past 1.5C. A 2C target means that we can use only around 85% of the fossil fuel that's currently being developed or in production, while a 1.5C target means we can extract little more than a third (the figures are explained by the US environmentalist Bill McKibben in an article in New Republic).*

We appreciate the County Commissioners' endorsement of climate policy proposals through Communities for Climate Action and all of the work the County Commissioners, Boards, and staff are doing to promote energy efficiency, renewable energy, reduce methane from waste, promote regenerative agriculture, and more. Unfortunately, the resulting methane leakage from oil and gas fracking and the burning of these fossil fuels could undermine our collective efforts to do our part to reduce greenhouse gas emissions.

We understand that Supreme Court's decision that local communities currently have no authority to say no to fracking locally has tied local leaders hands, and so while we strive to change that, we urge that you incorporate the following suggestions into the draft regs:

• Require audited financial statements and scrutiny of every company applying for a permit to ensure that county residents are not left cleaning up the mess left by

insolvent companies, especially in light of the fact that the fracking boom appears to be busting with 90 gas and oil producers in the US and Canada having filed for bankruptcy in the last 20 months (Jan. 2015 - Aug. 2016) and <u>135 oil companies</u> on the edge of bankruptcy.

Require baseline sampling of air, water, and land

• Require continual monitoring and impactful penalties for spills and releases of methane, VOCs and other detrimental emissions

• Do not allow pipeline siting on open space land, especially agricultural, since leaks do and will occur, and we cannot allow contamination of these important lands

• Require closed loop systems and clean up of water used to drinking water standards, considering the large quantity of water used in fracking and likely water shortages due to climate change in the future

• Require careful public health and safety reviews for every potential permit

• Require plans of how water and resources will be transported to and from a site including vehicles and accounting for where water is coming from and where it goes, with no allowances for spraying toxic waste water on land or roads

• Emergency response plan - require disclosure of all chemicals used and testing of wastewater to assess hazards

Thank you.

Note: *The report uses the hazard assessment adopted by the United Nations of a 66% chance of preventing 2C of global warming and a 50% chance of preventing 1.5C – an assumption of risk that in any other field would be regarded as reckless.

Micah Parkin 350 Colorado, Executive Director 504-258-1247 <u>350 Colorado on Facebook</u> www.350Colorado.org Hello,

Please do not allow fracking in our Boulder County!

Boulder County is model for others on taking care of our land and environment.

Allowing fracking, which we are still learning so much about and which we already know has impacts on the environment/health, would be hugely inconsistent with the work that has been done so far to make this County a special place to live.

Best,

Tricia Stahr

From:	You
To:	Boulder County Oil and Gas Comment
Cc:	Jackson Mammele
Subject:	Not happy as Boulder County resident at 1112 Lee Hill Dr. that oil and gas industry thinks they can (see below) October 12, 2016
Date:	Wednesday, October 12, 2016 3:20:33 PM

.... that they can extract natural resources from the earth using the method of hydraulic fracturing to obtain natural gas, or that they can drill into the earth to extract oil.

This planet is being systematically destroyed by such methods as stated above. The people who have the most money and influence in the political arena are the ones who feel it is their right to do such damage to this planet. They make it sound as though they have a right to do this.

As a Boulder County resident living at 1112 Lee Hill Dr., Boulder, CO 80302 I request the Boulder County Commissioners to not allow the oil and gas industry the right to drill into the earth to extract these substances any longer. The people who are in a position to make decisions must consider seven generations forward from today, asking themselves and each other how their decisions are going to impact the seventh (7th) generation from today. If the answer is even remotely possible that that 7th generation will be negatively impacted by an action then it is necessary to not make such a decision.

The other important statement I want to make is this: When making any decision one must taken into consideration what their heart and intuition tells them. They need to ask: How does this feel to me? If the answer comes back in the negative, then the decision must not be made to go forward.

It is not easy sometimes to stand strong and tall against interests which do not have the highest good for all at the very center of the subject.

Please do the right thing for all sentient Beings and this planet right now having to do with allowing oil and gas industry to continue to damage our planet. Do not allow this to continue. Thank You.

Regards,

You, my entire legal name 1112 Lee Hill Dr. Boulder, CO 80302

303-447-2327

younirone@gmail.com

October 12, 2016

From:	Judith Dack
То:	Boulder County Oil and Gas Comment
Subject:	Fracking
Date:	Wednesday, October 12, 2016 10:19:11 PM

I live in a house I own in Boulder County and I strongly oppose any and all oil and gas fracking. I firmly believe this practice will greatly harm our environment and make us sick. Please do your duty and protect the people and our children rather than the oil and gas industry. Please create new jobs through sustainable energy practices. Thank you. Judith Dack 2770 7th Street 80304

Sent from my iPhone. Please forgive any typos and mistakes !!