

**From:** [essreacherin@everyactionadvocacy.com](mailto:essreacherin@everyactionadvocacy.com) on behalf of [Essrea Cherin](#)  
**To:** [Boulder County Board of Commissioners](#)  
**Subject:** Please enact a ban on fracking ASAP, as well as the strongest possible oil & gas regulations.  
**Date:** Monday, November 09, 2020 8:12:05 AM

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Dear Board Chair Deb Gardner,

Dear Commissioners,

I write as a Boulder County resident deeply concerned about proposed fracking projects (140 wells) in our county and the resulting threats to air and water quality, public health, wildlife, and the climate. I urge you to enact a ban on fracking in Boulder County as soon as possible to protect our community from the well-documented threats to public health and safety from fracking, and to enact the strongest possible protective regulations as a backstop.

The proposed fracking projects are particularly troubling in the context of the Front Range's "serious" non-attainment status for ozone, and high concentrations of benzene and other VOCs, to which existing oil and gas operations are a significant contributor. Additionally, a recent report of the IPCC calls for a "rapid phase-out of CO2 emissions" largely over the next decade to avert catastrophic global temperature rise.

Despite the recent Longmont decision, a ban on fracking is consistent with the County's efforts to fight climate change, including the declaration of a climate emergency, and ongoing lawsuit against Suncor and Exxon for climate change-related damages. A fracking ban is both a reasonable and necessary action authorized for local governments by SB19-181. A ban is widely supported by Boulder County residents: 70% in recent polling, and the same fraction of voters in the County voted in favor of Proposition 112 in 2018.

I also urge you to enact the strongest possible Article 12 regulations on oil and gas operations as a backstop protection to any potential legal challenge to a ban. I recommend the following points for inclusion in Article 12, based on the updated draft released October 20, 2020:

-Implement mandatory 2500' minimum setbacks with no waivers: Revise Article 12 to extend the minimum setback of oil and gas operations to 2500' from any structure intended for human occupancy, and from open space, recreation areas and all water sources. This is modest considering that research has identified adverse effects on the cognitive performance of infants whose mothers lived within 8,500 feet of oil and gas wells and an increased risk of congenital heart defects among children born to women living near oil and gas operations in Colorado, with the risks increasing with the density of oil and gas activities within a 10-mile radius.

-Cumulative impacts: Article 12 should incorporate a structure for the County to consider the context of our already-degraded air quality and the need for dramatic reductions in greenhouse gas emissions to avert catastrophic consequences from climate change.

-Affirmatively protect public health, safety, and welfare, and the environment: Section 12-1000 states that "A proposal meets the standards if it will...either avoid adverse impacts to public health, safety, and welfare, the environment and wildlife resources or...sufficiently minimize, and mitigate unavoidable impact." Oil and gas operations must be required to avoid adverse impacts to public health, safety, and welfare, and the environment and wildlife resources entirely, and not simply minimize impacts.

-Implement as mandatory all of the discretionary measures that are listed in Section 12-1100. Article 12 should explicitly prohibit venting and flaring and require "tankless" operations, which reduce air emissions. A recent study concluded that pregnant women who lived in proximity to natural gas flaring had a 50% higher chance of giving birth early than those who did not, putting the level of risk on par with that caused by smoking.

However, regulations are no substitute for a permanent ban. We encourage you to direct County staff to begin developing language for a fracking ban in Boulder County. Thank you for your ongoing efforts to prioritize public health and the environment in Boulder County.

Sincerely,

Sincerely,

Essrea Cherin

4500 19th St Lot 435 Boulder, CO 80304-0662

essreacherin@gmail.com

**From:** [Anne Borrell](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** Extend the moratorium!  
**Date:** Monday, November 09, 2020 8:19:59 AM

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- We are in the midst of a pandemic.
- Raging wildfires have scorched our state and the west coast.
- Our air quality is wretched.

We are in CLIMATE CRISIS.

You must NOT legalize fracking in Boulder County. Extend the moratorium!!

This is a bald attempt of the outgoing commissioners — Elise Jones and Deb Gardner — to approve an update to the oil and gas regulations (SB-181) that will open the county to drilling applications in 2021, then the incoming and remaining commissioners will say, after the fact, that their hands are tied.

The long-term solution to the oil and gas problem is a paradigm shift away from current unsustainable practices.

Boulder County Commissioners – do NOT pass these updates to the Boulder County’s oil and gas regulations.

Extend the moratorium until you get the balls to truly ban drilling and fracking. SB-181 does not protect the health and safety of Boulder County.

Maybe in [another] six-months, the full extent of the damage done by bankrupt oil and gas companies will be [more] clearly demonstrated and The People will wake up to DEMAND that local leaders take the CLIMATE CRISIS seriously.

The populace has entrusted you to protect the health and well being of all citizens of Boulder County. What will future generations say about your decision?

**From:** [paddyofowler@everyactionadvocacy.com](mailto:paddyofowler@everyactionadvocacy.com) on behalf of [Patrick Fowler](#)  
**To:** [Boulder County Board of Commissioners](#)  
**Subject:** Please enact a ban on fracking ASAP, as well as the strongest possible oil & gas regulations.  
**Date:** Monday, November 09, 2020 8:53:13 AM

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Dear Board Chair Deb Gardner,

Deb, Matt, Elise,

I am sure you will receive many emails, some in the form of a pre-drafted form letter which is OK too. I am writing to you and addressing you by your first names as I would anyone I would write to sincerely, As a Boulder resident and am very concerned about proposed fracking in the County as a whole. The current plan to develop 100+ wells is the first order of business we need to address and immediately put a stop to. I encourage you to direct County staff to begin developing language for a fracking ban in Boulder County. Thank you for your ongoing efforts to prioritize public health and the environment in Boulder County.

Patrick

Sincerely,  
Patrick Fowler  
7835 Greenbriar Cir Boulder, CO 80301-4130  
[paddyofowler@gmail.com](mailto:paddyofowler@gmail.com)



**From:** [bhoffmann3821@everyactionadvocacy.com](mailto:bhoffmann3821@everyactionadvocacy.com) on behalf of [Bruce Hoffmann](#)  
**To:** [Boulder County Board of Commissioners](#)  
**Subject:** Please enact a ban on fracking ASAP, as well as the strongest possible oil & gas regulations.  
**Date:** Monday, November 09, 2020 8:58:58 AM

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Dear Board Chair Deb Gardner,

Dear Commissioners,

I write as a Boulder County resident deeply concerned about proposed fracking projects (140 wells) in our county and the resulting threats to air and water quality, public health, wildlife, and the climate. I urge you to enact a ban on fracking in Boulder County as soon as possible to protect our community from the well-documented threats to public health and safety from fracking, and to enact the strongest possible protective regulations as a backstop.

The proposed fracking projects are particularly troubling in the context of the Front Range's "serious" non-attainment status for ozone, and high concentrations of benzene and other VOCs, to which existing oil and gas operations are a significant contributor. Additionally, a recent report of the IPCC calls for a "rapid phase-out of CO2 emissions" largely over the next decade to avert catastrophic global temperature rise.

Despite the recent Longmont decision, a ban on fracking is consistent with the County's efforts to fight climate change, including the declaration of a climate emergency, and ongoing lawsuit against Suncor and Exxon for climate change-related damages. A fracking ban is both a reasonable and necessary action authorized for local governments by SB19-181. A ban is widely supported by Boulder County residents: 70% in recent polling, and the same fraction of voters in the County voted in favor of Proposition 112 in 2018.

I also urge you to enact the strongest possible Article 12 regulations on oil and gas operations as a backstop protection to any potential legal challenge to a ban. I recommend the following points for inclusion in Article 12, based on the updated draft released October 20, 2020:

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-Cumulative impacts: Article 12 should incorporate a structure for the County to consider the context of our already-degraded air quality and the need for dramatic reductions in greenhouse gas emissions to avert catastrophic consequences from climate change.

-Affirmatively protect public health, safety, and welfare, and the environment: Section 12-1000 states that "A proposal meets the standards if it will...either avoid adverse impacts to public health, safety, and welfare, the environment and wildlife resources or...sufficiently minimize, and mitigate unavoidable impact." Oil and gas operations must be required to avoid adverse impacts to public health, safety, and welfare, and the environment and wildlife resources entirely, and not simply minimize impacts.

-Implement as mandatory all of the discretionary measures that are listed in Section 12-1100. Article 12 should explicitly prohibit venting and flaring and require "tankless" operations, which reduce air emissions. A recent study concluded that pregnant women who lived in proximity to natural gas flaring had a 50% higher chance of giving birth early than those who did not, putting the level of risk on par with that caused by smoking.

However, regulations are no substitute for a permanent ban. We encourage you to direct County staff to begin developing language for a fracking ban in Boulder County. Thank you for your ongoing efforts to prioritize public health and the environment in Boulder County.

Sincerely,

Sincerely,  
Bruce Hoffmann  
3821 Silver Plume Cir Boulder, CO 80305-7211  
bhoffmann3821@gmail.com

**From:** [Virginia Winter](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** Oil and Gas Leasing Regulations  
**Date:** Monday, November 09, 2020 9:03:45 AM

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Dear County Commissioners:

There are many reasons that I favor stronger County oil and gas regulations and a continued moratorium on what is called “fracking” from these operations. I understand you are reviewing these this day or evening.

Predominant in my mind are the effects this can have on air quality and the pending threats to health, safety and environment caused by climatic changes directly linked to such operations.

Some of these are listed below.

- Prohibit flaring or venting of natural gas: A recent study published in [Nature](#) concluded that estimates of anthropogenic methane emissions, to which oil and gas operations are a prime contributor, are likely 20-40% higher than previously thought. Preliminary reports from NOAA for atmospheric methane levels in 2019 indicate that the year from 2018 to 2019 showed the largest annual increase in atmospheric methane since 2012.
- Prohibit permitting while the Front Range remains in non-attainment of the National Ambient Air Quality Standard (NAAQS) standards for ozone, and prohibit emissions of air toxics such as benzene: Research has demonstrated that Boulder County’s air quality is adversely affected by oil and gas operations in Weld County, and that oil and gas operations are a significant contributor to excessive levels of ozone on the Front Range. Section 12-1000 A.1. states that “oil and gas facilities and operations will not compromise the attainment of ozone standards for the Denver Metro/North Front Range ozone nonattainment area as established by the US Environmental Protection Agency. Oil and gas facilities and operations will not contribute particulate matter to the air in a manner that endangers public health.” This should be strengthened to prohibit permitting altogether while the Front Range remains in non-attainment for ozone, and should extend to emissions of air toxics as well. A threshold for allowable emissions of particulate matter should be defined based on the ample body of scientific evidence assessing the effects of particulate matter on public health.
- In assessing a permit application, the Board of County Commissioners should be required to consider the cumulative effects of the expected greenhouse gas emissions and other air- and water-polluting emissions associated with the permit in the context of the existing pollution burden in the County.
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Require that all electrical power provided to oil and gas operations be supplied by renewables, on an annual basis (i.e. net zero energy for electricity) and require that all on-site equipment be electrically-powered.

“Tankless” operations, which reduce air emissions, especially of volatile organic compounds (VOCs), should be required in all circumstances. Section 12-1100 D. 14 states a requirement (to be imposed at the county’s discretion, as currently written) for “hydrocarbon control of 98% or better for crude oil, condensate, and produced water tanks.” Section 12-1100 E. 1. (also to be imposed at the county’s discretion) states a requirement for “use of pipelines to transport all gas and fluid materials, including oil, natural gas, fresh water, produced water, and waste products, to and from the oil and gas facilities.”

Thank you for your time and your service to our citizenry!

Virginia Winter  
Managing Principal  
Equinox Consultancy LLC  
2930 Bluff Street #312  
Boulder, CO. 80301

T: 303.355.4924  
C: 303.518.4587

**From:** [rmme44@everyactionadvocacy.com](mailto:rmme44@everyactionadvocacy.com) on behalf of [Rhea Esposito](#)  
**To:** [Boulder County Board of Commissioners](#)  
**Subject:** Please enact a ban on fracking ASAP, as well as the strongest possible oil & gas regulations.  
**Date:** Monday, November 09, 2020 9:06:16 AM

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Dear Board Chair Deb Gardner,

Dear Commissioners,

I write as a Boulder County resident deeply concerned about proposed fracking projects (140 wells) in our county and the resulting threats to air and water quality, public health, wildlife, and the climate. I urge you to enact a ban on fracking in Boulder County as soon as possible to protect our community from the well-documented threats to public health and safety from fracking, and to enact the strongest possible protective regulations as a backstop.

The proposed fracking projects are particularly troubling in the context of the Front Range's "serious" non-attainment status for ozone, and high concentrations of benzene and other VOCs, to which existing oil and gas operations are a significant contributor. Additionally, a recent report of the IPCC calls for a "rapid phase-out of CO2 emissions" largely over the next decade to avert catastrophic global temperature rise.

Despite the recent Longmont decision, a ban on fracking is consistent with the County's efforts to fight climate change, including the declaration of a climate emergency, and ongoing lawsuit against Suncor and Exxon for climate change-related damages. A fracking ban is both a reasonable and necessary action authorized for local governments by SB19-181. A ban is widely supported by Boulder County residents: 70% in recent polling, and the same fraction of voters in the County voted in favor of Proposition 112 in 2018.

I also urge you to enact the strongest possible Article 12 regulations on oil and gas operations as a backstop protection to any potential legal challenge to a ban. I recommend the following points for inclusion in Article 12, based on the updated draft released October 20, 2020:

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However, regulations are no substitute for a permanent ban. We encourage you to direct County staff to begin developing language for a fracking ban in Boulder County. Thank you for your ongoing efforts to prioritize public health and the environment in Boulder County.

Sincerely,

Sincerely,  
Rhea Esposito  
4775 White Rock Cir Apt C Boulder, CO 80301-5365  
rmme44@yahoo.com

**From:** [Eric Tussey](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** Do Not Regulate Fracking - Protect our communities by extending the Moratorium  
**Date:** Monday, November 09, 2020 9:48:33 AM

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My name is Eric Tussey. I have lived in Boulder County since 1989. Back then the Denver Boulder area had dealt with our 1970's ozone situation from car traffic. Now we see ozone and breathe it daily from all the fracking operations in Weld county. I believe we now have 40,000 to 50,000 oil and gas wells in Weld County. Isn't that enough? Human caused climate change from burning fossil fuel is wreaking havoc on people and the planet's ecosystems.

We need to stop oil and gas drilling in Boulder County permanently. Fracking Regulation does not stop the poisoning. It does not keep methane in the ground. Regulation is simply legalizing the process so corporations can make money. Money will not fix a polluted aquifer. Oil and gas profits do not pay for cancer and health issues like asthma and severe migraines that are a result of thier operations, Regulations don't allocate advance funding to take care of leaks, explosions, or cap off abandoned wells. Even a capped well will fail and leak over time. Regulations do not protect us. Regulations do not control radiation from wells as a recent study from Harvard points out. If you live within 12 miles of a fracking well radiation is 40% higher than the background radiation. Fracking breaks up buried uranium and releases radiation. See link

[https://www.popularmechanics.com/science/environment/a34480446/fracking-airborne-radioactivity/?fbclid=IwAR37UuxdibRyV7ag\\_4\\_CcCybzL45BSkASIPolgOuu7iJ3e\\_wnW1SHS58C1w](https://www.popularmechanics.com/science/environment/a34480446/fracking-airborne-radioactivity/?fbclid=IwAR37UuxdibRyV7ag_4_CcCybzL45BSkASIPolgOuu7iJ3e_wnW1SHS58C1w)

What are you doing to address the public health aspect of fracking? A permanent moratorium is a start.

There is no rational reason to allow the Oil and Gas industry to drill or frack more wells in Colorado....

Oh, wait... there is the .... *Profit at everyone else's expense for non accountable corporation's "reason"*. Antiquated laws benefit the fracking companies that come and go out of business regularly to avoid liability for the wells that stop producing oil - or the toxic pollution that they don't want to pay to clean up. The banks lending them money profit handsomely as well. Banks don't have to worry about destroyed aquifers. Some investors profit - they do not pay for the toxic pollution that they wreak on the public's air and water . None of them pays for rising sea levels or the climate refugees. Taxpayers will pay. We all pay for the millions of gallons of fresh water that each fracking well uses. Do we really need to expand the Gross Reservoir so Oil and Gas can frack our communities?

We all know that there is a human caused climate crisis and it is because of fossil fuel

consumption. Right now there is a glut of Oil and Gas on the market. Look at fuel prices. Look at fracking companies going out of business. Laws are meant to keep up with the times. A set of laws drafted in the 18th or 19th centuries to develop our "inexhaustible resources " is not relevant today. People that bought mineral rights years ago made an investment that may not pay off as they had hoped. Just like any investment - timing is everything, Owner of mineral rights investments should have "exercised" them decades ago before science pointed out with irrefutable facts that fossil fuels are causing an irreversible havoc on our atmosphere. People lose money every day in the stock market - owning mineral rights is a similar gamble. Lafayette is a Home Rule city. It is time to make the moratorium permanent and pass Community Rights laws that protect us from drilling.

We will not allow Fracking. The government is granted power by the people. When the government does not act in a way that supports the people's wishes - it is time for a new government. Lafayette citizens have repeatedly supported a permanent ban on fracking. Make the moratorium permanent.

Take advantage of the services that CELDF - the Community Environmental Legal Defense Fund has offered and fight against all fracking. Be the change we ask for. Make the moratorium permanent and protect your community and planet. We will support you if you act in our best interests. Enabling Oil and Gas companies to poison us is not in the public interest.

Thank You.

Eric Tussey  
5075 51st Street Boulder CO 80301  
.....



**From:** [Carolyn Clebsch](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** Ban all fracking in Boulder County  
**Date:** Monday, November 09, 2020 9:50:53 AM

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Hello,

I support banning of all fracking in Boulder County as well as CO in general. At this pivotal moment there is no good reason to continue fracking. Our recent fires show the horrible effects of climate change. It is time to be moving away from fossil fuels not further polluting our local air, creating the conditions for increasingly deadly fires and desecrating our open spaces.

Fracking has proven to be financially unsustainable. There is absolutely no valid reason to continue fracking.

I urge you to continue finding a way to ban all fracking in Boulder County.

Sincerely  
Carolyn Clebsch  
3981 Promontory Ct, Boulder, CO 80304

**From:** [JRodehaver@everyactionadvocacy.com](mailto:JRodehaver@everyactionadvocacy.com) on behalf of [Jennifer Rodehaver](#)  
**To:** [Boulder County Board of Commissioners](#)  
**Subject:** Please enact a ban on fracking ASAP, as well as the strongest possible oil & gas regulations.  
**Date:** Monday, November 09, 2020 10:24:23 AM

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Dear Board Chair Deb Gardner,

Dear Commissioners,

I write as a Boulder County resident deeply concerned about proposed fracking projects (140 wells) in our county and the resulting threats to air and water quality, public health, wildlife, and the climate. I urge you to enact a ban on fracking in Boulder County as soon as possible to protect our community from the well-documented threats to public health and safety from fracking, and to enact the strongest possible protective regulations as a backstop.

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However, regulations are no substitute for a permanent ban. We encourage you to direct County staff to begin developing language for a fracking ban in Boulder County. Thank you for your ongoing efforts to prioritize public health and the environment in Boulder County.

Sincerely,

Sincerely,  
Jennifer Rodehaver  
5159 Idylwild Trl Boulder, CO 80301-3667  
JRodehaver@hotmail.com

**From:** [Ryan Seastrom](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Cc:** [Sanchez, Kimberly](#); [Pearlman, Ben](#); [Rich Coolidge](#); [Mark Mathews](#); [Julia Rhine](#)  
**Subject:** Colorado Oil & Gas Association Comments - Boulder County Draft Oil & Gas Regulations  
**Date:** Monday, November 09, 2020 10:47:12 AM  
**Attachments:** [2020.11.09 COGA Comment Draft Regulations.pdf](#)  
[2020.11.6 COGA Redlines Boulder County Draft Regulations.pdf](#)

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Good morning,

Please see attached for preliminary comments from COGA related to Boulder County's proposed oil and gas regulations. We appreciate the Planning Commission and staff's attention to our concerns and are available to meet or discuss further.

Please let me know if you have any questions.

Sincerely,

Ryan Seastrom  
Regulatory Affairs Manager  
[Colorado Oil & Gas Association](#)  
p: 303-861-0362 c: 208-320-2664



Elections matter! Support candidates who support us by giving to COGA's Small Donor Committee. Text 'COGA2020' to 22525 or click [here](#). Individuals can contribute up to \$50 per year.

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November 9, 2020

**VIA EMAIL – NO ORIGINAL TO FOLLOW**

Boulder County Planning Commission  
2045 13<sup>th</sup> Street, Suite 200  
Boulder, Colorado 80302

**RE: Colorado Oil & Gas Association – Comments regarding Boulder County’s proposed oil and gas development Land Use Code amendments**

Dear Commissioners,

Founded in 1984, the Colorado Oil & Gas Association’s (COGA) mission is to be the unified political and regulatory voice for the oil and natural gas industry in Colorado, and to support our members through advocacy, partnerships, education, and stakeholder engagement. Our vision is to create a thriving, innovative and respected oil and natural gas industry in Colorado that embodies the values of our communities, prioritizes the protection of our environment, and provides the natural resources that advance our society.

COGA respectfully submits this letter along with the attached redline to the Planning Commission, opposing many of the provisions in the draft code related to registration, pre-existing facilities, inspections/enforcement, and fines and penalties. COGA believes that many of the regulations as drafted are unreasonable and unnecessary, and cause serious concerns related to confidentiality, compliance, and the legal authority of the county to enact and enforce specific provisions. Please note that the items outlined above and in our redline do not address all of COGA’s concerns with the draft regulations and are not presented in any order of importance.

While SB19-181 provides Boulder County and other municipal governments with greater authority to regulate oil and gas development, they must do so in a manner that is reasonable and necessary. COGA welcomes any questions from the county on our comments and would welcome a meeting with county staff to provide further clarity on our comments before the County Commissioner’s public hearing in early December.

Please contact me with any questions you may have about this submission.

Sincerely,

A handwritten signature in dark ink, appearing to read 'R. Seastrom', with a stylized, cursive script.

Ryan Seastrom  
Regulatory Affairs Manager

cc: Ben Pearlman – Boulder County Attorney  
Kim Sanchez – Boulder County Deputy Director, Planning/Zoning  
Rich Coolidge – Colorado Oil and Gas Association; Dir. of Regulatory Affairs  
Mark Mathews – Brownstein, Hyatt, Farber, Schreck; Outside Counsel for COGA  
Julia Rhine – Brownstein, Hyatt, Farber, Schreck; Outside Counsel for COGA

Updates to Article 12 of the Boulder County Land Use Code for Oil and Gas Operations  
Docket # DC-19-0002

Summary of Proposed Changes in Staff Second Draft  
October 20, 2020

County staff's Second Draft of the proposed revisions to Article 12 of the Land Use Code, governing all oil and gas development and operations, are attached. The Second Draft contains numerous modifications from the Initial Draft released on March 6, 2020. They are provided without showing changes from the existing regulations or the Initial Draft because the changes proposed are significant enough that showing the changes in redline form makes the document difficult to read. (For comparison, the existing Article 12 can be viewed at: <https://assets.bouldercounty.org/wp-content/uploads/2017/02/land-use-code-article-12.pdf>; and the Initial Draft can be viewed at <https://assets.bouldercounty.org/wp-content/uploads/2020/03/dc-19-0002-summary-and-draft-text-amendments-20200306.pdf>.) This Second Draft takes into consideration additional research, public comment, suggestions from outside experts, other local governments, and state government experts, and changes made at the state level during the ongoing Colorado Oil and Gas Conservation Commission rulemakings.

Overall, the proposed changes in the Initial Draft and the Second Draft address the new authorities given to or clarified for local governments by Senate Bill 19-181, signed into law in April 2019. The proposed changes encompass advances in technology and the ongoing degradation of regional air quality.

Oil and gas development is a complicated area to regulate and has the potential for significant public health and environmental impacts. As a consequence, the proposed regulations are lengthy, technical, and complex. Moreover, it may not be clear from the regulations alone the level of scrutiny and rigor to be applied by County staff, the Planning Commission, and ultimately the Board of County Commissioners (the "Board"). This summary provides information about how the regulations will work in practice and highlights particularly important areas of new or enhanced oversight.

Staff have made many minor changes to the Initial Draft presented on March 6, 2020 in the Second Draft. The changes are too numerous to list or demonstrate in whole. However, the major changes between the Initial Draft presented on March 6, 2020 include the following:

**I. Major Changes between the Initial Draft and the Second Draft**

- Addition of a Setback in Article 12-1000(V):
  - No Well Pad can be located within 2,000 feet of any Dwelling, Educational Facility, or Child Care Center.
- Clarification on how and when applications for oil and gas operations will be denied.
- Addition of Section 12-600 governing Well and Pipeline Abandonment.

- Clarification of protocols for notification of emergency response services and the County for incidents causing or threatening to cause personal injury or property damage.
- Edited provisions for geophysical exploration of oil and gas (seismic testing).
- Updates to noise and odor control regulations.
- Numerous additional plans required from the operator for review by the County to demonstrate protections for public health, safety, and welfare and the environment and wildlife, including new Weed Control Plan, Dust Suppression Plan, Photometric Study, Worker Training Requirements, Safety Management Plan, and assessments and modeling of current and projected air quality.

## **II. Provisions in the Initial and Second Drafts that do not appear in the current Article 12**

- **Regulation of Existing Facilities (Section 12-500).** The County will have broader inspection and enforcement authority over oil and gas facilities already in existence, including with respect to air emissions.
- **Regulation of Seismic Testing (Section 12-700).** Operators will need a permit before conducting seismic testing for oil and gas in the County.
- **Financial Assurances (Multiple Sections).** Under new authority, the County has increased the insurance coverage it requires of operators and will now require financial assurances (such as bonds and letters of credit) from operators to guarantee compliance with all permits, clean-up of any pollution, and complete reclamation. In addition, operators' financial fitness to conduct its operations safely and in compliance with all regulations will be considered during staff's and the Board's analyses.
- **Water Source (Multiple Sections).** S.B. 19-181 gave the County authority related to the water source used for oil and gas operations. The County will obtain and analyze water use proposals from the operator, including assessments of the impacts of removing the proposed water from the watershed.
- **Fines and Penalties (Section 12-1500).** With new authority, a section on fines and other penalties for violations of Article 12 standards has been added.

## **III. Provisions modified from the current Article 12**

- **Operator Registration and Renewal (Section 12-400)**
  - Operators (whether of existing wells or proposed) must supply significant information to demonstrate their financial and technical capabilities, along with their history of complying with oil and gas regulations, which is renewed annually.
  - No applications for new operations will be accepted until registration is complete.



- **Application materials submitted (Section 12-900)**
  - Applications must contain thorough information about:
    - the physical and environmental baseline conditions at and near the sites, including air quality, ambient noise, and natural resources;
    - expert modeling of the impacts of the project; and
    - plans of operations.
  - Applicants will hire outside, independent experts approved by the County to conduct modeling and assessments.
  - These materials will be used by the County as part of its analysis of the project and its impacts.
- **Public Notice and Outreach by the Operator (Section 12-800)**
  - After filing a complete application, the operator will send direct notice to nearby property owners and post signs about the pending application.
  - The operator will hold a neighborhood meeting, open to the public, to provide information and take comments from the public.
  - The operator will report on the public meeting to the County.
- **County Review**
  - Based on the complete application materials and expert reports, any supplemental information required, and all information received from the public, County staff will begin an in-depth analysis of the application.
  - Section 12-1000 lists the standards and criteria against which each application will be measured. No oil and gas facility or operation will be approved if it does not meet the standards under all conditions of approval imposed.
  - The County may hire outside experts to analyze the application materials, at the operator's expense.
  - Staff will send out requests for input (referrals) from numerous local and state agencies, surrounding property owners and residents, several County departments, and whatever other parties have necessary expertise or will be impacted. The referral responses form an important part of staff's analysis.
  - The operator may be asked to supplement the application materials if needed to assist staff's analysis.
  - After its thorough, rigorous analysis of the proposal and consideration of possible conditions to be imposed, staff will make a recommendation whether the application should be approved with stated conditions or denied. The recommendation depends on whether the proposed project, as conditioned, could meet the rigorous standards of Section 12-1000.
- **Advisory Boards**
  - If the proposal is to be located on or near County-owned open space land, a public hearing before the Parks and Open Space Advisory Committee may be required.
  - For all applications for new oil and gas development, a public hearing before the Planning Commission will be required.
- **Opportunities for Public Input**

- Starting with the required operator’s neighborhood meeting, Article 12 ensures numerous opportunities for public input.
- After the application is received, the public can submit comments on the application at any time.
- Public testimony will be taken at any hearing before the Parks and Open Space Advisory Committee and the hearing or hearings before the Planning Commission.
- Public testimony will also be taken when the Board holds its hearing on the application.
- **Board of County Commissioners**
  - The Board has the final say on each application after a public hearing or hearings.
  - The Board takes into account the materials submitted by the operator, materials generated by staff during its analysis, staff’s recommendation, the advisory boards’ recommendations, and all public comment and testimony at public hearings.
  - The Board makes its decision based on whether the applicant has met its burden of demonstrating that the proposed project meets the standards in Article 12.
  - Based on its application of the Article 12, the Board will either approve the application with conditions or deny it.

#### IV. **Annotated Table of Contents of Revised Article 12**

- **12-100 Purpose.** The underlying purposes to be met by Article 12.
- **12-200 Authority.** A recitation of the legal authority for enacting and implementing Article 12.
- **12-300 Effective Date and Survival.**
- **12-400 Operator Registration and Renewal.** Moved from former 12-500 to its own section; required submittals by all operators before applying for special use review.
- **12-500 Pre-Existing Facilities.** Standards and requirements applicable to oil and gas facilities already in existence.
- **12-600 Well and Pipeline Abandonment or Decommissioning.** Regulations for the plugging and abandonment of wells and the abandonment of pipelines.
- **12-700 Geophysical Exploration for Oil and Gas (“Seismic Testing”).** A new, administrative permitting requirement before seismic testing can occur.
- **12-800 Application Process.** Description of the steps in the process from application through public engagement and on to hearings before the appropriate boards before final determination by the Board of County Commissioners.
- **12-900 Application Submittal Requirements.** A list of the materials that must be submitted and deemed complete by the County before an application will be reviewed.

- **12-1000 Special Review Standards.** Detailed standards that must be met for any oil and gas operation to receive approval. If a project cannot be made to meet these standards, it will be denied.
- **12-1100 Conditions of Approval.** A combination of existing sections 12-700 and 12-701. A list of conditions the County may impose before approving an oil and gas operation. This is not an exhaustive list, but illustrative.
- **12-1200 Judicial Review.** Stating that applicants may seek court review of any final determination by the Board under Article 12.
- **12-1300 Procedures Following Approval of a Special Review Application.** Requirements and procedures for any oil and gas development receiving special review approval.
- **12-1400 Inspections; Enforcement.** The County's rights to inspect records and facilities and its enforcement procedures for violations.
- **12-1500 Fines and Penalties.** Describing fines and other penalties that the County will impose for violations of any standards set forth in Article 12.
- **12-1600 Definitions.**

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# Article 12



## Regulation of Oil and Gas Development, Facilities and Operations

### Article 12 • Oil and Gas Development, Facilities and Operations

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#### 12-100 Purpose

- A. The County's objective is to (1) protect public health, safety, and welfare and the environment and wildlife resources; and (2) regulate the surface impacts of oil and gas operations in a reasonable manner to address matters including the following: local land use impacts; the location and siting of oil and gas facilities; impacts to public facilities and services; water quality and source; noise; vibration; odor; light; dust; air emissions and air quality; land disturbance; reclamation procedures; cultural resources; emergency preparedness and coordination with first responders; security; traffic and transportation impacts; financial securities; indemnification; insurance; other effects of oil and gas development; and providing for the planned and orderly use of land and protection of the environment in a manner consistent with constitutional rights. The County will deny applications where the proposed oil and gas operations cannot be conducted in a manner that appropriately protects public health, safety, and welfare, the environment and wildlife.
- B. This article is an exercise of the Board of County Commissioners' (the "Board") regulatory authority over oil and gas development. Both the state and County regulate oil and gas operations independently and both may have applicable rules.
- C. The County's review process for new oil and gas facilities and operations includes: (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 prior to any decision being made, 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

or denial if necessary. These regulations are intended to provide close scrutiny of all proposed oil and gas development including seismic testing in order to protect public health, safety, and welfare, the environment and wildlife. They also allow staff, the Boulder County Planning Commission, and the Board to consider site-specific circumstances related to oil and gas development and to customize avoidance, minimization, and mitigation measures to best address each of the site-specific circumstances, which may include modification, re-location, or denial of proposed oil and gas facilities or oil and gas operations if review of the criteria warrants it. These regulations will help to ensure close inspection, monitoring, compliance with and enforcement of all post-approval requirements and mitigation measures imposed by this Article. Finally, the regulations allow the County to address potential impacts of pre-existing oil and gas facilities and operations.

## 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., 25-7101 et seq., 30-15-401, Colorado common law related to public nuisances, and other authority as applicable.

## 12-300 Effective Date and Survival

- A. This Article will become effective on the date specified in the adopting resolution of the Board (Resolution \_\_\_\_\_).
- B. All conditions of approval for oil and gas development under this Article will survive until the Director provides notice of satisfactory completion of final reclamation of a plugged and abandoned well and related pipelines. All conditions of approval will survive a change of ownership and apply to the Applicant's successors, including the requirement of Operator Registration and Financial Assurances.

## 12-400 Operator Registration and Renewal

- A. Registration Required. All Operators within the unincorporated county must have a current and valid County registration in place.
- B. Submission and Renewal. All Operators must submit the following Operator registration information and pay the registration or renewal fee. All submissions under this section are subject to 12-1400(E):
  1. Company name, address, email, and mobile phone contact information for two individuals associated with the company and who will serve as 24-hour emergency contacts and who can ensure a timely and comprehensive response to any emergency.
  2. A map that shows all of the Operator's mineral rights, including lease rights, whether owned by the Operator named in number 1 or a parent or subsidiary entity, in unincorporated Boulder County.
  3. A certified list of all instances within the 10 years prior to the registration where the COGCC, CDPHE, other state agency, any federal agency, any city, or any county found that the Operator has not complied with applicable state, federal, or local requirements during the course of drilling, operation, or decommissioning of a well. The list must identify the date of the violation, the entity or agency making the determination, the nature of the non-compliance, and, if applicable, the final resolution of the issue. If no such instances of non-compliance exist, the Operator must certify to that effect.
  4. A list of all incidents (including but not limited to accidents, spills, releases, injuries) within the past 10 years that occurred at facilities owned or operated by Operator, an operator's legacy companies, or a subsidiary of Operator, including events involving contractors. Operator shall also list any root causes analysis conducted and corrective actions taken in response to the near-misses and incidents, including internal changes to corporate practices or procedures, such as modifications to the safety management plan or emergency preparedness plan.
  5. Information related to the Operator's financial fitness to undertake the proposed oil and gas operations, including materials (audited, where appropriate) such as the following:
    - a. Balance sheets for the previous 5 fiscal years;
    - b. Operating cash flow statements for the previous 5 fiscal years;
    - c. List of long- and short-term debt obligations;
    - d. List of undercapitalized liabilities;
    - e. Relevant tax documents;
    - f. Statements necessary to calculate net profit margin, debt ratio, and instant or current solvency ratio;

**Commented [BHFS1]:** What is the purpose of this information? The acreage position of an Operator implicates confidential business information. COGA requests that the County confirm this information will be held by the County confidentially and not shared under a CORA request. Without ensuring this information is confidential, this regulation is unreasonable. The regulation is also unnecessary, as an Operator's acreage position may or not may relate to its existing operations and the information is not relevant to compliance with the County's regulations or to the protection of public health, safety, welfare, and the environment, including wildlife resources. See comment 6 below as well.

**Commented [BHFS2]:** Because these regulations apply to current Operators/operations, what is the purpose of this information? Especially without understanding how this information will be used, this requirement appears unreasonable and unnecessary. As Boulder cannot engage in enforcement activities for past issues, this appears unnecessary and unreasonable. Additionally, please clarify this applies only to Colorado operations and will be held confidentially.

**Commented [BHFS3]:** Please clarify this applies only to Colorado operations and will be held confidentially.

**Commented [BHFS4]:** Because these regulations apply to current Operators/operations, what is the purpose of this information? Especially without understanding how this information will be used, this requirement appears unreasonable and unnecessary. As Boulder cannot engage in enforcement activities for already passed issues, this appears unnecessary and unreasonable.

**Commented [BHFS5]:** What constitutes a "near-miss"? Please also clarify that that this applies only to Colorado operations.

**Commented [BHFS6]:** Please confirm this will be held confidentially and will not be subject to disclosure under CORA. COGA recognizes that 12-400.6. below contains a confidentiality provision, but up front confirmation is necessary before this sensitive information can be shared.

Also, please confirm this does not apply to existing operators who do not have "proposed oil and gas operations."

- g. Certified copies of all current financial assurances filed with the COGCC; and
- h. Tax returns for the prior 5 years.
- 6. If an Operator or person designates any portion of a document or submission to the County as “confidential” and if the County determines that the document meets the confidentiality provisions of the Colorado Open Records Act, it may be exempt from disclosure to the public, provided that any page containing such information is clearly labeled with the words “Confidential Information”.
- 0. **Complaint Protocol.** A process for the Operator’s acceptance, processing, and resolution of any and all complaints submitted to state agencies or the Operator directly by members of the public stemming from any adverse impact from oil and gas facilities and operations.
- C. New Operators to Boulder County must submit registration materials that are accepted by the County at least 60 days prior to scheduling a Pre-Application conference. Operators with existing facilities are subject to 12500(B).
- D. Operator registration must be updated and renewed annually by July 31.

**Commented [BHFS7]:** Discussions regarding confidentiality should happen early in the process, before submittal, to ensure that confidential documents are kept confidential.

**Commented [BHFS8]:** 60 days is unreasonable and unnecessary.

## 12-500 Pre-Existing Facilities

- A. **Application to Pre-Existing Facilities.** Oil and gas facilities that were legally established prior to the effective date of this Article but do not conform to this Article will be allowed to continue, subject to this section. Any proposed amendment, modification, maintenance, or repair to a pre-existing oil and gas facility or operation is subject to review by the Director under 12-1300(D) and (E). Any modification of such oil and gas operations or facilities that the Director determines to be substantial requires a separate Special Review under this Article.
- B. **Registration.** Operators with existing oil and gas facilities in Boulder County prior to the effective date of Article 12 will submit the registration materials described in 12-400 within 60 days after the effective date of this article; or, if not already operating wells in Boulder County, at least 60 days prior to assuming responsibility for operating an existing well. Operator registration must be updated and renewed annually by July 31.
- C. **Inspections.**
  - 1. The County may inspect the items listed in this section 12-500 at pre-existing oil and gas facilities under 121400.
  - 2. Operators will inspect all oil and gas facilities, including shut-in and temporarily abandoned facilities, as follows:
    - a. Soil sampling for contamination within the boundaries of existing facility pads annually;
    - b. Equipment-assisted inspection for emissions or releases, including use of best available technology (such as infrared cameras), at least every 30 days; and
    - c. Visual inspections for liquid leaks at least every 30 days.
  - 3. Operators will report the date, methodology, subject, and results of all inspections to the County monthly.
  - 4. Spills, leaks, and releases of any substance other than fresh water, including spills of produced water, oil, condensate, natural gas liquids, all spills outside of secondary containment, gas leaks, and E & P waste, must be reported to the County Local Governmental Designee immediately upon discovery and no later than 6 hours thereafter. When leaks, spills, or releases are discovered, by County or Operator inspection, the enforcement mechanisms and penalty provisions in 12-1400 and 12-1500 will apply.
    - a. **Reporting.** For spills or other releases meeting the Colorado reporting requirements pursuant to Section 25-8-601 (2), C.R.S., operators will adhere to all Colorado reporting requirements. If the County determines the spill or leak is reportable to any agency, the County may make such report.
    - b. **Clean-up.** Any leak, release, or spill will be cleaned up according to applicable state and federal laws.
    - c. **Root Cause Analysis.** A root cause analysis of any spill, leak, or release of any substance other than fresh water that resulted in serious bodily injury or fatality, serious environmental harm, was a Grade 1 gas leak as defined by the COGCC, or is otherwise requested by the Director must be submitted to the County within 30 days of the leak, spill, or release.
- D. **Noise.** Existing oil and gas facilities must not create noise exceeding [...] dbA from 7 a.m. to 7 p.m. and [...] dbA from 7 p.m. to 7 a.m. as measured from the parcel boundary of the oil and gas facility.
- E. **Odor.** Existing oil and gas facilities must not emit odor detectable after dilution with 5 or more volumes of odor free air.
- F. **Emergency Response Plan.** Each Operator with a pre-existing oil and gas operation in the County is required to

**Commented [BHFS9]:** This is unreasonable and unnecessary if there are no spills/releases or any other indicator there has been soil contamination.

**Commented [BHFS10]:** This should state “may” apply. The spill, leak, or release could be unavoidable or not the result of the Operator’s conduct. A leak, spill or release should not automatically lead to enforcement and penalties.

**Commented [BHFS11]:** Please clarify what the county means by a “root cause” analysis, as different agencies have different meanings/requirements regarding to what this phrase occurs.

**Commented [BHFS12]:** COGA suggests a receptor based noise measurement.

**Commented [BHFS13]:** Suggest Operator review.

submit to the Department an Emergency Response Plan for each oil and gas facility consistent with this section. Emergency Response Plans for existing oil and gas facilities must be submitted with registration. The emergency response plan must consist of at least the following information:

1. Name, address and phone number, including 24-hour emergency numbers for at least 2 persons located in or near Boulder County who are responsible for emergency field operations. The Operator is responsible for ensuring that at least one of these emergency contacts can be on the site of any emergency within 15 minutes.
2. Protocols for notification of emergency response services and the County, including contact names and numbers for each such agency, for use in reporting any incident causing or threatening to cause personal injury or property damage. Emergency response must be notified immediately upon the imminent threat or occurrence of such incidents; the County must be notified as quickly thereafter as practicable and in no instance more than 24 hours later.
3. An 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.
4. Transportation routes to and from oil and gas facilities for emergency response and management purposes, including at least two (2) evacuation routes and health care facilities that would be used.
5. Detailed information addressing each potential emergency that may be associated with the operation. This may include any or all of the following: well integrity issues; explosions; fires; gas, oil or water pipeline leaks or ruptures; hydrogen sulfide or other toxic or explosive gas emissions; and hazardous material vehicle accidents or spills. This may also include external hazards to the site such as earthquakes, lightning, floods, high winds, tornadoes, terrorism, vandalism, or wildfire.
6. The threshold or triggers constituting various potential types of emergencies must be identified.
7. 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, and in no case more than 4 hours after such spill is discovered, in addition to all necessary reporting to state agencies.
8. Project-specific emergency response plans are required for any project that involves drilling or penetrating through known zones of hydrogen sulfide gas.
9. The plan must include a provision that obligates the Operator to reimburse the appropriate emergency response service providers for costs incurred in connection with any emergency. The appropriate emergency response service provider may specify alternative methods for reimbursement of its services.
10. Detailed information showing that the Operator has adequate personnel, ongoing safety training of all on-site personnel, safety supplies, and funding to implement the emergency response plan immediately at all times during operations.
11. As applicable, the plan must include provisions that obligate the Operator 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, including fracking fluids. Operators must timely provide SDS to the public in response to a written request. 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.
12. The plan must include a provision establishing a process by which the Operator periodically engages with the surrounding residents and landowners to educate them on the risks of the existing operations, explain emergency procedures, and establish a process for surrounding neighbors to communicate with the Operator.
13. The plan must include a process by which the community can submit concerns and complaints and be assured of timely responses.
- G. Revegetation and Reclamation. When any pre-existing oil and gas facility is decommissioned, all areas disturbed will be reclaimed and revegetated to the satisfaction of the County.
- H. Stormwater Quality Control. Adequate stormwater quality control measures must be used to comply with applicable permits and County regulations.
- I. Fines. Violations of this section are subject to the enforcement mechanisms in 12-1400 and 12-1500.

**Commented [BHFS14]:** So long as a responsible company representative can be notified and that timely emergency response is provided for in the Emergency Response Plan, it appears unreasonable and unnecessary for one of the emergency contacts to be able to be onsite of any emergency within fifteen minutes. That is an exceedingly short period of time.

**Commented [BHFS15]:** What if this information is not available for legacy sites? Also, there are security concerns with identifying such equipment. Please confirm this will be held by the County confidentially.

**Commented [BHFS16]:** And if there aren't more than 2 evacuation routes available?

**Commented [BHFS17]:** Please provide more detail about what the County envisions.

**Commented [BHFS18]:** Reclamation and revegetation are accomplished under close collaboration with the Surface Owner. COGA urges the County to respect the Surface Owner's wishes with respect to reclaiming and revegetating former oil and gas facilities.

**Commented [BHFS19]:** COGA again urges flexibility and the substitution of the phrase "may be" in lieu of "are" here.

## 12-600 Well and Pipeline Abandonment or Decommissioning

- A. An Operator may not plug, re-plug, abandon, or otherwise decommission an oil and gas well, flowline, or associated fresh, produced or wastewater pipeline until the Director has reviewed and provided written approval to the Operator.
- B. Plugging/Re-Plugging, Abandoning or Decommissioning Wells.
  - 1. COGCC rules. Operators will comply with all COGCC rules regarding plugging, abandoning, and decommissioning oil and gas wells.
  - 2. Coordinates. The Operator must provide the County with the surveyed coordinates of the decommissioned, plugged, or abandoned well.
  - 3. Marking. Unless otherwise requested by the surface owner, the Operator must leave onsite a permanent physical marker of the well location.
- C. Pipeline Abandonment. Flowlines proposed to be abandoned or decommissioned or fresh, produced or associated wastewater pipelines must be removed unless otherwise authorized in writing by the Director after consultation with the landowner. If the Director approves of abandonment in place of the line, all COGCC rules will be strictly complied with.
- D. Conditions of Approval of Well and Flowline Abandonment.
  - 1. With any approval for work to go forward, the Director will provide the Operator with County requirements for plugging and abandoning wells and pipelines. These requirements may include but are not limited to:
    - a. Timing Constraints;
    - b. With respect to pipelines abandoned in place, a tracer will be placed in any nonmetal line; and
    - c. Specific reclamation and revegetation requirements.

**Commented [BHFS20]:** This section exceeds Boulder County's authority to regulate surface impacts. The plugging and abandonment of wells is a subsurface activity regulated by COGCC.

## 12-700 Geophysical Exploration for Oil and Gas ("Seismic Testing")

To protect the public health, safety, and welfare, and the environment and wildlife, the County will permit only those geophysical exploration activities ("seismic testing") that comply with the following requirements:

- A. Prior to conducting any seismic testing, a geophysical exploration permit issued by the Director is required under this section. If the Operator submits information that is inadequate, the Director may deny a permit.
- B. To apply for a permit, the Applicant must provide:
  - 1. Vibration Monitoring and Control Plan Map. A map of the exploration area that identifies all of the following within 800 feet of all source points in the testing area:
    - a. Water supplies for domestic, public, or agricultural use;
    - b. Domestic, commercial, and industrial structures;
    - c. Areas affected by previous mining activities or public works;
    - d. Geologic hazards;
    - e. Mapped floodplain and floodway;
    - f. Identification of wildlife resources; and
    - g. Water, sewer, oil, gas, and chemical facilities and pipelines in the testing area.
  - 2. A map showing the proposed travel routes of all vibration-generating seismic testing equipment;
  - 3. A traffic control plan for any operations that will occur on or impede traffic on a public right-of-way;
  - 4. Insurance Coverage. A copy of the following insurance coverage, including the required Additional Insured Language:
    - a. Commercial General Liability. This coverage should be provided on an Occurrence Form, ISO CG001 or equivalent, with Minimum limits of \$1,000,000 Each Occurrence, \$2,000,000 General Aggregate and \$2,000,000 Products Completed Operations Aggregate.
    - b. Automobile Liability. Bodily Injury and Property Damage for any owned, hired, and non-owned vehicles used in the performance of the Contract. Minimum limits \$1,000,000 Each Accident.
    - c. Workers' Compensation and Employer's Liability. Workers' Compensation must be maintained with the statutory limits. Employer's Liability is required for minimum limits of \$100,000 Each Accident/\$500,000 Disease-Policy Limit/\$100,000 Disease-Each Employee.
    - d. Umbrella/Excess Insurance. Umbrella/Excess Liability insurance in the amount \$25,000,000.00, following form.

**Commented [BHFS21]:** Reclamation and revegetation are accomplished under close collaboration with the Surface Owner. COGA urges the County to respect the Surface Owner's wishes wrt reclaiming and revegetating former oil and gas facilities.



- e. Professional Liability (Errors and Omissions). Professional liability coverage with minimum limits of \$10,000,000 Per Loss and \$10,000,000 Aggregate. Professional Liability provisions indemnifying for loss and expense resulting from errors, omission, mistakes or malpractice is acceptable and may be written on a claims-made basis. The contractor warrants that any retroactive date under the policy shall precede the effective date of this Contract; and that either continuous coverage will be maintained or an extended discovery period will be exercised for a period of 2 years beginning at the time work under this Contract is completed.
- f. Pollution Liability. Coverage pay for those sums the Contractor becomes legally obligated to pay as damages because of Bodily Injury, Property Damage or environmental Damage arising out of a pollution incident caused by the Contractor's work including Completed Operations. Coverage shall include emergency response expenses, pollution liability during transportation (if applicable) and at Non-Owned Waste Disposal Site (if applicable). The Minimum limits required are \$15,000,000 Per Occurrence/Loss and \$15,000,000 Policy Aggregate. If the coverage is written on a claims-made basis, the Contractor warrants that any retroactive date applicable to coverage under the policy precedes the effective date of this Contract; and that continuous coverage will be maintained or an extended discovery period will be exercised for a period of 3 years beginning from the time that work under this contract is completed. County shall be named as an additional insured for ongoing operations and completed operations.
- g. Additional Insured. Boulder County must be named as an additional insured for the General Liability, Umbrella/Excess Coverage and Pollution Liability policies listed above. Additional insured shall be endorsed to the policy. Additional Insured wording shall be as follows:  
*County of Boulder, State of Colorado, a body corporate and politic, is named as an Additional Insured.*
- h. Contractors. Operator shall require adequate insurance of its contractors and subcontractors.  
 Operator agrees that it shall be responsible for any damage or loss suffered by the County as a result of negligence by Operator or any subcontractor with these requirements.
- 5. Financial assurances in a form and amount satisfactory to the Director sufficient to guarantee Applicant's obligation to restore all property damaged by seismic testing to its pre-testing condition;
- 6. Copies of written permission from every landowner of property where the Operator is going to use or place equipment for geophysical exploration;
- 7. A Vibration Monitoring and Control Plan prepared by a Vibration Monitoring Specialist (VMS). The VMS must be an independent, registered Professional Engineer or Geologist. This Vibration Monitoring and Control Plan must include:
  - a. The name of the Firm providing the vibration monitoring services;
  - b. Specifications of the monitoring equipment to be used;
  - c. Specifications of the energy source to be utilized for the source points;
  - d. If vibroseis trucks will be utilized, the plan should discuss:
    - i. The number of vibroseis trucks;
    - ii. The distance between the vibroseis trucks;
    - iii. The drive level to be used;
    - iv. The sweep duration; and
    - v. The sweep frequency range.
  - e. Measurement locations and field procedures for setting up vibration monitors;
  - f. Procedures for data collection and analysis which include examples of vibration monitoring field sheets and vibration event analysis;
  - g. Results of on-site vibration attenuation study (walk away test) with prediction of maximum expected particle velocity at each monitoring location;
  - h. Means and methods of providing warning when the Response Values are reached;
  - i. Generalized plans of action to be implemented in the event any Response Value is reached. This plan must include positive measures by the Operator to control vibrations (e.g. reducing drive level, increasing stand-off distances, dropping source points); and
  - j. Procedures for addressing complaints and claims of damage. C. The following requirements will apply to all permits to conduct geophysical exploration:
    - 1. Implementation of a Vibration Monitoring and Control Plan approved by the Director; the Director may require modifications to the plan submitted by the Applicant.

2. Methods involving explosive material ("shotholes") are prohibited.
3. All geophysical activities will be strictly limited to the areas, methodologies, and routes indicated in the maps and plans approved by the permit.
4. All geophysical activities will be strictly limited to the hours of operation noted in the approved permit;
  5. The Applicant's VMS will be on site throughout all geophysical activities to ensure County permit conditions are met and will report whether the testing complies with the approved permit.
6. If any utility line(s) or other above or below ground features must be removed or altered during geophysical operations, the Applicant will provide a letter from the utility owner authorizing the removal or alteration and notify the County at least 3 days prior to any such removal or modification and comply with any additional permitting requirements imposed by the County.
7. Applicant must obtain any permits for use of County roads required by the County Public Works Department.
8. No seismic testing activities will be permitted in a mapped floodway. Activities in a mapped floodplain may require a County Floodplain Development Permit.
9. Any violation of the terms of a seismic testing permit are subject to the penalties and enforcement mechanisms of Article 12-1400 and 12-1500, in addition to all remedies available at law.
10. Ground vibration monitoring will be required for any source points located within 400 feet of any structures identified in the map of the exploration area. The VMS must conduct the analysis and interpretation of the collected vibration monitoring data for comparison to appropriate vibration limits and must prepare weekly reports for submittal to the County.
11. Ground vibration amplitudes will be limited to the following Response Values:
  - a. The Response Values for ground vibration include a Threshold Value of 0.2 inches per second and a Limiting Value of 0.3 inches per second. Higher values may be acceptable based on the feature of concern but the Applicant must submit an engineering report for review and approval by the County.
    - i. If a Threshold Value is reached, the Applicant must:
      1. Immediately notify the County;
      2. Meet with the County to discuss the need for response action(s);
      3. If directed by the County during the above meeting that a response action is needed, submit within 24 hours a detailed specific plan of action based as appropriate on the generalized plan of action submitted previously as part of the vibration-monitoring plan. Seismic testing cannot resume until the detailed specific plan of action is approved by the County; and
      4. If directed by the County, implement response action(s) within 24 hours of submitting a detailed.
    - ii. If a Limiting Value is reached, the Applicant must:
      1. Immediately notify the County and suspend vibration producing activities in the affected area, with the exception of those actions necessary to avoid exceeding the Limiting Value;
      2. Meet with the County to discuss the need for response action(s); and
      3. If directed by the County during the above meeting that a response action is needed, submit within 24 hours a detailed specific plan of action based as appropriate on the generalized plan of action submitted previously as part of the vibration-monitoring plan. Seismic testing cannot resume until the detailed specific plan of action is approved by the County.
12. If directed by the County, implement response action(s) within 24 hours of submitting a detailed specific plan of action, so that the Limiting Value is not exceeded. Ten days prior to vibration monitoring pursuant to the Vibration Monitoring and Control Plan, the Applicant will submit a certificate of calibration for any vibration monitoring equipment that will be used on site. The certificate must certify that the instruments are calibrated and maintained in accordance with the equipment manufacturer's calibration requirements and that calibrations are traceable to the U.S. National Institute of Standards and Technology. All instrumentation must have been calibrated by the manufacturer or a certified calibration laboratory within 1 year of their use on site.
13. During the exploration activity, the Applicant must provide weekly reports summarizing any vibration monitoring data collected. The reports must be prepared and signed by the VMS. The County reserves the right to request a different reporting schedule where appropriate.
14. In addition to the above, the Director may impose additional conditions on the conduct of seismic

testing that are necessary and reasonable to protect the public health, safety, and welfare, the environment or wildlife resources.

D. Notice and Property Inspection.

1. After a permit is issued by the Director, the Applicant will provide notice of the seismic testing to each property located within 400 feet of any source point as depicted in the approved Vibration Monitoring and Control Plan Map at least 10 days before the testing is to occur.

a. The notice will include:

- i. A description of the project including the duration, physical effects, precautions Applicant is taking, and precautions the property should make;
- ii. Complaint procedures for property owners and residents;
- iii. An offer of property and water well baseline condition inspections at Applicant's expense, which, upon property owner's request, will be completed at least 3 days prior to seismic testing. Results of such testing will be provided to the property owner and maintained by Applicant for at least 3 years. All baseline condition testing must be completed by a qualified technician who will report the date of inspection, name of property owner, address of property owner, property owner contact information, description of the property, age of structure(s), material of structure(s) and foundation(s). High resolution photographs and video must be taken documenting the present state of all structures on the property, including roads, bridges, and sidewalks. The technician should note any chemical and physical weathering or any other structural defects. All water well samples must be collected by a qualified technician and include the date and time of sample, property owner name, address, contact information and water type and conditions, well type, depth, age, casing type and length, drilling contractor, whether it is conditioned or filtered, sample point type, and any other useful information; and
- iv. The notice will further include an offer of property and water well condition inspections at Applicant's expense after the testing is complete, the results of which will be provided to the property owner and maintained by Applicant for at least 3 years.

E. Appeals. The Applicant may appeal the Director's decision to deny a permit or place particular conditions on the permit to the Board of County Commissioners within 30 days of the Director's decision.

## 12-800 Application Process

- A. Special Review Required. Except as provided in 12-500, all oil and gas facilities and oil and gas operations on public and private land within the unincorporated areas of Boulder County must comply with this Article. Prior to the commencement of any new oil and gas operations in the unincorporated county, an Applicant must submit an application which must receive approval according to this Article. Special Review approval is required prior to the issuance of County permits necessary for the oil and gas facility and operation.
- B. Community Engagement. Boulder County requires Applicant to engage with local communities, residents, and other stakeholders. The purpose of this engagement is to provide sufficient opportunity for public and stakeholder comment on plans, operations, and performance, to listen to concerns of the community, and to address all reasonable concerns related to the proposed oil and gas facility and operation.
- C. Surface Use Agreements, Rights of Way, Easements. Operators commonly enter into surface use agreements, right of way agreements, easements and other types of access agreements with landowners. To avoid inconsistency, the County recommends that agreements with landowners related to the proposed oil and gas facility or oil and gas operation not be finalized until the Applicant has completed Special Review under this Article, at which time the impacts related to the proposed siting will be analyzed.
- D. COGCC approval. Colorado Oil and Gas Conservation Commission ("COGCC") approval of any application does not constitute local approval, and compliance with all terms and conditions of this Article is required prior to the commencement of any new oil and gas facility and operations in the County. Wherever the Oil and Gas Conservation Act, §§ 34-60-101 et seq., C.R.S., requires local government approval prior to COGCC approval, Special Review under this Article must be completed before applications are submitted to the COGCC.
- E. Pre-Application Conference.
  1. Timing. A pre-application conference as defined in Article 3-201 of this Code must be held prior to the Applicant submitting an Application for Special Review. An Applicant must complete registration as defined in 12-400 prior to scheduling a pre-application conference.

2. Pre-Application Conference. At the pre-application conference, the County and the Applicant will discuss the points contained in Article 3-201 of this Code and review the County's Special Review process.
  3. Six-month Duration for filing Application. Completion of the pre-application conference qualifies the Applicant to submit an Application for a Special Review provided the Application is filed within 6 months after the pre-application conference.
  4. Site Visit. At the discretion of the Director, a site visit of the parcels involved in the Application may be required as part of the pre-application conference with the Applicant. To the extent necessary, the Applicant will be responsible for securing permission or coordinating with the landowner(s) to conduct the site visit.
- F. Application Submission. The Application must include documentation listed in Section 12-900. The Applicant must submit the Application, the application fee, and supporting documentation in electronic format with a minimum of two additional copies of the Application materials in paper format. The Director may require additional paper copies of the Application, or a portion of the Application materials, if needed for review purposes. The Application must contain a certification from the Applicant that the information in the Application, as well as in any accompanying documentation, is true and accurate. The Application must be signed by a person authorized to sign on behalf of the Applicant and identify who will be the primary contact during processing of the Application. The point of contact information in the Application must be amended to specify the new point of contact if the Applicant's point of contact changes during the Application process.
- G. Completeness Determination. Upon acceptance of the Application, the Director will determine if the Application satisfactorily meets the requirements of this Article. If County staff needs consultants or staff outside the County to assist the Director with the completeness determination, the County may hire such assistance at the Applicant's expense. Upon review of the Application materials by the Director and any necessary outside consultants, the Director will determine whether a Special Review Application is complete.
1. Application Deemed Incomplete. If the Director finds that the Application is incomplete, the Director will inform the Applicant of the deficiencies. No further action will be taken on an incomplete Application. Should the Applicant fail to correct deficiencies within 12 months, the Application will expire, and the Applicant may submit a new Application and fee as specified in Section (F) above. The twelve-month timeframe may be extended by the Director according to the standards in Article 4-604(D). Should the Applicant dispute the Director's completeness determination, the Applicant may appeal the Director's determination to the Boulder County Board of County Commissioners within 30 days of the Director's decision. During any Board of County Commissioners proceeding or subsequent appeal, the Application will not be processed.
  2. Application Deemed Complete. If the Director finds that the Application is complete, the Director will process the Application.
- H. Notice.
1. The Applicant must deliver notice to surface owners, to surrounding land owners and lessees, the Local Governmental Designees (LGDs) of any local government within one mile of the proposed oil and gas facilities, and to water source owners as identified in this section no more than 10 days after the Application is deemed complete by the Department. If approved by the Director, the Applicant may deliver the notice defined in this section using secure methods other than mail. Notice of the Application must be made as follows:
    - a. To the surface owners of the parcels of land on which the oil and gas operation is proposed to be located;
    - b. To the owners and lessees of the parcels of land within one mile of the parcel on which the oil and gas operation is proposed to be located;
    - c. To the physical address of all parcels within one mile of the parcel on 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; and
    - d. To water source owners within one mile of the parcel on which the oil and gas operation is proposed to be located and within one-half mile of either side of the full length of the planned wellbore and bottom location. The Applicant is responsible for determining the addresses of such water source owners and providing a list of such owners to the Director.
    - e. The Department will provide the list of addresses of record for property owners within one mile of the parcel on which the oil and gas operation is proposed to be located to the Applicant at the pre-

application conference so the Applicant can provide notice as required by subsection (a), (b), and (c) of this section.

- f. If other sites come into consideration during Application processing, the Director may require the Applicant to provide supplemental notice as described here with reference to the new sites.

2. 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 consisting of up to [number of wells] and [description of other facilities] is being proposed in your area. 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 oil and gas facility, including the legal description; parcel number; a street address for the site, if available from the County's addressing system; the company name of the Operator; the name of an Applicant contact; the current business address, telephone number, and email address for the Applicant contact; a vicinity map; and a brief description and overview of the proposed oil and gas operation (e.g., a detailed description of the timeframe for facility construction and estimated duration of drilling and any proposed hydraulic fracturing);
- c. Information concerning the facilities and equipment proposed at the site when operational, and proposed access roads and gathering lines;
- d. The docket number of the Application and the date of its completeness determination;
- e. An attachment provided by the Director explaining the applicable review process and explaining that the public may review the full Application file at Department offices and that public comments on the Application may be submitted to the Department;
- 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 process, County staff may from time to time need to enter onto the property that is the subject of a Special Review Application."; and
- g. The current mailing address, website address, email, and telephone number for both the Department and the COGCC, as well as a statement that additional information on the Application will be available from the Department.

3. Notice Review. The Applicant must submit a copy of the proposed notice for review by the Director. If the Director determines that the notice does not comply with the requirements of this Article, the Director may require the Applicant to modify the notice.

I. Posting Public Notice Signage Onsite. Within 5 days after the Director has deemed an Application complete, the Applicant must post a public notice sign or signs on the subject parcels, including parcels where flowlines or other pipelines will be constructed, that meet the following requirements:

- 1. 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 or signs on the subject parcel will not provide adequate public notice, multiple signs or signs in additional locations meeting the requirements of this section may be required.
- 2. In lettering clearly visible from a passing car and proportionate to the size of the sign, the sign must contain the following:
  - a. "Attention: An oil and gas operation consisting of up to [number of wells] and [description of facilities] is being proposed in your area. Please read this notice carefully.";
  - b. "The Applicant has applied for Special Review, [docket number]"; and
  - c. "Information regarding this Application may be obtained from Boulder County Community Planning & Permitting at [phone number / email]".

3. Within 5 days of the posting of the sign, the Applicant must submit a photograph of the sign or signs as posted for review by the Director. If the Director determines that the sign does not comply with the requirements of this Article, the Director may require the Applicant to post a sign or signs complying with this Article.

4. The sign or signs must be posted on the sites until the Special Review process is complete. The Applicant must repair or replace signs that are damaged or defaced within 5 days of learning of damage or defacement.

J. Neighborhood Meeting. The Applicant must conduct a neighborhood meeting with adjacent and surrounding landowner(s) and other interested parties at a convenient date, time, and public location. The meeting must occur at least 20 days after the notice is sent and the signs are posted pursuant to Section

12-800(H) and (I). The neighborhood meeting must be noticed to the County and to all individuals entitled to notice pursuant to Section 12-800(H)(1) at least 14 days prior to the meeting. In addition to those parties entitled to notice under 12-800(H)(1), the meeting will be made open to the public. The meeting must be held at an accessible and adequate location. If requested by members of the public or the Director determines remote attendance is necessary for public health reasons, accommodation must be made for remote attendance. At the neighborhood meeting, the Applicant must provide an overview of its proposed oil and gas operation, distribute a handout provided by the Director with an explanation of the Article 12 Special Review process, and allow those in attendance to provide input as to the proposed operation, including, but not limited to, facility 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 video recording of the meeting and a report of all of attendee comments and any proposals from the Applicant for addressing neighborhood concerns to the Director within 20 days after the meeting.

- K. Referral Requirements and Agency Review. Following the determination that an Application is complete, the Director will refer the Application materials to the Boulder County Public Works and Parks and Open Space Departments, Boulder County Public Health, the appropriate fire district, the Boulder County Sheriff, the Boulder County Office of Emergency Management, the COGCC and CDPHE, and any appropriate municipality, special district, and school district for review and comment. As deemed necessary in the Director's sole discretion, the Director may also refer the Application to other government agencies or entities for review and comment. Referral comments on the proposal must be returned to the Director within 75 days of date of referral, unless the Director determines additional time is necessary.
1. Following the determination that an Application is complete the Director will send a referral notice to all individuals entitled to notice pursuant to Section 12-800(H)(1). The notice will include information on where to access Application materials on the County's website. The complete Application referral packet will be available for public review online in hard copy at the Department during business hours. Referral responses must be received by the Director within 75 days of transmittal to ensure that comments are considered.
  2. If the proposed oil and gas facility or oil and gas operation is on or within 1,500 feet of Boulder County Parks and Open Space property or property over which Boulder County owns a conservation easement, the Parks and Open Space Director may refer the Application to the Parks and Open Space Advisory Committee (POSAC) for a public hearing. After the public hearing, the POSAC may forward recommendations for assuring the protection of environmental, ecological, wildlife, historical, archeological, and agricultural resources of the open space, which may include recommendations to deny the Application or to modify the location or density of the oil and gas facility.
  3. The Applicant is responsible for preparing the referral packets in the manner prescribed by the Director. Any errors made by the Applicant in the preparation of referral packets may result in a delay in processing of the Application.
- L. Consultant Review. The Director may submit all or parts of 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 impacts of oil and gas development. The Applicant will be notified if the Director decides to retain consultants, and the Applicant will escrow funds sufficient to cover the anticipated cost of the consultants' review. The Applicant will be responsible for the actual costs associated with this consultant review and will be refunded any excess escrowed funds.
- M. Supplemental Information. If, during the Special Review process, the Director determines that additional information is required to conduct adequate review of the Application in light of the standards and criteria, the Director may suspend the Application review until the additional information is received.
- N. Site Visit. The Department will conduct a site visit to evaluate the Application and the site-specific circumstances on and near the parcel and surrounding parcels on which the facility and operations are located. The Department may coordinate a site visit with other County departments and governmental agencies.
- O. Staff Recommendation. After its review of the Application, staff will make a recommendation for approval with conditions or denial of the Application, based on its analysis of the Special Review Standards, the referral comments and the Applicant's responses to the referral comments. When the staff recommendation is complete, the Application will be scheduled for a public hearing in front of the Planning

Commission. The staff recommendation will be made available to the public once it is complete.

- P. **Notice of Planning Commission Hearing.** Not less than 14 days prior to the Planning Commission's public hearing on the Application, the County will publish a legal notice of the public hearing in a newspaper of general circulation in the County and mail written notice to the people and entities entitled to notice under Section 12-800(H)(1) of the time and place of the Planning Commission's public hearing.
- Q. **Planning Commission Hearing and Recommendation.** The Planning Commission will hold a public hearing on the Application and will make a recommendation of approval with conditions necessary to ensure compliance with this Article, or denial, which will be forwarded to the Board of County Commissioners.
- R. **Notice of Board of County Commissioners' Hearing.** Not less than 14 days prior to the Board of County Commissioners' public hearing on the Application, the County will publish a legal notice of the public hearing 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 will be provided pursuant to Section 12-800(H)(1).
- S. **Board of County Commissioners Hearing and Decision.** The Board of County Commissioners (the "Board") will hold a public hearing on the Application. Any action taken by the Board will be based on the entire record of proceedings on the matter, as that record is maintained by the Director and/or the Clerk of the Board, including but not limited to: recordings or transcripts of public hearings; all written comments of referral agencies; the review and recommendations of the Department, POSAC if applicable, and Planning Commission; and all written commitments, statements, or evidence made or submitted by or in behalf of the Applicant, landowners or interest holders or their agents, and interested members of the public. The Applicant will have the burden of proof to show that the applicable standards for approval have been met. Based on the evidence received at such public hearing(s), the Board will make its determination to approve the Application with conditions necessary to ensure compliance with this Article or deny the Application. The Board may designate its determination as final or preliminary and subject to review by a technical review board under Sections 29-20-104(3) and 34-60-104.5(3), C.R.S. The Board's action will contain appropriate findings or reasons in support of its decision. The Board will render its decision on the Application in writing following the conclusion of the public hearing.

## 12-900 Application Submittal Requirements

Unless a submittal requirement is waived or modified by the Director after the Applicant's request, the Applicant must submit the information and documents specified in this section with the Special Review Application for oil and gas facilities and operations. If the contents or relevant information in any required submittal materially changes, the Applicant must promptly update those materials with the Department. The Director may waive or modify the submission requirements in this section if, because of the nature of the Application, the requested information is unlikely to be useful to the Board in applying the Special Review standards. Each of the following will form the basis for full and independent review by the County and all reviewing bodies. All materials submitted under this section are subject to Section 121400(E).

### A. General Information

1. **Application Form.**
2. **Operator Registration.** Operator registration materials submitted under Section 12-400 are incorporated into the Application materials. The Director, Parks and Open Space Advisory Committee, Planning Commission, or Board, may consider such materials in reviewing any Article 12 Application.
3. **Proof of Pre-Application Conference.** Date the Applicant conducted the pre-application conference with the Department.
4. **Verification of Legal Rights.**
  - a. **Mineral Rights and Surface Access Rights.** Proof of ownership of, or lease rights to, the mineral rights and accompanying surface lands where oil and gas facilities are proposed, including copies of all easements, licenses or right-of-way agreements necessary to lay any pipelines associated with the Application. Identification of all persons with a real property interest in the proposed oil and gas facilities. A title report supporting the asserted mineral interests and surface access. A map of the mineral interests Applicant will produce with the proposed oil and gas operation.
  - b. **Surface Use Agreements.** The County strongly recommends that surface agreements not be finalized until after the Applicant has completed Special Review. Nonetheless, if the Applicant has entered any surface

use agreements for any proposed oil and gas facilities subject to the Application, Applicant will provide a copy.

- c. **Roads.** Information demonstrating that the Applicant has or will have the right to use or construct temporary and permanent private access roads that are necessary for the proposed oil and gas facilities or operations. A copy of any signed or proposed agreements with landowner(s) regarding road construction, maintenance, and improvements necessitated by the proposed oil and gas operation. Any recorded or historical easements providing access to or across the parcel(s) must be provided.
  - d. **Pipelines.** Information demonstrating that the Applicant has or will have the right to use or construct temporary and permanent gas, oil or water (fresh, produced, or waste) pipelines that are necessary for the proposed oil and gas operations. A copy of any signed or proposed agreements with landowner(s) regarding pipeline construction, maintenance, and improvements necessitated by the proposed oil and gas operation.
5. **Insurance Coverage.** A copy of the following insurance coverage, including the required Additional Insured language:
- a. **Commercial General Liability.** Coverage should be provided on an Occurrence form, ISO CG0001 or equivalent. The policy shall be endorsed to include Additional Insured Owners, Lessees or Contractors endorsements CG 2038 (or equivalent), Designated Construction Project(s) General Aggregate Endorsement CG2503 (or equivalent) and Additional Insured Completed Operations for Owners, Lessees or Contractors CG 2037 (or equivalent). Minimum limits required of \$1,000,000 Each Occurrence, \$2,000,000 General Aggregate and \$2,000,000 Products/Completed Operations Aggregate. The County requires the Products/Completed Operations coverage to be provided 3 years after completion of construction. An endorsement must be included with the certificate.
  - b. **Automobile Liability.** Bodily Injury and Property Damage for any owned, hired, and non-owned vehicles used in the proposed oil and gas operations. Minimum limits \$1,000,000 Each Accident.
  - c. **Workers' Compensation and Employer's Liability.** Workers' Compensation must be maintained with the statutory limits. Employer's Liability is required for minimum limits of \$100,000 Each Accident/\$500,000 Disease-Policy Limit/\$100,000 Disease-Each Employee.
  - d. **Umbrella/Excess Liability.** Umbrella/Excess Liability insurance in the amount \$25,000,000.00, following form.
  - e. **Professional Liability (Errors and Omissions).** Professional liability coverage with minimum limits of \$10,000,000 Per Loss and \$10,000,000 Aggregate. Professional Liability provisions indemnifying for loss and expense resulting from errors, omission, mistakes or malpractice is acceptable and may be written on a claims-made basis. The Operator warrants that any retroactive date under the policy shall precede the effective date of a Special Review approval; and that continuous coverage will be maintained until final reclamation obligations are completed to the County's satisfaction.
  - f. **Pollution Liability.** Coverage pay for those sums the Operator becomes legally obligated to pay as damages because of Bodily Injury, Property Damage or environmental Damage arising out of a pollution incident caused by the Operator. Coverage shall include emergency response expenses, pollution liability during transportation (if applicable) and at Non-Owned Waste Disposal Site (if applicable). The Minimum limits required are \$25,000,000 Per Occurrence/Loss and \$25,000,000 Policy Aggregate. If the coverage is written on a claims-made basis, the Operator will warrant that any retroactive date applicable to coverage under the policy precedes the effective date of any Special Review Approval; and that continuous coverage will be maintained until final reclamation obligations are completed to the County's satisfaction. The County shall be named as an additional insured for ongoing operations and completed operations.
  - g. **Control of Well Coverage.** Coverage for costs and expenses related to bringing a well back under control, pollution cleanup costs incurred due to pollution that results from a well out of control event, legal liability for pollution-related bodily injury or property damage arising from a well out of control event, re-drill and other extra expense incurred to restore the well to its pre-loss condition that the Operator becomes legally obligated to pay. The Minimum limits required are \$25,000,000 Per Occurrence/Loss and \$25,000,000 Policy Aggregate. If the coverage is written on a claims-made basis, the Operator will warrant that any retroactive date applicable to coverage under the policy precedes the effective date of any Special Review approval; and that continuous coverage will be maintained until final reclamation obligations are completed to the County's satisfaction. The County shall be named as an additional insured for ongoing operations and completed operations.



- h. **Waiver of Subrogation.** Operator will waive and cause its insurers to waive for the benefit of the County any right of recovery or subrogation which the insurer may have or acquire against the County or any of its affiliates, or its or their employees, officers or directors for payments made or to be made under such policies.
- i. **Additional Insured.** Boulder County must be named as an additional insured for the General Liability, Umbrella/Excess Coverage and Pollution Liability policies listed above. Additional insured shall be endorsed to the policy. Additional Insured wording shall be as follows:  
*County of Boulder, State of Colorado, a body corporate and politic, is named as an Additional Insured.*
- j. **Contractors.** Operator shall require adequate insurance of its contractors and subcontractors. Operator agrees that it shall be responsible for any damage or loss suffered by the County as a result of negligence by Operator or any subcontractor with these requirements.
- 6. **Financial Fitness and Assurances.** Applicant will be required to provide adequate financial assurances to guarantee performance of all conditions of approval attached to any Special Review approval for the lifetime of the oil and gas facility. With the Application, Applicant will submit a description of the type(s) of financial assurances it expects to provide to meet those requirements. The type and amount of financial assurances provided will be determined by the County with any Special Review approval.
- B. **Site and Area Information.** Applicant must include maps that meet the following criteria:
  - 1. **All maps must be** at a scale which best conveys the conceptual aspects of the plan, include written scale, graphic scale, and north arrow (designated as true north), and allow for effective public presentation. All maps and plans must include the date of preparation and revision box.
  - 2. **Topography.** A map of the existing and proposed topography at five-foot intervals to portray the direction and slope of the parcel(s) where the oil and gas facilities are proposed to be located.
  - 3. **Existing Dwellings and Structures.** A map of the location of all existing Dwellings and other structures and improvements within one mile from the parcel(s) on which the proposed oil and gas facility will be located. Dwellings must be specifically identified. This map must depict any setbacks required by this Article.
  - 4. **Existing Roads.** A map depicting all existing roads (designating public and private roads) near and surrounding the proposed oil and gas facilities.
  - 5. **Existing or Pending Oil and Gas Facilities.**
    - a. A map showing the location of all producing, shut-in, temporarily abandoned, dry and abandoned or plugged and abandoned wells, and any other oil and gas facilities and operations for which permits are pending with applicable agencies, on or within one mile of the parcel(s) where the proposed oil and gas facilities will be located and within one mile of either side of the full length of each proposed wellbore.
    - b. A map of existing oil, gas, and water pipelines on or within one mile of the parcel(s) where the proposed oil and gas facilities will be located, including information on the age, location, depth, diameter, thickness, typical and maximum operating pressures, the nature of the material carried in the pipes and the estimated worst-case liquid spill volumes.
  - 6. **Water Wells.** A map of any domestic or commercial water wells or irrigation wells within one mile of the parcel or parcels on which the proposed oil and gas facilities will be located and within one mile of either side of the full length of each proposed wellbore.
  - 7. **Surrounding Land Uses.** Identification of all land uses within one mile, or as otherwise determined, of the parcel(s) where the oil and gas facilities are proposed to be located.
  - 8. **Educational Facilities and Child Care Centers.** A map of educational facilities and licensed Child Care Centers within one mile of the parcel(s) on which the proposed oil and gas facilities will be located. This map must include the distances between the proposed oil and gas facility and the Educational Facilities and licensed Child Care Centers. This map must depict any setbacks required by this Article.
  - 9. **Agricultural Lands.** A map of the agricultural lands on and within one mile of the parcel(s) on which the oil and gas facilities are proposed to be located, including but not limited to agricultural lands of national, statewide, or local importance as identified in the Boulder County Comprehensive Plan; identification of the specific agricultural uses on the parcel(s) and their status; and the existence of irrigation and other agricultural infrastructure.
  - 10. **Water Bodies; Riparian Areas; Wetlands; Ditches.** A map depicting all surface water bodies including, but not limited to, lakes, streams, wetlands or aquatic habitat, riparian areas, and riparian corridors identified in the Boulder County Comprehensive Plan or otherwise found on or within one mile of the parcel(s) on which the proposed oil and gas facilities will be located, and within one mile of either side of the full length of each

proposed wellbore. The map must also depict irrigation ditches and reservoirs as identified and mapped on the Boulder County's Ditch and Reservoir Directory and the St. Vrain and Left Hand Water Conservation District Ditch and Reservoir Directory.

11. **Natural Resources.** A map of all significant natural ecosystems or environmental features, significant natural communities, rare plant areas, high biodiversity areas, natural landmarks, and natural areas, as identified in the Boulder County Comprehensive Plan, found from other sources, or otherwise identified on or, within one mile of the parcel(s) on which the oil and gas facilities are proposed to be located.
  12. **Existing vegetation.** An inventory of the vegetation (including its quality) at the site of the proposed oil and gas facilities.
  13. **Wildlife.** An inventory of the wildlife species and population numbers on or within one mile of the parcel(s) on which the oil and gas facilities are proposed to be located, including state or federally designated threatened or endangered species, species of special concern as defined by Colorado Parks and Wildlife, or other types of species making use of the area. A map of critical wildlife habitat and wildlife migration corridors or routes as identified by the Boulder County Comprehensive Plan and Colorado Parks and Wildlife on and within one mile of the parcel(s) on which the oil and gas facilities are proposed to be located.
  14. **Natural and Geologic Hazards.** A map of all natural and geologic hazard and constraint areas as identified in the Boulder County Comprehensive Plan or using the best available information on or within one mile of the parcel(s) on which the proposed oil and gas facilities will be located and within one mile of either side of the full length of each proposed wellbore. Natural hazards may include, without limitation, expansive soils or claystone, subsiding soils, soil creep areas, or questionable soils where the safe-sustaining power of the soils is in doubt; landslides, mudslides, mudfalls, debris fans, unstable slopes, and rockfalls.
  15. **Floodplain and Floodway.** A map of all floodplains and floodways, including both the FEMA and Boulder County Floodplains as delineated by the most recent Official Boulder County Floodplain Map defined in Article 4-400, on or within one mile of the parcel(s) on which the proposed oil and gas facilities will be located.
  16. **Recreational Activity; Trails; Bikeways.** A map and identification of active and passive recreational activity areas, such as public trails, publicly accessible open space, bike paths, and commonly used bike travel ways within one mile of the parcel(s) where the oil and gas facilities are proposed to be located.
  17. **Open Space.** A map of public open space or lands with conservation easements on or within one mile of the parcel(s) on which the proposed oil and gas facilities will be located.
  18. **Site Selection Rationale.** Maps and a narrative explaining the reasons the Applicant chose the proposed site(s) for the oil and gas facilities or operations with respect to other possible locations.
  19. **Ozone Exceedance.** A report of the number of ozone exceedances as measured at any and all CDPHE monitoring stations in Boulder County and the amount by which the 2015 National Ambient Air Quality Standards of 70 parts per billion under the Clean Air Act were exceeded. The report should include all data for the preceding three-year period.
- C. Proposed Development Information.**
1. **Facility Layout.** A facility layout diagram, including: construction and operations layout drawings; location construction and operations cross-section plots including location and finish grades; operations facility layout drawings; the location of equipment such as wellheads, pumping units, tanks, treaters, staging and storage areas; the location of access roads and ingress and egress to and from public roads; structures such as sound walls; location, height and materials for all fences; temporary workspaces and permanent areas of disturbance for all phases of development; fencing; and an equipment list.
  2. **Wellbore Risk analysis.** A copy of the anti-collision evaluation for all proposed wells conducted for or under the same terms as required in COGCC Rules.
  3. **Area of Disturbance.** A map and dimensions of the proposed oil and gas facilities, indicating both temporary and permanent disturbance areas, in square feet and acres.
  4. **Roads and Road Improvements.** A map of proposed new roads and improvements to existing roads that will be necessary for the proposed oil and gas facilities, as well as identification of the road surface planned for each road or road improvement.
  5. **Pipeline Plan.**
    - a. The specific location and route of each flowline, and fresh, produced, or waste water pipeline and any other transport pipeline necessary for the oil and gas facilities and operations, through the lifetime of the oil and gas facilities and operations, and their distances from: existing or proposed residential,

- commercial, or industrial buildings; places of public assembly; surface water bodies; natural resources identified under 12-900(B)(11); geologic hazards, agricultural lands; and public or private roads;
- b. The size, operating pressure, material, and locations of each line and what materials they will carry;
  - c. Whether pipelines will be co-located with proposed or existing lines; and
  - d. Identification of all pipeline segments that will be constructed by boring and the location of the boring operation.
6. **Grading and Drainage Plan.** A plan and information showing location and typical cross-section of all existing and proposed earthwork on the parcel(s) on which the oil and gas facilities are proposed to be located, including earthwork calculations, historic drainage patterns and flow rates, mitigation measures to compensate for anticipated drainage impacts, and geotechnical soil reports. The best available information should be used to identify and evaluate drainage impacts, including without limitation the Boulder County Storm Drainage Criteria Manual. The plan must be certified by a Colorado registered professional engineer.
  7. **Landscaping and Screening Plan.** A plan denoting the intended landscaping and visual screening on the parcel(s) on which the oil and gas facilities are proposed to be located; an irrigation plan may be required where visual buffering is proposed to be accomplished with vegetation.
  8. **Weed Control Plan.** A Weed Control Plan identifying what County listed noxious weeds are known to be on the parcel(s) on which the oil and gas facilities are proposed to be located, their location, and the proposed method of weed control. This plan must also include a strategy to prevent and manage the growth of noxious weeds during oil and gas operations and reclamation.
  9. **Dust Suppression Plan.** A plan detailing how the Applicant will prevent excessive dust escaping from the oil and gas facility site(s) and all associated roads; a plan for preventing fugitive dust, sand, or silica materials escaping from any oil and gas operation.
  10. **Lighting Plan and Photometric Study.** A plan indicating the location of all outdoor lighting on the site and structures, including cut sheets (manufacturer's specifications with picture or diagram) of all proposed fixtures. The plan should include the location and type of any emergency lighting and description of situations in which it will be used. A photometric study conducted by an independent consultant to measure the lumens emitted by the oil and gas facilities or operations evaluate lighting impact on surrounding properties must also be included as part of the plan.
  11. **Operational Plan.** A plan describing in detail the proposed oil and gas operations including the method, schedule, and duration of time for drilling, completion, production, and decommissioning.
  12. **Electrification Plan.** A plan identifying all sources of electricity that will be brought to or used at the proposed oil and gas location during all phases, including drilling, completion, and operations.
  13. **Revegetation and Reclamation Plan.** A plan illustrating how all disturbed areas will be revegetated and reclaimed, including areas disturbed during flowline abandonment. The plan will include timing, methods, materials to be used, including any proposed soil amendments, and procedures for ensuring successful revegetation, including an on-going maintenance plan that ensures successful establishment of vegetation and weed control.
  14. **Worker Training and Records.**
    - a. All workers at oil and gas facilities and involved with oil and gas operations shall have any applicable nationally recognized certifications and training for the work they are performing. This includes, but is not limited to, Hazard Communications Training, Hazardous Waste Operations Certifications, heavy equipment operator training, occupational safety and health training, etc.
    - b. Upon request from the County, the Operator shall supply the County written procedures detailing employee training requirements and training records.
- D. **Assessments, Studies, and Plans by Outside Experts.** Any independent experts, engineers or consultants must be retained by the Applicant and are subject to approval by Boulder County.
1. **Air Quality.**
    - a. **Existing emissions.** An independent expert's inventory of methane, VOCs, NO<sub>x</sub>, CO<sub>2</sub> and particulate emissions for all oil and gas facilities and operations in Boulder County owned or operated by the Applicant for the calendar year prior to registration or renewal.
    - b. **Air Quality Modeling.** A qualified, independent modeling study that considers all relevant environmental and atmospheric conditions, and includes:
      - i. Assesses the existing air quality at the proposed site;
      - ii. Predicts the anticipated emissions (including methane, VOCs, NO<sub>x</sub>, CO<sub>2</sub>, and particulate emissions)

- from the proposed oil and gas facilities and operations, assuming use of and identifying all emissions control equipment and processes intended for use at the oil and gas facilities; and
  - iii. Models the impacts on air quality from the proposed oil and gas facilities and operations over their lifetime, including the compounding effects of climate change on ozone and particulate pollution in the county and taking into account and identifying all relevant factors including natural conditions and other air quality impacts from any existing or foreseeable source.
2. Baseline Soil Conditions. An independent expert's report detailing the soil conditions on the parcel(s) on which the proposed oil and gas facilities will be located. The report will address the NRCS classification of the soils, the organic and inorganic characteristics of the soil, and any existing contamination or sensitive soil features existing on the site.
  3. Traffic and Road Use Plan.
    - a. A Transportation Impact Study, as defined in the Boulder County Multimodal Transportation Standards, covering all areas affected by the proposed oil and gas facilities or operations and prepared by a Colorado registered professional engineer.
    - b. A map indicating proposed trip routes for all traffic serving the oil and gas operation during all phases of well development and operations, for the lifetime of the oil and gas facilities and operations.
    - c. For each segment of proposed traffic routes 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 during all phases of the proposed oil and gas operation.
    - d. The intended measures the Applicant will take to ensure safety, maintenance of road condition, and the quality of life experience of other users of the County transportation system, adjacent residents, and affected property owners, including without limitation:
      - i. 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;
      - ii. Maintenance practices on the proposed route, including without limitation, grading of unpaved roads, dust suppression, vehicle cleaning necessary to minimize re-entrained dust from adjacent roads, snow and ice management, 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
      - iii. Any necessary physical infrastructure improvements to ensure public safety for all modes of travel including non-motorized modes along travel routes to and from the site.
  4. Agriculture. An independent expert's report identifying the anticipated impacts of the proposed oil and gas facilities or operations on the current agricultural uses and the existing productivity of the lands where the oil and gas facilities and operations are proposed.
  5. Wildlife. An independent expert's report identifying the anticipated impacts of the proposed oil and gas facilities and operations on wildlife and wildlife habitat and recommending measures for avoiding or minimizing such impacts.
  6. Natural Resources. An independent expert's report identifying the anticipated impacts of the proposed oil and gas facilities and operations on the resources identified under 12-900(B)(11) and recommendations for avoiding or minimizing such impacts.
  7. Water Quantity, Source and Use.
    - a. An estimate of the amount of water needed for all phases of the oil and gas operation.
    - b. The source of water intended for use by the proposed oil and gas facility or operation.
      - i. A list of all available sources of water for the proposed oil and gas operations, and if multiple sources are available, analysis of which source is least detrimental to the environment.
    - c. Impacts of Water Use. An independent expert's assessment of the impacts of the proposed use of water described in subsections (a) and (b) above. Impacts to, at a minimum, downstream users, groundwater users, agricultural lands and users, terrestrial and aquatic wildlife, plant communities, and recreation must be considered.
    - d. Water Management Plan. An independent expert's recommendation of measures that will avoid or minimize the impacts identified in subsection (c) above and address the water use standards in Section 12-1000.
    - e. Produced Water. An estimate of the amount of produced water and other wastewater that will be generated by the proposed oil and gas operations, including a description and evaluation of potential

flowback and produced water volume reduction options through recycling, reuse or other beneficial uses and the rationale for the methods to be employed.

i. Plans for recycling or reusing water used or produced by the oil and gas

operations. 8. Water Quality.

- a. Testing of existing conditions. A qualified, independent expert's assessment of existing water quality conditions on and adjacent to the parcel(s) where the oil and gas facilities will be located based on testing as follows.
  - i. Identification of and offers to owners to sample all domestic water wells and water sources located within one mile of the parcel or parcels on which the oil and gas facilities are proposed to be located and within one-half mile of either side of the full length of each proposed wellbore. For all water wells and water sources for which the Applicant is given permission:
    1. Initial collection and testing of baseline samples from available water sources within 12 months prior to the commencement of drilling a well, or within 12 months prior to the re-stimulation of an existing well for which no samples were collected and tested during the previous 12 months;
    0. Analytical monitoring. All sampling shall be performed by the Applicant according to the specified methods in 40 C.F.R. Part 136, including sample containers, preservation methods, and holding time limits, for the analytes listed in Table 1 below; and
    2. GPS coordinates, at sub-meter resolution, for all water wells and water sources tested.
  - ii. An Operator may rely on existing sampling data collected from water sources within the radius described above, provided the data was collected within the previous 12 months, the data includes the constituents listed in Table 1, and there has been no oil and gas activity within a one-mile radius in the time between the original sampling and the present.
  - iii. If the Operator is unable to locate and obtain permission from the owner of a water source to be tested, the Operator must advise the Director that the Operator could not obtain access to the water source from the surface owner.
  - iv. The Operator will submit a monitoring report to the Director with the Application, including reporting on damaged or unsanitary water well conditions; existing, adjacent potential pollution sources; water odor; water color; presence of sediment; bubbles and effervescence; and the existence and amount of any Table 1 analytes found. Copies of the report will be provided to the COGCC and the water source owners within 10 days after the Operator's receipt of the report.
  - v. If sampling shows water contamination, additional measures may be required including the following:
    1. If free gas or a dissolved methane concentration level greater than one milligram per liter (mg/l) is detected in a water source, determination of the gas type using gas compositional analysis and stable isotope analysis of the methane (carbon and hydrogen);
    2. If the test results indicate thermogenic or a mixture of thermogenic and biogenic gas, an action plan to determine the source of the gas; or
    3. Additional reporting to Boulder County Public Health.
- b. Modeling of Impacts. An independent expert's modeling of the water quality impacts on any water bodies and groundwater within one mile, or as otherwise determined, of the oil and gas facilities and operations.
- c. Stormwater Quality Control. A plan for establishing compliance with the stormwater management provisions of Section 12-1000(DD), Boulder County's Illicit Stormwater Discharge Ordinance, the Stormwater Quality Control provisions of Section 7-904, and with all water quality or stormwater quality control permits obtained from the County or any other agency. With reference to such standards, the plan must include:
  - i. Containment of pollutants;
  - ii. A list of the control measures that will be employed to prevent illicit or inadvertent discharges of contaminated stormwater, which may include containment impoundments, energy dissipators, sediment traps, check dams, culverts, and level spreaders or similar devices;
  - iii. Spill notification and response plans;
  - iv. A non-radioactive means of tracing fracking fluid migration from the oil and gas operations, such as identifying the isotopic fingerprint of the Operator's fracking flowback fluids, for use in tracing any subsequent water contamination; and

- v. The timing and means of Applicant providing the County with the information it provides to the COGCC ensuring compliance with the water quality protection standards contained in COGCC rules and associated forms.
9. Emergency Preparedness Plan. The emergency preparedness plan must consist of at least the following information:
- a. Name, address and phone number, including 24-hour emergency numbers for at least 2 persons located in or near Boulder County who are responsible for emergency field operations. The Operator is responsible for ensuring that at least one of these emergency contacts can be on the site of any emergency within 15 minutes.
  - b. Protocols for notification of emergency response services and the County, including contact names and numbers for each such agency, for use in reporting any incident causing or threatening to cause personal injury or property damage. Emergency response must be notified immediately upon the imminent threat or occurrence of such incidents; the County must be notified as quickly thereafter as practicable and in no instance more than 24 hours later.
  - c. An 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 30 days of the ready-for-service date.
  - d. Transportation routes to and from oil and gas facilities for emergency response and management purposes, including at least 2 evacuation routes and health care facilities that would be used.
  - e. Detailed information addressing each potential emergency that may be associated with the operation. This may include any or all of the following: well integrity issues; explosions; fires; gas, oil or water pipeline leaks or ruptures; hydrogen sulfide or other toxic or explosive gas emissions; and hazardous material vehicle accidents or spills. This may also include external hazards to the site such as earthquakes, lightning, floods, high winds, tornadoes, terrorism, vandalism, or wildfire.
  - f. The threshold or triggers constituting an emergency must be identified.
  - g. 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, and in no case more than 4 hours after such spill is discovered, in addition to all necessary reporting to state agencies.
  - h. Project-specific emergency preparedness plans are required for any project that involves drilling or penetrating through known zones of hydrogen sulfide gas.
  - i. The plan must include a provision that obligates the Operator to reimburse the appropriate emergency response service providers for costs incurred in connection with any emergency. The appropriate emergency response service provider may specify alternative methods for reimbursement of its services. If requested by the emergency response agency, Operator will include a provision in the plan that addresses regular training exercises.
  - j. Detailed information on safety management showing that the Operator has adequate personnel, ongoing safety training of all on-site personnel, safety supplies, and funding to implement the emergency response plan immediately at all times during construction and operations.
  - k. As applicable, the plan must include provisions that obligate the Operator 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, including fracking fluids. Operators must timely provide SDS to the public in response to a written request. 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.
  - l. The plan must include a provision establishing a process by which the Operator periodically engages with the surrounding residents and landowners to educate them on the risks of the onsite operations, explain emergency procedures, engage in evacuation exercises, and to establish a process for surrounding neighbors to communicate with the Operator.
  - m. The plan must include a process by which the community can submit concerns and complaints and be assured of responses.

10. Noise Plan.

- a. **Monitoring Plan.** An independent expert's plan for the creation of the Baseline Report and noise modeling, including the proposed receptor locations, proposed test periods, and proposed times of year for monitoring and the software and methodology for modeling. This plan must be approved by the County prior to the creation of a Baseline Report or Noise Modeling. This plan must demonstrate that the Baseline Reports and Noise Modeling will comply with the American National Standards Institute S 1.4: Specifications for Sound Level Meters.
  - b. **Baseline Report.** Report of dBA and dBC ambient noise levels over 24-hour test periods for at least 3 consecutive weekdays and 3 consecutive weekend periods at the site at different and in different weather conditions according to the Monitoring Plan. Baseline Reports must include wind speed, direction, rainfall data, season conducted, and any other relevant conditions.
  - c. **Noise Modeling.** Using an industry-recognized noise modeling software, modeling of expected dBA and dBC noise levels from the proposed oil and gas facilities and operations during all phases of development and operation, assuming use of and identifying all noise-mitigating equipment and measures intended for use at the proposed oil and gas facilities or operations. All Noise Modeling must include a list of all noise sources, reference noise data used in the model for each source, noise attenuation specifications for any proposed noise walls, a scaled map showing predicted noise levels.
  - d. **Complaint procedure.** A plan for responding to noise complaints and communicating the results to the complainant and to the County in a timely manner.
11. **Odor Plan.** A list of all odor reduction measures that will be used to address the predicted odors from the proposed oil and gas facilities and operations and meet the standards in 12-1000(P). Identification of all natural features (e.g., topography, prevailing wind patterns, vegetation) that will aggravate or mitigate odor impacts on the areas within 2000 feet of the parcel(s) where the oil and gas facilities are proposed to be located. A plan for timely responding to odor complaints and communicating the results to the complainant and to the County.
  12. **Cultural and Historical Resources Survey.** A cultural, historical, and archeological survey of the parcel(s) where the oil and gas facilities or operations are proposed to be located done in consultation with and as required by History Colorado.
  13. **Flood Protection and Mitigation Plan.** If the proposed oil and gas facilities or operations are within a floodplain, an independent engineer's plan that describes how flood protection measures and flood response actions, such as remote shut-in procedures and, anchoring will be implemented.
  14. **Waste.**
    - a. **Projected waste.** An independent expert's assessment projecting the types and amounts of waste (including construction waste, drilling mud, fracking fluids, exploration and production waste) that will be generated by the oil and gas facilities or operations throughout their lifetimes. The assessment will include description of any sources of technically enhanced naturally occurring radioactive material used in or generated by the oil and gas operations and facilities.
    - b. **Waste Management Plan.** Plan for disposal of all waste generated by the oil and gas facilities or operations, including use of truck or pipeline transport with details of anticipated truck trips (routes, number of trips, timing of trips). The plan will identify whether waste materials will be stored on site and, if so, how such storage will avoid adverse impacts to the oil and gas facility parcel(s), surrounding lands, water and natural resources, air quality, and public health, safety, and welfare. The plan must specify whether on-site storage of drilling mud is contemplated and, if so, how the Applicant will eliminate odors leaving the site.
  15. **Existing Mines Risk Study.** An independent engineer's study and assessment of the degree and type of risks posed by interaction of the proposed oil and gas facilities or operations with existing or former mining operations, such as subsurface features resulting from other mineral mining activities within one mile of the proposed oil and gas facilities and within one mile of either side of the full length of each proposed wellbore.

## 12-1000 Special Review Standards

All Special Review Applications for new oil and gas development will be reviewed according to the following standards to ensure the protection of public health, safety, and welfare, the environment, and wildlife resources. The Board, considering the advice of the Director, has determined the following standards to be generally applicable based on the nature and extent of oil and gas development. When two or more of the standards listed below

conflict, the Board, based upon advice of the Director, will 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 will determine whether the proposed oil and gas facility or operation, individually and in light of the cumulative impacts of surrounding land uses, complies with these Special Review standards. The Applicant bears the burden of proving that the proposed oil and gas facilities and oil and gas operations will meet the standards. A proposal meets the standards if it will, with respect to each subject area below, either avoid adverse impacts to public health, safety, and welfare, the environment and wildlife resources or, through imposition of conditions of approval, sufficiently minimize, and mitigate unavoidable impacts. In no case will the Board approve oil and gas facilities or operations with impacts that will endanger public health, safety, and welfare, the environment or wildlife.

- A. Air Quality. Oil and gas facilities and operations will sufficiently avoid, minimize, and mitigate impacts to air quality.
  1. Compliance with National Ambient Air Quality Standards. Oil and gas facilities and operations will not compromise the attainment of ozone standards for the Denver Metro/North Front Range ozone nonattainment area as established by the US Environmental Protection Agency. Oil and gas facilities and operations will not contribute particulate matter to the air in a manner that endangers public health.
  2. Methane. Oil and gas facilities and operations will sufficiently avoid, minimize, and mitigate emissions or release of methane.
- B. Water Use. Use of the proposed water from the proposed supply will not injure water users, groundwater users, water delivery systems, agricultural lands and operations, recreation water body health, terrestrial and aquatic wildlife, and viability, plant communities, wetlands, and wildlife.
- C. Agricultural Land. Oil and gas facilities and operations will sufficiently avoid, minimize, and mitigate loss of and adverse impacts to: agricultural land, including farm or ranch lands and soils; agricultural operations, including crop and livestock production; irrigation systems and schedules; and improvements including fencing.
- D. Cultural and Historic Resources. Oil and gas facilities and operations will sufficiently avoid, minimize, and mitigate impacts to or loss of cultural or historic or archaeological resources, resources eligible for County landmarking, or sites included in the National Historic Register.
- E. Emergency Prevention and Response. Oil and gas facilities and operations will sufficiently avoid, minimize, and mitigate risks of and appropriately prepare for emergency situations such as explosions, fires, gas, oil or water pipeline leaks or ruptures, hydrogen sulfide or other toxic gas or fluid emissions, and hazardous material vehicle accidents or spills. Oil and gas operations will 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. Financial Fitness and Assurance. Oil and gas operations must not present a significant risk that public funds will be expended to protect the public, health, safety, and welfare in light of the financial viability of the Applicant. Applicants must demonstrate sufficient financial stability to operate the proposed oil and gas operations for the lifetime of the oil and gas operations. Applicants must provide forms of financial assurance sufficient to guarantee performance of all conditions of approval and obligations through the lifetime of the proposed oil and gas operations.
- G. Floodplains and Floodways. Above-ground oil and gas facilities are prohibited in floodways. Above-ground oil and gas facilities must be located outside a floodplain unless there is no way to avoid the floodplain, no other sites can be reasonably used, or if reasonably necessary to avoid significant adverse impacts to public health, safety, welfare or the environment. Oil and gas facilities and operations will sufficiently avoid, minimize, and mitigate flood risks.
- H. Drainage. The oil and gas facilities and operations will not alter historic drainage patterns and/or flow rates or shall include acceptable mitigation measures to compensate for anticipated drainage impacts. The best available information should be used to evaluate these impacts, including the Boulder County Storm Drainage Criteria Manual, hydrologic evaluations to determine peak flows, floodplain mapping studies, updated topographic data, Colorado Geologic Survey landslide, earth/debris flow data, and creek planning studies, as applicable.
- I. Dust. The oil and gas facilities and operations must use all practical measures or operating procedures necessary to minimize dust. Sources must prevent dust from leaving their property. No produced water or



other process fluids shall be used for dust suppression.

- J. **Geologic and Natural Hazards.** Oil and gas facilities and operations will not be located in geologic or natural hazard areas as identified in the Boulder County Comprehensive Plan or through the Special Review process, unless there is no way to avoid the hazard area, no other sites can be reasonably used, or if reasonably necessary to avoid significant adverse impacts to public health, safety, welfare or the environment.
- K. **Land Disturbance.** The installation and operation of any oil and gas facilities must sufficiently avoid, minimize, and mitigate adverse impacts to the surface lands under and immediately surrounding all oil and gas operations and facilities. Considerations in applying this standard include, but are not limited to, alteration of the natural topography and existing vegetation, the scope of the proposed oil and gas facilities or operations, the amount of cut and fill, and run-off and erosion potential, and soil stability.
- L. **Lighting.** Lighting associated with oil and gas facilities or operations will sufficiently avoid, minimize, and mitigate adverse impacts on surrounding properties, livestock, and wildlife.
- M. **Water Bodies; Riparian Areas; Wetlands.** Oil and gas facilities or operations will sufficiently avoid, minimize, and mitigate adverse impacts to all surface water bodies including, but not limited to, irrigation ditches and reservoirs as identified and mapped on Boulder County's Ditch and Reservoir Directory and the St. Vrain and Left Hand Water Conservation District Ditch and Reservoir Directory, wetlands or aquatic habitat, riparian areas, and riparian corridors.
- N. **Natural Resources.** Oil and gas facilities and operations will sufficiently avoid, minimize, and mitigate adverse impacts to significant natural ecosystems or environmental features, significant natural communities, rare plant areas, high biodiversity areas, natural landmarks, and natural areas, as identified in the Boulder County Comprehensive Plan, other sources, or through the Special Review process.
- O. **Noise.**
1. No oil and gas operation will create any noise which causes the ambient noise level when measured at the locations approved in the Monitoring Plan where the oil and gas operation is located to:
    - a. Exceed the ambient noise level by more than four dBA during daytime hours and more than three dBA during nighttime hours for general operations; and
    - b. Exceed the ambient dBA noise level by more than three decibels during flowback operations if necessary during nighttime hours.
  2. In no instance may an oil and gas operation produce noise exceeding [ ] dBA from 7 a.m. to 7 p.m. and [ ] dBA from 7 p.m. to 7 a.m.
  3. In no instance may an oil and gas operation produce noise exceeding 60 dBC.
- P. **Odor.** No odor from the proposed oil and gas facility or oil and gas operations shall be detectable after dilution with 5 or more volumes of odor free air as measured at the property line of the oil and gas location.
- Q. **Electrification.** Operations will be electrified to the highest degree possible. Renewable energy is preferred.
- R. **Pipelines.** All flowlines and fresh, produced, or wastewater pipelines will be routed and constructed to sufficiently avoid, minimize, and mitigate adverse impacts to infrastructure and natural resources and to public health, safety, and welfare, the environment, and wildlife without compromising pipeline integrity and safety; any such lines constructed in County-owned right-of-way will also follow the procedures for and requirements of a utility construction permit from the Public Works Department. Pipelines crossing streams, ditches, or other water bodies must be bored underneath the water body, consistent with the Boulder County Stormwater Discharge Control Manual.
- S. **Recreational Activity; Trails; Bikeways.** Oil and gas facilities and operations must avoid adverse impacts to the quality and quantity of both active and passive recreational activities, trails, and bikeways.
- T. **Revegetation and Reclamation.** The Operator must fully revegetate and reclaim all areas of disturbance. Vegetation must be fully established to its pre-existing conditions pursuant to approved revegetation and reclamation plans.
- U. **Safety.** Oil and gas operations must be conducted in a manner to avoid risk of personal injury and property damage.
- V. **Setback from Dwellings, Educational Facilities and Child Care Centers.**
1. A Well Pad at an oil and gas facility must be located a minimum of 2,000 feet from an existing Dwelling and related residential uses.
  2. A Well Pad at an oil and gas facility must be located a minimum of 2,000 feet from an Educational Facility or licensed Child Care Center;
- W. **Scenic Attributes and Rural Character.** Oil and gas facilities and operations will sufficiently avoid, minimize,

**Commented [RJ2]:** As above, these noise standards will be finalized based on results of ambient noise testing.

and mitigate adverse impacts to the scenic attributes and rural character of the surrounding area.

Temporary structures, such as sound walls, or buildings constructed to mitigate impacts of oil and gas development may be approved at heights greater than the maximum building heights for each zoning district.

- X. **Soil.** Oil and gas facilities and operations will sufficiently avoid, minimize, and mitigate adverse impacts to baseline soil conditions.
- Y. **Surrounding Land Uses.** Oil and gas facilities and operations must be sited in a manner that sufficiently avoids, minimizes, and mitigates adverse impacts to surrounding land uses. In applying this standard, separation from surrounding land uses will be considered the most effective measure to ensure compatibility between proposed oil and gas operations and existing land uses.
- Z. **Transportation, Roads, and Access.** Oil and gas facilities and operations must be designed and implemented to: support a multimodal transportation system; avoid adverse impacts to the County transportation system; avoid traffic hazards; minimize use of County-owned gravel roads; and ensure public safety and maintain quality of life.
- AA. **Vibration.** Oil and gas facilities and operations must not create vibrations significant enough or long enough in duration to cause adverse impacts to the health, safety, welfare, environment, and wildlife, or quality of life of surrounding residents and occupants or damage to existing structures.
- BB. **Waste.** All waste generated by oil and gas facilities and operations will be stored, transported and disposed of in a manner that avoids adverse impacts to public health, safety, and welfare, the environment, and wildlife. Injection wells and disposal wells are prohibited.
- CC. **Water Quality.** Oil and gas facilities and operations must sufficiently avoid, minimize, and mitigate adverse impacts to the availability and quality of surface water bodies and groundwater within Boulder County.
- DD. **Stormwater Quality Control.** All stormwater runoff occurring at an oil and gas facility must be controlled to prevent adverse impacts to surrounding natural resources, including wetlands and water bodies.
- EE. **Wildlife.** Oil and gas facilities and operations will sufficiently avoid, minimize, and mitigate adverse impacts to wildlife, wildlife habitat and migration corridors as defined in the Boulder County Comprehensive Plan or identified on the site.

## 12-1100 Conditions of Approval

After Special Review, the Board will deny the Application if the proposed oil and gas facilities or operations cannot be conducted in a manner that protects public health, safety, and welfare, the environment and wildlife. If the Application can be approved, it will be subject to conditions that ensure compliance with the standards listed in Section 12-1000 and protection of public health, safety, and welfare, the environment and wildlife. Conditions may include but are not limited to the following:

- A. **Location.**
  - 1. Adjustments to the locations of any or all proposed oil and gas facilities or operations, which may include but not be limited to consolidating, distributing, or re-locating facilities;
  - 2. Sharing of existing infrastructure by multiple oil and gas operations, minimizing the installation of new facilities and avoiding additional disturbance to the environment, landowners and natural resources; or
  - 3. Modification of proposed travel routes for some or all phases of the oil and gas operation.
- B. **Scope.** Adjustments to the size and density of facilities that may include but not be limited to:
  - 1. Reductions or limitations on the number of total wells;
  - 2. Reductions or limitations on the number of wells per pad; or
  - 3. Changes to the dimensions of the proposed facilities.
- C. **Timing and Phasing.**
  - 1. Separating the overall project into phases over a period of time;
  - 2. Establishing the timeline for commencement and duration of all or some phases of oil and gas operations;
  - 3. Establishing the times in which all or some phases of oil and gas operations are conducted with respect to weather, agricultural activities, wildlife needs and other seasonal concerns; or
  - 4. Limitations on times of day and night in which operations are conducted.
- D. **Air Quality.**

To protect air quality and public health, emissions control measures may be required, including, but not limited to, one or more of the following:

1. Compliance with the current, most protective air quality regulations and health-based standards, which may include regulations and standards set by the EPA, CDPHE, COGCC, CDC or other relevant authorities.
2. Continuous monitoring during all phases from pre-production through the end of production, which may monitor air quality at the oil and gas facilities, nearby properties, and other areas of concern.
3. A leak detection and repair program that may include:
  - a. Use of best available technology leak detection, such as infra-red cameras and hydrocarbon analyzers;
  - b. Regular on-site inspections at a frequency determined by the Director;
  - c. Immediate leak repair;
  - d. Reporting of monitoring and inspection results to the Director, who may make such reports available to the public;
  - e. Operator maintenance of all images and data obtained from leak detection devices for 10 years, to be made available to the Director upon request; and
  - f. Immediate reporting of all leaks detected to the Director;
4. Completion of wells using reduced emission completion practices.
5. Require closed loop pitless systems for containment and/or recycling of all drilling, completion, flowback and produced fluids.
6. Routine flaring is prohibited. In the event of an emergency, Operators may be required to shut-in the well if the emergency lasts greater than 24 hours; routine maintenance does not constitute an emergency.
  - a. Routine flaring is the flaring of natural gas during the normal course of oil and gas production for reasons other than safety and emergencies and other conditions outside of the control of the operator.
  - b. For any permitted flaring, manufacture test or other data demonstrating hydrocarbon destruction or control efficiency that complies with a design destruction efficiency of 98% or better. 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. Electronic surveillance monitors to detect when pilot lights on control devices are extinguished
7. Venting is prohibited during all phases unless approved by the Director or required in situations where there is an immediate threat to public health, safety, and welfare, the environment, and wildlife.
8. Require all pneumatics to be non-emitting pneumatic controllers.
9. Zero-emission desiccant dehydrators or 98% control of hydrocarbon emissions from glycol dehydrators.
10. Operator participation in Natural Gas STAR or other voluntary programs to encourage innovation in pollution control.
11. Emission reduction measures in immediate response to posting of air quality action day advisories by CDPHE for the County area, including minimizing vehicle and engine idling, reducing truck and employee traffic, delaying vehicle refueling, suspending or delaying use of gas-powered ancillary equipment, postponing well maintenance and storage tank hydrocarbon liquid loadout, postponing construction and maintenance activities.
12. Consolidation and centralization of product treatment and storage equipment and compression equipment.
13. Use of a pressure-suitable separator and vapor recovery unit.
14. Hydrocarbon control of 98% or better for crude oil, condensate, and produced water tanks.
15. Require dry seals on centrifugal compressors.
16. Routing of emissions from rod-packing and other components on reciprocating compressors to vapor collection systems.
17. Control emissions by 98% during storage tank hydrocarbon liquids loadout (i.e. loading out liquids from storage tanks to trucks).
18. Prohibit manual venting during well liquids unloading activities, use best management practices during liquids unloading activities, including the installation of artificial lift, and automated plunger lifts or other forms of artificial lift (98% or better hydrocarbon flare only).
19. Reduction or elimination of emissions from flowline maintenance activities such as pigging, including routing emissions to a vapor collection system.

E. Operations.

1. Requirement for use of pipelines to transport all gas and fluid materials, including oil, natural gas, fresh water, produced water, and waste products, to and from the oil and gas facilities.
2. Delay of well completions until pipeline transport is in place for all hydrocarbon products and produced or wastewater.
3. Limitations on on-site storage tanks.
4. Restrictions on field maintenance of vehicles involving hazardous materials
5. Requirement that vehicles are only refueled on impervious surfaces and never during storm events.

**F. Water Supply.**

1. Conditions necessary to avoid, minimize, and mitigate the impacts of the proposed water use, including recycling; and
2. Any necessary water agreements must be secured prior to any oil and gas operations commencing.

**G. Waste.** Compliance with the County-approved waste management plan, including routine testing of all applicable waste for technically enhanced naturally occurring radioactive material.

**H. Water Quality and Stormwater Quality Control.** On-going water quality monitoring and use of protective measures such as those listed in this section:

1. Follow-up and on-going testing of all water sources and water wells within one mile of the parcel or parcels on which the oil and gas facilities are proposed to be located and within one-half mile of either side of the full length of each proposed wellbore. Sampling requirements may include:
  - a. Testing for the analytes listed in Table 1.
- b. Post-completions and periodic on-going monitoring samples collected from one up-gradient and one down-gradient source and tested pursuant to the following time frame:
  - i. One sample within 6 months after completion;
  - ii. One sample between 12 and 18 months after completion; and
  - iii. One sample between 60 and 72 months after completion.
  - iv. For multi-well pads, collection will occur annually during active drilling and completion and on the subsequent dates listed in this section.
- c. If the Operator is unable to locate and obtain permission from the surface owner of a water source to be tested, the Operator must advise the Director that the Applicant could not obtain access to the water source from the surface owner.
- d. In any case, the Director may require the Applicant to drill a water monitoring well on the Well Pad to ensure that groundwater samples are collected from the aquifer(s) through which the well will penetrate.
- e. All sampling shall be performed by the Applicant according to the specified methods in 40 C.F.R. Part 136, including sample containers, preservation methods, and holding time limits.
- f. The location of each tested water source will be noted using a GPS with sub-meter resolution.
- g. Reporting on damaged or unsanitary water well conditions, adjacent potential pollution sources, odor, water color, sediment, bubbles, and effervescence.
- h. The Operator will submit a monitoring report to the Director with the Application, including reporting on damaged or unsanitary water well conditions; existing, adjacent potential pollution sources; water odor; water color; presence of sediment; bubbles and effervescence; and the existence and amount of any Table 1 analytes found. Copies of the report will be provided to the COGCC and the water source owners within 10 days after the Operator's receipt of the report.
- i. If sampling shows water contamination, additional measures may be required including the following:
  1. If free gas or a dissolved methane concentration level greater than one milligram per liter (mg/l) is detected in a water source, determination of the gas type using gas compositional analysis and stable isotope analysis of the methane (carbon and hydrogen);
  2. If the test results indicate thermogenic or a mixture of thermogenic and biogenic gas, an action plan to determine the source of the gas;
  3. Immediate notification to the Director, the COGCC, Boulder County Public Health, and the owner of the water source if the methane concentration increases by more than 5 mg/l between sampling periods, or increases to more than 10 mg/l;
  4. Immediate notification to the Director, the COGCC, Boulder County Public Health, and the owner of the water source if BTEX and/or TPH are detected as a result of testing. Such detections may result in required subsequent sampling for additional analytes; or
  5. Further water source sampling in response to complaints from water source owners.

- j. Timely production and distribution of test results, well location, and analytical data in electronic deliverable format to the Director, the COGCC, Boulder County Public Health, and the water source owners.
2. The County may limit or prohibit toxic (when inhaled or ingested) chemicals in hydraulic fracturing fluids.
3. No produced water or other wastewater may be sprayed or otherwise dispersed on any lands or waters within the County.
4. Compliance with the Boulder County Illicit Stormwater Discharge Ordinance, and all water quality or stormwater quality permits from the County and other agencies.
5. Confirmation from CDPHE that the oil and gas facilities and operations are covered under the Colorado Discharge Permit System (CDPS) general permit for Stormwater Discharges Associated with Construction Activities (state stormwater discharge permit), when applicable.
6. Flowback and produced water reporting including:
  - a. A complete characterization of the Operator's flowback and produced water streams, including chemical analyses, radioactivity analyses, total dissolved solid concentrations and rate of flowback and production fluid at each well;
  - b. Amount of flowback and production fluid generated by each well that is recycled or reused for oil and gas operations; and
  - c. An accounting of all flowback and produced water from the well to final disposal, including all temporary holding facilities.

**Table 1. Water Quality Analytes**

<b>General Water Quality</b>	Alkalinity Conductivity & TDS pH Dissolved Organic Carbon (or Total Organic Carbon) Bacteria Hydrogen Sulphide
<b>Major Ions</b>	Bromide Chloride Fluoride Magnesium Potassium Sodium Sulfate Nitrate + Nitrite as N (total)
<b>Metals</b>	Arsenic Barium Boron Chromium Copper Iron Lead Manganese Selenium Strontium
<b>Dissolved Gases and Volatile Organic Compounds</b>	Methane BTEX as Benzene, Toluene, Ethylbenzene, Xylenes Total Petroleum Hydrocarbons (TPH)

Other	Water Level Stable isotopes of water (Oxygen, Hydrogen, Carbon) Phosphorus Tracing materials associated with Operator's fracking fluid as identified in the Water Quality Plan pursuant to 12-900(D)(8)
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**I. Contamination Prevention.**

1. For each existing abandoned oil and gas facilities identified under 12-900(B)(5), prior to any hydraulic fracturing, and at periods following hydraulic fracturing, the Operator must perform assessment and monitoring that may include:
  - a. Risk assessment of leaking gas or water into the ground surface or subsurface water resources;
  - b. Soil gas surveys from various depths and at various distances depending on results of risk assessment;
  - c. Same surveys 90 days after completion and every year after production has commenced if initial survey results suggest increased risk;
  - d. follow-up soil gas survey and leak tests may be required every 3 years after production has commenced; and
  - e. Periodic or specific bradenhead testing.

**J. Spills, Leaks, and Releases.**

1. **Containment.** Secondary or Tertiary containment for oil and gas facilities and operations may be required.
2. **Reporting.** Spills, leaks, and releases of any substance other than fresh water, including spills of produced water, oil, condensate, natural gas liquids, all spills, gas leaks, and E & P waste, must be reported to emergency response as required and to the County immediately upon discovery and no later than 6 hours thereafter. If the County determines the spill or leak is reportable to any agency when the Operator disagrees, the County may make such report.
3. **Clean-up.** Any leak, release, or spill will be cleaned up according to applicable state and federal laws, including Colorado Water Quality Control Commission regulations, the Oil and Pollution Act and the Clean Water Act.
4. **Root Cause Analysis.** Submission to the County of a root cause analysis of any spill, leak, or release of any substance other than fresh water that resulted in serious bodily injury or fatality, serious environmental harm, was a Grade 1 gas leak as defined by the COGCC, or is otherwise requested by the Director within 30 days of the leak, spill, or release.

**K. Revegetation and Reclamation.** Specific revegetation and reclamation requirements for all areas disturbed by any oil and gas facilities or operations, including pipelines, in accordance with the Revegetation and Reclamation Plan approved by the County.

**L. Site Management.**

1. **Trash.** Prohibition on burning of trash in association with an oil and gas operation per Section 25-7128(5), C.R.S.
2. **Removal of Non-permanent Equipment.** Time limits for non-permanent equipment remaining on site.
3. **Access Roads.** Conditions to prevent run-off, erosion and other negative impacts to access roads and abutting lands.
4. **On-site Inspector.** Inspection, at Operator's expense, to monitor adherence to all provisions of this Article and conditions of permits and approvals.

**M. Weed Control.** Oil and gas facilities must be kept free of weeds and must comply with the approved Weed Control Plan.

**N. Drought-Tolerant Landscaping.** All landscaping for screening and, reclamation, or other purposes will include drought tolerant species that are native and suitable for the climate and soil conditions of the area.

**O. Soils.** Post-completion analysis and on-going monitoring for soil contamination. Pre-reclamation analysis of soil profiles.

**P. Compliance with Emergency Response Plan.** Following Special Review, adherence to a County approved Emergency Response Plan is an on-going condition of approval.

**Q. Site Security.** Oil and gas facilities must be kept secure from trespassers and risk of vandalism.

**R. Remote monitoring and control.** Use of Supervisory Control and Data Acquisition or other remote monitoring

of wells, including remote telemetry units, onsite control valves, onsite data acquisition devices, radio network/modems, and the ability to trigger an automatic shut-down of a facility.

S. Seismicity. Operator shall conduct continuous seismic monitoring during fracking operations.

1. Seismic events greater than 2.0 on Richter scale shall be reported to LGD and to COGCC.
2. If a seismic event occurs, the County may require cessation of operations immediately and Operator can only resume work once the County is satisfied with the actions taken to reduce the likelihood of further seismicity.
3. Operations shall be immediately suspended for any seismic event measuring 4.0 or above on the Richter scale. Operator may only resume work once the County is satisfied with the actions taken to reduce the likelihood of further seismicity.

T. Noise.

1. Compliance with Section 12-1000(O) is required at all oil and gas operations and oil and gas facilities.
2. Continuous noise monitoring of any oil and gas facilities and operations meeting the most recent version of the American National Standard Institute's Specification for Sound Level Meters.
3. Use of sound walls and other physical barriers to prevent noise leaving the site.
4. Electrification from the power grid or from renewable sources.
5. Use of quiet drilling and completion equipment, such as the Quiet Fleet design provided by Liberty Oilfield Services.
6. For well pads that are not electrically operated, use of quiet design mufflers (also referred to as hospital grade or dual dissipative) or equivalent.
7. Use of electric drill rigs.
8. Tier 4 or better diesel engines, diesel and natural gas co-fired Tier 2 or Tier 3 engines, natural gas fired spark ignition engines, or electric line power for hydraulic fracturing pumps.
9. The use of liquefied natural gas dual fuel hydraulic fracturing pumps.
10. Use of acoustically insulated housing or covers to enclose motors or engines.
11. No pipe unloading or workover operations will occur between 7 p.m and the following 7 a.m.

U. Odor.

1. Compliance with Section 12-1000(P); on-going monitoring for compliance.
2. Odor reduction requirements may include:
  - a. Using minimum low odor Category IV or better drilling fluid. This could include non-diesel based drilling muds including drilling muds that are low odor and do not contain benzene, toluene, ethylbenzene or xylene (BTEX);
  - b. Adding odorants that are not a masking agent;
  - c. Additional or enhanced measures during peak odor-producing phases or times such as increasing additive concentration;
  - d. Wipe down drill pipe each time drilling operation "trips" out;
  - e. Adding chillers to the mud systems;
  - f. Using filtration systems or additives to minimize odors from drilling and fracturing fluids except that the Applicant shall not mask odors;
  - g. Enclosing shale shakers to contain fumes from exposed mud where safe and feasible;
  - h. Removing drilling mud from drill pipe as it is removed from the well;
  - i. Prohibition on exposed drilling mud; or
  - j. Limitation or prohibition on use of diesel generators.

V. Lighting. Limitations on the location and specifications on type of lighting.

W. Visual Impacts. Conditions to reduce adverse visual impacts such as specifications on facility color, screening measures such as berming, visual barriers, and landscaping.

X. Dust. Limitations on or requirements for activities to control dust; storage requirements for sand, silica and similar materials to prevent fugitive particulates. Particulate control measures, including proof of compliance with State-required dust control measures and imposition of an opacity requirement as tested using EPA Method 9.

Y. Traffic. Conditions necessary to ensure public safety for all modes of travel, including but not limited to adjustment of travel routes during some or all phases of development.

Z. County Transportation Infrastructure.

1. Maintenance practices to protect transportation infrastructure, and compliance with the Boulder County

#### Multimodal Transportation Standards

2. Required improvements to existing transportation system infrastructure to support the proposed oil and gas facilities or operations, as designed and performed by the County at Applicant's cost.
  - a. If Applicant disputes the County's statement of necessary transportation infrastructure improvements or the costs, thereof, Applicant may engage a licensed civil engineer to perform an independent study and provide the results thereof to the County for its consideration, at Applicant's cost.
3. Standards and specifications for construction and maintenance of access roads required for the proposed oil and gas facilities or operations.
4. Measures to protect existing transportation infrastructure, such as weight restrictions, prevention of mud and sediment tracking and prohibition on the use of tire chains.

#### AA. Pipeline Conditions.

1. Specific setbacks from features of concern.
2. Conditions on depth of cover and clearance distances from subsurface features or improvements.
3. Conditions for protection of trenches during construction.
4. Construction conditions related to protection of streams, rivers, irrigation ditches and wetlands.
5. As-built reporting, including the location (with GPS coordinates), materials and operating pressures of all flowlines and fresh, produced or wastewater pipelines and depicting the locations of other subsurface features or improvements crossed by such lines.
6. Leak detection system.
7. Inspection protocol, in addition to County inspections.
8. A risk-based engineering study by an independent engineer retained by the Applicant and subject to approval by the County prior to placement and construction of proposed pipelines.
9. Without compromising pipeline integrity and safety, Applicant may be required to share existing pipeline rights-of-way and consolidate new corridors for pipeline rights-of-way to minimize impact.

**BB. Flood Protection.** Compliance with a County-approved flood mitigation plan; any additional conditions necessary to avoid, minimize, and mitigate risks of adverse impacts from oil and gas facilities or operations.

**CC. Applications and Permits.** The Applicant must obtain local, state and federal permits or approvals required for the operation and provide copies to the Director prior to any construction activities. In addition to Article 12 approval, Applicants may be required to obtain County permits including but not limited to Floodplain Development Permits, Grading Permits, Building or Construction Permits, Oversize/Overweight Permits, Stormwater Control Permits.

**DD. Certification and Reporting.** The Operator will submit to the Director copies of all reports related to oil and gas operations and oil and gas facilities made to any agency at the local, state or federal level within 30 days of their submission to the original recipient.

#### EE. Financial Assurances.

1. Financial assurances such as performance bonds, irrevocable letters of credit, irrevocable trusts, or other financial guarantees in a form satisfactory to the County.
2. Additional assurances may be required if circumstances during the lifetime of the oil and gas operations require.
3. Copies of all financial assurance and insurance renewals promptly supplied to the Department.
4. Upon transfer, Financial Assurances will only be returned or cancelled once they are replaced by equivalent Financial Assurances secured by the new owner/Operator.

**FF. Re-assessment of Conditions.** All conditions of approval may specify that the County may re-assess their effectiveness in meeting the standards of this Article after commencement of oil and gas operations.

**GG. Representations of Record.** Any approved Special Review Application is subject to all commitments of record, including verbal representations made by the Applicant at any public hearing and written commitments in the Application file, and without limitation must encompass compliance with all approved mitigation plans.

## 12-1200 Judicial Review

A final decision by the Board of County Commissioners on any matters in this Article 12 is subject to judicial review in a court of competent jurisdiction under C.R.C.P. 106(a)(4).

## 12-1300 Procedures Following Approval of a Special Review Application

**A. Right to Enter.** Each approved Special Review will contain the following statement: "Applicant consents to



allow the County the right of inspection of this approved oil and gas facility and operation provided the County contacts the Operator with 4 hours prior notice of such inspection.”

- B. **Effect of the Approved Special Review.** After approval of a Special Review Application by the Board and subject to compliance with any applicable conditions of approval, the Department will issue a permit for the proposed oil and gas operation.
1. Following receipt of the permit, the Applicant must obtain any necessary building, grading, access, stormwater control, floodplain, or other County permits and, following the receipt of these additional permits and all necessary permits and permissions from other agencies or persons, is authorized to otherwise proceed with the proposed oil and gas operation.
  2. 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.**
1. **Commencement of operations within 2 years.** An approved Special Review Application will remain effective for a period of 2 calendar years following the date of the Board’s approval resolution. If the approved operation is not commenced within 2 calendar years, the permit will expire, and the Applicant will have to reapply for Special Review prior to commencing operations.
  2. **Expiration of approval to operate after 10 years.** Unless renewed in a subsequent Special Review approval, all Special Review approvals under this Article 12 will expire 10 years after their effective date and operations must cease and final reclamation commence.
- D. **Amendments and Modifications.** Prior to changing or modifying a special use approved under this Article or any other existing oil and gas operation, an Operator must submit a written request for modification as specified under Article 4-603. Upon submission of such a request, the Director will proceed as specified in Article 4603(A) to make a determination whether the modification is substantial, except that the Director will consider the additional criteria specified in this subsection. Unless approved in the original Special Review approval, the addition of new wells on an existing pad will be considered a substantial modification. Other changes will be considered substantial if they meet the criteria in 4-603(B) or significantly alter the nature, character, or extent of the land use impacts of the Special Review approval or will result in an increase in harmful emissions or adverse impacts on public health, safety, and welfare, the environment or wildlife, including as a result of cumulative impacts from the proposed modification in combination with existing land uses. Refracking of an existing well will be considered a substantial modification. A modification may not be considered a substantial modification if it results in a net decrease in hydrocarbon emissions or other net mitigation of existing or potential environmental impacts. Should the Applicant dispute the Director’s determination that a proposed modification to a pre-existing oil and gas operation or facility is a substantial modification, the Applicant may appeal the Director’s determination to the Board. The County will not process the Application during any appeal.
- E. **Maintenance and Repair.** If an Operator anticipates undertaking routine maintenance or making a repair to any existing or new oil and gas facility, the Operator must provide written notice to the Director as soon in advance of the maintenance or repair as practicable. For emergency repairs necessary to curtail or prevent threat of property damage or personal injury, if possible, the Operator must provide notice to the Director within 24 hours before commencement of the repair and otherwise as soon thereafter as possible. The notice must include a detailed description of the maintenance or repair. In response to the notice, the Director may approve the repair or maintenance, conditionally approve the repair or maintenance, or require that the Operator apply for a substantial modification determination. The Director may maintain a list of routine maintenance activities that an Operator may undertake without County review or approval.

## 12-1400 Inspections; Enforcement

To monitor compliance with permit conditions or if the County determines at any time that there is a violation of the provisions of this Article 12, including 12-400, 12-500, 12-600, 12-700, and 12-1100, the Director may commence one or more of the following enforcement measures and remedies:

- A. **Right to Enter.** Any oil and gas facility may be inspected by the County at any time to ensure compliance with the requirements of County permits or the provisions of this Article 12. Unless urgent circumstances exist, the County will use best efforts to ensure that 4 hours prior notice is given to the Operator’s contact person at

the telephone number on file. County inspections will be coordinated with the Operator to ensure Operator presence onsite to the extent possible and to ensure the site visit is conducted in accordance with all applicable Operator safety requirements.

- B. Records. Operators will make available to the County at its request all records or reports required by the Colorado Department of Public Health and Environment, the COGCC, the Colorado Public Utilities Commission, the Occupational Safety and Health Administration, and the Pipeline and Hazardous Materials Safety Administration.
- C. Violations. Violations of any condition of approval, any provisions of 12-400, 12-500, 12-600, 12-700, will be subject to Section 12-1500.
- D. Suit to Enjoin COGCC Rule Violation. If the Director discovers a violation or threatened violation of Title 34, Article 60 of the Colorado Revised Statutes or any rule, regulation, or order made under that Article, the Director will notify the COGCC in writing. If the COGCC fails to bring suit to enjoin any actual or threatened violation, then the County Attorney may file an action on behalf of the Board seeking injunctive relief.
- E. Falsification. If the Director, in the course of administering any portion of this Article, learns that the Applicant, including any employee, officer, agent or representative of the Applicant has made a false representation of or omitted material facts the Application may be rejected or summarily denied or, if the Application has been approved, the approval may be revoked and the Director may report such information to the District Attorney for criminal prosecution.
- F. Other Penalties. In addition to or in lieu of civil fines, the County may exercise remedies for Operator violations including the following:
1. Increased inspection frequency;
  2. Mandatory equipment upgrades;
  3. A requirement to conduct an audit of the systems or equipment involved in the violation(s);
  4. A requirement for increased reporting to the County;
  3. Written Order Suspending the Approval. As a result of either (i) emergency conditions, or (ii) three or more fines imposed for serious violations within 6 months, the Director may issue a written order to the Applicant (or the Applicant's owner, Operator, or agent) suspending the Special Review Approval. Upon receipt, the Applicant must cease all activities and operations immediately until the violation is remedied. The Applicant may appeal the order suspending approval to the Board of County Commissioners.
- G. 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, required permits, or other County approvals. Nothing in this section shall limit the remedies available to the County for a violation of any provision of Article 12.

**Commented [BHFS22]:** Request more time be given. Emphasis that it is for the County inspector's safety for an escort to be present on site.

**Commented [BHFS23]:** Potential for unreasonableness/necessity abuse.

**Commented [BHFS24]:** This regulation is extreme. It also does not appear to contemplate the scenario where the Director believes there is a threatened violation but there is no threat nor actual violation.

**Commented [BHFS25]:** Suspension is a dire consequence and more due process is required. COGA believes the same due process protections in as found in the State Administrative Procedure Act should apply to the County's suspension process. See § 24-4-104(3)-(6), C.R.S. (specifying when and how an agency may revoke, suspend, annul, limit, or modify a license, including a permit.)

## 2-1500 Fines and Penalties

- A. Fines for Violations. An Operator who violates any condition of approval imposed for the oil and gas facility or operation or any provision of Section 12-400, 12-500, 12-600, or 12-700 will be subject to a civil penalty assessed by the Director.
- B. Process.
1. Identification of Violation. If the Director has reasonable cause to believe that a violation has occurred, the Director will issue a Notice of Violation to the Operator. Each violation of an individual condition or Code provision will be considered a separate infraction. Each day that a violation remains will be considered a separate infraction.
    - a. Contents of Notice of Violation:
      - i. Provisions of this Article or conditions imposed on a permit that are alleged to be violated;
      - ii. Short and plain statement of the facts alleged to constitute each violation;
      - iii. A statement that the Operator will be subject to fines as specified in this section; and
      - iv. A demand that the violation be remedied.
  2. Response. The Operator will have the time specified by the Director in the notice to respond to the Notice of Violation, unless an extension is requested in writing and granted by the Director. The Response must address each violation, including the cause of the violation and any corrective actions taken, and identify

**Commented [BHFS26]:** COGA urges discretion. *De minimis* violations or misunderstandings between an Operator and the County should not automatically result in the assessment of a civil penalty. This also needs to clarify that Boulder cannot assess penalties for violations of COGCC regulations.

**Commented [BHFS27]:** Discretion should be built in.

**Commented [BHFS28]:** Operators must be given a reasonable time to respond.

any other relevant facts.

3. Assessment of Fine.

- a. Based on the Operator's response, if any is provided, and any other competent evidence, the Director will determine if a violation has occurred and, if so, the appropriate penalty to assess. Any fine imposed after consideration of the response will be measured with respect to the first date of discovery of the violation or the date the violation first occurred and continues until the violation has been remedied to the satisfaction of the Director.
- b. If the Operator disputes the Director's determination that a violation occurred or the amount of any fine assessed, an appeal as specified in Section 12-1500(D) must be made within 10 days of the determination. Any requirement to remedy the violation will not be stayed during the appeal period.

C. Penalty Calculation. The Director has discretion to assess a civil penalty between \$300 and \$15,000 per violation per day, depending on the nature and severity of the violation and Application of the additional factors listed in subsection (b) below.

1. To evaluate the severity of the violation, the Director will consider the following:
  - a. Degree of threatened or actual impact to public health, safety, welfare, the environment or wildlife;
  - b. Existence, size, and proximity of potentially impacted livestock, wildlife, fish, soil, crops, water, and all other environmental resources;
  - c. Degree of threatened or actual damage to agricultural lands, public lands, private property, freshwater sources, public drinking water, natural resources, environmental features, or wildlife;
  - d. The size of the leak, release, or spill;
  - e. The violation resulted in a significant waste of oil and gas resources;
  - f. Toxicity of leak or spill;
  - g. Violation led to death or serious injury; and
  - h. Duration of the violation.
2. In addition to considering the severity of the violation, the Director will consider the following:
  - a. Whether the same or similar violations have occurred at the location;
  - b. Whether other violations have occurred at the location in the previous 12 months;
  - c. The timeliness and adequacy of the Operator's corrective actions;
  - d. The degree the violation was outside of the violator's reasonable control and responsibility;
  - e. Whether the violator acted with gross negligence, or knowing and willful misconduct;
  - f. Whether the violator self-reported; and
  - g. Whether violator was cooperative with all agencies involved in working to mitigate the impacts of the violation.

D. Appeal Hearing Before the Board of County Commissioners. If the Applicant files a written appeal with the Board of County Commissioners of the Director's determination within 10 days of receipt of the determination that a violation occurred or the imposition of any fine or penalty or a written order suspending special use approval, the Board will schedule a hearing on the appeal, of which the Applicant will receive reasonable prior notice. The Board, based on the evidence in the record, may reverse or confirm the Director's determination whether a violation occurred. In addition, based on the evidence in the record, the Board may reverse, confirm, or adjust any remedy or penalty imposed by the Director. The Board, in its discretion, may also give the Applicant additional time to correct the violation(s), or may specify other means of correcting the violation(s) at the Applicant's expense. The Board's determination is subject to judicial review as specified in Section 12-1200.

**Commented [BHFS29]:** This appears to violate state statute. Section 30-15-402(1), C.R.S., provides in pertinent part; "(1) Any person who violates any county ordinance adopted pursuant to this part 4 commits a class 2 petty offense or, in the case of traffic offenses, commits a traffic infraction, and, upon conviction thereof, shall be punished by a fine of not more than one thousand dollars for each separate violation."

COGA further notes that under § 29-20-104, C.R.S., the County can only assess fines for "leaks, spills, and emissions." Of course, all fines must also be necessary and reasonable.

**Commented [BHFS30]:** Suggest more mitigation factors be added, following COGCC's 500 Series.

**Commented [BHFS31]:** Recommend more time be given.

**Commented [BHFS32]:** Operator must have an opportunity to introduce its evidence into the record.

## 12-1600 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 decommissioning of an oil and gas facility, including any single well or portion of pipeline.

**Act.** The Oil and Gas Conservation Act at Sections 34-60-101 et seq., C.R.S., as amended.

**Adequate Water Supply.** A water supply that will be sufficient for the proposed oil and gas operations, including consideration of reasonable conservation measures and water demand management measures.

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

Applicant. Person, corporation or other legal entity possessing the legal right to develop a mineral resource who has applied for a Special Review permit for an oil and gas operation.

Application. The Application filed by the Applicant for Special Review under current consideration.

Best Management Practices. Practices that are designed to prevent or reduce impacts caused by oil and gas facilities or 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.

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

Closed Loop Drilling Process or System. A system consisting of steel tanks for mud mixing and storage and the use of solids removal equipment by some combination of shale shakers, mud cleaners and centrifuges to separate drill cutting solids from the mud stream. The solids are placed in containment provided on the site.

A Closed Loop Drilling System does not include use of a Conventional Reserve Drilling Pit.

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

Comprehensive Plan. The Boulder County Comprehensive Plan, available at

<https://www.bouldercounty.org/property-and-land/land-use/planning/boulder-county-comprehensive-plan/>, Department. Boulder County Community Planning & Permitting Department.

Director. The Director of the Boulder County Community Planning & Permitting Department.

Dwelling. See Article 18-137.

Educational Facility. See Article 4-504(E).

Equipment. Machinery or structures located on an oil and gas location, including, but not limited to, wellheads, separators, dehydration units, compressors, heaters, meters, storage tanks, compressors, pumping units, internal combustion engines, and electric motors.

Flowline. Those segments of pipe transferring oil, gas, or condensate between a wellhead and processing equipment to the load point or point of delivery to a U.S. Department of Transportation Pipeline and Hazardous Materials Safety Administration or Colorado Public Utilities Commission regulated gathering line, or a segment of pipe transferring produced water between a wellhead and the point of disposal, discharge, or loading. In this Article, flowline includes lines within a well pad and those that are outside a well pad, and includes flowlines connecting to gas compressors or gas plants.

Geophysical Operation. Operations that involve the transmittal of seismic waves into and through the ground to model the geophysical properties of the Earth's crust.

Groundwater. Subsurface waters in a zone of saturation.

NO<sub>x</sub>. Nitrogen oxides. Ozone precursor pollutants.

Oil and Gas Facilities. The equipment and improvements used for the exploration, production, transportation, treatment, and/or storage of oil and gas and waste products, including: 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; flowlines and ancillary equipment including but not limited to drip stations, vent stations, pigging facilities, chemical injection stations and valve boxes; and temporary storage and construction staging yards in place for less than 6 months.

Oil and Gas Operations. Exploring for oil and gas, including conducting seismic operations and the drilling of test bores; siting, drilling, deepening, recompleting, reworking, or abandoning a well; producing operations related to any well, including installing flowlines; the generating, transporting, storing, treating, or disposing exploration and production wastes; the construction, operation, maintenance and repair of any oil and gas facility; and any constructing, site preparing, or reclaiming activities associated with such operations. With respect to any submittal or review requirements under this section, "oil and gas operations" will refer to the particular oil and gas operations for which the Applicant is seeking County approval.

Operator. Any person who exercises the right to control the conduct of oil and gas operations.

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.

Produced Water. Water produced from a well or wellbore, including treatment fluids.

Recreation (active or passive). Active recreation means outdoor activities that require equipment or physical exertion or both. Passive recreation means outdoor activities such as nature observation or photography that require a minimum of facilities or development.

Reduced Emissions Completion. A well completion following fracturing or refracturing where gas flowback that is otherwise vented is captured, cleaned, and routed to the gas flow line or collection system, re-injected into the

well or another well, used as an onsite fuel source, or used for other useful purpose that a purchased fuel or raw material would serve, with no direct release to the atmosphere.

TPY. Tons per year.

VOC. Volatile organic compounds.

Wastewater. Water used in oil and gas operations that is contaminated with chemicals, particulate, or other matter that makes it non-potable.

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 Source. Water source will mean water bodies that supply domestic, agricultural or municipal uses, water wells that are registered with Colorado Division of Water Resources, including household, domestic, livestock, irrigation, municipal/public and commercial wells, permitted or adjudicated springs, and monitoring wells other than monitoring wells that are drilled for the purpose of monitoring water quality changes that are not associated with oil and gas activities.

Well or Wellhead. 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.

Well Pad. Areas that are directly disturbed during the drilling and subsequent operation of, or affected by production facilities directly associated with, any oil well, or gas well.

**From:** [Katie Orton](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** Comment: 2500' Setback should be required in Article 12  
**Date:** Monday, November 09, 2020 10:59:03 AM

---

Dear Oil & Gas Commission,

While the County revises its regulations to Article 12 addressing oil and gas operations, I would like to urge you to include a minimum 2500' setback from occupied buildings, water sources, open space, and recreation areas.

The dangers of fracking include toxic emissions, contaminated air, water and soil which bring long-term health impacts, and seismic activity. These effects only become more severe the closer fracking sites are to humans and wildlife, so we have to push fracking as far away as possible.

There is no room for doubt. The CO Department of Public Health and Environment has studied impacts of fracking up to a distance of 2000 feet. At 2000 feet, they found negative health effects on humans and wildlife. No sensible person would choose to live at a distance from fracking that is proven to be unsafe. If I told you I could throw a rotten tomato ten feet, would you stand exactly ten feet away from me and my tomato? You would at least back up to fifteen just in case.

You have the proof -- so make the sensible decision to back up. We need a clear setback, no loopholes, at least 2500 feet away from fracking sites.

--

Katie Orton,  
Intern at 350 Colorado  
She/Her

**From:** [Jamie Jost](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Cc:** [Sanchez, Kimberly](#); [Burke, Kate A.](#); [Jason Oates](#); [Ashley Campbell](#)  
**Subject:** Docket DC-19-002: Crestone Peak Resources Operating, LLC - Comments to Planning Commission on Proposed Regulations  
**Date:** Monday, November 09, 2020 11:24:25 AM  
**Attachments:** [11-9-20 Crestone - Boulder County OG Regulation Comments\[1\].pdf](#)

---

Good morning,

Please see Crestone Peak Resources Operating, LLC's written comments to the Boulder County Planning Commission regarding Docket DC-19-002. Thank you.

Jamie

**Jamie L. Jost**  
Managing Shareholder

3511 Ringsby Court, Unit 103  
Denver, CO 80216  
Main 720-446-5620  
Mobile 720-362-0875

[jjost@jostenergylaw.com](mailto:jjost@jostenergylaw.com)



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November 9, 2020

**Via Email Only – oilgascomment@bouldercounty.org**

Boulder County Planning Commission  
2045 13<sup>th</sup> Street, Suite 200  
Boulder, Colorado 80302

*RE: Crestone Peak Resources Operating, LLC – Comments on Docket DC-19-0002*

Dear Planning Commission Members,

Crestone Peak Resources, LLC (“Crestone”) respectfully submits this letter to the Boulder County Planning Commission for consideration prior to the November 10, 2020 hearing on Docket DC-19-0002: Proposed Amendments to Oil and Gas Development Regulations (“Proposed Regulations”).

Crestone reviewed the Proposed Regulations and analyzed their short-term and long-term impacts on future oil and gas development in Boulder County from an operator perspective. While Crestone acknowledges the attempts made by Boulder County to amend their regulations under the land use authority of Senate Bill 19-181, we still have significant concerns about the Proposed Regulations. Crestone’s concerns are included in American Petroleum Institute’s (“API”) comments set forth in their written submissions regarding the Proposed Regulations.

Overall, Crestone asserts that certain of the Proposed Regulations extend beyond the land use authority provided to local governments in Senate Bill 19-181 and serve to prohibit oil and gas development in unincorporated areas of Boulder County, instead of “regulating the surface impacts of oil and gas operations in a reasonable manner” and minimizing adverse impacts “to the extent necessary and reasonable” while still allowing for oil and gas development. *See* C.R.S. § 29-20-104(1)(h).

Crestone respectfully requests that the Planning Commission take time to address the reasonable and practical concerns set forth by API.

Sincerely,

Jason Oates  
Crestone Peak Resources Operating, LLC

cc: Kim Sanchez, Boulder County Chief Planner – [ksanchez@bouldercounty.org](mailto:ksanchez@bouldercounty.org)  
Kate Burke, Boulder County Attorney – [kaburke@bouldercounty.org](mailto:kaburke@bouldercounty.org)  
Jamie Jost – Jost Energy Law, P.C. – [jjost@jostenergylaw.com](mailto:jjost@jostenergylaw.com)



**From:** [Donald Dulchinos](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Cc:** [dopod](#)  
**Subject:** Comment on Proposed Oil and Gas Regs  
**Date:** Monday, November 09, 2020 11:39:35 AM

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Thanks for the opportunity to comment on the proposed regulations.

I ask the Commissioners to change well pad setback from 2000 to 2500. There seems a lack of published evidence about the risks here - let's err on the side of caution.

I applaud the County's attention to air quality studies in new applications, but there is a lack of baseline data against which to measure new air quality impact. There is also a lack of air quality information from local monitors. The recent wildfires called attention to air quality applications (AirNow, PurpleAir) which help citizens track real-time information. The County should look at these and figure out how to make fracking site-specific air quality data available to local residents. I ride my bike down Rt 52 every week, past the currently proposed sites on county land, and having physically experienced lung impacts from the wildfires, I am concerned that less visible emissions from these oil and gas sites may have a direct negative impact on my health. I have a professional background in sensor technology and would be glad to assist in any investigation of air quality applications/sensors.

More generally, I would ask the Commissioners to extend the current moratorium on new fracking operations for at least another year. This would not only allow full assessment of air quality impacts, but would allow for a fuller discussion of why the County would allow any fracking at all on County land. This assessment would take into account the ongoing transformation of Colorado's electric generation mix, which is trending away from fossil fuels. I have direct professional knowledge of these trends in my work with the OpenADR Alliance, which manages technology for integrating distributed renewable resources into the grid. With solar and wind and storage technologies now cheaper than fossil fuels, reducing the emissions footprint of generation and also transportation (through electric vehicles), it makes no sense to support any further additions of oil or natural gas to that mix.

Thanks.

Don Dulchinos

4865 Dakota Blvd, Boulder

303 909 4598

**From:** [altho@everyactionadvocacy.com](mailto:altho@everyactionadvocacy.com) on behalf of [alex pieper](#)  
**To:** [Boulder County Board of Commissioners](#)  
**Subject:** Please enact a ban on fracking ASAP, as well as the strongest possible oil & gas regulations.  
**Date:** Monday, November 09, 2020 11:58:14 AM

---

Dear Board Chair Deb Gardner,

Dear Commissioners,

I write as a Boulder County resident deeply concerned about proposed fracking projects (140 wells) in our county and the resulting threats to air and water quality, public health, wildlife, and the climate. I urge you to enact a ban on fracking in Boulder County as soon as possible to protect our community from the well-documented threats to public health and safety from fracking, and to enact the strongest possible protective regulations as a backstop.

The proposed fracking projects are particularly troubling in the context of the Front Range's "serious" non-attainment status for ozone, and high concentrations of benzene and other VOCs, to which existing oil and gas operations are a significant contributor. Additionally, a recent report of the IPCC calls for a "rapid phase-out of CO2 emissions" largely over the next decade to avert catastrophic global temperature rise.

Despite the recent Longmont decision, a ban on fracking is consistent with the County's efforts to fight climate change, including the declaration of a climate emergency, and ongoing lawsuit against Suncor and Exxon for climate change-related damages. A fracking ban is both a reasonable and necessary action authorized for local governments by SB19-181. A ban is widely supported by Boulder County residents: 70% in recent polling, and the same fraction of voters in the County voted in favor of Proposition 112 in 2018.

I also urge you to enact the strongest possible Article 12 regulations on oil and gas operations as a backstop protection to any potential legal challenge to a ban. I recommend the following points for inclusion in Article 12, based on the updated draft released October 20, 2020:

-Implement mandatory 2500' minimum setbacks with no waivers: Revise Article 12 to extend the minimum setback of oil and gas operations to 2500' from any structure intended for human occupancy, and from open space, recreation areas and all water sources. This is modest considering that research has identified adverse effects on the cognitive performance of infants whose mothers lived within 8,500 feet of oil and gas wells and an increased risk of congenital heart defects among children born to women living near oil and gas operations in Colorado, with the risks increasing with the density of oil and gas activities within a 10-mile radius.

-Cumulative impacts: Article 12 should incorporate a structure for the County to consider the context of our already-degraded air quality and the need for dramatic reductions in greenhouse gas emissions to avert catastrophic consequences from climate change.

-Affirmatively protect public health, safety, and welfare, and the environment: Section 12-1000 states that "A proposal meets the standards if it will...either avoid adverse impacts to public health, safety, and welfare, the environment and wildlife resources or...sufficiently minimize, and mitigate unavoidable impact." Oil and gas operations must be required to avoid adverse impacts to public health, safety, and welfare, and the environment and wildlife resources entirely, and not simply minimize impacts.

-Implement as mandatory all of the discretionary measures that are listed in Section 12-1100. Article 12 should explicitly prohibit venting and flaring and require "tankless" operations, which reduce air emissions. A recent study concluded that pregnant women who lived in proximity to natural gas flaring had a 50% higher chance of giving birth early than those who did not, putting the level of risk on par with that caused by smoking.

However, regulations are no substitute for a permanent ban. We encourage you to direct County staff to begin developing language for a fracking ban in Boulder County. Thank you for your ongoing efforts to prioritize public health and the environment in Boulder County.

Sincerely,

Sincerely,  
alex pieper  
1406 Pine St Boulder, CO 80302-4845  
altho@gmx.com

**From:** [dana bove](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** Written comments for November 9th Oil and Gas Planning Commission meeting  
**Date:** Monday, November 09, 2020 12:27:37 PM  
**Attachments:** [BC O and G comments Front Range Nesting Bald Eagle Studies.pdf](#)

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**Comments submitted on Nov. 9th by Front Range Nesting Bald Eagle Studies**

**PDF of these comments are attached at bottom:**

### **Front Range Nesting Bald Eagle Studies**

#### **Response and Comments to Boulder County's Draft Oil and Gas Plan**

The new COGCC staff draft issued on 10/9/2020 for the 1200 Series rules continues to omit the majority of High Priority Habitats (HPH) recommended by CPW; and fails to define or protect biological resources.

Boulder County's Oil and Gas Draft plan, while stating it will adapt COGCC's new Oil and Gas rules as a starting level, needs to do better in its protections for wildlife, and certainly needs to acknowledge the definition of "Biological Resources" and establish protection thereof. SB19-181 legally entitles Boulder County to adopt more stringent rules and regulations to protect wildlife, biological resources, and human health and safety, as long as they are reasonable and necessary.

On behalf of Front Range Nesting Bald Eagle Studies (FRNBES), who has been an integral party in the COGCC's rulemaking process, we urge Boulder County to go much further in protections of wildlife and biological resources. Please consider the following recommendations:

#### **12-900 Application Submittal Requirements -- Wildlife and Natural Resources Issues**

The requirement to map wildlife and "natural resources" within 1 mile of a proposed facility is a positive first step in identifying potential impacts to important species and ecosystems in Boulder County (12-900.B.11 and 13).

#### **Comments:**

For wildlife, the species list for mapping should include all Species of Greatest Conservation Need (Tier 1 and Tier 2 species) in the Colorado SWAP.

The species list could also refer to the Boulder County Wildlife Species of Special Concern list - <https://assets.bouldercounty.org/wp-content/uploads/2017/03/bccp-designating-wildlife-species-of-special-concern-20131112.pdf>

Oil and gas applicants are also required to obtain an independent experts evaluation of potential impacts to wildlife and natural resources (12-900.D.5 and 6).

Comments:

More information and details are required on the depth of expertise of the experts and scope and nature of their reports.

Too much attention has been focused on permitting and environmental evaluation of the actual drilling sites and pads. Reports and actual field studies by these experts need to include evaluation and assessment of all reasonably foreseeable direct and indirect impacts from ALL phases of oil and gas development, or cradle to grave. Some of the most significant impacts to wildlife and natural resources by oil and gas development are from related activities that include: offsite flowline project that carry oil, gas, and produced water from well pad to hub; roads to well pads and pipelines; noise, light, and dust; and post-drilling activities that include shut-in of older vertical well in response to nearby multi-well horizontal drilling, well-closures, and even routine maintenance.

## **12-1000 Special Review Standards**

Comments:

Oil and gas development, with respect to wildlife and natural resources have had very few restrictions. Boulder County must protect wildlife and natural resources including rules that list actual avoidance or “no-go” areas that pertain to ALL phases for oil and gas development, from “cradle to grave”.

Boulder County’s oil and gas rules need to include wildlife buffers that include ALL of CPW’s 2019 High Priority Habitat Guidelines as a minimum standard. These buffers and seasonal closure need to apply to ALL phases of oil and gas development: well pads; pipelines; roads; lighting; noise, etc.

Boulder County must establish significant buffers around wetlands, and riparian areas. We suggest a minimum of 2,000 ft.

In 12-1000 Special Review Standards, there is weakening language that may allow for insufficient protections. Here, it is stated that “Oil and gas facilities and operations will sufficiently avoid, minimize,

and mitigate adverse impacts” to natural resources (12-1000.N, p. 12-22), with similar wording for wildlife ([12-1000.EE](#), p. 12-23). We are concerned that it will be difficult to determine and implement this standard, and that adverse impacts to Boulder County’s wildlife and natural resources may be allowed to occur.

Comment:

We recommend a stronger standard: Oil and gas facilities and operations will avoid adverse impacts to wildlife and natural resources and abide by stated CPW 2019 HPH buffers for listed species.

“Biological resources” need to be defined and protected in Boulder County, not omitted and excluded as they have been by the COGCC.

**From:** [Bonnie Sundance](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** Fracking  
**Date:** Monday, November 09, 2020 12:31:56 PM

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Dear Commissioners,

Fracking ---

I have been hugely concerned about Boulder County's overall toxic contributions to the air, water and soil. Fracking contributes toxicity to all 3.

Please consider making it near to impossible and financially implausible for any new fracking in Boulder County.

1. Require that all chemicals used be biodegradable and non-toxic to humans and the environment
2. At least require 2500' distance for wells from any human used environment or habitation.
3. Please educate citizens and all Bo Co students about the harms of fracking and encourage replacement of all appliances which use natural gas / fracking sourced energy.
4. **A full ban on fracking is both reasonable and necessary action authorized for local governments by SB19-181 -- please consider continuing the ban.**

Thanks for standing up to reduce climate change and its impacts.

Bonnie Sundance, Boulder County Resident of 30 years

--

Bonnie Sundance MLS  
Executive Director, Our Sacred Earth [www.Our-Sacred-Earth.org](http://www.Our-Sacred-Earth.org)  
Right Relationship Boulder, Schools Group, Facilitator

We live on the homeland of the Ute, Arapaho and Cheyenne, who are being welcomed home by Right Relationship Boulder and the City of Boulder into healing relationship with the land and people residing here.

May you connect with this process as well.

Also active in:

Eco Dharma Sangha Boulder, Steering Committee,

Envision Circle for our future

GreenFaith Boulder Circle

11th Hour Calling for Climate Action Core Group

Time Bank of Boulder, member

KGNU and Rocky Mountain Peace and Justice Center, Sustaining member

**From:** [randyr@everyactionadvocacy.com](mailto:randyr@everyactionadvocacy.com) on behalf of [Randy Rolen](#)  
**To:** [Boulder County Board of Commissioners](#)  
**Subject:** Please enact a ban on fracking ASAP, as well as the strongest possible oil & gas regulations.  
**Date:** Monday, November 09, 2020 12:55:41 PM

---

Dear Board Chair Deb Gardner,

Dear Commissioners,

I write as a Boulder County resident deeply concerned about proposed fracking projects (140 wells) in our county and the resulting threats to air and water quality, public health, wildlife, and the climate. I urge you to enact a ban on fracking in Boulder County as soon as possible to protect our community from the well-documented threats to public health and safety from fracking, and to enact the strongest possible protective regulations as a backstop.

The proposed fracking projects are particularly troubling in the context of the Front Range's "serious" non-attainment status for ozone, and high concentrations of benzene and other VOCs, to which existing oil and gas operations are a significant contributor. Additionally, a recent report of the IPCC calls for a "rapid phase-out of CO2 emissions" largely over the next decade to avert catastrophic global temperature rise.

Despite the recent Longmont decision, a ban on fracking is consistent with the County's efforts to fight climate change, including the declaration of a climate emergency, and ongoing lawsuit against Suncor and Exxon for climate change-related damages. A fracking ban is both a reasonable and necessary action authorized for local governments by SB19-181. A ban is widely supported by Boulder County residents: 70% in recent polling, and the same fraction of voters in the County voted in favor of Proposition 112 in 2018.

I also urge you to enact the strongest possible Article 12 regulations on oil and gas operations as a backstop protection to any potential legal challenge to a ban. I recommend the following points for inclusion in Article 12, based on the updated draft released October 20, 2020:

-Implement mandatory 2500' minimum setbacks with no waivers: Revise Article 12 to extend the minimum setback of oil and gas operations to 2500' from any structure intended for human occupancy, and from open space, recreation areas and all water sources. This is modest considering that research has identified adverse effects on the cognitive performance of infants whose mothers lived within 8,500 feet of oil and gas wells and an increased risk of congenital heart defects among children born to women living near oil and gas operations in Colorado, with the risks increasing with the density of oil and gas activities within a 10-mile radius.

-Cumulative impacts: Article 12 should incorporate a structure for the County to consider the context of our already-degraded air quality and the need for dramatic reductions in greenhouse gas emissions to avert catastrophic consequences from climate change.

-Affirmatively protect public health, safety, and welfare, and the environment: Section 12-1000 states that "A proposal meets the standards if it will...either avoid adverse impacts to public health, safety, and welfare, the environment and wildlife resources or...sufficiently minimize, and mitigate unavoidable impact." Oil and gas operations must be required to avoid adverse impacts to public health, safety, and welfare, and the environment and wildlife resources entirely, and not simply minimize impacts.

-Implement as mandatory all of the discretionary measures that are listed in Section 12-1100. Article 12 should explicitly prohibit venting and flaring and require "tankless" operations, which reduce air emissions. A recent study concluded that pregnant women who lived in proximity to natural gas flaring had a 50% higher chance of giving birth early than those who did not, putting the level of risk on par with that caused by smoking.

However, regulations are no substitute for a permanent ban. We encourage you to direct County staff to begin developing language for a fracking ban in Boulder County. Thank you for your ongoing efforts to prioritize public health and the environment in Boulder County.



Sincerely,

Sincerely,

Randy Rolen

814 Sunshine Canyon Dr Boulder, CO 80302-9727

randyr@indra.com

**From:** [dana bove](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Cc:** [Theo Kuhn](#); [georgia Anderson](#)  
**Subject:** FRNBES O and G draft plan Nov 9 planning commission--2 figures for Commissioners and staff  
**Date:** Monday, November 09, 2020 2:00:11 PM  
**Attachments:** [FRNBES Figure 1 and 2 for Comments.pdf](#)

---

Dear Boulder County,

Attached is a pdf file that has 2 reference figures that will accompany pooled 6 minute comment time by FRNBES.

Thank you and apologies for late send.

Dana Bove



Figure 1. Extraction offsite flowline project at Boulder Creek nest, November, 2018

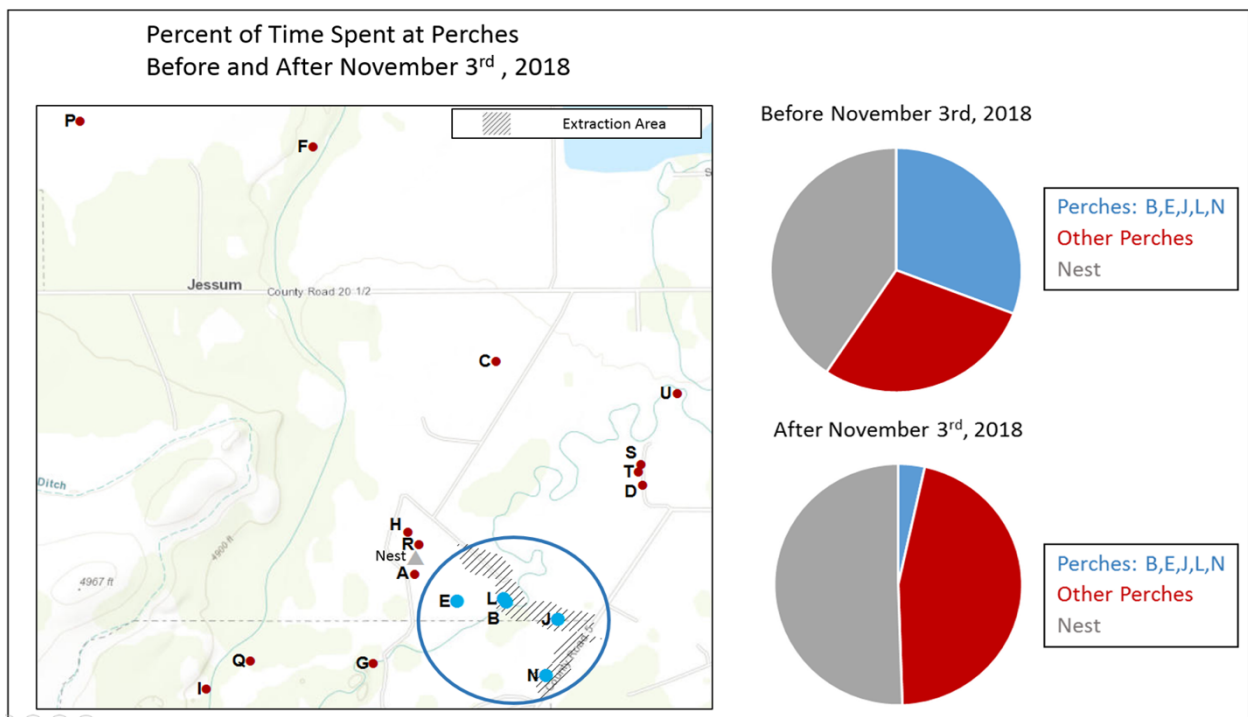


Figure 2. Nesting Bald eagle critical hunting perch map usage before and after Extraction pipeline project (FRNBES study, unpub data, 2020).

**From:** [Froggie](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** request  
**Date:** Monday, November 09, 2020 2:20:52 PM

---

Dear County Commissioners:

I have lived in Boulder County for most of my adult life. Last December, I moved from Erie to Longmont. One of the reasons we moved to Longmont was that Longmont banned fracking. Unfortunately, the ban was not upheld in court, but the laws have changed. Please institute a ban on fracking or, at the very least, a set-back of a minimum of 2500 feet from schools, homes and any other buildings people inhabit. Research and experience prove that fracking near people and human health do not co-exist well. Seismic activity in the Midwest occurs on a regular basis.

Please, do something that makes sense and protects all of us.

Sincerely,  
Sharon Kocina

**From:** [John Whitney](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** Ban fracking  
**Date:** Monday, November 09, 2020 4:00:49 PM

---

New regulations are being drafted when really it's this simple. Ban fracking. Regulations are useless and are really you just giving the oil and gas industry the right to destroy. So it's simple ban fracking we the people have shown that we want it banned so do what we ask that's your job

John Whitney

**From:** [bill@billiklerstudio.com](mailto:bill@billiklerstudio.com)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Cc:** [Boulder County Board of Commissioners](#)  
**Subject:** Fracking comments  
**Date:** Monday, November 09, 2020 4:09:59 PM

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Please consider these comments concerning fracking regulations:

I urge you to adopt the strictest safety and environmental regulations where fracking is involved in Boulder County.

- Minimum of 2500' setbacks to nearest housing, schools, churches

- Strict monitoring of air and water quality

- No 'flaring' of gas

- Reuse fracking water

- Stiff penalties for non-compliance

- No fracking on Boulder County Open Space! I've voted for every Open Space tax since the inception of County Open Space purchases and never intended for Open Space lands to be used for oil and gas extraction which is diametrically in opposition to the intended purposes of recreation and wildlife preservation.

Thanks for considering my views.

Bill Ikler 303-258-3858 (cell)  
PO Box 873 Nederland, CO 80466  
[bill@billiklerstudio.com](mailto:bill@billiklerstudio.com)

**From:** [runderwoodpfs@everyactionadvocacy.com](mailto:runderwoodpfs@everyactionadvocacy.com) on behalf of [William Underwood](#)  
**To:** [Boulder County Board of Commissioners](#)  
**Subject:** Please enact a ban on fracking ASAP, as well as the strongest possible oil & gas regulations.  
**Date:** Monday, November 09, 2020 5:11:31 PM

---

Dear Board Chair Deb Gardner,

Dear Commissioners,

I write as a Boulder County resident deeply concerned about proposed fracking projects (140 wells) in our county and the resulting threats to air and water quality, public health, wildlife, and the climate. I urge you to enact a ban on fracking in Boulder County as soon as possible to protect our community from the well-documented threats to public health and safety from fracking, and to enact the strongest possible protective regulations as a backstop.

The proposed fracking projects are particularly troubling in the context of the Front Range's "serious" non-attainment status for ozone, and high concentrations of benzene and other VOCs, to which existing oil and gas operations are a significant contributor. Additionally, a recent report of the IPCC calls for a "rapid phase-out of CO2 emissions" largely over the next decade to avert catastrophic global temperature rise.

Despite the recent Longmont decision, a ban on fracking is consistent with the County's efforts to fight climate change, including the declaration of a climate emergency, and ongoing lawsuit against Suncor and Exxon for climate change-related damages. A fracking ban is both a reasonable and necessary action authorized for local governments by SB19-181. A ban is widely supported by Boulder County residents: 70% in recent polling, and the same fraction of voters in the County voted in favor of Proposition 112 in 2018.

I also urge you to enact the strongest possible Article 12 regulations on oil and gas operations as a backstop protection to any potential legal challenge to a ban. I recommend the following points for inclusion in Article 12, based on the updated draft released October 20, 2020:

-Implement mandatory 2500' minimum setbacks with no waivers: Revise Article 12 to extend the minimum setback of oil and gas operations to 2500' from any structure intended for human occupancy, and from open space, recreation areas and all water sources. This is modest considering that research has identified adverse effects on the cognitive performance of infants whose mothers lived within 8,500 feet of oil and gas wells and an increased risk of congenital heart defects among children born to women living near oil and gas operations in Colorado, with the risks increasing with the density of oil and gas activities within a 10-mile radius.

-Cumulative impacts: Article 12 should incorporate a structure for the County to consider the context of our already-degraded air quality and the need for dramatic reductions in greenhouse gas emissions to avert catastrophic consequences from climate change.

-Affirmatively protect public health, safety, and welfare, and the environment: Section 12-1000 states that "A proposal meets the standards if it will...either avoid adverse impacts to public health, safety, and welfare, the environment and wildlife resources or...sufficiently minimize, and mitigate unavoidable impact." Oil and gas operations must be required to avoid adverse impacts to public health, safety, and welfare, and the environment and wildlife resources entirely, and not simply minimize impacts.

-Implement as mandatory all of the discretionary measures that are listed in Section 12-1100. Article 12 should explicitly prohibit venting and flaring and require "tankless" operations, which reduce air emissions. A recent study concluded that pregnant women who lived in proximity to natural gas flaring had a 50% higher chance of giving birth early than those who did not, putting the level of risk on par with that caused by smoking.

However, regulations are no substitute for a permanent ban. We encourage you to direct County staff to begin developing language for a fracking ban in Boulder County. Thank you for your ongoing efforts to prioritize public health and the environment in Boulder County.

Sincerely,

Sincerely,  
William Underwood  
1217 S Terry St Longmont, CO 80501-6815  
runderwoodpfs@hotmail.com



**From:** [STEWART GUTHRIE](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** A ban on new fracking in Boulder County  
**Date:** Monday, November 09, 2020 5:26:45 PM

---

Dear Boulder County Commissioners,

As a long-time resident of the county, the newly bereaved husband of an even longer-time resident, and the brother and brother in law of residents here since the early sixties, I urge that you support a ban on new fracking in the county.

My reasons are several, ranging from broad, even global, concerns to narrower personal ones. Globally, as you well know, we are now experiencing climate change via storm, fire and flood of unprecedented intensity and frequency. Locally, this year has brought the largest wildfires ever along the northern Front Range. Also locally, as again you well know, Boulder County and much of the Front Range have ozone and other industrial pollution at a federally "nonconforming" level. Fracking, of course, is implicated directly in all these novel conditions.

At the most personal level, I recently have lost my wife to a vascular condition--stroke--known to be exacerbated by the industrial toxins emitted by fracking. Moreover, I myself now have cardiovascular conditions similarly linked to these toxins. Earlier, my wife and I had discussed leaving the county because of them. Now, of course, it is too late for her. I, however, still am considering it, despite having friends and family here. I certainly would stay if fracking were banned.

The bottom line for your constituents, including me, is simple: short-term profits for a few (increasingly few, as wind and solar become cheaper than oil and gas) do not justify permanent damage to many.

Thank you,  
Stewart Guthrie  
7898 Devonshire Way  
Boulder 80301

**From:** [Gabrielle Katz Heatherwood](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** Article 12 Comments  
**Date:** Monday, November 09, 2020 5:47:22 PM  
**Attachments:** [Article 12 Comments Nov 2020.docx](#)

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Attached please find my comments related to wildlife and natural resources, addressing the October 20 version of Article 12.

Thank you,  
Gabrielle Katz

## 12-900 Application Submittal Requirements

Re: Wildlife and Natural Resources Issues

The current draft regulations require maps of wildlife and “natural resources” within 1 mile of the proposed facility, referring to the Boulder County Comprehensive Plan. This is an excellent first step in identifying potential impacts to important species and ecosystems in Boulder County (12-900.B.11 and 13).

Comments:

- For wildlife, the species list for mapping should include all Species of Greatest Conservation Need (Tier 1 and Tier 2 species) in the Colorado SWAP.
- The species list could also refer to the Boulder County Wildlife Species of Special Concern list -- <https://assets.bouldercounty.org/wp-content/uploads/2017/03/bccp-designating-wildlife-species-of-special-concern-20131112.pdf>

In addition, applicants are required to obtain an independent expert’s evaluation of potential impacts to wildlife and natural resources (12-900.D.5 and 6). This is also an essential step towards protecting Boulder County’s biodiversity.

Comments:

- More detail is needed as to the format and scope of these expert reports. Specifically, these reports should include site visits to assess resources on the ground at the site and within 1 mile of the proposed facility.
- These reports should include assessment of all reasonably foreseeable direct impacts (e.g., site surface disturbance), as well as indirect and cumulative impacts (e.g., habitat fragmentation from roads; habitat degradation from noise, light, dust, emissions; disturbance associated with maintenance, repairs, etc.). It is critical that noise and light be included in these reports, as both are known to be detrimental to wildlife. See peer-reviewed scientific references provided in my comments submitted in September 2019.

Other plans that are relevant to wildlife include the Noise Plan (12-900.D.10). This plan should include steps to avoid adverse impacts to wildlife, which are known to be significant.

Comments:

- The characterization of noise levels in the Baseline Report should be conducted in such a way as to remove or avoid airplane noise. We should NOT work from the premise that existing ambient noise represents an acceptable noise level in the Wattenberg area. In particular, there has been an outcry in eastern Boulder County lately regarding airplane noise. This area has been subjected to an increasing amount of airplane noise, coming from small planes utilizing the Boulder Municipal Airport, Rocky Mountain Metropolitan Airport, and the Longmont Airport.

## **12-1000 Special Review Standards**

There are very few areas deemed off limits to oil and gas operations, and most of these stipulations (such as 12-1000.G Floodplains and Floodways, and 12-1000.J Geologic and Natural Hazards) contain weakening language that allows development to occur if there is “no way” to avoid it.

Comments:

- This weakening language (i.e., allowance of exceptions), should be omitted.
- More actual avoidance areas (“no-go” areas) should be included in the rules:
  - OSMP and BCPOS open space areas
  - Riparian areas, wetlands
  - Wildlife buffers, following CPW’s 2019 High Priority Habitat Guidelines as a minimum standard.

In 12-1000 Special Review Standards, there is weakening language that may allow for insufficient protections. Here, it is stated that “Oil and gas facilities and operations will sufficiently avoid, minimize, and mitigate adverse impacts” to natural resources (12-1000.N, p. 12-22), with similar wording for wildlife (12-1000.EE, p. 12-23). We are concerned that it will be difficult to determine and implement this standard, and that adverse impacts to Boulder County’s wildlife and natural resources may be allowed to occur.

Comments:

- A stronger standard is needed: Oil and gas facilities and operations will avoid adverse impacts to wildlife and natural resources.

12-100.L Lighting. Here again, there is weakening language (i.e., “sufficiently avoid”) that should be removed.

Comments:

- A stronger standard is needed: Lighting should avoid impacts to wildlife.

## **12-1100 Conditions of Approval**

Wildlife and natural resources are not mentioned in this section. While many of the issues listed here (e.g., light, noise, vibration) are related to wildlife, the existing listed items may be insufficient to protect wildlife and natural resources, and other environmental or landscape features.

Comments:

- Stand-alone “wildlife” and “natural resources” sections should be added here, to allow for the imposition of specific conditions that might relate to these resources, should the need arise. For example, ongoing or annual monitoring could (should!) be required, to ensure no adverse impacts to wildlife and/or natural resources, if they exist near the site.

**From:** [Deborah McNamara](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** Sources citing during public comment supporting 2,500 ft. setbacks.  
**Date:** Monday, November 09, 2020 5:51:34 PM

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Hello and thank you for hearing our comments this evening.

Here is a [link to my statement calling for stronger setbacks](#), with research sources linked for your review. I've also listed the research sources cited below.

Thank you for your work and attention on this issue,  
Deborah McNamara

Research cited support 2,500 setbacks:

**-2016 article**

- McKenzie, L., et al., "Birth Outcomes and Maternal Residential Proximity to Natural Gas Development in Rural Colorado", April 2014, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3984231/>
- McKenzie, L., et al., "Congenital heart defects and intensity of oil and gas well site activities in early pregnancy," November 2019, <https://www.sciencedirect.com/science/article/pii/S0160412019315429?via%3Dihub>
- Hill, E., "Shale gas development and infant health: Evidence from Pennsylvania", September 2018, <https://www.sciencedirect.com/science/article/abs/pii/S0167629617304174>
- Wong, N. "Existing scientific literature on setback distances from oil and gas development sites", June 2017, [https://www.stand.la/uploads/5/3/9/0/53904099/2500\\_literature\\_review\\_report-final\\_jul13.pdf](https://www.stand.la/uploads/5/3/9/0/53904099/2500_literature_review_report-final_jul13.pdf)
- Lelieveld, J., et al. "Loss of Life Expectancy from Air Pollution Compared to Other Risk Factors," March 2020, <https://academic.oup.com/circovas/advance-article/doi/10.1093/cvr/cvaa025/5770885>
- Cui, Y., et al. "Air pollution and case fatality of SARS in the People's Republic of China: an ecologic study", 2003, <https://ehjournal.biomedcentral.com/articles/10.1186/1476-069X-2-15>
- Boulder Weekly. "As state Dems prepare legislation, data shows oil and gas emissions significantly affect Boulder County's air quality", 2/28/19, <https://www.boulderweekly.com/news/as-state-dems-prepare-legislation-data-shows-oil-and-gas-emissions-significantly-affect-boulder-countys-air-quality/>
- CIRES, "Oil and Gas Emissions a Major Contributor to Bad Ozone Days", 11/3/17, <https://cires.colorado.edu/news/oil-and-gas-emissions-major-contributor-bad-ozone-days>

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Deborah McNamara  
[350 Colorado](#), Campaign Director  
720.400.3739

Follow [350 Colorado on Facebook](#)

**From:** [flupe@flupe.com](mailto:flupe@flupe.com)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** Fw: Regarding extending the Fracking Moratorium in Boulder County...  
**Date:** Monday, November 09, 2020 6:51:50 PM

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Everything written from last February still applies. See below.

**Gabriel Perry**  
**Boulder, Colorado**  
[www.flupe.com](http://www.flupe.com)  
[soundcloud.com/gabrielperry](https://soundcloud.com/gabrielperry)  
[soundcloud.com/neptuniansunrise](https://soundcloud.com/neptuniansunrise)

----- Forwarded Message -----

**From:** flupe@flupe.com <yaflupe@yahoo.com>  
**To:** "oilgascomment@bouldercounty.org" <oilgascomment@bouldercounty.org>  
**Sent:** Tuesday, February 25, 2020, 11:15:17 AM MST  
**Subject:** Regarding extending the Fracking Moratorium in Boulder County...

Hello Commissioners,

Here we are again, kicking the can down the road and not taking any substantive measures to actually fight Climate Breakdown aka "Climate Change". As some of you may know, I've been very vocal about my concern with fracking in Colorado, and in Boulder County specifically.

My concerns have not diminished since 2012, since I first became aware of the issue. In fact, my concerns have only increased due to the plethora of science evidence and firsthand accounts of people literally living with fracking in their neighborhoods and backyards.

It's been almost 8 years since I joined the fight and what have we learned?

1. The Oil and Gas industry (the "industry") will stop at nothing in order to continue to develop oil/gas resources. They are only interested in short term profits and have a complete disregard for the actual real costs of this type of extraction.
2. All of the real costs and harm of extraction are being pushed onto the people and wildlife living here in Colorado, and great personal expense and well-being.
3. The industry doesn't care about the health or safety of its workers or residents living Colorado. They defend fracking within hundreds of feet from schools and hospitals.
4. The industry doesn't care about how extraction negatively impacts our environment: water, air and soil. In fact, they actively spread propaganda touting how the industry is vital to our economy, etc.
5. The industry only focuses on the benefits of fossil fuels and ignores all

- negative impacts, which are many and devastating.
6. Fracking is a leading cause (if not the leading cause) of methane emissions to our environment which is a major driving force currently fueling irreversible catastrophic climate breakdown.
  7. Radioactive waste is byproduct of fracking and that type of pollution and harm is not being mitigated properly. This radioactivity may even be in the natural gas being delivered to customers to heat their homes and cook their food.
  8. The waste water from fracking is not handled properly.
  9. Fracking destroys water, a vital resource needed for our survival.
  10. The Republicans in this state don't seem to care about any of the points listed above. Neither do the Democrats. The Dems have specifically stated that they can't stop the fracking industry and that their hands are tied, so to speak.
  11. Both parties are actively practicing science denial and have their head's in the sand thinking that we can leisurely transition our energy systems to cleaner and green technologies over the next 30+ years. They fail recognize or take seriously the actual threats we are facing.

How can this be possible?

With respect to whether or not the county should extend the fracking moratorium, I believe they should NOT extend the moratorium, but instead **issue a state of climate emergency and BAN FRACKING NOW** as well as all extractive processes. The county should implement immediate emergency measures to transition to green energy technologies. We have a lot of smart and highly educated people (and scientists) living here. We can solve this problem if we really want to and we need to solve it now, not 30 years from now.

That's where I stand. Time is running out and things are not looking good for us as a species. I'm deeply concerned by all of this. As a resident of Boulder County since 1995, I have seen the degradation of our air quality with my own eyes and the situation is only getting worse. Smog, haze and pollution are common now in Boulder, and it breaks my heart.

It didn't used to be like this. We need to change course.

Finally, I would attend the upcoming meeting and state my concerns publicly, but the meeting falls during regular working hours. I can't attend, because I need to work. So, I'm writing this email instead. I believe these meeting times are deliberately planned to be inconvenient for working people such that the Commissioners won't have to deal with actual people like me showing up with actual concerns and protesting this issue in front of a public audience on a public record.

Ban fracking now. Time is running out for all of us.

We should do better. We need to do better.

Sincerely,

**Gabriel Perry**  
**Boulder, Colorado**

***PS - When you have another meeting regarding this issue, simply re-read this email and change the dates/times accordingly. All of it will still apply.***



**From:** [Emily Yeh](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** comment on oil and gas regulations  
**Date:** Monday, November 09, 2020 7:32:54 PM

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Dear County Commissioners,

As a long-time resident of Boulder County, I am writing to express my very strong support for a ban on fracking in Boulder County. We need the strongest possible regulations possible on hydraulic fracturing, given well documented evidence of its negative impacts on air pollution, in particular ozone, and, just as urgently, on climate change. Climate change is no

longer a question of a sustainable or livable future - it is about what we face everyday right here and right now.

Sincerely,  
Emily

\* \* \* \*

Department of Geography  
University of Colorado Boulder  
Traditional Territories of the Arapaho, Cheyenne and Ute Nations

Vice President, American Association of Geographers

**From:** [bushu.kunga@everyactionadvocacy.com](mailto:bushu.kunga@everyactionadvocacy.com) on behalf of [Kunga Lama](#)  
**To:** [Boulder County Board of Commissioners](#)  
**Subject:** Please enact a ban on fracking ASAP, as well as the strongest possible oil & gas regulations.  
**Date:** Monday, November 09, 2020 7:33:37 PM

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Dear Board Chair Deb Gardner,

Dear County Commissioners,

I write as a Boulder County resident deeply concerned about proposed fracking projects (140 wells) in our county and the resulting threats to air and water quality, public health, wildlife, and the climate. I urge you to enact a ban on fracking in Boulder County as soon as possible to protect our community from the well-documented threats to public health and safety from fracking, and to enact the strongest possible protective regulations as a backstop.

The proposed fracking projects are particularly troubling in the context of the Front Range's "serious" non-attainment status for ozone, and high concentrations of benzene and other VOCs, to which existing oil and gas operations are a significant contributor. Additionally, a recent report of the IPCC calls for a "rapid phase-out of CO2 emissions" largely over the next decade to avert catastrophic global temperature rise.

Despite the recent Longmont decision, a ban on fracking is consistent with the County's efforts to fight climate change, including the declaration of a climate emergency, and ongoing lawsuit against Suncor and Exxon for climate change-related damages. A fracking ban is both a reasonable and necessary action authorized for local governments by SB19-181. A ban is widely supported by Boulder County residents: 70% in recent polling, and the same fraction of voters in the County voted in favor of Proposition 112 in 2018.

I also urge you to enact the strongest possible Article 12 regulations on oil and gas operations as a backstop protection to any potential legal challenge to a ban. I recommend the following points for inclusion in Article 12, based on the updated draft released October 20, 2020:

-Implement mandatory 2500' minimum setbacks with no waivers: Revise Article 12 to extend the minimum setback of oil and gas operations to 2500' from any structure intended for human occupancy, and from open space, recreation areas and all water sources. This is modest considering that research has identified adverse effects on the cognitive performance of infants whose mothers lived within 8,500 feet of oil and gas wells and an increased risk of congenital heart defects among children born to women living near oil and gas operations in Colorado, with the risks increasing with the density of oil and gas activities within a 10-mile radius.

-Cumulative impacts: Article 12 should incorporate a structure for the County to consider the context of our already-degraded air quality and the need for dramatic reductions in greenhouse gas emissions to avert catastrophic consequences from climate change.

-Affirmatively protect public health, safety, and welfare, and the environment: Section 12-1000 states that "A proposal meets the standards if it will...either avoid adverse impacts to public health, safety, and welfare, the environment and wildlife resources or...sufficiently minimize, and mitigate unavoidable impact." Oil and gas operations must be required to avoid adverse impacts to public health, safety, and welfare, and the environment and wildlife resources entirely, and not simply minimize impacts.

-Implement as mandatory all of the discretionary measures that are listed in Section 12-1100. Article 12 should explicitly prohibit venting and flaring and require "tankless" operations, which reduce air emissions. A recent study concluded that pregnant women who lived in proximity to natural gas flaring had a 50% higher chance of giving birth early than those who did not, putting the level of risk on par with that caused by smoking.

However, regulations are no substitute for a permanent ban. We encourage you to direct County staff to begin developing language for a fracking ban in Boulder County. Thank you for your ongoing efforts to prioritize public health and the environment in Boulder County.

Sincerely,

Sincerely,

Kunga Lama

1115 Berea Dr Boulder, CO 80305-6637

bushu.kunga@gmail.com

**From:** [Stauch, Mercer](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** One Youth Voice Against Fracking  
**Date:** Monday, November 09, 2020 10:38:36 PM

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To whom it may concern,

My name is Mercer Stauch, and I'm a junior at Niwot High School. The outdoors are my safe space. I run cross country on Niwot and Boulder's trails, I ski Colorado's mountains in the winter, and I hike them in the summer. I grew up fishing in Steamboat, and swimming in McIntosh Lake in Longmont. Even the idea that any of those places might be threatened is overwhelmingly alarming to me, and should be even more overwhelming to those in charge, who permit that risk on their watch.

The Crestone CDP is that risk. It's 3 miles from my house. It's 3 miles from my school, and even closer to some of my team's favorite trails.

Additionally, we're in a global pandemic, and the outdoors are a place where we can escape our desk chairs and take a safe break. For countless of my friends and family, it's been a lifesaver to have such an amazing environment in our neighborhoods. When the Calwood fire's smoke threatened our air quality, we got a four-day taste of what polluted air would be like to live in, especially during a quarantine. It was not doable. The Crestone CDP could alter the reality of too many people in ways I don't care to imagine. It's not worth any amount of profit to go through with this.

I've heard the arguments for this project, and the arguments used to quell my worries. One that stands out is the claim that science hasn't proven fracking is a health hazard. First of all, it is. My best friend's predisposition toward diabetes was triggered by fracking near his school. Second of all, ANY INKLING OF A POSSIBILITY that a project like this could harm so many should be enough to nix it altogether.

I'm speaking for myself and everyone I care about. Thank you for your consideration.

Mercer Stauch  
11th Grade, Niwot High School

**From:** [judith.ansara@everyactionadvocacy.com](mailto:judith.ansara@everyactionadvocacy.com) on behalf of [Judith Ansara](#)  
**To:** [Boulder County Board of Commissioners](#)  
**Subject:** Please enact a ban on fracking ASAP, as well as the strongest possible oil & gas regulations.  
**Date:** Monday, November 09, 2020 11:09:50 PM

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Dear Board Chair Deb Gardner,

Dear Commissioners,

I write as a Boulder County resident deeply concerned about proposed fracking projects (140 wells) in our county and the resulting threats to air and water quality, public health, wildlife, and the climate. I urge you to enact a ban on fracking in Boulder County as soon as possible to protect our community from the well-documented threats to public health and safety from fracking, and to enact the strongest possible protective regulations as a backstop.

The proposed fracking projects are particularly troubling in the context of the Front Range's "serious" non-attainment status for ozone, and high concentrations of benzene and other VOCs, to which existing oil and gas operations are a significant contributor. Additionally, a recent report of the IPCC calls for a "rapid phase-out of CO2 emissions" largely over the next decade to avert catastrophic global temperature rise.

Despite the recent Longmont decision, a ban on fracking is consistent with the County's efforts to fight climate change, including the declaration of a climate emergency, and ongoing lawsuit against Suncor and Exxon for climate change-related damages. A fracking ban is both a reasonable and necessary action authorized for local governments by SB19-181. A ban is widely supported by Boulder County residents: 70% in recent polling, and the same fraction of voters in the County voted in favor of Proposition 112 in 2018.

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However, regulations are no substitute for a permanent ban. We encourage you to direct County staff to begin developing language for a fracking ban in Boulder County. Thank you for your ongoing efforts to prioritize public health and the environment in Boulder County.

Sincerely,

Sincerely,

Judith Ansara

895 Rain Lilly Ln Boulder, CO 80304-0790

judith.ansara@gmail.com

**From:** [Maya Beauvineau](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** Oil and Gas Regulations Statement  
**Date:** Tuesday, November 10, 2020 10:58:10 AM

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Hello,

My name is Maya Beauvineau, I'm a Senior at Niwot High School, and I live at 984 Pine Glade Rd. Nederland, CO.

My peers and I are threatened by Crestone Peak Resources and their proposed plan to develop 140 new fracking wells in what would be the State's largest fracking site, only 3 miles from our school. The prospect of this site terrifies me, as it would jeopardize the health of the Niwot community and would exacerbate the climate crisis at a time when Colorado is already suffocating in the smoke of climate change. With my future and the future of Colorado on the line, I refuse to silently hope that the site will not be approved.

As an intern with 350 Colorado, I have reviewed the proposed regulations on oil and gas extraction. As stated by the county, "[the] objective with the amended oil and gas regulations is to protect public health, safety, and welfare, and the environment and wildlife to the maximum extent permitted by law." *To the maximum extent*. To me, this means implementing regulations that, if not in name, in effect, thwart the development of all oil and gas extraction sites in Boulder County.

I appreciate Boulder County's steps thus far in drafting regulations, especially as they do not include waivers for extraction companies. However, there is undoubtedly work to be done to make these regulations protect people and the environment to the maximum extent.

First and foremost, the term "climate change" is mentioned a total of ONE time within the proposed regulations. This year, CO has faced three of the largest wildfires in recorded state history, and the CalWood fire was the largest fire ever recorded in Boulder County history. I dare conclude this is not a coincidence. We are in the midst of a climate crisis, and it is time we start acting like it. Oil and gas extraction and combustion is the leading driver of climate change. It is imperative that we stop it immediately, starting where we currently have the opportunity: in Boulder County.

Next, the issue of setbacks. Setbacks are critical in prohibiting the establishment of oil and gas extraction sites. If Boulder County truly plans to protect people and the environment to the maximum extent possible, the setbacks simply must be larger. Currently, the COGCC, at the state level, is looking at implementing 2,000 ft setbacks. Boulder must be a leader, not a follower, in the regulation process, if we are to progress toward a fossil-free future. Based on a review of existing scientific literature, Wong (2017) concluded that, "a 2,500-foot setback recommendation is on the lower end of the range of distances where research has

determined harmful health and quality of life impacts of toxic emissions and exposures.” Thus, I demand not only that Boulder increase the setback distance to 2,500ft AT A MINIMUM, but also that open space be included, in addition to any structure intended for human occupancy. Remember, the protection of wildlife is included within the county’s mission statement, in addition to that of humans and the environment.

Though, my peers and I speak out to protect our immediate community, our motivation in demanding an end to oil and gas extraction is far more deeply rooted. We demand an end to all fracking, because our future and the future of our planet relies on it.

Thank you.

Wong, N. “Existing scientific literature on setback distances from oil and gas development sites”, June 2017, [https://www.stand.la/uploads/5/3/9/0/53904099/2500\\_literature\\_review\\_report-final\\_jul13.pdf](https://www.stand.la/uploads/5/3/9/0/53904099/2500_literature_review_report-final_jul13.pdf)



**From:** [Bob Hopper](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** Fracking regulations  
**Date:** Tuesday, November 10, 2020 11:20:44 AM

---

To the Planning Commission and the Boulder County Commissioners:

As evidenced by the extensive fires all summer throughout Colorado, California, and the Northwest as well as the extensive hurricanes and floods seen this year, climate change/crisis/catastrophe is upon us. Fossil fuels and fossil fuel operations are among the main contributors to climate change. I urge the Planning Commission and the County Commission to institute the most restrictive regulations possible (e.g., 2500-foot setbacks), an extended moratorium on all drilling operations, and ultimately a ban on such operations. An immediate ban on fracking Boulder County Open Space is imperative. Public health and safety (i.e., people), wildlife, and the environment must be protected. Thank you.

Robert Hopper, Ph.D. (psychologist and 42 year resident of Boulder)

550 Ithaca Drive

Boulder 80305

**From:** [Dr. Tom Groover](#)  
**To:** ["Eric Tussey"; Boulder County Oil and Gas Comment](#)  
**Subject:** RE: Do Not Regulate Fracking - Protect our communities by extending the Moratorium  
**Date:** Tuesday, November 10, 2020 11:28:09 AM

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Good job Eric.  
Tom

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**From:** ebcu-new-core-group@googlegroups.com <ebcu-new-core-group@googlegroups.com> **On Behalf Of** Eric Tussey  
**Sent:** Monday, November 09, 2020 9:48 AM  
**To:** Boulder County Oil and Gas Comment <oilgascomment@bouldercounty.org>  
**Subject:** Do Not Regulate Fracking - Protect our communities by extending the Moratorium

My name is Eric Tussey. I have lived in Boulder County since 1989. Back then the Denver Boulder area had dealt with our 1970's ozone situation from car traffic. Now we see ozone and breathe it daily from all the fracking operations in Weld county. I believe we now have 40,000 to 50,000 oil and gas wells in Weld County. Isn't that enough? Human caused climate change from burning fossil fuel is wreaking havoc on people and the planet's ecosystems.

We need to stop oil and gas drilling in Boulder County permanently. Fracking Regulation does not stop the poisoning. It does not keep methane in the ground. Regulation is simply legalizing the process so corporations can make money. Money will not fix a polluted aquifer. Oil and gas profits do not pay for cancer and health issues like asthma and severe migraines that are a result of thier operations, Regulations don't allocate advance funding to take care of leaks, explosions, or cap off abandoned wells. Even a capped well will fail and leak over time. Regulations do not protect us. Regulations do not control radiation from wells as a recent study from Harvard points out. If you live within 12 miles of a fracking well radiation is 40% higher than the background radiation. Fracking breaks up buried uranium and releases radiation. See link

[https://www.popularmechanics.com/science/environment/a34480446/fracking-airborne-radioactivity/?fbclid=IwAR37UuxdibRyV7ag\\_4\\_CcCybzL45BSkASlPolgOuu7iJ3e\\_wnW1SHS58C1w](https://www.popularmechanics.com/science/environment/a34480446/fracking-airborne-radioactivity/?fbclid=IwAR37UuxdibRyV7ag_4_CcCybzL45BSkASlPolgOuu7iJ3e_wnW1SHS58C1w)

What are you doing to address the public health aspect of fracking? A permanent moratorium is a start.

There is no rational reason to allow the Oil and Gas industry to drill or frack more wells in Colorado....

Oh, wait... there is the .... *Profit at everyone else's expense for non accountable corporation's "reason"*. Antiquated laws benefit the fracking companies that come and go out of business regularly to avoid liability for the wells that stop producing oil - or the toxic

pollution that they don't want to pay to clean up. The banks lending them money profit handsomely as well. Banks don't have to worry about destroyed aquifers. Some investors profit - they do not pay for the toxic pollution that they wreak on the public's air and water. None of them pays for rising sea levels or the climate refugees. Taxpayers will pay. We all pay for the millions of gallons of fresh water that each fracking well uses. Do we really need to expand the Gross Reservoir so Oil and Gas can frack our communities?

We all know that there is a human caused climate crisis and it is because of fossil fuel consumption. Right now there is a glut of Oil and Gas on the market. Look at fuel prices. Look at fracking companies going out of business. Laws are meant to keep up with the times. A set of laws drafted in the 18th or 19th centuries to develop our "inexhaustible resources" is not relevant today. People that bought mineral rights years ago made an investment that may not pay off as they had hoped. Just like any investment - timing is everything. Owner of mineral rights investments should have "exercised" them decades ago before science pointed out with irrefutable facts that fossil fuels are causing an irreversible havoc on our atmosphere. People lose money every day in the stock market - owning mineral rights is a similar gamble. Lafayette is a Home Rule city. It is time to make the moratorium permanent and pass Community Rights laws that protect us from drilling.

We will not allow Fracking. The government is granted power by the people. When the government does not act in a way that supports the people's wishes - it is time for a new government. Lafayette citizens have repeatedly supported a permanent ban on fracking. Make the moratorium permanent.

Take advantage of the services that CELDF - the Community Environmental Legal Defense Fund has offered and fight against all fracking. Be the change we ask for. Make the moratorium permanent and protect your community and planet. We will support you if you act in our best interests. Enabling Oil and Gas companies to poison us is not in the public interest.

Thank You.

Eric Tussey  
5075 51st Street Boulder CO 80301

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**From:** [Paula Kelly](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** New Regs  
**Date:** Tuesday, November 10, 2020 2:16:05 PM

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I would like to reiterate and echo the sentiments of the speakers open comment from 11/9/2020.

I would like to see an EXTENSION OF THE MORATORIUM until the COGCC is finished with their updates.

1) we need a minimum setback of 2,500 feet, with no wavers, but that is sadly not far enough to keep the public safe.

2) we need to protect open space and wildlife at any cost.

3) the financial stability of these extraction companies is in serious question. Bankruptcy is business as usual for these companies now, only to open the next day with another name in order to get out of their responsibilities. This is a big concern. This leads me to other questions.

How and who is going to reimburse home owners who are impacted by a fire, explosion or leaks?

Who is going to pay medical expenses for those who are impacted by VOC's and other carcinogenic chemicals being released daily from these well pads?

Who is going to reimburse people who, due to asthma, cancer and neurological problems, among the short list of medical issues caused by chemical release, can no longer work?

How are people who are evacuated due to emergencies going to shelter until clean up is completed? Who will cover those expenses?

And finally, who decides what is reasonable and necessary?

Language is vague in many parts of these regulations and leaves too much open to debate and legal manipulation from the oil industry.

The students who spoke from Niwot High were extraordinary. It is their future you hold in your hands with the decisions you make today. The only protection from the climate crises we face world wide is to BAN FRACKING.

When the oil companies bully and threaten, we need to stand up and fight! We need to be the change and set the example for the state of Colorado. I understand you see these regulations as a back up, but in reality it is only a doorway to allow in more fracking. We need to be smarter and stronger than that.

Paula Kelly

Lafayette, CO 80026

**From:** [zascamar@everyactionadvocacy.com](mailto:zascamar@everyactionadvocacy.com) on behalf of [Sally Blaser](#)  
**To:** [Boulder County Board of Commissioners](#)  
**Subject:** Please enact a ban on fracking ASAP, as well as the strongest possible oil & gas regulations.  
**Date:** Tuesday, November 10, 2020 2:19:32 PM

---

Dear Board Chair Deb Gardner,

Dear Commissioners,

I write as a Boulder County resident deeply concerned about proposed fracking projects (140 wells) in our county and the resulting threats to air and water quality, public health, wildlife, and the climate. I urge you to enact a ban on fracking in Boulder County as soon as possible to protect our community from the well-documented threats to public health and safety from fracking, and to enact the strongest possible protective regulations as a backstop.

The proposed fracking projects are particularly troubling in the context of the Front Range's "serious" non-attainment status for ozone, and high concentrations of benzene and other VOCs, to which existing oil and gas operations are a significant contributor. Additionally, a recent report of the IPCC calls for a "rapid phase-out of CO2 emissions" largely over the next decade to avert catastrophic global temperature rise.

Despite the recent Longmont decision, a ban on fracking is consistent with the County's efforts to fight climate change, including the declaration of a climate emergency, and ongoing lawsuit against Suncor and Exxon for climate change-related damages. A fracking ban is both a reasonable and necessary action authorized for local governments by SB19-181. A ban is widely supported by Boulder County residents: 70% in recent polling, and the same fraction of voters in the County voted in favor of Proposition 112 in 2018.

I also urge you to enact the strongest possible Article 12 regulations on oil and gas operations as a backstop protection to any potential legal challenge to a ban. I recommend the following points for inclusion in Article 12, based on the updated draft released October 20, 2020:

-Implement mandatory 2500' minimum setbacks with no waivers: Revise Article 12 to extend the minimum setback of oil and gas operations to 2500' from any structure intended for human occupancy, and from open space, recreation areas and all water sources. This is modest considering that research has identified adverse effects on the cognitive performance of infants whose mothers lived within 8,500 feet of oil and gas wells and an increased risk of congenital heart defects among children born to women living near oil and gas operations in Colorado, with the risks increasing with the density of oil and gas activities within a 10-mile radius.

-Cumulative impacts: Article 12 should incorporate a structure for the County to consider the context of our already-degraded air quality and the need for dramatic reductions in greenhouse gas emissions to avert catastrophic consequences from climate change.

-Affirmatively protect public health, safety, and welfare, and the environment: Section 12-1000 states that "A proposal meets the standards if it will...either avoid adverse impacts to public health, safety, and welfare, the environment and wildlife resources or...sufficiently minimize, and mitigate unavoidable impact." Oil and gas operations must be required to avoid adverse impacts to public health, safety, and welfare, and the environment and wildlife resources entirely, and not simply minimize impacts.

-Implement as mandatory all of the discretionary measures that are listed in Section 12-1100. Article 12 should explicitly prohibit venting and flaring and require "tankless" operations, which reduce air emissions. A recent study concluded that pregnant women who lived in proximity to natural gas flaring had a 50% higher chance of giving birth early than those who did not, putting the level of risk on par with that caused by smoking.

However, regulations are no substitute for a permanent ban. We encourage you to direct County staff to begin developing language for a fracking ban in Boulder County. Thank you for your ongoing efforts to prioritize public health and the environment in Boulder County.

Sincerely,

Sincerely,  
Sally Blaser  
1515 Sidon Cir Lafayette, CO 80026-1325  
zascamar@yahoo.com

**From:** [Eric Tussey](#)  
**To:** [Hackett, Richard](#); [Boulder County Board of Commissioners](#); [Boulder County Oil and Gas Comment](#); [#LandUsePlanner](#)  
**Subject:** Oil and Gas Regulations Public Comment Period Notification Issue - extension request for Public Comments  
**Date:** Tuesday, November 10, 2020 2:43:57 PM

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Hi Richard, and Boulder County Commissioners

I wanted to respectfully request that the Public Comment Period on the Regulation review be extended for at least another 2 weeks to give people an adequate notice and opportunity to provide feedback on the Revisions to the Boulder County Oil and Gas Regulations. As a "fairly informed" / very concerned citizen I was unable to find the meeting posted on the Open Meetings Portal yesterday morning. It was not actually posted there until about 11 am after I had asked where to find it.

Based on the lackluster attendance by members of the public last night it appears that NOT having the meeting posted on the Boulder County Open Meeting Portal prior to the day of the actual meeting has not given the people adequate chance for representation. Participation was so low that we did not even take the normal "break" in comments at 6pm.

We want to have our voices heard - most of which seemed to desire an outright ban on fracking - not a modification to Regulation. The longer we push this process down the road the better, The longer we do not allow more wells the longer our carbon footprint in Boulder County remains close to its current level.

We also do not feel that it is appropriate for the outgoing County Commissioners to be voting on these critical Regulations - effectively allowing fracking in Boulder County - before they leave their posts. At this point the process should wait until the new Commissioners are sworn in. They have the duty - and they will be here to take responsibility for their actions. Elise Jones and Deb Gardner cannot vote something like this through and simply exit.

Allowing Unconventional Oil and Gas Development - now euphemistically known as fracking - is something that should not occur in Boulder County during our period of declared "Climate Emergency".

COGCC is still refining their regulations per SB 181. How can you develop and pass Regulations before the state process has reached its conclusion? We need additional time to adapt our Regulations to their final rules and regulations.

The city of Lafayette extended their moratorium another 6 months for this exact reason. Their legal counsel recommended waiting until the COGCC rules were actually finalized so that they could make sure to properly address the actual rules and regulations. Doing so in advance leaves us at a disadvantage.

We need 4 things - not necessarily in this order

- 1 Additional Public comments - with adequate notice on websites - and posted legal public notices
- 2 Final Regulations drafted AFTER the COGCC is finished with SB181 regulations and rulemaking
- 3 Newly elected County Commissioners to oversee this process
- 4 Extend the moratorium until Boulder's declared Climate Emergency is over.

This process needs to be done properly or the process has no credibility and decisions will not be accepted by the public. There are all kinds of reasons to do this right. There is little justification to push it through the way that it is currently playing out.

I appreciate your help in creating a fair pathway for legislation and regulation in our County.

Cordially,

Eric Tussey  
5075 51st Street Boulder CO 80301

---

**From:** Eric Tussey <[eric@tussey.com](mailto:eric@tussey.com)>  
**Sent:** Monday, November 9, 2020 3:02 PM  
**To:** Hackett, Richard <[rhackett@bouldercounty.org](mailto:rhackett@bouldercounty.org)>  
**Cc:** Boulder County Board of Commissioners <[commissioners@bouldercounty.org](mailto:commissioners@bouldercounty.org)>; Amanda J <[bocoenvironment@gmail.com](mailto:bocoenvironment@gmail.com)>  
**Subject:** Re: Do not Regulate Fracking - protect our communities and extend the Moratorium

Hi Richard,

I appreciate the effort in posting today's Oil and Gas Planning meeting on the website this morning. However - given the extreme importance of this meeting updating the calendar the morning of the hearing does not appear to give adequate notice to the public. I am sure there are parameters for public notices which require more than having it posted for 4 or 5 hours before the meeting occurs.

This meeting has been on the schedule for weeks and it should have been on the public calendar for an equivalent period of time. I am also concerned that the agenda for the Boulder County Commissioners meeting (for this week) is not even posted yet.



These items are substantial in nature and although we are all working as well as we can with COVID 19 this is not really acceptable. We respectfully request another additional meeting for public comment - with several weeks notice to inform the public about the process. Permitting and Regulating Oil and Gas Hydraulic Fracturing in our community is a serious health threat to people (and our ecosystem).

Side note - after finally getting a copy of the agenda for the meeting today - I see nothing in the Regulations addressing released radiation when buried uranium is fractured.

[https://www.popularmechanics.com/science/environment/a34480446/fracking-airborne-radioactivity/?fbclid=IwAR37UuxdibRyV7ag\\_4\\_CcCybzL45BSkASlPolgOuu7iJ3e\\_wnW1SHS58C1w](https://www.popularmechanics.com/science/environment/a34480446/fracking-airborne-radioactivity/?fbclid=IwAR37UuxdibRyV7ag_4_CcCybzL45BSkASlPolgOuu7iJ3e_wnW1SHS58C1w)



Cordially,

Eric Tussey  
5075 51st street Boulder CO 80301

---

**From:** Hackett, Richard <rhackett@bouldercounty.org>  
**Sent:** Monday, November 9, 2020 11:46 AM  
**To:** Eric Tussey <eric@tussey.com>  
**Subject:** RE: Do not Regulate Fracking - protect our communities and extend the Moratorium


Hi Eric,

In addition to the information Kim provided, the November 9 and 10 Planning Commission meetings are now updated on the [Boulder County Open Meeting Portal](#), under the Planning Commission Meeting group (see screenshot).

These meetings are also listed on the [county event calendar](#):

- <https://www.bouldercounty.org/events/planning-commission-virtual-public-hearing-proposed-oil-gas-regulations-docket-dc-19-0002-amendments-to-article-12-of-the-land-use-code-20201109/>
- <https://www.bouldercounty.org/events/planning-commission-virtual-public-hearing-proposed-oil-gas-regulations-docket-dc-19-0002-amendments-to-article-12-of-the-land-use-code-20201110/>

You may also be interested in signing-up for oil and gas information and news (via email or SMS) from Boulder County: <https://boco.org/OilGasNews>



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### Planning Commission

#### Upcoming Meetings

[Full Calendar](#)
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##### November, 2020

Nov 9, 2020 4:00 PM	Public Hearing - Commissioners' Hearing Room, 3rd Floor	<a href="#">Agenda</a>   <a href="#">Agenda Packet</a>
Nov 10, 2020 4:00 PM	Regular Meeting - Commissioners' Hearing Room, 3rd Floor	<a href="#">Agenda</a>   <a href="#">Agenda Packet</a>
Nov 18, 2020 1:30 PM	Regular Meeting - Commissioners' Hearing Room, 3rd Floor	<a href="#">Agenda</a>   <a href="#">Agenda Packet</a>

[See more . . .](#)

#### Past Meetings

[Full Calendar](#)
[RSS](#)

##### October, 2020

Oct 21, 2020 1:30 PM	Regular Meeting - Commissioners' Hearing Room, 3rd Floor	<a href="#">Agenda</a>   <a href="#">Agenda Packet</a>   <a href="#">Summary</a>   <a href="#">Minutes</a>
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##### September, 2020

Sep 16, 2020 2:30 PM	Regular Meeting - Commissioners' Hearing Room, 3rd Floor	<a href="#">Agenda</a>   <a href="#">Agenda Packet</a>   <a href="#">Summary</a>   <a href="#">Minutes</a>
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##### August, 2020

Aug 19, 2020 1:30 PM	Regular Meeting - Commissioners' Hearing Room, 3rd Floor	<a href="#">Agenda</a>   <a href="#">Agenda Packet</a>   <a href="#">Summary</a>   <a href="#">Minutes</a>   <a href="#">Video</a>
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##### July, 2020

Jul 15, 2020 1:30 PM	Regular Meeting - Commissioners' Hearing Room, 3rd Floor	<a href="#">Agenda</a>   <a href="#">Agenda Packet</a>   <a href="#">Summary</a>   <a href="#">Minutes</a>   <a href="#">Video</a>
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[See more . . .](#)

**Richard Hackett | Communications Specialist**  
Boulder County Community Planning & Permitting  
2045 13th St., Boulder, CO 80302  
Mailing Address: P.O. Box 471, Boulder, CO 80306  
303-441-3930  
[www.BoulderCounty.org](http://www.BoulderCounty.org)

**From:** Sanchez, Kimberly <[ksanchez@bouldercounty.org](mailto:ksanchez@bouldercounty.org)>  
**Sent:** Monday, November 09, 2020 10:45 AM  
**To:** Eric Tussey <[eric@tussey.com](mailto:eric@tussey.com)>  
**Cc:** Hackett, Richard <[rhackett@bouldercounty.org](mailto:rhackett@bouldercounty.org)>  
**Subject:** RE: Do not Regulate Fracking - protect our communities and extend the Moratorium

Hello Eric,  
All information is on the County's oil & gas webpage, including speaker sign-up if you're interested in providing public comment at today's hearing:  
<https://boco.org/oilgas>  
You could also sign up to speak during the hearing itself.

There were also several press releases published (now posted under the News tab on the O&G website at below link), and the proceedings were legally noticed as required by the Land Use Code on October 25 (see attached).

- <https://www.bouldercounty.org/property-and-land/land-use/planning/oil-gas-development/#news>

We know there is tremendous interest so have made great efforts to spread the word. That said, today is just the start of the public proceedings; I've pasted the schedule in below:

- **Present – Nov. 20** – County staff participates in Colorado Oil & Gas Conservation Commission (COGCC) "Mission Change" Rulemaking Process. (200-600 Series and 800-1200 Series)
- **Monday, Nov. 9 at 4 p.m.** – Public hearing for Planning Commission to receive public testimony on the proposed oil and gas regulations. Public testimony only; no action by Planning Commission. [Learn more or register to attend or speak.](#)
- **Tuesday, Nov. 10 at 4 p.m.** – Public meeting for Planning Commission discussion and recommendation to the Board of County Commissioners or direction to staff to modify regulations. *No additional public testimony.* [View how to join the Public Meeting at 4 p.m. Tuesday, Nov. 10.](#)
- *(If necessary)* **Tuesday, Nov. 17 at 4 p.m.** – Planning Commission public proceedings continued, if needed.
- *(If necessary)* **Thursday, Nov. 19 at 4 p.m.** – Planning Commission public proceedings continued, if needed.
- **Tuesday, Dec. 1, 2020 at 4 p.m.** – Public hearing for the Board of County Commissioners (BOCC) to receive public testimony on the proposed oil and gas regulations. Public testimony only; no action by BOCC.
- **Thursday, Dec. 3, 2020 at 4 p.m.** – Public meeting for BOCC discussion. Adoption of regulations or direction to staff to modify regulations. *No additional public testimony.*
- *(If necessary)* **Thursday, Dec. 10 at 4 p.m.** – BOCC public proceedings continued, if needed.
- *(If necessary)* **Tuesday, Dec. 15 at 4 p.m.** – BOCC public proceedings continued, if needed.

Let me know if you have questions.  
Kim

**Kim Sanchez | Deputy Director - Planning**

Boulder County | Community Planning & Permitting

2045 13<sup>th</sup> St., Boulder CO 80302

Direct: 720-564-2627

Main: 303-441-3930

[ksanchez@bouldercounty.org](mailto:ksanchez@bouldercounty.org)

[www.BoulderCounty.org](http://www.BoulderCounty.org)

**PLEASE NOTE:** Staff is focused on CalWood and Lefthand Canyon fire response and many have been redeployed to other roles. Our response may be delayed. Thank you for your patience.

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**From:** Eric Tussey <[eric@tussey.com](mailto:eric@tussey.com)>

**Sent:** Monday, November 9, 2020 10:26 AM

**To:** Sanchez, Kimberly <[ksanchez@bouldercounty.org](mailto:ksanchez@bouldercounty.org)>


**Subject:** Re: Do not Regulate Fracking - protect our communities and extend the Moratorium

Hi Kimberly,,

I hope you are well. Thank you for responding to my submitted comments.

I am wondering why this November 9th Planning Commission meeting concerning Oil and Gas Regulation - for Public Comment is not listed on the County's Open Meeting web portal? The only listed meeting this month is a "regular Meeting on Nov 18th.

<http://bouldercountyco.iqm2.com/Citizens/default.aspx>



### [Meeting Portal - Boulder County, CO](#)

Welcome to Boulder County's agenda, minutes, and video portal. Upcoming Meetings. Full Calendar RSS

[bouldercountyco.iqm2.com](http://bouldercountyco.iqm2.com)

This does not seem like adequate Public Notice for such an important topic. With human caused climate change affecting our existence / future - the Public should be fully informed that there is a discussion about ending the moratorium and allowing (Regulating) Oil and Gas activity in Boulder County .

Please advise.

Thank you,  
Eric Tussey

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**From:** Sanchez, Kimberly <[ksanchez@bouldercounty.org](mailto:ksanchez@bouldercounty.org)>

**Sent:** Monday, November 9, 2020 9:55 AM

**To:** Boulder County Oil and Gas Comment <[oilgascomment@bouldercounty.org](mailto:oilgascomment@bouldercounty.org)>

**Cc:** Eric Tussey <[eric@tussey.com](mailto:eric@tussey.com)>

**Subject:** FW: Do not Regulate Fracking - protect our communities and extend the Moratorium

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**From:** Eric Tussey <[eric@tussey.com](mailto:eric@tussey.com)>  
**Sent:** Monday, November 9, 2020 9:51 AM  
**To:** #LandUsePlanner <[Planner@bouldercounty.org](mailto:Planner@bouldercounty.org)>  
**Subject:** Do not Regulate Fracking - protect our communities and extend the Moratorium

My name is Eric Tussey. I have lived in Boulder County since 1989. Back then the Denver Boulder area had dealt with our 1970's ozone situation from car traffic. Now we see ozone and breathe it daily from all the fracking operations in Weld county. I believe we now have 40,000 to 50,000 oil and gas wells in Weld County. Isn't that enough? Human caused climate change from burning fossil fuel is wreaking havoc on people and the planet's ecosystems.

We need to stop oil and gas drilling in Boulder County permanently. Fracking Regulation does not stop the poisoning. It does not keep methane in the ground. Regulation is simply legalizing the process so corporations can make money. Money will not fix a polluted aquifer. Oil and gas profits do not pay for cancer and health issues like asthma and severe migraines that are a result of thier operations, Regulations don't allocate advance funding to take care of leaks, explosions, or cap off abandoned wells. Even a capped well will fail and leak over time. Regulations do not protect us. Regulations do not control radiation from wells as a recent study from Harvard points out. If you live within 12 miles of a fracking well radiation is 40% higher than the background radiation. Fracking breaks up buried uranium and releases radiation. See link

[https://www.popularmechanics.com/science/environment/a34480446/fracking-airborne-radioactivity/?fbclid=IwAR37UuxdibRyV7ag\\_4\\_CcCybzL45B5kASlPolgOuu7iJ3e\\_wnW1SHS58C1w](https://www.popularmechanics.com/science/environment/a34480446/fracking-airborne-radioactivity/?fbclid=IwAR37UuxdibRyV7ag_4_CcCybzL45B5kASlPolgOuu7iJ3e_wnW1SHS58C1w)

What are you doing to address the public health aspect of fracking? A permanent moratorium is a start.

There is no rational reason to allow the Oil and Gas industry to drill or frack more wells in Colorado....

Oh, wait... there is the .... *Profit at everyone else's expense for non accountable corporation's "reason"*. Antiquated laws benefit the fracking companies that come and go out of business regularly to avoid liability for the wells that stop producing oil - or the toxic pollution that they don't want to pay to clean up. The banks lending them money profit handsomely as well. Banks don't have to worry about destroyed aquifers. Some investors profit - they do not pay for the toxic pollution that they wreak on the public's air and water . None of them pays for rising sea levels or the climate refugees. Taxpayers will pay. We all pay for the millions of gallons of fresh water that each fracking well uses. Do we really need to expand the Gross Reservoir so Oil and Gas can frack our communities?

We all know that there is a human caused climate crisis and it is because of fossil fuel consumption. Right now there is a glut of Oil and Gas on the market. Look at fuel prices. Look at fracking companies going out of business. Laws are meant to keep up with the times. A set of laws drafted in the 18th or 19th centuries to develop our "inexhaustible resources " is not relevant today. People that bought mineral rights years ago made an investment that may not pay off as they had hoped. Just like any investment - timing is everything, Owner of mineral rights investments should have "exercised" them decades ago before science pointed out with irrefutable facts that fossil fuels are causing an irreversible havoc on our atmosphere. People lose money every day in the stock market - owning mineral rights is a similar gamble. Lafayette is a Home Rule city. It is time to make the moratorium permanent and pass Community Rights laws that protect us from drilling.

We will not allow Fracking. The government is granted power by the people. When the government does not act in a way that supports the people's wishes - it is time for a new government. Lafayette citizens have repeatedly supported a permanent ban on fracking. Make the moratorium permanent.

Take advantage of the services that CELDF - the Community Environmental Legal Defense Fund has offered and fight against all fracking. Be the change we ask for. Make the moratorium permanent and protect your community and planet. We will support you if you act in our best interests. Enabling Oil and Gas companies to poison us is not in the public interest.

Thank You.

Eric Tussey  
5075 51st Street Boulder CO 80301

**From:** [Patricia P](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** Fracking in Boulder County  
**Date:** Tuesday, November 10, 2020 3:16:13 PM

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Dear Commissioners:

How many times do the Citizens of Boulder, CO have to request that great health of its residents is an absolute need, not an option? Fracking is NOT healthy and fracking pollutes our air and precious water!!

Fracking is a terrible practice and needs to stop! It is non-negotiable.

Our residents and especially the children deserve better. Developing asthma as an infant is just plain ridiculous when the Number 1 known cause is fracking. End fracking and watch the statistics of childhood asthma go down. I challenge you to a ban on fracking for the sake of the children many of whom will grow up and hold you accountable. How will you sleep at night knowing you chose profits over the health of children and all citizens who breathe the air in Boulder County? Do you have a conscience? Please BAN FRACKING; it could be the life/health of your loved one you save.

A Strong Nation (Colorado) is a Healthy Nation (Colorado)

Sincerely,

Patricia S. Pearson, RN  
4500 19th Street, Lot #567  
Boulder, CO 80304

**From:** [Wufoo](#)  
**To:** [Boulder County Board of Commissioners](#)  
**Subject:** Contact County Commissioners [#1730] - [Name: Kelly, Paula] Re: Oil and gas regs review  
**Date:** Tuesday, November 10, 2020 4:45:46 PM

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Name \* Paula Kelly

Email \* [pasgkelly@yahoo.com](mailto:pasgkelly@yahoo.com)

Address or General Area (optional) ☐ Lafayette, CO 80026  
United States

Subject \* Oil and gas regs review

Comments, Question or Feedback \*

I would like to see an EXTENSION OF THE MORATORIUM and NO final regulations in Boulder County until the COGCC is finished with their updates. Any decisions prior to this makes no sense.

1) a minimum setback of 2,500 feet, no wavers, but that is sadly not far enough to keep the public safe.

2) we need to protect open space and wildlife.

3) the financial stability of these extraction companies is in serious question. Bankruptcy is business as usual for these companies, only to open the next day with another name in order to get out of responsibilities. This is concerning and leads to other questions.

How and who is going to reimburse home owners who are impacted by a fire, explosion or leaks?

Who is going to pay medical expenses for those who are impacted by VOC's and carcinogenic chemicals released daily from well pads?

Who is going to reimburse people who, due to asthma, cancer, neurological problems, among some medical issues caused by chemical release, can no longer work?

How are people who are evacuated due to emergencies going to shelter until clean up is completed?

Who will cover those expenses?

And who decides what is reasonable and necessary?

Language is vague in parts.

Students who spoke from Niwot High were extraordinary. It is their future you hold in your hands with decisions you make today. The only protection from the climate crises is to BAN FRACKING.

When the oil companies bully and threaten, we need to stand up and fight! We need to be the change and set the example for the state of Colorado. I understand you see these regulations as a back up, but in reality it is only a doorway to allow in more fracking. We need to be smarter and stronger than that.

Please check box below \* ☐ I acknowledge receipt of the Open Records Notification

**From:** [Eric Tussey](#)  
**To:** [Boulder County Board of Commissioners](#); [Boulder County Oil and Gas Comment](#); [Marta Loachamin](#); [sonjailewis@gmail.com](#); [Claire Levy](#); [mattjones@bouldercounty.org](#)  
**Subject:** We do not have to allow Unconventional Oil and Gas Development in Boulder County - see Grant Township PA  
**Date:** Wednesday, November 11, 2020 10:39:28 AM

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Hi,

We cannot Regulate our own poisoning . We need to stand up and ban Unconventional Oil and Gas Development in Boulder County. Lafayette CO has passed Home Rule. They voted on Community rights laws to protect their community from fracking. This article gives some perspective on the issue we face. The organization in the article - CELDF will help defend us against Oil and Gas and the COGCC.

<https://www.rollingstone.com/politics/politics-news/how-a-small-town-is-standing-up-to-fracking-117307/>



Please read this . Become aware of how massive the problem is (corporations having rights that people and communities supposedly do not have).

Please join us in making changes to protect our Communities and Nature. During this Climate Emergency we must hold the line and not allow more fossil fuel development to pollute our air, water, and natural environment. How can we allow drilling and meet our climate goals? Where are the "offsets" for their industrial activities? Can you figure out a way to offset pollution? How do we get back our clean water? How did BP clean up the billions of gallons of pollution in the Gulf of Mexico?

Historic laws are positioned for change - not adherence. No one will come to save us. Not the EPA, not the state, not the COGCC. We must save ourselves and in this effort be the example for other communities to save themselves and to save the planet.

Thank you for working in our community interest.!

Eric Tussey

EBCU.org

CELDF.org

COCRN.org

5075 51st street Boulder CO 80301



**From:** [steiner\\_king@everyactionadvocacy.com](mailto:steiner_king@everyactionadvocacy.com) on behalf of [John Steiner](#)  
**To:** [Boulder County Board of Commissioners](#)  
**Subject:** Please enact a ban on fracking ASAP, as well as the strongest possible oil & gas regulations.  
**Date:** Wednesday, November 11, 2020 12:06:17 PM

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Dear Board Chair Deb Gardner,

Dear Commissioners,

I write as a Boulder County resident deeply concerned about proposed fracking projects (140 wells) in our county and the resulting threats to air and water quality, public health, wildlife, and the climate. I urge you to enact a ban on fracking in Boulder County as soon as possible to protect our community from the well-documented threats to public health and safety from fracking, and to enact the strongest possible protective regulations as a backstop.

The proposed fracking projects are particularly troubling in the context of the Front Range's "serious" non-attainment status for ozone, and high concentrations of benzene and other VOCs, to which existing oil and gas operations are a significant contributor. Additionally, a recent report of the IPCC calls for a "rapid phase-out of CO2 emissions" largely over the next decade to avert catastrophic global temperature rise.

Despite the recent Longmont decision, a ban on fracking is consistent with the County's efforts to fight climate change, including the declaration of a climate emergency, and ongoing lawsuit against Suncor and Exxon for climate change-related damages. A fracking ban is both a reasonable and necessary action authorized for local governments by SB19-181. A ban is widely supported by Boulder County residents: 70% in recent polling, and the same fraction of voters in the County voted in favor of Proposition 112 in 2018.

I also urge you to enact the strongest possible Article 12 regulations on oil and gas operations as a backstop protection to any potential legal challenge to a ban. I recommend the following points for inclusion in Article 12, based on the updated draft released October 20, 2020:

- Implement mandatory 2500' minimum setbacks with no waivers: Revise Article 12 to extend the minimum setback of oil and gas operations to 2500' from any structure intended for human occupancy, and from open space, recreation areas and all water sources. This is modest considering that research has identified adverse effects on the cognitive performance of infants whose mothers lived within 8,500 feet of oil and gas wells and an increased risk of congenital heart defects among children born to women living near oil and gas operations in Colorado, with the risks increasing with the density of oil and gas activities within a 10-mile radius.

- Cumulative impacts: Article 12 should incorporate a structure for the County to consider the context of our already-degraded air quality and the need for dramatic reductions in greenhouse gas emissions to avert catastrophic consequences from climate change.

- Affirmatively protect public health, safety, and welfare, and the environment: Section 12-1000 states that "A proposal meets the standards if it will...either avoid adverse impacts to public health, safety, and welfare, the environment and wildlife resources or...sufficiently minimize, and mitigate unavoidable impact." Oil and gas operations must be required to avoid adverse impacts to public health, safety, and welfare, and the environment and wildlife resources entirely, and not simply minimize impacts.

- Implement as mandatory all of the discretionary measures that are listed in Section 12-1100. Article 12 should explicitly prohibit venting and flaring and require "tankless" operations, which reduce air emissions. A recent study concluded that pregnant women who lived in proximity to natural gas flaring had a 50% higher chance of giving birth early than those who did not, putting the level of risk on par with that caused by smoking.

However, regulations are no substitute for a permanent ban. We encourage you to direct County staff to begin developing language for a fracking ban in Boulder County. Thank you for your ongoing efforts to prioritize public health and the environment in Boulder County.

Sincerely,

Sincerely,

John Steiner

3286 Plateau Rd Longmont, CO 80503-8801

steiner\_king@earthlink.net

**From:** [steiner\\_king@everyactionadvocacy.com](mailto:steiner_king@everyactionadvocacy.com) on behalf of [Margo King](#)  
**To:** [Boulder County Board of Commissioners](#)  
**Subject:** Please enact a ban on fracking ASAP, as well as the strongest possible oil & gas regulations.  
**Date:** Wednesday, November 11, 2020 12:06:45 PM

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Dear Board Chair Deb Gardner,

Dear Commissioners,

I write as a Boulder County resident deeply concerned about proposed fracking projects (140 wells) in our county and the resulting threats to air and water quality, public health, wildlife, and the climate. I urge you to enact a ban on fracking in Boulder County as soon as possible to protect our community from the well-documented threats to public health and safety from fracking, and to enact the strongest possible protective regulations as a backstop.

The proposed fracking projects are particularly troubling in the context of the Front Range's "serious" non-attainment status for ozone, and high concentrations of benzene and other VOCs, to which existing oil and gas operations are a significant contributor. Additionally, a recent report of the IPCC calls for a "rapid phase-out of CO2 emissions" largely over the next decade to avert catastrophic global temperature rise.

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However, regulations are no substitute for a permanent ban. We encourage you to direct County staff to begin developing language for a fracking ban in Boulder County. Thank you for your ongoing efforts to prioritize public health and the environment in Boulder County.

Sincerely,

Sincerely,  
Margo King  
3286 Plateau Rd Longmont, CO 80503-8801  
steiner\_king@earthlink.net

**From:** [keng4java@everyactionadvocacy.com](mailto:keng4java@everyactionadvocacy.com) on behalf of [Ken Gamauf](#)  
**To:** [Boulder County Board of Commissioners](#)  
**Subject:** Please enact a ban on fracking ASAP, as well as the strongest possible oil & gas regulations.  
**Date:** Wednesday, November 11, 2020 3:55:38 PM

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Dear Board Chair Deb Gardner,

Dear Commissioners,

I write as a Boulder County resident deeply concerned about proposed fracking projects (140 wells) in our county and the resulting threats to air and water quality, public health, wildlife, and the climate. I urge you to enact a ban on fracking in Boulder County as soon as possible to protect our community from the well-documented threats to public health and safety from fracking, and to enact the strongest possible protective regulations as a backstop.

The proposed fracking projects are particularly troubling in the context of the Front Range's "serious" non-attainment status for ozone, and high concentrations of benzene and other VOCs, to which existing oil and gas operations are a significant contributor. Additionally, a recent report of the IPCC calls for a "rapid phase-out of CO2 emissions" largely over the next decade to avert catastrophic global temperature rise.

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-Cumulative impacts: Article 12 should incorporate a structure for the County to consider the context of our already-degraded air quality and the need for dramatic reductions in greenhouse gas emissions to avert catastrophic consequences from climate change.

-Affirmatively protect public health, safety, and welfare, and the environment: Section 12-1000 states that "A proposal meets the standards if it will...either avoid adverse impacts to public health, safety, and welfare, the environment and wildlife resources or...sufficiently minimize, and mitigate unavoidable impact." Oil and gas operations must be required to avoid adverse impacts to public health, safety, and welfare, and the environment and wildlife resources entirely, and not simply minimize impacts.

-Implement as mandatory all of the discretionary measures that are listed in Section 12-1100. Article 12 should explicitly prohibit venting and flaring and require "tankless" operations, which reduce air emissions. A recent study concluded that pregnant women who lived in proximity to natural gas flaring had a 50% higher chance of giving birth early than those who did not, putting the level of risk on par with that caused by smoking.

However, regulations are no substitute for a permanent ban. We encourage you to direct County staff to begin developing language for a fracking ban in Boulder County. Thank you for your ongoing efforts to prioritize public health and the environment in Boulder County.

Sincerely,

Sincerely,  
Ken Gamauf  
1670 Dogwood Ln Boulder, CO 80304-1525  
keng4java@netscape.net

**From:** [Jennifer Dearth](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** Boulder Moratorium on new oil and gas operations  
**Date:** Wednesday, November 11, 2020 6:30:30 PM

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Hi,

We moved to Boulder more than 5 years ago because we loved the outdoors. Given all the wildfires, pollution, and global pandemic, please vote for a countywide ban on new oil and gas operations.

I'm a mother of two young kids and there is a large body of academic literature proving the serious effects on human health and life expectancy from fracking wells and other oil and gas operations.

I urge Boulder County to ban fracking and impose the most stringent regulations possible on oil and gas extraction.

Jennifer Dearth  
Resident of Boulder

**From:** [gaia.mika@everyactionadvocacy.com](mailto:gaia.mika@everyactionadvocacy.com) on behalf of [Gaia Mika](#)  
**To:** [Boulder County Board of Commissioners](#)  
**Subject:** Please enact a ban on fracking ASAP, as well as the strongest possible oil & gas regulations.  
**Date:** Wednesday, November 11, 2020 9:37:26 PM

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Dear Board Chair Deb Gardner,

Dear Commissioners,

I write as a Boulder County resident deeply concerned about proposed fracking projects (140 wells) in our county and the resulting threats to air and water quality, public health, wildlife, and the climate. I urge you to enact a ban on fracking in Boulder County as soon as possible to protect our community from the well-documented threats to public health and safety from fracking, and to enact the strongest possible protective regulations as a backstop.

The proposed fracking projects are particularly troubling in the context of the Front Range's "serious" non-attainment status for ozone, and high concentrations of benzene and other VOCs, to which existing oil and gas operations are a significant contributor. Additionally, a recent report of the IPCC calls for a "rapid phase-out of CO2 emissions" largely over the next decade to avert catastrophic global temperature rise.

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However, regulations are no substitute for a permanent ban. We encourage you to direct County staff to begin developing language for a fracking ban in Boulder County. Thank you for your ongoing efforts to prioritize public health and the environment in Boulder County.



Sincerely,

Sincerely,

Gaia Mika

1501 Dellwood Ave Boulder, CO 80304-3127

[gaia.mika@colorado.edu](mailto:gaia.mika@colorado.edu)

**From:** [dr.sarahart@everyactionadvocacy.com](mailto:dr.sarahart@everyactionadvocacy.com) on behalf of [Sara Hart](#)  
**To:** [Boulder County Board of Commissioners](#)  
**Subject:** Please enact a ban on fracking ASAP, as well as the strongest possible oil & gas regulations.  
**Date:** Wednesday, November 11, 2020 10:57:00 PM

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Dear Board Chair Deb Gardner,

Dear Commissioners,

I write as a Boulder County resident deeply concerned about proposed fracking projects (140 wells) in our county and the resulting threats to air and water quality, public health, wildlife, and the climate. I urge you to enact a ban on fracking in Boulder County as soon as possible to protect our community from the well-documented threats to public health and safety from fracking, and to enact the strongest possible protective regulations as a backstop.

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-Cumulative impacts: Article 12 should incorporate a structure for the County to consider the context of our already-degraded air quality and the need for dramatic reductions in greenhouse gas emissions to avert catastrophic consequences from climate change.

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However, regulations are no substitute for a permanent ban. We encourage you to direct County staff to begin developing language for a fracking ban in Boulder County. Thank you for your ongoing efforts to prioritize public health and the environment in Boulder County.

Sincerely,

Sincerely,

Sara Hart

2154 Apple Valley Rd Lyons, CO 80540-9010

dr.sarahart@gmail.com

**From:** [ajmail2011@everyactionadvocacy.com](mailto:ajmail2011@everyactionadvocacy.com) on behalf of [Adam Pastula](#)  
**To:** [Boulder County Board of Commissioners](#)  
**Subject:** Please enact a ban on fracking ASAP, as well as the strongest possible oil & gas regulations.  
**Date:** Thursday, November 12, 2020 9:41:51 AM

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Dear Board Chair Deb Gardner,

Dear Commissioners,

I write as a Boulder County resident deeply concerned about proposed fracking projects (140 wells) in our county and the resulting threats to air and water quality, public health, wildlife, and the climate. I urge you to enact a ban on fracking in Boulder County as soon as possible to protect our community from the well-documented threats to public health and safety from fracking, and to enact the strongest possible protective regulations as a backstop.

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However, regulations are no substitute for a permanent ban. We encourage you to direct County staff to begin developing language for a fracking ban in Boulder County. Thank you for your ongoing efforts to prioritize public health and the environment in Boulder County.

Sincerely,

Sincerely,  
Adam Pastula  
8130 Kincross Dr Boulder, CO 80301-4227  
ajmail2011@gmail.com

**From:** [forbesjuliana@everyactionadvocacy.com](mailto:forbesjuliana@everyactionadvocacy.com) on behalf of [Juliana Forbes](#)  
**To:** [Boulder County Board of Commissioners](#)  
**Subject:** Please enact a ban on fracking ASAP, as well as the strongest possible oil & gas regulations.  
**Date:** Friday, November 13, 2020 7:54:52 AM

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Dear Board Chair Deb Gardner,

Dear Commissioners,

I write as a Boulder County resident deeply concerned about proposed fracking projects (140 wells) in our county and the resulting threats to air and water quality, public health, wildlife, and the climate. I urge you to enact a ban on fracking in Boulder County as soon as possible to protect our community from the well-documented threats to public health and safety from fracking, and to enact the strongest possible protective regulations as a backstop.

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-Cumulative impacts: Article 12 should incorporate a structure for the County to consider the context of our already-degraded air quality and the need for dramatic reductions in greenhouse gas emissions to avert catastrophic consequences from climate change.

-Affirmatively protect public health, safety, and welfare, and the environment: Section 12-1000 states that "A proposal meets the standards if it will...either avoid adverse impacts to public health, safety, and welfare, the environment and wildlife resources or...sufficiently minimize, and mitigate unavoidable impact." Oil and gas operations must be required to avoid adverse impacts to public health, safety, and welfare, and the environment and wildlife resources entirely, and not simply minimize impacts.

-Implement as mandatory all of the discretionary measures that are listed in Section 12-1100. Article 12 should explicitly prohibit venting and flaring and require "tankless" operations, which reduce air emissions. A recent study concluded that pregnant women who lived in proximity to natural gas flaring had a 50% higher chance of giving birth early than those who did not, putting the level of risk on par with that caused by smoking.

However, regulations are no substitute for a permanent ban. We encourage you to direct County staff to begin developing language for a fracking ban in Boulder County. Thank you for your ongoing efforts to prioritize public health and the environment in Boulder County.

Sincerely,

Sincerely,  
Juliana Forbes  
2344 Mapleton Ave Boulder, CO 80304-3752  
forbesjuliana@gmail.com

**From:** [sarah@everyactionadvocacy.com](mailto:sarah@everyactionadvocacy.com) on behalf of [Sarah Peterson](#)  
**To:** [Boulder County Board of Commissioners](#)  
**Subject:** Please enact a ban on fracking ASAP, as well as the strongest possible oil & gas regulations.  
**Date:** Friday, November 13, 2020 8:04:47 AM

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Dear Board Chair Deb Gardner,

Dear Commissioners,

I write as a Boulder County resident deeply concerned about proposed fracking projects (140 wells) in our county and the resulting threats to air and water quality, public health, wildlife, and the climate. I urge you to enact a ban on fracking in Boulder County as soon as possible to protect our community from the well-documented threats to public health and safety from fracking, and to enact the strongest possible protective regulations as a backstop.

The proposed fracking projects are particularly troubling in the context of the Front Range's "serious" non-attainment status for ozone, and high concentrations of benzene and other VOCs, to which existing oil and gas operations are a significant contributor. Additionally, a recent report of the IPCC calls for a "rapid phase-out of CO2 emissions" largely over the next decade to avert catastrophic global temperature rise.

Despite the recent Longmont decision, a ban on fracking is consistent with the County's efforts to fight climate change, including the declaration of a climate emergency, and ongoing lawsuit against Suncor and Exxon for climate change-related damages. A fracking ban is both a reasonable and necessary action authorized for local governments by SB19-181. A ban is widely supported by Boulder County residents: 70% in recent polling, and the same fraction of voters in the County voted in favor of Proposition 112 in 2018.

I also urge you to enact the strongest possible Article 12 regulations on oil and gas operations as a backstop protection to any potential legal challenge to a ban. I recommend the following points for inclusion in Article 12, based on the updated draft released October 20, 2020:

-Implement mandatory 2500' minimum setbacks with no waivers: Revise Article 12 to extend the minimum setback of oil and gas operations to 2500' from any structure intended for human occupancy, and from open space, recreation areas and all water sources. This is modest considering that research has identified adverse effects on the cognitive performance of infants whose mothers lived within 8,500 feet of oil and gas wells and an increased risk of congenital heart defects among children born to women living near oil and gas operations in Colorado, with the risks increasing with the density of oil and gas activities within a 10-mile radius.

-Cumulative impacts: Article 12 should incorporate a structure for the County to consider the context of our already-degraded air quality and the need for dramatic reductions in greenhouse gas emissions to avert catastrophic consequences from climate change.

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However, regulations are no substitute for a permanent ban. We encourage you to direct County staff to begin developing language for a fracking ban in Boulder County. Thank you for your ongoing efforts to prioritize public health and the environment in Boulder County.



Sincerely,

Sincerely,

Sarah Peterson

11278 N 66th St Longmont, CO 80503-9163

sarah@sarahfpeterson.com

**From:** [scottgaren@everyactionadvocacy.com](mailto:scottgaren@everyactionadvocacy.com) on behalf of [Scott Garen](#)  
**To:** [Boulder County Board of Commissioners](#)  
**Subject:** Please enact a ban on fracking ASAP, as well as the strongest possible oil & gas regulations.  
**Date:** Friday, November 13, 2020 8:07:57 AM

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Dear Board Chair Deb Gardner,

Dear Commissioners,

I write as a Boulder County resident deeply concerned about proposed fracking projects (140 wells) in our county and the resulting threats to air and water quality, public health, wildlife, and the climate. I urge you to enact a ban on fracking in Boulder County as soon as possible to protect our community from the well-documented threats to public health and safety from fracking, and to enact the strongest possible protective regulations as a backstop.

The proposed fracking projects are particularly troubling in the context of the Front Range's "serious" non-attainment status for ozone, and high concentrations of benzene and other VOCs, to which existing oil and gas operations are a significant contributor. Additionally, a recent report of the IPCC calls for a "rapid phase-out of CO2 emissions" largely over the next decade to avert catastrophic global temperature rise.

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-Cumulative impacts: Article 12 should incorporate a structure for the County to consider the context of our already-degraded air quality and the need for dramatic reductions in greenhouse gas emissions to avert catastrophic consequences from climate change.

-Affirmatively protect public health, safety, and welfare, and the environment: Section 12-1000 states that "A proposal meets the standards if it will...either avoid adverse impacts to public health, safety, and welfare, the environment and wildlife resources or...sufficiently minimize, and mitigate unavoidable impact." Oil and gas operations must be required to avoid adverse impacts to public health, safety, and welfare, and the environment and wildlife resources entirely, and not simply minimize impacts.

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However, regulations are no substitute for a permanent ban. We encourage you to direct County staff to begin developing language for a fracking ban in Boulder County. Thank you for your ongoing efforts to prioritize public health and the environment in Boulder County.

Sincerely,

Sincerely,  
Scott Garen  
6900 Sunshine Canyon Dr Boulder, CO 80302-8780  
scottgaren@gmail.com

**From:** [Lila Sophia Tresemer](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** no fracking in Boulder Co!!  
**Date:** Friday, November 13, 2020 8:16:40 AM

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Please consider the long term impact of Fracking, and the mysteries it continues to pose as a health threat--not to mention its concern for environmental damage. Resources need to move towards renewable energy before we are hopelessly over the threshold of no return  
Sincerely,  
Laura Cannon,  
Sunshine Canyon, Boulder CO

--

*Laura Lea Cannon*  
*720-320-5988 mobile*  
*303-786-8681 message U.S.*

**From:** [glennis12@everyactionadvocacy.com](mailto:glennis12@everyactionadvocacy.com) on behalf of [Glennis Smith](#)  
**To:** [Boulder County Board of Commissioners](#)  
**Subject:** Please enact a ban on fracking ASAP, as well as the strongest possible oil & gas regulations.  
**Date:** Friday, November 13, 2020 8:24:36 AM

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Dear Board Chair Deb Gardner,

Dear Commissioners,

I write as a Boulder County resident deeply concerned about proposed fracking projects (140 wells) in our county and the resulting threats to air and water quality, public health, wildlife, and the climate. I urge you to enact a ban on fracking in Boulder County as soon as possible to protect our community from the well-documented threats to public health and safety from fracking, and to enact the strongest possible protective regulations as a backstop.

The proposed fracking projects are particularly troubling in the context of the Front Range's "serious" non-attainment status for ozone, and high concentrations of benzene and other VOCs, to which existing oil and gas operations are a significant contributor. Additionally, a recent report of the IPCC calls for a "rapid phase-out of CO2 emissions" largely over the next decade to avert catastrophic global temperature rise.

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-Cumulative impacts: Article 12 should incorporate a structure for the County to consider the context of our already-degraded air quality and the need for dramatic reductions in greenhouse gas emissions to avert catastrophic consequences from climate change.

-Affirmatively protect public health, safety, and welfare, and the environment: Section 12-1000 states that "A proposal meets the standards if it will...either avoid adverse impacts to public health, safety, and welfare, the environment and wildlife resources or...sufficiently minimize, and mitigate unavoidable impact." Oil and gas operations must be required to avoid adverse impacts to public health, safety, and welfare, and the environment and wildlife resources entirely, and not simply minimize impacts.

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However, regulations are no substitute for a permanent ban. We encourage you to direct County staff to begin developing language for a fracking ban in Boulder County. Thank you for your ongoing efforts to prioritize public health and the environment in Boulder County.

THANK YOU KINDLY FOR YOUR CONSIDERATION!

Sincerely,

Sincerely,  
Glennis Smith  
25 S Cedar Brook Rd Boulder, CO 80304-0493  
glennis12@icloud.com

**From:** [jessica@everyactionadvocacy.com](mailto:jessica@everyactionadvocacy.com) on behalf of [Jessica Adams](#)  
**To:** [Boulder County Board of Commissioners](#)  
**Subject:** Please enact a ban on fracking ASAP, as well as the strongest possible oil & gas regulations.  
**Date:** Friday, November 13, 2020 8:26:49 AM

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Dear Board Chair Deb Gardner,

Dear Commissioners,

I write as a Boulder County resident deeply concerned about proposed fracking projects (140 wells) in our county and the resulting threats to air and water quality, public health, wildlife, and the climate. I urge you to enact a ban on fracking in Boulder County as soon as possible to protect our community from the well-documented threats to public health and safety from fracking, and to enact the strongest possible protective regulations as a backstop.

The proposed fracking projects are particularly troubling in the context of the Front Range's "serious" non-attainment status for ozone, and high concentrations of benzene and other VOCs, to which existing oil and gas operations are a significant contributor. Additionally, a recent report of the IPCC calls for a "rapid phase-out of CO2 emissions" largely over the next decade to avert catastrophic global temperature rise.

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I also urge you to enact the strongest possible Article 12 regulations on oil and gas operations as a backstop protection to any potential legal challenge to a ban. I recommend the following points for inclusion in Article 12, based on the updated draft released October 20, 2020:

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-Cumulative impacts: Article 12 should incorporate a structure for the County to consider the context of our already-degraded air quality and the need for dramatic reductions in greenhouse gas emissions to avert catastrophic consequences from climate change.

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-Implement as mandatory all of the discretionary measures that are listed in Section 12-1100. Article 12 should explicitly prohibit venting and flaring and require "tankless" operations, which reduce air emissions. A recent study concluded that pregnant women who lived in proximity to natural gas flaring had a 50% higher chance of giving birth early than those who did not, putting the level of risk on par with that caused by smoking.

However, regulations are no substitute for a permanent ban. We encourage you to direct County staff to begin developing language for a fracking ban in Boulder County. Thank you for your ongoing efforts to prioritize public health and the environment in Boulder County.

Sincerely,

Sincerely,

Jessica Adams

4245 Redwood Pl Boulder, CO 80301-1639

jessica@livingdesignstudios.com



**From:** [elena@everyactionadvocacy.com](mailto:elena@everyactionadvocacy.com) on behalf of [Elena Klaver](#)  
**To:** [Boulder County Board of Commissioners](#)  
**Subject:** Please enact a ban on fracking ASAP, as well as the strongest possible oil & gas regulations.  
**Date:** Friday, November 13, 2020 8:27:49 AM

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Dear Board Chair Deb Gardner,

Dear Commissioners,

I write as a Boulder County resident deeply concerned about proposed fracking projects (140 wells) in our county and the resulting threats to air and water quality, public health, wildlife, and the climate. I urge you to enact a ban on fracking in Boulder County as soon as possible to protect our community from the well-documented threats to public health and safety from fracking, and to enact the strongest possible protective regulations as a backstop.

The proposed fracking projects are particularly troubling in the context of the Front Range's "serious" non-attainment status for ozone, and high concentrations of benzene and other VOCs, to which existing oil and gas operations are a significant contributor. Additionally, a recent report of the IPCC calls for a "rapid phase-out of CO2 emissions" largely over the next decade to avert catastrophic global temperature rise.

Despite the recent Longmont decision, a ban on fracking is consistent with the County's efforts to fight climate change, including the declaration of a climate emergency, and ongoing lawsuit against Suncor and Exxon for climate change-related damages. A fracking ban is both a reasonable and necessary action authorized for local governments by SB19-181. A ban is widely supported by Boulder County residents: 70% in recent polling, and the same fraction of voters in the County voted in favor of Proposition 112 in 2018.

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However, regulations are no substitute for a permanent ban. We encourage you to direct County staff to begin developing language for a fracking ban in Boulder County. Thank you for your ongoing efforts to prioritize public health and the environment in Boulder County.

Sincerely,

Sincerely,

Elena Klaver

PO Box 529 Niwot, CO 80544-0529

[elena@indra.com](mailto:elena@indra.com)

**From:** [Jessica Adams](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** Regulate Fracking  
**Date:** Friday, November 13, 2020 8:31:29 AM  
**Attachments:** [image001.png](#)

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Dear Commissioners,

I write as a Boulder County resident and Business Owner deeply concerned about proposed fracking projects (140 wells) in our county and the resulting threats to air and water quality, public health, wildlife, and the climate. I urge you to enact strict regulations on fracking in Boulder County as soon as possible to protect our community from the well-documented threats to public health and safety from fracking, and to enact the strongest possible protective regulations as a backstop.

The proposed fracking projects are particularly troubling in the context of the Front Range's "serious" non-attainment status for ozone, and high concentrations of benzene and other VOCs, to which existing oil and gas operations are a significant contributor. Additionally, a recent report of the IPCC calls for a "rapid phase-out of CO2 emissions" largely over the next decade to avert catastrophic global temperature rise.

Despite the recent Longmont decision, a ban on fracking is consistent with the County's efforts to fight climate change, including the declaration of a climate emergency, and ongoing lawsuit against Suncor and Exxon for climate change-related damages. A fracking ban is both a reasonable and necessary action authorized for local governments by SB19-181. A ban is widely supported by Boulder County residents: 70% in recent polling, and the same fraction of voters in the County voted in favor of Proposition 112 in 2018.

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We encourage you to direct County staff to begin developing language for a fracking ban in Boulder County. Thank you for your ongoing efforts to prioritize public health and the environment in Boulder County.

Thanks,  
Jessica Adams  
Founder + President



Mail: PO Box 973, Lafayette CO 80026

Physical: 1010 Carbon Ct Unit D, Erie CO 80516

303-442-2614 Erie + 970-920-6998 Aspen + 303-517-6303 Cell

[LivingDesignStudios.com](http://LivingDesignStudios.com) = Metalwork

**From:** [diane@everyactionadvocacy.com](mailto:diane@everyactionadvocacy.com) on behalf of [Diane Dvorin](#)  
**To:** [Boulder County Board of Commissioners](#)  
**Subject:** Please enact a ban on fracking ASAP, as well as the strongest possible oil & gas regulations.  
**Date:** Friday, November 13, 2020 8:36:25 AM

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Dear Board Chair Deb Gardner,

Dear Commissioners,

I write as a Boulder County resident deeply concerned about proposed fracking projects (140 wells) in our county and the resulting threats to air and water quality, public health, wildlife, and the climate. I urge you to enact a ban on fracking in Boulder County as soon as possible to protect our community from the well-documented threats to public health and safety from fracking, and to enact the strongest possible protective regulations as a backstop.

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However, regulations are no substitute for a permanent ban. We encourage you to direct County staff to begin developing language for a fracking ban in Boulder County. Thank you for your ongoing efforts to prioritize public health and the environment in Boulder County.

Sincerely,

Sincerely,  
Diane Dvorin  
3232 6th St Boulder, CO 80304-2107  
diane@bayhillsgroup.com

**From:** [rjboswell7@everyactionadvocacy.com](mailto:rjboswell7@everyactionadvocacy.com) on behalf of [Robert Boswell](#)  
**To:** [Boulder County Board of Commissioners](#)  
**Subject:** Please enact a ban on fracking ASAP, as well as the strongest possible oil & gas regulations.  
**Date:** Friday, November 13, 2020 8:39:58 AM

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Dear Board Chair Deb Gardner,

Dear Commissioners,

I write as a Boulder County resident deeply concerned about proposed fracking projects (140 wells) in our county and the resulting threats to air and water quality, public health, wildlife, and the climate. I urge you to enact a ban on fracking in Boulder County as soon as possible to protect our community from the well-documented threats to public health and safety from fracking, and to enact the strongest possible protective regulations as a backstop.

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However, regulations are no substitute for a permanent ban. We encourage you to direct County staff to begin developing language for a fracking ban in Boulder County. Thank you for your ongoing efforts to prioritize public health and the environment in Boulder County.

Sincerely,

Sincerely,  
Robert Boswell  
3541 Smuggler Way Boulder, CO 80305-7221  
rjboswell7@gmail.com



**From:** [jenwalton@everyactionadvocacy.com](mailto:jenwalton@everyactionadvocacy.com) on behalf of [Jennifer Walton](#)  
**To:** [Boulder County Board of Commissioners](#)  
**Subject:** Please enact a ban on fracking ASAP, as well as the strongest possible oil & gas regulations.  
**Date:** Friday, November 13, 2020 8:41:34 AM

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Dear Board Chair Deb Gardner,

Dear Commissioners,

I write as a Boulder County resident deeply concerned about proposed fracking projects (140 wells) in our county and the resulting threats to air and water quality, public health, wildlife, and the climate. I urge you to enact a ban on fracking in Boulder County as soon as possible to protect our community from the well-documented threats to public health and safety from fracking, and to enact the strongest possible protective regulations as a backstop.

The proposed fracking projects are particularly troubling in the context of the Front Range's "serious" non-attainment status for ozone, and high concentrations of benzene and other VOCs, to which existing oil and gas operations are a significant contributor. Additionally, a recent report of the IPCC calls for a "rapid phase-out of CO2 emissions" largely over the next decade to avert catastrophic global temperature rise.

Despite the recent Longmont decision, a ban on fracking is consistent with the County's efforts to fight climate change, including the declaration of a climate emergency, and ongoing lawsuit against Suncor and Exxon for climate change-related damages. A fracking ban is both a reasonable and necessary action authorized for local governments by SB19-181. A ban is widely supported by Boulder County residents: 70% in recent polling, and the same fraction of voters in the County voted in favor of Proposition 112 in 2018.

I also urge you to enact the strongest possible Article 12 regulations on oil and gas operations as a backstop protection to any potential legal challenge to a ban. I recommend the following points for inclusion in Article 12, based on the updated draft released October 20, 2020:

-Implement mandatory 2500' minimum setbacks with no waivers: Revise Article 12 to extend the minimum setback of oil and gas operations to 2500' from any structure intended for human occupancy, and from open space, recreation areas and all water sources. This is modest considering that research has identified adverse effects on the cognitive performance of infants whose mothers lived within 8,500 feet of oil and gas wells and an increased risk of congenital heart defects among children born to women living near oil and gas operations in Colorado, with the risks increasing with the density of oil and gas activities within a 10-mile radius.

-Cumulative impacts: Article 12 should incorporate a structure for the County to consider the context of our already-degraded air quality and the need for dramatic reductions in greenhouse gas emissions to avert catastrophic consequences from climate change.

-Affirmatively protect public health, safety, and welfare, and the environment: Section 12-1000 states that "A proposal meets the standards if it will...either avoid adverse impacts to public health, safety, and welfare, the environment and wildlife resources or...sufficiently minimize, and mitigate unavoidable impact." Oil and gas operations must be required to avoid adverse impacts to public health, safety, and welfare, and the environment and wildlife resources entirely, and not simply minimize impacts.

-Implement as mandatory all of the discretionary measures that are listed in Section 12-1100. Article 12 should explicitly prohibit venting and flaring and require "tankless" operations, which reduce air emissions. A recent study concluded that pregnant women who lived in proximity to natural gas flaring had a 50% higher chance of giving birth early than those who did not, putting the level of risk on par with that caused by smoking.

However, regulations are no substitute for a permanent ban. We encourage you to direct County staff to begin developing language for a fracking ban in Boulder County. Thank you for your ongoing efforts to prioritize public health and the environment in Boulder County.

Sincerely,

Sincerely,

Jennifer Walton

3980 Broadway St Ste Pm 103 Boulder, CO 80304-1161

jenwalton@earthlink.net

**From:** [dianerosenthal@everyactionadvocacy.com](mailto:dianerosenthal@everyactionadvocacy.com) on behalf of [Diane Rosenthal](#)  
**To:** [Boulder County Board of Commissioners](#)  
**Subject:** Please enact a ban on fracking ASAP, as well as the strongest possible oil & gas regulations.  
**Date:** Friday, November 13, 2020 8:54:47 AM

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Dear Board Chair Deb Gardner,

Dear Commissioners,

I write as a Boulder County resident deeply concerned about proposed fracking projects (140 wells) in our county and the resulting threats to air and water quality, public health, wildlife, and the climate. I urge you to enact a ban on fracking in Boulder County as soon as possible to protect our community from the well-documented threats to public health and safety from fracking, and to enact the strongest possible protective regulations as a backstop.

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However, regulations are no substitute for a permanent ban. We encourage you to direct County staff to begin developing language for a fracking ban in Boulder County. Thank you for your ongoing efforts to prioritize public health and the environment in Boulder County.

Sincerely,

Sincerely,  
Diane Rosenthal  
2945 Lafayette Dr Boulder, CO 80305-7108  
dianerosenthal@mac.com

**From:** [health@everyactionadvocacy.com](mailto:health@everyactionadvocacy.com) on behalf of [Charley Cropley](#)  
**To:** [Boulder County Board of Commissioners](#)  
**Subject:** Please enact a ban on fracking ASAP, as well as the strongest possible oil & gas regulations.  
**Date:** Friday, November 13, 2020 9:08:12 AM

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Dear Board Chair Deb Gardner,

Dear Commissioners,

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Sincerely,

Sincerely,  
Charley Cropley  
1109 Portland Pl Boulder, CO 80304-3315  
health@charleycropley.com

**From:** [cbtawa@everyactionadvocacy.com](mailto:cbtawa@everyactionadvocacy.com) on behalf of [Brigitte Tawa](#)  
**To:** [Boulder County Board of Commissioners](#)  
**Subject:** Please enact a ban on fracking ASAP, as well as the strongest possible oil & gas regulations.  
**Date:** Friday, November 13, 2020 9:14:06 AM

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Dear Board Chair Deb Gardner,

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However, regulations are no substitute for a permanent ban. We encourage you to direct County staff to begin developing language for a fracking ban in Boulder County. Thank you for your ongoing efforts to prioritize public health and the environment in Boulder County.

Sincerely,

Sincerely,  
Brigitte Tawa  
4440 Prado Dr Boulder, CO 80303-9632  
cbtawa@yahoo.com



**From:** [charlie@everyactionadvocacy.com](mailto:charlie@everyactionadvocacy.com) on behalf of [Charlie Papazian](#)  
**To:** [Boulder County Board of Commissioners](#)  
**Subject:** Please enact a ban on fracking ASAP, as well as the strongest possible oil & gas regulations.  
**Date:** Friday, November 13, 2020 9:19:22 AM

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Dear Board Chair Deb Gardner,

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Sincerely,

Sincerely,

Charlie Papazian

3348 Plateau Rd Longmont, CO 80503-8801

[charlie@papazian.org](mailto:charlie@papazian.org)

**From:** [jewel@everyactionadvocacy.com](mailto:jewel@everyactionadvocacy.com) on behalf of [Julie Lauer](#)  
**To:** [Boulder County Board of Commissioners](#)  
**Subject:** Please enact a ban on fracking ASAP, as well as the strongest possible oil & gas regulations.  
**Date:** Friday, November 13, 2020 9:44:53 AM

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Dear Board Chair Deb Gardner,

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Sincerely,

Sincerely,

Julie Lauer

2885 La Grange Cir Boulder, CO 80305-6314

[jewel@lauerstudio.com](mailto:jewel@lauerstudio.com)

**From:** [robertsjanet@everyactionadvocacy.com](mailto:robertsjanet@everyactionadvocacy.com) on behalf of [Janet Roberts](#)  
**To:** [Boulder County Board of Commissioners](#)  
**Subject:** Please enact a ban on fracking ASAP, as well as the strongest possible oil & gas regulations.  
**Date:** Friday, November 13, 2020 10:16:42 AM

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Dear Board Chair Deb Gardner,

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Sincerely,

Sincerely,

Janet Roberts

745 Arapahoe Ave Boulder, CO 80302-5916

robertsjanet@yahoo.com

**From:** [vance@everyactionadvocacy.com](mailto:vance@everyactionadvocacy.com) on behalf of [vance martin](#)  
**To:** [Boulder County Board of Commissioners](#)  
**Subject:** Please enact a ban on fracking ASAP, as well as the strongest possible oil & gas regulations.  
**Date:** Friday, November 13, 2020 11:39:26 AM

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Dear Board Chair Deb Gardner,

Dear Commissioners,

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Sincerely,

Sincerely,

vance martin

660 Wild Ridge Cir Lafayette, CO 80026-2583

vance@wild.org



**From:** [doug.parker@everyactionadvocacy.com](mailto:doug.parker@everyactionadvocacy.com) on behalf of [Doug Parker](#)  
**To:** [Boulder County Board of Commissioners](#)  
**Subject:** Please enact a ban on fracking ASAP, as well as the strongest possible oil & gas regulations.  
**Date:** Friday, November 13, 2020 11:59:04 AM

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Dear Board Chair Deb Gardner,

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Sincerely,

Sincerely,  
Doug Parker  
8695 Sunshine Canyon Dr Boulder, CO 80302-9772  
doug.parker@comcast.net

**From:** [jptrio@everyactionadvocacy.com](mailto:jptrio@everyactionadvocacy.com) on behalf of [Julian Peterson](#)  
**To:** [Boulder County Board of Commissioners](#)  
**Subject:** Please enact a ban on fracking ASAP, as well as the strongest possible oil & gas regulations.  
**Date:** Friday, November 13, 2020 12:03:18 PM

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Dear Board Chair Deb Gardner,

Dear Commissioners,

I write as a Boulder County resident deeply concerned about proposed fracking projects (140 wells) in our county and the resulting threats to air and water quality, public health, wildlife, and the climate. I urge you to enact a ban on fracking in Boulder County as soon as possible to protect our community from the well-documented threats to public health and safety from fracking, and to enact the strongest possible protective regulations as a backstop.

The proposed fracking projects are particularly troubling in the context of the Front Range's "serious" non-attainment status for ozone, and high concentrations of benzene and other VOCs, to which existing oil and gas operations are a significant contributor. Additionally, a recent report of the IPCC calls for a "rapid phase-out of CO2 emissions" largely over the next decade to avert catastrophic global temperature rise.

Despite the recent Longmont decision, a ban on fracking is consistent with the County's efforts to fight climate change, including the declaration of a climate emergency, and ongoing lawsuit against Suncor and Exxon for climate change-related damages. A fracking ban is both a reasonable and necessary action authorized for local governments by SB19-181. A ban is widely supported by Boulder County residents: 70% in recent polling, and the same fraction of voters in the County voted in favor of Proposition 112 in 2018.

I also urge you to enact the strongest possible Article 12 regulations on oil and gas operations as a backstop protection to any potential legal challenge to a ban. I recommend the following points for inclusion in Article 12, based on the updated draft released October 20, 2020:

-Implement mandatory 2500' minimum setbacks with no waivers: Revise Article 12 to extend the minimum setback of oil and gas operations to 2500' from any structure intended for human occupancy, and from open space, recreation areas and all water sources. This is modest considering that research has identified adverse effects on the cognitive performance of infants whose mothers lived within 8,500 feet of oil and gas wells and an increased risk of congenital heart defects among children born to women living near oil and gas operations in Colorado, with the risks increasing with the density of oil and gas activities within a 10-mile radius.

-Cumulative impacts: Article 12 should incorporate a structure for the County to consider the context of our already-degraded air quality and the need for dramatic reductions in greenhouse gas emissions to avert catastrophic consequences from climate change.

-Affirmatively protect public health, safety, and welfare, and the environment: Section 12-1000 states that "A proposal meets the standards if it will...either avoid adverse impacts to public health, safety, and welfare, the environment and wildlife resources or...sufficiently minimize, and mitigate unavoidable impact." Oil and gas operations must be required to avoid adverse impacts to public health, safety, and welfare, and the environment and wildlife resources entirely, and not simply minimize impacts.

-Implement as mandatory all of the discretionary measures that are listed in Section 12-1100. Article 12 should explicitly prohibit venting and flaring and require "tankless" operations, which reduce air emissions. A recent study concluded that pregnant women who lived in proximity to natural gas flaring had a 50% higher chance of giving birth early than those who did not, putting the level of risk on par with that caused by smoking.

However, regulations are no substitute for a permanent ban. We encourage you to direct County staff to begin developing language for a fracking ban in Boulder County. Thank you for your ongoing efforts to prioritize public health and the environment in Boulder County.

Sincerely,

Sincerely,  
Julian Peterson  
11278 N 66th St Longmont, CO 80503-9163  
jptrio@gmail.com

**From:** [jonathan.w.wfalk@everyactionadvocacy.com](mailto:jonathan.w.wfalk@everyactionadvocacy.com) on behalf of [jonathan.falk](#)  
**To:** [Boulder County Board of Commissioners](#)  
**Subject:** Please enact a ban on fracking ASAP, as well as the strongest possible oil & gas regulations.  
**Date:** Friday, November 13, 2020 12:25:15 PM

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Dear Board Chair Deb Gardner,

Dear Commissioners,

I write as a Boulder County resident deeply concerned about proposed fracking projects (140 wells) in our county and the resulting threats to air and water quality, public health, wildlife, and the climate. I urge you to enact a ban on fracking in Boulder County as soon as possible to protect our community from the well-documented threats to public health and safety from fracking, and to enact the strongest possible protective regulations as a backstop.

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However, regulations are no substitute for a permanent ban. We encourage you to direct County staff to begin developing language for a fracking ban in Boulder County. Thank you for your ongoing efforts to prioritize public health and the environment in Boulder County.

Sincerely,

Sincerely,

jonathan falk

7071 Fairways Dr Longmont, CO 80503-8007

jonathan.w.wfalk@gmail.com

**From:** [noreensmartfrog@everyactionadvocacy.com](mailto:noreensmartfrog@everyactionadvocacy.com) on behalf of [Noreen Reeder](#)  
**To:** [Boulder County Board of Commissioners](#)  
**Subject:** Please enact a ban on fracking ASAP, as well as the strongest possible oil & gas regulations.  
**Date:** Friday, November 13, 2020 12:51:41 PM

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Dear Board Chair Deb Gardner,

Dear Commissioners,

I write as a Boulder County resident deeply concerned about proposed fracking projects (140 wells) in our county and the resulting threats to air and water quality, public health, wildlife, and the climate. I urge you to enact a ban on fracking in Boulder County as soon as possible to protect our community from the well-documented threats to public health and safety from fracking, and to enact the strongest possible protective regulations as a backstop.

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However, regulations are no substitute for a permanent ban. We encourage you to direct County staff to begin developing language for a fracking ban in Boulder County. Thank you for your ongoing efforts to prioritize public health and the environment in Boulder County.

Sincerely,

Sincerely,

Noreen Reeder

7067 Fairways Dr Longmont, CO 80503-8007

noreensmartfrog@aol.com



**From:** [ellenfisk@everyactionadvocacy.com](mailto:ellenfisk@everyactionadvocacy.com) on behalf of [Ellen Fisk](#)  
**To:** [Boulder County Board of Commissioners](#)  
**Subject:** Please enact a ban on fracking ASAP, as well as the strongest possible oil & gas regulations.  
**Date:** Friday, November 13, 2020 1:27:00 PM

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Dear Board Chair Deb Gardner,

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However, regulations are no substitute for a permanent ban. We encourage you to direct County staff to begin developing language for a fracking ban in Boulder County. Thank you for your ongoing efforts to prioritize public health and the environment in Boulder County.

Sincerely,

Sincerely,

Ellen Fisk

769 University Ave Boulder, CO 80302-5904

ellenfisk@hotmail.com

**From:** [sky@everyactionadvocacy.com](mailto:sky@everyactionadvocacy.com) on behalf of [Sky Canyon](#)  
**To:** [Boulder County Board of Commissioners](#)  
**Subject:** Please enact a ban on fracking ASAP, as well as the strongest possible oil & gas regulations.  
**Date:** Friday, November 13, 2020 1:28:55 PM

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Dear Board Chair Deb Gardner,

Dear Commissioners,

I write as a Boulder County resident deeply concerned about proposed fracking projects (140 wells) in our county and the resulting threats to air and water quality, public health, wildlife, and the climate. I urge you to enact a ban on fracking in Boulder County as soon as possible to protect our community from the well-documented threats to public health and safety from fracking, and to enact the strongest possible protective regulations as a backstop.

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However, regulations are no substitute for a permanent ban. We encourage you to direct County staff to begin developing language for a fracking ban in Boulder County. Thank you for your ongoing efforts to prioritize public health and the environment in Boulder County.

Sincerely,

Sincerely,  
Sky Canyon  
5851 S Orchard Creek Cir Boulder, CO 80301-5825  
[sky@skycanyon.info](mailto:sky@skycanyon.info)

**From:** [clairepeterson80@everyactionadvocacy.com](mailto:clairepeterson80@everyactionadvocacy.com) on behalf of [claire peterson](#)  
**To:** [Boulder County Board of Commissioners](#)  
**Subject:** Please enact a ban on fracking ASAP, as well as the strongest possible oil & gas regulations.  
**Date:** Friday, November 13, 2020 1:31:03 PM

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Dear Board Chair Deb Gardner,

Dear Commissioners,

I write as a Boulder County resident deeply concerned about proposed fracking projects (140 wells) in our county and the resulting threats to air and water quality, public health, wildlife, and the climate. I urge you to enact a ban on fracking in Boulder County as soon as possible to protect our community from the well-documented threats to public health and safety from fracking, and to enact the strongest possible protective regulations as a backstop.

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However, regulations are no substitute for a permanent ban. We encourage you to direct County staff to begin developing language for a fracking ban in Boulder County. Thank you for your ongoing efforts to prioritize public health and the environment in Boulder County.

Sincerely,

Sincerely,  
claire peterson  
202 W Simpson St Lafayette, CO 80026-1659  
clairepeterson80@gmail.com

**From:** [cara.boulder@everyactionadvocacy.com](mailto:cara.boulder@everyactionadvocacy.com) on behalf of [Cara Anderson](#)  
**To:** [Boulder County Board of Commissioners](#)  
**Subject:** Please enact a ban on fracking ASAP, as well as the strongest possible oil & gas regulations.  
**Date:** Friday, November 13, 2020 1:50:57 PM

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Dear Board Chair Deb Gardner,

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Sincerely,

Sincerely,

Cara Anderson

2445 Juniper Ave Boulder, CO 80304-1957

cara.boulder@gmail.com



**From:** [EvensonDennisWarner@everyactionadvocacy.com](mailto:EvensonDennisWarner@everyactionadvocacy.com) on behalf of [Dennis Evenson](#)  
**To:** [Boulder County Board of Commissioners](#)  
**Subject:** Please enact a ban on fracking ASAP, as well as the strongest possible oil & gas regulations.  
**Date:** Friday, November 13, 2020 2:20:06 PM

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Dear Board Chair Deb Gardner,

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Sincerely,

Sincerely,

Dennis Evenson

1055 Adams Cir Apt 1014 Boulder, CO 80303-1850

EvensonDennisWarner@yahoo.com

**From:** [randyfaulkner@everyactionadvocacy.com](mailto:randyfaulkner@everyactionadvocacy.com) on behalf of [Randy Faulkner](#)  
**To:** [Boulder County Board of Commissioners](#)  
**Subject:** Please enact a ban on fracking ASAP, as well as the strongest possible oil & gas regulations.  
**Date:** Friday, November 13, 2020 2:53:29 PM

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Dear Board Chair Deb Gardner,

Dear Commissioners,

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-Cumulative impacts: Article 12 should incorporate a structure for the County to consider the context of our already-degraded air quality and the need for dramatic reductions in greenhouse gas emissions to avert catastrophic consequences from climate change.

-Affirmatively protect public health, safety, and welfare, and the environment: Section 12-1000 states that "A proposal meets the standards if it will...either avoid adverse impacts to public health, safety, and welfare, the environment and wildlife resources or...sufficiently minimize, and mitigate unavoidable impact." Oil and gas operations must be required to avoid adverse impacts to public health, safety, and welfare, and the environment and wildlife resources entirely, and not simply minimize impacts.

-Implement as mandatory all of the discretionary measures that are listed in Section 12-1100. Article 12 should explicitly prohibit venting and flaring and require "tankless" operations, which reduce air emissions. A recent study concluded that pregnant women who lived in proximity to natural gas flaring had a 50% higher chance of giving birth early than those who did not, putting the level of risk on par with that caused by smoking.

However, regulations are no substitute for a permanent ban. We encourage you to direct County staff to begin developing language for a fracking ban in Boulder County. Thank you for your ongoing efforts to prioritize public health and the environment in Boulder County.

Sincerely,

Sincerely,  
Randy Faulkner  
2432 Lexington St Lafayette, CO 80026-3411  
randyfaulkner@yahoo.com

**From:** [margeryjanegoldman@everyactionadvocacy.com](mailto:margeryjanegoldman@everyactionadvocacy.com) on behalf of [Margery Goldman](#)  
**To:** [Boulder County Board of Commissioners](#)  
**Subject:** Please enact a ban on fracking ASAP, as well as the strongest possible oil & gas regulations.  
**Date:** Friday, November 13, 2020 2:55:12 PM

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Dear Board Chair Deb Gardner,

Dear Commissioners,

I write as a Boulder County resident deeply concerned about proposed fracking projects (140 wells) in our county and the resulting threats to air and water quality, public health, wildlife, and the climate. I urge you to enact a ban on fracking in Boulder County as soon as possible to protect our community from the well-documented threats to public health and safety from fracking, and to enact the strongest possible protective regulations as a backstop.

The proposed fracking projects are particularly troubling in the context of the Front Range's "serious" non-attainment status for ozone, and high concentrations of benzene and other VOCs, to which existing oil and gas operations are a significant contributor. Additionally, a recent report of the IPCC calls for a "rapid phase-out of CO2 emissions" largely over the next decade to avert catastrophic global temperature rise.

Despite the recent Longmont decision, a ban on fracking is consistent with the County's efforts to fight climate change, including the declaration of a climate emergency, and ongoing lawsuit against Suncor and Exxon for climate change-related damages. A fracking ban is both a reasonable and necessary action authorized for local governments by SB19-181. A ban is widely supported by Boulder County residents: 70% in recent polling, and the same fraction of voters in the County voted in favor of Proposition 112 in 2018.

I also urge you to enact the strongest possible Article 12 regulations on oil and gas operations as a backstop protection to any potential legal challenge to a ban. I recommend the following points for inclusion in Article 12, based on the updated draft released October 20, 2020:

-Implement mandatory 2500' minimum setbacks with no waivers: Revise Article 12 to extend the minimum setback of oil and gas operations to 2500' from any structure intended for human occupancy, and from open space, recreation areas and all water sources. This is modest considering that research has identified adverse effects on the cognitive performance of infants whose mothers lived within 8,500 feet of oil and gas wells and an increased risk of congenital heart defects among children born to women living near oil and gas operations in Colorado, with the risks increasing with the density of oil and gas activities within a 10-mile radius.

-Cumulative impacts: Article 12 should incorporate a structure for the County to consider the context of our already-degraded air quality and the need for dramatic reductions in greenhouse gas emissions to avert catastrophic consequences from climate change.

-Affirmatively protect public health, safety, and welfare, and the environment: Section 12-1000 states that "A proposal meets the standards if it will...either avoid adverse impacts to public health, safety, and welfare, the environment and wildlife resources or...sufficiently minimize, and mitigate unavoidable impact." Oil and gas operations must be required to avoid adverse impacts to public health, safety, and welfare, and the environment and wildlife resources entirely, and not simply minimize impacts.

-Implement as mandatory all of the discretionary measures that are listed in Section 12-1100. Article 12 should explicitly prohibit venting and flaring and require "tankless" operations, which reduce air emissions. A recent study concluded that pregnant women who lived in proximity to natural gas flaring had a 50% higher chance of giving birth early than those who did not, putting the level of risk on par with that caused by smoking.

However, regulations are no substitute for a permanent ban. We encourage you to direct County staff to begin developing language for a fracking ban in Boulder County. Thank you for your ongoing efforts to prioritize public health and the environment in Boulder County.

Sincerely,

Sincerely,  
Margery Goldman  
1043 Pine St Boulder, CO 80302-4022  
margeryjanegoldman@gmail.com

**From:** [selene@everyactionadvocacy.com](mailto:selene@everyactionadvocacy.com) on behalf of [D. McShan](#)  
**To:** [Boulder County Board of Commissioners](#)  
**Subject:** Please enact a ban on fracking ASAP, as well as the strongest possible oil & gas regulations.  
**Date:** Friday, November 13, 2020 2:55:45 PM

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Dear Board Chair Deb Gardner,

Dear Commissioners,

I write as a Boulder County resident deeply concerned about proposed fracking projects (140 wells) in our county and the resulting threats to air and water quality, public health, wildlife, and the climate. I urge you to enact a ban on fracking in Boulder County as soon as possible to protect our community from the well-documented threats to public health and safety from fracking, and to enact the strongest possible protective regulations as a backstop.

The proposed fracking projects are particularly troubling in the context of the Front Range's "serious" non-attainment status for ozone, and high concentrations of benzene and other VOCs, to which existing oil and gas operations are a significant contributor. Additionally, a recent report of the IPCC calls for a "rapid phase-out of CO2 emissions" largely over the next decade to avert catastrophic global temperature rise.

Despite the recent Longmont decision, a ban on fracking is consistent with the County's efforts to fight climate change, including the declaration of a climate emergency, and ongoing lawsuit against Suncor and Exxon for climate change-related damages. A fracking ban is both a reasonable and necessary action authorized for local governments by SB19-181. A ban is widely supported by Boulder County residents: 70% in recent polling, and the same fraction of voters in the County voted in favor of Proposition 112 in 2018.

I also urge you to enact the strongest possible Article 12 regulations on oil and gas operations as a backstop protection to any potential legal challenge to a ban. I recommend the following points for inclusion in Article 12, based on the updated draft released October 20, 2020:

-Implement mandatory 2500' minimum setbacks with no waivers: Revise Article 12 to extend the minimum setback of oil and gas operations to 2500' from any structure intended for human occupancy, and from open space, recreation areas and all water sources. This is modest considering that research has identified adverse effects on the cognitive performance of infants whose mothers lived within 8,500 feet of oil and gas wells and an increased risk of congenital heart defects among children born to women living near oil and gas operations in Colorado, with the risks increasing with the density of oil and gas activities within a 10-mile radius.

-Cumulative impacts: Article 12 should incorporate a structure for the County to consider the context of our already-degraded air quality and the need for dramatic reductions in greenhouse gas emissions to avert catastrophic consequences from climate change.

-Affirmatively protect public health, safety, and welfare, and the environment: Section 12-1000 states that "A proposal meets the standards if it will...either avoid adverse impacts to public health, safety, and welfare, the environment and wildlife resources or...sufficiently minimize, and mitigate unavoidable impact." Oil and gas operations must be required to avoid adverse impacts to public health, safety, and welfare, and the environment and wildlife resources entirely, and not simply minimize impacts.

-Implement as mandatory all of the discretionary measures that are listed in Section 12-1100. Article 12 should explicitly prohibit venting and flaring and require "tankless" operations, which reduce air emissions. A recent study concluded that pregnant women who lived in proximity to natural gas flaring had a 50% higher chance of giving birth early than those who did not, putting the level of risk on par with that caused by smoking.

However, regulations are no substitute for a permanent ban. We encourage you to direct County staff to begin developing language for a fracking ban in Boulder County. Thank you for your ongoing efforts to prioritize public health and the environment in Boulder County.

Sincerely,

Sincerely,

D McShan

1218 Alexandria St Lafayette, CO 80026-1838

selene@indra.com



**From:** [note@everyactionadvocacy.com](mailto:note@everyactionadvocacy.com) on behalf of [Dexter Payne](#)  
**To:** [Boulder County Board of Commissioners](#)  
**Subject:** Please enact a ban on fracking ASAP, as well as the strongest possible oil & gas regulations.  
**Date:** Friday, November 13, 2020 3:02:53 PM

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Dear Board Chair Deb Gardner,

Dear Commissioners,

It's clear the majority of county residents want nothing to do with fracking on OR under public lands... or for that matter, anywhere in the county. And with very good reasons - public health and safety and the urgency of climate alteration among the foremost.

Boulder County residents are deeply concerned about proposed fracking projects (140 wells) in our community. They will result in threats to air and water quality, public health, wildlife, and the climate. It's certain.

I urge you to enact a ban on fracking in Boulder County asap. Protect our community from well-documented public health and safety threats from any activity! Enact the strongest possible protective regulations as a backstop.

The proposed fracking projects are particularly troubling in the context of the Front Range's "serious" high ozone levels, plus high concentrations of benzene and other VOCs. Existing oil and gas operations are significant contributors. The IPCC calls for "rapid phase-out of CO2 emissions" over the next 10yr to avert a global temperature catastrophe.

A ban on fracking is consistent with the County's efforts to fight climate change, including the declaration of Climate Emergency, and ongoing lawsuit against Suncor and Exxon for climate change-related damages. A fracking ban is reasonable and necessary - authorized for local governments by SB19-181. A ban is widely supported by Boulder County residents: 70% in recent polling, and the same fraction of voters in the County voted in favor of Proposition 112 in 2018.

I also urge you to enact the strongest possible Article 12 regulations on oil and gas operations as a backstop protection to any potential legal challenge to a ban. I recommend the following points for inclusion in Article 12, based on the updated draft released October 20, 2020:

- Implement mandatory 2500' minimum setbacks with no waivers: Revise Article 12 to extend the minimum setback of oil and gas operations to 2500' from any structure intended for human occupancy, and from open space, recreation areas and all water SOURCES

- \*(modest considering that research has identified adverse effects on the cognitive performance of infants whose mothers lived within 8,500 feet of oil and gas wells and increased risk of congenital heart defects among children born to women living near oil and gas operations in COLORADO - risks increase with density of oil and gas activities within 10-mile radius.)

- Cumulative impacts:

Article 12 should incorporate a structure for the County to consider the context of our already-degraded air quality and the need for dramatic reductions in greenhouse gas emissions to avert catastrophic consequences from climate change.

- Affirmatively protect public health, safety, and welfare, and the environment: Section 12-1000 states that "A proposal meets the standards if it will...either avoid adverse impacts to public health, safety, and welfare, the environment and wildlife resources or...sufficiently minimize, and mitigate unavoidable impact." Oil and gas operations must be required to avoid adverse impacts to public health, safety, and welfare, and the environment and wildlife resources entirely, and not simply minimize impacts.

- Implement as mandatory all of the discretionary measures that are listed in Section 12-1100. Article 12 should explicitly prohibit venting and flaring and require "tankless" operations, which reduce air emissions. A recent study

concluded that pregnant women who lived in proximity to natural gas flaring had a 50% higher chance of giving birth early than those who did not, putting the level of risk on par with that caused by smoking.

However, regulations are NO SUBSTITUTE for a permanent ban. We encourage you and all County staff immediately develop language for a fracking ban in Boulder County. Thanks for ongoing efforts. Pprioritize public health and the environment in Boulder County.

If we dont protect fully, then how much? If not now, when?

Sincerely,  
Dexter Payne  
4729 Harwich St Boulder, CO 80301-4216  
note@dexterpayne.com

**From:** [lisatully@everyactionadvocacy.com](mailto:lisatully@everyactionadvocacy.com) on behalf of [Lisa Tully](#)  
**To:** [Boulder County Board of Commissioners](#)  
**Subject:** Please enact a ban on fracking ASAP, as well as the strongest possible oil & gas regulations.  
**Date:** Friday, November 13, 2020 4:28:32 PM

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Dear Board Chair Deb Gardner,

Dear Commissioners,

I write as a Boulder County resident deeply concerned about proposed fracking projects (140 wells) in our county and the resulting threats to air and water quality, public health, wildlife, and the climate. I urge you to enact a ban on fracking in Boulder County as soon as possible to protect our community from the well-documented threats to public health and safety from fracking, and to enact the strongest possible protective regulations as a backstop.

The proposed fracking projects are particularly troubling in the context of the Front Range's "serious" non-attainment status for ozone, and high concentrations of benzene and other VOCs, to which existing oil and gas operations are a significant contributor. Additionally, a recent report of the IPCC calls for a "rapid phase-out of CO2 emissions" largely over the next decade to avert catastrophic global temperature rise.

Despite the recent Longmont decision, a ban on fracking is consistent with the County's efforts to fight climate change, including the declaration of a climate emergency, and ongoing lawsuit against Suncor and Exxon for climate change-related damages. A fracking ban is both a reasonable and necessary action authorized for local governments by SB19-181. A ban is widely supported by Boulder County residents: 70% in recent polling, and the same fraction of voters in the County voted in favor of Proposition 112 in 2018.

I also urge you to enact the strongest possible Article 12 regulations on oil and gas operations as a backstop protection to any potential legal challenge to a ban. I recommend the following points for inclusion in Article 12, based on the updated draft released October 20, 2020:

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-Cumulative impacts: Article 12 should incorporate a structure for the County to consider the context of our already-degraded air quality and the need for dramatic reductions in greenhouse gas emissions to avert catastrophic consequences from climate change.

-Affirmatively protect public health, safety, and welfare, and the environment: Section 12-1000 states that "A proposal meets the standards if it will...either avoid adverse impacts to public health, safety, and welfare, the environment and wildlife resources or...sufficiently minimize, and mitigate unavoidable impact." Oil and gas operations must be required to avoid adverse impacts to public health, safety, and welfare, and the environment and wildlife resources entirely, and not simply minimize impacts.

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However, regulations are no substitute for a permanent ban. We encourage you to direct County staff to begin developing language for a fracking ban in Boulder County. Thank you for your ongoing efforts to prioritize public health and the environment in Boulder County.

Sincerely,

Sincerely,  
Lisa Tully  
27 Arrowleaf Ct Boulder, CO 80304-0401  
lisatully@gmail.com

**From:** [shanaparker@everyactionadvocacy.com](mailto:shanaparker@everyactionadvocacy.com) on behalf of [shana.parker](#)  
**To:** [Boulder County Board of Commissioners](#)  
**Subject:** Please enact a ban on fracking ASAP, as well as the strongest possible oil & gas regulations.  
**Date:** Friday, November 13, 2020 4:50:56 PM

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Dear Board Chair Deb Gardner,

Dear Commissioners,

I write as a Boulder County resident deeply concerned about proposed fracking projects (140 wells) in our county and the resulting threats to air and water quality, public health, wildlife, and the climate. I urge you to enact a ban on fracking in Boulder County as soon as possible to protect our community from the well-documented threats to public health and safety from fracking, and to enact the strongest possible protective regulations as a backstop.

The proposed fracking projects are particularly troubling in the context of the Front Range's "serious" non-attainment status for ozone, and high concentrations of benzene and other VOCs, to which existing oil and gas operations are a significant contributor. Additionally, a recent report of the IPCC calls for a "rapid phase-out of CO2 emissions" largely over the next decade to avert catastrophic global temperature rise.

Despite the recent Longmont decision, a ban on fracking is consistent with the County's efforts to fight climate change, including the declaration of a climate emergency, and ongoing lawsuit against Suncor and Exxon for climate change-related damages. A fracking ban is both a reasonable and necessary action authorized for local governments by SB19-181. A ban is widely supported by Boulder County residents: 70% in recent polling, and the same fraction of voters in the County voted in favor of Proposition 112 in 2018.

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-Cumulative impacts: Article 12 should incorporate a structure for the County to consider the context of our already-degraded air quality and the need for dramatic reductions in greenhouse gas emissions to avert catastrophic consequences from climate change.

-Affirmatively protect public health, safety, and welfare, and the environment: Section 12-1000 states that "A proposal meets the standards if it will...either avoid adverse impacts to public health, safety, and welfare, the environment and wildlife resources or...sufficiently minimize, and mitigate unavoidable impact." Oil and gas operations must be required to avoid adverse impacts to public health, safety, and welfare, and the environment and wildlife resources entirely, and not simply minimize impacts.

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However, regulations are no substitute for a permanent ban. We encourage you to direct County staff to begin developing language for a fracking ban in Boulder County. Thank you for your ongoing efforts to prioritize public health and the environment in Boulder County.

Sincerely,

Sincerely,  
shana parker  
936 Rain Lilly Ln Boulder, CO 80304-0791  
shanaparker@comcast.net

**From:** [phoebedooley@everyactionadvocacy.com](mailto:phoebedooley@everyactionadvocacy.com) on behalf of [phoebe dooley](#)  
**To:** [Boulder County Board of Commissioners](#)  
**Subject:** Please enact a ban on fracking ASAP, as well as the strongest possible oil & gas regulations.  
**Date:** Friday, November 13, 2020 8:48:36 PM

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Dear Board Chair Deb Gardner,

Dear Commissioners,

I write as a Boulder County resident deeply concerned about proposed fracking projects (140 wells) in our county and the resulting threats to air and water quality, public health, wildlife, and the climate. I urge you to enact a ban on fracking in Boulder County as soon as possible to protect our community from the well-documented threats to public health and safety from fracking, and to enact the strongest possible protective regulations as a backstop.

The proposed fracking projects are particularly troubling in the context of the Front Range's "serious" non-attainment status for ozone, and high concentrations of benzene and other VOCs, to which existing oil and gas operations are a significant contributor. Additionally, a recent report of the IPCC calls for a "rapid phase-out of CO2 emissions" largely over the next decade to avert catastrophic global temperature rise.

Despite the recent Longmont decision, a ban on fracking is consistent with the County's efforts to fight climate change, including the declaration of a climate emergency, and ongoing lawsuit against Suncor and Exxon for climate change-related damages. A fracking ban is both a reasonable and necessary action authorized for local governments by SB19-181. A ban is widely supported by Boulder County residents: 70% in recent polling, and the same fraction of voters in the County voted in favor of Proposition 112 in 2018.

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-Cumulative impacts: Article 12 should incorporate a structure for the County to consider the context of our already-degraded air quality and the need for dramatic reductions in greenhouse gas emissions to avert catastrophic consequences from climate change.

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However, regulations are no substitute for a permanent ban. We encourage you to direct County staff to begin developing language for a fracking ban in Boulder County. Thank you for your ongoing efforts to prioritize public health and the environment in Boulder County.

Sincerely,

Sincerely,  
phoebe dooley  
1326 S Pratt Pkwy Longmont, CO 80501-6809  
phoebedooley@comcast.net



**From:** [claunald@everyactionadvocacy.com](mailto:claunald@everyactionadvocacy.com) on behalf of [Claudia Gregori-Samson](#)  
**To:** [Boulder County Board of Commissioners](#)  
**Subject:** Please enact a ban on fracking ASAP, as well as the strongest possible oil & gas regulations.  
**Date:** Friday, November 13, 2020 9:03:39 PM

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Dear Board Chair Deb Gardner,

Dear Commissioners,

I write as a Boulder County resident deeply concerned about proposed fracking projects (140 wells) in our county and the resulting threats to air and water quality, public health, wildlife, and the climate. I urge you to enact a ban on fracking in Boulder County as soon as possible to protect our community from the well-documented threats to public health and safety from fracking, and to enact the strongest possible protective regulations as a backstop.

The proposed fracking projects are particularly troubling in the context of the Front Range's "serious" non-attainment status for ozone, and high concentrations of benzene and other VOCs, to which existing oil and gas operations are a significant contributor. Additionally, a recent report of the IPCC calls for a "rapid phase-out of CO2 emissions" largely over the next decade to avert catastrophic global temperature rise.

Despite the recent Longmont decision, a ban on fracking is consistent with the County's efforts to fight climate change, including the declaration of a climate emergency, and ongoing lawsuit against Suncor and Exxon for climate change-related damages. A fracking ban is both a reasonable and necessary action authorized for local governments by SB19-181. A ban is widely supported by Boulder County residents: 70% in recent polling, and the same fraction of voters in the County voted in favor of Proposition 112 in 2018.

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However, regulations are no substitute for a permanent ban. We encourage you to direct County staff to begin developing language for a fracking ban in Boulder County. Thank you for your ongoing efforts to prioritize public health and the environment in Boulder County.

Sincerely,

Sincerely,

Claudia Gregori-Samson

1360 Riverside Ave Boulder, CO 80304-0841

claunald@aol.com

**From:** [marerod@everyactionadvocacy.com](mailto:marerod@everyactionadvocacy.com) on behalf of [Mareli Rodriguez](#)  
**To:** [Boulder County Board of Commissioners](#)  
**Subject:** Please enact a ban on fracking ASAP, as well as the strongest possible oil & gas regulations.  
**Date:** Friday, November 13, 2020 10:01:18 PM

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Dear Board Chair Deb Gardner,

Dear Commissioners,

I write as a Boulder County resident deeply concerned about proposed fracking projects (140 wells) in our county and the resulting threats to air and water quality, public health, wildlife, and the climate. I urge you to enact a ban on fracking in Boulder County as soon as possible to protect our community from the well-documented threats to public health and safety from fracking, and to enact the strongest possible protective regulations as a backstop.

The proposed fracking projects are particularly troubling in the context of the Front Range's "serious" non-attainment status for ozone, and high concentrations of benzene and other VOCs, to which existing oil and gas operations are a significant contributor. Additionally, a recent report of the IPCC calls for a "rapid phase-out of CO2 emissions" largely over the next decade to avert catastrophic global temperature rise.

Despite the recent Longmont decision, a ban on fracking is consistent with the County's efforts to fight climate change, including the declaration of a climate emergency, and ongoing lawsuit against Suncor and Exxon for climate change-related damages. A fracking ban is both a reasonable and necessary action authorized for local governments by SB19-181. A ban is widely supported by Boulder County residents: 70% in recent polling, and the same fraction of voters in the County voted in favor of Proposition 112 in 2018.

I also urge you to enact the strongest possible Article 12 regulations on oil and gas operations as a backstop protection to any potential legal challenge to a ban. I recommend the following points for inclusion in Article 12, based on the updated draft released October 20, 2020:

-Implement mandatory 2500' minimum setbacks with no waivers: Revise Article 12 to extend the minimum setback of oil and gas operations to 2500' from any structure intended for human occupancy, and from open space, recreation areas and all water sources. This is modest considering that research has identified adverse effects on the cognitive performance of infants whose mothers lived within 8,500 feet of oil and gas wells and an increased risk of congenital heart defects among children born to women living near oil and gas operations in Colorado, with the risks increasing with the density of oil and gas activities within a 10-mile radius.

-Cumulative impacts: Article 12 should incorporate a structure for the County to consider the context of our already-degraded air quality and the need for dramatic reductions in greenhouse gas emissions to avert catastrophic consequences from climate change.

-Affirmatively protect public health, safety, and welfare, and the environment: Section 12-1000 states that "A proposal meets the standards if it will...either avoid adverse impacts to public health, safety, and welfare, the environment and wildlife resources or...sufficiently minimize, and mitigate unavoidable impact." Oil and gas operations must be required to avoid adverse impacts to public health, safety, and welfare, and the environment and wildlife resources entirely, and not simply minimize impacts.

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However, regulations are no substitute for a permanent ban. We encourage you to direct County staff to begin developing language for a fracking ban in Boulder County. Thank you for your ongoing efforts to prioritize public health and the environment in Boulder County.

Sincerely,

Sincerely,  
Mareli Rodriguez  
11887 Billings Ave Lafayette, CO 80026-9613  
marerod@msn.com

**From:** [rithyoff@everyactionadvocacy.com](mailto:rithyoff@everyactionadvocacy.com) on behalf of [Rithy Orloff-Falk](#)  
**To:** [Boulder County Board of Commissioners](#)  
**Subject:** Please enact a ban on fracking ASAP, as well as the strongest possible oil & gas regulations.  
**Date:** Saturday, November 14, 2020 6:51:42 AM

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Dear Board Chair Deb Gardner,

Dear Commissioners,

I write as a Boulder County resident deeply concerned about proposed fracking projects (140 wells) in our county and the resulting threats to air and water quality, public health, wildlife, and the climate. I urge you to enact a ban on fracking in Boulder County as soon as possible to protect our community from the well-documented threats to public health and safety from fracking, and to enact the strongest possible protective regulations as a backstop.

The proposed fracking projects are particularly troubling in the context of the Front Range's "serious" non-attainment status for ozone, and high concentrations of benzene and other VOCs, to which existing oil and gas operations are a significant contributor. Additionally, a recent report of the IPCC calls for a "rapid phase-out of CO2 emissions" largely over the next decade to avert catastrophic global temperature rise.

Despite the recent Longmont decision, a ban on fracking is consistent with the County's efforts to fight climate change, including the declaration of a climate emergency, and ongoing lawsuit against Suncor and Exxon for climate change-related damages. A fracking ban is both a reasonable and necessary action authorized for local governments by SB19-181. A ban is widely supported by Boulder County residents: 70% in recent polling, and the same fraction of voters in the County voted in favor of Proposition 112 in 2018.

I also urge you to enact the strongest possible Article 12 regulations on oil and gas operations as a backstop protection to any potential legal challenge to a ban. I recommend the following points for inclusion in Article 12, based on the updated draft released October 20, 2020:

-Implement mandatory 2500' minimum setbacks with no waivers: Revise Article 12 to extend the minimum setback of oil and gas operations to 2500' from any structure intended for human occupancy, and from open space, recreation areas and all water sources. This is modest considering that research has identified adverse effects on the cognitive performance of infants whose mothers lived within 8,500 feet of oil and gas wells and an increased risk of congenital heart defects among children born to women living near oil and gas operations in Colorado, with the risks increasing with the density of oil and gas activities within a 10-mile radius.

-Cumulative impacts: Article 12 should incorporate a structure for the County to consider the context of our already-degraded air quality and the need for dramatic reductions in greenhouse gas emissions to avert catastrophic consequences from climate change.

-Affirmatively protect public health, safety, and welfare, and the environment: Section 12-1000 states that "A proposal meets the standards if it will...either avoid adverse impacts to public health, safety, and welfare, the environment and wildlife resources or...sufficiently minimize, and mitigate unavoidable impact." Oil and gas operations must be required to avoid adverse impacts to public health, safety, and welfare, and the environment and wildlife resources entirely, and not simply minimize impacts.

-Implement as mandatory all of the discretionary measures that are listed in Section 12-1100. Article 12 should explicitly prohibit venting and flaring and require "tankless" operations, which reduce air emissions. A recent study concluded that pregnant women who lived in proximity to natural gas flaring had a 50% higher chance of giving birth early than those who did not, putting the level of risk on par with that caused by smoking.

However, regulations are no substitute for a permanent ban. We encourage you to direct County staff to begin developing language for a fracking ban in Boulder County. Thank you for your ongoing efforts to prioritize public health and the environment in Boulder County.

Sincerely,

Sincerely,  
Rithy Orloff-Falk  
736 Wade Rd Longmont, CO 80503-7018  
rithyoff@gmail.com

**From:** [hkavanagh546@everyactionadvocacy.com](mailto:hkavanagh546@everyactionadvocacy.com) on behalf of [Hilarie Kavanagh](#)  
**To:** [Boulder County Board of Commissioners](#)  
**Subject:** Please enact a ban on fracking ASAP, as well as the strongest possible oil & gas regulations.  
**Date:** Saturday, November 14, 2020 11:07:46 AM

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Dear Board Chair Deb Gardner,

Dear Commissioners,

I write as a Boulder County resident deeply concerned about proposed fracking projects (140 wells) in our county and the resulting threats to air and water quality, public health, wildlife, and the climate. I urge you to enact a ban on fracking in Boulder County as soon as possible to protect our community from the well-documented threats to public health and safety from fracking, and to enact the strongest possible protective regulations as a backstop.

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However, regulations are no substitute for a permanent ban. We encourage you to direct County staff to begin developing language for a fracking ban in Boulder County. Thank you for your ongoing efforts to prioritize public health and the environment in Boulder County.

Sincerely,

Sincerely,  
Hilarie Kavanagh  
7249 Mount Meeker Rd Longmont, CO 80503-7127  
hkavanagh546@msn.com



**From:** [julitpearson@everyactionadvocacy.com](mailto:julitpearson@everyactionadvocacy.com) on behalf of [juli pearson](#)  
**To:** [Boulder County Board of Commissioners](#)  
**Subject:** Please enact a ban on fracking ASAP, as well as the strongest possible oil & gas regulations.  
**Date:** Saturday, November 14, 2020 12:12:49 PM

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Dear Board Chair Deb Gardner,

Dear Commissioners,

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However, regulations are no substitute for a permanent ban. We encourage you to direct County staff to begin developing language for a fracking ban in Boulder County. Thank you for your ongoing efforts to prioritize public health and the environment in Boulder County.

Sincerely,

Sincerely,  
juli pearson  
378 Buchanan Ct Louisville, CO 80027-2269  
julipearson@hotmail.com

**From:** [doneworkin@everyactionadvocacy.com](mailto:doneworkin@everyactionadvocacy.com) on behalf of [Susan Chase](#)  
**To:** [Boulder County Board of Commissioners](#)  
**Subject:** Please enact a ban on fracking ASAP, as well as the strongest possible oil & gas regulations.  
**Date:** Saturday, November 14, 2020 5:18:18 PM

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Dear Board Chair Deb Gardner,

Dear Commissioners,

I write as a Boulder County resident deeply concerned about proposed fracking projects (140 wells) in our county and the resulting threats to air and water quality, public health, wildlife, and the climate. I urge you to enact a ban on fracking in Boulder County as soon as possible to protect our community from the well-documented threats to public health and safety from fracking, and to enact the strongest possible protective regulations as a backstop.

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However, regulations are no substitute for a permanent ban. We encourage you to direct County staff to begin developing language for a fracking ban in Boulder County. Thank you for your ongoing efforts to prioritize public health and the environment in Boulder County.

Sincerely,

Sincerely,  
Susan Chase  
1219 Alexandria St Lafayette, CO 80026-1827  
doneworkin@msn.com

**From:** [politicalbeth888@everyactionadvocacy.com](mailto:politicalbeth888@everyactionadvocacy.com) on behalf of [Beth Kuper](#)  
**To:** [Boulder County Board of Commissioners](#)  
**Subject:** Please enact a ban on fracking ASAP, as well as the strongest possible oil & gas regulations.  
**Date:** Saturday, November 14, 2020 7:30:05 PM

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Dear Board Chair Deb Gardner,

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However, regulations are no substitute for a permanent ban. We encourage you to direct County staff to begin developing language for a fracking ban in Boulder County. Thank you for your ongoing efforts to prioritize public health and the environment in Boulder County.

Sincerely,

Sincerely,  
Beth Kuper  
722 Cardinal Dr Lafayette, CO 80026-2111  
politicalbeth888@gmail.com

**From:** [davidtresemer@everyactionadvocacy.com](mailto:davidtresemer@everyactionadvocacy.com) on behalf of [David Tresemer](#)  
**To:** [Boulder County Board of Commissioners](#)  
**Subject:** Please enact a ban on fracking ASAP, as well as the strongest possible oil & gas regulations.  
**Date:** Saturday, November 14, 2020 8:28:02 PM

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Dear Board Chair Deb Gardner,

Dear Boulder County Commissioners,

The air quality--ought it not be perfect, so close to so much nature, so many trees and mountains? But it's not. Fracking is a major contributor, and i urge you to stop new wells here.

I write as a Boulder County resident deeply concerned about proposed fracking projects (140 wells) in our county and the resulting threats to air and water quality, public health, wildlife, and the climate. I urge you to enact a ban on fracking in Boulder County as soon as possible to protect our community from the well-documented threats to public health and safety from fracking, and to enact the strongest possible protective regulations as a backstop.

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However, regulations are no substitute for a permanent ban. We encourage you to direct County staff to begin developing language for a fracking ban in Boulder County. Thank you for your ongoing efforts to prioritize public health and the environment in Boulder County.

Sincerely,

Sincerely,  
David Tresemer  
3464 Sunshine Canyon Dr Boulder, CO 80302-9722  
davidtresemer@gmail.com



**From:** [sagewave@everyactionadvocacy.com](mailto:sagewave@everyactionadvocacy.com) on behalf of [Sage Hamilton](#)  
**To:** [Boulder County Board of Commissioners](#)  
**Subject:** Please enact a ban on fracking ASAP, as well as the strongest possible oil & gas regulations.  
**Date:** Monday, November 16, 2020 2:25:49 PM

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Dear Board Chair Deb Gardner,

Dear Commissioners,

TIME TO STOP NOW ! STOP DOING ANYTHING THAT DEGRADES OUR ENVIRONMENT ANYMORE.  
TAKE A STAND FOR THE ENVIRONMENT, FOR OUR CITIZENS!

I write as a Boulder County resident deeply concerned about proposed fracking projects (140 wells) in our county and the resulting threats to air and water quality, public health, wildlife, and the climate. I urge you to enact a ban on fracking in Boulder County as soon as possible to protect our community from the well-documented threats to public health and safety from fracking, and to enact the strongest possible protective regulations as a backstop.

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Sincerely,

Sincerely,  
Sage Hamilton  
1545 Upland Ave Boulder, CO 80304-0828  
sagewaye@gmail.com

**From:** [lynnjoywalk@everyactionadvocacy.com](mailto:lynnjoywalk@everyactionadvocacy.com) on behalf of [Lynn Israel](#)  
**To:** [Boulder County Board of Commissioners](#)  
**Subject:** Please enact a ban on fracking ASAP, as well as the strongest possible oil & gas regulations.  
**Date:** Friday, November 20, 2020 10:24:55 PM

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Dear Board Chair Deb Gardner,

Dear Commissioners,

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Sincerely,

Sincerely,

Lynn Israel

1475 Kendall Dr Boulder, CO 80305-6936

lynnjoywalk@gmail.com

**From:** [Toby Blauwasser](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** Oil and Gas Comments  
**Date:** Friday, November 20, 2020 11:33:21 PM

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Honorable County Commissioners,

We need the strongest protection from oil and gas drilling.

We need to make it as expensive as possible and deny this destructive industry the opportunity to pass on the cost of pollution in the form of public health expenditures, the cost of destroying our planet in the form of natural disasters such as drought and fires, the cost to our environment, not only for humans but for all living things.

Tax the bad, subsidize the good.

Thank you,

Toby A. Blauwasser

**From:** [Aaron Harber](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Cc:** [Jones, Matt](#); [Gardner, Deb](#); [Jones, Elise](#); [Case, Dale](#)  
**Subject:** Oil & Gas Regulations  
**Date:** Saturday, November 21, 2020 6:22:31 AM

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Dear Commissioners and Planning Staff,

As a property owner in Boulder County with two adjacent parcels (each currently having a gas well and pad on each parcel), I have found that these operations can attract all kinds of unwanted attention.

As a result, they create significant public and private nuisances. I am certain these are unintentional, as far as energy companies are concerned, and many responsible companies address these issues to everyone's satisfaction.

Unfortunately, there are a significant number of "rogue" energy companies which spoil the situation for everyone, including those companies which act responsibly.

The result is these companies do the minimum necessary to comply with the law and various rules and regulations. In some cases, they do not even do that.

I thought it might be helpful for you to have the perspective of and some suggestions from a property owner. I own and live on the northern half of Section 25 in Boulder County, just ½ north of Arapahoe Road.

The problems which can be created by oil & gas operations are exacerbated by the existence of the "split estate" in Colorado in which property owners are subject to the whims of mineral rights owners who are guaranteed use of and access to a property, often with minimal compensation.

Perhaps, at some point, the County can look at this situation and, with other counties and the state government, find a long-term path to unite mineral rights and land ownership.

I believe there are some creative possibilities which would be worth exploring and which, ultimately would help eliminate conflict between landowners and mineral rights owners.

The reason so many property owners have so few rights and get such minimal compensation for the use of their property is because the vast majority of mineral rights leases were made decades ago.

At those points in time, few people were aware of the dangers various operations could pose and, for the most part, there were fewer homes and structures in most of the County.

In my experience, one of the most significant issues is that energy companies require roads (typically dirt and gravel) to well locations on a property. These roads attract a wide range of people who trespass on the property and create a number of problems.

These roadways usually are used only by the oil & gas companies and their contractors, which typically drive on them almost every day to the wellheads on a property. This is to ensure the wells are operating property and safely.

The roadways also are used by very large vehicles, including tanker trucks and drilling equipment services, to periodically service the wells.

As a result, the oil & gas roadways are appealing to outsiders because they present paths throughout a property. This creates problems when people (and their various vehicles) come onto a property which is not completely fenced.

In many cases, the trespassers are younger people who aren't aware of any dangers posed by the oil & gas operation or of the fact they are trespassing. They often do damage to farmland via biking, ATV-ing, and even driving cars and trucks through the property.

Trespassers also are often not aware of the dangers of being on well-pads, despite the warning signage most oil & gas companies include on site.

So, regulations which will work to keep people off properties where there are oil & gas operations would be to the benefit of all concerned.

I would like to encourage you to include provisions in the County's regulations that, at the request of the County or a property owner, the following be done.

I realize you already may be in the process of addressing many of these. If so, please consider this as an indication of my support for your efforts.

1. In the event of any kind of accident, spill, et cetera, on a property, the oil & gas company should immediately notify the County and the landowner as well as implement a plan for mitigation and correction. Provision should be made for compensation to the landowner for any damage. This should be done as a supplemental set of regulations to those promulgated by the Colorado Oil & Gas Conservation Commission.
2. Oil & gas operations should include air quality real-time monitoring on each well pad, where this is not already occurring.
3. Oil & gas operations should include air quality real-time monitoring at a minimum of four separate and equally distant locations from each well pad.
4. Such real-time monitoring should be online and accessible to the County and the public 24/7.
5. All oil & gas well pads should be gated & fenced with the design of the gating & fencing subject to the approval of the County and the landowner. Fencing design would address the type of fencing, the quality of fencing, the height of fencing, when and how it would be installed and maintained, and future consideration (such as a deposit or bond to guarantee performance), et cetera.
6. All parcels where there are oil & gas operations and/or oil & gas wells should be gated & fenced, if requested by the County or the landowner, with the design of the gating & fencing subject to the approval of the County and the landowner.
7. All roads (of any kind) used by oil & gas companies should be paved with asphalt or concrete, if requested by the County or the landowner, to eliminate the dust and dirt raised through frequent use.
8. In the event of any significant work on a well or well pad which last more than a day, the oil

& gas company, at the landowner's request, should pay a per diem to the landowner (automatically adjusted annually for inflation) to cover the costs of temporary housing for the period of time work is being done (e.g., drilling a well, recompleting a well, installing related facilities such as pipelines, et cetera).

9. To prevent the County or landowner from being left with the cost of an abandoned well or with a company which uses bankruptcy to avoid its obligations, the County should consider what bonding requirements it can impose on both existing and new wells and related activity (such as pipelines, storage, and other transmission elements). Most bonding requirements to date are grossly underfunded and inadequate to address problems they were meant to cover.
10. In the event of any conflict between an oil & gas company and a landowner or the County, there should be an Alternative Dispute Resolution provision which provides for a relative speedy and inexpensive resolution process for any conflicts. This would reduce the burden on our already overburdened courts and also allow issues to get resolved quicker which would be especially beneficial when there are environmental concerns which cannot otherwise be immediately addressed.

I hope some of these suggestions are helpful as you formulate policies, rules, and regulations for the coming years.

You all are welcome to contact me any time, if you have any questions. Thank you very much for your time and consideration.

Respectfully yours,



2500 North 119<sup>th</sup> Street, Lafayette, CO 80026

2601 East County Line Road, Erie, CO 80516

Township 1 North, Range 69 West, at the 6<sup>th</sup> P.M., Boulder County, Colorado

P: 303-666-6161 C: 303-718-3399

[HarberTV.com/Info](http://HarberTV.com/Info) + [HarberTV.com/Award](http://HarberTV.com/Award)



**From:** [Megan Houseweart](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** Public comment for Dec 1 hearing on O&G regulations  
**Date:** Saturday, November 21, 2020 3:09:27 PM

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Please enact the most strict and comprehensive land use code amendments to protect our air, water, climate, wildlife and citizens. We must prevent further oil and gas development and seismic testing in Boulder County by creative use of the land use code.

SB181 allows local governments to regulate oil and gas development, so please push the envelope and go beyond what is considered legally “safe.” It would be better to enact protections that are possibly beyond the letter of the law and perhaps incur a lawsuit if it means better protections for our county. Important legal precedents could be set by your aggressive approach - this could benefit other counties with fewer resources. The O&G industry is reeling financially and may not be able to fight back as they have in the past. Nothing ventured, nothing gained.

Megan Wilder  
80302

**From:** [jonathonmontag@everyactionadvocacy.com](mailto:jonathonmontag@everyactionadvocacy.com) on behalf of [Jonathon Montag Pharmacist MS PA-C](#)  
**To:** [Boulder County Board of Commissioners](#)  
**Subject:** Please enact a ban on fracking ASAP, as well as the strongest possible oil & gas regulations.  
**Date:** Monday, November 23, 2020 2:01:35 PM

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Dear Board Chair Deb Gardner,

Dear Commissioners,

I write as a Boulder County resident deeply concerned about proposed fracking projects (140 wells) in our county and the resulting threats to air and water quality, public health, wildlife, and the climate. I urge you to enact a ban on fracking in Boulder County as soon as possible to protect our community from the well-documented threats to public health and safety from fracking, and to enact the strongest possible protective regulations as a backstop.

The proposed fracking projects are particularly troubling in the context of the Front Range's "serious" non-attainment status for ozone, and high concentrations of benzene and other VOCs, to which existing oil and gas operations are a significant contributor. Additionally, a recent report of the IPCC calls for a "rapid phase-out of CO2 emissions" largely over the next decade to avert catastrophic global temperature rise.

Despite the recent Longmont decision, a ban on fracking is consistent with the County's efforts to fight climate change, including the declaration of a climate emergency, and ongoing lawsuit against Suncor and Exxon for climate change-related damages. A fracking ban is both a reasonable and necessary action authorized for local governments by SB19-181. A ban is widely supported by Boulder County residents: 70% in recent polling, and the same fraction of voters in the County voted in favor of Proposition 112 in 2018.

I also urge you to enact the strongest possible Article 12 regulations on oil and gas operations as a backstop protection to any potential legal challenge to a ban. I recommend the following points for inclusion in Article 12, based on the updated draft released October 20, 2020:

-Implement mandatory 2500' minimum setbacks with no waivers: Revise Article 12 to extend the minimum setback of oil and gas operations to 2500' from any structure intended for human occupancy, and from open space, recreation areas and all water sources. This is modest considering that research has identified adverse effects on the cognitive performance of infants whose mothers lived within 8,500 feet of oil and gas wells and an increased risk of congenital heart defects among children born to women living near oil and gas operations in Colorado, with the risks increasing with the density of oil and gas activities within a 10-mile radius.

-Cumulative impacts: Article 12 should incorporate a structure for the County to consider the context of our already-degraded air quality and the need for dramatic reductions in greenhouse gas emissions to avert catastrophic consequences from climate change.

-Affirmatively protect public health, safety, and welfare, and the environment: Section 12-1000 states that "A proposal meets the standards if it will...either avoid adverse impacts to public health, safety, and welfare, the environment and wildlife resources or...sufficiently minimize, and mitigate unavoidable impact." Oil and gas operations must be required to avoid adverse impacts to public health, safety, and welfare, and the environment and wildlife resources entirely, and not simply minimize impacts.

-Implement as mandatory all of the discretionary measures that are listed in Section 12-1100. Article 12 should explicitly prohibit venting and flaring and require "tankless" operations, which reduce air emissions. A recent study concluded that pregnant women who lived in proximity to natural gas flaring had a 50% higher chance of giving birth early than those who did not, putting the level of risk on par with that caused by smoking.

However, regulations are no substitute for a permanent ban. We encourage you to direct County staff to begin developing language for a fracking ban in Boulder County. Thank you for your ongoing efforts to prioritize public health and the environment in Boulder County.

Sincerely,

Sincerely,  
Jonathon Montag Pharmacist MS PA-C  
4500 19th St Lot 567 Boulder, CO 80304-0666  
jonathonmontag@hotmail.com

**From:** [Bhatt](#)  
**To:** [Jones, Elise](#); [Jones, Matt](#); [Gardner, Deb](#); [Boulder County Oil and Gas Comment](#)  
**Subject:** Article 12 oil and gas regulation comments  
**Date:** Monday, November 23, 2020 2:04:07 PM  
**Attachments:** [Article12-Written Comments-11-22-2020.docx](#)  
[Article12-Written Comments-11-22-2020.pdf](#)

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Please see enclosed file for our comments on the Boulder County Article 12 draft regulations.

Thanks,  
Ramesh Bhatt  
Member, Executive Committee of the Indian Peaks Sierra Club Group  
2421 Briarwood Drive  
Boulder, CO 80305



Sierra Club Indian Peaks Group

Ramesh Bhatt, Ph.D.  
2421 Briarwood Drive  
Boulder, CO 80305  
bhattlex@yahoo.com

November 22, 2020

Boulder County Commissioners and Staff  
1777 Broadway  
Boulder, CO 80302

Dear Commissioners and Staff,

I am writing on behalf of the Executive Committee of the Indian Peaks Group of the Sierra Club, which has approximately 10,000 members and supporters in Boulder County. We thank the county staff for the latest iteration of Article 12 which we believe is stronger than the earlier version. However, we also feel that the regulations could be improved with more stringent standards and greater clarity.

First, the rules now say that fracking operations cannot compromise our ozone non-attainment or increase particulate pollution:

“Oil and gas facilities and operations will not compromise the attainment of ozone standards for the Denver Metro/North Front Range ozone nonattainment area as established by the US Environmental Protection Agency. Oil and gas facilities and operations will not contribute particulate matter to the air in a manner that endangers public health.”<sup>1</sup>

While these prohibitions are good, unfortunately, similar clear language is missing when it comes to other toxic emissions. By now, a long list of chemicals that affect human health have been identified as originating from fracking operations.<sup>2</sup> A recent paper from Harvard even suggests that fracking leads to increased radiation as far away as 12 miles downstream.<sup>3</sup> Please

<sup>1</sup> Section 12-1000.A.1. Updates to Article 12 of the Boulder County Land Use Code for Oil and Gas Operations. Oct 20, 2020

<sup>2</sup> Helmig, D. 2020. Air quality impacts from oil and natural gas development in Colorado. *Elem Sci Anth*, 8: 4. DOI: <https://doi.org/10.1525/elementa.398>

<sup>3</sup> Li et al. (2020). Unconventional oil and gas development and ambient particle radioactivity. *Nature Communications*. <https://www.nature.com/articles/s41467-020-18226-w>

strengthen the rules to explicitly protect our community against *all* such dangers in the same manner as the prohibitions against ozone and particulate pollution.

Second, it is disappointing to see very little mention of climate change in the rules. While the draft rules address ozone and particulate matter specifically, they do not address climate change. County staff say that climate impacts are not included because they are not explicitly mentioned in SB181. Ozone and particulates are not mentioned in SB181 either, yet they have been incorporated into the proposed regulations. This contrast is puzzling. SB181 allows municipalities to protect human health, welfare, and the environment. It is hard to imagine how this can be achieved without explicitly addressing climate change, which is directly linked to the air emissions that result from production and use of oil and gas. Boulder County has declared a climate emergency and has even sued oil and gas companies Exxon and Suncor to recover costs associated with their contribution to climate change. Yet there is an apparent reluctance to impose regulations on fracking operations that would require mitigation of their carbon pollution. We urge the staff and commissioners to include strong language that directly addresses climate impacts in the regulations. Ideally, fracking operations would not be allowed at all in the county, but at a minimum, oil and gas companies should be required to offset their emissions by buying carbon credits or using other mechanisms to account for climate damage from their operations. Please modify the rules to require operators to buy offsets or in some other way ensure that their operation and their products do not result in a net increase in greenhouse gas emissions.

Third, over the years, Boulder County residents have spent over \$500 million to purchase and protect open space. It would be extremely unfortunate if the highly polluting industrial activity of fracking is allowed to occur on our green space. This is a clear danger given that 140 wells have already been proposed to be located on open space in east Boulder County. Please use the clear authority provided by SB19-181 to protect against these threats. Ideally oil and gas operations would be prohibited on open space. At the very least, fracking should not be allowed to occur in floodplains; riparian areas; core areas of green space; ecologically significant areas for Tier 1 and Tier 2 species in the Colorado State Wildlife Action Plan and for those on the Boulder County Wildlife Species of Special Concern list; migratory corridors; bird nesting areas; and near recreation areas like hiking trails. SB181 demands that wildlife and biological resources be protected to the same extent as human health and welfare, so there should no hesitation in strictly protecting at least these components of open space.

Finally, we feel that the language is unnecessarily tentative in some places. For example, a section in rule 12-1100 states the following: “The County may limit or prohibit toxic chemicals

<sup>4</sup> Kim Sanchez’s testimony in front of Planning Commission on 11/10/2020.

[https://www.youtube.com/watch?v=7Zo2NAeY\\_n8&list=PLwaTWZycLjaRAkOueQFtaOe1JDCiEvxcX&index=2](https://www.youtube.com/watch?v=7Zo2NAeY_n8&list=PLwaTWZycLjaRAkOueQFtaOe1JDCiEvxcX&index=2)

in hydraulic fracturing fluids.”<sup>5</sup> Instead, we suggest that you adopt strong language such as “The County *prohibits* toxic chemicals in hydraulic fracking fluid.” We believe that such explicit and definitive language is necessary to protect human health, welfare, wildlife, and the environment as envisioned in SB19-181.

Thank you for the opportunity to comment on the draft rules.

Sincerely,

A handwritten signature in black ink, appearing to read "Ramesh Bhatt", with a horizontal line underneath.

Ramesh Bhatt, Ph.D.

Member, Executive Committee of the Indian Peaks Sierra Club

<sup>5</sup> Section 12-1100.H.2 Updates to Article 12 of the Boulder County Land Use Code for Oil and Gas Operations. Oct 20, 2020

**From:** [mhouseweart@everyactionadvocacy.com](mailto:mhouseweart@everyactionadvocacy.com) on behalf of [Megan Wilder](#)  
[Boulder County Board of Commissioners](#)  
**Subject:** Please enact a ban on fracking ASAP, as well as the strongest possible oil & gas regulations.  
**Date:** Monday, November 23, 2020 2:05:27 PM

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Dear Board Chair Deb Gardner,

Dear Commissioners,

I write as a Boulder County resident deeply concerned about proposed fracking projects (140 wells) in our county and the resulting threats to air and water quality, public health, wildlife, and the climate. I urge you to enact a ban on fracking in Boulder County as soon as possible to protect our community from the well-documented threats to public health and safety from fracking, and to enact the strongest possible protective regulations as a backstop.

The proposed fracking projects are particularly troubling in the context of the Front Range's "serious" non-attainment status for ozone, and high concentrations of benzene and other VOCs, to which existing oil and gas operations are a significant contributor. Additionally, a recent report of the IPCC calls for a "rapid phase-out of CO2 emissions" largely over the next decade to avert catastrophic global temperature rise.

Despite the recent Longmont decision, a ban on fracking is consistent with the County's efforts to fight climate change, including the declaration of a climate emergency, and ongoing lawsuit against Suncor and Exxon for climate change-related damages. A fracking ban is both a reasonable and necessary action authorized for local governments by SB19-181. A ban is widely supported by Boulder County residents: 70% in recent polling, and the same fraction of voters in the County voted in favor of Proposition 112 in 2018.

I also urge you to enact the strongest possible Article 12 regulations on oil and gas operations as a backstop protection to any potential legal challenge to a ban. I recommend the following points for inclusion in Article 12, based on the updated draft released October 20, 2020:

- Implement mandatory 2500' minimum setbacks with no waivers: Revise Article 12 to extend the minimum setback of oil and gas operations to 2500' from any structure intended for human occupancy, and from open space, recreation areas and all water sources. This is modest considering that research has identified adverse effects on the cognitive performance of infants whose mothers lived within 8,500 feet of oil and gas wells and an increased risk of congenital heart defects among children born to women living near oil and gas operations in Colorado, with the risks increasing with the density of oil and gas activities within a 10-mile radius.

- Cumulative impacts: Article 12 should incorporate a structure for the County to consider the context of our already-degraded air quality and the need for dramatic reductions in greenhouse gas emissions to avert catastrophic consequences from climate change.

- Affirmatively protect public health, safety, and welfare, and the environment: Section 12-1000 states that "A proposal meets the standards if it will...either avoid adverse impacts to public health, safety, and welfare, the environment and wildlife resources or...sufficiently minimize, and mitigate unavoidable impact." Oil and gas operations must be required to avoid adverse impacts to public health, safety, and welfare, and the environment and wildlife resources entirely, and not simply minimize impacts.

- Implement as mandatory all of the discretionary measures that are listed in Section 12-1100. Article 12 should explicitly prohibit venting and flaring and require "tankless" operations, which reduce air emissions. A recent study concluded that pregnant women who lived in proximity to natural gas flaring had a 50% higher chance of giving birth early than those who did not, putting the level of risk on par with that caused by smoking.

However, regulations are no substitute for a permanent ban. We encourage you to direct County staff to begin developing language for a fracking ban in Boulder County. Thank you for your ongoing efforts to prioritize public health and the environment in Boulder County.



Sincerely,

Sincerely,  
Megan Wilder  
2175 Knollwood Dr Boulder, CO 80302-4706  
mhouseweart@yahoo.com

**From:** [cjboulder@everyactionadvocacy.com](mailto:cjboulder@everyactionadvocacy.com) on behalf of [Catherine Johnson](#)  
[Boulder County Board of Commissioners](#)  
**Subject:** Please enact a ban on fracking ASAP, as well as the strongest possible oil & gas regulations.  
**Date:** Monday, November 23, 2020 2:11:33 PM

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Dear Board Chair Deb Gardner,

Dear Commissioners,

I write as a Boulder County resident deeply concerned about proposed fracking projects (140 wells) in our county and the resulting threats to air and water quality, public health, wildlife, and the climate. I urge you to enact a ban on fracking in Boulder County as soon as possible to protect our community from the well-documented threats to public health and safety from fracking, and to enact the strongest possible protective regulations as a backstop.

The proposed fracking projects are particularly troubling in the context of the Front Range's "serious" non-attainment status for ozone, and high concentrations of benzene and other VOCs, to which existing oil and gas operations are a significant contributor. Additionally, a recent report of the IPCC calls for a "rapid phase-out of CO2 emissions" largely over the next decade to avert catastrophic global temperature rise.

Despite the recent Longmont decision, a ban on fracking is consistent with the County's efforts to fight climate change, including the declaration of a climate emergency, and ongoing lawsuit against Suncor and Exxon for climate change-related damages. A fracking ban is both a reasonable and necessary action authorized for local governments by SB19-181. A ban is widely supported by Boulder County residents: 70% in recent polling, and the same fraction of voters in the County voted in favor of Proposition 112 in 2018.

I also urge you to enact the strongest possible Article 12 regulations on oil and gas operations as a backstop protection to any potential legal challenge to a ban. I recommend the following points for inclusion in Article 12, based on the updated draft released October 20, 2020:

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However, regulations are no substitute for a permanent ban. We encourage you to direct County staff to begin developing language for a fracking ban in Boulder County. Thank you for your ongoing efforts to prioritize public health and the environment in Boulder County.

Sincerely,

Sincerely,  
Catherine Johnson  
1205 Hartford Dr Boulder, CO 80305-6321  
cjboulder@yahoo.com

**From:** [jeangore@everyactionadvocacy.com](mailto:jeangore@everyactionadvocacy.com) on behalf of [Jean Gore](#)  
**To:** [Boulder County Board of Commissioners](#)  
**Subject:** Please enact a ban on fracking ASAP, as well as the strongest possible oil & gas regulations.  
**Date:** Monday, November 23, 2020 2:47:33 PM

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Dear Board Chair Deb Gardner,

Dear Commissioners,

I write as a Boulder County resident deeply concerned about proposed fracking projects (140 wells) in our county and the resulting threats to air and water quality, public health, wildlife, and the climate. I urge you to enact a ban on fracking in Boulder County as soon as possible to protect our community from the well-documented threats to public health and safety from fracking, and to enact the strongest possible protective regulations as a backstop.

The proposed fracking projects are particularly troubling in the context of the Front Range's "serious" non-attainment status for ozone, and high concentrations of benzene and other VOCs, to which existing oil and gas operations are a significant contributor. Additionally, a recent report of the IPCC calls for a "rapid phase-out of CO2 emissions" largely over the next decade to avert catastrophic global temperature rise.

Despite the recent Longmont decision, a ban on fracking is consistent with the County's efforts to fight climate change, including the declaration of a climate emergency, and ongoing lawsuit against Suncor and Exxon for climate change-related damages. A fracking ban is both a reasonable and necessary action authorized for local governments by SB19-181. A ban is widely supported by Boulder County residents: 70% in recent polling, and the same fraction of voters in the County voted in favor of Proposition 112 in 2018.

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However, regulations are no substitute for a permanent ban. We encourage you to direct County staff to begin developing language for a fracking ban in Boulder County. Thank you for your ongoing efforts to prioritize public health and the environment in Boulder County.

Sincerely,

Sincerely,

Jean Gore

350 Ponca Pl Apt 175 Boulder, CO 80303-3864

jeangore@comcast.net

**From:** [adetwile@everyactionadvocacy.com](mailto:adetwile@everyactionadvocacy.com) on behalf of [Alden Perkins](#)  
**To:** [Boulder County Board of Commissioners](#)  
**Subject:** Please enact a ban on fracking ASAP, as well as the strongest possible oil & gas regulations.  
**Date:** Monday, November 23, 2020 3:04:00 PM

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Dear Board Chair Deb Gardner,

Dear Commissioners,

We need to keep trying to ban fracking in Boulder County, for the health and safety of our residents as well as nearby communities and the environment as a whole. While we pursue a total ban, right now we have the ability to strengthen our restrictions, and we should do that to the farthest possible extent.

There is no possible justification for fracking -- there's ample evidence that it poisons air and water; it destroys animals habitats and natural landscapes; the noise impacts are damaging to human health (mental and physical); and it sustains our dependence on fossil fuels, which we need to wean ourselves from as soon as possible (like, 10 years ago) if we want to have a livable planet in 20 years. The financial and political power of the oil and gas industry is the only reason we are even still having this conversation, but the tide is turning.

A fracking ban is both a reasonable and necessary action authorized for local governments by SB19-181. A ban is widely supported by Boulder County residents: 70% in recent polling, and the same fraction of voters in the County voted in favor of Proposition 112 in 2018.

I also urge you to enact the strongest possible Article 12 regulations on oil and gas operations as a backstop protection to any potential legal challenge to a ban.

However, regulations are no substitute for a permanent ban. We encourage you to direct County staff to begin developing language for a fracking ban in Boulder County. Thank you for your ongoing efforts to prioritize public health and the environment in Boulder County.

Sincerely,

Sincerely,  
Alden Perkins  
3340 13th St Boulder, CO 80304-2206  
[adetwile@yahoo.com](mailto:adetwile@yahoo.com)

**From:** [gurarie@everyactionadvocacy.com](mailto:gurarie@everyactionadvocacy.com) on behalf of [David Gurarie](#)  
[Boulder County Board of Commissioners](#)  
**Subject:** Please enact a ban on fracking ASAP, as well as the strongest possible oil & gas regulations.  
**Date:** Monday, November 23, 2020 3:08:41 PM

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Dear Board Chair Deb Gardner,

Dear Commissioners,

I write as a Boulder County resident deeply concerned about proposed fracking projects (140 wells) in our county and the resulting threats to air and water quality, public health, wildlife, and the climate. I urge you to enact a ban on fracking in Boulder County as soon as possible to protect our community from the well-documented threats to public health and safety from fracking, and to enact the strongest possible protective regulations as a backstop.

The proposed fracking projects are particularly troubling in the context of the Front Range's "serious" non-attainment status for ozone, and high concentrations of benzene and other VOCs, to which existing oil and gas operations are a significant contributor. Additionally, a recent report of the IPCC calls for a "rapid phase-out of CO2 emissions" largely over the next decade to avert catastrophic global temperature rise.

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However, regulations are no substitute for a permanent ban. We encourage you to direct County staff to begin developing language for a fracking ban in Boulder County. Thank you for your ongoing efforts to prioritize public health and the environment in Boulder County.

Sincerely,

Sincerely,

David Gurarie

2724 Northbrook Pl Boulder, CO 80304-1407

[gurarie@ucar.edu](mailto:gurarie@ucar.edu)



**From:** [jbbrockman9@everyactionadvocacy.com](mailto:jbbrockman9@everyactionadvocacy.com) on behalf of [JB Brockman](#)  
[Boulder County Board of Commissioners](#)  
**Subject:** Please enact a ban on fracking ASAP, as well as the strongest possible oil & gas regulations.  
**Date:** Monday, November 23, 2020 3:26:03 PM

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Dear Board Chair Deb Gardner,

Dear Commissioners,

I'm a Boulder County resident and deeply concerned about proposed fracking projects (140 wells) in our county and the resulting threats to air and water quality, public health, wildlife, and the climate. I urge you to enact a ban on fracking in Boulder County as soon as possible to protect our community from the well-documented threats to public health and safety, and to enact the strongest possible protective regulations as a backstop.

The proposed fracking projects are particularly troubling in the context of the Front Range's "serious" non-attainment status for ozone, and high concentrations of benzene and other VOCs, to which existing oil and gas operations are a significant contributor. Additionally, a recent report of the IPCC calls for a "rapid phase-out of CO2 emissions" largely over the next decade to avert catastrophic global temperature rise.

Despite the recent Longmont decision, a ban on fracking is consistent with the County's efforts to fight climate change, including the declaration of a climate emergency, and ongoing lawsuit against Suncor and Exxon for climate change-related damages. A fracking ban is both a reasonable and necessary action authorized for local governments by SB19-181. Boulder County residents widely support a ban: 70% in recent polling, and the same fraction of voters in the County voted in favor of Proposition 112 in 2018.

I also urge you to enact the strongest possible Article 12 regulations on oil and gas operations as a backstop protection to any potential legal challenge to a ban. I recommend the following points for inclusion in Article 12, based on the updated draft released October 20, 2020:

- Implement mandatory 2500' minimum setbacks with no waivers: Revise Article 12 to extend the minimum setback of oil and gas operations to 2500' from any structure intended for human occupancy, and from open space, recreation areas and all water sources. This is modest considering that research has identified adverse effects on the cognitive performance of infants whose mothers lived within 8,500 feet of oil and gas wells and an increased risk of congenital heart defects among children born to women living near oil and gas operations in Colorado, with the risks increasing with the density of oil and gas activities within a 10-mile radius.

- Cumulative impacts: Article 12 should incorporate a structure for the County to consider the context of our already-degraded air quality and the need for dramatic reductions in greenhouse gas emissions to avert catastrophic consequences from climate change.

- Affirmatively protect public health, safety, and welfare, and the environment: Section 12-1000 states that "A proposal meets the standards if it will...either avoid adverse impacts to public health, safety, and welfare, the environment and wildlife resources or...sufficiently minimize, and mitigate unavoidable impact." Oil and gas operations must be required to avoid adverse impacts to public health, safety, and welfare, and the environment and wildlife resources entirely, and not simply minimize impacts.

- Implement as mandatory all of the discretionary measures that are listed in Section 12-1100. Article 12 should explicitly prohibit venting and flaring and require "tankless" operations, which reduce air emissions. A recent study concluded that pregnant women who lived in proximity to natural gas flaring had a 50% higher chance of giving birth early than those who did not, putting the level of risk on par with that caused by smoking.

However, regulations are no substitute for a permanent ban. We encourage you to direct County staff to begin developing language for a fracking ban in Boulder County. Thank you for your ongoing efforts to prioritize public health and the environment in Boulder County.

Sincerely,

Sincerely,

JB Brockman

4172 Amber Pl Boulder, CO 80304-0963

jbbrockman9@gmail.com

**From:** [chinle3@everyactionadvocacy.com](mailto:chinle3@everyactionadvocacy.com) on behalf of [Cindy Beaver](#)  
[Boulder County Board of Commissioners](#)  
**Subject:** Please enact a ban on fracking ASAP, as well as the strongest possible oil & gas regulations.  
**Date:** Monday, November 23, 2020 3:26:55 PM

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Dear Board Chair Deb Gardner,

Dear Commissioners,

I write as a Boulder County resident deeply concerned about proposed fracking projects (140 wells) in our county and the resulting threats to air and water quality, public health, wildlife, and the climate. I urge you to enact a ban on fracking in Boulder County as soon as possible to protect our community from the well-documented threats to public health and safety from fracking, and to enact the strongest possible protective regulations as a backstop.

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However, regulations are no substitute for a permanent ban. We encourage you to direct County staff to begin developing language for a fracking ban in Boulder County. Thank you for your ongoing efforts to prioritize public health and the environment in Boulder County.

Sincerely,

Sincerely,  
Cindy Beaver  
7786 Arlington Dr Boulder, CO 80303-3200  
chinle3@gmail.com

**From:** [judy123@everyactionadvocacy.com](mailto:judy123@everyactionadvocacy.com) on behalf of [Judy Lubow](#)  
[Boulder County Board of Commissioners](#)  
**Subject:** Please enact a ban on fracking ASAP, as well as the strongest possible oil & gas regulations.  
**Date:** Monday, November 23, 2020 4:13:19 PM

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Dear Board Chair Deb Gardner,

Dear Commissioners,

I write as a Boulder County resident deeply concerned about proposed fracking projects (140 wells) in our county and the resulting threats to air and water quality, public health, wildlife, and the climate. I urge you to enact a ban on fracking in Boulder County as soon as possible to protect our community from the well-documented threats to public health and safety from fracking, and to enact the strongest possible protective regulations as a backstop.

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However, regulations are no substitute for a permanent ban. We encourage you to direct County staff to begin developing language for a fracking ban in Boulder County. Thank you for your ongoing efforts to prioritize public health and the environment in Boulder County.

Sincerely,

Sincerely,  
Judy Lubow  
106 Granada Ct Longmont, CO 80504-1213  
judy123@indra.com

**From:** [dcb1995@everyactionadvocacy.com](mailto:dcb1995@everyactionadvocacy.com) on behalf of [David Burns](#)  
[Boulder County Board of Commissioners](#)  
**Subject:** Please enact a ban on fracking ASAP, as well as the strongest possible oil & gas regulations.  
**Date:** Monday, November 23, 2020 4:17:24 PM

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Dear Board Chair Deb Gardner,

Dear Commissioners,

I write as a Boulder County resident deeply concerned about proposed fracking projects (140 wells) in our county and the resulting threats to air and water quality, public health, wildlife, and the climate. I urge you to enact a ban on fracking in Boulder County as soon as possible to protect our community from the well-documented threats to public health and safety from fracking, and to enact the strongest possible protective regulations as a backstop.

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However, regulations are no substitute for a permanent ban. We encourage you to direct County staff to begin developing language for a fracking ban in Boulder County. Thank you for your ongoing efforts to prioritize public health and the environment in Boulder County.

Sincerely,

Sincerely,  
David Burns  
1023 W Alder St Louisville, CO 80027-1047  
dcb1995@comcast.net



**From:** [lisa.kincannon@everyactionadvocacy.com](mailto:lisa.kincannon@everyactionadvocacy.com) on behalf of [Lisa Kincannon](#)  
[Boulder County Board of Commissioners](#)  
**Subject:** Please enact a ban on fracking ASAP, as well as the strongest possible oil & gas regulations.  
**Date:** Monday, November 23, 2020 5:06:02 PM

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Dear Board Chair Deb Gardner,

Dear Commissioners,

I write as a Boulder County resident deeply concerned about proposed fracking projects (140 wells) in our county and the resulting threats to air and water quality, public health, wildlife, and the climate. I urge you to enact a ban on fracking in Boulder County as soon as possible to protect our community from the well-documented threats to public health and safety from fracking, and to enact the strongest possible protective regulations as a backstop.

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However, regulations are no substitute for a permanent ban. We encourage you to direct County staff to begin developing language for a fracking ban in Boulder County. Thank you for your ongoing efforts to prioritize public health and the environment in Boulder County.

Sincerely,

Sincerely,  
Lisa Kincannon  
1612 Bradley Ct Boulder, CO 80305-7310  
lisa.kincannon@comcast.net

**From:** [elizmcclain@everyactionadvocacy.com](mailto:elizmcclain@everyactionadvocacy.com) on behalf of [Elizabeth McClain](#)  
[Boulder County Board of Commissioners](#)  
**Subject:** Please enact a ban on fracking ASAP, as well as the strongest possible oil & gas regulations.  
**Date:** Monday, November 23, 2020 6:36:05 PM

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Dear Board Chair Deb Gardner,

Dear Commissioners,

I write as a Boulder County resident deeply concerned about proposed fracking projects (140 wells) in our county and the resulting threats to air and water quality, public health, wildlife, and the climate. I urge you to enact a ban on fracking in Boulder County as soon as possible to protect our community from the well-documented threats to public health and safety from fracking, and to enact the strongest possible protective regulations as a backstop.

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However, regulations are no substitute for a permanent ban. We encourage you to direct County staff to begin developing language for a fracking ban in Boulder County. Thank you for your ongoing efforts to prioritize public health and the environment in Boulder County.

Sincerely,

Sincerely,  
Elizabeth McClain  
800 Laramie Blvd Unit E Boulder, CO 80304-4785  
elizmcclain@gmail.com

**From:** [taradubarr12@everyactionadvocacy.com](mailto:taradubarr12@everyactionadvocacy.com) on behalf of [Tara Dubarr](#)  
[Boulder County Board of Commissioners](#)  
**Subject:** Please enact a ban on fracking ASAP, as well as the strongest possible oil & gas regulations.  
**Date:** Monday, November 23, 2020 7:41:08 PM

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Dear Board Chair Deb Gardner,

Dear Commissioners,

A resident of the city of Boulder for 36 years, I have watched our skies go from blue to grey and the resulting air we breath become less and less healthy. Once a pristine place to live and raise a family pollutants such as those produced from the proposed fracking projects (140 wells) in our county are resulting in threats to air and water quality, public health, wildlife, and the climate. Please enact a ban on fracking in Boulder County now. Protect our community from threats to health and safety from fracking, and enact the strongest possible protective regulations.

The proposed fracking projects are particularly troubling in the context of the Front Range's "serious" non-attainment status for ozone, and high concentrations of benzene and other VOCs, to which existing oil and gas operations are a significant contributor. Additionally, a recent report of the IPCC calls for a "rapid phase-out of CO2 emissions" largely over the next decade to avert catastrophic global temperature rise.

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However, regulations are no substitute for a permanent ban. We encourage you to direct County staff to begin developing language for a fracking ban in Boulder County. Thank you for your ongoing efforts to prioritize public health and the environment in Boulder County.

Sincerely,

Sincerely,  
Tara Dubarr  
2525 Arapahoe Ave Unit P E4 Boulder, CO 80302-6746  
taradubarr12@gmail.com

**From:** [perk14@everyactionadvocacy.com](mailto:perk14@everyactionadvocacy.com) on behalf of [Anna Perkins](#)  
[Boulder County Board of Commissioners](#)  
**Subject:** Please enact a ban on fracking ASAP, as well as the strongest possible oil & gas regulations.  
**Date:** Tuesday, November 24, 2020 8:06:54 AM

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Dear Board Chair Deb Gardner,

Dear Commissioners,

I write as a Boulder County resident deeply concerned about proposed fracking projects (140 wells) in our county and the resulting threats to air and water quality, public health, wildlife, and the climate. I urge you to enact a ban on fracking in Boulder County as soon as possible to protect our community from the well-documented threats to public health and safety from fracking, and to enact the strongest possible protective regulations as a backstop.

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Sincerely,

Sincerely,

Anna Perkins

1125 Claremont Dr Boulder, CO 80305-6601

perk14@gmail.com



**From:** [kate@everyactionadvocacy.com](mailto:kate@everyactionadvocacy.com) on behalf of [Kathryn Inskeep](#)  
[Boulder County Board of Commissioners](#)  
**Subject:** Please enact a ban on fracking ASAP, as well as the strongest possible oil & gas regulations.  
**Date:** Tuesday, November 24, 2020 10:14:59 AM

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Dear Board Chair Deb Gardner,

Dear Commissioners,

I write as a Boulder County resident deeply concerned about proposed fracking projects (140 wells) in our county and the resulting threats to air and water quality, public health, wildlife, and the climate. I urge you to enact a ban on fracking in Boulder County as soon as possible to protect our community from the well-documented threats to public health and safety from fracking, and to enact the strongest possible protective regulations as a backstop.

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Sincerely,

Sincerely,  
Kathryn Inskip  
10992 Gold Hill Rd Boulder, CO 80302-9716  
kate@kateinskeep.com

**From:** [gary.erb@everyactionadvocacy.com](mailto:gary.erb@everyactionadvocacy.com) on behalf of [Gary Erb](#)  
**To:** [Boulder County Board of Commissioners](#)  
**Subject:** Please enact a ban on fracking ASAP, as well as the strongest possible oil & gas regulations.  
**Date:** Tuesday, November 24, 2020 2:22:39 PM

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Dear Board Chair Deb Gardner,

Dear Commissioners,

I write as a Boulder County resident deeply concerned about proposed fracking projects (140 wells) in our county and the resulting threats to air and water quality, public health, wildlife, and the climate. I urge you to enact a ban on fracking in Boulder County as soon as possible to protect our community from the well-documented threats to public health and safety from fracking, and to enact the strongest possible protective regulations as a backstop.

The proposed fracking projects are particularly troubling in the context of the Front Range's "serious" non-attainment status for ozone, and high concentrations of benzene and other VOCs, to which existing oil and gas operations are a significant contributor. Additionally, a recent report of the IPCC calls for a "rapid phase-out of CO2 emissions" largely over the next decade to avert catastrophic global temperature rise.

Despite the recent Longmont decision, a ban on fracking is consistent with the County's efforts to fight climate change, including the declaration of a climate emergency, and ongoing lawsuit against Suncor and Exxon for climate change-related damages. A fracking ban is both a reasonable and necessary action authorized for local governments by SB19-181. A ban is widely supported by Boulder County residents: 70% in recent polling, and the same fraction of voters in the County voted in favor of Proposition 112 in 2018.

I also urge you to enact the strongest possible Article 12 regulations on oil and gas operations as a backstop protection to any potential legal challenge to a ban. I recommend the following points for inclusion in Article 12, based on the updated draft released October 20, 2020:

-Implement mandatory 2500' minimum setbacks with no waivers: Revise Article 12 to extend the minimum setback of oil and gas operations to 2500' from any structure intended for human occupancy, and from open space, recreation areas and all water sources. This is modest considering that research has identified adverse effects on the cognitive performance of infants whose mothers lived within 8,500 feet of oil and gas wells and an increased risk of congenital heart defects among children born to women living near oil and gas operations in Colorado, with the risks increasing with the density of oil and gas activities within a 10-mile radius.

-Cumulative impacts: Article 12 should incorporate a structure for the County to consider the context of our already-degraded air quality and the need for dramatic reductions in greenhouse gas emissions to avert catastrophic consequences from climate change.

-Affirmatively protect public health, safety, and welfare, and the environment: Section 12-1000 states that "A proposal meets the standards if it will...either avoid adverse impacts to public health, safety, and welfare, the environment and wildlife resources or...sufficiently minimize, and mitigate unavoidable impact." Oil and gas operations must be required to avoid adverse impacts to public health, safety, and welfare, and the environment and wildlife resources entirely, and not simply minimize impacts.

-Implement as mandatory all of the discretionary measures that are listed in Section 12-1100. Article 12 should explicitly prohibit venting and flaring and require "tankless" operations, which reduce air emissions. A recent study concluded that pregnant women who lived in proximity to natural gas flaring had a 50% higher chance of giving birth early than those who did not, putting the level of risk on par with that caused by smoking.

However, regulations are no substitute for a permanent ban. We encourage you to direct County staff to begin developing language for a fracking ban in Boulder County. Thank you for your ongoing efforts to prioritize public health and the environment in Boulder County.

Sincerely,

Sincerely,

Gary Erb

1600 Hillside Rd # 9 Boulder, CO 80302-6303

[gary.erb@colorado.edu](mailto:gary.erb@colorado.edu)

**From:** [Kathy Kaiser](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** Comments on Article 12  
**Date:** Tuesday, November 24, 2020 5:33:14 PM

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I'm urging the county commissioners to take the strongest actions possible in regard to controlling oil and gas drilling in Boulder County. As a resident of the eastern part of the county (in Gunbarrel), I'm very concerned about the health and environmental effects of fracking. Please protect us and the environment.

Thanks for all you do.

Kathy Kaiser

4815 Devonshire St.

Boulder, CO 80301

<http://cabinjournal.typepad.com>

<https://agingjournal.net>

**From:** [kaile.ferguson@everyactionadvocacy.com](mailto:kaile.ferguson@everyactionadvocacy.com) on behalf of [Kaile Ferguson](#)  
[Boulder County Board of Commissioners](#)  
**Subject:** Please enact a ban on fracking ASAP, as well as the strongest possible oil & gas regulations.  
**Date:** Wednesday, November 25, 2020 4:10:43 AM

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Dear Board Chair Deb Gardner,

Dear Commissioners,

I write as a Boulder County resident deeply concerned about proposed fracking projects (140 wells) in our county and the resulting threats to air and water quality, public health, wildlife, and the climate. I urge you to enact a ban on fracking in Boulder County as soon as possible to protect our community from the well-documented threats to public health and safety from fracking, and to enact the strongest possible protective regulations as a backstop.

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However, regulations are no substitute for a permanent ban. We encourage you to direct County staff to begin developing language for a fracking ban in Boulder County. Thank you for your ongoing efforts to prioritize public health and the environment in Boulder County.

Sincerely,

Sincerely,

Kaile Ferguson

3009 Madison Ave Apt J426 Boulder, CO 80303-2032

kaile.ferguson@gmail.com

**From:** [leslielx@everyactionadvocacy.com](mailto:leslielx@everyactionadvocacy.com) on behalf of [Leslie Weise](#)  
[Boulder County Board of Commissioners](#)  
**Subject:** Please enact a ban on fracking ASAP, as well as the strongest possible oil & gas regulations.  
**Date:** Wednesday, November 25, 2020 12:41:48 PM

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Dear Board Chair Deb Gardner,

Dear Commissioners,

I write as a Boulder County resident deeply concerned about proposed fracking projects (140 wells) in our county and the resulting threats to air and water quality, public health, wildlife, and the climate. I urge you to enact a ban on fracking in Boulder County as soon as possible to protect our community from the well-documented threats to public health and safety from fracking, and to enact the strongest possible protective regulations as a backstop.

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However, regulations are no substitute for a permanent ban. We encourage you to direct County staff to begin developing language for a fracking ban in Boulder County. Thank you for your ongoing efforts to prioritize public health and the environment in Boulder County.



Sincerely,

Sincerely,  
Leslie Weise  
7578 Crestview Dr Niwot, CO 80504-7301  
leslielx@yahoo.com

**From:** [natasha\\_d\\_galloway@everyactionadvocacy.com](mailto:natasha_d_galloway@everyactionadvocacy.com) on behalf of [Natasha Galloway](#)  
**To:** [Boulder County Board of Commissioners](#)  
**Subject:** Please enact a ban on fracking ASAP, as well as the strongest possible oil & gas regulations.  
**Date:** Wednesday, November 25, 2020 1:41:06 PM

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Dear Board Chair Deb Gardner,

Dear Commissioners,

I write as a Boulder County resident deeply concerned about proposed fracking projects (140 wells) in our county and the resulting threats to air and water quality, public health, wildlife, and the climate. I urge you to enact a ban on fracking in Boulder County as soon as possible to protect our community from the well-documented threats to public health and safety from fracking, and to enact the strongest possible protective regulations as a backstop.

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However, regulations are no substitute for a permanent ban. We encourage you to direct County staff to begin developing language for a fracking ban in Boulder County. Thank you for your ongoing efforts to prioritize public health and the environment in Boulder County.

Sincerely,

Sincerely,  
Natasha Galloway  
1226 Lanyon Ln Longmont, CO 80503-3641  
natasha\_d\_galloway@yahoo.com

**From:** [Raymond Bridge](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** Oil & Gas Regulations  
**Date:** Wednesday, November 25, 2020 2:17:44 PM

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Commissioners:

Boulder County Audubon Society thanks you for your proactive policies regarding oil and gas development—the moratorium on permit applications, allowing time for staff to draft new regulations in light of the passage of SB 19-181. We also appreciate the work that county staff has done in working on the new COGCC policies and regulations, and generally urge approval of Docket DC-19-0002.

Since the new COGCC rules were approved just a few days ago, it might be appropriate to further extend the moratorium, so that staff could update its recommendations to take those new rules into account.

If you choose not to further extend the moratorium, we would suggest that you extend the 2000-foot pad setback requirement to also apply to open space properties (both BCPOS- and OSMP-owned), including both in-fee and conservation easements, in order to protect the ecologically sensitive resources that those properties represent.

Yours respectfully,

Raymond Bridge, BCAS Conservation Chair

**From:** [leyla@everyactionadvocacy.com](mailto:leyla@everyactionadvocacy.com) on behalf of [Leyla Steele](#)  
[Boulder County Board of Commissioners](#)  
**Subject:** Please enact a ban on fracking ASAP, as well as the strongest possible oil & gas regulations.  
**Date:** Wednesday, November 25, 2020 3:21:10 PM

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Dear Board Chair Deb Gardner,

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I write as a Boulder County resident deeply concerned about proposed fracking projects (140 wells) in our county and the resulting threats to air and water quality, public health, wildlife, and the climate. I urge you to enact a ban on fracking in Boulder County as soon as possible to protect our community from the well-documented threats to public health and safety from fracking, and to enact the strongest possible protective regulations as a backstop.

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However, regulations are no substitute for a permanent ban. We encourage you to direct County staff to begin developing language for a fracking ban in Boulder County. Thank you for your ongoing efforts to prioritize public health and the environment in Boulder County.

Sincerely,

Sincerely,  
Leyla Steele  
2275 Forest Ave Boulder, CO 80304-2743  
leyla@leysteele.com

**From:** [markpglenn@everyactionadvocacy.com](mailto:markpglenn@everyactionadvocacy.com) on behalf of [Mark Glenn](#)  
**To:** [Boulder County Board of Commissioners](#)  
**Subject:** Please enact a ban on fracking ASAP, as well as the strongest possible oil & gas regulations.  
**Date:** Thursday, November 26, 2020 9:29:08 AM

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Dear Board Chair Deb Gardner,

Dear Commissioners,

I write as a Boulder County resident deeply concerned about proposed fracking projects (140 wells) in our county and the resulting threats to air and water quality, public health, wildlife, and the climate. I urge you to enact a ban on fracking in Boulder County as soon as possible to protect our community from the well-documented threats to public health and safety from fracking, and to enact the strongest possible protective regulations as a backstop.

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However, regulations are no substitute for a permanent ban. We encourage you to direct County staff to begin developing language for a fracking ban in Boulder County. Thank you for your ongoing efforts to prioritize public health and the environment in Boulder County.

Sincerely,

Sincerely,  
Mark Glenn  
2800 17th St Boulder, CO 80304-3531  
markpglenn@gmail.com



**From:** [John C. Lamb](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** fracking  
**Date:** Friday, November 27, 2020 10:36:46 AM

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Dear Boulder County Commissioners:

Trying to regulate toxic harms to our health caused by corporations for profit is a losing effort. In our present case, banning fracking and all its accompanying infrastructures is what you should do. First, as pointed out recently by Suzanne Bhatt in her letter to the Daily Camera, fracking regulations do not address the climate change emergency (global warming). We have to act fast to reduce carbon emissions, like methane, or the result of the inaction will cause death and destruction that will make Covid-19 look like nothing. As Phil Doe pointed out in his letter to the Camera, corruption is running high with the instant firing of internationally-known climate scientist Detlev Helmig, whose research shows fracking's harms can travel from far-away places like Weld County. As described in the book, "Merchants of Doubt," this ruining of a scientist's career and discrediting of facts by scientists was a strategy well-known and used by the tobacco industry as it fought to keep poisoning us for profit. The oil and gas industry is using the same strategy against Dr. Helmig. CU is under the dominion of O&G's money and power. This is corruption. A recent article by Judith Kohler in the Denver Post reports that critics of the COGCC rules (i.e., 2000 foot setbacks) say there will be exceptions—loopholes—that the O&G industry will use to get around the new "regulations." This is another problem with regulations. There are many problems with fracking in terms of health, economy, and the environment of the State of Colorado and for the planet. I count 50 plus problems that have peer-

that fracking harms us and our environment has been established.

If you put the question of banning/not banning fracking to the people of Boulder County in a public vote, I believe you would have to admit that the majority would vote for a ban. "Democracy" can be defined as a government in which "the people affected by governing decisions are the ones who make and enforce the law, directly or through representatives bound to the will of the governed and limited only by a strict respect for the unalienable rights of all beings" (Ben Price, "How Wealth Rules the World," preface). The problem of communities being powerless to decide their own future is the main, over-riding problem in America that necessitates you, as commissioners, to ban fracking, regardless of corrupt laws that have been passed by industry and their purchased legislators. This is a tenet of the Community Rights Movement.

Ban fracking.

Sincerely,  
John C. Lamb, Ph.D.  
590 East Sutton Circle  
Lafayette, CO 80026

**From:** [lglustrom@everyactionadvocacy.com](mailto:lglustrom@everyactionadvocacy.com) on behalf of [Leslie Glustrom](#)  
**To:** [Boulder County Board of Commissioners](#)  
**Subject:** Please enact a ban on fracking ASAP, as well as the strongest possible oil & gas regulations.  
**Date:** Friday, November 27, 2020 11:16:59 AM

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Dear Board Chair Deb Gardner,

Dear Commissioners,

PLEASE KEEP PROTECTING BOULDER COUNTY FROM THE HEALTH AND ENV THREATS OF FRACKING!!!

and the resulting threats to air and water quality, public health, wildlife, and the climate. I urge you to enact a ban on fracking in Boulder County as soon as possible to protect our community from the well-documented threats to public health and safety from fracking, and to enact the strongest possible protective regulations as a backstop.

The proposed fracking projects are particularly troubling in the context of the Front Range's "serious" non-attainment status for ozone, and high concentrations of benzene and other VOCs, to which existing oil and gas operations are a significant contributor. Additionally, a recent report of the IPCC calls for a "rapid phase-out of CO2 emissions" largely over the next decade to avert catastrophic global temperature rise.

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However, regulations are no substitute for a permanent ban. We encourage you to direct County staff to begin

developing language for a fracking ban in Boulder County. Thank you for your ongoing efforts to prioritize public health and the environment in Boulder County.

Sincerely,

Sincerely,  
Leslie Glustrom  
4492 Burr Pl Boulder, CO 80303-1115  
lglustrom@gmail.com

**From:** [Tim Schoechle](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Cc:** [timothy@schoechle.org](mailto:timothy@schoechle.org)  
**Subject:** Support fracking regulation  
**Date:** Friday, November 27, 2020 12:29:18 PM

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Boulder County Government,

Please support a a ban on fracking in the County as soon as possible and also the strongest possible regulation of oil and gas activity, including a minimum of 2500' setbacks from occupied buildings, water sources, open space, and recreation areas. This kind of high-risk industrial activity is inappropriate anywhere in Boulder County, as well as anywhere in the State of Colorado.

--Tim

--

Timothy D. Schoechle, PhD  
Senior Research Fellow, National Institute for Science, Law and Public Policy  
3066 Sixth Street, Boulder, Colorado 80304, USA  
Phone: +1 303-443-5490; mobile +1 303-818-8760

**From:** [Karl Hanzel](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** "Favor a flat-out ban on fracking in Boulder County"  
**Date:** Friday, November 27, 2020 6:29:43 PM

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To be clear, i would like to see a ban on fracking everywhere, and moreover have the Alberta tar sands mining shut down permanently, because the planet just can't take it any more, and we need to move exceedingly fast to stop our use of all fossil fuels. I also realize that it can't happen over night either. But in general, the sooner, the better.

Thanks for your consideration,

Karl

•—>

**From:** [Kim Golden](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** 2,500 set backs  
**Date:** Saturday, November 28, 2020 9:30:52 AM

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I am writing to plea that you take the concept of minimum 2,500 feet setbacks seriously. We already know that you know that the impact of fracking is harming the health and safety of the people you were hired/elected to serve. You know it. We know it. Please do the right thing on behalf of us and our children.....

"It is time for our commissioners to require a mandatory minimum setback of 2,500 feet between oil and gas operations and occupied structures, recreation areas and open space land. While setbacks of 2,000 feet may be a start in offering more protection for Coloradans, this is not enough.

The 2019 CDPHE study highlights a major issue of concern: the emitting of benzene and ethyltolulene, known carcinogens and the presence of elevated levels of benzene in the blood of residents living near oil and gas operations and the associated toxicity associated with benzene exposure. Health experts warn that short-term benzene exposure poses health risks and effects including headaches, nose bleeds, dizziness, tremors, confusion, unconsciousness and death. Long-term exposure increases the risk of acute myeloid leukemia and can be harmful to reproductive organs affecting fertility and harmful effects on the developing fetus, and more."

Thanks,  
Kim

Kim Golden  
303.909.0175  
Owner, Earth Clay Works  
<http://www.earthclayworks.com>  
Installers of American Clay since 2005. Nature's alternative to paint.

**From:** [Kip Golden](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** implement minimum 2,500 set backs  
**Date:** Saturday, November 28, 2020 9:30:54 AM

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I am writing to plea that you take the concept of minimum 2,500 feet setbacks seriously. We already know that you know that the impact of fracking is harming the health and safety of the people you were hired/elected to serve. You know it. We know it. Please do the right thing on behalf of us and our children.....

"It is time for our commissioners to require a mandatory minimum setback of 2,500 feet between oil and gas operations and occupied structures, recreation areas and open space land. While setbacks of 2,000 feet may be a start in offering more protection for Coloradans, this is not enough.

The 2019 CDPHE study highlights a major issue of concern: the emitting of benzene and ethyltolulene, known carcinogens and the presence of elevated levels of benzene in the blood of residents living near oil and gas operations and the associated toxicity associated with benzene exposure. Health experts warn that short-term benzene exposure poses health risks and effects including headaches, nose bleeds, dizziness, tremors, confusion, unconsciousness and death. Long-term exposure increases the risk of acute myeloid leukemia and can be harmful to reproductive organs affecting fertility and harmful effects on the developing fetus, and more."

Thanks,  
Kip

Kip Golden  
303.818.7903  
Owner, Earth Clay Works  
[www.earthclayworks.com](http://www.earthclayworks.com)  
Installers of American Clay since 2005. *Nature's Alternative to paint.*

**From:** [Carol Friefeld](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
CO Senate Bill 19-181 and fracking rules  
**Date:** Saturday, November 28, 2020 7:26:04 PM

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Hello:

I urge the county commissioners to directly address the impact of fracking on our climate crisis as they develop regulations for oil and gas development in Boulder County. Fracking clearly has an adverse impact on the climate, leading to increased warming, with all of the attendant public health and safety risks that we have already begun to see. I support an outright ban on fracking in Boulder County (or anywhere)—it is past time that we make a serious commitment to a full transition to non-carbon sources of energy. Short of a ban, the commissioners must insist, via regulation, that the oil and gas companies are required to mitigate the damage that they do to our climate and our environment, either via carbon offsets or other meaningful mechanisms.

Daylight's burning.

Carol Siegel, MD, MSPH



**From:** [D. Groff](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** Public Comment on Proposed Oil and Gas Regulations  
**Date:** Sunday, November 29, 2020 11:39:03 AM

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Dear Boulder County Commissioners,

Thank you for inviting public comments regarding the Amendments to Article 12 of the Land Use Code-Proposed land use code amendments addressing oil and gas development, seismic tasing and companion changes to the Land Use Code.

We are in support of adopting these amendments in order to preserve the quality of our air, water, land and lifestyle. Please consider the health impacts of any oil and gas wells, and we are also in support of increasing the set backs from 2,000 to 2,500 feet.

We have enjoyed living in Boulder County for 38 years with ample time recreating in our County. That means breathing the air, drinking the water and enjoying the beauty of our wildlife habitats. Please do your part in preserving our natural resources for our health, well being and for future generations.

Sincerely,  
Don and Diane Groff  
819 Sumner St.  
Longmont, CO 80501  
DGroff@wt.net

**From:** [benchapman1@everyactionadvocacy.com](mailto:benchapman1@everyactionadvocacy.com) on behalf of [Ben Chapman](#)  
[Boulder County Board of Commissioners](#)  
**Subject:** Please enact a ban on fracking ASAP, as well as the strongest possible oil & gas regulations.  
**Date:** Sunday, November 29, 2020 11:52:38 AM

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Dear Board Chair Deb Gardner,

Dear Commissioners,

I write as a Boulder County resident deeply concerned about proposed fracking projects (140 wells) in our county and the resulting threats to air and water quality, public health, wildlife, and the climate. I urge you to enact a ban on fracking in Boulder County as soon as possible to protect our community from the well-documented threats to public health and safety from fracking, and to enact the strongest possible protective regulations as a backstop.

The proposed fracking projects are particularly troubling in the context of the Front Range's "serious" non-attainment status for ozone, and high concentrations of benzene and other VOCs, to which existing oil and gas operations are a significant contributor. Additionally, a recent report of the IPCC calls for a "rapid phase-out of CO2 emissions" largely over the next decade to avert catastrophic global temperature rise.

Despite the recent Longmont decision, a ban on fracking is consistent with the County's efforts to fight climate change, including the declaration of a climate emergency, and ongoing lawsuit against Suncor and Exxon for climate change-related damages. A fracking ban is both a reasonable and necessary action authorized for local governments by SB19-181. A ban is widely supported by Boulder County residents: 70% in recent polling, and the same fraction of voters in the County voted in favor of Proposition 112 in 2018.

I also urge you to enact the strongest possible Article 12 regulations on oil and gas operations as a backstop protection to any potential legal challenge to a ban. I recommend the following points for inclusion in Article 12, based on the updated draft released October 20, 2020:

- Implement mandatory 2500' minimum setbacks with no waivers: Revise Article 12 to extend the minimum setback of oil and gas operations to 2500' from any structure intended for human occupancy, and from open space, recreation areas and all water sources. This is modest considering that research has identified adverse effects on the cognitive performance of infants whose mothers lived within 8,500 feet of oil and gas wells and an increased risk of congenital heart defects among children born to women living near oil and gas operations in Colorado, with the risks increasing with the density of oil and gas activities within a 10-mile radius.

- Cumulative impacts: Article 12 should incorporate a structure for the County to consider the context of our already-degraded air quality and the need for dramatic reductions in greenhouse gas emissions to avert catastrophic consequences from climate change.

- Affirmatively protect public health, safety, and welfare, and the environment: Section 12-1000 states that "A proposal meets the standards if it will...either avoid adverse impacts to public health, safety, and welfare, the environment and wildlife resources or...sufficiently minimize, and mitigate unavoidable impact." Oil and gas operations must be required to avoid adverse impacts to public health, safety, and welfare, and the environment and wildlife resources entirely, and not simply minimize impacts.

- Implement as mandatory all of the discretionary measures that are listed in Section 12-1100. Article 12 should explicitly prohibit venting and flaring and require "tankless" operations, which reduce air emissions. A recent study concluded that pregnant women who lived in proximity to natural gas flaring had a 50% higher chance of giving birth early than those who did not, putting the level of risk on par with that caused by smoking.

However, regulations are no substitute for a permanent ban. We encourage you to direct County staff to begin developing language for a fracking ban in Boulder County. Thank you for your ongoing efforts to prioritize public health and the environment in Boulder County.

Sincerely,

Sincerely,  
Ben Chapman  
2246 Provenance Ct Longmont, CO 80504-3701  
benchapman1@comcast.net

**From:** [laurieloveyoga@everyactionadvocacy.com](mailto:laurieloveyoga@everyactionadvocacy.com) on behalf of [Laurie Rochardt](#)  
[Boulder County Board of Commissioners](#)  
**Subject:** Please enact a ban on fracking ASAP, as well as the strongest possible oil & gas regulations.  
**Date:** Sunday, November 29, 2020 12:02:31 PM

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Dear Board Chair Deb Gardner,

Dear Commissioners,

I write as a Boulder County resident deeply concerned about proposed fracking projects (140 wells) in our county and the resulting threats to air and water quality, public health, wildlife, and the climate. I urge you to enact a ban on fracking in Boulder County as soon as possible to protect our community from the well-documented threats to public health and safety from fracking, and to enact the strongest possible protective regulations as a backstop.

The proposed fracking projects are particularly troubling in the context of the Front Range's "serious" non-attainment status for ozone, and high concentrations of benzene and other VOCs, to which existing oil and gas operations are a significant contributor. Additionally, a recent report of the IPCC calls for a "rapid phase-out of CO2 emissions" largely over the next decade to avert catastrophic global temperature rise.

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-Cumulative impacts: Article 12 should incorporate a structure for the County to consider the context of our already-degraded air quality and the need for dramatic reductions in greenhouse gas emissions to avert catastrophic consequences from climate change.

-Affirmatively protect public health, safety, and welfare, and the environment: Section 12-1000 states that "A proposal meets the standards if it will...either avoid adverse impacts to public health, safety, and welfare, the environment and wildlife resources or...sufficiently minimize, and mitigate unavoidable impact." Oil and gas operations must be required to avoid adverse impacts to public health, safety, and welfare, and the environment and wildlife resources entirely, and not simply minimize impacts.

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However, regulations are no substitute for a permanent ban. We encourage you to direct County staff to begin developing language for a fracking ban in Boulder County. Thank you for your ongoing efforts to prioritize public health and the environment in Boulder County.

Sincerely,

Sincerely,  
Laurie Rochardt  
323 5th Ave Lyons, CO 80540-5031  
laurieloveyoga@gmail.com

**From:** [magic@everyactionadvocacy.com](mailto:magic@everyactionadvocacy.com) on behalf of [Lawrence Crowley](#)  
[Boulder County Board of Commissioners](#)  
**Subject:** Please enact a ban on fracking ASAP, as well as the strongest possible oil & gas regulations.  
**Date:** Sunday, November 29, 2020 12:03:32 PM

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Dear Board Chair Deb Gardner,

Dear Commissioners,

I write as a Boulder County resident deeply concerned about proposed fracking projects (140 wells) in our county and the resulting threats to air and water quality, public health, wildlife, and the climate. I urge you to enact a ban on fracking in Boulder County as soon as possible to protect our community from the well-documented threats to public health and safety from fracking, and to enact the strongest possible protective regulations as a backstop.

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However, regulations are no substitute for a permanent ban. We encourage you to direct County staff to begin developing language for a fracking ban in Boulder County. Thank you for your ongoing efforts to prioritize public health and the environment in Boulder County.

Sincerely,

Sincerely,  
Lawrence Crowley  
441 Pheasant Run Louisville, CO 80027-1141  
magic@ecentral.com

**From:** [keng4java@everyactionadvocacy.com](mailto:keng4java@everyactionadvocacy.com) on behalf of [Ken Gamauf](#)  
[Boulder County Board of Commissioners](#)  
**Subject:** Please enact a ban on fracking ASAP, as well as the strongest possible oil & gas regulations.  
**Date:** Sunday, November 29, 2020 12:26:38 PM

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Dear Board Chair Deb Gardner,

Dear Commissioners,

I write as a Boulder County resident deeply concerned about proposed fracking projects (140 wells) in our county and the resulting threats to air and water quality, public health, wildlife, and the climate. I urge you to enact a ban on fracking in Boulder County as soon as possible to protect our community from the well-documented threats to public health and safety from fracking, and to enact the strongest possible protective regulations as a backstop.

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However, regulations are no substitute for a permanent ban. We encourage you to direct County staff to begin developing language for a fracking ban in Boulder County. Thank you for your ongoing efforts to prioritize public health and the environment in Boulder County.



Sincerely,

Sincerely,  
Ken Gamauf  
1670 Dogwood Ln Boulder, CO 80304-1525  
keng4java@netscape.net

**From:** [ginger.ikeda@everyactionadvocacy.com](mailto:ginger.ikeda@everyactionadvocacy.com) on behalf of [ginger ikeda](#)  
[Boulder County Board of Commissioners](#)  
**Subject:** Please enact a ban on fracking ASAP, as well as the strongest possible oil & gas regulations.  
**Date:** Sunday, November 29, 2020 12:40:54 PM

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Dear Board Chair Deb Gardner,

Dear Commissioners,

I write as a Boulder County resident deeply concerned about proposed fracking projects (140 wells) in our county and the resulting threats to air and water quality, public health, wildlife, and the climate. I urge you to enact a ban on fracking in Boulder County as soon as possible to protect our community from the well-documented threats to public health and safety from fracking, and to enact the strongest possible protective regulations as a backstop.

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-Cumulative impacts: Article 12 should incorporate a structure for the County to consider the context of our already-degraded air quality and the need for dramatic reductions in greenhouse gas emissions to avert catastrophic consequences from climate change.

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However, regulations are no substitute for a permanent ban. We encourage you to direct County staff to begin developing language for a fracking ban in Boulder County. Thank you for your ongoing efforts to prioritize public health and the environment in Boulder County.

Sincerely,

Sincerely,  
ginger ikeda  
3320 15th St Boulder, CO 80304-2210  
ginger.ikeda@gmail.com

**From:** [tiffany.ashley.snyder@everyactionadvocacy.com](mailto:tiffany.ashley.snyder@everyactionadvocacy.com) on behalf of [Honorable Tiffany Snyder - Ret. Ward Mayor Boulder County Board of Commissioners](#)  
**Subject:** Please enact a ban on fracking ASAP, as well as the strongest possible oil & gas regulations.  
**Date:** Sunday, November 29, 2020 12:48:19 PM

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Dear Board Chair Deb Gardner,

Dear Commissioners,

I write as a former Mayor of Ward (4-terms, now Ret.) and 35+ year Boulder County resident deeply concerned about proposed fracking projects (140 wells) in our county and the resulting threats to air and water quality, public health, wildlife, and the climate. I urge you to enact a ban on fracking in Boulder County as soon as possible to protect our community from the well-documented threats to public health and safety from fracking, and to enact the strongest possible protective regulations as a backstop.

The proposed fracking projects are particularly troubling in the context of the Front Range's "serious" non-attainment status for ozone, and high concentrations of benzene and other VOCs, to which existing oil and gas operations are a significant contributor. Additionally, a recent report of the IPCC calls for a "rapid phase-out of CO2 emissions" largely over the next decade to avert catastrophic global temperature rise.

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However, regulations are no substitute for a permanent ban. We encourage you to direct County staff to begin developing language for a fracking ban in Boulder County. Thank you for your ongoing efforts to prioritize public health and the environment in Boulder County.

Sincerely,

Sincerely,  
Honorable Tiffany Snyder - Ret. Ward Mayor  
175 S 35th St Boulder, CO 80305-5434  
tiffany.ashley.snyder@gmail.com

**From:** [lbutlerco@everyactionadvocacy.com](mailto:lbutlerco@everyactionadvocacy.com) on behalf of [Lisa Butler](#)  
**To:** [Boulder County Board of Commissioners](#)  
Please enact a ban on fracking ASAP, as well as the strongest possible oil & gas regulations.  
**Date:** Sunday, November 29, 2020 12:48:40 PM

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Dear Board Chair Deb Gardner,

Dear Commissioners,

I write as a Boulder County resident deeply concerned about proposed fracking projects (140 wells) in our county and the resulting threats to air and water quality, public health, wildlife, and the climate. I urge you to enact a ban on fracking in Boulder County as soon as possible to protect our community from the well-documented threats to public health and safety from fracking, and to enact the strongest possible protective regulations as a backstop.

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However, regulations are no substitute for a permanent ban. We encourage you to direct County staff to begin developing language for a fracking ban in Boulder County. Thank you for your ongoing efforts to prioritize public health and the environment in Boulder County.

Sincerely,

Sincerely,

Lisa Butler

2569 Stonewall Ln Lafayette, CO 80026-3476

lbutlerco@gmail.com

**From:** [tomstumpf71@everyactionadvocacy.com](mailto:tomstumpf71@everyactionadvocacy.com) on behalf of [Tom Stumpf](#)  
[Boulder County Board of Commissioners](#)  
**Subject:** Please enact a ban on fracking ASAP, as well as the strongest possible oil & gas regulations.  
**Date:** Sunday, November 29, 2020 1:31:25 PM

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Dear Board Chair Deb Gardner,

Dear Commissioners,

I write as a Boulder County resident deeply concerned about proposed fracking projects (140 wells) in our county and the resulting threats to air and water quality, public health, wildlife, and the climate. I urge you to enact a ban on fracking in Boulder County as soon as possible to protect our community from the well-documented threats to public health and safety from fracking, and to enact the strongest possible protective regulations as a backstop.

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- Implement mandatory 2500' minimum setbacks with no waivers: Revise Article 12 to extend the minimum setback of oil and gas operations to 2500' from any structure intended for human occupancy, and from open space, recreation areas and all water sources. This is modest considering that research has identified adverse effects on the cognitive performance of infants whose mothers lived within 8,500 feet of oil and gas wells and an increased risk of congenital heart defects among children born to women living near oil and gas operations in Colorado, with the risks increasing with the density of oil and gas activities within a 10-mile radius.

- Cumulative impacts: Article 12 should incorporate a structure for the County to consider the context of our already-degraded air quality and the need for dramatic reductions in greenhouse gas emissions to avert catastrophic consequences from climate change.

- Affirmatively protect public health, safety, and welfare, and the environment: Section 12-1000 states that "A proposal meets the standards if it will...either avoid adverse impacts to public health, safety, and welfare, the environment and wildlife resources or...sufficiently minimize, and mitigate unavoidable impact." Oil and gas operations must be required to avoid adverse impacts to public health, safety, and welfare, and the environment and wildlife resources entirely, and not simply minimize impacts.

- Implement as mandatory all of the discretionary measures that are listed in Section 12-1100. Article 12 should explicitly prohibit venting and flaring and require "tankless" operations, which reduce air emissions. A recent study concluded that pregnant women who lived in proximity to natural gas flaring had a 50% higher chance of giving birth early than those who did not, putting the level of risk on par with that caused by smoking.

However, regulations are no substitute for a permanent ban. We encourage you to direct County staff to begin developing language for a fracking ban in Boulder County. Thank you for your ongoing efforts to prioritize public health and the environment in Boulder County.



Please remember the Rule of the Seven P's: Please Prioritize People and Planet over Profit, Power, and Partisanship.

Sincerely,

Sincerely,  
Tom Stumpf  
2863 Humboldt Cir Longmont, CO 80503-2339  
tomstumpf71@gmail.com

**From:** [dr.sarahart@everyactionadvocacy.com](mailto:dr.sarahart@everyactionadvocacy.com) on behalf of [Sara Hart](#)  
[Boulder County Board of Commissioners](#)  
**Subject:** Please enact a ban on fracking ASAP, as well as the strongest possible oil & gas regulations.  
**Date:** Sunday, November 29, 2020 1:51:37 PM

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Dear Board Chair Deb Gardner,

Dear Commissioners,

I write as a Boulder County resident deeply concerned about proposed fracking projects (140 wells) in our county and the resulting threats to air and water quality, public health, wildlife, and the climate. I urge you to enact a ban on fracking in Boulder County as soon as possible to protect our community from the well-documented threats to public health and safety from fracking, and to enact the strongest possible protective regulations as a backstop.

The proposed fracking projects are particularly troubling in the context of the Front Range's "serious" non-attainment status for ozone, and high concentrations of benzene and other VOCs, to which existing oil and gas operations are a significant contributor. Additionally, a recent report of the IPCC calls for a "rapid phase-out of CO2 emissions" largely over the next decade to avert catastrophic global temperature rise.

Despite the recent Longmont decision, a ban on fracking is consistent with the County's efforts to fight climate change, including the declaration of a climate emergency, and ongoing lawsuit against Suncor and Exxon for climate change-related damages. A fracking ban is both a reasonable and necessary action authorized for local governments by SB19-181. A ban is widely supported by Boulder County residents: 70% in recent polling, and the same fraction of voters in the County voted in favor of Proposition 112 in 2018.

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-Cumulative impacts: Article 12 should incorporate a structure for the County to consider the context of our already-degraded air quality and the need for dramatic reductions in greenhouse gas emissions to avert catastrophic consequences from climate change.

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However, regulations are no substitute for a permanent ban. We encourage you to direct County staff to begin developing language for a fracking ban in Boulder County. Thank you for your ongoing efforts to prioritize public health and the environment in Boulder County.

Sincerely,

Sincerely,

Sara Hart

2154 Apple Valley Rd Lyons, CO 80540-9010

dr.sarahart@gmail.com

**From:** [amanda.groziak@everyactionadvocacy.com](mailto:amanda.groziak@everyactionadvocacy.com) on behalf of [Amanda Groziak](#)  
[Boulder County Board of Commissioners](#)  
**Subject:** Please enact a ban on fracking ASAP, as well as the strongest possible oil & gas regulations.  
**Date:** Sunday, November 29, 2020 1:52:44 PM

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Dear Board Chair Deb Gardner,

Dear Commissioners,

I write as a Boulder County resident deeply concerned about proposed fracking projects (140 wells) in our county and the resulting threats to air and water quality, public health, wildlife, and the climate. I urge you to enact a ban on fracking in Boulder County as soon as possible to protect our community from the well-documented threats to public health and safety from fracking, and to enact the strongest possible protective regulations as a backstop.

The proposed fracking projects are particularly troubling in the context of the Front Range's "serious" non-attainment status for ozone, and high concentrations of benzene and other VOCs, to which existing oil and gas operations are a significant contributor. Additionally, a recent report of the IPCC calls for a "rapid phase-out of CO2 emissions" largely over the next decade to avert catastrophic global temperature rise.

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However, regulations are no substitute for a permanent ban. We encourage you to direct County staff to begin developing language for a fracking ban in Boulder County. Thank you for your ongoing efforts to prioritize public health and the environment in Boulder County.

Sincerely,

Sincerely,  
Amanda Groziak  
2950 Bixby Ln Boulder, CO 80303-2209  
amanda.groziak@gmail.com

**From:** [glmattingly@everyactionadvocacy.com](mailto:glmattingly@everyactionadvocacy.com) on behalf of [Georgia Mattingly](#)  
[Boulder County Board of Commissioners](#)  
**Subject:** Please enact a ban on fracking ASAP, as well as the strongest possible oil & gas regulations.  
**Date:** Sunday, November 29, 2020 2:10:55 PM

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Dear Board Chair Deb Gardner,

Dear Commissioners,

I write as a Boulder County resident deeply concerned about proposed fracking projects (140 wells) in our county and the resulting threats to air and water quality, public health, wildlife, and the climate. I urge you to enact a ban on fracking in Boulder County as soon as possible to protect our community from the well-documented threats to public health and safety from fracking, and to enact the strongest possible protective regulations as a backstop.

The proposed fracking projects are particularly troubling in the context of the Front Range's "serious" non-attainment status for ozone, and high concentrations of benzene and other VOCs, to which existing oil and gas operations are a significant contributor. Additionally, a recent report of the IPCC calls for a "rapid phase-out of CO2 emissions" largely over the next decade to avert catastrophic global temperature rise.

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However, regulations are no substitute for a permanent ban. We encourage you to direct County staff to begin developing language for a fracking ban in Boulder County. Thank you for your ongoing efforts to prioritize public health and the environment in Boulder County.

Sincerely,

Sincerely,  
Georgia Mattingly  
412 Verdant Cir Longmont, CO 80504-3908  
glmattingly@earthlink.net

**From:** [donnambirdlady@everyactionadvocacy.com](mailto:donnambirdlady@everyactionadvocacy.com) on behalf of [Donna Bonetti](#)  
[Boulder County Board of Commissioners](#)  
**Subject:** Please enact a ban on fracking ASAP, as well as the strongest possible oil & gas regulations.  
**Date:** Sunday, November 29, 2020 2:24:30 PM

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Dear Board Chair Deb Gardner,

Dear Commissioners,

I write as a Boulder County resident deeply concerned about proposed fracking projects (140 wells) in our county and the resulting threats to air and water quality, public health, wildlife, and the climate. I urge you to enact a ban on fracking in Boulder County as soon as possible to protect our community from the well-documented threats to public health and safety from fracking, and to enact the strongest possible protective regulations as a backstop.

The proposed fracking projects are particularly troubling in the context of the Front Range's "serious" non-attainment status for ozone, and high concentrations of benzene and other VOCs, to which existing oil and gas operations are a significant contributor. Additionally, a recent report of the IPCC calls for a "rapid phase-out of CO2 emissions" largely over the next decade to avert catastrophic global temperature rise.

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However, regulations are no substitute for a permanent ban. We encourage you to direct County staff to begin developing language for a fracking ban in Boulder County. Thank you for your ongoing efforts to prioritize public health and the environment in Boulder County.



Sincerely,

Sincerely,

Donna Bonetti

1170 Monroe Dr Apt B Boulder, CO 80303-8323

[donnambirdlady@yahoo.com](mailto:donnambirdlady@yahoo.com)

**From:** [neil@everyactionadvocacy.com](mailto:neil@everyactionadvocacy.com) on behalf of [Neil McLane](#)  
[Boulder County Board of Commissioners](#)  
**Subject:** Please enact a ban on fracking ASAP, as well as the strongest possible oil & gas regulations.  
**Date:** Sunday, November 29, 2020 2:26:57 PM

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Dear Board Chair Deb Gardner,

Dear Commissioners,

I write as a Boulder County resident deeply concerned about proposed fracking projects (140 wells) in our county and the resulting threats to air and water quality, public health, wildlife, and the climate. I urge you to enact a ban on fracking in Boulder County as soon as possible to protect our community from the well-documented threats to public health and safety from fracking, and to enact the strongest possible protective regulations as a backstop.

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However, regulations are no substitute for a permanent ban. We encourage you to direct County staff to begin developing language for a fracking ban in Boulder County. Thank you for your ongoing efforts to prioritize public health and the environment in Boulder County.

Sincerely,

Sincerely,

Neil McLane

5539 Colt Dr Longmont, CO 80503-8604

neil@mclaneassoc.com

**From:** [sattarakaur@everyactionadvocacy.com](mailto:sattarakaur@everyactionadvocacy.com) on behalf of [Sat Tara Khalsa](#)  
**To:** [Boulder County Board of Commissioners](#)  
**Subject:** Please enact a ban on fracking ASAP, as well as the strongest possible oil & gas regulations.  
**Date:** Sunday, November 29, 2020 2:36:52 PM

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Dear Board Chair Deb Gardner,

Dear Commissioners,

I write as a Boulder County resident deeply concerned about proposed fracking projects (140 wells) in our county and the resulting threats to air and water quality, public health, wildlife, and the climate. I urge you to enact a ban on fracking in Boulder County as soon as possible to protect our community from the well-documented threats to public health and safety from fracking, and to enact the strongest possible protective regulations as a backstop.

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However, regulations are no substitute for a permanent ban. We encourage you to direct County staff to begin developing language for a fracking ban in Boulder County. Thank you for your ongoing efforts to prioritize public health and the environment in Boulder County.

Sincerely,

Sincerely,  
Sat Tara Khalsa  
4467 Aberdeen Ct Boulder, CO 80301-4042  
sattarakaur@comcast.net

**From:** [Margaret LeCompte](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** Curtail emissions from fracking, drilling and seismic testing for health and environmental safety  
**Date:** Sunday, November 29, 2020 2:38:40 PM

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Dear Boulder County Commissioners;

I'm writing to beg you to act NOW to stop the oil and gas industry from polluting our air, water and soil by releasing byproducts from energy exploitation. Water used in fracking and injected into the earth now pollutes our groundwater, surface water, and aquifers. Gasses flared or vented after fracking and drilling or released during seismic testing now contaminate the air we breath, cause our tap water to catch fire, and create a myriad of respiratory problems among humans and animals. These injuries don't just stay near the drilling sites. They drift on the wind and through our water systems into multiple other communities downwind and downstream. Meanwhile, the oil and gas industry continues to make profits by inflicting diseconomies upon residents of Weld, Boulder, and other surrounding counties downwind from fracking and drilling operations.

It's time to stop letting the oil and gas industry off scot-free. For now, what they're doing isn't even the "cost of doing business." The industry should not be able to poison the environment and the people, plants and animals who live in it with impunity. When I moved to SE Boulder in 1990, the night sky sparkled with stars that I watched every night with awe. Now, persistent fracking-induced smog obscures all but the most brilliant of celestial bodies. Skies used to be blue-bird blue much of the time; now, they're dimmed with a persistent brown cloud of smog. I almost never suffered from "allergies." Now, most days, I sneeze and sneeze and sneeze; my eyes itch and my nose runs as if it were the middle of ragweed season- instead of the middle of winter. It all gets worse each year as the smog increases with rampant oil and gas exploitation.

Please. Act to enact and enforce controls on the oil and gas industry's emissions. And while you're at it, require them to fully map and disclose to the public where all the new, and importantly, all the old and forgotten-about pipelines are before we explode more houses and more lives are lost like those of the Martinez family in Frederick.

Margaret LeCompte  
290 Pawnee Drive  
Boulder CO 80303

**From:** [mbrooks5854@everyactionadvocacy.com](mailto:mbrooks5854@everyactionadvocacy.com) on behalf of [Meredith Brooks](#)  
**To:** [Boulder County Board of Commissioners](#)  
**Subject:** Please enact a ban on fracking ASAP, as well as the strongest possible oil & gas regulations.  
**Date:** Sunday, November 29, 2020 2:41:18 PM

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Dear Board Chair Deb Gardner,

Dear Commissioners,

I write as a Boulder County resident deeply concerned about proposed fracking projects (140 wells) in our county and the resulting threats to air and water quality, public health, wildlife, and the climate. I urge you to enact a ban on fracking in Boulder County as soon as possible to protect our community from the well-documented threats to public health and safety from fracking, and to enact the strongest possible protective regulations as a backstop.

The proposed fracking projects are particularly troubling in the context of the Front Range's "serious" non-attainment status for ozone, and high concentrations of benzene and other VOCs, to which existing oil and gas operations are a significant contributor. Additionally, a recent report of the IPCC calls for a "rapid phase-out of CO2 emissions" largely over the next decade to avert catastrophic global temperature rise.

Despite the recent Longmont decision, a ban on fracking is consistent with the County's efforts to fight climate change, including the declaration of a climate emergency, and ongoing lawsuit against Suncor and Exxon for climate change-related damages. A fracking ban is both a reasonable and necessary action authorized for local governments by SB19-181. A ban is widely supported by Boulder County residents: 70% in recent polling, and the same fraction of voters in the County voted in favor of Proposition 112 in 2018.

I also urge you to enact the strongest possible Article 12 regulations on oil and gas operations as a backstop protection to any potential legal challenge to a ban. I recommend the following points for inclusion in Article 12, based on the updated draft released October 20, 2020:

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-Affirmatively protect public health, safety, and welfare, and the environment: Section 12-1000 states that "A proposal meets the standards if it will...either avoid adverse impacts to public health, safety, and welfare, the environment and wildlife resources or...sufficiently minimize, and mitigate unavoidable impact." Oil and gas operations must be required to avoid adverse impacts to public health, safety, and welfare, and the environment and wildlife resources entirely, and not simply minimize impacts.

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However, regulations are no substitute for a permanent ban. We encourage you to direct County staff to begin developing language for a fracking ban in Boulder County. Thank you for your ongoing efforts to prioritize public health and the environment in Boulder County.

Sincerely,

Sincerely,  
Meredith Brooks  
2045 Fox Hills Rd Erie, CO 80516-7119  
mbrooks5854@yahoo.com



**From:** [betty gary Ball](#)  
**To:** [Boulder County Board of Commissioners](#)  
**Subject:** Please Ban Fracking in Boulder County  
**Date:** Sunday, November 29, 2020 2:42:54 PM

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November 29th, 2020

Dear Deb Gardner, Chair, and Boulder County Commissioners,

I am a Boulder County resident and deeply concerned about the proposal to create 140 Fracking Wells in our county. It is well known that doing so would cause serious contamination of our air and water, resulting in serious impacts to public health, wildlife and the climate. I strongly urge you to enact a ban on fracking in Boulder County as soon as possible. It is of the utmost importance to ban fracking in order to protect our community's health and well-being.

The proposed fracking projects are especially troubling in light of the Front Range's "serious" non-attainment status for ozone, and high concentrations of benzene and other VOCs, to which existing oil and gas operations are a significant contributor.

Additionally, a recent report of the IPCC calls for a "rapid phase-out of CO2 emissions" largely over the next decade to avert catastrophic global temperature rise.

Despite the recent Longmont decision, a ban on fracking *is* consistent with the County's efforts to fight climate change, including the declaration of a climate emergency, and ongoing lawsuit against Suncor and Exxon for climate change-related damages.

A fracking ban is both a reasonable and necessary action authorized for local governments by SB19-181. And as you are aware, a ban is widely supported by Boulder County residents:

Proposition 112 in 2018.

It **is also** imperative for you to please enact the strongest possible protective regulations as a backstop. **However, regulations are no substitute for a permanent ban.**

We most strongly encourage you to direct County staff to begin developing language for a fracking ban in Boulder County.

Thank you in advance, for taking action to protect public health and the environment in Boulder County.

With appreciation,  
Sincerely,  
*Betty Ball*

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*Betty Ball*

**From:** [mitzwilson1969@everyactionadvocacy.com](mailto:mitzwilson1969@everyactionadvocacy.com) on behalf of [Michelle Wilson](#)  
[Boulder County Board of Commissioners](#)  
**Subject:** Please enact a ban on fracking ASAP, as well as the strongest possible oil & gas regulations.  
**Date:** Sunday, November 29, 2020 3:27:43 PM

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Dear Board Chair Deb Gardner,

Dear Commissioners,

I write as a Boulder County resident deeply concerned about proposed fracking projects (140 wells) in our county and the resulting threats to air and water quality, public health, wildlife, and the climate. I urge you to enact a ban on fracking in Boulder County as soon as possible to protect our community from the well-documented threats to public health and safety from fracking, and to enact the strongest possible protective regulations as a backstop.

The proposed fracking projects are particularly troubling in the context of the Front Range's "serious" non-attainment status for ozone, and high concentrations of benzene and other VOCs, to which existing oil and gas operations are a significant contributor. Additionally, a recent report of the IPCC calls for a "rapid phase-out of CO2 emissions" largely over the next decade to avert catastrophic global temperature rise.

Despite the recent Longmont decision, a ban on fracking is consistent with the County's efforts to fight climate change, including the declaration of a climate emergency, and ongoing lawsuit against Suncor and Exxon for climate change-related damages. A fracking ban is both a reasonable and necessary action authorized for local governments by SB19-181. A ban is widely supported by Boulder County residents: 70% in recent polling, and the same fraction of voters in the County voted in favor of Proposition 112 in 2018.

I also urge you to enact the strongest possible Article 12 regulations on oil and gas operations as a backstop protection to any potential legal challenge to a ban. I recommend the following points for inclusion in Article 12, based on the updated draft released October 20, 2020:

-Implement mandatory 2500' minimum setbacks with no waivers: Revise Article 12 to extend the minimum setback of oil and gas operations to 2500' from any structure intended for human occupancy, and from open space, recreation areas and all water sources. This is modest considering that research has identified adverse effects on the cognitive performance of infants whose mothers lived within 8,500 feet of oil and gas wells and an increased risk of congenital heart defects among children born to women living near oil and gas operations in Colorado, with the risks increasing with the density of oil and gas activities within a 10-mile radius.

-Cumulative impacts: Article 12 should incorporate a structure for the County to consider the context of our already-degraded air quality and the need for dramatic reductions in greenhouse gas emissions to avert catastrophic consequences from climate change.

-Affirmatively protect public health, safety, and welfare, and the environment: Section 12-1000 states that "A proposal meets the standards if it will...either avoid adverse impacts to public health, safety, and welfare, the environment and wildlife resources or...sufficiently minimize, and mitigate unavoidable impact." Oil and gas operations must be required to avoid adverse impacts to public health, safety, and welfare, and the environment and wildlife resources entirely, and not simply minimize impacts.

-Implement as mandatory all of the discretionary measures that are listed in Section 12-1100. Article 12 should explicitly prohibit venting and flaring and require "tankless" operations, which reduce air emissions. A recent study concluded that pregnant women who lived in proximity to natural gas flaring had a 50% higher chance of giving birth early than those who did not, putting the level of risk on par with that caused by smoking.

However, regulations are no substitute for a permanent ban. We encourage you to direct County staff to begin developing language for a fracking ban in Boulder County. Thank you for your ongoing efforts to prioritize public health and the environment in Boulder County.

Sincerely,

Sincerely,  
Michelle Wilson  
2424 9th Ave Apt 7101 Longmont, CO 80503-4068  
mitzwilson1969@gmail.com

**From:** [susanmarie@everyactionadvocacy.com](mailto:susanmarie@everyactionadvocacy.com) on behalf of [Susan Frontczak](#)  
[Boulder County Board of Commissioners](#)  
**Subject:** Please enact a ban on fracking ASAP, as well as the strongest possible oil & gas regulations.  
**Date:** Sunday, November 29, 2020 3:29:53 PM

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Dear Board Chair Deb Gardner,

Dear Commissioners,

I write as a Boulder County resident deeply concerned about proposed fracking projects (140 wells) in our county and the resulting threats to air and water quality, public health, wildlife, and the climate. I urge you to enact a ban on fracking in Boulder County as soon as possible to protect our community from the well-documented threats to public health and safety from fracking, and to enact the strongest possible protective regulations as a backstop.

The proposed fracking projects are particularly troubling in the context of the Front Range's "serious" non-attainment status for ozone, and high concentrations of benzene and other VOCs, to which existing oil and gas operations are a significant contributor. Additionally, a recent report of the IPCC calls for a "rapid phase-out of CO2 emissions" largely over the next decade to avert catastrophic global temperature rise.

Despite the recent Longmont decision, a ban on fracking is consistent with the County's efforts to fight climate change, including the declaration of a climate emergency, and ongoing lawsuit against Suncor and Exxon for climate change-related damages. A fracking ban is both a reasonable and necessary action authorized for local governments by SB19-181. A ban is widely supported by Boulder County residents: 70% in recent polling, and the same fraction of voters in the County voted in favor of Proposition 112 in 2018.

I also urge you to enact the strongest possible Article 12 regulations on oil and gas operations as a backstop protection to any potential legal challenge to a ban. I recommend the following points for inclusion in Article 12, based on the updated draft released October 20, 2020:

- Implement mandatory 2500' minimum setbacks with no waivers: Revise Article 12 to extend the minimum setback of oil and gas operations to 2500' from any structure intended for human occupancy, and from open space, recreation areas and all water sources. This is modest considering that research has identified adverse effects on the cognitive performance of infants whose mothers lived within 8,500 feet of oil and gas wells and an increased risk of congenital heart defects among children born to women living near oil and gas operations in Colorado, with the risks increasing with the density of oil and gas activities within a 10-mile radius.

- Cumulative impacts: Article 12 should incorporate a structure for the County to consider the context of our already-degraded air quality and the need for dramatic reductions in greenhouse gas emissions to avert catastrophic consequences from climate change.

- Affirmatively protect public health, safety, and welfare, and the environment: Section 12-1000 states that "A proposal meets the standards if it will...either avoid adverse impacts to public health, safety, and welfare, the environment and wildlife resources or...sufficiently minimize, and mitigate unavoidable impact." Oil and gas operations must be required to avoid adverse impacts to public health, safety, and welfare, and the environment and wildlife resources entirely, and not simply minimize impacts.

- Implement as mandatory all of the discretionary measures that are listed in Section 12-1100. Article 12 should explicitly prohibit venting and flaring and require "tankless" operations, which reduce air emissions. A recent study concluded that pregnant women who lived in proximity to natural gas flaring had a 50% higher chance of giving birth early than those who did not, putting the level of risk on par with that caused by smoking.

However, regulations are no substitute for a permanent ban. We encourage you to direct County staff to begin developing language for a fracking ban in Boulder County. Thank you for your ongoing efforts to prioritize public health and the environment in Boulder County.

Sincerely,

Sincerely,  
Susan Frontczak  
3664 Chase Ct Boulder, CO 80305-5531  
susanmarie@cybermesa.com

**From:** [bgil331@everyactionadvocacy.com](mailto:bgil331@everyactionadvocacy.com) on behalf of [Brian Gillin](#)  
**To:** [Boulder County Board of Commissioners](#)  
**Subject:** Please enact a ban on fracking ASAP, as well as the strongest possible oil & gas regulations.  
**Date:** Sunday, November 29, 2020 3:32:01 PM

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Dear Board Chair Deb Gardner,

Dear Commissioners,

I write as a Boulder County resident deeply concerned about proposed fracking projects (140 wells) in our county and the resulting threats to air and water quality, public health, wildlife, and the climate. I urge you to enact a ban on fracking in Boulder County as soon as possible to protect our community from the well-documented threats to public health and safety from fracking, and to enact the strongest possible protective regulations as a backstop.

The proposed fracking projects are particularly troubling in the context of the Front Range's "serious" non-attainment status for ozone, and high concentrations of benzene and other VOCs, to which existing oil and gas operations are a significant contributor. Additionally, a recent report of the IPCC calls for a "rapid phase-out of CO2 emissions" largely over the next decade to avert catastrophic global temperature rise.

Despite the recent Longmont decision, a ban on fracking is consistent with the County's efforts to fight climate change, including the declaration of a climate emergency, and ongoing lawsuit against Suncor and Exxon for climate change-related damages. A fracking ban is both a reasonable and necessary action authorized for local governments by SB19-181. A ban is widely supported by Boulder County residents: 70% in recent polling, and the same fraction of voters in the County voted in favor of Proposition 112 in 2018.

I also urge you to enact the strongest possible Article 12 regulations on oil and gas operations as a backstop protection to any potential legal challenge to a ban. I recommend the following points for inclusion in Article 12, based on the updated draft released October 20, 2020:

-Implement mandatory 2500' minimum setbacks with no waivers: Revise Article 12 to extend the minimum setback of oil and gas operations to 2500' from any structure intended for human occupancy, and from open space, recreation areas and all water sources. This is modest considering that research has identified adverse effects on the cognitive performance of infants whose mothers lived within 8,500 feet of oil and gas wells and an increased risk of congenital heart defects among children born to women living near oil and gas operations in Colorado, with the risks increasing with the density of oil and gas activities within a 10-mile radius.

-Cumulative impacts: Article 12 should incorporate a structure for the County to consider the context of our already-degraded air quality and the need for dramatic reductions in greenhouse gas emissions to avert catastrophic consequences from climate change.

-Affirmatively protect public health, safety, and welfare, and the environment: Section 12-1000 states that "A proposal meets the standards if it will...either avoid adverse impacts to public health, safety, and welfare, the environment and wildlife resources or...sufficiently minimize, and mitigate unavoidable impact." Oil and gas operations must be required to avoid adverse impacts to public health, safety, and welfare, and the environment and wildlife resources entirely, and not simply minimize impacts.

-Implement as mandatory all of the discretionary measures that are listed in Section 12-1100. Article 12 should explicitly prohibit venting and flaring and require "tankless" operations, which reduce air emissions. A recent study concluded that pregnant women who lived in proximity to natural gas flaring had a 50% higher chance of giving birth early than those who did not, putting the level of risk on par with that caused by smoking.

However, regulations are no substitute for a permanent ban. We encourage you to direct County staff to begin developing language for a fracking ban in Boulder County. Thank you for your ongoing efforts to prioritize public health and the environment in Boulder County.

Sincerely,

Sincerely,  
Brian Gillin  
3233 Castle Peak Ave Superior, CO 80027-6072  
bgil331@gmail.com

**From:** [Ronald Brown](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** Public Comment Dec 1: Please strengthen O&G regulations  
**Date:** Sunday, November 29, 2020 3:55:28 PM

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- A large body of academic literature has characterized serious effects on human health and life expectancy from air pollution, including a recent study that identified air pollution as a contributor to 8.8 million deaths annually, identifying it as “one of the main global health risks.” Additionally, exposure to air pollution has been linked to higher rates of mortality from viral infectious diseases. In light of this evidence, and the serious threats posed by fracking to the stability of our climate, the only responsible course of action is for Boulder County to ban fracking and impose the most stringent regulations possible on oil and gas extraction.

## Public Health

- Setbacks: Numerous studies have linked fracking to harm to human health, including an increased risk of congenital heart defects among children born to women living near oil and gas operations in Colorado, with the risks increasing with the density of oil and gas activities within a 10-mile radius; and reduced cognitive performance has been identified in infants born to mothers living within 8,500 ft. of a fracking well. Based on a review of existing scientific literature, Wong (2017) concluded that, “a 2,500-foot setback recommendation is on the lower end of the range of distances where research has determined harmful health and quality of life impacts of toxic emissions and exposures.” Therefore, Article 12 should be revised to require a setback of at least 2,500 ft. between oil and gas operations and any structure intended for human occupancy, open space, water sources.
- SB 19-181 grants local jurisdictions, such as Boulder County, the ability to enact more restrictive regulations. A setback requirement that is more rigorous than the 2,000’ setback (with many potential exceptions) that is present in the regulations likely to be adopted by the COGCC, is essential. The CDPHE study on which the 2,000’ setback requirement is based identified deleterious health effects within 2,000’ of oil and gas operations, and did not consider health effects outside of that radius.

## Permitting Process

- Implement as mandatory all of the discretionary conditions listed in Section 12-1100, including:
  - Prohibition of venting or flaring of natural gas
  -



#### Requirement for ongoing water quality monitoring

- Requirements for use of “tankless” operations, which reduce air emissions, especially those of VOCs
- Continuous monitoring of leaks
- Requirement for closed loop “pitless” drilling systems, to facilitate re-use of produced water.
- Affirmatively protect public health, safety, and welfare, and the environment: Section 12-1000 states that “A proposal meets the standards if it will..., either avoid adverse impacts to public health, safety, and welfare, the environment and wildlife resources or, through imposition of conditions of approval, sufficiently minimize, and mitigate unavoidable impact.”. Oil and gas operations must be required to avoid adverse impacts to public health, safety, and welfare, and the environment and wildlife resources entirely, and not simply minimize impacts.
- Capping of old wells as a condition for new permits: If an operator applying for a new permit for oil and gas operations in Boulder County has existing “legacy” wells in the county, the operator should be required to cap them before a permit for new wells is considered.
- An operator should be required to obtain county approval before seeking surface-use agreements with landowners. (In Section 12-800 Part C, this is “recommended”, but not required.

#### Climate and Air Quality

- Prohibit flaring or venting of natural gas: A recent study published in [Nature](#) concluded that estimates of anthropogenic methane emissions, to which oil and gas operations are a prime contributor, are likely 20-40% higher than previously thought. Preliminary reports from NOAA for atmospheric methane levels in 2019 indicate that the year from 2018 to 2019 showed the largest annual increase in atmospheric methane since 2012.
- Prohibit permitting while the Front Range remains in non-attainment of the National Ambient Air Quality Standard (NAAQS) standards for ozone, and prohibit emissions of air toxics such as benzene: Research has demonstrated that Boulder County’s air quality is adversely affected by oil and gas operations in Weld County, and that oil

and gas operations are a significant contributor to excessive levels of ozone on the Front Range. Section 12-1000 A.1. states that “oil and gas facilities and operations will not compromise the attainment of ozone standards for the Denver Metro/North Front Range ozone nonattainment area as established by the US Environmental Protection Agency. Oil and gas facilities and operations will not contribute particulate matter to the air in a manner that endangers public health.” This should be strengthened to prohibit permitting altogether while the Front Range remains in non-attainment for ozone, and should extend to emissions of air toxics as well. A threshold for allowable emissions of particulate matter should be defined based on the ample body of scientific evidence assessing the effects of particulate matter on public health.

- In assessing a permit application, the Board of County Commissioners should be required to consider the cumulative effects of the expected greenhouse gas emissions and other air- and water-polluting emissions associated with the permit in the context of the existing pollution burden in the County and the existing global levels of greenhouse gas emissions. The greenhouse gas emissions associated with oil and gas development contribute to accelerating climate change, which fundamentally threatens public health, safety, and welfare
- Require that all electrical power provided to oil and gas operations be supplied by renewables, on an annual basis (i.e. net zero energy for electricity) and require that all on-site equipment be electrically-powered.
- “Tankless” operations, which reduce air emissions, especially of volatile organic compounds (VOCs), should be required in all circumstances. Section 12-1100 D. 14 states a requirement (to be imposed at the county’s discretion, as currently written) for “hydrocarbon control of 98% or better for crude oil, condensate, and produced water tanks.” Section 12-1100 E. 1. (also to be imposed at the county’s discretion) states a requirement for “use of pipelines to transport all gas and fluid materials, including oil, natural gas, fresh water, produced water, and waste products, to and from the oil and gas facilities.”

## **Water Use and Quality**

- Sec. 12-900 D.7.e.i.. requires “plans for recycling or reuse of all water used or produced by the oil and gas operations.” Implementation of these plans should be mandatory (currently a discretionary item in 12-1100 D.5).
- Measures to address water quality impacts identified in the study required by Sec. 12-900 D.8.b.. “Modeling of Impacts” should be mandatory and the radius over which water sources are included for testing should be increased.

- There should be no oil and gas development in floodplains.

### **Financial Assurances, Fines, and Liability**

- The County should reserve the right to revoke a permit for oil and gas operations based on the operator's failure to abide by the conditions of the permit. (Section 12-1400 F.5. states that, "As a result of either (i) emergency conditions, or (ii) three or more fines imposed for serious violations within six (6) months, the Director may issue a written order to the Applicant (or the Applicant's owner, Operator, or agent) suspending the Special Review Approval. Upon receipt, the Applicant must cease all activities and operations immediately until the violation is remedied." However, certain actions by an operator should result in the permit revocation of a permit.)
- regulations: Section 12-1500 C. identifies a range of possible fines from \$300 to \$15,000 per violation per day, which is far too low to address the serious effects on public health and the environment which could result from a violation of the permit conditions. Additionally, the county should consider the cumulative effects of all violations by an operator in Boulder County, not limited to a particular site, in assessing the magnitude of the fines to be imposed.
- Increase the required amount of financial assurances and extend all conditions (from assurances to liability) to all affiliated entities and subcontractors. The extension of requirements for financial assurances and liability to affiliates and sub-contractors is particularly important in the light of current market conditions and the precarious financial state of many fracking companies operating in Colorado. Insurance requirements should be implemented on a per well basis. Studies have found that the cost of soil remediation alone for oilfield sites in Colorado ranges from \$13,000 to \$73,000, while intensive remediation of groundwater pollution can cost more than \$1 million.
- A section should be added to the regulations specifically addressing requirements for maintenance of wells and related equipment, and imposing fines on operators who fail to meet the requirements. Lack of routine maintenance at oil and gas wells contributes to leaks and increased emissions which threaten human health and the environment, as well as increased future remediation costs.

### **Land Management**

- Oil and gas operations should be prohibited on open space. Boulder County residents pay over \$4 million annually in property taxes alone to support acquisitions

of open space, and the county's open space lands are a precious home for wildlife, as well as a destination for outdoor recreation.

- The operator should be required to fully restore the land on which an oil and gas operation is located to its prior state, such that it could continue to be used for its original purposes, such as agriculture or recreation .

## **Public Notice**

- The notification requirements (in Sec. 12-600 H) for nearby landowners after an application for a permit is deemed complete by the county should extend to all residents of the county, through publication in a newspaper in general circulation and on a county website.

Follow-up and ongoing water testing results should be mandatory, and should be recorded such that they would be available to future owners of the property and/or future users of the water source in question, and test results reporting on flowback and produced water should also be made available to the public. (Sec 12-1100 H.1. and H.6).

- Continuous air quality monitoring should be mandatory, and all reports from air quality monitoring of oil and gas operations should be available to the public and evidence of leaks and/or spills should also be reported to the public through a county website and any other appropriate channels. (Sec. 12-1100 D.1. and Sec 12-1100 D.3.)

## **Seismic Testing**

- Sec. 12-700 D.: The definition of a "testing area" for seismic testing should be clearly defined in terms of its extents.

## **Wildlife and Natural Resources**

- The current draft regulations require maps of wildlife and "natural resources" within 1 mile of the proposed facility, referring to the Boulder County Comprehensive Plan. This is an excellent first step in identifying potential impacts to important species and ecosystems in Boulder County (12-900.B.11 and 13). In addition, applicants are required to obtain an independent expert's evaluation of potential impacts to wildlife and natural resources (12-900.D. 5 and 6). This is also an essential step towards protecting Boulder County's biodiversity.
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However, in 12-1000 Special Review Standards, there is weakening language that may allow for insufficient protections. Here, it is stated that “Oil and gas facilities and operations will sufficiently avoid, minimize, and mitigate adverse impacts” to natural resources (p.12-22), with similar wording for wildlife (p.12-23). We are concerned that it will be difficult to determine and implement this standard, and that adverse impacts to Boulder County’s wildlife and natural resources may be allowed to occur. We recommend a stronger standard: Oil and gas facilities and operations will avoid adverse impacts to wildlife and natural resources.

**From:** [alison rogers](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** Public Comment Dec 1: Please strengthen O&G regulations  
**Date:** Sunday, November 29, 2020 3:59:22 PM

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There should be no new wells permitted in Boulder County, given the worsening air pollution that was more evident this year than even past summers which have been getting worse every year. There were many more days that the AQI for Boulder was unhealthy than there were days with AQI in the good zone. This toxic brew of pollution has been increasing every year leaving the air almost unbreathable. Until we reduce air pollution there should be no new sources of pollution allowed.

Thank you

*Alison Rogers Ed.D., RYT*

*Boulder, CO. 80304*

*303.324.1046*

*[Book: Breathing Space For New Mothers](#)*

*[www.theyogaofparenting.com](http://www.theyogaofparenting.com)*

*[www.facebook.com/yogaofparenting](https://www.facebook.com/yogaofparenting)*

**From:** [lois-boulder@comcast.net](mailto:lois-boulder@comcast.net)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** Ban fracking  
**Date:** Sunday, November 29, 2020 4:02:49 PM

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I am writing as a concerned Boulder Citizen pleading we continue the fight to ban fracking in Boulder, CO. One doesn't need to be a scientist to know the harm and destruction fracking causes to the environment, community and health of the citizens. This summer and fall was bad enough with the fires and poor air quality. We desperately need to take climate change seriously for future generations. Given Boulder was ranked as a top city to reside don't we have an obligation as a progressive city to set a standard for the health of the planet? I am doing everything possible on my part to reduce my carbon footprint. My dream is one day fracking will be banned Nationally. Let's join other communities to ban fracking once and for all in Boulder County.

Thank you,  
Lois Sorlie

**From:** [Frederica Acora](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** Public Comment Dec 1: Please strengthen O&G regulations  
**Date:** Sunday, November 29, 2020 4:17:05 PM

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Dear commissioners,

Please strengthen the oil and gas regulations before opening up our taxpayer supported open space to more fracking- and make sure the stricter regulations are not voluntary.

I know you're under pressure to lift this moratorium and allow 140 new wells, but there must be some way to stop this and continue keeping our health, safety and environmental concerns a priority.

Sincerely,  
Frederica Acora  
Upland Ave.  
Boulder, CO



**From:** [Katherine Delanoy](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** Public Comment: Please strengthen O&G regulations  
**Date:** Sunday, November 29, 2020 4:31:25 PM

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Dear AQCC,

Please consider the following recommendations in regard to the State Ozone Implementation Plan rulemaking.

Regulation 7 should be strengthened by requiring that continuous emissions monitoring for major source RACT limits be conducted by a third party with demonstrated expertise in the monitoring of selective pollutants with methods suitable to measure at a high dynamic range and frequency. It is unacceptable to have the ACQQ rely upon known faulty, 'bottom up,' estimates of emissions based on oil and gas industry emission inventories to demonstrate accurate attainment of the 8-hour ozone standard. Given the oil and gas industry's stark under-estimation of emissions, emissions inventories should be a critical function of the AQCC.

Colorado's ranking of ozone nonattainment should be bumped up from serious to severe in order to implement additional measures to protect public health and safety. Currently, the DMNFR is ranked as serious and Colorado. A ranking of severe will bring life-saving additional protective measures to help clear our air and modify the fracking industry.

I encourage the AQCC to adopt the alternate proposals put forth by multiple conservation groups. The AQCC has a mandate to step up during this critical time of wildfires and the coronavirus. Increase in lung damage, respiratory health impacts, and comorbidity among Colorado residents is rising. Ensure that alternate proposals in this rulemaking that support the DMNFR to meet the 8-hour ozone standard are fully considered in a serious manner by the entire commission. Ensure that maximum protections for public health and safety of residents are immediately implemented.

Thank you for your attention,

Katherine Delanoy  
214 Howard St.  
P.O. Box 144  
Eagle, CO 81631

**From:** [Jon Schroeder](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** Re: Fracking in Boulder County open space  
**Date:** Sunday, November 29, 2020 4:32:58 PM

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A large body of academic literature has characterized serious effects on human health and life expectancy from air pollution, including a recent[1] study that identified air pollution as a contributor to 8.8 million deaths annually, identifying it as “one of the main global health risks.” Additionally, exposure to air pollution has been linked to higher rates of mortality from viral infectious diseases[2]. In light of this evidence, and the serious threats posed by fracking to the stability of our climate, the only responsible course of action is for Boulder County to ban fracking and impose the most stringent regulations possible on oil and gas extraction.

Setbacks: Numerous studies have linked fracking to harm to human health, including an increased risk of congenital heart defects among children born to women living near oil and gas operations in Colorado[3], with the risks increasing with the density of oil and gas activities within a 10-mile radius[4]; and reduced cognitive performance has been identified in infants born to mothers living within 8,500 ft. of a fracking well[5]. Based on a review of existing scientific literature, Wong (2017)[6] concluded that, “a 2,500-foot setback recommendation is on the lower end of the range of distances where research has determined harmful health and quality of life impacts of toxic emissions and exposures.” Therefore, Article 12 should be revised to require a setback of at least 2,500 ft. between oil and gas operations and any structure intended for human occupancy, open space, water sources.

Please consider a county wide ban of fracking.

Research[10] has demonstrated that Boulder County’s air quality is adversely affected by oil and gas operations in Weld County, and that oil and gas operations are a significant contributor[11] to excessive levels of ozone on the Front Range.

Let's protect the health of our people and move away from Fossil fuels that harm every living being in this finite planet.

Sent from Xfinity Connect Application

**From:** [Thomas F Mayer](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
Ban on Fracking  
**Date:** Sunday, November 29, 2020 4:44:28 PM

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Dear County Commissioners:

A ban on fracking is an essential part of the effort to deal with climate change. Please continue the ban on fracking in Boulder County.

Thank you.

For environmental sanity,

Tom Mayer

918 Juniper Ave.

Boulder 80304

**From:** [Cindy Lurie](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** Public Comment Dec 1: Please strengthen O&G regulations  
**Date:** Sunday, November 29, 2020 6:29:59 PM

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Dear AQCC,

As a concerned member of the public, I am writing to you today to consider the following recommendations in regard to the State Ozone Implementation Plan rulemaking. One of the top issues with the current proposal is regarding continuous emissions monitoring in Regulation 7. Regulation 7 should be strengthened by requiring that continuous emissions monitoring for major source RACT limits as outlined in II.A.5.c. be conducted by a third party with demonstrated expertise in the monitoring of selective pollutants with methods suitable to measure at a high dynamic range and frequency. The Commission should include this monitoring in GHG Reporting Requirements as mandated by SB-181. It is unacceptable to have the AQCC rely upon known faulty, 'bottom up,' estimates of emissions based on oil and gas industry emission inventories to demonstrate accurate attainment of the 8-hour ozone

resolution, geographically broad, and 'top down' emissions inventories should be a critical function of the AQCC and a revision to this proposal.

Furthermore, Colorado's ranking of ozone nonattainment should be bumped up from serious to severe in order to implement additional measures to protect public health and safety. Governor Polis and the AQCC can cut out delays by asking EPA now for a voluntary bump up to a severe protection level. Currently, the DMNFR is ranked as serious and Colorado has not met federal air quality standards for over a decade and the bump up to a ranking of severe will bring life-saving additional protective measures to help clear our air and reign in the fracking industry.

Lastly, I encourage the AQCC to adopt the alternate proposals put forth by the Conservation Groups, Be the Change, Local Community Organizations, and WildEarth Guardians. The AQCC has a mandate through SB19-181, HB19-1261 and the CAA to step up during this critical time as wildfires ravage our state and the coronavirus threatens to increase lung damage, respiratory health impacts, and comorbidity among Colorado residents and ensure that alternate proposals in this rulemaking that support the DMNFR to meet the 8-hour ozone standard are fully considered in a serious manner by the entire commission and that maximum protections for public health and safety of residents in the DMNFR are immediately implemented.

Thank you for considering my comments today.

Sincerely,  
Cindy Lurie  
Lafayette, CO

**From:** [georgi@everyactionadvocacy.com](mailto:georgi@everyactionadvocacy.com) on behalf of [Georgi Ivanov](#)  
**To:** [Boulder County Board of Commissioners](#)  
**Subject:** Please enact a ban on fracking ASAP, as well as the strongest possible oil & gas regulations.  
**Date:** Sunday, November 29, 2020 6:47:49 PM

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Dear Board Chair Deb Gardner,

Dear Commissioners,

I write as a Boulder County resident deeply concerned about proposed fracking projects (140 wells) in our county and the resulting threats to air and water quality, public health, wildlife, and the climate. I urge you to enact a ban on fracking in Boulder County as soon as possible to protect our community from the well-documented threats to public health and safety from fracking, and to enact the strongest possible protective regulations as a backstop.

The proposed fracking projects are particularly troubling in the context of the Front Range's "serious" non-attainment status for ozone, and high concentrations of benzene and other VOCs, to which existing oil and gas operations are a significant contributor. Additionally, a recent report of the IPCC calls for a "rapid phase-out of CO2 emissions" largely over the next decade to avert catastrophic global temperature rise.

Despite the recent Longmont decision, a ban on fracking is consistent with the County's efforts to fight climate change, including the declaration of a climate emergency, and ongoing lawsuit against Suncor and Exxon for climate change-related damages. A fracking ban is both a reasonable and necessary action authorized for local governments by SB19-181. A ban is widely supported by Boulder County residents: 70% in recent polling, and the same fraction of voters in the County voted in favor of Proposition 112 in 2018.

I also urge you to enact the strongest possible Article 12 regulations on oil and gas operations as a backstop protection to any potential legal challenge to a ban. I recommend the following points for inclusion in Article 12, based on the updated draft released October 20, 2020:

- Implement mandatory 2500' minimum setbacks with no waivers: Revise Article 12 to extend the minimum setback of oil and gas operations to 2500' from any structure intended for human occupancy, and from open space, recreation areas and all water sources. This is modest considering that research has identified adverse effects on the cognitive performance of infants whose mothers lived within 8,500 feet of oil and gas wells and an increased risk of congenital heart defects among children born to women living near oil and gas operations in Colorado, with the risks increasing with the density of oil and gas activities within a 10-mile radius.

- Cumulative impacts: Article 12 should incorporate a structure for the County to consider the context of our already-degraded air quality and the need for dramatic reductions in greenhouse gas emissions to avert catastrophic consequences from climate change.

- Affirmatively protect public health, safety, and welfare, and the environment: Section 12-1000 states that "A proposal meets the standards if it will...either avoid adverse impacts to public health, safety, and welfare, the environment and wildlife resources or...sufficiently minimize, and mitigate unavoidable impact." Oil and gas operations must be required to avoid adverse impacts to public health, safety, and welfare, and the environment and wildlife resources entirely, and not simply minimize impacts.

- Implement as mandatory all of the discretionary measures that are listed in Section 12-1100. Article 12 should explicitly prohibit venting and flaring and require "tankless" operations, which reduce air emissions. A recent study concluded that pregnant women who lived in proximity to natural gas flaring had a 50% higher chance of giving birth early than those who did not, putting the level of risk on par with that caused by smoking.

However, regulations are no substitute for a permanent ban. We encourage you to direct County staff to begin developing language for a fracking ban in Boulder County. Thank you for your ongoing efforts to prioritize public health and the environment in Boulder County.

Sincerely,

Sincerely,

Georgi Ivanov

4550 Broadway St Unit 212 Boulder, CO 80304-4801

[georgi@ivanovphotography.com](mailto:georgi@ivanovphotography.com)

**From:** [Bev B](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** Proposed Oil and Gas Regulations  
**Date:** Sunday, November 29, 2020 7:02:02 PM

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Dear Commissioners and Staff,

I appreciate the work that has gone into these proposed regulations. I would like to see them further strengthened as follows:

1. If possible, prohibit oil and gas operations on Boulder County Parks and Open Space properties. If this is not possible, ensure that important wildlife and biological resource areas will be protected from the effects of oil and gas activity, as SB181 language requires. Such areas include floodplains, riparian areas, Environmental Conservation Areas designated in the County Comprehensive Plan, bird nesting areas, migration corridors, and ecologically significant areas for Tier 1 and Tier 2 species in the Colorado State Wildlife Action Plan and for those on the Boulder County Wildlife Species of Special Concern list.
2. Address climate change by adding strong language that requires oil and gas companies to ensure that their operations do not result in a net increase in greenhouse gas emissions. At a minimum, if fracking is to occur in Boulder County, oil and gas operators should be required to offset emissions from their activities and products.
3. Strengthen language to require protection of human health from all toxic emissions from oil and gas operations, instead of only ozone and particulate matter.

Thank you for the opportunity to comment.

Bev Baker  
Louisville

**From:** [sylvie4@everyactionadvocacy.com](mailto:sylvie4@everyactionadvocacy.com) on behalf of [Sylvie Chevallier](#)  
[Boulder County Board of Commissioners](#)  
**Subject:** Please enact a ban on fracking ASAP, as well as the strongest possible oil & gas regulations.  
**Date:** Sunday, November 29, 2020 7:18:56 PM

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Dear Board Chair Deb Gardner,

Dear Commissioners,

I write as a Boulder County resident deeply concerned about proposed fracking projects (140 wells) in our county and the resulting threats to air and water quality, public health, wildlife, and the climate. I urge you to enact a ban on fracking in Boulder County as soon as possible to protect our community from the well-documented threats to public health and safety from fracking, and to enact the strongest possible protective regulations as a backstop.

The proposed fracking projects are particularly troubling in the context of the Front Range's "serious" non-attainment status for ozone, and high concentrations of benzene and other VOCs, to which existing oil and gas operations are a significant contributor. Additionally, a recent report of the IPCC calls for a "rapid phase-out of CO2 emissions" largely over the next decade to avert catastrophic global temperature rise.

Despite the recent Longmont decision, a ban on fracking is consistent with the County's efforts to fight climate change, including the declaration of a climate emergency, and ongoing lawsuit against Suncor and Exxon for climate change-related damages. A fracking ban is both a reasonable and necessary action authorized for local governments by SB19-181. A ban is widely supported by Boulder County residents: 70% in recent polling, and the same fraction of voters in the County voted in favor of Proposition 112 in 2018.

I also urge you to enact the strongest possible Article 12 regulations on oil and gas operations as a backstop protection to any potential legal challenge to a ban. I recommend the following points for inclusion in Article 12, based on the updated draft released October 20, 2020:

- Implement mandatory 2500' minimum setbacks with no waivers: Revise Article 12 to extend the minimum setback of oil and gas operations to 2500' from any structure intended for human occupancy, and from open space, recreation areas and all water sources. This is modest considering that research has identified adverse effects on the cognitive performance of infants whose mothers lived within 8,500 feet of oil and gas wells and an increased risk of congenital heart defects among children born to women living near oil and gas operations in Colorado, with the risks increasing with the density of oil and gas activities within a 10-mile radius.

- Cumulative impacts: Article 12 should incorporate a structure for the County to consider the context of our already-degraded air quality and the need for dramatic reductions in greenhouse gas emissions to avert catastrophic consequences from climate change.

- Affirmatively protect public health, safety, and welfare, and the environment: Section 12-1000 states that "A proposal meets the standards if it will...either avoid adverse impacts to public health, safety, and welfare, the environment and wildlife resources or...sufficiently minimize, and mitigate unavoidable impact." Oil and gas operations must be required to avoid adverse impacts to public health, safety, and welfare, and the environment and wildlife resources entirely, and not simply minimize impacts.

- Implement as mandatory all of the discretionary measures that are listed in Section 12-1100. Article 12 should explicitly prohibit venting and flaring and require "tankless" operations, which reduce air emissions. A recent study concluded that pregnant women who lived in proximity to natural gas flaring had a 50% higher chance of giving birth early than those who did not, putting the level of risk on par with that caused by smoking.

However, regulations are no substitute for a permanent ban. We encourage you to direct County staff to begin developing language for a fracking ban in Boulder County. Thank you for your ongoing efforts to prioritize public health and the environment in Boulder County.



Sincerely,

Sincerely,  
Sylvie Chevallier  
4500 19th St Boulder, CO 80304-0613  
sylvie4@gmail.com

**From:** [mcathetinebrooks@everyactionadvocacy.com](mailto:mcathetinebrooks@everyactionadvocacy.com) on behalf of [Catherine Brooks](#)  
**To:** [Boulder County Board of Commissioners](#)  
**Subject:** Please enact a ban on fracking ASAP, as well as the strongest possible oil & gas regulations.  
**Date:** Sunday, November 29, 2020 7:21:04 PM

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Dear Board Chair Deb Gardner,

Dear Commissioners,

I write as a Boulder County resident deeply concerned about proposed fracking projects (140 wells) in our county and the resulting threats to air and water quality, public health, wildlife, and the climate. I urge you to enact a ban on fracking in Boulder County as soon as possible to protect our community from the well-documented threats to public health and safety from fracking, and to enact the strongest possible protective regulations as a backstop.

The proposed fracking projects are particularly troubling in the context of the Front Range's "serious" non-attainment status for ozone, and high concentrations of benzene and other VOCs, to which existing oil and gas operations are a significant contributor. Additionally, a recent report of the IPCC calls for a "rapid phase-out of CO2 emissions" largely over the next decade to avert catastrophic global temperature rise.

Despite the recent Longmont decision, a ban on fracking is consistent with the County's efforts to fight climate change, including the declaration of a climate emergency, and ongoing lawsuit against Suncor and Exxon for climate change-related damages. A fracking ban is both a reasonable and necessary action authorized for local governments by SB19-181. A ban is widely supported by Boulder County residents: 70% in recent polling, and the same fraction of voters in the County voted in favor of Proposition 112 in 2018.

I also urge you to enact the strongest possible Article 12 regulations on oil and gas operations as a backstop protection to any potential legal challenge to a ban. I recommend the following points for inclusion in Article 12, based on the updated draft released October 20, 2020:

-Implement mandatory 2500' minimum setbacks with no waivers: Revise Article 12 to extend the minimum setback of oil and gas operations to 2500' from any structure intended for human occupancy, and from open space, recreation areas and all water sources. This is modest considering that research has identified adverse effects on the cognitive performance of infants whose mothers lived within 8,500 feet of oil and gas wells and an increased risk of congenital heart defects among children born to women living near oil and gas operations in Colorado, with the risks increasing with the density of oil and gas activities within a 10-mile radius.

-Cumulative impacts: Article 12 should incorporate a structure for the County to consider the context of our already-degraded air quality and the need for dramatic reductions in greenhouse gas emissions to avert catastrophic consequences from climate change.

-Affirmatively protect public health, safety, and welfare, and the environment: Section 12-1000 states that "A proposal meets the standards if it will...either avoid adverse impacts to public health, safety, and welfare, the environment and wildlife resources or...sufficiently minimize, and mitigate unavoidable impact." Oil and gas operations must be required to avoid adverse impacts to public health, safety, and welfare, and the environment and wildlife resources entirely, and not simply minimize impacts.

-Implement as mandatory all of the discretionary measures that are listed in Section 12-1100. Article 12 should explicitly prohibit venting and flaring and require "tankless" operations, which reduce air emissions. A recent study concluded that pregnant women who lived in proximity to natural gas flaring had a 50% higher chance of giving birth early than those who did not, putting the level of risk on par with that caused by smoking.

However, regulations are no substitute for a permanent ban. We encourage you to direct County staff to begin developing language for a fracking ban in Boulder County. Thank you for your ongoing efforts to prioritize public

Sincerely,

Sincerely,  
Catherine Brooks  
4550 Broadway St Unit 212 Boulder, CO 80304-4801  
mcathetinebrooks@gmail.com

**From:** [kathy durrum](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** Public Comment Dec 1: Please strengthen O&G regulations. DO NOT proceed with destructive permits  
**Date:** Sunday, November 29, 2020 7:57:04 PM

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**Please Commissioners, I'm letting you know that I oppose the 140 new fracking wells that are proposed for Boulder County.** The current moratorium that prevents new drilling permits expires this month. Take action against! Despite activists' and Colorado Rising's call for greatly strengthened regulations, do NOT proceed with the destructive revisions

Kathy Durrum

Sent from my iPhone

**From:** [Joshua Knight](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** Public Comment Dec 1: Please strengthen O&G regulations  
**Date:** Sunday, November 29, 2020 8:19:28 PM

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Dear Boulder County,

May God bless you in your discernment.

I would like to see O&G Regulations Strengthened!

- A large body of academic literature has characterized serious effects on human health and life expectancy from air pollution, including a recent study that identified air pollution as a contributor to 8.8 million deaths annually, identifying it as “one of the main global health risks.” Additionally, exposure to air pollution has been linked to higher rates of mortality from viral infectious diseases. In light of this evidence, and the serious threats posed by fracking to the stability of our climate, the only responsible course of action is for Boulder County to ban fracking and impose the most stringent regulations possible on oil and gas extraction.

#### Public Health

- Setbacks: Numerous studies have linked fracking to harm to human health, including an increased risk of congenital heart defects among children born to women living near oil and gas operations in Colorado, with the risks increasing with the density of oil and gas activities within a 10-mile radius; and reduced cognitive performance has been identified in infants born to mothers living within 8,500 ft. of a fracking well. Based on a review of existing scientific literature, Wong (2017) concluded that, “a 2,500-foot setback recommendation is on the lower end of the range of distances where research has determined harmful health and quality of life impacts of toxic emissions and exposures.” Therefore, Article 12 should be revised to require a setback of at least 2,500 ft. between oil and gas operations and any structure intended for human occupancy, open space, water sources.
- SB 19-181 grants local jurisdictions, such as Boulder County, the ability to enact more restrictive regulations. A setback requirement that is more rigorous than the 2,000’ setback (with many potential exceptions) that is present in the regulations likely to be adopted by the COGCC, is essential. The CDPHE study on which the 2,000’ setback requirement is based identified deleterious health effects within 2,000’ of oil and gas operations, and did not consider health effects outside of that radius.

#### Permitting Process

- Implement as mandatory all of the discretionary conditions listed in Section 12-1100, including:
  - Prohibition of venting or flaring of natural gas
  - Requirement for ongoing water quality monitoring

#### of VOCs

- Continuous monitoring of leaks
- Requirement for closed loop “pitless” drilling systems, to facilitate re-use of produced water.
- Affirmatively protect public health, safety, and welfare, and the environment: Section 12-1000 states that “A proposal meets the standards if it will..., either avoid adverse impacts to public health, safety, and welfare, the environment and wildlife resources or, through imposition of conditions of approval, sufficiently minimize, and mitigate unavoidable

impact.”. Oil and gas operations must be required to avoid adverse impacts to public health, safety, and welfare, and the environment and wildlife resources entirely, and not simply minimize impacts.

- Capping of old wells as a condition for new permits: If an operator applying for a new permit for oil and gas operations in Boulder County has existing “legacy” wells in the county, the operator should be required to cap them before a permit for new wells is considered.
- An operator should be required to obtain county approval before seeking surface-use agreements with landowners. (In Section 12-800 Part C, this is “recommended”, but not required.

#### Climate and Air Quality

- Prohibit flaring or venting of natural gas: A recent study published in Nature concluded that estimates of anthropogenic methane emissions, to which oil and gas operations are a prime contributor, are likely 20-40% higher than previously thought. Preliminary reports from NOAA for atmospheric methane levels in 2019 indicate that the year from 2018 to 2019 showed the largest annual increase in atmospheric methane since 2012.
- Prohibit permitting while the Front Range remains in non-attainment of the National Ambient Air Quality Standard (NAAQS) standards for ozone, and prohibit emissions of air toxics such as benzene: Research has demonstrated that Boulder County’s air quality is adversely affected by oil and gas operations in Weld County, and that oil and gas operations

A.1. states that “oil and gas facilities and operations will not compromise the attainment of ozone standards for the Denver Metro/North Front Range ozone nonattainment area as established by the US Environmental Protection Agency. Oil and gas facilities and operations will not contribute particulate matter to the air in a manner that endangers public health.” This should be strengthened to prohibit permitting altogether while the Front Range remains in non-attainment for ozone, and should extend to emissions of air toxics as well. A threshold for allowable emissions of particulate matter should be defined based on the ample body of scientific evidence assessing the effects of particulate matter on public health.

- In assessing a permit application, the Board of County Commissioners should be required to consider the cumulative effects of the expected greenhouse gas emissions and other air- and water-polluting emissions associated with the permit in the context of the existing pollution burden in the County and the existing global levels of greenhouse gas emissions. The greenhouse gas emissions associated with oil and gas development contribute to accelerating climate change, which fundamentally threatens public health, safety, and welfare
- Require that all electrical power provided to oil and gas operations be supplied by renewables, on an annual basis (i.e. net zero energy for electricity) and require that all on-site equipment be electrically-powered.
- “Tankless” operations, which reduce air emissions, especially of volatile organic compounds (VOCs), should be required in all circumstances. Section 12-1100 D. 14 states a requirement (to be imposed at the county’s discretion, as currently written) for “hydrocarbon control of 98% or better for crude oil, condensate, and produced water tanks.” Section 12-1100 E. 1. (also to be imposed at the county’s discretion) states a requirement for “use of pipelines to transport all gas and fluid materials, including oil, natural gas, fresh water, produced water, and waste products, to and from the oil and gas facilities.”

#### Water Use and Quality

- Sec. 12-900 D.7.e.i.. requires “plans for recycling or reuse of all water used or produced by the oil and gas operations.” Implementation of these plans should be mandatory (currently a discretionary item in 12-1100 D.5).

- Measures to address water quality impacts identified in the study required by Sec. 12-900 D.8.b.. “Modeling of Impacts” should be mandatory and the radius over which water sources are included for testing should be increased.
- There should be no oil and gas development in floodplains.

#### Financial Assurances, Fines, and Liability

- The County should reserve the right to revoke a permit for oil and gas operations based on the operator’s failure to abide by the conditions of the permit. (Section 12-1400 F.5. states that, “As a result of either (i) emergency conditions, or (ii) three or more fines imposed for serious violations within six (6) months, the Director may issue a written order to the Applicant (or the Applicant’s owner, Operator, or agent) suspending the Special Review Approval. Upon receipt, the Applicant must cease all activities and operations immediately until the violation is remedied.” However, certain actions by an operator should result in the permit revocation of a permit.)
- Increase the maximum level of fines that the County can impose for violation of the regulations: Section 12-1500 C. identifies a range of possible fines from \$300 to \$15,000 per violation per day, which is far too low to address the serious effects on public health and the environment which could result from a violation of the permit conditions. Additionally, the county should consider the cumulative effects of all violations by an operator in Boulder County, not limited to a particular site, in assessing the magnitude of the fines to be imposed.
- Increase the required amount of financial assurances and extend all conditions (from assurances to liability) to all affiliated entities and subcontractors. The extension of requirements for financial assurances and liability to affiliates and sub-contractors is

state of many fracking companies operating in Colorado. Insurance requirements should be implemented on a per well basis. Studies have found that the cost of soil remediation alone for oilfield sites in Colorado ranges from \$13,000 to \$73,000, while intensive remediation of groundwater pollution can cost more than \$1 million.

- A section should be added to the regulations specifically addressing requirements for maintenance of wells and related equipment, and imposing fines on operators who fail to meet the requirements. Lack of routine maintenance at oil and gas wells contributes to leaks and increased emissions which threaten human health and the environment, as well as increased future remediation costs.

#### Land Management

- Oil and gas operations should be prohibited on open space. Boulder County residents pay over \$4 million annually in property taxes alone to support acquisitions of open space, and the county’s open space lands are a precious home for wildlife, as well as a destination for outdoor recreation.
- The operator should be required to fully restore the land on which an oil and gas operation is located to its prior state, such that it could continue to be used for its original purposes, such as agriculture or recreation .

#### Public Notice

- The notification requirements (in Sec. 12-600 H) for nearby landowners after an application for a permit is deemed complete by the county should extend to all residents of the county, through publication in a newspaper in general circulation and on a county website.
- Follow-up and ongoing water testing results should be mandatory, and should be recorded such that they would be available to future owners of the property and/or future users of the

water source in question, and test results reporting on flowback and produced water should also be made available to the public. (Sec 12-1100 H.1. and H.6).

- Continuous air quality monitoring should be mandatory, and all reports from air quality monitoring of oil and gas operations should be available to the public and evidence of leaks and/or spills should also be reported to the public through a county website and any other appropriate channels. (Sec. 12-1100 D.1. and Sec 12-1100 D.3.)

#### Seismic Testing

- Sec. 12-700 D.: The definition of a “testing area” for seismic testing should be clearly defined in terms of its extents.

#### Wildlife and Natural Resources

- The current draft regulations require maps of wildlife and “natural resources” within 1 mile of the proposed facility, referring to the Boulder County Comprehensive Plan. This is an excellent first step in identifying potential impacts to important species and ecosystems in Boulder County (12-900.B.11 and 13). In addition, applicants are required to obtain an independent expert’s evaluation of potential impacts to wildlife and natural resources (12-900.D. 5 and 6). This is also an essential step towards protecting Boulder County’s biodiversity.
- However, in 12-1000 Special Review Standards, there is weakening language that may allow for insufficient protections. Here, it is stated that “Oil and gas facilities and operations will sufficiently avoid, minimize, and mitigate adverse impacts” to natural resources (p.12-22), with similar wording for wildlife (p.12-23). We are concerned that it will be difficult to determine and implement this standard, and that adverse impacts to Boulder County’s wildlife and natural resources may be allowed to occur. We recommend a stronger standard: Oil and

Sincerely,  
Dr. Joshua Knight

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**Joshua Knight** | Program Engineer | **Global Hope Network International**  
+1 (303) 919-2872 | [ghni.org](http://ghni.org)

Schedule a call with me: [calendly.com/joshua-knight](https://calendly.com/joshua-knight)

Support our work: <https://www.globalhopenetwork.org/about/staff/joshua-knight>



**From:** [Julie Lang](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** Boulder County Article 12 Land Use/Oil and Gas Regulations  
**Date:** Sunday, November 29, 2020 8:27:02 PM

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Dear Boulder County Commissioners

I am writing today to urge you to provide the strongest, most protective oil and gas regulations possible. This includes 2500' foot setbacks from occupied buildings, water sources, rec areas and open space land. We would obviously prefer a countywide ban.

Fracking is a short-term bandaid to the energy problem. However, the risk to human health and life from the resultant air pollution, both from the fracking process and a carbon energy source is one of the main global health risks.

Let's do the right thing - transition to renewables and leave Boulder county in a more pristine state, for our health and the health of the lands.

Julie Lang

**From:** [Randy R](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** Boulder County Article 12 Land Use/Oil and Gas Regulations  
**Date:** Sunday, November 29, 2020 8:34:41 PM

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Hello Boulder County

Thank you for taking a moment to read feedback from your constituents.

I would request that you vote the strongest, most protective oil and gas regulations possible - including a minimum of 2500' setbacks from all occupied buildings, water sources, recreation areas and open space land.

our land, air and water are protected to protect us now and for future generations.

Sincerely,  
--- Randy

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

**From:** [Chris Bentley](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** Public Comment Dec 1: Please strengthen O&G regulations  
**Date:** Sunday, November 29, 2020 9:55:00 PM

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NO FRACKING in Boulder County!

Chris

**Chris Bentley**

[Chris@BentleyMarketingPlus.com](mailto:Chris@BentleyMarketingPlus.com) | C) 970-319-9200 | [LinkedIn Profile](#)



**From:** [Katherine Merlin](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** Public comment to proposed O&G regulations  
**Date:** Sunday, November 29, 2020 10:16:32 PM

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Dear Commissioners,

The oil and gas industry is gunning for Boulder. Look at a map of the existing and proposed wells and you will see that the eastern edge of Boulder County is starkly contrasted. The only thing that stands between our precious open space, our already damaged air, and further assault and degradation of our land and our bodies are the rules that you are about to vote on.

After a moratorium which I believe has lasted the better part of a decade, Boulder is finally in a legal position to enact the rules that it wants to thanks to SB 19-181. Public support in Boulder County for 2018's Proposition 112, seeking 2,500 foot setbacks was over 70%. Boulder residents didn't pay millions upon millions of dollars to preserve our open space simply in order for the oil and gas industry to cram it full of thousands of wells and tanks, unencumbered by residential setbacks thanks to our dedication to keeping the space "open."

The rules you have proposed are simply not strong enough. They do not require minimum setbacks from trails or recreation areas which are heavily utilized by Boulder's outdoor enthusiasts, for one. Without firm setbacks from these areas Boulder will have less power to require operators to move wells and infrastructure away from human activity, resulting in increased danger to health and safety (explosion, fire, toxic air emissions, particulate matter, vehicle traffic risks, etc.) as well as exposure to noxious odor, intrusive noise, and unsightly features such as large tank batteries, tangles of piping, and open flares. Many open spaces in Boulder are visited on a nearly continuous basis by humans on foot or bike who are exposed and vulnerable - not protected by even the four walls of a home. These areas should receive explicit protection, if not to the same degree as an occupied home then at least to some degree. A 1000' setback from demarcated trails, trailheads, bikeways, and recreation areas - although well inside the typical evacuation area in emergency situations at oil and gas facilities - would provide some protection for the 6.25 million people who visit Boulder's open space every year.

Boulder has invested too much of itself in its open space to cede it to dirty, dangerous, and outdated oil and gas development. Not just our money. We have invested our hearts, it is the backbone of the soul of the community. It is where we live, as much as we live anywhere. The oil and gas industry only sees "free" land where it can cram mega pads (often 20 acres or larger apiece). But the land is not free. It is occupied by humans every single day of the year. It is occupied by wildlife every single day of the year.

I support the proposals by 350 Colorado and others to strengthen the proposed Boulder County regulations, and I implore you to add mandatory setbacks of at least 1000' from trails, trailheads, bikeways, and recreation areas to protect the more than 6 million visitors who use these places every year.

Best regards,

Kate Merlin  
479 Arapahoe Ave.,  
Boulder, Colorado

**From:** [Cathy OGrady](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** Public Comment Dec 1: Please strengthen O&G regulations  
**Date:**

---

I am opposed to the 140 fracking wells proposed for Boulder County. The air pollution is intolerable now. Some days I can hardly breathe. As a Nurse Practitioner the deteriorating health of the public is unacceptable. Thank You for your consideration

-Sincerely,-  
Cathy O Grady-Melvin

**From:** [Paula Kelly](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** Regulations  
**Date:** Sunday, November 29, 2020 10:44:11 PM

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I am writing to you today to ask that you extend the moratorium for at least another six months for two specific reasons. First, two commissioners, Deb Gardner and Elise Jones will no longer be serving in 2021. Why should they be making such serious decisions and one month later walk away with no repercussions for their actions. Second, the COGCC has not completed their regulations yet. We should be waiting until they have completed all of their new regulations so that we can have a more thorough and viable set of regulations.

Another concern is in the new regulations it is imperative that we go with a 2500 foot setback. A 2000 foot setback is not enough and we know a 2500 foot setback is on the extreme low end of safe, if you consider breathing carcinogenic and radioactive substances safe. Is there actually a safe amount of poison we can breathe? Is there actually a safe amount of poison we can belch into the environment without causing damage? I think the worldwide climate crisis that we are in the midst of holds testament to those questions.

The financial status of these companies is at best shaky. They are claiming bankruptcy at a high rate these days as a matter of conducting daily business. What is to legally hold them responsible for damages or emergencies once they claim bankruptcy? Then it will be left to the taxpayers once these companies leave town.

And if fracking is so safe, why do we need an evacuation and emergency preparedness plan? Does this include a plan for paying medical bills and compensation for people for who get sick and can no longer work? Or if someone's house is destroyed as a result of an explosion? As you know these operations are not safe. They cannot be regulated to be safe because there are always accidents, leaks and emissions. The only way to keep us safe is a complete ban on fracking in Boulder County.

Paula Kelly  
Lafayette, CO 80026

**From:** [Deborah McNamara](#)  
**To:** [Boulder County Board of Commissioners](#)  
[Amy Allen](#); [Micah Parkin](#); [Tricia Olson](#); [Caitlin Johnston](#); [Ramesh Bhatt](#); [Gabrielle Katz Heatherwood](#); [Cynthia Allison](#); [Leslie Weise](#); [Kate Christensen](#); [Nick Tuta](#); [Mitzi Nicoletti](#); [I Spy Energy](#); [Parry Burnap](#); [Giselle Herzfeld](#)  
**Subject:** Materials for Review re: Article 12 & Tuesday's hearing  
**Date:** Sunday, November 29, 2020 10:44:40 PM

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Dear Boulder County Commissioners,

I'm writing on behalf of a coalition of organizations calling for a ban on fracking in Boulder County, and urging you to pass the strongest possible regulations on oil and gas operations as a backstop protection to any potential legal challenge to a ban. Over 50 organizations and businesses representing over 130,000 Boulder County residents have signed on in support of a ban on fracking in Boulder County. Thank you for the opportunity to share materials for review.

**Below you will find video clips from recent expert testimony offered during the Colorado Oil and Gas Conservation Commission Rulemaking process highlighting a number of our concerns relative to oil and gas development and the many risks it poses to our county. Please consider in your decision-making process, paying particular attention to the testimony in the 600 series calling for 2,500 foot setbacks.**

The following clips highlight expert testimony presented to the Colorado Oil and Gas Conservation Commission during the 2020 Mission Change 200-600 series Rulemaking process as well as the 900 series. Thank you so much for your time and attention to these important issues.

**200 Series: Testimony with expert witness Dr. Anthony Ingraffea on the financial state of the Oil & Gas Fracking Industry** and action needed to protect CO taxpayers' from getting left holding the bag as a growing number of frackers go bankrupt. [You can view expert testimony here.](#)

**300 Series: Testimony with expert witnesses Sandra Steingraber, Lisa McKenzie, Robert Howarth, and Kathryn Maicula** presented as part of the COGCC 300 series rulemaking on behalf of 350 Colorado, PSR Colorado, The Lookout Alliance, Wild Earth Guardians and Colorado Environmental Advocates. [You can view expert testimony here.](#) **\*Begin at 5:54**

**600 Series: Testimony with expert witness Dr. Ned Ketyer, calling for 2500' setbacks between fracking and occupied buildings.** [You can view expert testimony here.](#)

**900 Series: Testimony on fracking and radioactivity with investigative journalist Justin Nobel.** To learn more about the issue, read [this report from Harvard Study about the radioactivity from fracking](#). You can listen to the brief presentation delivered to the [COGCC for the 900 series rulemaking here.](#)

With gratitude for your time and attention,

Deborah McNamara

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Deborah McNamara  
[350 Colorado](#), Campaign Director  
720.400.3739

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**From:** [kaile.ferguson@everyactionadvocacy.com](mailto:kaile.ferguson@everyactionadvocacy.com) on behalf of [Kaile Ferguson](#)  
[Boulder County Board of Commissioners](#)  
**Subject:** Please enact a ban on fracking ASAP, as well as the strongest possible oil & gas regulations.  
**Date:** Monday, November 30, 2020 1:28:14 AM

---

Dear Board Chair Deb Gardner,

Dear Commissioners,

I write as a Boulder County resident deeply concerned about proposed fracking projects (140 wells) in our county and the resulting threats to air and water quality, public health, wildlife, and the climate. I urge you to enact a ban on fracking in Boulder County as soon as possible to protect our community from the well-documented threats to public health and safety from fracking, and to enact the strongest possible protective regulations as a backstop.

The proposed fracking projects are particularly troubling in the context of the Front Range's "serious" non-attainment status for ozone, and high concentrations of benzene and other VOCs, to which existing oil and gas operations are a significant contributor. Additionally, a recent report of the IPCC calls for a "rapid phase-out of CO2 emissions" largely over the next decade to avert catastrophic global temperature rise.

Despite the recent Longmont decision, a ban on fracking is consistent with the County's efforts to fight climate change, including the declaration of a climate emergency, and ongoing lawsuit against Suncor and Exxon for climate change-related damages. A fracking ban is both a reasonable and necessary action authorized for local governments by SB19-181. A ban is widely supported by Boulder County residents: 70% in recent polling, and the same fraction of voters in the County voted in favor of Proposition 112 in 2018.

I also urge you to enact the strongest possible Article 12 regulations on oil and gas operations as a backstop protection to any potential legal challenge to a ban. I recommend the following points for inclusion in Article 12, based on the updated draft released October 20, 2020:

- Implement mandatory 2500' minimum setbacks with no waivers: Revise Article 12 to extend the minimum setback of oil and gas operations to 2500' from any structure intended for human occupancy, and from open space, recreation areas and all water sources. This is modest considering that research has identified adverse effects on the cognitive performance of infants whose mothers lived within 8,500 feet of oil and gas wells and an increased risk of congenital heart defects among children born to women living near oil and gas operations in Colorado, with the risks increasing with the density of oil and gas activities within a 10-mile radius.

- Cumulative impacts: Article 12 should incorporate a structure for the County to consider the context of our already-degraded air quality and the need for dramatic reductions in greenhouse gas emissions to avert catastrophic consequences from climate change.

- Affirmatively protect public health, safety, and welfare, and the environment: Section 12-1000 states that "A proposal meets the standards if it will...either avoid adverse impacts to public health, safety, and welfare, the environment and wildlife resources or...sufficiently minimize, and mitigate unavoidable impact." Oil and gas operations must be required to avoid adverse impacts to public health, safety, and welfare, and the environment and wildlife resources entirely, and not simply minimize impacts.

- Implement as mandatory all of the discretionary measures that are listed in Section 12-1100. Article 12 should explicitly prohibit venting and flaring and require "tankless" operations, which reduce air emissions. A recent study concluded that pregnant women who lived in proximity to natural gas flaring had a 50% higher chance of giving birth early than those who did not, putting the level of risk on par with that caused by smoking.

However, regulations are no substitute for a permanent ban. We encourage you to direct County staff to begin developing language for a fracking ban in Boulder County. Thank you for your ongoing efforts to prioritize public health and the environment in Boulder County.

Sincerely,

Sincerely,  
Kaile Ferguson  
3009 Madison Ave Boulder, CO 80303-2013  
kaile.ferguson@gmail.com

**From:** [dmward33@everyactionadvocacy.com](mailto:dmward33@everyactionadvocacy.com) on behalf of [Diane Ward](#)  
[Boulder County Board of Commissioners](#)  
**Subject:** Please enact a ban on fracking ASAP, as well as the strongest possible oil & gas regulations.  
**Date:** Monday, November 30, 2020 5:59:38 AM

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Dear Board Chair Deb Gardner,

Dear Commissioners,

I write as a Boulder County resident deeply concerned about proposed fracking projects (140 wells) in our county and the resulting threats to air and water quality, public health, wildlife, and the climate. I urge you to enact a ban on fracking in Boulder County as soon as possible to protect our community from the well-documented threats to public health and safety from fracking, and to enact the strongest possible protective regulations as a backstop.

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However, regulations are no substitute for a permanent ban. We encourage you to direct County staff to begin developing language for a fracking ban in Boulder County. Thank you for your ongoing efforts to prioritize public health and the environment in Boulder County.

Sincerely,

Sincerely,  
Diane Ward  
798 Hartford Dr Boulder, CO 80305-5719  
dmward33@gmail.com

**From:** [deb@everyactionadvocacy.com](mailto:deb@everyactionadvocacy.com) on behalf of [Deborah Fink](#)  
**To:** [Boulder County Board of Commissioners](#)  
**Subject:** Please enact a ban on fracking ASAP, as well as the strongest possible oil & gas regulations.  
**Date:** Monday, November 30, 2020 8:28:26 AM

---

Dear Board Chair Deb Gardner,

Dear Commissioners,

I write as a Boulder County resident deeply concerned about proposed fracking projects (140 wells) in our county and the resulting threats to air and water quality, public health, wildlife, and the climate. I urge you to enact a ban on fracking in Boulder County as soon as possible to protect our community from the well-documented threats to public health and safety from fracking, and to enact the strongest possible protective regulations as a backstop.

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However, regulations are no substitute for a permanent ban. We encourage you to direct County staff to begin developing language for a fracking ban in Boulder County. Thank you for your ongoing efforts to prioritize public health and the environment in Boulder County.

Sincerely,

Sincerely,  
Deborah Fink  
3855 Telluride Pl Boulder, CO 80305-7219  
deb@harvestthebounty.com

**From:** [Connirae Andreas](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** Public Comment Dec 1: Please strengthen O&G regulations  
**Date:** Monday, November 30, 2020 9:45:32 AM

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Dear Commissioners,  
Please strengthen regulations for any new fracking in Boulder County.  
I am personally oppose all fracking that borders areas where people are living. It impacts quality of life, and frackers haven't been transparent in the chemicals they use, etc.  
Please strengthen regulations in line with recommendations from Colorado Rising.  
Keeping the potential harm from fracking out of our communities is an act of kindness for future generations who hope to live here.

Connirae Andreas  
Boulder, CO 80302

**From:** [Gary Zimmerman](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** Public Comment Dec 1: Please strengthen O&G regulations  
**Date:** Monday, November 30, 2020 9:47:44 AM

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There is no reason to make it easier to drill in Boulder County. While we live in one of the most beautiful places in the country, our air quality is among the worst.

Climate change and the oil glut are reasons that we should be and we are transitioning away from oil.

Once these oil companies are done, they will leave the mess to us to clean up.

Please do what is right for your constituents and make it as hard as possible to establish new wells in Boulder County.

Thank you  
Gary A Zimmerman  
Longmont CO



**From:** [Juno Mail](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** Safer fracking  
**Date:** Monday, November 30, 2020 10:51:31 AM

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Dear Boulder County Fracking Decision makers:

This letter is essentially a repetition of numerous comments I've made in the past regarding my concerns for public safety requirements in areas where fracking is taking place.

During the last election, the fracking industry spent a lot of money on what I think were deceptive ads, saying Colorado has some of the nation's toughest restrictions to protect area residents (from the negative impacts of oil and gas fracking), but that doesn't mean they keep people safe. Here are a small sample of risks I have recently uncovered, thanks to the group, Colorado Rising.

Because of the oil and gas industry, residents of six Colorado counties, face cancer risks that exceed the EPA's level of concern. Fracking releases carcinogenic volatile organic compounds, like benzene, ethylbenzene, toluene, xylene, and formaldehyde. A Colorado-based study found that concentrations of benzene and other pollutants were three to nine times higher within half a mile of an oil and gas well than farther away and a yearlong study involving weekly tests of Front Range air quality 7/10ths of a mile from a well pad detected VOCs were present over the multiple stages of well drilling and production. Fracking also increases ground level ozone, which is the second leading cause of lung cancer and has been linked to asthma and other respiratory diseases in the U.S. according to several peer-review studies. Even at relatively low doses, ozone has been shown to have a health impact and a significant number of Colorado children will suffer asthma attacks as a result of oil and gas operations. For these reasons, I urge Coloradans to support new health-protection guidelines such as a 2500 foot setback and allowing counties to impose complete bans when conditions are too confined to do it safely.

Sincerely,

Sue E. Dean  
[deanks@juno.com](mailto:deanks@juno.com)  
89 Widgeon Drive  
Longmont, CO 8503  
303-459-2658

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- [Trump Did Not Like What He Saw on 60 Minutes](#)

**From:** [Martha Dick](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
Oil and gas proposed draft  
**Date:** Monday, November 30, 2020 11:08:09 AM

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These regulations, if enacted, would have transportation standards requiring operations to mitigate various infrastructure issues and would require protection of cultural and associated properties. These proposed regulations should be enacted in the proposed updates.

Sincerely,

M.Dick  
4617 almond Lane,  
Boulder, CO 80301

**From:** [Denise Motta](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** Boulder County Article 12 Land Use/Oil and Gas Regulations  
**Date:** Monday, November 30, 2020 11:37:00 AM

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To Whom It May Concern:

A large body of academic literature has characterized serious effects on human health and life expectancy from air pollution, including a recent study that identified air pollution as a contributor to 8.8 million deaths annually, identifying it as “one of the main global health risks.” Additionally, exposure to air pollution has been linked to higher rates of mortality from viral infectious diseases. In light of this evidence, and the serious threats posed by fracking to the stability of our climate, the only responsible course of action is for Boulder County to ban fracking and impose the most stringent regulations possible on oil and gas extraction.

Thank you for allowing my comment,

Denise Motta, NSCA-CPT, E-RYT500  
Yoga, Pilates & Fitness Instructor-  
[denmot@cybercon.net](mailto:denmot@cybercon.net)

"EVEN THOUGH WE'RE THE FIRST SPECIES THAT HAS THE CAPACITY TO DESTROY THE PLANET, WE'RE ALSO THE FIRST WITH THE CONSCIOUSNESS TO SAVE IT." ---- Rich Hannigan (Board Vice President - Environmental Action)

**From:** [denmot@everyactionadvocacy.com](mailto:denmot@everyactionadvocacy.com) on behalf of [Denise Motta](#)  
[Boulder County Board of Commissioners](#)  
**Subject:** Please enact a ban on fracking ASAP, as well as the strongest possible oil & gas regulations.  
**Date:** Monday, November 30, 2020 11:38:35 AM

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Dear Board Chair Deb Gardner,

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I write as a Boulder County resident deeply concerned about proposed fracking projects (140 wells) in our county and the resulting threats to air and water quality, public health, wildlife, and the climate. I urge you to enact a ban on fracking in Boulder County as soon as possible to protect our community from the well-documented threats to public health and safety from fracking, and to enact the strongest possible protective regulations as a backstop.

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However, regulations are no substitute for a permanent ban. We encourage you to direct County staff to begin developing language for a fracking ban in Boulder County. Thank you for your ongoing efforts to prioritize public health and the environment in Boulder County.

Sincerely,

Sincerely,  
Denise Motta  
129 County Road 90 Allenspark, CO 80510-5007  
denmot@cybercon.net

**From:** [gassasb@everyactionadvocacy.com](mailto:gassasb@everyactionadvocacy.com) on behalf of [Stephen Gassaway](#)  
[Boulder County Board of Commissioners](#)  
**Subject:** Please enact a ban on fracking ASAP, as well as the strongest possible oil & gas regulations.  
**Date:** Monday, November 30, 2020 11:47:02 AM

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Dear Board Chair Deb Gardner,

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Sincerely,

Sincerely,  
Stephen Gassaway  
634 Highland Ave Boulder, CO 80302-4722  
gassasb@hushmail.com

**From:** [rmme44@everyactionadvocacy.com](mailto:rmme44@everyactionadvocacy.com) on behalf of [Rhea Esposito](#)  
**To:** [Boulder County Board of Commissioners](#)  
**Subject:** Please enact a ban on fracking ASAP, as well as the strongest possible oil & gas regulations.  
**Date:** Monday, November 30, 2020 12:37:48 PM

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Dear Board Chair Deb Gardner,

Dear Commissioners,

I write as a Boulder County resident deeply concerned about proposed fracking projects (140 wells) in our county and the resulting threats to air and water quality, public health, wildlife, and the climate. I urge you to enact a ban on fracking in Boulder County as soon as possible to protect our community from the well-documented threats to public health and safety from fracking, and to enact the strongest possible protective regulations as a backstop.

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Sincerely,

Sincerely,  
Rhea Esposito  
4775 White Rock Cir Apt C Boulder, CO 80301-5365  
rmme44@yahoo.com

**From:** [Christopher J. McGowne](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
[Lynn M. Granger](#)  
**Subject:** API Comments on Boulder County Oil and Gas regulations  
**Date:** Monday, November 30, 2020 2:46:26 PM  
**Attachments:** [Boulder County Redline 11.30.20.pdf](#)  
[Boulder County Written Comments 11.30.20.pdf](#)

---

Good afternoon,

Please see attached for API's comments on Boulder County's proposed oil and gas code.

Please let me know if you have any questions,

Thanks

Chris

Chris McGowne  
Associate Director  
American Petroleum Institute – Colorado  
1660 Lincoln Street, Suite 2900  
Denver, CO 80264  
720-878-7688 (Cell)  
[mcgownec@api.org](mailto:mcgownec@api.org)



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December 1, 2020

Boulder Board of County Commissioners  
1325 Pearl Street  
Boulder, CO 80302

Dear Commissioners,

The American Petroleum Institute Colorado (API) appreciates the opportunity to review and comment on Boulder County's proposed oil and gas regulations. API Colorado is a division of the American Petroleum Institute, which represents all facets of the natural gas and oil industry. Our more than 600 members produce, process, and distribute most of the nation's energy. In our first 100 years, API has developed more than 700 standards to enhance operational and environmental safety, efficiency and sustainability. API Colorado is committed to ensuring a strong, viable industry capable of meeting the energy needs of the state in a safe and environmentally responsible manner.

API and its member companies have always enjoyed a very positive, collaborative, and engaging relationship with communities across the front range. In Colorado alone, API members have continuously come to the table in local jurisdictions to find collaborative solutions to complex issues. This is also true in Boulder, where our operators have worked diligently to address both the city and constituent issues. However, we have some concerns regarding your proposed regulations.

As such, we have highlighted our more general concerns in this letter. You will also find a redline of attached which contains a more comprehensive and detailed list of our suggestions and edits. We would note we appreciate you reviewing our initial comments and making some of our recommended changes. While that is a positive step forward, we still have very significant concerns about your latest draft.

Many of our most significant outstanding issues are your proposed provisions are subjective, overly broad, or simply neither necessary nor reasonable. We have made specific notations to those in the associated redlines. As you are aware, land use decisions must not be arbitrary or capricious in nature. We feel some of these provisions, especially if used to deny a permit application, would constitute such an arbitrary and capricious decision. Further, these provisions work together to effectively prohibit the development of private property rights. Finally, we have noted several significant concerns regarding the county's desire to regulate subsurface activities or attempt to require applicants to disclose proprietary business information that is wholly unrelated to an operator's permit application.

We would encourage Boulder County to sit down and discuss their proposal with industry representatives. While SB19-181 granted the county more authority to regulate oil and gas, it did not allow the county to bad development. The cumulative impacts of this regulatory proposal likely constitute such an action.

Again, we thank you for your time. This letter was intended only to highlight our most pressing concerns. As always, we would welcome the opportunity to sit down and discuss these issues with the county.

If you have any questions, please do not hesitate to contact me at (720) 878-7688, or mcgownec@api.org.

Sincerely,

Chris McGowne  
Associate Director  
Colorado Petroleum Council



## Community Planning & Permitting

Courthouse Annex • 2045 13th Street • Boulder, Colorado 80302 • Tel: 303.441.3930 • Fax: 303.441.4856  
Mailing Address: P.O. Box 471 • Boulder, Colorado 80306 • [www.bouldercounty.org](http://www.bouldercounty.org)

### BOULDER COUNTY BOARD OF COUNTY COMMISSIONERS PUBLIC HEARING

December 1, 2020 at 4:00PM

*Due to COVID-19 this hearing will be held virtually*

#### Docket DC-19-0002: Amendments Related to Article 12 of the Land Use Code

Proposed Land Use Code amendments addressing oil and gas development, seismic testing, and companion changes to the Land Use Code

**Staff:** Kimberly Sanchez, Deputy Director - Planning (Community Planning & Permitting)  
Jasmine Rodenburg, Senior Planner (Community Planning & Permitting)  
Kate Burke, Senior Assistant County Attorney (County Attorney's Office)

#### AGENDA

1. December 1, 2020 4 P.M. → COUNTY STAFF PRESENTATION AND PUBLIC COMMENT (2 minutes per individual speaker\*\*)
2. December 3, 2020 4 P.M. → COMMISSIONER QUESTIONS TO STAFF, DELIBERATION, AND ACTION (no additional public comment will be taken)

\*\*Time may be pooled (up to 8 minutes maximum) provided all individuals who are pooling time are present. Advance speaker sign-up is available on the Boulder County oil and gas development website (<https://boco.org/oilgas>).

On December 3, 2020 at 4:00PM, Board of County Commissioners will convene to ask staff any questions, discuss the docket, and either approve the Draft Regulations or provide direction to staff regarding changes.

#### PACKET CONTENTS

Item	Pages
o Staff Memo	1 – 10
o Draft Article 12 Regulations as amended after Planning Commission (Exhibit A) dated November 23, 2020	A1 – A35
o Other Proposed Conforming Amendments to the Land Use Code as amended after Planning Commission (Exhibit B) dated November 23, 2020	B1-B6
o Summary of Proposed Changes from October 20, 2020 Draft Article 12 Regulations (Exhibit C)	C1-C5

#### ACTION REQUESTED FROM BOARD OF COUNTY COMMISSIONERS

The December 1, 2020 public hearing and December 3, 2020, public meeting are for the Board of County Commissioners ("BOCC") to consider the Boulder County Land Use Code amendments ("Draft Regulations") that update the County's review of oil and gas development and seismic

Deb Gardner County Commissioner

Elise Jones County Commissioner

Matt Jones County Commissioner

testing in unincorporated Boulder County. The Draft Regulations reflect direction given to staff by the BOCC update the regulations following enactment of Senate Bill 19-181, "Protect Public Welfare Oil and Gas Operations," signed into law April 16, 2019.

On December 1, staff will give a presentation on the proposed regulations and public testimony will be taken. No discussion by the BOCC will take place on December 1. On December 3, 2020, the BOCC will ask staff questions and discuss the Draft Regulations. Staff requests they take action (approve Docket DC-19-0002) or provide direction to staff to otherwise modify the Draft Regulations. If the BOCC provides direction to staff to edit the Draft Regulations, staff will bring back any necessary revisions to the BOCC on December 10, 2020.

***Schedule for Review of the Draft Regulations (Docket DC-19-0002)***

**Planning Commission**

- **Monday, November 9, 2020, 4:00 p.m.** Planning Commission public hearing – staff presentation on proposed regulations and public comment was taken
- **Tuesday, November 10, 2020, 4:00 p.m.** Planning Commission public meeting – no further testimony was taken. Planning Commission asked questions, discussed, and approved and recommended BOCC approval of DC-19-0002 with limited changes, subject to their discussion at the public meeting.

**Board of County Commissioners**

- **Tuesday, December 1, 2020, 4 p.m.** Board of County Commissioners public hearing – public comment to be taken.
- **Thursday, December 3, 2020, 4 p.m.** Board of County Commissioners public meeting – no further testimony will be taken.
- **(If necessary) Thursday, December 10, 2020, at 4 p.m.** Board of County Commissioners public proceedings continued, if necessary.
- **(If necessary) Tuesday, December 15, 2020 at 4 p.m.** Board of County Commissioners public proceedings continued, if necessary.

Any updates to the schedule will be posted on the County's oil and gas website:

<https://boco.org/oilgas>

Boulder County's current moratorium on accepting applications for new oil and gas development remains in effect while this update is in process, until December 31, 2020.

**BACKGROUND**

Boulder County has long been and remains concerned about the adverse impacts on people and the environment from potential expanded oil and gas development within the county. Strong regulations are an important tool for protecting the public health, safety, and welfare, and environment and wildlife of Boulder County. The County adopted its existing oil and gas regulations (found in Article 12 of the Boulder County Land Use Code) in March 2017. No applications for new oil and gas development have been submitted to the County since that time. However, in 2019,

Senate Bill 19-181 was enacted, which significantly changed the legal landscape for local governments with respect to regulating oil and gas activities. Therefore, on June 4, 2019, the Board of County Commissioners authorized staff to begin amendments to Article 12 in light of the legal changes made by S.B. 19-181. To give staff the necessary time to complete the regulatory update, the Board instituted a moratorium on June 28, 2019, directing staff not to accept or process applications for new oil and gas development until after March 28, 2020 (see Resolution 2019-59). Due to the Coronavirus pandemic beginning in March 2020, the original schedule for public meetings necessary to complete the regulatory update was vacated. To accommodate the pandemic response and the significant rulemaking at the Colorado Oil and Gas Conservation Commission to implement S.B. 19-181, in which staff and county residents were deeply involved, the moratorium was extended twice to allow for the subject update to proceed, ultimately through its current end date on December 31, 2020.

On March 6, 2020, staff published an initial draft of the updated regulations. Following the release, staff received public comment and engaged in numerous meetings with internal county departments, expert consultants, industry representatives, environmental and neighborhood advocacy groups, and other local governments. The invaluable input from those sources was carefully considered and implemented as strongly as possible into a new draft, posted to the county oil and gas website on October 20, 2020. Following discussion and recommendations from the Planning Commission, staff edited the Draft Regulations attached as Exhibit A (dated November 23, 2020). That draft is the one currently presented for the Board of County Commissioners' and public's consideration.

#### **Senate Bill 19-181**

Senate Bill 19-181 ("181" or the "Bill") amended several sections of the Colorado statutes. The Bill prioritizes the protection of public health, safety, and welfare, and the environment and wildlife in the regulation of oil and gas industry. As relevant to the Article 12 update, the Bill clarified, expanded, and reinforced local governments' regulatory authority over the surface impacts of oil and gas development. Specifically, the Bill clarified that local governments have land use authority over: the siting of oil and gas operations; air emissions and air quality; vibration, noise, odor, light, dust, and all other nuisance-type impacts; water quality and water source; reclamation; cultural resources; emergency preparedness; and traffic and transportation. Additionally, the Bill clarified or established local government power to: require financial securities to guarantee compliance with regulations; inspect facilities for compliance; impose fines for leaks, spills, and emissions; and impose fees on operators or owners to cover the reasonably foreseeable direct and indirect costs of permitting and regulation, including inspection programs. Critically, the Bill established that local government land use regulations regarding oil and gas would not be preempted by overlapping state regulations. These aspects of the Bill created a drastically different landscape than the one under with the existing Article 12 regulations from 2017 were drafted.

#### **PURPOSE OF THE AMENDED REGULATIONS**

The County's objective with the amended oil and gas regulations is to protect public health, safety, and welfare, and the environment and wildlife to the maximum extent permitted by law. Oil and gas development is, by its nature, industrial and intensive, and has the potential to significantly impact the surrounding community and environment. Boulder County residents and officials 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 generally would separate these industrial uses from residential and rural areas. However, due to the unique circumstance of the severed mineral estate, traditional zoning tools are weakened. The Draft Regulations are proposed to minimize potential land use conflicts between oil and gas operations and current or future land uses.

Under the Bill, local governments have regulatory authority to address local impacts of oil and gas development that is independent of state and federal authority. Local authority is limited, however, to the surface impacts of oil and gas; the COGCC retains jurisdiction over many of the technical and “downhole” facets. The Draft Regulations create an intensive and comprehensive review of oil and gas development that includes: (1) the submission of all necessary information related to proposed development and its potential impacts, including expert surveys, assessments, and modeling; (2) thorough analysis and review of such information with respect to clear standards; (3) multiple opportunities for public input; and (4) imposition of conditions necessary to protect public health, safety, and welfare, and the environment and wildlife, or where no conditions can give adequate protections, denial.

#### **SUMMARY OF THE PROPOSED REGULATIONS**

The Draft Regulations provide for review of seismic activities and extremely close scrutiny of all proposed oil and gas development with 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, minimization, and mitigation measures to best address each of these circumstances. Finally, the proposed regulations will help to ensure close monitoring and enforcement of post-approval compliance with all requirements and mitigation measures.

Under its updated regulations, the County will:

- impose requirements for existing oil and gas facilities,
- require an administrative permit prior to any seismic testing, and
- require Special Review for all new oil and gas development in Boulder County.

The Special Review process will allow for a thorough and comprehensive review of any proposal, allow opportunities for public involvement, and provide conditions on the development that will reduce the impacts on neighboring landowners and preserve the County land and environment.

Areas of particular interest in the Draft Regulations include:

- A 2,000’ setback from homes and associated residential uses, schools and childcare centers;
- Strong air quality provisions, including a leak detection and repair (LDAR) program, reporting requirements, and prompt repair of any discovered leaks;
- Careful review, including the use of outside experts, of the impacts threatened by proposed development, including from air emissions, water use, potential contamination, noise, odor, light, dust, and traffic;
- County review of operator-submitted emergency preparedness and response plans;
- Enhanced and clarified reporting requirements for spills and accidents;

- Transportation standards requiring operations to mitigate any adverse impacts to roads and public infrastructure;
- Floodway prohibition;
- A new permitting process for seismic testing activities;
- Protection of cultural and historic resources, recreational areas, scenic and rural character impacts, agricultural land including sensitive soils, wetlands and other natural resources;
- Financial assurances in the form of financial status reporting, greatly expanded insurance coverage requirements, and requirements for financial securities (e.g., bonds or letters of credit);
- Regulation of the abandonment or decommissioning of wells and pipelines;
- Waste management requirements; and
- New provisions for enforcement, including inspections, fines, and other penalties.

Key Sections of the Draft Regulations	
1. New Operator Registration and Renewal (12-400)	
Operators must register with Boulder County and submit significant information regarding their history as an operator and demonstrating their fitness to undertake the proposed project. Operator registration must be updated and renewed annually.	
2. Pre-Existing Facilities (12-500)	
New standards to prevent adverse impacts from the existing oil and gas facilities in the county, including the ability to inspect existing facilities. Noise and odor will be evaluated at existing facilities and operators must submit an Emergency Response Plan.	
3. Abandonment and Decommissioning of wells and pipelines (12-600)	
New oversight over the surface activities related to plugging and abandoning of wells and the decommissioning of pipelines. Decommissioning of pipelines and flowlines will involve an evaluation of whether the lines should be removed from the ground entirely or abandoned in place, with the county's preference being removal unless there are site-specific circumstances that warrant otherwise. The ability to impose timing restrictions and specific revegetation / reclamation requirements has been added.	
4. Geophysical Exploration for Oil and Gas, "Seismic Testing" (12-700)	
A new administrative permit process before operators can conduct seismic testing, including a requirement that operators offer inspection and testing of residential structures and domestic water wells before and after seismic activities. Copies of written permission from landowners whose property is involved in the seismic testing is required. Notice is required to surrounding property owners 10 days prior to the approved testing.	
5. Application Process (12-800)	



<p>The following steps are required as part of the public process for a new oil and gas operation:</p> <ul style="list-style-type: none"> <li>• Pre-application conference; registration must be complete before a pre-application conference can be scheduled</li> <li>• Application submission, including all items in Art. 12-900 of the Code</li> <li>• County determination that application is complete</li> <li>• Notice to landowners, residents, tenants, water well owners</li> <li>• Public signs posted by operator</li> <li>• Neighborhood meeting organized and run by operator</li> <li>• Public comment received by County staff at any time after completeness determination</li> <li>• Referrals to relevant agencies, including COGCC and CDPHE and any consultants hired by the county</li> <li>• Site visit by County staff</li> <li>• Staff recommendation (denial, approval with conditions)</li> <li>• If applicable, public hearing before the Parks and Open Space Advisory Committee</li> <li>• Public hearing before the Planning Commission</li> <li>• Planning Commission recommendation to Board</li> <li>• Public hearing before the Board</li> <li>• Board decision</li> </ul>
<b>6. Application Submittals (12-900)</b>
<p>For all oil and gas operations, applicants must submit detailed information on the proposal and its anticipated impacts in their application materials. This includes, among other submission requirements, the following:</p> <ul style="list-style-type: none"> <li>• Verification of the operator's legal rights to use land and access minerals</li> <li>• Insurance coverage including pollution and control of well coverage and a \$25,000,000 umbrella or excess insurance policy</li> <li>• 16 maps and information on current conditions at the proposed location, including the Operator's rationale behind choosing the selected site with respect to other possible locations</li> <li>• Detailed information on the proposed facility itself, as well as worker training and records</li> <li>• Assessments, studies, and plans from independent experts regarding the various types of anticipated impacts of the development and intended methods for avoiding, mitigating, or minimizing those impacts</li> </ul>
<b>7. Review Standards (12-1000)</b>
<p>Protective and specific standards the proposed oil and gas development facility must meet to be approved. Staff, Planning Commission and the Board of County Commissioners will determine whether the proposed oil and gas facility or operation, individually and in light of the cumulative impacts, complies with the Special Review standards. The Applicant bears the burden of proving that the proposed oil and gas facilities and oil and gas operations meet the standards. A proposal meets the standards if it will, respect to the standards in 12-1000, either avoid adverse impacts to public health, safety, welfare, the environment and wildlife resources, or through the imposition of conditions of approval will sufficiently minimize and mitigate unavoidable impacts. In no case will the Board approve oil and gas facilities or operations with impacts that will endanger public health, safety, welfare, the environment or wildlife.</p>
<b>8. Conditions of Approval (12-1100)</b>
<p>Possible conditions that may be applied to an application as specific circumstances require to sufficiently protect public health, safety, and welfare, and the environment and wildlife. If conditions cannot be devised to make a proposed development protective, it will be denied</p>
<b>9. Inspection, Enforcement, Penalties (12-1400, 12-1500)</b>

The County will have the right to inspect oil and gas operations for compliance with the regulations and all conditions of approval and will have the power to impose fines for violations as well as other penalties such as increased reporting and a stop work order

#### ***Other Proposed Amendments to the Land Use Code***

Other proposed conforming amendments to Article 4 and throughout the Code are also proposed as part of this docket (see Exhibit B).

#### **PUBLIC COMMENT:**

All public comment received to date is available on the County's oil and gas website at:

<https://www.bouldercounty.org/property-and-land/land-use/planning/oil-gasdevelopment/#public-comment>

Staff has reviewed all of the public comments received and greatly appreciates the involvement of county residents. The public comments are too numerous to specifically list here, but staff found substantial value in comments and suggestions provided by members of the public and implemented several of the suggestions received, including: inclusion of a minimum setback from well pads to residences and their associated residential uses; clarification when and how the County can deny applications for special review for oil and gas development; and several specific suggestions related to various portions of Article 12.

Numerous commenters requested a ban on fracking in the county. Staff is closely monitoring a lawsuit that examines local governments' power to impose a fracking ban under S.B. 19-181 for judicial guidance on this issue. In the meantime, the Board has directed staff to develop the strongest and most protective regulations possible to protect county residents and lands from the impacts of oil and gas development for use if necessary.

#### **INDUSTRY INPUT**

The American Petroleum Institute, the Colorado Oil and Gas Association, and Crestone Peak Resources LLC provided comments and proposed redlines. The industry groups pointed out several main issues:

- Potential disparities in the type and depth of operator registration information requested with respect to pre-existing oil and gas facilities;
- Concerns with confidentiality for certain operator registration submissions, including financial documents;
- Concerns with the 12-600 section on plugging and decommissioning oil and gas facilities with respect to the county's legal authority over "downhole" activities;
- Concerns about notice provisions involving lessees and water source owners and how that information is obtained;
- Numerous requests for additional clarity with respect to timing and scope of requirements;
- Concerns about insurance coverage amounts;
- Requests for clarity on certain application submission requirements such as maps of existing facilities and identification of "land uses;"

- Concerns with the subjectivity in several stated standards and requirements;
- Alleged impacts of the proposed 2,000-foot setback on operators' ability to develop their minerals;
- Timing concerns with establishment of pipeline routes;
- Concern with the county's authority to regulate hydraulic fracturing methods and fluid contents;
- Procedural and due process questions regarding the enforcement and penalty provisions;
- Statutory limitations on the county's authority to impose penalties.

Staff made some initial modifications to the draft attached as Exhibit A in response to some of the industry groups' comments and suggestions.

#### **PLANNING COMMISSION'S REVIEW AND RECCOMENDATION TO THE BOCC**

On November 9, 2020, staff introduced the proposed Land Use Code amendments addressing oil and gas development and seismic testing to the Planning Commission at a public hearing on the matter. The Planning Commission heard comments from members of the public and industry representatives. Members of the public raised concerns largely echoed in the written public comments including: requests for a ban on all oil and gas development, and requests for greater setback distances as well as from more types of features (open space, etc.). Industry representatives raised concerns as described in the section above.

Subsequently, at a public meeting on November 10, 2020, staff responded to questions raised by the public on November 9, 2020 and answered questions from the Planning Commission. The Planning Commission discussed the Draft Regulations and ultimately recommended approval of DC19-0002 subject to suggestions made throughout its discussion, as highlighted below.

At the November 10, 2020 Planning Commission public meeting, the planning commissioners asked numerous clarifying questions regarding the Draft Regulations. Some discussion centered around technical requirements related to flaring/venting, the noise requirements and investigations undertaken by Boulder County, the rationale behind the 2000' setback, and seismic testing.

Additionally, the Planning Commission requested that the following items be considered for changes to the Draft Regulations that will be reviewed by the BOCC and public at the BOCC proceedings in December:

- Review the confidentiality concerns raised by Industry related to Article 12-400 in Operator Registration and Renewal.
  - Staff moved the discussion of confidentiality to the beginning of Article 12-400 to provide clarity.
- Clarify the timing for annual registration renewal.
  - Staff added clarification.
- Extend the timing for operators with existing facilities to submit the numerous, required registration materials.
  - Staff changed the timing so operators now have 90 days (not 60 days) from the effective date of the Regulations to submit registration materials.

- Review operator registration requirements for operators with existing facilities to ensure they are proportional and necessary.
  - Staff reviewed these requirements and finds that although the list presents as long, all requirements are necessary and can be provided by an operator. Staff clarified that some plans may cover multiple existing facilities.
- Review the Emergency Response Plan for pre-existing facilities and verify that the requested details are necessary and able to be obtained and add a timeframe for its submittal.
  - Staff edited the requested details and finds that the remaining items are necessary to protect the health, safety, welfare, and the environment in emergency situations at oil and gas facilities. Staff clarified that the timeframe for submittal of these plans is tied to the registration or annual update.
- Review the insurance requirements for contractors and subcontractors to make sure Boulder County is protected in the event those actors damage County property; clarify certification of “adequate insurance” in Section 12-900(A)(5)(j).
  - Staff consulted with the County Risk Management Department and made minor modifications to the insurance provisions.
- Research if it is feasible for operators to determine lessees as required in Section 12-800.H.1
  - Staff clarified language so operators determine “identifiable” lessees, meaning those lessees that are determined through title work or are county-held interests.
- Clarify what water source owners need to receive notice under Section 12-800.H.1
  - Staff clarified this language.
- Clarify introductory language in Section 12-900(D) related to information that is required to be completed by outside experts.
  - Staff clarified this language.
- Clarify what is meant by “Surrounding Land Uses” in Section 12-900.B.7
  - Staff added to this provision to include the types of uses that would be considered.
- Differentiate between basic Wildlife Reports and expert wildlife surveys required to be submitted or obtained by the operators in Article 12-900.
  - Staff differentiated the requirements between the basic Wildlife Reports and expert wildlife surveys.
- Clarify what Worker Training and Records we are asking for under Article 12-900 and whether they are more appropriately part of operator registration.
  - Staff clarified that Worker Training and Records are required to be submitted. Staff added a standard in Article 12-1000 for Worker Training and Records.
- Communicate better to the public how decisions are made under Article 12-1000 and whether cumulative impacts are considered
  - Staff re-organized and clarified these two paragraphs to highlight the pertinent language.

- Define “Operations” and clarify timing and procedures under Article 12-1300.C.
- Include operator inspection requirements in Article 12-1100 similar to those for pre-existing facilities.
  - Staff added operator inspection requirements to Article 12-1100 matching those for pre-existing facilities.
- Add ability for Boulder County to recover costs for any increased inspections required as penalties under Article 12-1400(F) from the Operator.
  - Staff added this language.
- Consider reevaluation of Article 12 at regular intervals to ensure its effectiveness and update as necessary.
  - This change does not need to be in the Code (Art. 12) language but the Board could direct staff to review the regulations after a specified timeline, as is typical of many Code changes.
- Clarify the noise provisions throughout Article 12
  - Staff edited Article 12-500(E), 12-1000(O), and 12-1100(U) to clarify the noise limitations for pre-existing and new oil and gas facilities. Both pre-existing and new oil and gas facilities cannot unreasonably exceed existing ambient noise levels in the typical, or dBA range; 60 decibels in the very low-frequency or dBC range (very lowfrequency noise generally perceived as vibration); and any limitations set by the Colorado Oil and Gas Conservation Commission. Specific noise limitations and requirements will be individually determined for each oil and gas facility based on sitespecific ambient noise testing and other conditions.

Staff incorporated many of the changes above into the Draft Regulations in Exhibit A. To the extent Staff did not incorporate suggested changes, the most substantive examples are explained above. Further, Staff made some minor grammatical edits. Between the October 20, 2020 Draft Regulations and the November 9, 2020 Planning Commission hearing, staff also struck the proposed change to Art. 7-904 (Stormwater Quality Management Permit Requirements) as it was determined that this exemption should be eliminated in order for Boulder County to be in compliance with its MS4 Permit.

After Planning Commission finished its discussion, they approved and recommended approval of docket DC-19-0002 with their suggested changes by a vote of 7-0.

#### **TEXT AMENDMENT CRITERIA REVIEW**

Pursuant to Article 16-100 of the Land Use Code, no text amendment shall be adopted by the Board of County Commissioners unless the Board has determined that:

1. the existing text is in need of the amendment;
2. the amendment is not contrary to the intent and purpose of this Code; and
3. the amendment is in accordance with the *Boulder County Comprehensive Plan*

The Planning Commission approved and provided a recommendation to the Board of County Commissioners to approve the Draft Regulations with limited changes presented in the November

23, 2020 Draft. The moratorium adopted by the Board of County Commissioners demonstrated the need for the subject amendments and update to the regulations adopted in 2017 based on changes necessitated by S.B.19-181. The amendments are not contrary to the intent and purpose of the Code but update and address the issues raised by the Board in June 2019. The amendments do not conflict with the Boulder County Comprehensive Plan (BCCP); rather, they implement many of the BCCP policies adopted by the Planning Commission on August 15, 2012 when the BCCP was updated to address oil and gas development. Consequently, staff finds the criteria for text amendments in Article 16-100.B. of the Land Use Code are met.

#### **SUMMARY AND RECOMMENDATION**

The overall goal contained within the Draft Regulations is to work within the land use authority provided to counties by enacting the most protective regulations governing new oil and gas operations. **STAFF RECOMMENDS THAT THE BOARD OF COUNTY COMMISSIONERS APPROVE**  
**Docket DC-19-0002:**

**Amendments Related to Article 12 of the Land Use Code** (including companion changes to the Land Use Code) and the official record of the Docket before the Board with its staff comments, public testimony, and Board discussion/action.



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# Article 12



■ ■ ■ Regulation of Oil  
and Gas  
Development,  
Facilities and  
Operations

## Article 12 • Oil and Gas Development, Facilities and Operations

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### 12-100 Purpose

- A. The County's objective is to (1) protect public health, safety, and welfare and the environment and wildlife resources; and (2) regulate the surface impacts of oil and gas operations in a reasonable manner to address matters including the following: local land use impacts; the location and siting of oil and gas facilities; impacts to public facilities and services; water quality and source; noise; vibration; odor; light; dust; air emissions and air quality; land disturbance; reclamation procedures; cultural resources; emergency preparedness and coordination with first responders; security; traffic and transportation impacts; financial securities; indemnification; insurance; other effects of oil and gas development; and providing for the planned and orderly use of land and protection of the environment in a manner consistent with constitutional rights. The County will deny applications where the proposed oil and gas operations cannot be conducted in a manner that appropriately protects public health, safety, and welfare, the environment and wildlife.



- B. This article is an exercise of the Board of County Commissioners' (the "Board") regulatory authority over oil and gas development. Both the state and County regulate oil and gas operations independently and both may have applicable rules.
- C. The County's review process for new oil and gas facilities and operations includes: (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 prior to any decision being made, 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 or denial if necessary. These regulations are intended to provide close scrutiny of all proposed oil and gas development including seismic testing in order to protect public health, safety, and welfare, the environment and wildlife. They also allow staff, the Boulder County Planning Commission, and the Board to consider sitespecific circumstances related to oil and gas development and to customize avoidance, minimization, and mitigation measures to best address each of the site-specific circumstances, which may include modification, re-location, or denial of proposed oil and gas facilities or oil and gas operations if review of the criteria warrants it. These regulations will help to ensure close inspection, monitoring, compliance with and enforcement of all post-approval requirements and mitigation measures imposed by this Article. Finally, the regulations allow the County to address potential impacts of pre-existing oil and gas facilities and operations.

## 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., 25-7101 et seq., 30-15-401, Colorado common law related to public nuisances, and other authority as applicable.

## 12-300 Effective Date and Survival

- A. This Article will become effective on the date specified in the adopting resolution of the Board (Resolution \_\_\_\_\_).
- B. All conditions of approval for oil and gas development under this Article will survive until the Director provides notice of satisfactory completion of final reclamation of a plugged and abandoned well and related pipelines. All conditions of approval will survive a change of ownership and apply to the Applicant's successors, including the requirement of Operator Registration and Financial Assurances.

## 12-400 Operator Registration and Renewal

- A. Registration Required. All Operators within the unincorporated county must have a current and valid County registration in place.
- B. Submission and Renewal. All Operators must submit the following Operator registration information and pay the registration or renewal fee. If an Operator or person designates any portion of a document or submission to the County as "confidential" and if the County determines that the document meets the confidentiality provisions of the Colorado Open Records Act, it may be exempt from disclosure to the public, provided that any page containing such information is clearly labeled with the words "Confidential Information." All submissions under this section are subject to 12-1400(E):
  - 1. Company name, address, email, and mobile phone contact information for two individuals associated with the company and who will serve as 24-hour emergency contacts and who can ensure a timely and comprehensive response to any emergency.
  - 2. A map that shows all of the Operator's mineral rights, including lease rights, whether owned by the Operator named in number 1 or a parent or subsidiary entity, in unincorporated Boulder County.
  - 3. A certified list of all instances within the 10 years prior to the registration where the COGCC, CDPHE, other state agency, any federal agency, any city, or any county found that the Operator has not complied

**Commented [CJM1]:** We would re-emphasize that under this paragraph confidential business information is likely to be subject to public disclosure. This, for numerous reasons, is extremely problematic. Further, much of the information requested under this proposed rule, that would be subject to public disclosure, is neither necessary nor reasonable for the county.

**Commented [CJM2]:** First, the county is asking someone who simply has either an already existing well to submit their entire proprietary business information where competitors can see? Further the County cannot simply piece corporate protections and require parents or other entities not relevant to the permit.

with applicable state, federal, or local requirements during the course of drilling, operation, or decommissioning of a well. The list must identify the date of the violation, the entity or agency making the determination, the nature of the non-compliance, and, if applicable, the final resolution of the issue. If no such instances of non-compliance exist, the Operator must certify to that effect.

4. A list of all incidents (including but not limited to accidents, spills, releases, [and injuries](#)) within the past 10 years that occurred at facilities owned or operated by Operator, ~~an operator's legacy companies~~, or a subsidiary of Operator, ~~including events involving contractors~~. Operator shall also list any root ~~causes~~ [analysis/causes analyses](#) conducted and corrective actions taken in response to the ~~near-misses and incidents, including internal changes to corporate practices or procedures, such as modifications to the safety management plan or emergency preparedness plan.~~
5. Information related to the Operator's financial fitness to undertake the proposed oil and gas operations, including materials (audited, where appropriate) such as the following:
  - a. Balance sheets for the previous 5 fiscal years;
  - b. Operating cash flow statements for the previous 5 fiscal years;
  - c. List of long- and short-term debt obligations;
  - d. List of undercapitalized liabilities;
  - e. Relevant tax documents;
  - f. Statements necessary to calculate net profit margin, debt ratio, and instant or current solvency ratio;
  - g. Certified copies of all current financial assurances filed with the COGCC; and
  - h. Tax returns for the prior 5 years.
6. ~~If an Operator or person designates any portion of a document or submission to the County as "confidential" and if the County determines that the document meets the confidentiality provisions of the Colorado Open Records Act, it may be exempt from disclosure to the public, provided that any page containing such information is clearly labeled with the words "Confidential Information".~~
7. Complaint Protocol. [A Description of a](#) process for the Operator's acceptance, processing, and resolution of any and all complaints submitted to state agencies or the Operator directly by members of the public stemming from any adverse impact from oil and gas facilities and operations.
- C. New Operators to Boulder County must submit registration materials that are accepted by the County at least 60 days prior to scheduling a Pre-Application conference. Operators with existing facilities are subject to 12500(~~BC~~).
- D. Operator registration must be updated and renewed annually by July 31.

**Commented [CJM3]:** We appreciate you striking the legacy company requirement, but this provision read broadly could infer that the county is seeking to piece the corporate veil of certain oil and gas operators, which is impermissible

**Commented [CJM4]:** While SB19-181 gave the county some extended surface use authority, it does not allow the county to implement regulations that are neither necessary nor reasonable. This is such a regulation. First, the county does not have adequate business knowledge to analyze such information. Second, the county cannot simply unilaterally require an applicant to disclose all its business information for a permit application when that information is not relevant to the permit at issue, or for a well already in operation. Finally, as this is not a provision applied to any other industry, this regulation clearly targets one specific industry.

## 12-500 Pre-Existing Facilities

- A. ~~A.~~ Application to Pre-Existing Facilities. Oil and gas facilities that were legally established prior to the effective date of this Article but do not conform to this Article will be allowed to continue, subject to this section. Any proposed amendment, modification, maintenance, or repair to a pre-existing oil and gas facility or operation is subject to review by the Director under 12-1300(D) and (E). Any modification of such oil and gas operations or facilities that the Director determines to be substantial requires a separate Special Review under this Article.
- B. ~~B.~~ [Assumption of Existing Oil and Gas Operations. Any operator assuming the ownership or operational responsibility for pre-existing oil and gas facilities or oil and gas operations is subject to the requirements of this section 12-500.](#)
- C. Registration. Operators with existing oil and gas facilities in Boulder County prior to the effective date of Article 12 will submit the registration materials described in 12-400 within ~~60~~[90](#) days after the effective date of this article; or, if not already operating wells in Boulder County, at least 60 days prior to assuming

**Commented [CJM5]:** The county seeks to impose a number of conditions retroactively on permitted facilities. We would strongly suggest the count review its proposal closely as many of these requirements would retroactively change permit conditions which is prohibited. See noise, odor, etc.

responsibility for operating ~~an~~ existing [well](#)~~Oil and Gas Facilities~~. Operator registration must be updated and renewed annually by July 31.

**CD.** Inspections.

1. The County may inspect the items listed in this section 12-500 at pre-existing oil and gas facilities under 121400.
2. Operators will inspect all oil and gas facilities, including shut-in and temporarily abandoned facilities, as follows:
  - a. Soil sampling for contamination within the boundaries of existing facility pads annually;
  - b. Equipment-assisted inspection for emissions or releases, including use of best available technology (such as infrared cameras), at least every 30 days; and
  - c. Visual inspections for liquid leaks at least every 30 days.
3. Operators will report the date, methodology, subject, and results of all inspections to the County monthly.
4. Spills, leaks, and releases of any substance other than fresh water, including spills of produced water, oil, condensate, natural gas liquids, all spills outside of secondary containment, gas leaks, and E & P waste, must be reported to the County Local Governmental Designee immediately upon discovery and no later than 6 hours thereafter. When leaks, spills, or releases are discovered, by County or Operator inspection, the enforcement mechanisms and penalty provisions in 12-1400 and 12-1500 will apply.
  - a. Reporting. For spills or other releases meeting the Colorado reporting requirements pursuant to Section 25-8-601 (2), C.R.S., operators will adhere to all Colorado reporting requirements. If the County determines the spill or leak is reportable to any agency, the County may make such report.
  - b. Clean-up. Any leak, release, or spill will be cleaned up according to applicable state and federal laws.
  - c. Root Cause Analysis. A root cause analysis of any spill, leak, or release of any substance other than fresh water that resulted in serious bodily injury or fatality, serious environmental harm, was a Grade 1 gas leak as defined by the COGCCC, or is otherwise requested by the Director must be submitted to the County within 30 days of the leak, spill, or release.

**DE.** Noise. Existing oil and gas facilities must ~~not create~~ [comply with the](#) noise ~~exceeding [ ] dbA from 7 a.m. to 7~~

[p.m. and \[ \] dbA from 7 p.m. to 7 a.m. as measured from the parcel boundary of the oil and gas facility standards in 12-1000\(O\).](#)

**EE.** Odor. Existing oil and gas facilities must not emit odor detectable after dilution with 5 or more volumes of odor free air.

**FG.** Emergency Response Plan. Each Operator with a pre-existing oil and gas operation in the County is required to submit to the Department an Emergency Response Plan ~~for each oil and gas facility~~ consistent with this section. [Operators with multiple pre-existing facilities may submit a single Emergency Response Plan that covers all preexisting Oil and Gas Facilities.](#) Emergency Response Plans for existing oil and gas facilities must be submitted with [the registration and renewal](#). The emergency response plan must consist of at least the following information:

1. Name, address and phone number, including 24-hour emergency numbers for at least 2 persons located in or near Boulder County who are responsible for emergency field operations. The Operator is responsible for ensuring that at least one of these emergency contacts can be on the site of any emergency within 15 minutes.
2. Protocols for notification of emergency response services and the County, including contact names and numbers for each such agency, for use in reporting any incident causing or threatening to cause personal injury or property damage. Emergency response must be notified immediately upon the imminent threat or occurrence of such incidents; the County must be notified as quickly thereafter as practicable and in no instance more than 24 hours later.

3. An 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.
4. Transportation routes to and from oil and gas facilities for emergency response and management purposes, including at least ~~two~~ (2) evacuation routes and health care facilities that would be used. If two evacuation routes do not exist, a plan for ensuring necessary evacuations will be possible in the event of an accident.
5. Detailed information addressing each potential emergency that may be associated with the operation. This may include any or all of the following: well integrity issues; explosions; fires; gas, oil or water pipeline leaks or ruptures; hydrogen sulfide or other toxic or explosive gas emissions; and hazardous material vehicle accidents or spills. This may also include external hazards to the site such as earthquakes, lightning, floods, high winds, tornadoes, terrorism, vandalism, or wildfire.
6. The threshold or triggers constituting various potential types of emergencies must be identified.
7. 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, and in no case more than 4 hours after such spill is discovered, in addition to all necessary reporting to state agencies.
8. ~~Project-specific emergency response plans are required for any project that involves drilling or penetrating through known zones of hydrogen sulfide gas.~~
- ~~9.8.~~ The plan must include a provision that obligates the Operator to reimburse the appropriate emergency response service providers for costs incurred in connection with any emergency. The appropriate emergency response service provider may specify alternative methods for reimbursement of its services.
- ~~10.9.~~ Detailed information showing that the Operator has adequate personnel, ongoing safety training of all onsite personnel, safety supplies, and funding to implement the emergency response plan immediately at all times during operations.
- ~~11.10.~~ As applicable, the plan must include provisions that obligate the Operator 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, including fracking fluids. Operators must timely provide SDS to the public in response to a written request. 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.
- ~~12.11.~~ The plan must include a provision establishing a process by which the Operator periodically engages with the surrounding residents and landowners to educate them on the risks of the existing operations, explain emergency procedures, and establish a process for surrounding neighbors to communicate with the Operator.
- ~~13.12.~~ The plan must include a process by which the community can submit concerns and complaints and be assured of timely responses.
- ~~GH.~~ Revegetation and Reclamation. When any pre-existing oil and gas facility is decommissioned, all areas disturbed will be reclaimed and revegetated to the satisfaction of the County. in consultation with the landowner.
- ~~HJ.~~ Stormwater Quality Control. Adequate stormwater quality control measures must be used to comply with applicable permits and County regulations.
- ~~IJ.~~ Fines. Violations of this section are subject to the enforcement mechanisms in 12-1400 and 12-1500.

## 12-600 Well and Pipeline Abandonment or Decommissioning

A. An Operator may not [commence activities to](#) plug, re-plug, abandon, or otherwise decommission an oil and gas well, flowline, or associated fresh, produced or wastewater pipeline until the Director has reviewed and provided written approval [for entry and surface operations](#) to the Operator. B. Plugging/Re-Plugging, Abandoning or Decommissioning Wells.

1. COGCC rules. Operators will comply with all COGCC rules regarding plugging, abandoning, and decommissioning oil and gas wells.
2. Coordinates. The Operator must provide the County with the surveyed coordinates of the decommissioned, plugged, or abandoned well.
3. Marking. Unless otherwise requested by the surface owner, the Operator must leave onsite a permanent physical marker of the well location.

C. Pipeline Abandonment. Flowlines ~~proposed to be abandoned or decommissioned~~ or fresh, produced or associated wastewater pipelines [proposed to be abandoned or decommissioned](#) must be removed unless otherwise authorized in writing by the Director after consultation with the landowner. If the Director approves of abandonment in place of the line, all COGCC rules will be strictly complied with. D. Conditions of Approval of Well and Flowline Abandonment.

1. With any approval for work to go forward, the Director will provide the Operator with County requirements for [surface activities for](#) plugging and abandoning wells and pipelines. These requirements may include but are not limited to: a. Timing Constraints;
- b. With respect to pipelines abandoned in place, a tracer ~~will be placed~~ in any nonmetal line; and
- c. Specific reclamation and revegetation requirements.

**Commented [CJM6]:** The county does not have subsurface regulatory authority.

## 12-700 Geophysical Exploration for Oil and Gas ("Seismic Testing")

To protect the public health, safety, and welfare, and the environment and wildlife, the County will permit only those geophysical exploration activities ("seismic testing") that comply with the following requirements:

A. Prior to conducting any seismic testing, a geophysical exploration permit issued by the Director is required under this section. If the Operator submits information that is inadequate, the Director may deny a permit. B. To apply for a permit, the Applicant must provide:

1. Vibration Monitoring and Control Plan Map. A map of the exploration area that identifies all of the following within 800 feet of all source points in the testing area: a. Water supplies for domestic, public, or agricultural use;
- b. Domestic, commercial, and industrial structures;
- c. Areas affected by previous mining activities or public works;
- d. Geologic hazards;
- e. Mapped floodplain and floodway;
- f. Identification of wildlife resources; and
- g. Water, sewer, oil, gas, and chemical facilities and pipelines in the testing area.
2. A map showing the proposed travel routes of all vibration-generating seismic testing equipment;
3. A traffic control plan for any operations that will occur on or impede traffic on a public right-of-way;
4. Insurance Coverage. A copy of the following insurance coverage, including the required Additional Insured Language:

- a. Commercial General Liability. This coverage should be provided on an Occurrence Form, ISO CG001 or equivalent, with Minimum limits of \$1,000,000 Each Occurrence, \$2,000,000 General Aggregate and \$2,000,000 Products Completed Operations Aggregate.
- b. Automobile Liability. Bodily Injury and Property Damage for any owned, hired, and non-owned vehicles used in the performance of the Contract. Minimum limits \$1,000,000 Each Accident.
- c. Workers' Compensation and Employer's Liability. Workers' Compensation must be maintained with the statutory limits. Employer's Liability is required for minimum limits of \$100,000 Each Accident/\$500,000 Disease-Policy Limit/\$100,000 Disease-Each Employee.
- d. Umbrella/Excess Insurance. Umbrella/Excess Liability insurance in the amount \$25,000,000.00, following form.
- e. Professional Liability (Errors and Omissions). Professional liability coverage with minimum limits of \$10,000,000 Per Loss and \$10,000,000 Aggregate. Professional Liability provisions indemnifying for loss and expense resulting from errors, omission, mistakes or malpractice is acceptable and may be written on a claims-made basis. The contractor warrants that any retroactive date under the policy shall precede the effective date of this Contract; and that either continuous coverage will be maintained or an extended discovery period will be exercised for a period of 2 years beginning at the time work under this Contract is completed.
- f. Pollution Liability. Coverage pay for those sums the Contractor becomes legally obligated to pay as damages because of Bodily Injury, Property Damage or environmental Damage arising out of a pollution incident caused by the Contractor's work including Completed Operations. Coverage shall include emergency response expenses, pollution liability during transportation (if applicable) and at Non-Owned Waste Disposal Site (if applicable). The Minimum limits required are \$15,000,000 Per Occurrence/Loss and \$15,000,000 Policy Aggregate. If the coverage is written on a claims-made basis, the Contractor warrants that any retroactive date applicable to coverage under the policy precedes the effective date of this Contract; and that continuous coverage will be maintained or an extended discovery period will be exercised for a period of 3 years beginning from the time that work under this contract is completed. County shall be named as an additional insured for ongoing operations and completed operations.
- g. Additional Insured. Boulder County must be named as an additional insured for the General Liability, Umbrella/Excess Coverage and Pollution Liability policies listed above. Additional insured shall be endorsed to the policy. Additional Insured wording shall be as follows:  
*County of Boulder, State of Colorado, a body corporate and politic, is named as an Additional Insured.*
- h. Contractors. Operator shall require adequate insurance of its contractors and subcontractors. ~~Operator agrees that it shall~~ Operators will be responsible for any and all damage or loss suffered by the County as a result of ~~negligence~~ the work being performed by Operator or any subcontractor ~~with these requirements as described in this Article.~~
5. Financial assurances in a form and amount satisfactory to the Director sufficient to guarantee Applicant's obligation to restore all property damaged by seismic testing to its pre-testing condition;
6. Copies of written permission from every landowner of property where the Operator is going to use or place equipment for geophysical exploration;
7. A Vibration Monitoring and Control Plan prepared by a Vibration Monitoring Specialist (VMS). The VMS must be an independent, registered Professional Engineer or Geologist. This Vibration Monitoring and Control Plan must include:
  - a. The name of the Firm providing the vibration monitoring services;
  - b. Specifications of the monitoring equipment to be used;

**Commented [CJM7]:** This is an arbitrary condition. How will the director determine such amounts?

- c. Specifications of the energy source to be utilized for the source points;
  - d. If vibroseis trucks will be utilized, the plan should discuss:
    - i. The number of vibroseis trucks;
    - ii. The distance between the vibroseis trucks;
    - iii. The drive level to be used;
    - iv. The sweep duration; and
    - v. The sweep frequency range.
  - e. Measurement locations and field procedures for setting up vibration monitors;
  - f. Procedures for data collection and analysis which include examples of vibration monitoring field sheets and vibration event analysis;
  - g. Results of on-site vibration attenuation study (walk away test) with prediction of maximum expected particle velocity at each monitoring location;
  - h. Means and methods of providing warning when the Response Values are reached;
  - i. Generalized plans of action to be implemented in the event any Response Value is reached. This plan must include positive measures by the Operator to control vibrations (e.g. reducing drive level, increasing stand-off distances, dropping source points); and
  - j. Procedures for addressing complaints and claims of damage.
- C. The following requirements will apply to all permits to conduct geophysical exploration:
1. Implementation of a Vibration Monitoring and Control Plan approved by the Director; the Director may require modifications to the plan submitted by the Applicant.
  2. Methods involving explosive material ("shotholes") are prohibited.
  3. All geophysical activities will be strictly limited to the areas, methodologies, and routes indicated in the maps and plans approved by the permit.
  4. All geophysical activities will be strictly limited to the hours of operation noted in the approved permit;
  5. The Applicant's VMS will be on site throughout all geophysical activities to ensure County permit conditions are met and will report whether the testing complies with the approved permit.
  6. If any utility line(s) or other above or below ground features must be removed or altered during geophysical operations, the Applicant will provide a letter from the utility owner authorizing the removal or alteration and notify the County at least 3 days prior to any such removal or modification and comply with any additional permitting requirements imposed by the County.
  7. Applicant must obtain any permits for use of County roads required by the County Public Works Department.
  8. No seismic testing activities will be permitted in a mapped floodway. Activities in a mapped floodplain may require a County Floodplain Development Permit.
  9. Any violation of the terms of a seismic testing permit are subject to the penalties and enforcement mechanisms of Article 12-1400 and 12-1500, in addition to all remedies available at law.
  10. Ground vibration monitoring will be required for any source points located within 400 feet of any structures identified in the map of the exploration area. The VMS must conduct the analysis and interpretation of the collected vibration monitoring data for comparison to appropriate vibration limits and must prepare weekly reports for submittal to the County.
  11. Ground vibration amplitudes will be limited to the following Response Values:

- a. The Response Values for ground vibration include a Threshold Value of 0.2 inches per second and a Limiting Value of 0.3 inches per second. Higher values may be acceptable based on the feature of concern but the Applicant must submit an engineering report for review and approval by the County.
  - i. If a Threshold Value is reached, the Applicant must:
    1. Immediately notify the County;
    2. Meet with the County to discuss the need for response action(s);
    3. If directed by the County during the above meeting that a response action is needed, submit within 24 hours a detailed specific plan of action based as appropriate on the generalized plan of action submitted previously as part of the vibration-monitoring plan. Seismic testing cannot resume until the detailed specific plan of action is approved by the County; and
    4. If directed by the County, implement response action(s) within 24 hours of submitting a detailed [plan of action](#).
      - ii. If a Limiting Value is reached, the Applicant must:
        1. Immediately notify the County and suspend vibration producing activities in the affected area, with the exception of those actions necessary to avoid exceeding the Limiting Value;
        2. Meet with the County to discuss the need for response action(s); and
        3. If directed by the County during the above meeting that a response action is needed, submit within 24 hours a detailed specific plan of action based as appropriate on the generalized plan of action submitted previously as part of the vibration-monitoring plan. Seismic testing cannot resume until the detailed specific plan of action is approved by the County.
12. If directed by the County, implement response action(s) within 24 hours of submitting a detailed specific plan of action, so that the Limiting Value is not exceeded. Ten days prior to vibration monitoring pursuant to the Vibration Monitoring and Control Plan, the Applicant will submit a certificate of calibration for any vibration monitoring equipment that will be used on site. The certificate must certify that the instruments are calibrated and maintained in accordance with the equipment manufacturer's calibration requirements and that calibrations are traceable to the U.S. National Institute of Standards and Technology. All instrumentation must have been calibrated by the manufacturer or a certified calibration laboratory within 1 year of their use on site.
13. During the exploration activity, the Applicant must provide weekly reports summarizing any vibration monitoring data collected. The reports must be prepared and signed by the VMS. The County reserves the right to request a different reporting schedule where appropriate.
14. In addition to the above, the Director may impose additional conditions on the conduct of seismic testing that are necessary and reasonable to protect the public health, safety, and welfare, the environment or wildlife resources. D. Notice and Property Inspection.
  1. After a permit is issued by the Director, the Applicant will provide notice of the seismic testing to each property located within 400 feet of any source point as depicted in the approved Vibration Monitoring and Control Plan Map at least 10 days before the testing is to occur.
    - a. The notice will include:
      - i. A description of the project including the duration, physical effects, precautions Applicant is taking, and precautions the property should make;
      - ii. Complaint procedures for property owners and residents;
      - iii. An offer of property and water well baseline condition inspections at Applicant's expense, which, upon property owner's request, will be completed at least 3 days prior to seismic testing. Results of such testing will be provided to the property owner and maintained by Applicant for at least 3 years. All baseline condition testing must be completed by a qualified technician who will report: the date of inspection, name of property owner, address of property owner, property owner



contact information, description of the property, age of structure(s), material of structure(s) and foundation(s). High resolution photographs and video must be taken documenting the present state of all structures on the property, including roads, bridges, and sidewalks. The technician should note any chemical and physical weathering or any other structural defects. All water well samples must be collected by a qualified technician and include the date and time of sample, property owner name, address, contact information and water type and conditions, well type, depth, age, casing type and length, drilling contractor, whether it is conditioned or filtered, sample point type, and any other useful information; and

- iv. The notice will further include an offer of property and water well condition inspections at Applicant's expense after the testing is complete, the results of which will be provided to the property owner and maintained by Applicant for at least 3 years.

E. Appeals. The Applicant may appeal the Director's decision to deny a permit or place particular conditions on the permit to the Board of County Commissioners within 30 days of the Director's decision.

## 12-800 Application Process

- A. Special Review Required. Except as provided in 12-500, all oil and gas facilities and oil and gas operations on public and private land within the unincorporated areas of Boulder County must comply with this Article. Prior to the commencement of any new oil and gas operations in the unincorporated county, an Applicant must submit an application which must receive approval according to this Article. Special Review approval is required prior to the issuance of County permits necessary for the oil and gas facility and operation.
- B. Community Engagement. Boulder County requires Applicant to engage with local communities, residents, and other stakeholders. The purpose of this engagement is to provide sufficient opportunity for public and stakeholder comment on plans, operations, and performance, to listen to concerns of the community, and to address all reasonable concerns related to the proposed oil and gas facility and operation.
- C. Surface Use Agreements, Rights of Way, Easements. Operators commonly enter into surface use agreements, right of way agreements, easements and other types of access agreements with landowners. To avoid inconsistency, the County recommends that agreements with landowners related to the proposed oil and gas facility or oil and gas operation not be finalized until the Applicant has completed Special Review under this Article, at which time the impacts related to the proposed siting will be analyzed.
- D. COGCC approval. Colorado Oil and Gas Conservation Commission ("COGCC") approval of any application does not constitute local approval, and compliance with all terms and conditions of this Article is required prior to the commencement of any new oil and gas facility and operations in the County. Wherever the Oil and Gas Conservation Act, §§ 34-60-101 et seq., C.R.S., requires local government approval prior to COGCC approval, Special Review under this Article must be completed before applications are submitted to the COGCC.
- E. Pre-Application Conference.
  - 1. Timing. A pre-application conference as defined in Article 3-201 of this Code must be held prior to the Applicant submitting an Application for Special Review. An Applicant must complete registration as defined in 12-400 prior to scheduling a pre-application conference.
  - 2. Pre-Application Conference. At the pre-application conference, the County and the Applicant will discuss the points contained in Article 3-201 of this Code and review the County's Special Review process.
  - 3. Six-month Duration for filing Application. Completion of the pre-application conference qualifies the Applicant to submit an Application for a Special Review provided the Application is filed within 6 months after the pre-application conference.
  - 4. Site Visit. At the discretion of the Director, a site visit of the parcels involved in the Application may be required as part of the pre-application conference with the Applicant. To the extent necessary, the

**Commented [CJM8]:** The county seeks to govern the use of private property as well as set parameters of the implementation of private contracts? Does the county see this exercise of power over landowners as within their purview?

**Commented [CJM9]:** What does "to the extent necessary" mean? When will the county step in if a landowner refuses access?

Applicant will be responsible for securing permission or coordinating with the landowner(s) to conduct the site visit.

- F. Application Submission. The Application must include documentation listed in Section 12-900. The Applicant must submit the Application, the application fee, and supporting documentation in electronic format with a minimum of two additional copies of the Application materials in paper format. The Director may require additional paper copies of the Application, or a portion of the Application materials, if needed for review purposes. The Application must contain a certification from the Applicant that the information in the Application, as well as in any accompanying documentation, is true and accurate. The Application must be signed by a person authorized to sign on behalf of the Applicant and identify who will be the primary contact during processing of the Application. The point of contact information in the Application must be amended to specify the new point of contact if the Applicant's point of contact changes during the Application process.
- G. Completeness Determination. Upon acceptance of the Application, the Director will determine if the Application satisfactorily meets the requirements of this Article. If County staff needs consultants or staff outside the County to assist the Director with the completeness determination, the County may hire such assistance at the Applicant's expense. Upon review of the Application materials by the Director and any necessary outside consultants, the Director will determine whether a Special Review Application is complete.
  - 1. Application Deemed Incomplete. If the Director finds that the Application is incomplete, the Director will inform the Applicant of the deficiencies. No further action will be taken on an incomplete Application. Should the Applicant fail to correct deficiencies within 12 months, the Application will expire, and the Applicant may submit a new Application and fee as specified in Section (F) above. The twelve-month timeframe may be extended by the Director according to the standards in Article 4-604(D). Should the Applicant dispute the Director's completeness determination, the Applicant may appeal the Director's determination to the Boulder County Board of County Commissioners within 30 days of the Director's decision. During any Board of County Commissioners proceeding or subsequent appeal, the Application will not be processed.
  - 2. Application Deemed Complete. If the Director finds that the Application is complete, the Director will process the Application. H. Notice.
    - 1. The Applicant must deliver notice to surface owners, to surrounding land owners and lessees, the Local Governmental Designees (LGDs) of any local government within one mile of the proposed oil and gas facilities, and to water source owners as identified in this section no more than 10 days after the Application is deemed complete by the Department. If approved by the Director, the Applicant may deliver the notice defined in this section using secure methods other than mail. Notice of the Application must be made as follows:
      - a. To the surface owners of the parcels of land on which the oil and gas operation is proposed to be located;
      - b. To the owners and [identifiable](#) lessees of the parcels of land within one mile of the parcel on which the oil and gas operation is proposed to be located;
      - c. To the physical address of all parcels within one mile of the parcel on 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; and
      - d. ~~To water source owners~~[To owners of wells registered with the Colorado Division of Water Resources, owners of municipal/public water bodies, and owners/managers of irrigation ditches and reservoirs](#) within one mile of the parcel on which the oil and gas operation is proposed to be located and within one-half mile of either side of the full length of the planned wellbore and bottom location. The Applicant is responsible for determining the addresses of such water source owners and providing a list of such owners to the Director.

- e. The Department will provide the list of addresses of record for property owners within one mile of the parcel on which the oil and gas operation is proposed to be located to the Applicant at the preapplication conference so the Applicant can provide notice as required by subsection (a), (b), and (c) of this section.
  - f. If other sites come into consideration during Application processing, the Director may require the Applicant to provide supplemental notice as described here with reference to the new sites.
2. 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 consisting of up to [number of wells] and [description of other facilities] is being proposed in your area. 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 oil and gas facility, including the legal description; parcel number; a street address for the site, if available from the County's addressing system; the company name of the Operator; the name of an Applicant contact; the current business address, telephone number, and email address for the Applicant contact; a vicinity map; and a brief description and overview of the proposed oil and gas operation (e.g., a detailed description of the timeframe for facility construction and estimated duration of drilling and any proposed hydraulic fracturing);
  - c. Information concerning the facilities and equipment proposed at the site when operational, and proposed access roads and gathering lines;
  - d. The docket number of the Application and the date of its completeness determination;
  - e. An attachment provided by the Director explaining the applicable review process and explaining that the public may review the full Application file at Department offices and that public comments on the Application may be submitted to the Department;
  - 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 process, County staff may from time to time need to enter onto the property that is the subject of a Special Review Application."; and
  - g. The current mailing address, website address, email, and telephone number for both the Department and the COGCC, as well as a statement that additional information on the Application will be available from the Department.
3. Notice Review. The Applicant must submit a copy of the proposed notice for review by the Director. If the Director determines that the notice does not comply with the requirements of this Article, the Director may require the Applicant to modify the notice.
- I. Posting Public Notice Signage Onsite. Within 5 days after the Director has deemed an Application complete, the Applicant must post a public notice sign or signs on the subject parcels, including parcels where flowlines or other pipelines will be constructed, that meet the following requirements:
- 1. 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 or signs on the subject parcel will not provide adequate public notice, multiple signs or signs in additional locations meeting the requirements of this section may be required.
  - 2. In lettering clearly visible from a passing car and proportionate to the size of the sign, the sign must contain the following:
    - a. "Attention: An oil and gas operation consisting of up to [number of wells] and [description of facilities] is being proposed in your area. Please read this notice carefully.";
    - b. "The Applicant has applied for Special Review, [docket number]"; and

**Commented [CJM10]:** There needs to be an addition of a new subsection that requires Boulder to provide water owners within 1 mile.

- c. "Information regarding this Application may be obtained from Boulder County Community Planning & Permitting at [phone number / email]".
- 3. Within 5 days of the posting of the sign, the Applicant must submit a photograph of the sign or signs as posted for review by the Director. If the Director determines that the sign does not comply with the requirements of this Article, the Director may require the Applicant to post a sign or signs complying with this Article.
- 4. The sign or signs must be posted on the sites until the Special Review process is complete. The Applicant must repair or replace signs that are damaged or defaced within 5 days of learning of damage or defacement.
- J. Neighborhood Meeting. The Applicant must conduct a neighborhood meeting with adjacent and surrounding landowner(s) and other interested parties at a convenient date, time, and public location. The meeting must occur at least 20 days after the notice is sent and the signs are posted pursuant to Section 12-800(H) and (I). The neighborhood meeting must be noticed to the County and to all individuals entitled to notice pursuant to Section 12-800(H)(1) at least 14 days prior to the meeting. In addition to those parties entitled to notice under 12-800(H)(1), the meeting will be made open to the public. The meeting must be held at an accessible and adequate location. If requested by members of the public or the Director determines remote attendance is necessary for public health reasons, accommodation must be made for remote attendance. At the neighborhood meeting, the Applicant must provide an overview of its proposed oil and gas operation, distribute a handout provided by the Director with an explanation of the Article 12 Special Review process, and allow those in attendance to provide input as to the proposed operation, including, but not limited to, facility 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 video recording of the meeting and a report of all of attendee comments and any proposals from the Applicant for addressing neighborhood concerns to the Director within 20 days after the meeting.
- K. Referral Requirements and Agency Review. Following the determination that an Application is complete, the Director will refer the Application materials to the Boulder County Public Works and Parks and Open Space Departments, Boulder County Public Health, the appropriate fire district, the Boulder County Sheriff, the Boulder County Office of Emergency Management, the COGCC and CDPHE, and any appropriate municipality, special district, and school district for review and comment. As deemed necessary in the Director's sole discretion, the Director may also refer the Application to other government agencies or entities for review and comment. Referral comments on the proposal must be returned to the Director within 75 days of date of referral, unless the Director determines additional time is necessary.
  - 1. Following the determination that an Application is complete the Director will send a referral notice to all individuals entitled to notice pursuant to Section 12-800(H)(1). The notice will include information on where to access Application materials on the County's website. The complete Application referral packet will be available for public review online in hard copy at the Department during business hours. Referral responses must be received by the Director within 75 days of transmittal to ensure that comments are considered.
  - 2. If the proposed oil and gas facility or oil and gas operation is on or within 1,500 feet of Boulder County Parks and Open Space property or property over which Boulder County owns a conservation easement, the Parks and Open Space Director may refer the Application to the Parks and Open Space Advisory Committee (POSAC) for a public hearing. After the public hearing, the POSAC may forward recommendations for assuring the protection of environmental, ecological, wildlife, historical, archeological, and agricultural resources of the open space, which may include recommendations to deny the Application or to modify the location or density of the oil and gas facility.

**Commented [CJM11]:** What does this requirement mean? That the meetings will be open to the general public and not those directly associated with the proposed development?

3. The Applicant is responsible for preparing the referral packets in the manner prescribed by the Director. Any errors made by the Applicant in the preparation of referral packets may result in a delay in processing of the Application.
- L. Consultant Review. The Director may submit all or parts of 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 impacts of oil and gas development. The Applicant will be notified if the Director decides to retain consultants, and the Applicant will escrow funds sufficient to cover the anticipated cost of the consultants' review. The Applicant will be responsible for the actual costs associated with this consultant review and will be refunded any excess escrowed funds.
- M. Supplemental Information. If, during the Special Review process, the Director determines that additional information is required to conduct adequate review of the Application in light of the standards and criteria, the Director may suspend the Application review until the additional information is received.
- N. Site Visit. The Department will conduct a site visit to evaluate the Application and the site-specific circumstances on and near the parcel and surrounding parcels on which the facility and operations are located. The Department may coordinate a site visit with other County departments and governmental agencies.
- O. Staff Recommendation. After its review of the Application, staff will make a recommendation for approval with conditions or denial of the Application, based on its analysis of the Special Review Standards, the referral comments and the Applicant's responses to the referral comments. When the staff recommendation is complete, the Application will be scheduled for a public hearing in front of the Planning Commission. The staff recommendation will be made available to the public once it is complete.
- P. Notice of Planning Commission Hearing. Not less than 14 days prior to the Planning Commission's public hearing on the Application, the County will publish a legal notice of the public hearing in a newspaper of general circulation in the County and mail written notice to the people and entities entitled to notice under Section 12-800(H)(1) of the time and place of the Planning Commission's public hearing.
- Q. Planning Commission Hearing and Recommendation. The Planning Commission will hold a public hearing on the Application and will make a recommendation of approval with conditions necessary to ensure compliance with this Article, or denial, which will be forwarded to the Board of County Commissioners. R. Notice of Board of County Commissioners' Hearing. Not less than 14 days prior to the Board of County Commissioners' public hearing on the Application, the County will publish a legal notice of the public hearing 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 will be provided pursuant to Section 12-800(H)(1).
- S. Board of County Commissioners Hearing and Decision. The Board of County Commissioners (the "Board") will hold a public hearing on the Application. Any action taken by the Board will be based on the entire record of proceedings on the matter, as that record is maintained by the Director and/or the Clerk of the Board, including but not limited to: recordings or transcripts of public hearings; all written comments of referral agencies; the review and recommendations of the Department, POSAC if applicable, and Planning Commission; and all written commitments, statements, or evidence made or submitted by or in behalf of the Applicant, landowners or interest holders or their agents, and interested members of the public. The Applicant will have the burden of proof to show that the applicable standards for approval have been met. Based on the evidence received at such public hearing(s), the Board will make its determination to approve the Application with conditions necessary to ensure compliance with this Article or deny the Application. The Board may designate its determination as final or preliminary and subject to review by a technical review board under Sections 29-20-104(3) and 34-60-104.5(3), C.R.S. The Board's action will contain appropriate findings or reasons in support of its decision. The Board will render its decision on the Application in writing following the conclusion of the public hearing.

**Commented [CJM12]:** This is an arbitrary requirement. This provisions allows the director, without limitation, to ask for any information they deem appropriate without justification

## 12-900 Application Submittal Requirements

Unless a submittal requirement is waived or modified by the Director after the Applicant's request, the Applicant must submit the information and documents specified in this section with the Special Review Application for oil and gas facilities and operations. If the contents or relevant information in any required submittal materially changes, the Applicant must promptly update those materials with the Department. The Director may waive or modify the submission requirements in this section if, because of the nature of the Application, the requested information is unlikely to be useful to the Board in applying the Special Review standards. Each of the following will form the basis for full and independent review by the County and all reviewing bodies. All materials submitted under this section are subject to Section 121400(E).

### A. General Information 1.

#### Application Form.

2. **Operator Registration.** Operator registration materials submitted under Section 12-400 are incorporated into the Application materials. The Director, Parks and Open Space Advisory Committee, Planning Commission, or Board, may consider such materials in reviewing any Article 12 Application.
3. **Proof of Pre-Application Conference.** Date the Applicant conducted the pre-application conference with the Department.
4. **Verification of Legal Rights.**
  - a. **Mineral Rights and Surface Access Rights.** Proof of ownership of, or lease rights to, the mineral rights and accompanying surface lands where oil and gas facilities are proposed, including copies of all easements, licenses or right-of-way agreements necessary to lay any pipelines associated with the Application. Identification of all persons with a real property interest in the proposed oil and gas facilities. A title report supporting the asserted mineral interests and surface access. A map of the mineral interests Applicant will produce with the proposed oil and gas operation.
  - b. **Surface Use Agreements.** The County strongly recommends that surface agreements not be finalized until after the Applicant has completed Special Review. Nonetheless, if the Applicant has entered any surface use agreements for any proposed oil and gas facilities subject to the Application, Applicant will provide a copy.
  - c. **Roads.** Information demonstrating that the Applicant has or will have the right to use or construct temporary and permanent private access roads that are necessary for the proposed oil and gas facilities or operations. A copy of any signed or proposed agreements with landowner(s) regarding road construction, maintenance, and improvements necessitated by the proposed oil and gas operation. Any recorded or historical easements providing access to or across the parcel(s) must be provided.
  - d. **Pipelines.** Information demonstrating that the Applicant has or will have the right to use or construct temporary and permanent gas, oil or water (fresh, produced, or waste) pipelines that are necessary for the proposed oil and gas operations. A copy of any signed or proposed agreements with landowner(s) regarding pipeline construction, maintenance, and improvements necessitated by the proposed oil and gas operation.
5. **Insurance Coverage.** A copy of the following insurance coverage, including the required Additional Insured language:
  - a. **Commercial General Liability.** Coverage should be provided on an Occurrence form, ISO CG0001 or equivalent. The policy shall be endorsed to include Additional Insured Owners, Lessees or Contractors endorsements CG 2038 (or equivalent), Designated Construction Project(s) General Aggregate Endorsement CG2503 (or equivalent) and Additional Insured Completed Operations for Owners, Lessees or Contractors CG 2037 (or equivalent). Minimum limits required of \$1,000,000 Each Occurrence, \$2,000,000 General Aggregate and \$2,000,000 Products/Completed Operations

**Commented [CJM13]:** Pipeline agreements generally are not negotiated under the location is approved

**Commented [CJM14]:** We believe these insurance requirements are excessive, target the oil and gas industry, and are arbitrary and capricious. We would both ask the county how they justified these amounts

Aggregate. The County requires the Products/Completed Operations coverage to be provided 3 years after completion of construction. An endorsement must be included with the certificate.

- b. Automobile Liability. Bodily Injury and Property Damage for any owned, hired, and non-owned vehicles used in the proposed oil and gas operations. Minimum limits \$1,000,000 Each Accident.
- c. Workers' Compensation and Employer's Liability. Workers' Compensation must be maintained with the statutory limits. Employer's Liability is required for minimum limits of \$100,000 Each Accident/\$500,000 Disease-Policy Limit/\$100,000 Disease-Each Employee.
- d. Umbrella/Excess Liability. Umbrella/Excess Liability insurance in the amount \$25,000,000.00, following form.
- e. Professional Liability (Errors and Omissions). Professional liability coverage with minimum limits of \$10,000,000 Per Loss and \$10,000,000 Aggregate. Professional Liability provisions indemnifying for loss and expense resulting from errors, omission, mistakes or malpractice is acceptable and may be written on a claims-made basis. The Operator warrants that any retroactive date under the policy shall precede the effective date of a Special Review approval; and that continuous coverage will be maintained until final reclamation obligations are completed to the County's satisfaction.
- f. Pollution Liability. Coverage pay for those sums the Operator becomes legally obligated to pay as damages because of Bodily Injury, Property Damage or environmental Damage arising out of a pollution incident caused by the Operator. Coverage shall include emergency response expenses, pollution liability during transportation (if applicable) and at Non-Owned Waste Disposal Site (if applicable). The Minimum limits required are \$25,000,000 Per Occurrence/Loss and \$25,000,000 Policy Aggregate. If the coverage is written on a claims-made basis, the Operator will warrant that any retroactive date applicable to coverage under the policy precedes the effective date of any Special Review Approval; and that continuous coverage will be maintained until final reclamation obligations are completed to the County's satisfaction. The County shall be named as an additional insured for ongoing operations and completed operations.
- g. Control of Well Coverage. Coverage for costs and expenses related to bringing a well back under control, pollution cleanup costs incurred due to pollution that results from a well out of control event, legal liability for pollution-related bodily injury or property damage arising from a well out of control event, re-drill and other extra expense incurred to restore the well to its pre-loss condition that the Operator becomes legally obligated to pay. The Minimum limits required are \$25,000,000 Per Occurrence/Loss and \$25,000,000 Policy Aggregate. If the coverage is written on a claims-made basis, the Operator will warrant that any retroactive date applicable to coverage under the policy precedes the effective date of any Special Review approval; and that continuous coverage will be maintained until final reclamation obligations are completed to the County's satisfaction. The County shall be named as an additional insured for ongoing operations and completed operations.
- h. Waiver of Subrogation. Operator will waive and cause its insurers to waive for the benefit of the County any right of recovery or subrogation which the insurer may have or acquire against the County or any of its affiliates, or its or their employees, officers or directors for payments made or to be made under such policies.
- i. Additional Insured. Boulder County must be named as an additional insured for the General Liability, Umbrella/Excess Coverage and Pollution Liability policies listed above. Additional insured shall be endorsed to the policy. Additional Insured wording shall be as follows:

*County of Boulder, State of Colorado, a body corporate and politic, is named as an Additional Insured.*

- g.i. Contractors. Operator shall require adequate insurance of its contractors and subcontractors. Operator agrees that it shall be responsible for any and all damage or loss suffered by the County as a result of negligence the work being performed by Operator or any subcontractor with these requirements as described in this Article.

**Commented [CJM15]:** Does the county do this with all subcontractors? This appears to be a targeted regulation imposing vicarious liability on oil and gas operators for any and all third parties they hire. Even those they are required to hire under these rules. Further, this goes beyond negligence to "any work being performed, which is a broad and arbitrary standard.

6. Financial Fitness and Assurances. Applicant will be required to provide adequate financial assurances to guarantee performance of all conditions of approval attached to any Special Review approval for the lifetime of the oil and gas facility. With the Application, Applicant will submit a description of the type(s) of financial assurances it expects to provide to meet those requirements. The type and amount of financial assurances provided will be determined by the County with any Special Review approval. B. Site and Area Information. Applicant must include maps that meet the following criteria:
1. All maps must be at a scale which best conveys the conceptual aspects of the plan, include written scale, graphic scale, and north arrow (designated as true north), and allow for effective public presentation. All maps and plans must include the date of preparation and revision box.
  2. Topography. A map of the existing and proposed topography at five-foot intervals to portray the direction and slope of the parcel(s) where the oil and gas facilities are proposed to be located.
  3. Existing Dwellings and Structures. A map of the location of all existing Dwellings and other structures and improvements within one mile from the parcel(s) on which the proposed oil and gas facility will be located. Dwellings must be specifically identified. This map must depict any setbacks required by this Article.
  4. Existing Roads. A map depicting all existing roads (designating public and private roads) near and surrounding the proposed oil and gas facilities.
  5. Existing or Pending Oil and Gas Facilities.
    - a. A map showing the location of all producing, shut-in, temporarily abandoned, dry and abandoned or plugged and abandoned wells, and any other oil and gas facilities and operations for which permits are pending with applicable agencies, on or within one mile of the parcel(s) where the proposed oil and gas facilities will be located and within one mile of either side of the full length of each proposed wellbore.
    - b. A map of existing oil, gas, and water pipelines on or within one mile of the parcel(s) where the proposed oil and gas facilities will be located, including information on the age, location, depth, diameter, thickness, typical and maximum operating pressures, the nature of the material carried in the pipes and the estimated worst-case liquid spill volumes.
  6. Water Wells. A map of any domestic or commercial water wells or irrigation wells within one mile of the parcel or parcels on which the proposed oil and gas facilities will be located and within one mile of either side of the full length of each proposed wellbore.

**Commented [CJM16]:** How will the county determine this? What criteria will be articulated? This is an extremely arbitrary statement

**Commented [CJM17]:** This seems to read that operators must provide a map of all wells currently in production, even if not owned by the applicant, as well as any pending permits even if not relevant to applicant. Again this is an arbitrary condition that is not necessary or reasonable.



7. Surrounding Land ~~Uses~~Use Patterns. Identification of all ~~land~~existing activities and uses on surrounding lands (e.g., agricultural activities, residential, recreational, commercial or businesses) within one mile, or as otherwise determined, of the parcel(s) where the oil and gas facilities are proposed to be located.
8. Educational Facilities and Child Care Centers. A map of educational facilities and licensed Child Care Centers within one mile of the parcel(s) on which the proposed oil and gas facilities will be located. This map must include the distances between the proposed oil and gas facility and the Educational Facilities and licensed Child Care Centers. This map must depict any setbacks required by this Article.
9. Agricultural Lands. A map of the agricultural lands on and within one mile of the parcel(s) on which the oil and gas facilities are proposed to be located, including but not limited to agricultural lands of national, statewide, or local importance as identified in the Boulder County Comprehensive Plan; identification of the specific agricultural uses on the parcel(s) and their status; and the existence of irrigation and other agricultural infrastructure.
10. Water Bodies; Riparian Areas; Wetlands; Ditches. A map depicting all surface water bodies including, but not limited to, lakes, streams, wetlands or aquatic habitat, riparian areas, and riparian corridors identified in the Boulder County Comprehensive Plan or otherwise found on or within one mile of the parcel(s) on which the proposed oil and gas facilities will be located, and within one mile of either side of the full length of each proposed wellbore. The map must also depict irrigation ditches and reservoirs as identified and mapped on the Boulder County's Ditch and Reservoir Directory and the St. Vrain and Left Hand Water Conservation District Ditch and Reservoir Directory.
11. Natural Resources. A map of all significant natural ecosystems or environmental features, significant natural communities, rare plant areas, high biodiversity areas, natural landmarks, and natural areas, as identified in the Boulder County Comprehensive Plan, found from other sources, or otherwise identified on or, within one mile of the parcel(s) on which the oil and gas facilities are proposed to be located.
12. Existing vegetation. An inventory of the vegetation (including its quality) at the site of the proposed oil and gas facilities.
13. Wildlife. ~~An inventory of the wildlife species and population numbers on or within one mile of the parcel(s) on which the oil and gas facilities are proposed to be located, including state or federally designated threatened or endangered species, species of special concern as defined by Colorado Parks and Wildlife, or other types of species making use of the area.~~ A map of critical wildlife habitat and wildlife migration corridors or routes as identified by the Boulder County Comprehensive Plan and Colorado Parks and Wildlife on and within one mile of the parcel(s) on which the oil and gas facilities are proposed to be located.
14. Natural and Geologic Hazards. A map of all natural and geologic hazard and constraint areas as identified in the Boulder County Comprehensive Plan or using the best available information on or within one mile of the parcel(s) on which the proposed oil and gas facilities will be located and within one mile of either side of the full length of each proposed wellbore. Natural hazards may include, without limitation, expansive soils or claystone, subsiding soils, soil creep areas, or questionable soils where the safe-sustaining power of the soils is in doubt; landslides, mudslides, mudfalls, debris fans, unstable slopes, and rockfalls.
15. Floodplain and Floodway. A map of all floodplains and floodways, including both the FEMA and Boulder County Floodplains as delineated by the most recent Official Boulder County Floodplain Map defined in Article 4-400, on or within one mile of the parcel(s) on which the proposed oil and gas facilities will be located.
16. Recreational Activity; Trails; Bikeways. A map and identification of active and passive recreational activity areas, such as public trails, publicly accessible open space, bike paths, and commonly used bike travel ways within one mile of the parcel(s) where the oil and gas facilities are proposed to be located.
17. Open Space. A map of public open space or lands with conservation easements on or within one mile of the parcel(s) on which the proposed oil and gas facilities will be located.

18. Site Selection Rationale. Maps and a narrative explaining the reasons the Applicant chose the proposed site(s) for the oil and gas facilities or operations with respect to other possible locations.
19. Ozone Exceedance. A report of the number of ozone exceedances as measured at any and all CDPHE monitoring stations in Boulder County and the amount by which the 2015 National Ambient Air Quality Standards of 70 parts per billion under the Clean Air Act were exceeded. The report should include all data for the preceding three-year period. C. Proposed Development Information.
  1. Facility Layout. A facility layout diagram, including: construction and operations layout drawings; location construction and operations cross-section plots including location and finish grades; operations facility layout drawings; the location of equipment such as wellheads, pumping units, tanks, treaters, staging and storage areas; the location of access roads and ingress and egress to and from public roads; structures such as sound walls; location, height and materials for all fences; temporary workspaces and permanent areas of disturbance for all phases of development; fencing; and an equipment list.
  2. Wellbore Risk analysis. A copy of the anti-collision evaluation for all proposed wells conducted for or under the same terms as required in COGCC Rules.
  3. Area of Disturbance. A map and dimensions of the proposed oil and gas facilities, indicating both temporary and permanent disturbance areas, in square feet and acres.
  4. Roads and Road Improvements. A map of proposed new roads and improvements to existing roads that will be necessary for the proposed oil and gas facilities, as well as identification of the road surface planned for each road or road improvement.
  5. Pipeline Plan.
    - a. The specific location and route of each flowline, and fresh, produced, or waste water pipeline and any other transport pipeline necessary for the oil and gas facilities and operations, through the lifetime of the oil and gas facilities and operations, and their distances from: existing or proposed residential, commercial, or industrial buildings; places of public assembly; surface water bodies; natural resources identified under 12-900(B)(11); geologic hazards, agricultural lands; and public or private roads;
    - b. The size, operating pressure, material, and locations of each line and what materials they will carry;
    - c. Whether pipelines will be co-located with proposed or existing lines; and
    - d. Identification of all pipeline segments that will be constructed by boring and the location of the boring operation.
  6. Grading and Drainage Plan. A plan and information showing location and typical cross-section of all existing and proposed earthwork on the parcel(s) on which the oil and gas facilities are proposed to be located, including earthwork calculations, historic drainage patterns and flow rates, mitigation measures to compensate for anticipated drainage impacts, and geotechnical soil reports. The best available information should be used to identify and evaluate drainage impacts, including without limitation the Boulder County Storm Drainage Criteria Manual. The plan must be certified by a Colorado registered professional engineer.
  7. Landscaping and Screening Plan. A plan denoting the intended landscaping and visual screening on the parcel(s) on which the oil and gas facilities are proposed to be located; an irrigation plan may be required where visual buffering is proposed to be accomplished with vegetation.
  8. Weed Control Plan. A Weed Control Plan identifying what County listed noxious weeds are known to be on the parcel(s) on which the oil and gas facilities are proposed to be located, their location, and the proposed method of weed control. This plan must also include a strategy to prevent and manage the growth of noxious weeds during oil and gas operations and reclamation.
  9. Dust Suppression Plan. A plan detailing how the Applicant will prevent excessive dust escaping from the oil and gas facility site(s) and all associated roads; a plan for preventing fugitive dust, sand, or silica materials escaping from any oil and gas operation.
  10. Lighting Plan and Photometric Study. A plan indicating the location of all outdoor lighting on the site and structures, including cut sheets (manufacturer's specifications with picture or diagram) of all proposed

**Commented [CJM18]:** This is not determined until the location is approved. After approval pipeline route would be negotiated and determined. No specific route would be available at this time in the process and whether or not other lines existed would not be known.

fixtures. The plan should include the location and type of any emergency lighting and description of situations in which it will be used. A photometric study conducted by an independent consultant to measure the lumens emitted by the oil and gas facilities or operations evaluate lighting impact on surrounding properties must also be included as part of the plan.

11. Operational Plan. A plan describing in detail the proposed oil and gas operations including the method, schedule, and duration of time for drilling, completion, production, and decommissioning.
12. Electrification Plan. A plan identifying all sources of electricity that will be brought to or used at the proposed oil and gas location during all phases, including drilling, completion, and operations.
13. Revegetation and Reclamation Plan. A plan illustrating how all disturbed [areas](#) will be revegetated and reclaimed, including areas disturbed during flowline abandonment. The plan will include timing, methods, materials to be used, including any proposed soil amendments, and procedures for ensuring successful revegetation, including an on-going maintenance plan that ensures successful establishment of vegetation and weed control.
14. Worker Training and Records.

~~a. Written All workers at oil and gas facilities and involved with oil and gas operations shall have any applicable nationally recognized certifications and training for the work they are performing. This includes, but is not limited to, Hazard Communications Training, Hazardous Waste Operations Certifications, heavy equipment operator training, occupational safety and health training, etc.~~

~~15.14.— Upon request from the County, the Operator shall supply the County written~~ procedures detailing employee training requirements and training records.

D. Assessments, Studies, and Plans by Outside Experts. ~~Any independent~~[Independent](#) experts, engineers or consultants ~~must be referenced in this section will~~ be retained by the Applicant and ~~are~~[be](#) subject to approval by Boulder County.

1. Air Quality.
  - a. Existing emissions. An independent expert's inventory of methane, VOCs, NOx, CO<sub>2</sub> and particulate emissions for all oil and gas facilities and operations in Boulder County owned or operated by the Applicant for the calendar year prior to registration or renewal.
  - b. Air Quality Modeling. A qualified, independent modeling study that considers all relevant environmental and atmospheric conditions, and includes:
    - i. Assesses the existing air quality at the proposed site;
    - ii. Predicts the anticipated emissions (including methane, VOCs, NOx, CO<sub>2</sub>, and particulate emissions) from the proposed oil and gas facilities and operations, assuming use of and identifying all emissions control equipment and processes intended for use at the oil and gas facilities; and
    - iii. Models the impacts on air quality from the proposed oil and gas facilities and operations over their lifetime, including the compounding effects of climate change on ozone and particulate pollution in the county and taking into account and identifying all relevant factors including natural conditions and other air quality impacts from any existing or foreseeable source.
2. Baseline Soil Conditions. An independent expert's report detailing the soil conditions on the parcel(s) on which the proposed oil and gas facilities will be located. The report will address the NRCS classification of the soils, the organic and inorganic characteristics of the soil, and any existing contamination or sensitive soil features existing on the site.
3. Traffic and Road Use Plan.
  - a. A Transportation Impact Study, as defined in the Boulder County Multimodal Transportation Standards, covering all areas affected by the proposed oil and gas facilities or operations and prepared by a Colorado registered professional engineer.

- b. A map indicating proposed trip routes for all traffic serving the oil and gas operation during all phases of well development and operations, for the lifetime of the oil and gas facilities and operations.
- c. For each segment of proposed traffic routes 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 during all phases of the proposed oil and gas operation.
- d. The intended measures the Applicant will take to ensure safety, maintenance of road condition, and the quality of life experience of other users of the County transportation system, adjacent residents, and affected property owners, including without limitation:
  - i. 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;
  - ii. Maintenance practices on the proposed route, including without limitation, grading of unpaved roads, dust suppression, vehicle cleaning necessary to minimize re-entrained dust from adjacent roads, snow and ice management, 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
  - iii. Any necessary physical infrastructure improvements to ensure public safety for all modes of travel including non-motorized modes along travel routes to and from the site.
- 4. Agriculture. An independent expert's report identifying the anticipated impacts of the proposed oil and gas facilities or operations on the current agricultural uses and the existing productivity of the lands where the oil and gas facilities and operations are proposed.
- 5. Wildlife. An independent expert's report identifying the wildlife species and population numbers on or within one mile of the parcel(s) on which the oil and gas facilities are proposed to be located, including state or federally designated threatened or endangered species, species of special concern as defined by Colorado Parks and Wildlife, or other types of species making use of the area and identifying the anticipated impacts of the proposed oil and gas facilities and operations on wildlife and wildlife habitat and recommending measures for avoiding or minimizing such impacts.
- 6. Natural Resources. An independent expert's report identifying the anticipated impacts of the proposed oil and gas facilities and operations on the resources identified under 12-900(B)(11) and recommendations for avoiding or minimizing such impacts.
- 7. Water Quantity, Source and Use.
  - a. An estimate of the amount of water needed for all phases of the oil and gas operation.
  - b. The source of water intended for use by the proposed oil and gas facility or operation.
    - i. A list of all available sources of water for the proposed oil and gas operations, and if multiple sources are available, analysis of which source is least detrimental to the environment.
  - c. Impacts of Water Use. An independent expert's assessment of the impacts of the proposed use of water described in subsections (a) and (b) above. Impacts to, at a minimum, downstream users, groundwater users, agricultural lands and users, terrestrial and aquatic wildlife, plant communities, and recreation must be considered.
  - d. Water Management Plan. An independent expert's recommendation of measures that will avoid or minimize the impacts identified in subsection (c) above and address the water use standards in Section 12-1000.
  - e. Produced Water. An estimate of the amount of produced water and other wastewater that will be generated by the proposed oil and gas operations, including a description and evaluation of potential flowback and produced water volume reduction options through recycling, reuse or other beneficial uses and the rationale for the methods to be employed.
    - i. Plans for recycling or reusing water used or produced by the oil and gas operations.

**Commented [CJM19]:** Does this mean applicants are required to identify any and all living species within one mile of any proposed location?

8. Water Quality.

- a. Testing of existing conditions. A qualified, independent expert's assessment of existing water quality conditions on and adjacent to the parcel(s) where the oil and gas facilities will be located based on testing as follows.
  - i. Identification of and offers to owners to sample all domestic water wells and water sources located within one mile of the parcel or parcels on which the oil and gas facilities are proposed to be located and within one-half mile of either side of the full length of each proposed wellbore. For all water wells and water sources for which the Applicant is given permission:
    1. Initial collection and testing of baseline samples from available water sources within 12 months prior to the commencement of drilling a well, or within 12 months prior to the restimulation of an existing well for which no samples were collected and tested during the previous 12 months;
    2. Analytical monitoring. All sampling shall be performed by the Applicant according to the specified methods in 40 C.F.R. Part 136, including sample containers, preservation methods, and holding time limits, for the analytes listed in Table 1 below; and
    3. GPS coordinates, at sub-meter resolution, for all water wells and water sources tested.
  - ii. An Operator may rely on existing sampling data collected from water sources within the radius described above, provided the data was collected within the previous 12 months, the data includes the constituents listed in Table 1, and there has been no oil and gas activity within a one-mile radius in the time between the original sampling and the present.
  - iii. If the Operator is unable to locate and obtain permission from the owner of a water source to be tested, the Operator must advise the Director that the Operator could not obtain access to the water source from the surface owner.
  - iv. The Operator will submit a monitoring report to the Director with the Application, including reporting on damaged or unsanitary water well conditions; existing, adjacent potential pollution sources; water odor; water color; presence of sediment; bubbles and effervescence; and the existence and amount of any Table 1 analytes found. Copies of the report will be provided to the COGCC and the water source owners within 10 days after the Operator's receipt of the report.
  - v. If sampling shows water contamination, additional measures may be required including the following:
    1. If free gas or a dissolved methane concentration level greater than one milligram per liter

(mg/l) is detected in a water source, determination of the gas type using gas compositional analysis and stable isotope analysis of the methane (carbon and hydrogen);

2. If the test results indicate thermogenic or a mixture of thermogenic and biogenic gas, an action plan to determine the source of the gas; or 3. Additional reporting to Boulder County Public Health.
- b. Modeling of Impacts. An independent expert's modeling of the water quality impacts on any water bodies and groundwater within one mile, or as otherwise determined, of the oil and gas facilities and operations.
- c. Stormwater Quality Control. A plan for establishing compliance with the stormwater management provisions of Section 12-1000(DDEE), Boulder County's Illicit Stormwater Discharge Ordinance, the Stormwater Quality Control provisions of Section 7-904, and with all water quality or stormwater quality control permits obtained from the County or any other agency. With reference to such standards, the plan must include:
  - i. Containment of pollutants;
  - ii. A list of the control measures that will be employed to prevent illicit or inadvertent discharges of contaminated stormwater, which may include containment impoundments, energy dissipators, sediment traps, check dams, culverts, and level spreaders or similar devices;
  - iii. Spill notification and response plans;
  - iv. A non-radioactive means of tracing fracking fluid migration from the oil and gas operations, such as identifying the isotopic fingerprint of the Operator's fracking flowback fluids, for use in tracing any subsequent water contamination; and
  - v. The timing and means of Applicant providing the County with the information it provides to the COGCC ensuring compliance with the water quality protection standards contained in COGCC rules and associated forms.
9. Emergency Preparedness Plan. The emergency preparedness plan must consist of at least the following information:
  - a. Name, address and phone number, including 24-hour emergency numbers for at least 2 persons located in or near Boulder County who are responsible for emergency field operations. The Operator is responsible for ensuring that at least one of these emergency contacts can be on the site of any emergency within 15 minutes.
  - b. Protocols for notification of emergency response services and the County, including contact names and numbers for each such agency, for use in reporting any incident causing or threatening to cause personal injury or property damage. Emergency response must be notified immediately upon the imminent threat or occurrence of such incidents; the County must be notified as quickly thereafter as practicable and in no instance more than 24 hours later.
  - c. An 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 30 days of the ready-for-service date.
  - d. Transportation routes to and from oil and gas facilities for emergency response and management purposes, including at least 2 evacuation routes and health care facilities that would be used.
  - e. Detailed information addressing each potential emergency that may be associated with the operation. This may include any or all of the following: well integrity issues; explosions; fires; gas, oil or water pipeline leaks or ruptures; hydrogen sulfide or other toxic or explosive gas emissions; and

hazardous material vehicle accidents or spills. This may also include external hazards to the site such as earthquakes, lightning, floods, high winds, tornadoes, terrorism, vandalism, or wildfire.

- f. The threshold or triggers constituting an emergency must be identified.
  - g. 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, and in no case more than 4 hours after such spill is discovered, in addition to all necessary reporting to state agencies.
  - h. Project-specific emergency preparedness plans are required for any project that involves drilling or penetrating through known zones of hydrogen sulfide gas.
  - i. The plan must include a provision that obligates the Operator to reimburse the appropriate emergency response service providers for costs incurred in connection with any emergency. The appropriate emergency response service provider may specify alternative methods for reimbursement of its services. If requested by the emergency response agency, Operator will include a provision in the plan that addresses regular training exercises.
  - j. Detailed information on safety management showing that the Operator has adequate personnel, ongoing safety training of all on-site personnel, safety supplies, and funding to implement the emergency response plan immediately at all times during construction and operations.
  - k. As applicable, the plan must include provisions that obligate the Operator 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, including fracking fluids. Operators must timely provide SDS to the public in response to a written request. 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.
  - l. The plan must include a provision establishing a process by which the Operator periodically engages with the surrounding residents and landowners to educate them on the risks of the onsite operations, explain emergency procedures, engage in evacuation exercises, and to establish a process for surrounding neighbors to communicate with the Operator.
  - m. The plan must include a process by which the community can submit concerns and complaints and be assured of responses.
10. Noise Plan.
- a. Monitoring Plan. An independent expert's plan for the creation of the Baseline Report and noise modeling, including the proposed receptor locations, proposed test periods, and proposed times of year for monitoring and the software and methodology for modeling. This plan must be approved by the County prior to the creation of a Baseline Report or Noise Modeling. This plan must demonstrate that the Baseline Reports and Noise Modeling will comply with the American National Standards Institute S 1.4: Specifications for Sound Level Meters.
  - b. Baseline Report. Report of dBA and dBC ambient noise levels over 24-hour test periods for at least 3 consecutive weekdays and 3 consecutive weekend periods at the site ~~at different and~~ in different weather conditions, according to the Monitoring Plan. Baseline Reports must include wind speed, direction, rainfall data, season conducted, and any other relevant conditions.
  - c. Noise Modeling. Using an industry-recognized noise modeling software, modeling of expected dBA and dBC noise levels from the proposed oil and gas facilities and operations during all phases of development and operation, assuming use of and identifying all noise-mitigating equipment and measures intended for use at the proposed oil and gas facilities or operations. All Noise Modeling

must include a list of all noise sources, reference noise data used in the model for each source, noise attenuation specifications for any proposed noise walls, a scaled map showing predicted noise levels.

- d. Complaint procedure. A plan for responding to noise complaints and communicating the results to the complainant and to the County in a timely manner.

**Commented [CJM20]:** "verified" noise complaints

11. Odor Plan. A list of all odor reduction measures that will be used to address the predicted odors from the proposed oil and gas facilities and operations and meet the standards in 12-1000(P). Identification of all natural features (e.g., topography, prevailing wind patterns, vegetation) that will aggravate or mitigate odor impacts on the areas within 2000 feet of the parcel(s) where the oil and gas facilities are proposed to be located. A plan for timely responding to odor complaints and communicating the results to the complainant and to the County.

**Commented [CJM21]:** Does this mean all possible odors? Without restriction?

12. Cultural and Historical Resources Survey. A cultural, historical, and archeological survey of the parcel(s) where the oil and gas facilities or operations are proposed to be located done in consultation with and as required by History Colorado.

13. Flood Protection and Mitigation Plan. If the proposed oil and gas facilities or operations are within a floodplain, an independent engineer's plan that describes how flood protection measures and flood response actions, such as remote shut-in procedures and, anchoring will be implemented.

14. Waste.

- a. Projected waste. An independent expert's assessment projecting the types and amounts of waste (including construction waste, drilling mud, fracking fluids, exploration and production waste) that will be generated by the oil and gas facilities or operations throughout their lifetimes. The assessment will include description of any sources of technically enhanced naturally occurring radioactive material used in or generated by the oil and gas operations and facilities.
- b. Waste Management Plan. Plan for disposal of all waste generated by the oil and gas facilities or operations, including use of truck or pipeline transport with details of anticipated truck trips (routes, number of trips, timing of trips). The plan will identify whether waste materials will be stored on site and, if so, how such storage will avoid adverse impacts to the oil and gas facility parcel(s), surrounding lands, water and natural resources, air quality, and public health, safety, and welfare. The plan must specify whether on-site storage of drilling mud is contemplated and, if so, how the Applicant will eliminate odors leaving the site.

15. Existing Mines Risk Study. An independent engineer's study and assessment of the degree and type of risks posed by interaction of the proposed oil and gas facilities or operations with existing or former mining operations, such as subsurface features resulting from other mineral mining activities within one mile of the proposed oil and gas facilities and within one mile of either side of the full length of each proposed wellbore.

## 12-1000 Special Review Standards

All Special Review Applications for new oil and gas development will be reviewed according to the following standards to ensure the protection of public health, safety, and welfare, the environment, and wildlife resources.

The Board will determine whether the proposed oil and gas facility or operation, individually and in light of the cumulative impacts of surrounding land uses, complies with these Special Review standards. A proposal meets the standards if it will, with respect to each subject area below, either avoid adverse impacts to public health, safety, and welfare, the environment and wildlife resources or, through imposition of conditions of approval, sufficiently minimize, and mitigate unavoidable impacts. In no case will the Board approve oil and gas facilities or operations with impacts that will endanger public health, safety, and welfare, the environment or wildlife.

**Commented [CJM22]:** Again, we will remind the county that Colorado law prohibits the imposition of arbitrary and capricious land use decisions. We would further remind the county that mineral rights are, under both Colorado and federal law, considered as property rights.



The Board, considering the advice of the Director, has determined the following standards to be generally applicable based on the nature and extent of oil and gas development. The Applicant bears the burden of proving that the proposed oil and gas facilities and oil and gas operations will meet the standards. When two or more of the standards listed below conflict, the Board, based upon advice of the Director, will 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 to reach a decision.

~~The Board will determine whether the proposed oil and gas facility or operation, individually and in light of the cumulative impacts of surrounding land uses, complies with these Special Review standards. The Applicant bears the burden of proving that the proposed oil and gas facilities and oil and gas operations will meet the standards. A proposal meets the standards if it will, with respect to each subject area below, either avoid adverse impacts to public health, safety, and welfare, the environment and wildlife resources or, through imposition of conditions of approval, sufficiently minimize, and mitigate unavoidable impacts. In no case will the Board approve oil and gas facilities or operations with impacts that will endanger public health, safety, and welfare, the environment or wildlife.~~

- A. Air Quality. Oil and gas facilities and operations will sufficiently avoid, minimize, and mitigate impacts to air quality.
  - 1. Compliance with National Ambient Air Quality Standards. Oil and gas facilities and operations will not compromise the attainment of ozone standards for the Denver Metro/North Front Range ozone nonattainment area as established by the US Environmental Protection Agency. Oil and gas facilities and operations will not contribute particulate matter to the air in a manner that endangers public health.
  - 2. Methane. Oil and gas facilities and operations will sufficiently avoid, minimize, and mitigate emissions or release of methane.
- B. Water Use. Use of the proposed water from the proposed supply will not injure water users, groundwater users, water delivery systems, agricultural lands and operations, recreation water body health, terrestrial and aquatic wildlife, and viability, plant communities, wetlands, and wildlife.
- C. Agricultural Land. Oil and gas facilities and operations will sufficiently avoid, minimize, and mitigate loss of and adverse impacts to: agricultural land, including farm or ranch lands and soils; agricultural operations, including crop and livestock production; irrigation systems and schedules; and improvements including fencing.
- D. Cultural and Historic Resources. Oil and gas facilities and operations will sufficiently avoid, minimize, and mitigate impacts to or loss of cultural or historic or archaeological resources, resources eligible for County landmarking, or sites included in the National Historic Register.
- E. Emergency Prevention and Response. Oil and gas facilities and operations will sufficiently avoid, minimize, and mitigate risks of and appropriately prepare for emergency situations such as explosions, fires, gas, oil or water pipeline leaks or ruptures, hydrogen sulfide or other toxic gas or fluid emissions, and hazardous material vehicle accidents or spills. Oil and gas operations will 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. Financial Fitness and Assurance. Oil and gas operations must not present a significant risk that public funds will be expended to protect the public, health, safety, and welfare in light of the financial viability of the Applicant. Applicants must demonstrate sufficient financial stability to operate the proposed oil and gas operations for the lifetime of the oil and gas operations. Applicants must provide forms of financial assurance sufficient to guarantee performance of all conditions of approval and obligations through the lifetime of the proposed oil and gas operations.

**Commented [CJM23]:** What constitutes "sufficiently"

**Commented [CJM24]:** How will the city determine if operators "compromise" the attainment? This is arbitrary with no accompanying standards. Further, how will the town determine if particulate matter will "endanger public health"

**Commented [CJM25]:** Public funds are not at risk since operators must post bonding with the state and as we are sure the county is aware, they are not responsible for any cleanup of abandon wells.

- G. Floodplains and Floodways. Above-ground oil and gas facilities are prohibited in floodways. Above-ground oil and gas facilities must be located outside a floodplain unless there is no way to avoid the floodplain, no other sites can be reasonably used, or if reasonably necessary to avoid significant adverse impacts to public health, safety, welfare or the environment. Oil and gas facilities and operations will sufficiently avoid, minimize, and mitigate flood risks.
- H. Drainage. The oil and gas facilities and operations will not alter historic drainage patterns and/or flow rates or shall include acceptable mitigation measures to compensate for anticipated drainage impacts. The best available information should be used to evaluate these impacts, including the Boulder County Storm Drainage Criteria Manual, hydrologic evaluations to determine peak flows, floodplain mapping studies, updated topographic data, Colorado Geologic Survey landslide, earth/debris flow data, and creek planning studies, as applicable.
- I. Dust. The oil and gas facilities and operations must use all practical measures or operating procedures necessary to minimize dust. Sources must prevent dust from leaving their property. No produced water or other process fluids shall be used for dust suppression.
- J. Geologic and Natural Hazards. Oil and gas facilities and operations will not be located in geologic or natural hazard areas as identified in the Boulder County Comprehensive Plan or through the Special Review process, unless there is no way to avoid the hazard area, no other sites can be reasonably used, or if reasonably necessary to avoid significant adverse impacts to public health, safety, welfare or the environment.
- K. Land Disturbance. The installation and operation of any oil and gas facilities must sufficiently avoid, minimize, and mitigate adverse impacts to the surface lands under and immediately surrounding all oil and gas operations and facilities. Considerations in applying this standard include, but are not limited to, alteration of the natural topography and existing vegetation, the scope of the proposed oil and gas facilities or operations, the amount of cut and fill, and run-off and erosion potential, and soil stability.
- L. Lighting. Lighting associated with oil and gas facilities or operations will sufficiently avoid, minimize, and mitigate adverse impacts on surrounding properties, livestock, and wildlife.
- M. Water Bodies; Riparian Areas; Wetlands. Oil and gas facilities or operations will sufficiently avoid, minimize, and mitigate adverse impacts to all surface water bodies including, but not limited to, irrigation ditches and reservoirs as identified and mapped on Boulder County's Ditch and Reservoir Directory and the St. Vrain and Left Hand Water Conservation District Ditch and Reservoir Directory, wetlands or aquatic habitat, riparian areas, and riparian corridors.
- N. Natural Resources. Oil and gas facilities and operations will sufficiently avoid, minimize, and mitigate adverse impacts to significant natural ecosystems or environmental features, significant natural communities, rare plant areas, high biodiversity areas, natural landmarks, and natural areas, as identified in the Boulder County Comprehensive Plan, other sources, or through the Special Review process.
- O. Noise.
1. No oil and gas operation will create any noise which causes that unreasonably exceeds the existing ambient noise level when measured at the locations approved in the Monitoring Plan where the levels. Specific noise limitations will be assessed and imposed for each proposed oil and gas facility or operation

**Commented [CJM26]:** This could be construed as not allowing any surface operators to commence, which would constitute a ban.

**Commented [CJM27]:** How will sufficiently be determined

is located to:

- a. ~~Exceed the ambient noise level by more than four dBA during daytime hours and more than three dBA during nighttime hours for general operations; and~~
  - b. ~~Exceed the ambient dBA noise level by more than three decibels during flowback operations if necessary during nighttime hours.~~
2. In no instance may an oil and gas operation produce dBA noise exceeding ~~[ ] dBA from 7 a.m. to 7 p.m. and [ ] dBA from 7 p.m. to 7 a.m. limits set by the Colorado Oil and Gas Conservation Commission.~~
  3. In no instance may an oil and gas operation produce noise exceeding 60 dBC.
- P. Odor. No odor from the proposed oil and gas facility or oil and gas operations shall be detectable after dilution with 5 or more volumes of odor free air as measured at the property line of the oil and gas location.
- Q. Electrification. Operations will be electrified to the highest degree possible. Renewable energy is preferred.
- R. Pipelines. All flowlines and fresh, produced, or wastewater pipelines will be routed and constructed to sufficiently avoid, minimize, and mitigate adverse impacts to infrastructure and natural resources and to public health, safety, and welfare, the environment, and wildlife without compromising pipeline integrity and safety; any such lines constructed in County-owned right-of-way will also follow the procedures for and requirements of a utility construction permit from the Public Works Department. Pipelines crossing streams, ditches, or other water bodies must be bored underneath the water body, consistent with the Boulder County Stormwater Discharge Control Manual.
- S. Recreational Activity; Trails; Bikeways. Oil and gas facilities and operations must avoid adverse impacts to the quality and quantity of both active and passive recreational activities, trails, and bikeways.
- T. Revegetation and Reclamation. The Operator must fully revegetate and reclaim all areas of disturbance. Vegetation must be fully established to its pre-existing conditions pursuant to approved revegetation and reclamation plans.
- U. Safety. Oil and gas operations must be conducted in a manner to avoid risk of personal injury and property damage.
- V. Setback from Dwellings, Educational Facilities and Child Care Centers.
1. A Well Pad at an oil and gas facility must be located a minimum of 2,000 feet from an existing Dwelling and related residential uses.
  2. A Well Pad at an oil and gas facility must be located a minimum of 2,000 feet from an Educational Facility or licensed Child Care Center;
- W. Scenic Attributes and Rural Character. Oil and gas facilities and operations will sufficiently avoid, minimize, and mitigate adverse impacts to the scenic attributes and rural character of the surrounding area. Temporary structures, such as sound walls, or buildings constructed to mitigate impacts of oil and gas development may be approved at heights greater than the maximum building heights for each zoning district.
- X. Soil. Oil and gas facilities and operations will sufficiently avoid, minimize, and mitigate adverse impacts to baseline soil conditions.
- Y. Surrounding Land Uses. Oil and gas facilities and operations must be sited in a manner that sufficiently avoids, minimizes, and mitigates adverse impacts to surrounding land uses. In applying this standard, separation from surrounding land uses will be considered the most effective measure to ensure compatibility between proposed oil and gas operations and existing land uses.
- Z. Transportation, Roads, and Access. Oil and gas facilities and operations must be designed and implemented to: support a multimodal transportation system; avoid adverse impacts to the County transportation system; avoid traffic hazards; minimize use of County-owned gravel roads; and ensure public safety and maintain quality of life.

**Commented [CJM28]:** As the county is aware, 2000 feet is likely a ban on operations in the county.

- AA. Vibration. Oil and gas facilities and operations must not create vibrations significant enough or long enough in duration to cause adverse impacts to the health, safety, welfare, environment, and wildlife, or quality of life of surrounding residents and occupants or damage to existing structures.
- BB. Waste. All waste generated by oil and gas facilities and operations will be stored, transported and disposed of in a manner that avoids adverse impacts to public health, safety, and welfare, the environment, and wildlife. Injection wells and disposal wells are prohibited.
- CC. Water Quality. Oil and gas facilities and operations must sufficiently avoid, minimize, and mitigate adverse impacts to the availability and quality of surface water bodies and groundwater within Boulder County. -
- DD. Worker Training. All workers at oil and gas facilities and involved with oil and gas operations shall have any applicable nationally recognized certifications and training for the work they are performing. This includes, but is not limited to, Hazard Communications Training, Hazardous Waste Operations Certifications, heavy equipment operator training, occupational safety and health training, etc.
- ~~DD~~EE. Stormwater Quality Control. All stormwater runoff occurring at an oil and gas facility must be controlled to prevent adverse impacts to surrounding natural resources, including wetlands and water bodies.
- ~~EE~~FF. Wildlife. Oil and gas facilities and operations will sufficiently avoid, minimize, and mitigate adverse impacts to wildlife, wildlife habitat and migration corridors as defined in the Boulder County Comprehensive Plan or identified on the site.

## 12-1100 Conditions of Approval

After Special Review, the Board will deny the Application if the proposed oil and gas facilities or operations cannot be conducted in a manner that protects public health, safety, and welfare, the environment and wildlife. If the Application can be approved, it will be subject to conditions that ensure compliance with the standards listed in Section 12-1000 and protection of public health, safety, and welfare, the environment and wildlife. Conditions may include but are not limited to the following: A. Location.

1. Adjustments to the locations of any or all proposed oil and gas facilities or operations, which may include but not be limited to consolidating, distributing, or re-locating facilities;
2. Sharing of existing infrastructure by multiple oil and gas operations, minimizing the installation of new facilities and avoiding additional disturbance to the environment, landowners and natural resources; or
3. Modification of proposed travel routes for some or all phases of the oil and gas operation. B. Scope.

Adjustments to the size and density of facilities that may include but not be limited to:

1. Reductions or limitations on the number of total wells;
  2. Reductions or limitations on the number of wells per pad; or
  3. Changes to the dimensions of the proposed facilities. C. Timing and Phasing.
1. Separating the overall project into phases over a period of time;
  2. Establishing the timeline for commencement and duration of all or some phases of oil and gas operations;
  3. Establishing the times in which all or some phases of oil and gas operations are conducted with respect to weather, agricultural activities, wildlife needs and other seasonal concerns; or
  4. Limitations on times of day and night in which operations are conducted. D. Air Quality.

To protect air quality and public health, emissions control measures may be required, including, but not limited to, one or more of the following:

1. Compliance with the current, most protective air quality regulations and health-based standards, which may include regulations and standards set by the EPA, CDPHE, COGCC, CDC or other relevant authorities.

**Commented [CJM29]:** Again, we will remind the county that Colorado law prohibits the imposition of arbitrary and capricious land use decisions. We would further remind the county that mineral rights are, under both Colorado and federal law, considered as property rights.

2. Continuous monitoring during all phases from pre-production through the end of production, which may monitor air quality at the oil and gas facilities, nearby properties, and other areas of concern.
3. A leak detection and repair program that may include:
  - a. Use of best available technology leak detection, such as infra-red cameras and hydrocarbon analyzers;
  - b. Regular on-site inspections at a frequency determined by the Director;
  - c. Immediate leak repair;
  - d. Reporting of monitoring and inspection results to the Director, who may make such reports available to the public;
  - e. Operator maintenance of all images and data obtained from leak detection devices for 10 years, to be made available to the Director upon request; and
  - f. Immediate reporting of all leaks detected to the Director;
4. Completion of wells using reduced emission completion practices.
5. Require closed loop pitless systems for containment and/or recycling of all drilling, completion, flowback and produced fluids.
6. Routine flaring is prohibited. In the event of an emergency, Operators may be required to shut-in the well if the emergency lasts greater than 24 hours; routine maintenance does not constitute an emergency.
  - a. Routine flaring is the flaring of natural gas during the normal course of oil and gas production for reasons other than safety and emergencies and other conditions outside of the control of the operator.
  - b. For any permitted flaring, manufacture test or other data demonstrating hydrocarbon destruction or control efficiency that complies with a design destruction efficiency of 98% or better. 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. Electronic surveillance monitors to detect when pilot lights on control devices are extinguished
7. Venting is prohibited during all phases unless approved by the Director or required in situations where there is an immediate threat to public health, safety, and welfare, the environment, and wildlife.
8. Require all pneumatics to be non-emitting pneumatic controllers.
9. Zero-emission desiccant dehydrators or 98% control of hydrocarbon emissions from glycol dehydrators.
10. Operator participation in Natural Gas STAR or other voluntary programs to encourage innovation in pollution control.
11. Emission reduction measures in immediate response to posting of air quality action day advisories by CDPHE for the County area, including minimizing vehicle and engine idling, reducing truck and employee traffic, delaying vehicle refueling, suspending or delaying use of gas-powered ancillary equipment, postponing well maintenance and storage tank hydrocarbon liquid loadout, postponing construction and maintenance activities.
12. Consolidation and centralization of product treatment and storage equipment and compression equipment.
13. Use of a pressure-suitable separator and vapor recovery unit.
14. Hydrocarbon control of 98% or better for crude oil, condensate, and produced water tanks.
15. Require dry seals on centrifugal compressors.

**Commented [CJM30]:** Immediate should be changed to as soon as practicable based on safety considerations, pending verification, etc.

16. Routing of emissions from rod-packing and other components on reciprocating compressors to vapor collection systems.
17. Control emissions by 98% during storage tank hydrocarbon liquids loadout (i.e. loading out liquids from storage tanks to trucks).
18. Prohibit manual venting during well liquids unloading activities, use best management practices during liquids unloading activities, including the installation of artificial lift, and automated plunger lifts or other forms of artificial lift (98% or better hydrocarbon flare only).
19. Reduction or elimination of emissions from flowline maintenance activities such as pigging, including routing emissions to a vapor collection system. E. Operations.
  1. Requirement for use of pipelines to transport all gas and fluid materials, including oil, natural gas, fresh water, produced water, and waste products, to and from the oil and gas facilities.
  2. Delay of well completions until pipeline transport is in place for all hydrocarbon products and produced or wastewater.
  3. Limitations on on-site storage tanks.
  4. Restrictions on field maintenance of vehicles involving hazardous materials
  5. Requirement that vehicles are only refueled on impervious surfaces and never during storm events.

#### F. Inspections.

1. Operators will inspect all oil and gas facilities, including shut-in and temporarily abandoned facilities, as follows:
  - a. Soil sampling for contamination within the boundaries of existing facility pads annually;
  - b. Equipment-assisted inspection for emissions or releases, including use of best available technology (such as infrared cameras), at least every 30 days; and
  - c. Visual inspections for liquid leaks at least every 30 days.
2. Operators will report the date, methodology, subject, and results of all inspections to the County monthly.
3. Spills, leaks, and releases of any substance other than fresh water, including spills of produced water, oil, condensate, natural gas liquids, all spills outside of secondary containment, gas leaks, and E & P waste, must be reported to the County Local Governmental Designee immediately upon discovery and no later than 6 hours thereafter. When leaks, spills, or releases are discovered, by County or Operator inspection, the enforcement mechanisms and penalty provisions in 12-1400 and 12-1500 will apply.
4. Reporting. For spills or other releases meeting the Colorado reporting requirements pursuant to Section 25-8-601 (2), C.R.S., operators will adhere to all Colorado reporting requirements. If the County determines the spill or leak is reportable to any agency, the County may make such report.
5. Clean-up. Any leak, release, or spill will be cleaned up according to applicable state and federal laws.
6. Root Cause Analysis. A root cause analysis of any spill, leak, or release of any substance other than fresh water that resulted in serious bodily injury or fatality, serious environmental harm, was a Grade 1 gas leak as defined by the COGCC, or is otherwise requested by the Director must be submitted to the County within 30 days of the leak, spill, or release. F.G. Water Supply.
  1. Conditions necessary to avoid, minimize, and mitigate the impacts of the proposed water use, including recycling; and
  2. Any necessary water agreements must be secured prior to any oil and gas operations commencing.

G.H. Waste. Compliance with the County-approved waste management plan, including routine testing of all applicable waste for technically enhanced naturally occurring radioactive material.

H.I. Water Quality and Stormwater Quality Control. On-going water quality monitoring and use of protective measures such as those listed in this section:

**Commented [CJM31]:** Is this limited to ones they own?

1. Follow-up and on-going testing of all water sources and water wells within one mile of the parcel or parcels on which the oil and gas facilities are proposed to be located and within one-half mile of either side of the full length of each proposed wellbore. Sampling requirements may include:
  - a. Testing for the analytes listed in Table 1.
  - b. Post-completions and periodic on-going monitoring samples collected from one up-gradient and one down-gradient source and tested pursuant to the following time frame:
    - i. One sample within 6 months after completion;
    - ii. One sample between 12 and 18 months after completion; and
    - iii. One sample between 60 and 72 months after completion.
    - iv. For multi-well pads, collection will occur annually during active drilling and completion and on the subsequent dates listed in this section.
  - c. If the Operator is unable to locate and obtain permission from the surface owner of a water source to be tested, the Operator must advise the Director that the Applicant could not obtain access to the water source from the surface owner.
  - d. In any case, the Director may require the Applicant to drill a water monitoring well on the Well Pad to ensure that groundwater samples are collected from the aquifer(s) through which the well will penetrate.
  - e. All sampling shall be performed by the Applicant according to the specified methods in 40 C.F.R. Part 136, including sample containers, preservation methods, and holding time limits.
  - f. The location of each tested water source will be noted using a GPS with sub-meter resolution.
  - g. Reporting on damaged or unsanitary water well conditions, adjacent potential pollution sources, odor, water color, sediment, bubbles, and effervescence.
  - h. The Operator will submit a monitoring report to the Director with the Application, including reporting on damaged or unsanitary water well conditions; existing, adjacent potential pollution sources; water odor; water color; presence of sediment; bubbles and effervescence; and the existence and amount of any Table 1 analytes found. Copies of the report will be provided to the COGCC and the water source owners within 10 days after the Operator's receipt of the report.
  - i. If sampling shows water contamination, additional measures may be required including the following:
    1. If free gas or a dissolved methane concentration level greater than one milligram per liter (mg/l) is detected in a water source, determination of the gas type using gas compositional analysis and stable isotope analysis of the methane (carbon and hydrogen);
    2. If the test results indicate thermogenic or a mixture of thermogenic and biogenic gas, an action plan to determine the source of the gas;
    3. Immediate notification to the Director, the COGCC, Boulder County Public Health, and the owner of the water source if the methane concentration increases by more than 5 mg/l between sampling periods, or increases to more than 10 mg/l;
    4. Immediate notification to the Director, the COGCC, Boulder County Public Health, and the owner of the water source if BTEX and/or TPH are detected as a result of testing. Such detections may result in required subsequent sampling for additional analytes; or
    5. Further water source sampling in response to complaints from water source owners.
  - j. Timely production and distribution of test results, well location, and analytical data in electronic deliverable format to the Director, the COGCC, Boulder County Public Health, and the water source owners.
2. The County may limit or prohibit toxic (when inhaled or ingested) chemicals in hydraulic fracturing fluids.

**Commented [CJM32]:** Under what circumstances would this be required? We assume the county is aware that operators cannot drill into private water aquifers and take water they are not legally able to take?

**Commented [CJM33]:** The county may not regulate subsurface activities, as is the case with Hydraulic Fracturing. (as noted in the recent Longmont decision).

Further, it should specify any chemicals that are "added" and not naturally occurring.

3. No produced water or other wastewater may be sprayed or otherwise dispersed on any lands or waters within the County.
4. Compliance with the Boulder County Illicit Stormwater Discharge Ordinance, and all water quality or stormwater quality permits from the County and other agencies.
5. Confirmation from CDPHE that the oil and gas facilities and operations are covered under the Colorado Discharge Permit System (CDPS) general permit for Stormwater Discharges Associated with Construction Activities (state stormwater discharge permit), when applicable.
6. Flowback and produced water reporting including:
  - a. A complete characterization of the Operator's flowback and produced water streams, including chemical analyses, radioactivity analyses, total dissolved solid concentrations and rate of flowback and production fluid at each well;
  - b. Amount of flowback and production fluid generated by each well that is recycled or reused for oil and gas operations; and
  - c. An accounting of all flowback and produced water from the well to final disposal, including all temporary holding facilities.

Table 1. Water Quality Analytes

General Water Quality	Alkalinity Conductivity & TDS pH Dissolved Organic Carbon (or Total Organic Carbon) Bacteria Hydrogen Sulphide
Major Ions	Bromide Chloride Fluoride Magnesium Potassium Sodium Sulfate Nitrate + Nitrite as N (total)
Metals	Arsenic Barium Boron Chromium Copper Iron Lead Manganese Selenium Strontium
Dissolved Gases and Volatile Organic Compounds	Methane BTEX as Benzene, Toluene, Ethylbenzene, Xylenes Total Petroleum Hydrocarbons (TPH)



Other	Water Level Stable isotopes of water (Oxygen, Hydrogen, Carbon) Phosphorus Tracing materials associated with Operator's fracking fluid as identified in the Water Quality Plan pursuant to 12- 900(D)(8)
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#### H.J. Contamination Prevention.

1. For each existing abandoned oil and gas facilities identified under 12-900(B)(5), prior to any hydraulic fracturing, and at periods following hydraulic fracturing, the Operator must perform assessment and monitoring that may include:
  - a. Risk assessment of leaking gas or water into the ground surface or subsurface water resources;
  - b. Soil gas surveys from various depths and at various distances depending on results of risk assessment;
  - c. Same surveys 90 days after completion and every year after production has commenced if initial survey results suggest increased risk;
  - d. follow-up soil gas survey and leak tests may be required every 3 years after production has commenced; and
  - e. Periodic or specific bradenhead testing. J.K. Spills, Leaks, and Releases.
1. Containment. Secondary or Tertiary containment for oil and gas facilities and operations may be required.
2. Reporting. Spills, leaks, and releases of any substance other than fresh water, including spills of produced water, oil, condensate, natural gas liquids, all spills, gas leaks, and E & P waste, must be reported to emergency response as required and to the County immediately upon discovery and no later than 6 hours thereafter. If the County determines the spill or leak is reportable to any agency when the Operator disagrees, the County may make such report.
3. Clean-up. Any leak, release, or spill will be cleaned up according to applicable state and federal laws, including Colorado Water Quality Control Commission regulations, the Oil and Pollution Act and the Clean Water Act.
4. Root Cause Analysis. Submission to the County of a root cause analysis of any spill, leak, or release of any substance other than fresh water that resulted in serious bodily injury or fatality, serious environmental harm, was a Grade 1 gas leak as defined by the COGCCC, or is otherwise requested by the Director within 30 days of the leak, spill, or release.

K.L. Revegetation and Reclamation. Specific revegetation and reclamation requirements for all areas disturbed by any oil and gas facilities or operations, including pipelines, in accordance with the Revegetation and Reclamation Plan approved by the County. L.M. Site Management.

1. Trash. Prohibition on burning of trash in association with an oil and gas operation per Section 25-7128(5), C.R.S.
2. Removal of Non-permanent Equipment. Time limits for non-permanent equipment remaining on site.
3. Access Roads. Conditions to prevent run-off, erosion and other negative impacts to access roads and abutting lands.
4. On-site Inspector. Inspection, at Operator's expense, to monitor adherence to all provisions of this Article and conditions of permits and approvals.

M.N. Weed Control. Oil and gas facilities must be kept free of weeds and must comply with the approved Weed Control Plan.

N.O. Drought-Tolerant Landscaping. All landscaping for screening and, reclamation, or other purposes will include drought tolerant species that are native and suitable for the climate and soil conditions of the area.

Q.P. Soils. Post-completion analysis and on-going monitoring for soil contamination. Pre-reclamation analysis of soil profiles.

P.Q. Compliance with Emergency Response Plan. Following Special Review, adherence to a County approved Emergency Response Plan is an on-going condition of approval.

Q.R. Site Security. Oil and gas facilities must be kept secure from trespassers and risk of vandalism.

R.S. Remote monitoring and control. Use of Supervisory Control and Data Acquisition or other remote monitoring of wells, including remote telemetry units, onsite control valves, onsite data acquisition devices, radio network/modems, and the ability to trigger an automatic shut-down of a facility.

S.T. Seismicity. Operator shall conduct continuous seismic monitoring during fracking operations.

1. Seismic events greater than 2.0 on Richter scale shall be reported to LGD and to COGCC.
2. If a seismic event occurs, the County may require cessation of operations immediately and Operator can only resume work once the County is satisfied with the actions taken to reduce the likelihood of further seismicity.
3. Operations shall be immediately suspended for any seismic event measuring 4.0 or above on the Richter scale. Operator may only resume work once the County is satisfied with the actions taken to reduce the likelihood of further seismicity. T.U. Noise.
  1. Compliance with Section 12-1000(O) is required at all oil and gas operations and oil and gas facilities. [Based on results of ambient noise testing and other site-specific conditions, noise limits and necessary conditions will be assessed on a case-by-case basis.](#)
  2. Continuous noise monitoring of any oil and gas facilities and operations meeting the most recent version of the American National Standard Institute's Specification for Sound Level Meters.
  3. Use of sound walls and other physical barriers to prevent noise leaving the site.
  4. Electrification from the power grid or from renewable sources.
  5. Use of quiet drilling and completion equipment, such as the Quiet Fleet design provided by Liberty Oilfield Services.
  6. For well pads that are not electrically operated, use of quiet design mufflers (also referred to as hospital grade or dual dissipative) or equivalent.
  7. Use of electric drill rigs.
  8. Tier 4 or better diesel engines, diesel and natural gas co-fired Tier 2 or Tier 3 engines, natural gas fired spark ignition engines, or electric line power for hydraulic fracturing pumps.
  9. The use of liquefied natural gas dual fuel hydraulic fracturing pumps.
  10. Use of acoustically insulated housing or covers to enclose motors or engines.
11. No pipe unloading or workover operations will occur between 7 p.m and the following 7 a.m. U.V. Odor.
  1. Compliance with Section 12-1000(P); on-going monitoring for compliance.
  2. Odor reduction requirements may include:
    - a. Using minimum low odor Category IV or better drilling fluid. This could include non-diesel based drilling muds including drilling muds that are low odor and do not contain benzene, toluene, ethylbenzene or xylene (BTEX);
    - b. Adding odorants that are not a masking agent;
    - c. Additional or enhanced measures during peak odor-producing phases or times such as increasing additive concentration;
    - d. Wipe down drill pipe each time drilling operation "trips" out;

- e. Adding chillers to the mud systems;
- f. Using filtration systems or additives to minimize odors from drilling and fracturing fluids except that the Applicant shall not mask odors;
- g. Enclosing shale shakers to contain fumes from exposed mud where safe and feasible;
- h. Removing drilling mud from drill pipe as it is removed from the well;
- i. Prohibition on exposed drilling mud; or
- j. Limitation or prohibition on use of diesel generators.

~~V-W.~~ Lighting. Limitations on the location and specifications on type of lighting.

~~W-X.~~ Visual Impacts. Conditions to reduce adverse visual impacts such as specifications on facility color, screening measures such as berming, visual barriers, and landscaping.

~~X-Y.~~ Dust. Limitations on or requirements for activities to control dust; storage requirements for sand, silica and similar materials to prevent fugitive particulates. Particulate control measures, including proof of compliance with State-required dust control measures and imposition of an opacity requirement as tested using EPA Method 9.

~~Y-Z.~~ Traffic. Conditions necessary to ensure public safety for all modes of travel, including but not limited to adjustment of travel routes during some or all phases of development.

~~Z-AA.~~ County Transportation Infrastructure.

1. Maintenance practices to protect transportation infrastructure, and compliance with the Boulder County Multimodal Transportation Standards
2. Required improvements to existing transportation system infrastructure to support the proposed oil and gas facilities or operations, as designed and performed by the County at Applicant's cost.
  - a. If Applicant disputes the County's statement of necessary transportation infrastructure improvements or the costs, thereof, Applicant may engage a licensed civil engineer to perform an independent study and provide the results thereof to the County for its consideration, at Applicant's cost.
3. Standards and specifications for construction and maintenance of access roads required for the proposed oil and gas facilities or operations.
4. Measures to protect existing transportation infrastructure, such as weight restrictions, prevention of mud and sediment tracking and prohibition on the use of tire chains.

~~AA-BB.~~ Pipeline Conditions.

~~1.~~ Requirements for pipelines to be in place or imminently available prior to completion of any new well.

~~1-2.~~ Specific setbacks from features of concern.

~~2-3.~~ Conditions on depth of cover and clearance distances from subsurface features or improvements.

~~3-4.~~ Conditions for protection of trenches during construction.

~~4-5.~~ Construction conditions related to protection of streams, rivers, irrigation ditches and wetlands.

~~5-6.~~ As-built reporting, including the location (with GPS coordinates), materials and operating pressures of all flowlines and fresh, produced or wastewater pipelines and depicting the locations of other subsurface features or improvements crossed by such lines.

~~6-7.~~ Leak detection system.

~~7-8.~~ Inspection protocol, in addition to County inspections.

~~8-9.~~ A risk-based engineering study by an independent engineer retained by the Applicant and subject to approval by the County prior to placement and construction of proposed pipelines.

~~9-10.~~ Without compromising pipeline integrity and safety, Applicant may be required to share existing pipeline rights-of-way and consolidate new corridors for pipeline rights-of-way to minimize impact.

**Commented [CJM34]:** How will this process be approved by the county?

**Commented [CJM35]:** How will the county determine the distance? Will the county determine this during the pre-development phase?

~~BB-CC.~~ Flood Protection. Compliance with a County-approved flood mitigation plan; any additional conditions necessary to avoid, minimize, and mitigate risks of adverse impacts from oil and gas facilities or operations.

~~CC-DD.~~ Applications and Permits. The Applicant must obtain local, state and federal permits or approvals required for the operation and provide copies to the Director prior to any construction activities. In addition to Article 12 approval, Applicants may be required to obtain County permits including but not limited to Floodplain Development Permits, Grading Permits, Building or Construction Permits, Oversize/Overweight Permits, Stormwater Control Permits.

~~DD-EE.~~ Certification and Reporting. The Operator will submit to the Director copies of all reports related to oil and gas operations and oil and gas facilities made to any agency at the local, state or federal level within 30 days of their submission to the original recipient.

~~EE-FF.~~ Financial Assurances.

1. Financial assurances such as performance bonds, irrevocable letters of credit, irrevocable trusts, or other financial guarantees in a form satisfactory to the County.
2. Additional assurances may be required if circumstances during the lifetime of the oil and gas operations require.
3. Copies of all financial assurance and insurance renewals promptly supplied to the Department.
4. Upon transfer, Financial Assurances will only be returned or cancelled once they are replaced by equivalent Financial Assurances secured by the new owner/Operator.

~~FF-GG.~~ Re-assessment of Conditions. All conditions of approval may specify that the County may re-assess their effectiveness in meeting the standards of this Article after commencement of oil and gas operations.

~~GG-HH.~~ Representations of Record. Any approved Special Review Application is subject to all commitments of record, including verbal representations made by the Applicant at any public hearing and written commitments in the Application file, and without limitation must encompass compliance with all approved mitigation plans.

**Commented [CJM36]:** The county is directly contradicting established precedent and Colorado statute. Permits are vested rights, and the county may not unilaterally change those conditions once a permit has been issued.

## 12-1200 Judicial Review

A final decision by the Board of County Commissioners on any matters in this Article 12 is subject to judicial review in a court of competent jurisdiction under C.R.C.P. 106(a)(4).

## 12-1300 Procedures Following Approval of a Special Review Application

- A. Right to Enter. Each approved Special Review will contain the following statement: "Applicant consents to allow the County the right of inspection of this approved oil and gas facility and operation provided the County contacts the Operator with 4 hours prior notice of such inspection."
- B. Effect of the Approved Special Review. After approval of a Special Review Application by the Board and subject to compliance with any applicable conditions of approval, the Department will issue a permit for the proposed oil and gas operation.
1. Following receipt of the permit, the Applicant must obtain any necessary building, grading, access, stormwater control, floodplain, or other County permits and, following the receipt of these additional permits and all necessary permits and permissions from other agencies or persons, is authorized to otherwise proceed with the proposed oil and gas operation.
  2. 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.

**Commented [CJM37]:** Operators should not be held liable if the county enters on to an applicant's property and violates safety standards or enters unaccompanied.

1. ~~Commencement of operations within 2 years.~~ An approved Special Review Application will remain effective for a period of 2 calendar years following the date of the Board's approval resolution. ~~If the approved operation is not commenced within 2 calendar years, the permit will expire, and the Applicant will have to reapply for Special Review prior to commencing operations, unless otherwise extended by the Director.~~
  2. Expiration of approval to operate after 10 years. Unless renewed in a subsequent Special Review approval, all Special Review approvals under this Article 12 will expire 10 years after their effective date and operations must cease and final reclamation commence.
- D. Amendments and Modifications. Prior to changing or modifying a special use approved under this Article or any other existing oil and gas operation, an Operator must submit a written request for modification as specified under Article 4-603. Upon submission of such a request, the Director will proceed as specified in Article 4603(A) to make a determination whether the modification is substantial, except that the Director will consider the additional criteria specified in this subsection. Unless approved in the original Special Review approval, the addition of new wells on an existing pad will be considered a substantial modification. Other changes will be considered substantial if they meet the criteria in 4-603(B) or significantly alter the nature, character, or extent of the land use impacts of the Special Review approval or will result in an increase in harmful emissions or adverse impacts on public health, safety, and welfare, the environment or wildlife, including as a result of cumulative impacts from the proposed modification in combination with existing land uses. Refracking of an existing well will be considered a substantial modification. A modification may not be considered a substantial modification if it results in a net decrease in hydrocarbon emissions or other net mitigation of existing or potential environmental impacts. Should the Applicant dispute the Director's determination that a proposed modification to a pre-existing oil and gas operation or facility is a substantial modification, the Applicant may appeal the Director's determination to the Board. The County will not process the Application during any appeal.
- E. Maintenance and Repair. If an Operator anticipates undertaking routine maintenance or making a repair to any existing or new oil and gas facility, the Operator must provide written notice to the Director as soon in advance of the maintenance or repair as practicable. For emergency repairs necessary to curtail or prevent threat of property damage or personal injury, if possible, the Operator must provide notice to the Director within 24 hours before commencement of the repair and otherwise as soon thereafter as possible. The notice must include a detailed description of the maintenance or repair. In response to the notice, the Director may approve the repair or maintenance, conditionally approve the repair or maintenance, or require that the Operator apply for a substantial modification determination. The Director may maintain a list of routine maintenance activities that an Operator may undertake without County review or approval.

## 12-1400 Inspections; Enforcement

To monitor compliance with permit conditions or if the County determines at any time that there is a violation of the provisions of this Article 12, including 12-400, 12-500, 12-600, 12-700, and 12-1100, the Director may commence one or more of the following enforcement measures and remedies:

- A. **Right to Enter.** Any oil and gas facility may be inspected by the County at any time to ensure compliance with the requirements of County permits or the provisions of this Article 12. Unless urgent circumstances exist, the County will use best efforts to ensure that 4 hours prior notice is given to the Operator's contact person at the telephone number on file. County inspections will be coordinated with the Operator to ensure Operator presence onsite to the extent possible and to ensure the site visit is conducted in accordance with all applicable Operator safety requirements.
- B. Records. Operators will make available to the County at its request all records or reports required by the Colorado Department of Public Health and Environment, the COGCC, the Colorado Public Utilities Commission, the Occupational Safety and Health Administration, and the Pipeline and Hazardous Materials Safety Administration.

**Commented [CJM38]:** See comment above for concerns about unaccompanied entrance by county inspectors

- C. Violations. Violations of any condition of approval, any provisions of 12-400, 12-500, 12-600, 12-700, will be subject to Section 12-1500.
- D. Suit to Enjoin COGCC Rule Violation. If the Director discovers a violation or threatened violation of Title 34, Article 60 of the Colorado Revised Statutes or any rule, regulation, or order made under that Article, the Director will notify the COGCC in writing. If the COGCC fails to bring suit to enjoin any actual or threatened violation, then the County Attorney may file an action on behalf of the Board seeking injunctive relief.
- E. Falsification. If the Director, in the course of administering any portion of this Article, learns that the Applicant, including any employee, officer, agent or representative of the Applicant has made a false representation of or omitted material facts the Application may be rejected or summarily denied or, if the Application has been approved, the approval may be revoked and the Director may report such information to the District Attorney for criminal prosecution.
- F. Other Penalties. In addition to or in lieu of civil fines, the County may exercise remedies for Operator violations including the following:
  - 1. Increased [operator or county](#) inspection frequency [at Operator's expense](#);
  - 2. Mandatory equipment upgrades;
  - 3. A requirement to conduct an audit of the systems or equipment involved in the violation(s);
  - 4. A requirement for increased reporting to the County;
  - 5. Written Order Suspending the Approval. As a result of either (i) emergency conditions, or (ii) three or more fines imposed for serious violations within 6 months, the Director may issue a written order to the Applicant (or the Applicant's owner, Operator, or agent) suspending the Special Review Approval. Upon receipt, the Applicant must cease all activities and operations immediately until the violation is remedied. [The Applicant may or](#) appeal the order suspending approval to the Board of County Commissioners [within 14 days](#).
- G. 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, required permits, or other County approvals. Nothing in this section shall limit the remedies available to the County for a violation of any provision of Article 12.

## 2-1500 Fines and Penalties

- A. Fines for Violations. An Operator who violates any condition of approval imposed for the oil and gas facility or operation or any provision of Section 12-400, 12-500, 12-600, or 12-700 will be subject to a civil penalty assessed by the Director.
- B. Process.
  - 1. Identification of Violation. If the Director has reasonable cause to believe that a violation has occurred, the Director will issue a Notice of Violation to the Operator. Each violation of an individual condition or Code provision will be considered a separate infraction. Each day that a violation remains will be considered a separate infraction.
    - a. Contents of Notice of Violation:
      - i. Provisions of this Article or conditions imposed on a permit that are violated;
      - ii. Short and plain statement of the facts alleged to constitute each violation;
      - iii. A statement that the Operator will be subject to fines as specified in this section; and
      - iv. A demand that the violation be remedied.
  - 2. Response. The Operator will have the time specified by the Director in the notice to respond to the Notice of Violation, unless an extension is requested in writing and granted by the Director. The Response

must address each violation, including the cause of the violation and any corrective actions taken, and identify any other relevant facts.

3. Assessment of Fine.

- a. Based on the Operator's response, if any is provided, and any other competent evidence, the Director will determine if a violation has occurred and, if so, the appropriate penalty to assess. Any fine imposed after consideration of the response will be measured with respect to the first date of discovery of the violation or the date the violation first occurred and continues until the violation has been remedied to the satisfaction of the Director.
- b. If the Operator disputes the Director's determination that a violation occurred or the amount of any fine assessed, an appeal as specified in Section 12-1500(D) must be made within ~~40~~14 days of the determination. Any requirement to remedy the violation will not be stayed during the appeal period.

C. Penalty Calculation. The Director has discretion to assess a civil penalty between \$300 and \$15,000 per violation per day, depending on the nature and severity of the violation, statutory authority, and Application~~application~~ of the additional factors listed in subsection (b) below.

1. To evaluate the severity of the violation, the Director will consider the following:

- a. Degree of threatened or actual impact to public health, safety, welfare, the environment or wildlife;
- b. Existence, size, and proximity of potentially impacted livestock, wildlife, fish, soil, crops, water, and all other environmental resources;
- c. Degree of threatened or actual damage to agricultural lands, public lands, private property, freshwater sources, public drinking water, natural resources, environmental features, or wildlife; d. The size of the leak, release, or spill;
- e. The violation resulted in a significant waste of oil and gas resources; f. Toxicity of leak or spill;
- g. Violation led to death or serious injury; and
- h. Duration of the violation.

2. In addition to considering the severity of the violation, the Director will consider the following:

- a. Whether the same or similar violations have occurred at the location;
- b. Whether other violations have occurred at the location in the previous 12 months;
- c. The timeliness and adequacy of the Operator's corrective actions;
- d. The degree the violation was outside of the violator's reasonable control and responsibility;
- e. Whether the violator acted with gross negligence, or knowing and willful misconduct;
- f. Whether the violator self-reported; and
- g. Whether violator was cooperative with all agencies involved in working to mitigate the impacts of the violation.

D. Appeal Hearing Before the Board of County Commissioners. If the Applicant files a written appeal with the Board of County Commissioners of the Director's determination within 10 days of receipt of the determination that a violation occurred or the imposition of any fine or penalty or a written order suspending special use approval, the Board will schedule a hearing on the appeal, of which the Applicant will receive reasonable prior notice. The Board, based on the evidence in the record, may reverse or confirm the Director's determination whether a violation occurred. In addition, based on the evidence in the record, the Board may reverse, confirm, or adjust any remedy or penalty imposed by the Director. The Board, in its discretion, may also give the Applicant additional time to correct the violation(s), or may specify other means of correcting the violation(s) at the Applicant's expense. The Board's determination is subject to judicial review as specified in Section 12-1200.

**Commented [CJM39]:** We would again note the county is limited in the amounts it may fine by Colorado Statue

## 12-1600 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 decommissioning of an oil and gas facility, including any single well or portion of pipeline.

**Act.** The Oil and Gas Conservation Act at Sections 34-60-101 et seq., C.R.S., as amended.

**Adequate Water Supply.** A water supply that will be sufficient for the proposed oil and gas operations, including consideration of reasonable conservation measures and water demand management measures.

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

**Applicant.** Person, corporation or other legal entity possessing the legal right to develop a mineral resource who has applied for a Special Review permit for an oil and gas operation.

**Application.** The Application filed by the Applicant for Special Review under current consideration.

**Best Management Practices.** Practices that are designed to prevent or reduce impacts caused by oil and gas facilities or 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.

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

**Closed Loop Drilling Process or System.** A system consisting of steel tanks for mud mixing and storage and the use of solids removal equipment by some combination of shale shakers, mud cleaners and centrifuges to separate drill cutting solids from the mud stream. The solids are placed in containment provided on the site. A Closed Loop Drilling System does not include use of a Conventional Reserve Drilling Pit.

**Combustion device.** Any ignition device installed horizontally or vertically, used in exploration and production operations to combust otherwise vented emissions from completions. Comprehensive Plan. The Boulder County Comprehensive Plan, available at <https://www.bouldercounty.org/property-and-land/land-use/planning/boulder-county-comprehensive-plan/>.

**Department.** Boulder County Community Planning & Permitting Department.

**Director.** The Director of the Boulder County Community Planning & Permitting Department.

**Dwelling.** See Article 18-137.

**Educational Facility.** See Article 4-504(E).

**Equipment.** Machinery or structures located on an oil and gas location, including, but not limited to, wellheads, separators, dehydration units, compressors, heaters, meters, storage tanks, compressors, pumping units, internal combustion engines, and electric motors.

**Flowline.** Those segments of pipe transferring oil, gas, or condensate between a wellhead and processing equipment to the load point or point of delivery to a U.S. Department of Transportation Pipeline and Hazardous Materials Safety Administration or Colorado Public Utilities Commission regulated gathering line, or a segment of pipe transferring produced water between a wellhead and the point of disposal, discharge, or loading. In this Article, flowline includes lines within a well pad and those that are outside a well pad, and includes flowlines connecting to gas compressors or gas plants.

**Geophysical Operation.** Operations that involve the transmittal of seismic waves into and through the ground to model the geophysical properties of the Earth's crust.

**Groundwater.** Subsurface waters in a zone of saturation.

**NO<sub>x</sub>.** Nitrogen oxides. Ozone precursor pollutants.

**Oil and Gas Facilities.** The equipment and improvements used for the exploration, production, transportation, treatment, and/or storage of oil and gas and waste products, including: 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; flowlines and ancillary equipment including but not limited to drip stations, vent stations, pigging facilities, chemical injection stations and valve boxes; and temporary storage and construction staging yards in place for less than 6 months.



Oil and Gas Operations. Exploring for oil and gas, including conducting seismic operations and the drilling of test bores; siting, drilling, deepening, recompleting, reworking, or abandoning a well; producing operations related to any well, including installing flowlines; the generating, transporting, storing, treating, or disposing exploration and production wastes; the construction, operation, maintenance and repair of any oil and gas facility; and any constructing, site preparing, or reclaiming activities associated with such operations. With respect to any submittal or review requirements under this section, "oil and gas operations" will refer to the particular oil and gas operations for which the Applicant is seeking County approval.

Operator. Any person who exercises the right to control the conduct of oil and gas operations.

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.

Produced Water. Water produced from a well or wellbore, including treatment fluids.

Recreation (active or passive). Active recreation means outdoor activities that require equipment or physical exertion or both. Passive recreation means outdoor activities such as nature observation or photography that require a minimum of facilities or development.

Reduced Emissions Completion. A well completion following fracturing or refracturing where gas flowback that is otherwise vented is captured, cleaned, and routed to the gas flow line or collection system, re-injected into the well or another well, used as an onsite fuel source, or used for other useful purpose that a purchased fuel or raw material would serve, with no direct release to the atmosphere.

TPY. Tons per year.

VOC. Volatile organic compounds.

Wastewater. Water used in oil and gas operations that is contaminated with chemicals, particulate, or other matter that makes it non-potable.

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 Source. Water source will mean water bodies that supply domestic, agricultural or municipal uses, water wells that are registered with Colorado Division of Water Resources, including household, domestic, livestock, irrigation, municipal/public and commercial wells, permitted or adjudicated springs, and monitoring wells other than monitoring wells that are drilled for the purpose of monitoring water quality changes that are not associated with oil and gas activities.

Well or Wellhead. 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.

Well Pad. Areas that are directly disturbed during the drilling and subsequent operation of, or affected by production facilities directly associated with, any oil well, or gas well.

## OTHER PROVISIONS IN THE BOULDER COUNTY LAND USE CODE TO BE AMENDED AS A RESULT OF THE NEW ARTICLE 12 PROVISIONS

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### 2-800 Boulder County Board of Adjustment

#### 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 (e.g. 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.
2. The Board of Adjustment does not have the authority to grant any variance:
  - a. from uses permitted in the zoning district;
  - b. from the minimum lot size required or maximum gross density allowed in any zoning district;
  - c. from any definition;
  - d. from the height or yard requirements which may be obtained, or have been denied, through the approval of a special use;
  - e. which authorizes a substantial modification of a planned unit development or special use approved by the Board of County Commissioners; ~~or~~
  - f. which will cause an increase in the base flood to occur; or
  - g. from any provision of Article 12.

### Article 3-100 Approvals and Permits Necessary Prior to Development

#### B. Development Related Permits

1. Dependent on the specific nature of the activity, one or more of these permits will be required prior to undertaking development in the unincorporated areas of Boulder County.
  - d. ~~Special-Review for Oil and Gas Facilities~~ and Operations: Administrative + Review of oil and gas drilling and production facilities and operations. Applications for this review are available from the Land Use Department. See Article 12.

### Article 4-404 Floodplain Development Permits

#### B. Uses Prohibited in Floodway

15. Above-ground oil and gas facilities and operations, as defined in Article ~~12-1400~~ 12-1600.

#### 4-508 Mining Uses

##### B. Oil and Gas ~~Facilities and~~ Operations and Seismic Testing

1. Definitions: See Article ~~12-1400~~ 12-1600
2. Districts Permitted: By ~~special~~ the applicable review process outlined in Article 12 ~~for oil and gas operations~~ in all districts. (~~Article 12~~)

#### 4-514 Utility and Public Services Uses

##### E. Gas and/or Hazardous Liquid Pipelines not subject to Article 12

1. Definition: Pipelines for the collection and transmission of natural gas or other hazardous liquids.
2. Districts Permitted: In all districts by Limited Impact Special Review, or review under Article 8 (areas and activities of state interest), as applicable. Gathering lines and flow lines which are part of new oil and gas development and which are located on the same parcel or parcels as the well head, pumping units, tanks and/ or treaters will be subject to Development Plan Review under Article 12 of this Code.
3. Parking Requirements: None 4. Loading Requirements: None 5. Additional Provisions:
  - a. This use is not required to be located on a building lot, or comply with the minimum lot size requirement for the district in which it is located.
  - b. Flow lines, gathering lines, and transmission lines shall be buried and shall be sited a minimum of fifty (50) feet away from general residential, commercial, and industrial buildings, as well as 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, secondary containment, or other mitigation, as appropriate.
  - c. To the maximum extent practicable, pipelines should be aligned with established roads in order to minimize surface impacts and reduce habitat fragmentation and disturbance.
  - d. To the maximum extent practicable, Applicants shall share existing pipeline rights-of-way and consolidate new corridors for pipeline rights-of-way to minimize surface impacts.
  - e. Applicants shall use boring technology or alternative director-approved most effective performance techniques and practices when crossing streams, rivers or irrigation ditches with a pipeline to minimize negative impacts to the channel, bank, and riparian areas.
  - f. During pipeline construction for trenches that are left open for more than five (5) days and are greater than five (5) feet in width, install wildlife crossovers and escape ramps where the trench crosses well-defined game trails and at a minimum of one-quarter (1/4) mile intervals where the trench parallels well-defined game trails.

g. 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.

#### ~~E. Gas and/or Hazardous Liquid Pipelines~~

~~2. Definition: Pipelines for the collection and transmission of crude oil, natural gas or other hazardous liquids, including:~~

~~a. flowlines: segments of pipe from the wellhead downstream through the production facilities ending at: (i) in the case of gas lines, the gas metering equipment, or (ii) in the case of oil lines, the oil loading point or lease automated custody transfer unit;~~

~~b. gathering lines: pipelines and equipment 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, including 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, transmissions lines, or main lines); and~~

~~c. intra-state transmission lines: pipelines within the State of Colorado and defined as transmission lines by the Colorado Public Utilities Commission in 4 C.C.R. 723-4:4901(ee) as amended6).~~

~~3. Districts Permitted: In all districts by Special Review under Article 4, Article 8 (areas and activities of state interest), or Article 12 as applicable. Gathering lines, intra-state transmission lines and flowlines that are part of new oil and gas development and are located on the same parcel as a well head, pumping units, tanks and treaters will be subject to Special Review under Article 12 of this Code. Gathering lines and intra-state transmission lines that are not associated with new oil and gas development or are not located on the same parcel as a well head, pumping units, tanks and treaters and are not subject to Article 8 are subject to special review under this Article 4.~~

~~4. Parking Requirements: None 4. Loading Requirements: None~~

~~5. Additional Provisions:~~

~~a. This use is not required to be located on a building lot, or comply with the minimum lot size requirement for the district in which it is located.~~

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

~~c. The Applicant must submit copies of all necessary surface use agreements and proof of legal~~

access to the site prior to the commencement of any construction activities.

d. Siting.

(i) Gathering lines, flowlines and intra-state transmission lines subject to Article 4 review shall, to the maximum extent practicable, be sited to avoid areas containing existing or proposed residential, commercial, or industrial buildings; places of public assembly; the high mark of any surface waterbody; and sensitive environmental features.

(ii) Such lines shall, to the maximum extent practicable, be sited to avoid areas that will impact county open space or impede road rights of way. Surface impacts and habitat fragmentation and disturbance must be minimized where such pipelines are permitted.

(iii) To the maximum extent practicable, without compromising pipeline integrity and safety, Applicants shall share existing pipeline rights of way and consolidate new corridors for pipeline right of way to minimize surface impacts.

(iv) Setbacks from residential, commercial, or industrial buildings, places of public assembly and the highwater mark of any surface water body will be determined on a case-by-case basis in consideration of the size and type of the proposed line and features of the proposed site, but a Gas and/or Hazardous Liquid Pipeline subject to Article 4 Special Review must not be located closer than one hundred and fifty (150) feet from a residential, commercial, or industrial buildings; a place of public assembly; or a the high water mark of any surface water body except in extraordinary circumstances. All setback distances shall be measured from the nearest edge of the pipeline.

(v) 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.

e. Construction.

(i) Flowlines, gathering lines, and intra-state transmission lines subject to this Article 4 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 three (3) feet deep.

(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 (5) feet in width, install wildlife crossovers and escape ramps where the trench crosses well defined game trails and at a minimum of one quarter (1/4) mile intervals where the trench parallels well defined game trails.

(iv) 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) Gathering lines, flowlines and intra-state transmission lines 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 twelve (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.

f. 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 Director in electronic format compatible with the County's geographic information system for reference in case of emergency:

- (i) 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.
- (iii) The location of each crossing of another pipeline.
- (iv) The location of each buried utility crossing.
- (v) The location of each overhead crossing.
- (vi) The location of each valve and corrosion test station.
- (vii) Copies of all monitoring results and pipeline integrity test results for the past five years.

g. Inspection, Monitoring, Testing and Maintenance.

(i) Gathering lines, flowlines and intra-state transmission lines must include a leak detection system that includes pressure flow meters, flow balancing, and a computer alarm and communication system in the event of a suspected leak, unless, upon Applicant's request, the Director determines that an equivalent or better, commercially available technology appropriate to the line and the site may be used instead. The leak detection system for gas pipelines must include pressure sensor equipment. The accuracy of the system must be defined once the system is established and tested in a manner approved by the Director. The Director may approve change in these requirements to address specific system operating requirements.

(ii) Flowlines subject to Article 4 special review and operating at fifteen (15) psig or higher must either be pressure tested at least each calendar year unless risk factors suggest more frequent testing, or use a continuous monitoring program including a continuous leak detection system as described above.

(iii) If a leak is detected, the operator must report the leak to the Director immediately, at a minimum within twenty-four (24) hours. The operator must notify the Director of any pipeline taken out of service due to a test failure immediately, at a minimum within twenty-four (24) hours.

(iv) Pipe clamps, wooden plugs, or screw-in plugs must not be used for any permanent repair.

(v) Operators must visually inspect all aboveground pipelines for leaks and corrosion on a monthly basis.

h. Abandonment. If an Operator plans to abandon a gathering line or transmission line, the Operator must submit proposed pipeline abandonment procedures to the Director for review and approval. Flowlines must be abandoned consistent with COGCC Rule 1103 as amended.

i. 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.

I. Sewage or Water Transmission Lines

2. Districts Permitted: By review under the regulation of areas and activities of state interest or location and extent review in all districts, unless the line is serving an oil and gas operations or facility facilities, in which case ~~special~~ the applicable review under Article 12 in all districts.

**Article 7-904 Stormwater Quality Management Permit Requirements**

D. Requirements for Stormwater Quality Permit; Limited Permit exemptions

4. A Special Review permit authorizing oil and gas operations subject to a stormwater control plan approved under Article 12-700 or 12-701 of this Code 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.

**Article 18-124C COGCC**

**Colorado Oil and Gas Conservation Commission**

**18-180 OGCC Oil and Gas Conservation Commission of the State of Colorado.**

**Article 18-180 Oil and Gas Facilities**

The equipment and improvements used for the exploration, production, transportation, treatment, and/or storage of oil and gas and waste products, including: 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; flowlines and ancillary equipment including but not limited to drip stations, vent stations, pigging facilities, chemical injection stations and valve boxes; and temporary storage and construction staging yards in place for less than six months.

**Article 18-181 Oil and Gas 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; production facility and operations including the installation of flow lines and gathering lines; construction, site preparation, reclamation and related activities associated with the development of oil and gas resources.~~

Exploring for oil and gas, including conducting seismic operations and the drilling of test bores; siting, drilling, deepening, recompleting, reworking, or abandoning a well; producing operations related to any well, including installing flowlines; the generating, transporting, storing, treating, or disposing exploration and production wastes; the construction, operation, maintenance and repair of any oil and gas facility; and any constructing, site preparing, or reclaiming activities associated with such operations. With respect to any submittal or review requirements under this Section, "oil and gas operations" will refer to the particular oil and gas operations for which the Applicant is seeking County approval.





Updates to Article 12 of the Boulder County Land Use Code for Oil and Gas Operations  
Docket # DC-19-0002

Summary of Proposed Changes in Staff Second Draft  
October 20, 2020

County staff's Second Draft of the proposed revisions to Article 12 of the Land Use Code, governing all oil and gas development and operations, are attached. The Second Draft contains numerous modifications from the Initial Draft released on March 6, 2020. They are provided without showing changes from the existing regulations or the Initial Draft because the changes proposed are significant enough that showing the changes in redline form makes the document difficult to read. (For comparison, the existing Article 12 can be viewed at: <https://assets.bouldercounty.org/wp-content/uploads/2017/02/land-use-code-article-12.pdf>; and the Initial Draft can be viewed at <https://assets.bouldercounty.org/wp-content/uploads/2020/03/dc-19-0002-summary-and-draft-text-amendments-20200306.pdf>.) This Second Draft takes into consideration additional research, public comment, suggestions from outside experts, other local governments, and state government experts, and changes made at the state level during the ongoing Colorado Oil and Gas Conservation Commission rulemakings. Overall, the proposed changes in the Initial Draft and the Second Draft address the new authorities given to or clarified for local governments by Senate Bill 19-181, signed into law in April 2019. The proposed changes encompass advances in technology and the ongoing degradation of regional air quality.

Oil and gas development is a complicated area to regulate and has the potential for significant public health and environmental impacts. As a consequence, the proposed regulations are lengthy, technical, and complex. Moreover, it may not be clear from the regulations alone the level of scrutiny and rigor to be applied by County staff, the Planning Commission, and ultimately the Board of County Commissioners (the "Board"). This summary provides information about how the regulations will work in practice and highlights particularly important areas of new or enhanced oversight.

Staff have made many minor changes to the Initial Draft presented on March 6, 2020 in the Second Draft. The changes are too numerous to list or demonstrate in whole. However, the major changes between the Initial Draft presented on March 6, 2020 include the following: **I. Major Changes between the Initial Draft and the Second Draft**

- Addition of a Setback in Article 12-1000(V):
  - No Well Pad can be located within 2,000 feet of any Dwelling, Educational Facility, or Child Care Center.
- Clarification on how and when applications for oil and gas operations will be denied.
- Addition of Section 12-600 governing Well and Pipeline Abandonment.

- Clarification of protocols for notification of emergency response services and the County for incidents causing or threatening to cause personal injury or property damage.
- Edited provisions for geophysical exploration of oil and gas (seismic testing).
- Updates to noise and odor control regulations.
- Numerous additional plans required from the operator for review by the County to demonstrate protections for public health, safety, and welfare and the environment and wildlife, including new Weed Control Plan, Dust Suppression Plan, Photometric Study, Worker Training Requirements, and assessments and modeling of current and projected air quality.

## II. Provisions in the Initial and Second Drafts that do not appear in the current Article 12

- **Regulation of Existing Facilities (Section 12-500).** The County will have broader inspection and enforcement authority over oil and gas facilities already in existence, including with respect to air emissions.
- **Regulation of Seismic Testing (Section 12-700).** Operators will need a permit before conducting seismic testing for oil and gas in the County.
- **Financial Assurances (Multiple Sections).** Under new authority, the County has increased the insurance coverage it requires of operators and will now require financial assurances (such as bonds and letters of credit) from operators to guarantee compliance with all permits, clean-up of any pollution, and complete reclamation. In addition, operators' financial fitness to conduct its operations safely and in compliance with all regulations will be considered during staff's and the Board's analyses.
- **Water Source (Multiple Sections).** S.B. 19-181 gave the County authority related to the water source used for oil and gas operations. The County will obtain and analyze water use proposals from the operator, including assessments of the impacts of removing the proposed water from the watershed.
- **Fines and Penalties (Section 12-1500).** With new authority, a section on fines and other penalties for violations of Article 12 standards has been added.

## III. Provisions modified from the current Article 12

- **Operator Registration and Renewal (Section 12-400)**
  - Operators (whether of existing wells or proposed) must supply significant information to demonstrate their financial and technical capabilities, along with their history of complying with oil and gas regulations, which is renewed annually.
  - No applications for new operations will be accepted until registration is complete.

- **Application materials submitted (Section 12-900)** ○ Applications must contain thorough information about:
  - the physical and environmental baseline conditions at and near the sites, including air quality, ambient noise, and natural resources; ▪ expert modeling of the impacts of the project; and ▪ plans of operations.
  - Applicants will hire outside, independent experts approved by the County to conduct modeling and assessments.
  - These materials will be used by the County as part of its analysis of the project and its impacts.
- **Public Notice and Outreach by the Operator (Section 12-800)** ○ After filing a complete application, the operator will send direct notice to nearby property owners and post signs about the pending application.
  - The operator will hold a neighborhood meeting, open to the public, to provide information and take comments from the public.
  - The operator will report on the public meeting to the County.
- **County Review**
  - Based on the complete application materials and expert reports, any supplemental information required, and all information received from the public, County staff will begin an in-depth analysis of the application.
  - Section 12-1000 lists the standards and criteria against which each application will be measured. No oil and gas facility or operation will be approved if it does not meet the standards under all conditions of approval imposed.
  - The County may hire outside experts to analyze the application materials, at the operator's expense.
  - Staff will send out requests for input (referrals) from numerous local and state agencies, surrounding property owners and residents, several County departments, and whatever other parties have necessary expertise or will be impacted. The referral responses form an important part of staff's analysis. ○ The operator may be asked to supplement the application materials if needed to assist staff's analysis.
  - After its thorough, rigorous analysis of the proposal and consideration of possible conditions to be imposed, staff will make a recommendation whether the application should be approved with stated conditions or denied. The recommendation depends on whether the proposed project, as conditioned, could meet the rigorous standards of Section 12-1000.
- **Advisory Boards**
  - If the proposal is to be located on or near County-owned open space land, a public hearing before the Parks and Open Space Advisory Committee may be required.

- For all applications for new oil and gas development, a public hearing before the Planning Commission will be required.
- **Opportunities for Public Input**
  - Starting with the required operator’s neighborhood meeting, Article 12 ensures numerous opportunities for public input.
  - After the application is received, the public can submit comments on the application at any time.
  - Public testimony will be taken at any hearing before the Parks and Open Space Advisory Committee and the hearing or hearings before the Planning Commission.
  - Public testimony will also be taken when the Board holds its hearing on the application.
- **Board of County Commissioners**
  - The Board has the final say on each application after a public hearing or hearings.
  - The Board takes into account the materials submitted by the operator, materials generated by staff during its analysis, staff’s recommendation, the advisory boards’ recommendations, and all public comment and testimony at public hearings.
  - The Board makes its decision based on whether the applicant has met its burden of demonstrating that the proposed project meets the standards in Article 12.
  - Based on its application of the Article 12, the Board will either approve the application with conditions or deny it.

#### IV. **Annotated Table of Contents of Revised Article 12**

- **12-100 Purpose.** The underlying purposes to be met by Article 12.
- **12-200 Authority.** A recitation of the legal authority for enacting and implementing Article 12.
- **12-300 Effective Date and Survival.**
- **12-400 Operator Registration and Renewal.** Moved from former 12-500 to its own section; required submittals by all operators before applying for special use review.
- **12-500 Pre-Existing Facilities.** Standards and requirements applicable to oil and gas facilities already in existence.
- **12-600 Well and Pipeline Abandonment or Decommissioning.** Regulations for the plugging and abandonment of wells and the abandonment of pipelines.
- **12-700 Geophysical Exploration for Oil and Gas (“Seismic Testing”).** A new, administrative permitting requirement before seismic testing can occur.

- **12-800 Application Process.** Description of the steps in the process from application through public engagement and on to hearings before the appropriate boards before final determination by the Board of County Commissioners.
- **12-900 Application Submittal Requirements.** A list of the materials that must be submitted and deemed complete by the County before an application will be reviewed.
- **12-1000 Special Review Standards.** Detailed standards that must be met for any oil and gas operation to receive approval. If a project cannot be made to meet these standards, it will be denied.
- **12-1100 Conditions of Approval.** A combination of existing sections 12-700 and 12-701. A list of conditions the County may impose before approving an oil and gas operation. This is not an exhaustive list, but illustrative.
- **12-1200 Judicial Review.** Stating that applicants may seek court review of any final determination by the Board under Article 12.
- **12-1300 Procedures Following Approval of a Special Review Application.** Requirements and procedures for any oil and gas development receiving special review approval.
- **12-1400 Inspections; Enforcement.** The County's rights to inspect records and facilities and its enforcement procedures for violations.
- **12-1500 Fines and Penalties.** Describing fines and other penalties that the County will impose for violations of any standards set forth in Article 12.
- **12-1600 Definitions.**

**From:** [Maya Beauvineau](#)  
**To:** [Boulder County Board of Commissioners](#)  
**Subject:** Niwot Environmental Club Message Regarding Fracking  
**Date:** Monday, November 30, 2020 3:20:41 PM

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Dear County Commissioners,

I hope this email finds you all well!

The Niwot environmental club has put together a video, regarding the fracking issue in Boulder County, and we would love it if you would watch the video before the public hearing tomorrow!

Here is the link: <https://youtu.be/srSUEOmgTHM>

Thank you,

Maya Beauvineau

**From:** [3dtreecare@everyactionadvocacy.com](mailto:3dtreecare@everyactionadvocacy.com) on behalf of [Lori Hewitt](#)  
**To:** [Boulder County Board of Commissioners](#)  
**Subject:** Please enact a ban on fracking ASAP, as well as the strongest possible oil & gas regulations.  
**Date:** Monday, November 30, 2020 3:41:36 PM

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Dear Board Chair Deb Gardner,

Dear Commissioners,

I write as a Boulder County resident deeply concerned about proposed fracking projects (140 wells) in our county and the resulting threats to air and water quality, public health, wildlife, and the climate. I urge you to enact a ban on fracking in Boulder County as soon as possible to protect our community from the well-documented threats to public health and safety from fracking, and to enact the strongest possible protective regulations as a backstop.

The proposed fracking projects are particularly troubling in the context of the Front Range's "serious" non-attainment status for ozone, and high concentrations of benzene and other VOCs, to which existing oil and gas operations are a significant contributor. Additionally, a recent report of the IPCC calls for a "rapid phase-out of CO2 emissions" largely over the next decade to avert catastrophic global temperature rise.

Despite the recent Longmont decision, a ban on fracking is consistent with the County's efforts to fight climate change, including the declaration of a climate emergency, and ongoing lawsuit against Suncor and Exxon for climate change-related damages. A fracking ban is both a reasonable and necessary action authorized for local governments by SB19-181. A ban is widely supported by Boulder County residents: 70% in recent polling, and the same fraction of voters in the County voted in favor of Proposition 112 in 2018.

I also urge you to enact the strongest possible Article 12 regulations on oil and gas operations as a backstop protection to any potential legal challenge to a ban. I recommend the following points for inclusion in Article 12, based on the updated draft released October 20, 2020:

-Implement mandatory 2500' minimum setbacks with no waivers: Revise Article 12 to extend the minimum setback of oil and gas operations to 2500' from any structure intended for human occupancy, and from open space, recreation areas and all water sources. This is modest considering that research has identified adverse effects on the cognitive performance of infants whose mothers lived within 8,500 feet of oil and gas wells and an increased risk of congenital heart defects among children born to women living near oil and gas operations in Colorado, with the risks increasing with the density of oil and gas activities within a 10-mile radius.

-Cumulative impacts: Article 12 should incorporate a structure for the County to consider the context of our already-degraded air quality and the need for dramatic reductions in greenhouse gas emissions to avert catastrophic consequences from climate change.

-Affirmatively protect public health, safety, and welfare, and the environment: Section 12-1000 states that "A proposal meets the standards if it will...either avoid adverse impacts to public health, safety, and welfare, the environment and wildlife resources or...sufficiently minimize, and mitigate unavoidable impact." Oil and gas operations must be required to avoid adverse impacts to public health, safety, and welfare, and the environment and wildlife resources entirely, and not simply minimize impacts.

-Implement as mandatory all of the discretionary measures that are listed in Section 12-1100. Article 12 should explicitly prohibit venting and flaring and require "tankless" operations, which reduce air emissions. A recent study concluded that pregnant women who lived in proximity to natural gas flaring had a 50% higher chance of giving birth early than those who did not, putting the level of risk on par with that caused by smoking.

However, regulations are no substitute for a permanent ban. We encourage you to direct County staff to begin developing language for a fracking ban in Boulder County. Thank you for your ongoing efforts to prioritize public health and the environment in Boulder County.



Sincerely,

Sincerely,  
Lori Hewitt  
2911 Mountain View Ave Longmont, CO 80503-2123  
3dtreecare@gmail.com

**From:** [Andreia Shotwell](#)  
**To:** [cdphe.commentsapcd@state.co.us](mailto:cdphe.commentsapcd@state.co.us); [Boulder County Oil and Gas Comment](#)  
**Subject:** Ozone Implementation Rulemaking Public Comment  
**Date:** Monday, November 30, 2020 5:38:04 PM

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## Boulder County Article 12 Land Use/Oil and Gas Regulations

As a concerned citizen, I ask you to strongly consider the following information in making decisions that are potentially harmful at best and lethal at worst to people, animals and our environment. It is critical to reduce the destructive effects of pollution in our world, NOT to increase it.

A lot of information supports the serious effects on human health and life expectancy from air pollution, including a recent study that identified air pollution as a contributor to 8.8 million deaths annually, identifying it as “one of the main global health risks.” Additionally, exposure to air pollution has been linked to higher rates of mortality from viral infectious diseases. In light of this evidence, and the serious threats posed by fracking to the stability of our climate, the only responsible course of action is for Boulder County to ban fracking and impose the most stringent regulations possible on oil and gas extraction.

Numerous studies have linked fracking to harm to human health, including an increased risk of congenital heart defects among children born to women living near oil and gas operations in Colorado, with the risks increasing with the density of oil and gas activities within a 10-mile radius; and reduced cognitive performance has been identified in infants born to mothers living within 8,500 ft. of a fracking well.

- SB 19-181 grants local jurisdictions, such as Boulder County, the ability to enact more restrictive regulations. A setback requirement that is more rigorous than the 2,000' setback (with many potential exceptions) that is present in the regulations likely to be adopted by the COGCC, is essential. The CDPHE study on which the 2,000' setback requirement is based identified deleterious health effects within 2,000' of oil and gas operations, and did not consider health effects outside of that radius.

### Permitting Process

- Implement as mandatory all of the discretionary conditions listed in Section 12-1100, including:
  - Prohibition of venting or flaring of natural gas
  - Requirement for ongoing water quality monitoring
  - Requirements for use of “tankless” operations, which reduce air emissions, especially those of VOCs
  - Continuous monitoring of leaks

- Requirement for closed loop “pitless” drilling systems, to facilitate re-use of produced water.
- Affirmatively protect public health, safety, and welfare, and the environment: Section 12-1000 states that “A proposal meets the standards if it will..., either avoid adverse impacts to public health, safety, and welfare, the environment and wildlife resources or, through imposition of conditions of approval, sufficiently minimize, and mitigate unavoidable impact.”. Oil and gas operations must be required to avoid adverse impacts to public health, safety, and welfare, and the environment and wildlife resources entirely, and not simply minimize impacts.
- Capping of old wells as a condition for new permits: If an operator applying for a new permit for oil and gas operations in Boulder County has existing “legacy” wells in the county, the operator should be required to cap them before a permit for new wells is considered.
- An operator should be required to obtain county approval before seeking surface-use agreements with landowners. (In Section 12-800 Part C, this is “recommended”, but not required.

### **Climate and Air Quality**

- Prohibit flaring or venting of natural gas: A recent study published in [Nature](#) concluded that estimates of anthropogenic methane emissions, to which oil and gas operations are a prime contributor, are likely 20-40% higher than previously thought. Preliminary reports from NOAA for atmospheric methane levels in 2019 indicate that the year from 2018 to 2019 showed the largest annual increase in atmospheric methane since 2012.
- Prohibit permitting while the Front Range remains in non-attainment of the National Ambient Air Quality Standard (NAAQS) standards for ozone, and prohibit emissions of air toxics such as benzene: Research has demonstrated that Boulder County’s air quality is adversely affected by oil and gas operations in Weld County, and that oil and gas operations are a significant contributor to excessive levels of ozone on the Front Range. Section 12-1000 A.1. states that “oil and gas facilities and operations will not compromise the attainment of ozone standards for the Denver Metro/North Front Range ozone nonattainment area as established by the US Environmental Protection Agency. Oil and gas facilities and operations will not contribute particulate matter to the air in a manner that endangers public health.” This should be strengthened to prohibit permitting altogether while the Front Range remains in non-attainment for ozone, and should extend to emissions of air toxics as well. A threshold for allowable emissions of particulate matter should be defined based on the ample body of scientific evidence assessing the effects of particulate matter on public health.
- In assessing a permit application, the Board of County Commissioners should be required to consider the cumulative effects of the expected greenhouse gas emissions and other air- and water-polluting emissions associated with the permit in the context of the existing pollution burden in the County and the existing global levels of greenhouse gas emissions. The greenhouse gas emissions associated with oil and gas development contribute to accelerating climate change, which

fundamentally threatens public health, safety, and welfare

- Require that all electrical power provided to oil and gas operations be supplied by renewables, on an annual basis (i.e. net zero energy for electricity) and require that all on-site equipment be electrically-powered.
- “Tankless” operations, which reduce air emissions, especially of volatile organic compounds (VOCs), should be required in all circumstances. Section 12-1100 D. 14 states a requirement (to be imposed at the county’s discretion, as currently written) for “hydrocarbon control of 98% or better for crude oil, condensate, and produced water tanks.” Section 12-1100 E. 1. (also to be imposed at the county’s discretion) states a requirement for “use of pipelines to transport all gas and fluid materials, including oil, natural gas, fresh water, produced water, and waste products, to and from the oil and gas facilities.”

### **Water Use and Quality**

- Sec. 12-900 D.7.e.i.. requires “plans for recycling or reuse of all water used or produced by the oil and gas operations.” Implementation of these plans should be mandatory (currently a discretionary item in 12-1100 D.5).
- Measures to address water quality impacts identified in the study required by Sec. 12-900 D.8.b.. “Modeling of Impacts” should be mandatory and the radius over which water sources are included for testing should be increased.
- There should be no oil and gas development in floodplains.

### **Financial Assurances, Fines, and Liability**

- The County should reserve the right to revoke a permit for oil and gas operations based on the operator’s failure to abide by the conditions of the permit. (Section 12-1400 F.5. states that, “As a result of either (i) emergency conditions, or (ii) three or more fines imposed for serious violations within six (6) months, the Director may issue a written order to the Applicant (or the Applicant’s owner, Operator, or agent) suspending the Special Review Approval. Upon receipt, the Applicant must cease all activities and operations immediately until the violation is remedied.” However, certain actions by an operator should result in the permit revocation of a permit.)
- Increase the maximum level of fines that the County can impose for violation of the regulations: Section 12-1500 C. identifies a range of possible fines from \$300 to \$15,000 per violation per day, which is far too low to address the serious effects on public health and the environment which could result from a violation of the permit conditions. Additionally, the county should consider the cumulative effects of all violations by an operator in Boulder County, not limited to a particular site, in assessing the magnitude of the fines to be imposed.
- Increase the required amount of financial assurances and extend all conditions (from assurances to liability) to all affiliated entities and subcontractors. The extension of requirements for financial assurances and liability to affiliates and sub-contractors is particularly important in the light of current market conditions and the precarious financial state of many fracking companies operating in Colorado. Insurance requirements should be implemented on a per well basis. Studies have found that the cost of soil remediation alone for oilfield sites in Colorado ranges from \$13,000 to

\$73,000, while intensive remediation of groundwater pollution can cost more than \$1 million.

- A section should be added to the regulations specifically addressing requirements for maintenance of wells and related equipment, and imposing fines on operators who fail to meet the requirements. Lack of routine maintenance at oil and gas wells contributes to leaks and increased emissions which threaten human health and the environment, as well as increased future remediation costs.

### **Land Management**

- Oil and gas operations should be prohibited on open space. Boulder County residents pay over \$4 million annually in property taxes alone to support acquisitions of open space, and the county's open space lands are a precious home for wildlife, as well as a destination for outdoor recreation.
- The operator should be required to fully restore the land on which an oil and gas operation is located to its prior state, such that it could continue to be used for its original purposes, such as agriculture or recreation .

### **Public Notice**

- The notification requirements (in Sec. 12-600 H) for nearby landowners after an application for a permit is deemed complete by the county should extend to all residents of the county, through publication in a newspaper in general circulation and on a county website.
- Follow-up and ongoing water testing results should be mandatory, and should be recorded such that they would be available to future owners of the property and/or future users of the water source in question, and test results reporting on flowback and produced water should also be made available to the public. (Sec 12-1100 H.1. and H.6).
- Continuous air quality monitoring should be mandatory, and all reports from air quality monitoring of oil and gas operations should be available to the public and evidence of leaks and/or spills should also be reported to the public through a county website and any other appropriate channels. (Sec. 12-1100 D.1. and Sec 12-1100 D.3.)

### **Seismic Testing**

- Sec. 12-700 D.: The definition of a "testing area" for seismic testing should be clearly defined in terms of its extents.

### **Wildlife and Natural Resources**

- The current draft regulations require maps of wildlife and "natural resources" within 1 mile of the proposed facility, referring to the Boulder County Comprehensive Plan. This is an excellent first step in identifying potential impacts to important species and ecosystems in Boulder County (12-900.B.11 and 13). In addition, applicants are required to obtain an independent expert's evaluation of potential impacts to wildlife and natural resources (12-900.D. 5 and 6). This is also an essential step towards

protecting Boulder County's biodiversity.

- However, in 12-1000 Special Review Standards, there is weakening language that may allow for insufficient protections. Here, it is stated that "Oil and gas facilities and operations will sufficiently avoid, minimize, and mitigate adverse impacts" to natural resources (p.12-22), with similar wording for wildlife (p.12-23). We are concerned that it will be difficult to determine and implement this standard, and that adverse impacts to Boulder County's wildlife and natural resources may be allowed to occur. We recommend a stronger standard: Oil and gas facilities and operations will avoid adverse impacts to wildlife and natural resources.

**From:** [Maya Beauvineau](#)  
**To:** [elise@elisejones.org](mailto:elise@elisejones.org)  
**Cc:** [Boulder County Oil and Gas Comment](#)  
**Subject:** Fwd: Niwot Environmental Club Message Regarding Fracking  
**Date:** Monday, November 30, 2020 10:09:25 PM

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Hi Elise!

I thought I would forward this message directly to you, in hopes that you could share it with the other County Commissioners before the public hearing tomorrow. Initially, the environmental club had hoped to share the video during the hearing, but Kim Sanchez informed me that, with the zoom platform, we can't share media.

Thank you!

Maya Beauvineau

----- Forwarded message -----

**From:** Maya Beauvineau <[maya@350colorado.org](mailto:maya@350colorado.org)>  
**Date:** Mon, Nov 30, 2020 at 3:20 PM  
**Subject:** Niwot Environmental Club Message Regarding Fracking  
**To:** [commissioners@bouldercounty.org](mailto:commissioners@bouldercounty.org) <[commissioners@bouldercounty.org](mailto:commissioners@bouldercounty.org)>

Dear County Commissioners,

I hope this email finds you all well!

The Niwot environmental club has put together a video, regarding the fracking issue in Boulder County, and we would love it if you would watch the video before the public hearing tomorrow!

Here is the link: <https://youtu.be/srSUEOmgTHM>

Thank you,

Maya Beauvineau

**From:** [Mikl@everyactionadvocacy.com](mailto:Mikl@everyactionadvocacy.com) on behalf of [Mikl Brawner](#)  
**To:** [Boulder County Board of Commissioners](#)  
**Subject:** Please enact a ban on fracking ASAP, as well as the strongest possible oil & gas regulations.  
**Date:** Tuesday, December 01, 2020 7:36:40 AM

---

Dear Board Chair Deb Gardner,

Dear Commissioners,

I know you care about the health of Boulder County citizens. Whatever you can do to continue the ban on fracking will help us all now and into the future.

Sincerely,  
Mikl Brawner  
4795 26th St Boulder, CO 80301-1657  
[Mikl@HarlequinsGardens.com](mailto:Mikl@HarlequinsGardens.com)



**From:** [Jamie Jost](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Cc:** [Sanchez, Kimberly](#); [Burke, Kate A.](#); [Jason Oates](#); [Ashley Campbell](#)  
**Subject:** Docket DC-19-002: Crestone Peak Resources Operating, LLC - Comments to Board of County Commissioners on Proposed Regulations  
**Date:** Tuesday, December 01, 2020 8:24:18 AM  
**Attachments:** [Crestone Letter to Boulder County - Updated O&G Regulations \(12.01.20\).pdf](#)

---

Good morning,

Please see Crestone Peak Resources Operating, LLC's written comments to the Boulder County Board of County Commissioners regarding Docket DC-19-002. Thank you.

Jamie

**Jamie L. Jost**  
Managing Shareholder

3511 Ringsby Court, Unit 103  
Denver, CO 80216  
Main 720-446-5620  
Mobile 720-362-0875

[jjost@jostenergylaw.com](mailto:jjost@jostenergylaw.com)



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November 23, 2020

**Via Email Only – oilgascomment@bouldercounty.org**

Boulder County – Board of County Commissioners  
2045 13<sup>th</sup> Street, Suite 200  
Boulder, Colorado 80302

*RE: Crestone Peak Resources Operating, LLC – Comments on Docket DC-19-0002*

Dear Commissioner Jones, Commissioner Gardner and Commissioner Jones,

Crestone Peak Resources, LLC (“Crestone”) respectfully submits this letter to the Boulder County Board of County Commissioners for consideration prior to the December 1, 2020 hearing on Docket DC-19-0002: Proposed Amendments to Oil and Gas Development Regulations (“Proposed Regulations”).

Crestone reviewed the Proposed Regulations recommended by the Planning Commission and has continued to analyze their various impacts on future oil and gas development in Boulder County. Crestone recognizes that Boulder County is attempting to craft amendments to the regulations to reflect the County’s land use authority provided under Senate Bill 19-181, however, we still have significant concerns about the Proposed Regulations. Crestone’s concerns are included in American Petroleum Institute’s (“API”) and Colorado Oil and Gas Association’s (“COGA”) comments set forth in their written submissions regarding the Proposed Regulations to the County.

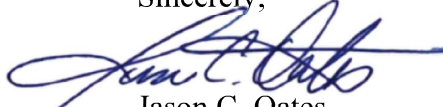
Overall, Crestone maintains its original assertion that certain of the Proposed Regulations extend beyond the land use authority provided to local governments in Senate Bill 19-181 and serve to prohibit oil and gas development in unincorporated areas of Boulder County, instead of “regulating the surface impacts of oil and gas operations in a reasonable manner” and minimizing adverse impacts “to the extent necessary and reasonable” while still allowing for oil and gas development. *See* C.R.S. § 29-20-104(1)(h).

Suite 2500 – 1801 California St., Denver, CO 80202

Phone: 720 410 8500 Fax: 720 410 8510

Crestone respectfully requests that the Board of County Commissioners take time to address the reasonable and practical concerns set forth in API and COGA's submissions. Thank you.

Sincerely,



Jason C. Oates

Crestone Peak Resources Operating, LLC

cc: Kim Sanchez, Boulder County Chief Planner – [ksanchez@bouldercounty.org](mailto:ksanchez@bouldercounty.org)  
Kate Burke, Boulder County Attorney – [kaburke@bouldercounty.org](mailto:kaburke@bouldercounty.org)  
Jamie Jost – Jost Energy Law, P.C. – [jjost@jostenergylaw.com](mailto:jjost@jostenergylaw.com)

Suite 2500 – 1801 California St., Denver, CO 80202

Phone: 720 410 8500 Fax: 720 410 8510

[www.crestonepeakresources.com](http://www.crestonepeakresources.com)

**From:** [Catherine Griesbach](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** Comments on Article 12  
**Date:** Tuesday, December 01, 2020 8:40:57 AM

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Dear COGCC,

I am contacting you regarding the oil and gas regulations under review for Boulder County, and would like to voice my concerns about fracking near neighborhoods, schools, and wildlife in our open spaces.

I personally have been affected by fracking, and I support more stringent regulations to protect children, adults, and animals from its well-documented hazardous effects. I moved farther away from fracking operations in Erie after my son tested in the 90th + percentile for ethylbenzene and several other VOCs associated with fracking operations. I, too, was experiencing symptoms such as rapid heartbeat after being outside, painful eyes, and nausea. These symptoms have disappeared since we moved. Some of my friends and neighbors, and their children, were experiencing migraines, very high fevers, and nausea.

Please protect the residents of Boulder County from the harmful effects of having it live near fracking operations and the subsequent wells. Studies have shown children living within 1 mile of oil or gas wells have a much greater risk of developing leukemia and other childhood cancers. Pregnant mothers have been shown to have a greater risk of low birth rate and health issues. Fracking also endangers wildlife habitat.

Thank you for hearing my comments. We need to protect residents and wildlife from fracking that is too near to homes, schools, and known wildlife habitats.

Sincerely,  
Catherine Griesbach

**From:** [Valorie Guanella Erion](#)  
**To:** [Boulder County Board of Commissioners](#)  
**Subject:** Oil and Gas Moratorium  
**Date:** Tuesday, December 01, 2020 10:32:13 AM

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December 1, 2020

Dear Boulder County Commissioners:

I am writing to give public comment regarding oil and gas development in Boulder County. I am strongly opposed to any further development of oil and gas in Boulder County and I think you should be too. You were elected by your constituents to look after their best interests, not the interests of the mega corporations of this toxic and archaic industry who are only out for the almighty dollar. Boulder County is one of the most beautiful landscapes in Colorado. That will cease to be the case if you allow any more oil and gas development. I'm honestly pretty astounded that you've allowed any at all, but moving forward the answer should no, nada, nothing. Fossil fuels are not the way forward, renewable energy is.

If you need a visual of what I speak about, I encourage you all to take a drive over to the western slope of Colorado, Garfield County specifically. Drive along I-70 between Rifle and Grand Junction and look to the north. The cancer (oil and gas development) spreading across this once, also gorgeous landscape, is a disgrace. It does indeed look like a cancer! Go talk to the residents of Battlement Mesa and see what it's like living next door to fracking and these very greedy neighbors is like. Go talk to the residents that live south of Silt. These folks bought ranchland for the peace and quiet and they now live in an industrial nightmare. Twenty years ago, they were where you are now. The Garfield County Commissioners have given a green light to oil and gas for twenty years and indeed laid out the red carpet for them, this is what you will get if you do the same. You, as human beings, live there too. Is this what you want to wake up to every morning? Do you want to have trouble sleeping at night because of the noise and lights and the constant rumbling of the earth? Is this what you want for your families?

We are supposed to be good stewards of the land, not destroying it! We are borrowing it from future generations and we should be ashamed at what has been allowed to happen. We are in the midst of a climate crisis that will take generations to undo. Furthermore, outgoing commissioners, whose terms expire in one month, should not be voting on this moratorium which will also end at the time of their terms. At the very least, these crucial decisions should be made by the incoming commissioners.

Please, I'm begging you to make the current moratorium on oil and gas development in Boulder County a permanent moratorium, for perpetuity.

Respectfully yours,

*Valorie Guanella Erion*

**From:** [kate.a.flynn@everyactionadvocacy.com](mailto:kate.a.flynn@everyactionadvocacy.com) on behalf of [Kate Flynn](#)  
**To:** [Boulder County Board of Commissioners](#)  
**Subject:** Please enact a ban on fracking ASAP, as well as the strongest possible oil & gas regulations.  
**Date:** Tuesday, December 01, 2020 10:48:14 AM

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Dear Board Chair Deb Gardner,

Dear Commissioners,

I write as a Boulder County resident deeply concerned about proposed fracking projects (140 wells) in our county and the resulting threats to air and water quality, public health, wildlife, and the climate. I urge you to enact a ban on fracking in Boulder County as soon as possible to protect our community from the well-documented threats to public health and safety from fracking, and to enact the strongest possible protective regulations as a backstop.

The proposed fracking projects are particularly troubling in the context of the Front Range's "serious" non-attainment status for ozone, and high concentrations of benzene and other VOCs, to which existing oil and gas operations are a significant contributor. Additionally, a recent report of the IPCC calls for a "rapid phase-out of CO2 emissions" largely over the next decade to avert catastrophic global temperature rise.

Despite the recent Longmont decision, a ban on fracking is consistent with the County's efforts to fight climate change, including the declaration of a climate emergency, and ongoing lawsuit against Suncor and Exxon for climate change-related damages. A fracking ban is both a reasonable and necessary action authorized for local governments by SB19-181. A ban is widely supported by Boulder County residents: 70% in recent polling, and the same fraction of voters in the County voted in favor of Proposition 112 in 2018.

I also urge you to enact the strongest possible Article 12 regulations on oil and gas operations as a backstop protection to any potential legal challenge to a ban. I recommend the following points for inclusion in Article 12, based on the updated draft released October 20, 2020:

-Implement mandatory 2500' minimum setbacks with no waivers: Revise Article 12 to extend the minimum setback of oil and gas operations to 2500' from any structure intended for human occupancy, and from open space, recreation areas and all water sources. This is modest considering that research has identified adverse effects on the cognitive performance of infants whose mothers lived within 8,500 feet of oil and gas wells and an increased risk of congenital heart defects among children born to women living near oil and gas operations in Colorado, with the risks increasing with the density of oil and gas activities within a 10-mile radius.

-Cumulative impacts: Article 12 should incorporate a structure for the County to consider the context of our already-degraded air quality and the need for dramatic reductions in greenhouse gas emissions to avert catastrophic consequences from climate change.

-Affirmatively protect public health, safety, and welfare, and the environment: Section 12-1000 states that "A proposal meets the standards if it will...either avoid adverse impacts to public health, safety, and welfare, the environment and wildlife resources or...sufficiently minimize, and mitigate unavoidable impact." Oil and gas operations must be required to avoid adverse impacts to public health, safety, and welfare, and the environment and wildlife resources entirely, and not simply minimize impacts.

-Implement as mandatory all of the discretionary measures that are listed in Section 12-1100. Article 12 should explicitly prohibit venting and flaring and require "tankless" operations, which reduce air emissions. A recent study concluded that pregnant women who lived in proximity to natural gas flaring had a 50% higher chance of giving birth early than those who did not, putting the level of risk on par with that caused by smoking.

However, regulations are no substitute for a permanent ban. We encourage you to direct County staff to begin developing language for a fracking ban in Boulder County. Thank you for your ongoing efforts to prioritize public health and the environment in Boulder County.

Sincerely,

Sincerely,

Kate Flynn

2707 Valmont Rd Apt 208B Boulder, CO 80304-2939

kate.a.flynn@gmail.com

**From:** [Valorie Guanella Erion](#)  
**To:** [#LandUsePlanner](#)  
**Subject:** Oil and Gas Development in Boulder County  
**Date:** Tuesday, December 01, 2020 11:01:23 AM

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Dear Boulder County Planning Department:

I am writing to give public comment regarding oil and gas development in Boulder County. I am strongly opposed to any further development of oil and gas in Boulder County and I think you should be too. Boulder County is one of the most beautiful landscapes in Colorado. That will cease to be the case if you allow any more oil and gas development. I'm honestly pretty astounded that you've allowed any at all, but moving forward the answer should be no, nada, nothing. Fossil fuels are not the way forward, renewable energy is.

If you need a visual of what I speak about, I encourage you all to take a drive over to the western slope of Colorado, Garfield County specifically. Drive along I-70 between Rifle and Grand Junction and look to the north. The cancer (oil and gas development) spreading across this once, also gorgeous landscape, is a disgrace. It does indeed look like a cancer! Go talk to the residents of Battlement Mesa and see what it's like living next door to fracking and these very greedy neighbors is like. Go talk to the residents that live south of Silt. These folks bought ranchland for the peace and quiet and they now live in an industrial nightmare. Twenty years ago, they were where you are now. The Garfield County Commissioners have given a green light to oil and gas for twenty years and indeed laid out the red carpet for them, this is what you will get if you do the same. You, as human beings, live there too. Is this what you want to wake up to every morning? Do you want to have trouble sleeping at night because of the noise and lights and the constant rumbling of the earth? Is this what you want for your families?

We are supposed to be good stewards of the land, not destroying it! We are borrowing it from future generations and we should be ashamed at what has been allowed to happen. We are in the midst of a climate crisis that will take generations to undo.

Please, I'm begging you to make the current moratorium on oil and gas development in Boulder County a permanent moratorium, for perpetuity.

Respectfully yours,

*Valorie Guanella Erion*



**From:** [joybarrett@juno.com](mailto:joybarrett@juno.com)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Cc:** [joybarrett@juno.com](mailto:joybarrett@juno.com)  
**Subject:** Please adopt strict protections from oil and gas development  
**Date:** Tuesday, December 01, 2020 12:26:15 PM

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Dear Boulder County Commissioners and other staff working on oil & gas development,

As a Ph.D. drinking water and water quality professional, I strongly urge you to assure that the County institutionalizes strict public health and environmental protections for oil and gas development. The entire state has been determined to be experiencing some level of drought. Development of each new fracking well uses between 2 and 12 million gallons of water and returns contaminated water to the aquifer. While there are so many other reasons to regulate and limit hydraulic fracturing – including climate impacts, air pollution health effects, and habitat fragmentation and destruction – I want to focus briefly on quality and quantity of our water resources.

Please mandate the following:

- Modeling of water quality impacts (per Section 12-900 D.8.b. of the Land Use Code), and increase the radius in which water resources are included for testing;
- “Plans for recycling or reuse of all water used or produced by the oil and gas operations” (per Section 12-1100 D.5);
- No oil and gas development in floodplains;
- Requirement for closed-loop (pitless) drilling systems, which will facilitate re-use of produced water (per Section 12-1100);
- Continuous monitoring of leaks; and
- A minimum of 2,500’ setbacks from all water sources, as well as occupied buildings, recreation areas, and open space land.

Thank you for your consideration of this matter, which is so crucial to public and environmental health in Boulder County.

Sincerely,

Joy Barrett, Ph.D.  
611 Concord Avenue  
Boulder, CO 80304  
(720) 635-0515  
[joybarrett@juno.com](mailto:joybarrett@juno.com)

**From:** [Deborah McNamara](#)  
**To:** [Boulder County Oil and Gas Comment](#); [Jones, Elise](#); [Jones, Matt](#); [Gardner, Deb](#)  
**Cc:** [Micah Parkin](#); [Leslie Weise](#); [Gabrielle Katz Heatherwood](#); [Amy Allen](#); [Giselle Herzfeld](#)  
**Subject:** Additional Materials for Review re: Article 12 & Tuesday's hearing  
**Date:** Tuesday, December 01, 2020 1:02:17 PM

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Hello Commissioners Jones, Jones and Gardner,

In addition to the previous email sent including expert testimony from the COGCC rulemaking process (included again below for your reference), I'm also submitting the below scientific research that supports not only the appropriate setback distance of greater than 2,000 feet, but also the strongest regulations to protect public health, safety and our environment.

350 Colorado submits this for the record to aid the Commissioners and Staff in enacting the most protective regulations with strong scientific support from research conducted by a diverse set of scientists and institutions.

Please [find here 9 witnesses' testimony for 3 parties](#) — 350 Colorado, The Lookout Alliance and Colorado Physicians for Social Responsibility — for the Mission Change Rulemaking 200-600 series. [Here are the corresponding witnesses' exhibits](#). A full list of all of our 3 parties' exhibits is [here](#).

Thank you so much for your attention to this supporting evidence and for your work on the regulations,

Deborah McNamara

----- Forwarded message -----

From: **Deborah McNamara** <[campaigns@350colorado.org](mailto:campaigns@350colorado.org)>  
Date: Sun, Nov 29, 2020 at 10:44 PM  
Subject: Materials for Review re: Article 12 & Tuesday's hearing  
To: <[commissioners@bouldercounty.org](mailto:commissioners@bouldercounty.org)>

Dear Boulder County Commissioners,

I'm writing on behalf of a coalition of organizations calling for a ban on fracking in Boulder County, and urging you to pass the strongest possible regulations on oil and gas operations as a backstop protection to any potential legal challenge to a ban. Over 50 organizations and businesses representing over 130,000 Boulder County residents have signed on in support of a ban on fracking in Boulder County. Thank you for the opportunity to share materials for review.

**Below you will find video clips from recent expert testimony offered during the Colorado Oil and Gas Conservation Commission Rulemaking process highlighting a number of our concerns relative to oil and gas development and the many risks it poses to our county. Please consider in your decision-making process, paying particular attention to the testimony in the 600 series calling for 2,500**

**foot setbacks.**

The following clips highlight expert testimony presented to the Colorado Oil and Gas Conservation Commission during the 2020 Mission Change 200-600 series Rulemaking process as well as the 900 series. Thank you so much for your time and attention to these important issues.

**200 Series: Testimony with expert witness Dr. Anthony Ingraffea on the financial state of the Oil & Gas Fracking Industry** and action needed to protect CO taxpayers' from getting left holding the bag as a growing number of frackers go bankrupt. [You can view expert testimony here.](#)

**300 Series: Testimony with expert witnesses Sandra Steingraber, Lisa McKenzie, Robert Howarth, and Kathryn Maicula** presented as part of the COGCC 300 series rulemaking on behalf of 350 Colorado, PSR Colorado, The Lookout Alliance, Wild Earth Guardians and Colorado Environmental Advocates. [You can view expert testimony here.](#) **\*Begin at 5:54**

**600 Series: Testimony with expert witness Dr. Ned Ketyer, calling for 2500' setbacks between fracking and occupied buildings.** [You can view expert testimony here.](#)

**900 Series: Testimony on fracking and radioactivity with investigative journalist Justin Nobel.** To learn more about the issue, read [this report from Harvard Study about the radioactivity from fracking.](#) You can listen to the brief presentation delivered to the [COGCC for the 900 series rulemaking here.](#)

With gratitude for your time and attention,

Deborah McNamara

--

Deborah McNamara  
[350 Colorado](#), Campaign Director  
720.400.3739

Follow [350 Colorado on Facebook](#)

**From:** [Steve Spry](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** Ban Fracking  
**Date:** Tuesday, December 01, 2020 1:07:32 PM

---

Dear Commissioners,

Thanks you for your efforts to date regarding protecting the public from air pollution related to oil and gas development. The research documenting the problem is overwhelming; much more needs to be done.

I write to encourage you to ban fracking completely. At the least, 2500 foot setbacks are a minimum, but do not fully address the problem.

In addition to banning fracking, I encourage you to pass the strictest rules possible relating to other harmful aspects of oil and gas development that you have heard many times: High water usage and pollution; flaring; financial assurances for monitoring , maintenance and closure; and bonding for those responsibilities.

The whole industry needs to be shut done, and other more sustainable options developed ASAP, which will create jobs for those lost in the transition.

Please think not only of our current neighbors, friends and loved ones, but also of future generations, who need your bold wisdom TODAY.

Thank you,

Steve Spry

199 Broken Fence Rd.

Boulder, CO

**From:** [Leslie Weise](#)  
**To:** [Jones, Elise](#); [Jones, Matt](#); [Gardner, Deb](#)  
**Cc:** [Boulder County Oil and Gas Comment](#); [Micah Parkin](#); [Amy Allen](#); [Gabrielle Katz Heatherwood](#); [Deborah McNamara](#); [Giselle Herzfeld](#); [Sanchez, Kimberly](#)  
**Subject:** Specific Feedback for Commissioners re Boulder County Oil and Gas Regulations  
**Date:** Tuesday, December 01, 2020 1:26:24 PM  
**Attachments:** [Commissioners Oil Gas Regs Dec 1 2020f.pdf](#)

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Dear Commissioners Jones, Jones and Gardner,  
Attached please find specific comments we are hopeful you will closely consider in your research and deliberations of the updates to county oil and gas regulations. We represent concerned community members who reside in Boulder County, and who also actively participate in local and statewide organizations seeking to ensure a healthy environment and climate, including 350 Colorado and The Lookout Alliance.

Please let us know if we can provide any additional supporting information or answer any questions.

Thank you.  
Leslie Weise  
Amy Allen  
Deborah McNamara  
Gabrielle Katz

December 1, 2020

**Dear Commissioners Jones, Jones and Gardner:**

We represent ourselves as Boulder County residents, as friends and community members, and as representatives of local and statewide organizations leading the fight against climate change and against the destructive effects of oil and gas drilling, including 350 Colorado and the Lookout Alliance. We have taken time to read the draft oil and gas regulations for the county, and we would like for you to consider the following important modifications. For certain topics, we have provided scientific references that support these edits and are happy to provide additional support for any of these topics upon request. We are also available to answer any questions you might have concerning these changes. Our contact information is at the bottom of this note.

**I. Setback Provisions Should Be Strengthened.**

The setbacks included in Section 12-1000 P should be expanded both in distance and in scope. A wealth of scientific study supports a larger setback beyond 2000 feet to protect public health, safety and welfare and the environment. Additionally, in 2018, Boulder county residents overwhelmingly voted to support a 2500 foot setback (by approximately 70%). Modifications to the current proposed 2000 foot setback that include the greater distance, and further protect the county's residents, workers and its precious water supplies and open space are included below. The underlined areas represent modifications to the current proposed regulations.

**12-1000 P. Setback from Dwellings, Educational Facilities and Child Care Centers.**

1. A Well Pad at an oil and gas facility must be located a minimum of 2,500 feet from an existing Dwelling and related residential uses, as measured from the perimeter of, or any actual or potential emitting source of pollutants or emissions from, the Well Pad to the closest residential use related to the Dwelling.
2. A Well Pad at an oil and gas facility must be located a minimum of 2,500 feet from an Educational Facility or licensed Child Care Center, as measured from the perimeter of, or any actual or potential emitting source of pollutants or emissions from, the Well Pad to the closest use related to the Facility or Center including playgrounds, related structures or parking lots.;

No exceptions to the setback requirement of Section P may be granted.

[Add a new section P2 (renumber) that directly follows section P, as follows:]

**P2. Setback from Occupied Structures, Open Space and Water Sources.**

1. A Well Pad at an oil and gas facility must be located a minimum of 2,500 feet from an existing Occupied Structure, being an office, retail or other work, recreational or other type building of commerce having one or more persons occupying the structure on average at least eight hours per day, five days per week, as measured from the perimeter of, or any actual or potential emitting source of pollutants or emissions from, the Well Pad to the closest use related to the Occupied Structure including parking lots associated with the Occupied Structure;

2. A Well Pad at an oil and gas facility must be located a minimum of 2,500 feet from existing Open Space land, as measured from the perimeter of, or any actual or potential emitting source of pollutants or emissions from, the Well Pad to the Open Space border;

3. A Well Pad at an oil and gas facility must be located a minimum of 2,500 feet from an existing Water Source, as measured from the perimeter of, or any actual or potential emitting source of pollutants or emissions from, the Well Pad to the closest use related to the Water Source border;

An Applicant may apply for an exception to the setback requirements of Section P2 (but no exception may be permitted under Section P) if it can be shown that no emissions or pollutants will be emitted from the facility and operations associated with the application for permit within the setback distance during the entirety of the drilling operations through reclamation.

**We believe strengthened and extended setbacks are legally defensible. Some highlights from the vast and growing amount of scientific support for the need for setback protections from oil and gas operations beyond 2000 feet (and at least 2500 feet) are as follows:**

- One study of note from Lisa McKenzie cites increased risk of congenital heart defects among children born to women living near oil and gas operations in Colorado, with the **risks increasing with the density of oil and gas activities within a 10-mile radius;**
- Another study from Fall of 2018 conducted in PA by Elaine Hill found reduced cognitive performance in infants born to mothers living within **8,500 ft. of a fracking well.**
- A **2017 study based on a review of existing scientific literature by Nicole Wong (2017) concluded that, “a 2,500-foot setback recommendation is on the lower end of the range of distances where research has determined harmful health and quality of life impacts of toxic emissions and exposures.”**
- A marginal increase in fracking-related contaminants in groundwater found at water intake locations within a distance of 0.5 km from a fracking well was found in a 2017 study ([Hill & Ma](#), summarized [here](#)).
- [The STAND LA literature review identifies a study from Colorado in 2014](#) identifying endocrine-disrupting chemicals in water sources within 1 mile of a spill from fracking operations.

**II. Specific sections of the draft rules are currently written as discretionary and allowable, that should be strengthened to make mandatory, including the following provisions:**

- Prohibitions on flaring (Section 12-1100 D6) and venting. (Section 12-1100 D7)
- Requirement for closed loop “pitless” drilling system. (Section 12-1100 D5)
- Requirement for continuous air quality monitoring. (Section 12-1100 D2) and water quality monitoring (Section 12-1100 I1)
- Requirement for leak detection and repair program. (Section 12-1100 D3)
- Requirement for the use of pipelines to transport all gas and fluid materials. (Section 12-1100 E)

**III. The definition of a “water source” should be expanded.**

At a minimum, the county should expand the definition of “water sources” in Article 12, to include an “underground source of drinking water,” as defined in the Safe Drinking Water Act. Although this source is found beneath the ground level surface, drinking water for residents and wildlife and agriculture without doubt affects the land use of the county, and its purity is of utmost importance.

### **Underground Source of Drinking Water**

An Underground Source of Drinking Water (USDW) as defined in Title 40, Code of Federal Regulations (40 CFR), Section 144.3 is an aquifer or part of an aquifer which:

supplies any public water system, or contains a sufficient quantity of ground water to supply a public water system and currently supplies drinking water for human consumption or contains fewer than 10,000 milligrams/liter of Total Dissolved Solids (TDS)

#### **IV. Applicants for oil and gas permitting should be required to obtain county approval before seeking surface-use agreements with landowners.**

Section 12-800 Part C, presently recommends, but does not require this. However, in order for the County to conduct a thorough assessment without undue influence an operator might be able to assert over a homeowner (through financial or other persuasion tactics), we recommend the following modification (emphasis added in underline):

FROM:

“To avoid inconsistency, the County recommends that agreements with landowners related to the proposed oil and gas facility or oil and gas operation not be finalized until the Applicant has completed Special Review under this Article, at which time the impacts related to the proposed siting will be analyzed.”

TO:

“To avoid inconsistency, agreements with landowners related to the proposed oil and gas facility or oil and gas operation should not be finalized until the Applicant has completed Special Review under this Article, so that the impacts related to the proposed siting will be thoroughly analyzed.”

#### **V. The cumulative impacts section allows for several categories that warrant strengthened protections.**

Finally, and perhaps most importantly, the draft regulations do not go far enough to protect public health, safety, welfare and the environment as required by SB-181, in particular as it relates to the cumulative impacts that would result from increased oil and gas drilling. SB-181 states affirmatively that:

Oil and gas operations shall be regulated “in a reasonable manner **to protect and minimize adverse impacts to public health, safety, and welfare, the environment, and wildlife resources** and shall **protect against adverse environmental impacts on any air, water, soil, or biological resource** resulting from oil and gas operations.” SB-181 Section 12, §34-60-106 (2.5)(a).

Specifically, Section 12-1000 pertaining to cumulative impacts seems to be broken down into three categories of protection, as follows:

- a. “Default-Allowed”. In particular, of the categories currently listed A – FF, there are 5 categories that are seemingly written to have little to no protection, i.e. “default-allowed” under the draft regulations: Flood Plains, Geologic & Natural Hazards, Drainage, Noise,



**Electrification.** For example, a well pad could be allowed in a flood plain if “there is no way to avoid the floodplain, no other sites can be reasonably used, or if reasonably necessary to avoid significant adverse impacts to public health, safety, welfare or the environment.” Why would the county allow a drilling site to be located in a flood plain or geologic hazard region? Why would drainage of toxic waste be permitted in any of the County’s drainage pathways? These should all be strengthened so that these scenarios are not allowed unless no emissions, pollution or adverse impacts will result, and the burden for demonstrating that is on the applicant.

b. Intermediate Protection. In addition, there are many categories that fall under the intermediate protection of the requirement of the need to “Avoid, Minimize, and Mitigate”: **Methane**; Agricultural Land; Cultural Historic Resources; Emergency prevention and response; Flood Plains; Land Disturbances; Lighting; **Water bodies, Riparian areas, Wetlands**; Pipeline Routing; Scenic Attributes and Rural Character; Soil; Surrounding Land Uses; Waste / Storage (however injection wells are prohibited); **Water Quality**; Wildlife

c. Highest Protection. Finally, there are some categories that seemingly have the highest protection, i.e. default “not-allowed” because of the undisputed harms and necessary protections therefrom: Ozone attainment, Water Use, **Financial Assurances**, Dust, Odor, Recreational Activity, Revegetation, Safety, **Setbacks** (certain categories, see section I, above), Transportation.

Recommendations for improvement:

Of these categories, those that are bolded: **Electrification; Methane; Water Bodies, Riparian Areas, Wetlands; Water Quality**, should be moved from low and intermediate protections, to a variation of the highest protection category “c”, where allowance may be permitted through a request for exception by the Applicant, which may only be granted if it can be shown that no emissions or pollution, and no adverse impacts will result.

Specifically, additional methane emissions, a potent greenhouse gas, must not be permitted during the climate crisis while governments should be mandating that greenhouse gas emissions must be decreasing.

Additionally, as mentioned above, Electrification should be required at all operations through reclamation, and not be subject to the “practical” limitations of the operator. Strict adherence to the County’s climate goals must be emphasized in every are of these and other county regulations, particularly how this and other categories of heavy industrial operations will fuel their operations.

Finally, our precious water supplies and bodies must be treated with the highest protection, and operators must prove that no pollution is being added to these water bodies.

The other four categories in section “a” should also be strengthened so that the default is “not-allowed” unless an exception is granted upon a showing of hardship, and that no new emissions will result. For example, why would the county allow a drilling site to be located in a flood plain at a natural or geological hazard location? This section should be rewritten so that the default is not allowed, unless an exception is applied for and extraordinary circumstances for some reason might allow for the site to be there without harm caused or potential for injury. Electrification should be moved to an even higher protection category C, where the County requires Electrification using renewable energy is required at oil and gas operations, unless a specific hardship / impossibility can be proven by the applicant. Indeed, the County should be moving to require this of all industrial operations in the County, so that oil and gas cannot assert they are being discriminated against.

And finally, the Financial Assurances provision 12-1000.F should be expanded to include “through reclamation”, and not simply “through the lifetime of the oil and gas operations”. Similarly, Section 12-900.A.6. (and any other mention of Financial Assurances) should be extended from how it is presently drafted, to only include “the lifetime of the oil and gas facility”, through to reclamation. It should be very clear to operators that Boulder County taxpayers should not be left to pay for clean up of their operations, as so often happens when many firms file for bankruptcy and abandon their responsibilities after the financial rewards for drilling have depleted.

Thank you for consideration of these important recommendations and modifications.

If you haven’t already read [this editorial](#) published this week in support of these changes (written by one of the contributors to this letter, Deb McNamara), please do so. Many other letters to editors have also been published recently and over the past several months in support of the strongest regulations possible. Please consider their comments, in addition to the pleas of the students of Niwot High School in [this video](#), made in sincerity and earnest for your consideration.

Amy Allen, Boulder  
Gabrielle Katz, Boulder  
Deborah McNamara, Boulder  
Leslie Weise, unincorporated Boulder County

**<sup>i</sup> Sources:**

1. McKenzie, L., et al., “Birth Outcomes and Maternal Residential Proximity to Natural Gas Development in Rural Colorado”, April 2014, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3984231/>
2. McKenzie, L., et al., “Congenital heart defects and intensity of oil and gas well site activities in early pregnancy,” November 2019, <https://www.sciencedirect.com/science/article/pii/S0160412019315429?via%3Dihub>
3. Hill, E., “Shale gas development and infant health: Evidence from Pennsylvania”, September 2018, <https://www.sciencedirect.com/science/article/abs/pii/S0167629617304174>
4. <https://journalistsresource.org/studies/environment/energy/fracking-groundwater-poison-shale-gas-oil/>
5. [https://www.stand.ia/uploads/5/3/9/0/53904099/2500\\_literature\\_review\\_report-final\\_jul13.pdf](https://www.stand.ia/uploads/5/3/9/0/53904099/2500_literature_review_report-final_jul13.pdf)
6. <https://www3.epa.gov/region1/eco/drinkwater/terms.html>

<https://www.dailycamera.com/2020/11/26/guest-opinion-deborah-mcnamara-now-is-the-time-for-2500-food-oil-and-gas-setbacks-in-boulder-county/?fbclid=IwAR2LrouJYVWf05M-AvoEfJ3v46Kgvj9nHAoxvnWuytUcnYgR214bWAhOyt0>

<https://youtu.be/srSUEOmgTHM>

**From:** [billhogrewe@gmail.com](mailto:billhogrewe@gmail.com)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** Please mandate strict water protections from oil and gas development  
**Date:** Tuesday, December 01, 2020 1:37:28 PM

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Dear Boulder County Commissioners,

I am an environmental engineer whose life's work has dealt with environmental and public health protection. As such, I strongly urge you to adopt strict protections for oil and gas development, including protections that pertain to our state's precious water resources. As you know, all of Colorado has been determined to be experiencing some level of drought. Fracking well development uses millions of gallons of water which must then be treated before being safe for consumption by humans or livestock. (This treatment is often at the expense of public utilities and their customers.) To assure protection of Boulder County's water resource quality and quantity, please mandate the following:

- "Plans for recycling or reuse of all water used or produced by the oil and gas operations" (per Section 12-900 D.7.e.i. of the Land Use Code);
- Requirement for closed-loop "pitless" drilling systems, which will facilitate re-use of produced water (per Section 12-1100);
- Continuous monitoring of leaks;
- Modeling of water quality impacts (per Section 12-900 D.8.b.), and increased radius in which water resources are included for testing;
- No oil and gas development in floodplains; and
- A minimum setback of 2,500' from all water sources, as well as occupied buildings, recreation areas, and open space land.

Thank you for your consideration of this matter.

Sincerely,

William (Bill) Hogrewe, Ph.D., P.E.  
Boulder, CO

**From:** [Shari Leyshon](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** No new wells in Boulder County  
**Date:** Tuesday, December 01, 2020 2:42:38 PM

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Dear sitting Commissioners Jones, Gardner and Jones , and incoming Commissioners Loachim and Levy:

Enact a long term moratorium on fracking and seismic exploration, past the existing December 31st sunset. . No new wells can be created and still protect health and safety.

With new regulations coming in as a result of statewide orders, and new Commissioners about to take office in Boulder County, a moratorium continues to make sense. Indeed, no new wells or testing should ensue in Boulder County, at all. And while, there may be legal challenges to a moratorium, existing laws are often unjust, as is the case when human health due to air pollution and climate damage with cascading consequences , are on the line.

Indeed, over seventy per cent of Boulder County voters stand against this injustice. I want you to imagine them standing behind me as you read these words. Over seventy per cent of Boulder voters, speak loudly about the unjust nature of the damage created by fracking and of legal frameworks when voting for a 2500 ft set back from human habitation. When a law creates harm, it must be resisted and changed. And that means resistance by our elected officials in order to do your solemn duty to protect our health and safety.

Boulder's United States Congressman has signed a resolution calling for a declaration of a climate emergency emanating from the United States. Our County seat is suing oil companies for knowing about climate damage from oil and gas, but proceeding with it any way. I ask, how is capitulating any different? Jeffrey Sachs, policy analyst from Columbia University has stated that policy inaction on climate is a crime against humanity. A Harvard study states that we have five years only to stop the most devastating health impacts of climate change, as we know in Boulder with climate change induced fires bearing down on us. What is required is political will.

Boulder County citizens possess that will. Enact continuing moratoriums, and in the end, we must enact a ban on fracking. I require my elected officials to protect our health and safety .

Sincerely and urgently,

Shari N Leyshon  
Truman Scholar  
942 Pine Street  
Boulder, CO 80302

[Sent from Yahoo Mail for iPad](#)

**From:** [Saia, Simon](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Date:** Tuesday, December 01, 2020 3:29:43 PM

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Hello my name is Simon Saia I live at 8312 Greenwood Drive and I want to voice my concerns on the current health of our community in regards to oil and natural gas and in particular fracking. I myself live within four miles of the proposed Crestone CDP site, as well as 1300 kids at my high school and 14,000 in the surrounding Niwot and Gunbarrel community, so the issue of fracking is personal to me and many others, and Like many others across Colorado have that already felt the impacts of fracking. The Crestone CDP site would be the biggest site in Colorado, over 140 wells, and bringing with it severe health consequences to all those who I just listed. We've seen and know the science of these health effects from fracking. We see the encroaching fossil fuels industry constructing sell pads in people's backyards, and schools, elevated benzene, toluene, and VOCs to these people without regard nor a care to the destruction of their livelihoods. Most of these people are of color or low income, we can see fossil fuels industries are also contributing to racial injustice in our communities.

My question is why should we allow for something that obviously severely impacts the health of our people to continue, and will continue to do so if not stopped. Not to mention the climate crisis that we face today, we cannot afford to put more Coloradoans at risk, nor can we continue to fund the fossil fuels industry in this time of a climate crisis, while we are already falling behind on emission objectives. We must make a transition to renewable energy and a sustainable way of living here in Colorado to achieve these goals. We must have a ban on fracking and ALL new oil and gas installations in Colorado for the sake of our people, and our futures. In a renewable energy transition jobs will not just be lost for those working in the fossil fuels industry but created in the renewable energy industry with solar, wind, or geothermal whatever must the state do. We must save ourselves, our economy, and our dignity, but we need the action from those who have the power to act on our behalf as people of Colorado.

The first step is a ban on all fracking and new oil and natural gas installations in Colorado. This is our future.

Thank you

Dear Commissioners,

Thank you for your efforts to prioritize public health, safety, and welfare in drafting and revising Article 12. I will offer several suggestions for how Article 12 can be strengthened in service of these goals.

The scope and magnitude of the setback requirement should be strengthened. An analysis of numerous peer-reviewed studies by Wong in 2017<sup>1</sup> concluded that a 2,500 ft setback “is on the lower end of the range of distances where research has determined harmful health and quality of life impacts of toxic emissions and exposures.” The CDPHE study (Human Health Risk Assessment for Oil and Gas Operations in Colorado, 2019) that is referenced as a basis for the COGCC’s setback requirement identified health impacts at a distance of 2,000 ft from oil and gas operations, and did not consider a larger radius, nor potential interactive effects from multiple well pads within that radius. I recommend that the setback in Article 12 Section 12-1000V be extended to 2,500 ft, and that the locations from which a setback is required be expanded to include all occupied buildings (and not limited to dwellings, schools, and childcare centers), water sources, and open space. The setback should be defined such that it is measured from “the perimeter of, or any actual or potential emitting source of pollutants or emissions from, the Well Pad” to the closest use related to the residential dwelling, occupied building (including parking lots), school (including playgrounds), and boundary of the open space or water source.

A 2017 study by Hill & Ma<sup>2</sup> identified an increase in fracking-related contaminants in groundwater at “water intake locations” within a distance of 0.5 km (about 1,640 ft) from a fracking well, and Kassotis, et al. in Colorado in 2014<sup>3</sup> identified endocrine-disrupting chemicals in water sources within 1 mile of a spill from fracking operations. Additionally, the definition of water sources (which currently reads “water bodies that supply domestic, agricultural or municipal uses, water wells that are registered with Colorado Division of Water Resources, including household, domestic, livestock, irrigation, municipal/public and commercial wells, permitted or adjudicated springs, and monitoring wells other than monitoring wells that are drilled for the purpose of monitoring water quality changes that are not associated with oil and gas activities”) should be expanded to include aquifers (the definition of an “underground source of drinking water”, which addresses potential future sources of drinking water as well, from the Safe Drinking Water Act, could be used as a protected category, as well as those already included in the definition of “water sources” in Article 12. ).

As you know, Boulder County residents pay over \$4 million annually in property taxes alone to support acquisitions of open space, and the county’s open space lands are a precious home for wildlife, as well as a destination for outdoor recreation. An extended setback requirement, in terms of both distance and protected locations, is especially important given the numerous potential exceptions in the COGCC’s setback requirement, including for drilling as part of an approved CDP.

<sup>1</sup> Wong, N. “Existing scientific literature on setback distances from oil and gas development sites”, June 2017, [https://www.stand.la/uploads/5/3/9/0/53904099/2500\\_literature\\_review\\_report-final\\_jul13.pdf](https://www.stand.la/uploads/5/3/9/0/53904099/2500_literature_review_report-final_jul13.pdf)

<sup>2</sup> Hill, Elaine, and Lala Ma. 2017. "Shale Gas Development and Drinking Water Quality." *American Economic Review*, 107 (5): 522-25. <https://www.aeaweb.org/articles?id=10.1257/aer.p20171133>

<sup>3</sup> Kassotis, C. D., Tillitt, D. E., Davis, J. W., Hormann, A. M., & Nagel, S. C. (2014). Estrogen and androgen receptor activities of hydraulic fracturing chemicals and surface and ground water in a drilling-dense region. *Endocrinology*, 155(3), 897-907

If this most robust setback requirement is deemed to be infeasible, an alternative is to permit exceptions to the setback requirements for open space, water sources, and occupied buildings (other than dwellings and schools and childcare), if it can be shown that no emissions or pollutants will be emitted from the facility and operations associated with the application for permit within the setback distance during the entirety of the drilling operations through reclamation.

I recommend that all of the discretionary conditions listed in Section 12-1100 (D-HH) be implemented as mandatory. If all of these conditions cannot be implemented as mandatory, I recommend prioritizing prohibitions on venting (12-1100 D7) or flaring (12-1100 D6) of natural gas, requirements for ongoing air (12-1100 D2) and water quality monitoring (12-1100 I 1) and a leak detection and repair program (12-1100 D3), requirements for the use of pipelines to transport all gas and fluid materials (12-1100 E), which reduces air emissions, and the requirement for closed loop “pitless” drilling systems, to facilitate re-use of produced water (12-1100 D5).

The 900 Series rules recently adopted by the COGCC prohibit routine venting and flaring for new wells permitted after Jan 15, 2021, with exceptions for maintenance and completion operations. However, Boulder County should adopt its own prohibition, for the greatest protection of its residents, given that the COGCC rules could be amended in the future. Where these conditions may conflict (such as the prohibition on venting and flaring, and the requirement for minimum efficiency of flares and a requirement for the use of pipelines and the hydrocarbon control requirement for tanks), I recommend implementing the more protective requirement as mandatory. Making these requirements mandatory is important to ensuring future protection of Boulder County residents, as the make-up of the Board of County Commissioners changes, and would give residents a much-needed sense of certainty regarding how the BOCC will address permit applications.

As you are well aware, controlling emissions of methane is essential. Methane has 86 times the global warming potential of CO<sub>2</sub> over a 20-year time period, and a recent study published in Nature<sup>4</sup> concluded that estimates of anthropogenic methane emissions, to which oil and gas operations are a prime contributor, are likely 20-40% higher than previously thought. Preliminary reports from NOAA<sup>5</sup> for atmospheric methane levels in 2019 indicate that the year from 2018 to 2019 showed the largest annual increase in atmospheric methane since 2012.

Another area of concern is consideration of cumulative impacts, in terms of pollution of water and air. The preamble in Section 12-1000 and Sec 12-1300(D) refer to consideration of cumulative impacts in terms of land use. (Sec 12-1000 states that “The Board will determine whether the proposed oil and gas facility or operation, individually and in light of the cumulative impacts of surrounding land uses, complies with these Special Review standards.”) Section 12-1000A states that “Oil and gas facilities and operations will not compromise the attainment of ozone standards for the Denver Metro/North Front Range ozone nonattainment area as established by the US Environmental Protection Agency. Oil and gas facilities and operations will not contribute particulate matter to the air in a manner that endangers public health.” This language should be revised to address cumulative impacts from existing air and water pollution and global ghg emissions, beyond land use. This could be addressed through a requirement that fracking operations result in no direct emissions of air and water pollutants, including ozone

<sup>4</sup> Hmiel, B., et al., “Preindustrial CH<sub>4</sub> indicates greater anthropogenic fossil CH<sub>4</sub> emissions,” February 2020.

<sup>5</sup> Ed Dlugokencky, NOAA/ESRL, ([www.esrl.noaa.gov/gmd/ccgg/trends\\_ch4/](http://www.esrl.noaa.gov/gmd/ccgg/trends_ch4/))

precursors, or ghgs, or a requirement for no net emissions. Section 12-1000Q, which states that “Operations will be electrified to the highest degree possible. Renewable energy is preferred,” could be strengthened to require electrification for all on-site operations, using renewable generation.

Article 12 should prohibit permitting while the Front Range remains in non-attainment of the National Ambient Air Quality Standard (NAAQS) standards for ozone and prohibit emissions of air toxics such as benzene. A robust body of evidence supports this, including work funded by Boulder County that has demonstrated that Boulder County’s air quality is adversely affected by oil and gas operations in Weld County, and that oil and gas operations are a significant contributor to excessive levels of ozone on the Front Range<sup>6</sup>. In Article 12, a threshold for allowable emissions of particulate matter should be defined based on the ample body of scientific evidence assessing the effects of particulate matter on public health.

Sincerely,

Amy Allen

[amyallen@alumni.stanford.edu](mailto:amyallen@alumni.stanford.edu)

217-220-1621

2935 College Ave, #123

Boulder, CO, 80303

<sup>6</sup> CIRES, “Oil and Gas Emissions a Major Contributor to Bad Ozone Days”, 11/3/17, <https://cires.colorado.edu/news/oil-and-gas-emissions-major-contributor-bad-ozone-days>



**From:** [Fiona Nugent](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** Statement: Stop the Crestone Peak Resources Project  
**Date:** Tuesday, December 01, 2020 3:43:38 PM

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To the County Commissioners

I am a senior at Niwot High School and a member of our Environmental Club. I'm writing to strongly urge you to cancel the Crestone Peak Resources Project and ban fracking in our county.

To Commissioner Gardner: You are a former chair and treasurer of the Boulder County Democratic Party, an organization with whom I'm volunteering.

To Commissioner Elise Jones: You have an impressive history of fighting for land conservation and preservation, including as executive director for the Colorado Environmental Coalition for 13 years.

To Commissioner Matt Jones: Your years in the Colorado House brought important environmental legislation. As a resident of district 3, I am a constituent of yours.

My priority is to combat the climate crisis. Clearly, the same can be said for all three of you. I don't need to convince you that fracking will damage our air quality, our water quality, and the health of the public. I also don't need to convince you of the awesome beauty of Boulder County and the joy that that beauty inspires.

We are on the same team.

So, please, for everything that we share, do not let the Crestone Peak Resources Project continue. Please ban fracking in our county. The residents of Boulder County will support you.

There's a reason that Gen Z'ers are rallying around this issue with a vengeance. Climate change is going to define our entire lives. It will define where we can live, what we can eat, whether we can have children.

This is our future.

Thank you, Fiona Nugent

8178 Dry Creek Circle  
Niwot, Colorado  
80503

**From:** [Hazel McCoy](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** Public Comment Dec 1: Please strengthen O&G regulations  
**Date:** Tuesday, December 01, 2020 3:56:58 PM

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The updated draft offers a starting point for enhanced county authority, but is in need of improvement in key areas to ensure protection of public health, the environment, and the climate. For example, the draft rules do not prohibit fracking on open space, and only provide a 2,000-foot setback from homes.

A large body of academic literature has characterized serious effects on human health and life expectancy from air pollution, including a recent study that identified air pollution as a contributor to 8.8 million deaths annually, identifying it as “one of the main global health risks.” Additionally, exposure to air pollution has been linked to higher rates of mortality from viral infectious diseases. In light of this evidence, and the serious threats posed by fracking to the stability of our climate, the only responsible course of action is for Boulder County to ban fracking and impose the most stringent regulations possible on oil and gas extraction.

Setbacks: Numerous studies have linked fracking to harm to human health, including an increased risk of congenital heart defects among children born to women living near oil and gas operations in Colorado, with the risks increasing with the density of oil and gas activities within a 10-mile radius; and reduced cognitive performance has been identified in infants born to mothers living within 8,500 ft. of a fracking well. Based on a review of existing scientific literature, Wong (2017) concluded that, “a 2,500-foot setback recommendation is on the lower end of the range of distances where research has determined harmful health and quality of life impacts of toxic emissions and exposures.” Therefore, Article 12 should be revised to require a setback of at least 2,500 ft. between oil and gas operations and any structure intended for human occupancy, open space, water sources.

SB 19-181 grants local jurisdictions, such as Boulder County, the ability to enact more restrictive regulations. A setback requirement that is more rigorous than the 2,000’ setback (with many potential exceptions) that is present in the regulations likely to be adopted by the COGCC, is essential. The CDPHE study on which the 2,000’ setback requirement is based identified deleterious health effects within 2,000’ of oil and gas operations, and did not consider health effects outside of that radius.

Implement as mandatory all of the discretionary conditions listed in Section 12-1100, including:

Prohibition of venting or flaring of natural gas

Requirement for ongoing water quality monitoring

Requirements for use of “tankless” operations, which reduce air emissions, especially those of VOCs

Continuous monitoring of leaks

Requirement for closed loop “pitless” drilling systems, to facilitate re-use of produced water

Affirmatively protect public health, safety, and welfare, and the environment: Section 12-1000 states that “A proposal meets the standards if it will..., either avoid adverse impacts to public health, safety, and welfare, the environment and wildlife resources or, through imposition of conditions of approval, sufficiently minimize, and mitigate unavoidable impact.”. Oil and gas operations must be required to avoid adverse impacts to public health, safety, and welfare, and the environment and wildlife resources entirely, and not simply minimize impacts.

Capping of old wells as a condition for new permits: If an operator applying for a new permit for oil and gas operations in Boulder County has existing “legacy” wells in the county, the operator should be required to cap them before a permit for new wells is considered.

An operator should be required to obtain county approval before seeking surface-use agreements with landowners. (In Section 12-800 Part C, this is “recommended”, but not required.

Prohibit flaring or venting of natural gas: A recent study published in [Nature](#) concluded that estimates of methane emissions, to which oil and gas operations are a prime contributor, are likely 20-40% higher than previously thought. Preliminary reports from NOAA for atmospheric methane levels in 2019 indicate that the year from 2018 to 2019 showed the largest annual increase in atmospheric methane since 2012.

Prohibit permitting while the Front Range remains in non-attainment of the National Ambient Air Quality Standard (NAAQS) standards for ozone, and prohibit emissions of air toxins such as benzene: Research has demonstrated that Boulder County's air quality is adversely affected by oil and gas.

Ultimately, a countywide ban on fracking is needed to ensure that our land, air and water are protected to protect us now and for future generations. Sincerely, Hazel McCoy



Virus-free. [www.avast.com](https://www.avast.com)

**From:** [Amy Allen](#)  
**To:** [Jones, Elise](#); [Jones, Matt](#); [Gardner, Deb](#)  
**Cc:** [Boulder County Oil and Gas Comment](#)  
**Subject:** Specific feedback re Article 12  
**Date:** Tuesday, December 01, 2020 4:25:17 PM  
**Attachments:** [Article 12 Comments Allen Amy 2020.12.01.pdf](#)

---

Dear Commissioners,

Please find attached specific comments and feedback from me regarding the updates to Article 12. I would be happy to provide copies of any of the scientific studies referenced.

Sincerely,

Amy Allen

[amyallen@alumni.stanford.edu](mailto:amyallen@alumni.stanford.edu)

2935 College, #123

Boulder, CO, 80303

**From:** [Joseph Marr](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Cc:** [J. Joseph Marr MD](#)  
**Subject:** Public Health and Fracking  
**Date:** Tuesday, December 01, 2020 5:00:01 PM

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Fracking is important for energy production until we can replace it with renewable and non-polluting energy. However, there is no reason to allow this industry to compromise the public health of the citizens of Boulder County nor to despoil open areas that cannot be replaced, nor to damage the environment.

Some pertinent data:

- There now are more than 700 studies on the impacts of fracking and more than 80% document risks or actual harm.
- Fracking releases volatile organic compounds. All of these are deleterious and at least one of these, benzene, is carcinogenic. There is no safe exposure level for benzene. It well known to cause acute myelogenous leukemia, especially in children, and is statistically associated with other cancers of the bone marrow – acute and chronic lymphocytic leukemia.
- Among the other noxious compounds released during fracking are toluene, ethylbenzene, and xylene. All four of these, including benzene, can affect the nervous system and are known to cause birth defects and damage the liver, kidneys, and lungs.
- The Colorado Department of Public Health in 2012 showed that persons living less than a half-mile (2680 feet) from a fracking site were at greater risk for neurological and respiratory diseases and congenital birth defects in babies than persons living farther away.

You must insist on a minimum of 2500' setbacks from all occupied buildings, water sources, recreation areas and open space land. The medical evidence for this is very clear. The extra 500 feet are important. Children grow and develop in that space. They live for years in that space and inhale the volatile toxins described above and incur the damage described above. You must insist on a 2,500' set back - 2,000 ' is not enough.

J. Joseph Marr, MD  
14885 Irving St.  
Broomfield, CO 80023

Tel: 970-215-5700

[Email: jjmarrco@yahoo.com](mailto:jjmarrco@yahoo.com)

**From:** [Micah Parkin](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** 350 Boulder County and 350 Colorado statement  
**Date:** Tuesday, December 01, 2020 5:19:09 PM

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Dear Commissioners and Staff,  
[Here is a link to the statement](#) I provided today on behalf of 350 Boulder County and 350 Colorado. We strongly urge you to increase the setback to at least 2500' from any occupied building, water source, recreation area and open space. Open space, wildlife, water, public health and safety, and our global climate must be protected.

Thank you,  
Micah Parkin

--

Micah Parkin  
350 Colorado, Executive Director  
504-258-1247  
[350 Colorado on Facebook](#)  
[www.350Colorado.org](http://www.350Colorado.org)

**From:** [Wufoo](#)  
**To:** [Boulder County Board of Commissioners](#)  
**Subject:** Contact County Commissioners [#1747] - [Name: Moore, Tom] Re: No Fracking in Boulder County  
**Date:** Tuesday, December 01, 2020 6:13:03 PM

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Name *	Tom Moore
Email *	<a href="mailto:mooretr@centurylink.net">mooretr@centurylink.net</a>
Address or General Area (optional)	<input type="checkbox"/> 2830 5th Boulder, CO 80304 United States
Phone Number (optional)	(303) 444-8565
Subject *	No Fracking in Boulder County

Comments, Question or Feedback \*

Dear Commissioners,

I urge you to prohibit hydraulic fracturing for hydrocarbons in our county! There are loads of reasons: 1) the process demands gigantic amounts of fresh water that our state just doesn't have. We seem to be in a prolonged drought and water used in fracking will be lost for higher uses. 2) we need to be cutting our carbon uses for fuel and plastic to alleviate climate change. 3) there are all sorts of toxics brought to the surface in the fracking process. The frackers just won't give us the details of these chemicals (It is proprietary. mmm) So the nature of the poisonings aren't quite clear but we be can be sure that aromatic hydrocarbons like benzene, and naphthalene are involved. 4)These outfits destroy habitat that is already stressed and won't recover easily.

If you can't hold off these environmental rapists:

No oil and gas development in floodplains;

Requirement for closed-loop drilling systems, which will facilitate re-use of produced water;

Continuous monitoring of leaks; and

A minimum of 2,500' setbacks from all water sources, as well as occupied buildings, recreation areas, and open space land.

Tom Moore

2830 5th St

Boulder, 80304

Please check box below \*

☒ I acknowledge receipt of the Open Records Notification



**From:** [Beauvineau, Maya](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** For Our Future, Ban Fracking  
**Date:** Tuesday, December 01, 2020 6:35:45 PM

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County Commissioners,

My name is Maya Beauvineau, I'm a Senior at Niwot High School, and I live at 984 Pine Glade Rd. Nederland, CO.

As an intern with 350 Colorado, I have reviewed the proposed regulations on oil and gas extraction. As stated by the county, "[the] objective ... is to protect public health, safety, welfare, the environment, and wildlife to the maximum extent permitted by law." *To the maximum extent*. To me, this means implementing regulations that, if not in name, in effect, thwart the development of all oil and gas extraction sites in Boulder County.

It is concerning that the regulation process is coming to an end, though the primary goal of prioritizing humans and the environment, is still unattained.

Yesterday, my peers and I released a video to send a message to you and to Colorado: Niwot High School is threatened by what would be CO's largest fracking site. But the reason we demand an end to fracking in Boulder County is so much bigger than that. SB19-181 is more than an opportunity to update oil and gas extraction laws; it is an obligation to create laws that reflect science to protect our health and well-being, to conserve the beautiful environment in which we live, and to save our future. Please watch our video here:

<https://youtu.be/srSUEOmgthM>.

Scientific study supports the conclusion that 2,500 ft setbacks are on the lower end of what constitutes a safe distance from fracking sites. Thus, within the immediate rule-making process, we, the youth of CO, demand 2,500 ft setbacks from open space as well as all land occupied by humans.

Though we list increased setback distance within our demands, our true ask is for an outright ban on fracking. The argument that doing so is too radical is simply invalid. Every new fracking site is established at the expense of our health and the environment's well-being. We should not have to fight to convince our policy makers to enact policy that will determine whether or not we have a future.

This is our future.

Thank you.

**From:** [Ludski-Lee, Joshua](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** Public Comment - Josh Ludski-Lee  
**Date:** Tuesday, December 01, 2020 6:36:16 PM

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Hello, I'm Josh Ludski-Lee, I'm at Niwot High School and I live at 829 Incurigible Cir. I'm sixteen years old.

It's mind-blowing how many people were at the last meeting, are here today, fighting against fracking. Clearly, it matters to us, citizens of Boulder County, and the world. We are battling to keep Boulder's hands clean and make the world a greener place.

Fracking is spreading much like the diseases that it causes. From maps, we can see that Weld county is being pumped full of chemicals that can affect their water supply, their wildlife, their future. Boulder County should be at the environmental forefront of Colorado. We shouldn't give in to fracking now.

The largest fracking site in Colorado is set to be built in Boulder County. With Boulder's name already being tainted by an unclean future, it has an even bigger blow coming - the proposed site is three miles from a school. Niwot High School. These are students we're affecting, poisoning. I am one of those students, my friends make up those students. This is our future.

Colorado is a mountain state, a forest and lake state, and a sunshine state. There are so many opportunities for us to be creating renewable energy, and protecting our state, county, and future. The main drive for fracking is its economic benefits, however, these won't last forever. Renewable energy can. The least we should do is increase setbacks to 2500ft.

County commissioners, today I leave you with a parting thought. Look at all the citizens of Boulder County who are standing up for our home: high school students, middle school students, old and young alike. It's our future, it's all of ours to save. Ban fracking.

Here's a link to the Niwot Environmental Club Video: <https://youtu.be/srSUEOmgHtM>

**From:** [ajmail2011@everyactionadvocacy.com](mailto:ajmail2011@everyactionadvocacy.com) on behalf of [Adam Pastula](#)  
**To:** [Boulder County Board of Commissioners](#)  
**Subject:** Please enact a ban on fracking ASAP, as well as the strongest possible oil & gas regulations.  
**Date:** Tuesday, December 01, 2020 7:23:59 PM

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Dear Board Chair Deb Gardner,

Dear Commissioners,

I write as a Boulder County resident deeply concerned about proposed fracking projects (140 wells) in our county and the resulting threats to air and water quality, public health, wildlife, and the climate. I urge you to enact a ban on fracking in Boulder County as soon as possible to protect our community from the well-documented threats to public health and safety from fracking, and to enact the strongest possible protective regulations as a backstop.

The proposed fracking projects are particularly troubling in the context of the Front Range's "serious" non-attainment status for ozone, and high concentrations of benzene and other VOCs, to which existing oil and gas operations are a significant contributor. Additionally, a recent report of the IPCC calls for a "rapid phase-out of CO2 emissions" largely over the next decade to avert catastrophic global temperature rise.

Despite the recent Longmont decision, a ban on fracking is consistent with the County's efforts to fight climate change, including the declaration of a climate emergency, and ongoing lawsuit against Suncor and Exxon for climate change-related damages. A fracking ban is both a reasonable and necessary action authorized for local governments by SB19-181. A ban is widely supported by Boulder County residents: 70% in recent polling, and the same fraction of voters in the County voted in favor of Proposition 112 in 2018.

I also urge you to enact the strongest possible Article 12 regulations on oil and gas operations as a backstop protection to any potential legal challenge to a ban. I recommend the following points for inclusion in Article 12, based on the updated draft released October 20, 2020:

- Implement mandatory 2500' minimum setbacks with no waivers: Revise Article 12 to extend the minimum setback of oil and gas operations to 2500' from any structure intended for human occupancy, and from open space, recreation areas and all water sources. This is modest considering that research has identified adverse effects on the cognitive performance of infants whose mothers lived within 8,500 feet of oil and gas wells and an increased risk of congenital heart defects among children born to women living near oil and gas operations in Colorado, with the risks increasing with the density of oil and gas activities within a 10-mile radius.

- Cumulative impacts: Article 12 should incorporate a structure for the County to consider the context of our already-degraded air quality and the need for dramatic reductions in greenhouse gas emissions to avert catastrophic consequences from climate change.

- Affirmatively protect public health, safety, and welfare, and the environment: Section 12-1000 states that "A proposal meets the standards if it will...either avoid adverse impacts to public health, safety, and welfare, the environment and wildlife resources or...sufficiently minimize, and mitigate unavoidable impact." Oil and gas operations must be required to avoid adverse impacts to public health, safety, and welfare, and the environment and wildlife resources entirely, and not simply minimize impacts.

- Implement as mandatory all of the discretionary measures that are listed in Section 12-1100. Article 12 should explicitly prohibit venting and flaring and require "tankless" operations, which reduce air emissions. A recent study concluded that pregnant women who lived in proximity to natural gas flaring had a 50% higher chance of giving birth early than those who did not, putting the level of risk on par with that caused by smoking.

However, regulations are no substitute for a permanent ban. We encourage you to direct County staff to begin developing language for a fracking ban in Boulder County. Thank you for your ongoing efforts to prioritize public health and the environment in Boulder County.

Sincerely,

Sincerely,  
Adam Pastula  
8130 Kincross Dr Boulder, CO 80301-4227  
ajmail2011@gmail.com

**From:** [Lily Sykes](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** Public Comment on Fracking  
**Date:** Tuesday, December 01, 2020 9:33:52 PM

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Hello. My name is Lily Sykes, and I live at 362 Blue Mountain Road, Lyons, Colorado. I am a freshman at Niwot High School.

This past fall, it felt as if the entire mountain range was on fire. From my home, you could see the Calwood fire, the Cameron Peak fire, and the East Troublesome fire raging on. While I was lucky enough to remain in my home with no evacuation orders, my experience was just that: lucky. Even though I was allowed to stay home, it was a terrifying experience. However, this is not the only impact that climate change has had on my life. The weather is becoming inconsistent, snowing when the sun should shine and warming up when it should be getting colder. There have been tremendous natural disasters across the globe, including fires, floods, hurricanes, and blizzards. These changes are not random; they are directly correlated to climate change, and therefore air quality.

As a member of the Niwot Environmental Club, it is my responsibility to stand up for the environment, my community, and my future. The largest fracking site in the state is proposed only 3 miles from our school, and it will certainly not allow the current climate situation to improve. This site will expose everyone that attends Niwot, not to mention the surrounding areas, to cancer inducing toxins, deteriorating air quality, an increased risk for heart disease, asthma, and overall health issues. We are being forced to choose between living our lives and living them healthily.

I, along with the Environmental Club at Niwot High School, demand that the Boulder County Commissioners ban fracking in Boulder County. In order to protect our environment, community, and future, you must take actions to ban fracking. It will improve our health, air quality, mental state, community, and environment. You must prioritize our health and immediately transition away from oil and gas mining. We must trust that what will be good for the environment is the best way forward. You have a choice. When making it, please remember one thing.

This is our future.

Lily Sykes  
Environmental Club  
Niwot High School

For more youth voices against fracking, please view this video:  
<https://www.youtube.com/watch?v=srSUEOmgTHM>

**From:** [Tricia Olson](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** Additional Comments Attached  
**Date:** Wednesday, December 02, 2020 6:20:52 AM  
**Attachments:** [Olson-Article12Comments-December2020.pdf](#)

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Dear Boulder County Commissioners and Staff,

Attached are a few more comments on Article 12 based on testimony yesterday.

Thank you for all your hard work on this.

Tricia Olson

December 1, 2020

**Via Electronic Mail:**

Dear Boulder County Commissioners and staff,

Thank you for the opportunity to testify today, for the moratorium and for all the substantial changes to Article 12. I was glad to see you all looking healthy in this year of COVID-19!

I was not able to finish my comments in the allotted two minutes and so would like to summarize and finish them here.

First, I spoke to the County's 2017 statement on oil and gas development on open space and specifically to the first sentence in that statement,

"Oil and gas development is not a permitted use of open space lands under the state sales tax resolutions that provide the funds for acquisition of most open space lands nor is it consistent on open space under the Boulder County Comprehensive Plan."

While the rest of the statement on the website relates to limitations in place before SB 19-181, now you have the ability to regulate siting. Drilling operations should be prohibited on open space as the development is not a permitted use.

Second, I also suggested a greater setback for surface water and prohibiting drilling operations in floodplains. Back-up links are in previous written comments.

Third, I brought up a change made since the Planning Commission Hearing to 12-1400 Inspections Enforcement, F.5. Written Order Suspending the Approval. This stop work order can apply under either emergency conditions or if there are 3 or more fines imposed for serious violations in 6 months. Previously, an operator had to cease activities until the violation or violations were remedied. Under the change, and I hope I'm wrong in my interpretation, with the addition of the word "or" in the last sentence, an operator can instead appeal within 14 days with no actual requirement for operations to cease. If there is a genuine emergency and/or serious violations, the County must have the ability to shut down operations before any appeal.

I would also go further. If a situation warrants, approval should actually be revoked, giving the regulations real teeth and providing a deterrent to violations as a course of business.

It is clear that the County is being cautious regarding its legal options. That is understandable, but there may be lawsuits of some kind anyway, whether from an operator or COGA for any permit denial or, in the case a permit is approved, perhaps from regular people trying to protect their health, safety, and welfare. It's a matter of what is defensible. If I had had the time, I would have agreed with various other speakers, that a 2500' setback IS defensible.

Wishing you all a happy holiday season!

Tricia Olson  
7446 Park Pl, Boulder, CO 80301  
olynmawr@msn.com

**From:** [Molly Walsh](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** Please stop fracking in Boulder County  
**Date:** Wednesday, December 02, 2020 10:54:09 AM

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Hello -

I am a concerned citizen in Niwot, CO and I opposed the development of this fracking site in Boulder County.

"From 350 Colorado: The largest fracking site in the state of Colorado is proposed to be developed only three miles from Niwot High School. Boulder County and Colorado are undergoing regulation update processes to prioritize the health and wellbeing of humans and the environment, as outlined by Senate Bill 19-181. The only way to effectively do this and protect Colorado's future is by banning fracking."

Please watch this video by Niwot students from age ten to eighteen, as they demand that the County Commissioners lead Colorado toward a resilient future by banning fracking in Boulder County.

<https://youtu.be/srSUEOmgTHM>

Thank you,  
Molly Walsh



**From:** [Eric Tussey](#)  
**To:** [Boulder County Board of Commissioners](#)  
**Subject:** Eric Tussey wants to share the file 2020 December 2 County Commissioner letter Radiation Study.docx with you  
**Date:** Wednesday, December 02, 2020 11:12:23 AM

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To view 2020 December 2 County Commissioner letter Radiation Study.docx, [sign in](#) or create an account.

**From:** [Eric Tussey](#)  
**To:** [Boulder County Board of Commissioners](#)  
**Cc:** [Dougherty, Michael](#)  
**Subject:** Harvard Radiation Study 2001 - 2017 - Public Comment follow up - please extend Moratorium  
**Date:** Wednesday, December 02, 2020 11:12:26 AM  
**Attachments:** [pastedImagebase640.png](#)  
[pastedImagebase641.png](#)  
[pastedImagebase642.png](#)  
[2020 December 2 County Commissioner letter Radiation Study.docx](#)

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<!--[if lte mso 15 || CheckWebRef]-->

Eric Tussey has shared a OneDrive for Business file with you. To view it, click the link below.

 [2020 December 2 County Commissioner letter Radiation Study.docx](#)

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<!--[endif]-->

December 2, 2020

Boulder County Commissioners  
1325 Pearl Street  
Boulder, CO 80302

Dear Commissioners.

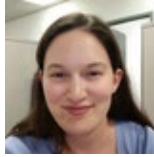
Thank you for listening to Public comments last night. It is good we have some mechanism in place to share feedback and data concerning establishing regulations. I may have sent this information to you earlier, but I wanted to share it now because it is so critical to protect the health of everyone in Boulder County. The Harvard study was mentioned several times in last night's Public comment session. Unconventional Oil and Gas Development (UOGD) fractures the earth releasing radiation. This is a health risk to humans and animals. SB 19-181 allows Boulder County to establish strict regulatory criteria to protect our health.

We do not need to compromise when science is clear. This was Harvard a study that went from 2001 to 2017. The science describes the radiation released from new oil extraction techniques. I encourage you to review it carefully and use the data to protect Boulder County by incorporating it into our regulations. To best protect our communities we should not allow fracking within 12 miles of any populated areas. This is science. The Oil and Gas industry has the burden of proof to refute this data and prove that it will do things differently before allowing them to harm us. We are literally in a declared Climate Emergency. Our County government has an Office of Sustainability, Climate Action and Resilience with 7 employees. We should not have to compromise to please the Oil and Gas Industry. It is not necessary for you to pass regulations one week after the COGCC has finalized rulemaking related to SB 19-181.

As I asked last night.... "Who is pushing you to pass Regulations?" The citizens that elected you to office do not want fracking on Boulder County. This was expressed clearly last night – and in the majority of comments that have been submitted over the past few years. We have 2 new County Commissioners that will be sworn in next month. It is for them to review our concerns, understand the issues and decide what our public policy will be. The prudent course of action is to extend the moratorium for at least 6 months and let our new Board make this decision.

## Fracking Has a Radioactive Problem

Living within 12 miles of a fracking site could make you sick, scientists say.



BY **CAROLINE DELBERT**

OCT 26, 2020



PAUL RATJE/AFP/GETTY

- Scientists say [the areas around fracking sites](#) have up to 40 percent more airborne radioactive particles.
- As an unorthodox way to extract materials, fracking has [presented research challenges](#).
- Researchers suggest not living within 12 miles of a fracking location.

Harvard scientists have found that fracking is associated with [greatly increased radioactive particulate](#) in the air, especially in West Virginia's dependent petrochemical economy. People who live within about 12 miles of fracking sites are at the highest risk, with ambient radiation as high as 40 percent over the background level.

The data comes from [17 years of measurements](#) at over 150 radiation monitoring sites. Scientists examined these measurements, combined with the location data on more than 120,000 fracking wells. While experts have known fracking can release chemicals into the groundwater in particular, this is the first study to analyze radiation levels.

READ THIS



### **Cleaning Up America's Worst Nuclear Waste Dump**

Fracking may be a lot of things, but the idea that it's literally radioactive could be surprising. The reason is that a lot of underlying rock contains small amounts of [uranium](#), for example, as part of the naturally occurring bedrock found all over Earth. Where conventional mining adds safety precautions and traditional oil drilling doesn't interact with bedrock the same way, fracking has gone a third way that pulverizes the bedrock and releases the uranium.

The study refers to fracking by a technical name: unconventional oil and natural gas development (UOGD).

These associations suggested the existence of some pathways by which UOGD activities could release [radioactive material] into the atmospheric environment," the researchers say. They conclude:

"Likely mechanisms include the fugitive release of natural gas, which contains a higher-than-background level of radon at wellheads, compressor stations, pipelines, and other associated facilities; the management, storage, discharge and disposal of flow-back and produced water which is rich in [radioactive materials]; the accidental spill or beneficial use of produced water in nearby communities; the handling, transport, management, and disposal of radioactive drill cuttings."

This is not a part of the report ..... but it illustrates the authority that SB 19-181 gives you to protect Boulder County:

- Senate Bill 19-181 Senate Bill 19-181 ("181" or the "Bill") amended several sections of the Colorado statutes. The Bill prioritizes the protection of public health, safety, and welfare, and the environment and wildlife in the regulation of oil and gas industry. As relevant to the Article 12 update, the Bill clarified, expanded, and reinforced local governments' regulatory authority over the surface impacts of oil and gas development. Specifically, the Bill clarified that local governments have land use authority over: the siting of oil and gas operations; air emissions and air quality; vibration, noise, odor, light, dust, and all other nuisance-type impacts; water quality and water source; reclamation; cultural resources; emergency preparedness; and traffic and transportation.
- Additionally, the Bill clarified or established local government power to: require financial securities to guarantee compliance with regulations; inspect facilities for compliance; impose fines for leaks, spills, and emissions; and impose fees on operators or owners to cover the reasonably foreseeable direct and indirect costs of permitting and regulation, including inspection programs.

- Critically, the Bill established that local government land use regulations regarding oil and gas would not be preempted by overlapping state regulations. These aspects of the Bill created a drastically different landscape than the one under with the existing Article 12 regulations from 2017 were drafted

I appreciate your consideration. Please let me know that you have received this message. I have not received any reply from you in the past – and I am unsure that you are actually reviewing all comments. This is a large concern for the process of civic input and public policy. Please send me a quick message to let me know that you have received this info.

Thank you again for all your effort in protecting Boulder County.  
Cordially,

Eric Tussey  
5075 51<sup>st</sup> Street Boulder , CO 80301

Eric@tussey.com

**From:** [Janis Hallowell](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** clarified response to the regulations draft  
**Date:** Wednesday, December 02, 2020 12:14:32 PM

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Dear commissioners,

Two years after we moved to unincorporated Boulder County my daughter was diagnosed with chronic myelogenous leukemia. Last year my husband was diagnosed with stage 3 cancer. The doctors say that both cancers are environmentally caused. Add to that, the F quality air we have from fracking and all the new scientific evidence on the carcinogens put into the air and water from fracking and you get the cancer epidemic we have in the county now.

I believe that none of you are climate change deniers. You were elected to protect and serve the people and the land in Boulder County. You are community leaders. You are aware of the extreme existential threat we are facing globally re: climate change, and the impact of fossil fuels. You have the responsibility to act on that knowledge locally. And locally, the front line on climate change is fracking, and the devastation of air quality, ground water, and negative impacts on health to humans and wildlife it has brought us.

70% of Boulder County citizens believe that there should be a ban on fracking.

If you believe the science, then you cannot believe that making more fracking possible in Boulder County is in keeping with your oath. SB19-181 takes away the power from the state to pre-empt local law. So stopping this scourge on our lives is in your hands now.

The oil and gas business is failing. The bankruptcies to date are alarming. The workers in this industry need to be transitioned to clean energy, we all know that. So, why are you making it possible for oil and gas to keep fracking and, indeed, considering allowing for 140 new wells in the county? Corporations who are going bankrupt are not good business partners. How could you possibly regulate every well, every day? I don't think the county has the resources to do that. Add to that, the language in the draft is very weak. Oil operators "should" comply with regulations etc. Words like "should" "are encouraged" "are advised" give loopholes to not comply. But, even with more assertive language you will have to watch them all the time to enforce regulations. I think the oversight presents a real problem.

Fundamentally, "regulating" means you are going to allow them to continue to frack and open the new wells. When what we need is fewer wells and a tapering off of this destructive industry.

Why do you feel you need to make it possible for operators to stay in business? Why are you effectively about to engage in a bail-out of the oil and gas industry in Boulder County?

Represent your county and put in the strongest regulations but also set a date to end fracking in this county. This is how you can use the power of your offices to make a real change in the climate crisis. Please step up. Please do better. We can't afford to wait or give them more chances. Act now.

Janis Hallowell  
8420 N 39th Street  
Longmont, CO 80503

[jh@janishallowell.com](mailto:jh@janishallowell.com)

**From:** [hmovshovitz@cs.com](mailto:hmovshovitz@cs.com)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** response to proposed fracking regulations  
**Date:** Wednesday, December 02, 2020 12:36:54 PM

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December 2, 2020

Dear Commissioners:

From everything said and written it seems obvious that the only good fracking is no fracking at all. Our air is F-quality; cancer is epidemic (my daughter and I both have cancers); the harm to the environment at this critical moment continues unabated.

For too long, the public and public officials have talked about fracking as “transitional” to fuels that are safe and renewable. Well, bluntly, you don’t “transition” by continuing the same destructive practices.

Regulation of oil and gas activities is pretty much a joke. For one, even with regulation, fracking cannot be safe. The companies, as they have shown over and over, don’t give a damn, and the county lacks the resources to monitor. Having rules that say the companies “should” do this or that is ludicrous. Regulations must be clear, firm and enforced.

Stop enabling and equivocating. By a huge majority, the people of Boulder County want to end fracking. Honor the will of the people. Your job is to protect the people and the environment – do that.

No more fracking is the only sane way to handle the problem.

I have lived in Boulder county since 1969. I have lived at 8420 N. 39<sup>th</sup> St. (Longmont P.O.) for 10+ years.

Yours,

H.P. Movshovitz

**From:** [ml robles](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** 12-01-2020 testimony (i ran out of time..)  
**Date:** Wednesday, December 02, 2020 2:21:04 PM

---

Hello BoCo commissioners and staff - i was speaking yesterday at the public hearing on the Oil and Gas meeting and ran out of time, please see my full testimony below, thank you. -ml

Confucius wrote that calling things by their proper names is the beginning of wisdom. Tonight you are considering updating Article 12 concerning Oil and Gas Operations for the Development of The Mineral Estate. I would find it impossible to derive wisdom from that. The simpler common name is fracking: the process of injecting liquid at high pressure into subterranean rocks so as to force open existing fissures and extract oil or gas.

I am not here to talk about fracking or oil and gas operations. I am here to speak to the leadership of Boulder County and to perhaps, incite new considerations of the topic at hand.

You are dealing with a fossil fuel. Fossil fuels are directly linked to the environmental decline of our planet via climate change. I appreciate that climate change has a seat at this discussion table yet many point out that our need for fossil fuel is undeniable as it seems an indispensable source for heating, cooking, and electricity generation. However, I would point out that in the summer of 2019, Berkeley California banned the installation of natural gas lines in new construction. Dozens of cities followed suit, just a few weeks ago, San Francisco banned natural gas in new buildings – all new buildings. So though the inclination is to keep doing what we know how to do – fuel our comfort with gas – it requires leadership to draw the line in the sand and say, no more. The buck stops here, we have the technology to solve the logistical problem of natural gas replacement, we do not have another planet.

I am not here to ask you to ban the installation of gas lines to new construction, which is more in my area of professional impact as an architect, but I do ask that you give this issue its proper name – you are talking about extracting a fossil fuel that contributes to the top two greenhouses gas sources: methane gas and carbon dioxide. That is the subject at hand. We cannot both be stewards of our land and then create a labyrinth of process to obscure the true consequences of fossil fuel extraction on those same lands.

ml Robles 12-01-2020  
boulder, CO

addressing Boulder County Commissioners

**ml Robles**

[necopass@gmail.com](mailto:necopass@gmail.com)

**303 443 1945**

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**Architect** <http://studiopoints.com/>

<http://good-design-is-like-that.studiopoints.com/>

<https://www.instagram.com/studiopoints/>

**Newlands ecopass coordinator** <https://necopass.blogspot.com/>



**From:** [liz stroh-coughlin](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** Do not frac in or near Niwot  
**Date:** Wednesday, December 02, 2020 4:29:35 PM

---

I am very concerned and disheartened to learn that there is a real possibility that a large fracking site is being planned near our home & community. I am concerned for our environment, our health and well being of our neighbors, our animals & wild life. As a tax payer and resident of Boulder Co, I strongly oppose. Please do not ruin our environment.

Liz Stroh-Coughlin

**From:** [Steve Hoover](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** oil and gas regulations  
**Date:** Wednesday, December 02, 2020 6:12:53 PM

---

I'd like to urge the commissioners to ban fracking in Boulder county.

Sincerely

Steve Hoover

Boulder County long time resident/voter

**From:** [Alanna Irving](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** Please Ban Fracking!  
**Date:** Wednesday, December 02, 2020 6:17:25 PM

---

Please do not implement fracking in Boulder County, specifically the site 3 miles from Niwot school. This would be devastating. The ozone is already so bad that in the summer we cannot enjoy the outdoors. Please think responsibly and consider the health of Boulder County residents.

Deborah Irving  
Boulder

**From:** [Bhatt](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** new drilling regulations  
**Date:** Thursday, December 03, 2020 10:15:14 AM

---

Dear County Commissioners and staff,

Thank you for the work that you have done in drafting strict regulations to minimize impacts from any future threats of oil and gas/fracking operations on county lands and for holding public hearings on this issue. With the threat of drilling looming over our eastern open spaces, there is a great deal at stake and the rules that are adopted must be air-tight and comprehensive. In that regard, I would like to go on the record as supporting the modifications proposed by the Indian Peaks Group of the Sierra Club and of other organizations to further strengthen the regulations, specifically:

- 1) Our open spaces are the heart of the beauty and environmental sustainability of Boulder County. All fracking and drilling operations should be prohibited on and within 2500 feet of county open spaces. Similar protections should be afforded to raptor nesting sites, waterways, floodplains, and critical wildlife habitat.
- 2) Strong regulations should restrict emissions of all toxic chemicals in addition to particulates and ozone-precursors.
- 3) Requirements for mitigation of carbon emissions that would further exacerbate climate change should be included.
- 4) Setbacks should reflect the large body of research citing health impacts from oil and gas operations and should be extended to a minimum of 2500 feet from residences, schools, and all other public places, as recommended by 350.org Colorado.

Thank you for this opportunity to comment. We know that the pressure from oil and gas companies will be great. Our new regulations need to be iron clad and maximally protective to preserve our health, environment, and the beauty of our home.

Suzanne Bhatt  
Boulder

**From:** [Eric Tussey](#)  
**To:** [Hackett, Richard](#)  
**Cc:** [Boulder County Commissioners](#); [Lappé, Matt](#); [Tomb, Collin](#)  
**Subject:** Re: Harvard Radiation Study 2001 - 2017 - Public Comment follow up - please extend Moratorium  
**Date:** Thursday, December 03, 2020 3:12:55 PM  
**Attachments:** [pastedImagebase641.png](#)  
[pastedImagebase642.png](#)  
[Outlook-boco-logo-.png](#)  
[Outlook-dt1qhddw.png](#)  
[Outlook-gs5h0w1j.png](#)  
[Outlook-zn2wpb1z.png](#)

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Hi Richard,

Thanks for getting back to me. Sorry about the problem opening the document. .

I included the entire document in my email (in case that was the case) . Using Word on a Chromebook is not always intuitive and sometimes folks are concerned about "opening " things.

I hope you had a chance to look at the main body of the original email below. The Harvard Study clearly shows that radiation from fracking is a health risk. One that we should not accept.

Boulder County should protect our health as a priority. We have the right to determine site locations. All wells should be located 12 miles or farther away from people.

Please let me know if you or the Commissioners - or OSCAR department have any questions.

Citizens feel that it is critical to enact Regulations that prioritize public health and safety. We are concerned our limited freshwater is being used for fracking and we are concerned about the toxic material in fracking fluid and it's disposal (among numerous other issues). We feel allowing fracking is adding to climate change and it directly contradicts our Sustainability efforts. This process is being pushed far too quickly since it was only last week that the COGCC rules were finalized. Any ruling on updated Regulations should happen in 2021. In November, the City of Lafayette's attorney suggested prudently that they extend the moratorium 6 months so that any regulations they enact will be in compliance with the new rules from COGCC. Boulder County Commissioners should follow the prudent course of action and digest the science, the final COGCC SB 19-181 rules, and citizens concerns regarding public health & safety.. Based on public comments about the weak regulatory language - updated regulations need detailed review by citizens and stakeholders in a formal process. The climate change crisis and public safety should be a primary determinant in final regulation process. The new Commissioners should be the ones that make the decision.

Thanks again for letting me know. about the document....

Do you know if the current County Commissioners have read my correspondence?

Cordially,

Eric Tussey

ORIGINAL MESSAGE -----

December 2, 2020

Boulder County Commissioners  
1325 Pearl Street  
Boulder, CO 80302

Dear Commissioners.

Thank you for listening to Public comments last night. It is good we have some mechanism in place to share feedback and data concerning establishing regulations. I may have sent this information to you earlier, but I wanted to share it now because it is so critical to protect the health of everyone in Boulder County. The Harvard study was mentioned several times in last night's Public comment session. Unconventional Oil and Gas Development (UOGD) fractures the earth releasing radiation. This is a health risk to humans and animals. SB 19-181 allows Boulder County to establish strict regulatory criteria to protect our health.

We do not need to compromise when science is clear. This was Harvard a study that went from 2001 to 2017. The science describes the radiation released from new oil extraction techniques. I encourage you to review it carefully and use the data to protect Boulder County by incorporating it into our regulations. To best protect our communities we should not allow fracking within 12 miles of any populated areas. This is science. The Oil and Gas industry has the burden of proof to refute this data and prove that it will do things differently before allowing them to harm us. We are literally in a declared Climate Emergency. Our County government has an Office of Sustainability, Climate Action and Resilience with 7 employees. We should not have to compromise to please the Oil and Gas Industry. It is not necessary for you to pass regulations one week after the COGCC has finalized rulemaking related to SB 19-181.

As I asked last night.... "Who is pushing you to pass Regulations?" The citizens that elected you to office do not want fracking on Boulder County. This was expressed clearly last night – and in the majority of comments that have been submitted over the past few years. We have 2 new County Commissioners that will be sworn in next month. It is for them to review our concerns, understand the issues and decide what our public policy will be. The prudent course of action is to extend the moratorium for at least 6 months and let our new Board make this decision.

**Fracking Has a Radioactive Problem**

Living within 12 miles of a fracking site could make you sick, scientists say.

**BY [CAROLINE DELBERT](#)**

OCT 26, 2020



PAUL RATJE/AFP/GETTY

- Scientists say [the areas around fracking sites](#) have up to 40 percent more airborne radioactive particles.
- As an unorthodox way to extract materials, fracking has [presented research challenges](#).
- Researchers suggest not living within 12 miles of a fracking location.

Harvard scientists have found that fracking is associated with [greatly increased radioactive particulate](#) in the air, especially in West Virginia's dependent petrochemical economy. People who live within about 12 miles of fracking sites are at the highest risk, with ambient radiation as high as 40 percent over the background level. The data comes from [17 years of measurements](#) at over 150 radiation monitoring sites. Scientists examined these measurements, combined with the location data on more than 120,000 fracking wells. While experts have known fracking can release chemicals into the groundwater in particular, this is the first study to analyze radiation levels.

READ THIS



### [Cleaning Up America's Worst Nuclear Waste Dump](#)

Fracking may be a lot of things, but the idea that it's literally radioactive could be surprising. The reason is that a lot of underlying rock contains small amounts of [uranium](#), for example, as part of the naturally occurring bedrock found all over Earth. Where

conventional mining adds safety precautions and traditional oil drilling doesn't interact with bedrock the same way, fracking has gone a third way that pulverizes the bedrock and releases the uranium.

The study refers to fracking by a technical name: unconventional oil and natural gas development (UOGD).

These associations suggested the existence of some pathways by which UOGD activities could release [radioactive material] into the atmospheric environment," the researchers say. They conclude:

"Likely mechanisms include the fugitive release of natural gas, which contains a higher-than-background level of radon at wellheads, compressor stations, pipelines, and other associated facilities; the management, storage, discharge and disposal of flow-back and produced water which is rich in [radioactive materials]; the accidental spill or beneficial use of produced water in nearby communities; the handling, transport, management, and disposal of radioactive drill cuttings."

This is not a part of the report ..... but it illustrates the authority that SB 19-181 gives you to protect Boulder County:

- Senate Bill 19-181 Senate Bill 19-181 ("181" or the "Bill") amended several sections of the Colorado statutes. The Bill prioritizes the protection of public health, safety, and welfare, and the environment and wildlife in the regulation of oil and gas industry. As relevant to the Article 12 update, the Bill clarified, expanded, and reinforced local governments' regulatory authority over the surface impacts of oil and gas development. Specifically, the Bill clarified that local governments have land use authority over: the siting of oil and gas operations; air emissions and air quality; vibration, noise, odor, light, dust, and all other nuisance-type impacts; water quality and water source; reclamation; cultural resources; emergency preparedness; and traffic and transportation.
- Additionally, the Bill clarified or established local government power to: require financial securities to guarantee compliance with regulations; inspect facilities for compliance; impose fines for leaks, spills, and emissions; and impose fees on operators or owners to cover the reasonably foreseeable direct and indirect costs of permitting and regulation, including inspection programs.
- Critically, the Bill established that local government land use regulations regarding oil and gas would not be preempted by overlapping state regulations. These aspects of the Bill created a drastically different landscape than the one under which the existing Article 12 regulations from 2017 were drafted

I appreciate your consideration. Please let me know that you have received this message. I have not received any reply from you in the past – and I am unsure that you are actually reviewing all comments. This is a large concern for the process of civic input and public policy. Please send me a quick message to let me know that you have received this info.



Thank you again for all your effort in protecting Boulder County.  
Cordially,

Eric Tussey  
5075 51<sup>st</sup> Street Boulder , CO 80301

[Eric@tussey.com](mailto:Eric@tussey.com)

---

**From:** Hackett, Richard <rhackett@bouldercounty.org>  
**Sent:** Wednesday, December 2, 2020 4:26 PM  
**To:** Eric Tussey <eric@tussey.com>  
**Subject:** RE: Harvard Radiation Study 2001 - 2017 - Public Comment follow up - please extend Moratorium

Hi Eric. I'm unable to access the [Microsoft Sharepoint Word doc download link you sent](#), are you able to attach the Word doc directly to an email and send it to me?

Thanks,

**Richard Hackett | Communications Specialist**

Boulder County Community Planning & Permitting

Mailing Address: P.O. Box 471, Boulder, CO 80306

Direct: 720-564-2605 | Main: 303-441-3930

[rhackett@bouldercounty.org](mailto:rhackett@bouldercounty.org)

[www.BoulderCounty.org](http://www.BoulderCounty.org)

Sign-up for Boulder County news at [boco.org/e-news](http://boco.org/e-news)



*Due to COVID-19, the Boulder County Community Planning & Permitting Department is conducting business and providing services virtually. Our physical office in Boulder is currently closed to the public. Please visit us online at <https://www.boco.org/cpp> for more information.*

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**From:** Eric Tussey <eric@tussey.com>

**Sent:** Wednesday, December 02, 2020 11:12 AM

**To:** Boulder County Board of Commissioners <commissioners@bouldercounty.org>

**Cc:** Dougherty, Michael <mdougherty@bouldercounty.org>

**Subject:** Harvard Radiation Study 2001 - 2017 - Public Comment follow up - please extend Moratorium

December 2, 2020

Boulder County Commissioners  
1325 Pearl Street  
Boulder, CO 80302

Dear Commissioners.

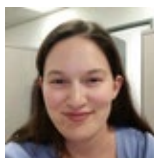
Thank you for listening to Public comments last night. It is good we have some mechanism in place to share feedback and data concerning establishing regulations. I may have sent this information to you earlier, but I wanted to share it now because it is so critical to protect the health of everyone in Boulder County. The Harvard study was mentioned several times in last night's Public comment session. Unconventional Oil and Gas Development (UOGD) fractures the earth releasing radiation. This is a health risk to humans and animals. SB 19-181 allows Boulder County to establish strict regulatory criteria to protect our health.

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BY [CAROLINE DELBERT](#)

OCT 26, 2020



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- Additionally, the Bill clarified or established local government power to: require financial securities to guarantee compliance with regulations; inspect facilities for compliance; impose fines for leaks, spills, and emissions; and impose fees on operators or owners to cover the reasonably foreseeable direct and indirect costs of permitting and regulation, including inspection programs.

- Critically, the Bill established that local government land use regulations regarding oil and gas would not be preempted by overlapping state regulations. These aspects of the Bill created a drastically different landscape than the one under with the existing Article 12 regulations from 2017 were drafted

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Thank you again for all your effort in protecting Boulder County.  
Cordially,

Eric Tussey  
5075 51<sup>st</sup> Street Boulder , CO 80301

[Eric@tussey.com](mailto:Eric@tussey.com)

**From:** [Aris Sophocles, Jr., MD](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** Letter re fracking  
**Date:** Thursday, December 03, 2020 8:26:26 PM  
**Attachments:** [County commissioners re extraction.pdf](#)

---

Dear County Commissioners:  
Please see my attached letter.  
Thank you.  
Aris Sophocles, MD, JD



Aris Sophocles, MD, JD

8696 Streamcrest Drive

Boulder, CO 80302

December 3, 2020

Dear Commissioners:

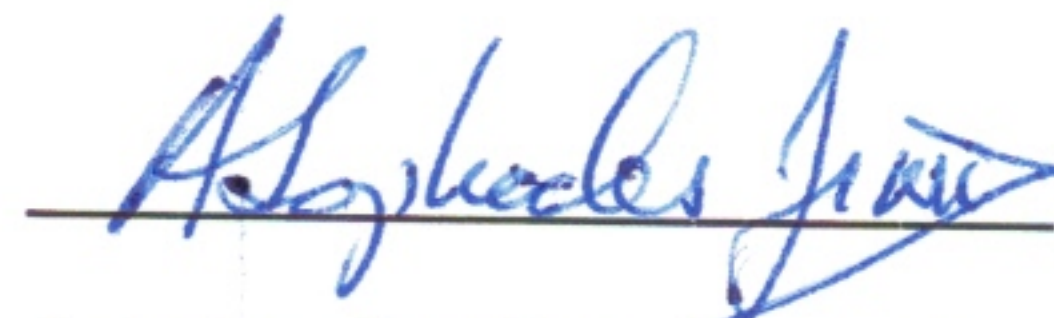
As we are all aware, Senate Bill 19-181 which was passed and signed into law by Governor Polis states clearly that public safety, health, welfare, and protection of our environment are top priorities when deciding whether to permit extractive activities. These concerns should be foremost in your minds as you decide whether to permit oil and gas extraction on Boulder County open space lands.

The citizens of Boulder County did not authorize the purchase of open space properties for use by oil, gas, and mining companies. Our intent was to protect those parcels from development: residential, commercial, and extractive. It was also to provide recreational terrain for county residents and our guests.

To honor your promise to protect OUR open spaces and to comply with the letter and spirit of SB 19-181, please vote against any and all extractive activities, oil, gas, and mining on Boulder County open spaces.

Thank you for your consideration.

Respectfully submitted,

A handwritten signature in blue ink, appearing to read "A. Sophocles, MD, JD", written over a horizontal line.

Aris Sophocles, MD, JD



**From:** [Saia, Simon](#)  
**To:** [Boulder County Board of Commissioners](#)  
**Subject:** Oil and Gas Regulations  
**Date:** Saturday, December 05, 2020 8:36:31 AM

---

Dear Boulder County Commissioners,

We honor you for your service and continued work through this scattered time. As you are in the process of forming new regulations for oil and gas development for our county, I along with many others in my community encourage for you to consider the effects on the well-being and health of the people of Boulder County, and the overall effects on Colorado due to fracking.

With new developments such as the Crestone Peak fracking site, that of which would sit three miles away from my high school, and the continued growth of fracking in Boulder County threaten the well-fare of all. Fracking destroys and threatens the pillars that make Boulder County and Colorado so unique. Our wildlife is disrupted and are extremely valuable Open Space is invaded by immense fracking projects. This is not only hurtful to the mental health of our citizens, but to the beauty and attraction that brings in \$2 billion dollars in tourism revenue every year. Not to mention the threat it poses to local water sources, and in the Crestone CDP case, puts 140 well pads in the middle of a floodplain that could leave devastated effects for many.

On the Boulder County website there is a stated goal: to be the greenest county in Colorado. In the implementation of more hostile fracking projects like Crestone under your watch doesn't seem like an uphold to this promise, nor of working toward county climate goals or with the necessary urgency that should be present during a county declared climate emergency.

As a citizen of Boulder County on behalf of my family, friends, Niwot Environmental Club and others, we ask you to reevaluate the situation regarding fracking and future oil and gas development in Boulder County. We demand 2, 500 foot setbacks from all building of high occupancy including Open Space, the protection of our water, wildlife, and Open Space, and that you put the well-being and the health of the people that you serve in front of oil and gas development.

This is our future.

Thank you and we aplaude you all for your perseverance through navigating a pandemic.

Sincerely,  
Simon Saia



Co-Leader of Niwot Environmental Club and Boulder County citizen

**From:** [Bhatt](#)  
**To:** [Boulder County Oil and Gas Comment](#); [Jones, Elise](#); [Jones, Matt](#); [Gardner, Deb](#)  
**Subject:** Article 12 comments  
**Date:** Sunday, December 06, 2020 1:49:31 PM

---

Dear Commissioners and County Staff,

Thank you for all of your hard work on Article 12 oil and gas oil regulations. With each iteration, the regulations are becoming stronger and getting appropriately more protective against a highly polluting industry. I followed the commissioners' deliberations on December 3, and offer the following suggestions based on the issues that were brought up during that discussion.

1. Thank you for considering larger setbacks. I definitely support extending setbacks from 2000 to 2500 feet (or more). By now, there is considerable evidence of harm from fracking operations much beyond 2000 feet (for a review, see [https://www.stand.ia/uploads/5/3/9/0/53904099/2500\\_literature\\_review\\_report-final\\_jul13.pdf](https://www.stand.ia/uploads/5/3/9/0/53904099/2500_literature_review_report-final_jul13.pdf)). While the CDPHE study that COGCC used to arrive at its 2000-foot setback found potential harmful effects at that distance, it failed to model outcomes beyond 2000 feet, so there is a good chance that effects would have been found if the study had analyzed longer distances (consistent with evidence from myriad other studies). As noted by the commissioners, Boulder County residents are clearly in support of larger setbacks, demonstrated by the fact that over 70% voted to support the 2500-foot setback proposed in 2018. Note also that Ventura County in California recently adopted 2500-foot setback (<http://www.elkgrovenews.net/2020/09/supporters-of-2500-foot-health-and.html>).

2. I also support setbacks from hiking trails, trailheads, and occupied buildings. These locations are occupied by people for several hours daily, in many cases while they are exercising strenuously and breathing heavily. These people need protection from the numerous noxious chemicals that have been associated with fracking operations to date, in addition to odor and noise.

3. The commissioners suggested strengthening the wildlife section 12-900-B-13 by explicitly including Tier 1 and Tier 2 species in the Colorado State Wildlife Action Plan and for those on the Boulder County Wildlife Species of Special Concern list. I agree with this suggestion and support the prohibition of oil and gas surface activities in areas that are ecologically significant for these species. Please also protect migratory corridors, bird nesting areas, and other areas important for wildlife and plant species in general.

4. When discussing Section 12-900-D-1 (page 12-17), the issue of whether radiation applies to air quality or water quality came up. Note that the recent study by Li et al (2020) that found evidence of enhanced radioactivity up to 12 miles downwind from fracking wells examined air particles (see <https://doi.org/10.1038/s41467-020-18226-w>). I therefore suggest the measurement and control of radiation of air particles in the rules.

5. In Section 12-1000-A (page 12-21), I strongly support the suggestion to include CO<sub>2</sub> and methane to the high level of standard required of ozone. These pollutants should not be allowed to compromise our health, safety, and well being, as envisioned in SB19-181.

Thank you for the opportunity to provide input.

Ramesh Bhatt, Ph.D.  
Boulder, CO 80305

**From:** [AJ](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** Special Land Use Regulations  
**Date:** Sunday, December 06, 2020 6:22:34 PM

---

Hello,

Scientific research supports a MINIMUM 2500-foot setback to protect human health and safety. This setback should include all occupied structures (i.e., homes, schools, workplaces), as well as other areas commonly used by people (i.e., trails, trailheads, etc.). Please consider making a MINIMUM 2500-foot setback rule.

Oil and gas drilling should be prohibited on open space. If a prohibition is not feasible, any drilling on open space should be subjected to additional strict criteria to protect wildlife, land, air, water and soil. This should include buffers around water bodies, wetlands and riparian areas, as well as strong restrictions for wildlife.

Finally, Air quality protections (that currently mention ozone, particulate matter, and methane) should be expanded to include carcinogens, and other airborne pollutants known to be associated with fracking.

Thanks for your time and efforts!  
Adam Pastula  
8130 Kincross Dr, Boulder, CO 80301

**From:** [Lon Goldstein](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** We need STRONG regulations to protect our health and the climate from fracking.  
**Date:** Sunday, December 06, 2020 9:14:20 PM

---

Dear Boulder County Commissioners,  
I am very concerned about the 140-well super-fracking site planned for only 3 miles from Niwot High School. We, the citizens of Boulder and Boulder County are counting on you to enact meaningful, responsible, scientifically backed regulations on oil and gas development to protect our health, our environment, and to address the worsening climate crisis.

2500 feet is the scientifically based MINIMUM setback distance required to protect human health and safety. You must stand strong against oil and gas industry talking points and enact this minimum to include all occupied structures, as well as trails and trailheads where people commonly gather.

Boulder County voters have spoken loudly and funded Open Space with their tax dollars. This was never envisioned to be a place for heavy industrial activity like fracking. If there is absolutely no way to prohibit oil operations in these delicate and precious natural areas, there must be substantial buffers around bodies of water, wetlands and riparian areas. And we need particularly strong protections for wildlife.

We need air quality protections to include not only the current ozone and methane and particulates, but also other known carcinogens and other pollutants documented at fracking sites.

Boulder should be a leader in the movement to address the critical climate crisis. We need to hold responsible companies that disproportionately contribute to greenhouse gas emissions through methane which is over 40 times more potent than carbon dioxide as a greenhouse gas.

Please stand strong against industry pressure and know that history is on your side. Please exercise vision and fortitude in the face of the self-interested arguments based on the short-term needs of a flailing unstable fossil-fuels industry, too long coddled by the state of Colorado.

Thank you for your service!  
Lon

=====  
Lon Goldstein  
4602 Chatham Pl.  
Boulder, CO 80301  
720-771-4409  
[lon.a.goldstein@gmail.com](mailto:lon.a.goldstein@gmail.com)  
=====

**From:** [Amy Allen](#)  
**To:** [Jones, Elise](#); [Jones, Matt](#); [Gardner, Deb](#); [Boulder County Oil and Gas Comment](#)  
**Subject:** Setbacks and carbon emissions in Article 12  
**Date:** Monday, December 07, 2020 12:13:15 AM

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Dear Commissioners and Boulder County Staff,

Thank you for hearing public testimony at the meeting on 12/1. Following the discussion at the Board meeting on 12/3, I wanted to provide some additional comments.

Thank you for your discussion of a potentially enhanced setback requirement. I reiterate my support for a setback of 2,500 ft. from all occupied buildings, open space, and water sources. Ample scientific evidence supports such a setback requirement. An analysis of numerous peer-reviewed studies by Wong in 2017<sup>[1]</sup> concluded that a 2,500 ft setback “is on the lower end of the range of distances where research has determined harmful health and quality of life impacts of toxic emissions and exposures.” The CDPHE study (Human Health Risk Assessment for Oil and Gas Operations in Colorado, 2019) that is referenced as a basis for the COGCC’s setback requirement identified health impacts at a distance of 2,000 ft from oil and gas operations, and did not consider a larger radius, nor potential interactive effects from multiple well pads within that radius.

A 2017 study by [Hill & Ma](#)<sup>[2]</sup> identified an increase in fracking-related contaminants in groundwater at “water intake locations” within a distance of 0.5 km (about 1,640 ft) from a fracking well, and [Kassotis, et al. in Colorado in 2014](#)<sup>[3]</sup> identified endocrine-disrupting chemicals in water sources within 1 mile of a spill from fracking operations. Additionally, the definition of water sources (which currently reads “water bodies that supply domestic, agricultural or municipal uses, water wells that are registered with Colorado Division of Water Resources, including household, domestic, livestock, irrigation, municipal/public and commercial wells, permitted or adjudicated springs, and monitoring wells other than monitoring wells that are drilled for the purpose of monitoring water quality changes that are not associated with oil and gas activities”) should be expanded to include aquifers (the definition of an “underground source of drinking water”, which addresses potential future sources of drinking water as well, from the Safe Drinking Water Act, could be used as a protected category, as well as those already included in the definition of “water sources” in Article 12. ).

Thank you also for your discussion of further treatment of greenhouse gas emissions in Article 12. I recommend that Section 12-1000 A1 be amended to read “Oil and gas facilities and operations will not contribute particulate matter, other hazardous air pollutants, or greenhouse gases to the air in a manner that endangers public health.” Ample, legally defensible scientific evidence supports the conclusion that emissions of hazardous air pollutants and greenhouse gases contribute to endangering public health. The recently-released 2020 edition of the Lancet Countdown on Health and Climate change emphasizes that greenhouse gas emissions must be cut drastically within the next five years to avert the worst consequences of climate change for public health, in the United States and worldwide. ([https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(20\)32579-4/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(20)32579-4/fulltext)).

Sincerely,

Amy Allen

2935 College Ave, #123

Boulder, CO, 80303

[amyallen@alumni.stanford.edu](mailto:amyallen@alumni.stanford.edu)

- 
- [1] Wong, N. "Existing scientific literature on setback distances from oil and gas development sites", June 2017, [https://www.stand.la/uploads/5/3/9/0/53904099/2500\\_literature\\_review\\_report-final\\_jul13.pdf](https://www.stand.la/uploads/5/3/9/0/53904099/2500_literature_review_report-final_jul13.pdf)
- [2] Hill, Elaine, and Lala Ma. 2017. "Shale Gas Development and Drinking Water Quality." American Economic Review, 107 (5): 522-25. <https://www.aeaweb.org/articles?id=10.1257/aer.p20171133>
- [3] Kassotis, C. D., Tillitt, D. E., Davis, J. W., Hormann, A. M., & Nagel, S. C. (2014). Estrogen and androgen receptor activities of hydraulic fracturing chemicals and surface and ground water in a drilling-dense region. Endocrinology, 155(3), 897-907

**From:** [The Piffarerios](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** Oil and gas comments  
**Date:** Monday, December 07, 2020 6:45:36 AM

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Please protect the people of Boulder county from the health dangers of fracking and other drilling operations.

Thank you,  
Jim Piffarerio  
Niwot Resident

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**From:** [Jude](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Cc:** [Governorpoli@state.co.us](mailto:Governorpoli@state.co.us)  
**Subject:** Comments regarding Article 12  
**Date:** Monday, December 07, 2020 11:37:57 AM

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Dear Commissioners:

I am writing to encourage you to renew the moratorium on oil and gas drilling in Boulder County. According to your draft of Article 12, your primary objective is as follows:

"The County's objective is to (1) protect public health, safety, and welfare and the environment and wildlife resources..."

History and experience have shown that this is essentially impossible in areas used for fracking operations. The contamination of environments, degradation of nature and risks to humans is extreme. More cases of tragedy exist than cases of good. The motivation for such operations is profit-driven even at a time when we have an excess of fossil fuel energy and are in the first stages of a global shift towards renewable energies.

There is no sane rationale for creating a series of dubious "safeguards" which will be ineffective in the case of accident (i.e. reporting spills within 30 days - I think the damage would be done by then). There may be political or financial incentives or other incentives of influence, but your job is to uphold the will of the community, not to negotiate with business for financial exchange.

As you proceed, I implore you to reinstate a moratorium. At the very least, consider these critical facts and do not be seduced by reassurances from vested interests to the contrary:

- Scientific research supports a MINIMUM 2500-foot setback to protect human health and safety. This setback should include all occupied structures (i.e., homes, schools, workplaces), as well as other areas commonly used by people (i.e, trails, trailheads, etc.).
- Oil and gas drilling should be prohibited in open space. If a prohibition is not feasible, any drilling on open space should be subjected to additional strict criteria to protect wildlife, land, air, water and soil. This should include buffers around water bodies, wetlands and riparian areas, as well as strong restrictions for wildlife.
- Air quality protections (that currently mention ozone, particulate matter, and methane) should be expanded to include carcinogens, and other airborne pollutants known to be associated with fracking.

Thank you for your time and consideration.

Jude O'Brien

**From:** [Kelly Corkill](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** Oil and gas rules  
**Date:** Monday, December 07, 2020 12:12:22 PM

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Hello, I've been in Boulder since 1993 and own property in the County, I'm very concerned about the impact that drilling operations and fracking will have on both the current and future health of your constituents.

Air quality is an ongoing issue and this will compound that, however my larger concern is future jeopardy to water supplies. I'm very aware that proponents say that they won't affect water tables but I believe that both common sense and the experience of other states (Oklahoma earthquakes) make it clear that fracking will impact ground water supplies potentially for centuries.

Please do NOT allow fracking or wells on open space, enforce a minimum 2500 foot setback within the county or preferably ban new wells and fracking operations in the entire county.

Take the concerns of the majority of your constituents and the long view, disallow fracking and new wells. History will reward you.

Kelly Corkill

**From:** [Gretel Follingstad](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** Boulder County Needs Strong Fracking Regulations!  
**Date:** Monday, December 07, 2020 12:27:32 PM

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As a resident of Boulder County, the supposedly most progressively green county in the state, I would only expect you to uphold strict oil and gas regulations that place Boulder County as a leader against climate change. The oil and gas industry needs to held accountable as we experience increasing signs of the negative effects of this irresponsible industry. Please remember the following key points that support strong regulations:

- Scientific research supports a minimum 2500-foot setback to protect human health and safety. This setback should include all occupied structures (i.e., homes, schools, workplaces), as well as other areas commonly used by people (i.e, trails, trailheads, etc.).
- Oil and gas drilling should be prohibited on Open Space. If a prohibition is not feasible, any drilling on Open Space should be subjected to additional strict criteria to protect wildlife, land, air, water and soil. This should include buffers around water bodies, wetlands and riparian areas, as well as strong restrictions for wildlife.
- Air quality protections -- that currently mention ozone, particulate matter, and methane - - should be expanded to include carcinogens, and other [airborne pollutants known to be associated with fracking](#).

Thank you.

Gretel Follingstad  
UC Denver PhD Candidate: Geography, Planning & Design  
Research: Resilience Planning  
[www.terra-planning.com](http://www.terra-planning.com)  
[gretelfollingstad@me.com](mailto:gretelfollingstad@me.com)

**From:** [Mary Marsden](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** Boulder County Needs Strong Fracking Regulations!  
**Date:** Monday, December 07, 2020 12:59:45 PM

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Dear BOCC and Staff,

Thank you for all of your work to develop strong oil and gas regulations for Boulder County. As a citizen of Boulder County I want to urge the strongest possible regulations whenever a total ban of fracking is not possible.

I support the following 3 essential points as part of Boulder Counties Oil and Gas Regulations. Please include them in your final plan. Thank you!

Mary Marsden  
180 S 36th Street  
Boulder, CO 80305

- Scientific research supports a minimum 2500-foot setback to protect human health and safety. This setback should include all occupied structures (i.e., homes, schools, workplaces), as well as other areas commonly used by people (i.e., trails, trailheads, etc.).
- Oil and gas drilling should be prohibited on Open Space. If a prohibition is not feasible, any drilling on Open Space should be subjected to additional strict criteria to protect wildlife, land, air, water and soil. This should include buffers around water bodies, wetlands and riparian areas, as well as strong restrictions for wildlife.
- Air quality protections -- that currently mention ozone, particulate matter, and methane -- should be expanded to include carcinogens, and other [airborne pollutants known to be associated with fracking](#).

Mary Marsden  
303-898-3252  
Boulder, CO  
[BeEarthNow.com](#)  
[www.venmo.com/Mary-Marsden-6](https://www.venmo.com/Mary-Marsden-6)

***...If we surrender  
to earth's intelligence  
we could rise up rooted, like trees...***

-Rainer Maria Rilke  
"Book of Hours"

**From:** [Cailin Marsden](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** urging strong oil and gas regulations for community safety  
**Date:** Monday, December 07, 2020 1:10:45 PM

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Dear BOCC and Staff,

Thank you for all of your work to develop strong oil and gas regulations for Boulder County. As a citizen of Boulder County I want to urge the strongest possible regulations whenever a total ban of fracking is not possible.

I support the following 3 essential points as part of Boulder Counties Oil and Gas Regulations. Please include them in your final plan. Thank you!

Cailin Marsden  
3140 Endicott Dr  
Boulder, CO 80305

- Scientific research supports a minimum 2500-foot setback to protect human health and safety. This setback should include all occupied structures (i.e., homes, schools, workplaces), as well as other areas commonly used by people (i.e, trails, trailheads, etc.).
- Oil and gas drilling should be prohibited on Open Space. If a prohibition is not feasible, any drilling on Open Space should be subjected to additional strict criteria to protect wildlife, land, air, water and soil. This should include buffers around water bodies, wetlands and riparian areas, as well as strong restrictions for wildlife.
- Air quality protections -- that currently mention ozone, particulate matter, and methane -- should be expanded to include carcinogens, and other [airborne pollutants known to be associated with fracking](#).

**From:** [Kimberley Rivero](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** Boulder County Needs Strong Fracking Regulations!  
**Date:** Monday, December 07, 2020 1:20:50 PM

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Esteemed Boulder County Commissioners - In 2018, Proposition 112 showed us that Boulder County voters overwhelmingly support 2,500 foot setbacks from oil and gas operations. We are counting on you to enact those setbacks for us now.

It's also clear that Boulder County voters never intended for Open Space to be drilled upon. We voted to protect that land and drilling doesn't protect it. Oil and gas drilling should be prohibited on County Open Space. If you cannot directly prohibit drilling then we are counting on you to prevent it through strong regulations which protect wildlife, air quality, and water. We especially need buffers around bodies of water, wetlands, and riparian areas.

Additionally, air quality protection language which currently mentions ozone, particulate matter, and methane needs to be expanded to include language against carcinogens, and other airborne pollutants known to be associated with fracking.

Thank you for your hard work protecting Boulder County.

Thanks, Kim

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**From:** [Suzanne De Lucia](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** Setbacks and Drilling Restrictions  
**Date:** Monday, December 07, 2020 1:30:19 PM

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Esteemed Boulder County Commissioners -

Yesterday, I was standing atop Green Mountain - in Lakewood, not Boulder - and was admiring the 360 degree vista. Unfortunately, there was a brown haze in the NE quadrant, right over Weld County. Nowhere else was this pollution visible. It is bad enough that these emissions cross county lines into our air space. Please do your best to prevent Boulder County from being a generator of these toxins by enacting setbacks of at least 2,500 feet.

In 2018, Proposition 112 showed us that Boulder County voters overwhelmingly supported the largest possible setbacks from oil and gas operations. We are counting on you to vote as your constituency desires.

It's also clear that Boulder County voters never intended for Open Space to be drilled upon. We voted to protect that land and drilling doesn't protect it. Oil and gas drilling should be prohibited on County Open Space. If you cannot directly prohibit drilling then we are counting on you to prevent it through strong regulations which protect wildlife, air quality, and water. We especially need buffers around bodies of water, wetlands, and riparian areas.

Additionally, air quality protection language which currently mentions ozone, particulate matter, and methane needs to be expanded to include language against carcinogens, and other airborne pollutants known to be associated with fracking.

Thank you for your hard work protecting Boulder County.

Thanks, Suzanne De Lucia

Suzanne M. De Lucia, CBI  
Fellow Of The IBBA  
President  
Front Range Business, Inc.  
5353 Manhattan Circle, Suite 101  
Boulder, CO 80303  
Office: 303-499-6008  
Fax: 1-888-521-8219  
[sdelucia@frontrangebusiness.com](mailto:sdelucia@frontrangebusiness.com)  
[www.frontrangebusiness.com](http://www.frontrangebusiness.com)

**From:** [Arturo Rivero](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** We Need Setbacks From Oil & Gas Operations!  
**Date:** Monday, December 07, 2020 1:39:18 PM

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Dear Boulder County Commissioners - Boulder County voters demonstrated in 2018 that they strongly support 2,500 foot setbacks from oil and gas operations. Remember that Prop 112 passed in Boulder County with more than 70% of voters in favor of it.

The voters are counting on you now to enact strong setbacks! Thank you for protecting Boulder County.

Thank you,  
Arturo Rivero



**From:** [ron@350colorado.org](mailto:ron@350colorado.org)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** Boulder County Fracking Comment  
**Date:** Monday, December 07, 2020 1:40:29 PM

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Dear Commissioners,

I'm writing with regard to proposed oil & gas rules for Boulder County and to urge the commission to adopt the strongest possible rules prohibiting this dangerous and destructive activity in Boulder County.

Please ban wells or infrastructure within 2,500' of occupied structures and in any designated open space or natural areas.

Require continuous monitoring for dangerous pollutants, particulates and methane.

Require disclosure and chain of custody for all fracking compounds and waste.

There is a gas and oil surplus nationwide and prices are very low with many related companies over-leveraged. Boulder needs to look to the future of energy in renewables and conservation. Please don't help perpetuate an industry that's past it's prime and who's activities place all of us at risk from air pollutants, water contamination, radioactive waste and climate change.

Thank you for your time and consideration.

-Ron

Ron Bennett, AIA  
Architect & Decarbonization Advocate  
[350Colorado.org](http://350Colorado.org)  
Boulder, CO

mobile: 978.258.2550

**From:** [Joanna Lynden](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** Boulder County Needs Strong Fracking Regulations!  
**Date:** Monday, December 07, 2020 1:53:44 PM

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Dear BOCC and Staff,

Thank you for all of your work to develop strong oil and gas regulations for Boulder County. As a citizen of Boulder County I want to urge the strongest possible regulations whenever a total ban of fracking is not possible.

I support the following 3 essential points as part of Boulder Counties Oil and Gas Regulations. Please include them in your final plan. Thank you!

- Scientific research supports a minimum 2500-foot setback to protect human health and safety. This setback should include all occupied structures (i.e., homes, schools, workplaces), as well as other areas commonly used by people (i.e, trails, trailheads, etc.).
- Oil and gas drilling should be prohibited on Open Space. If a prohibition is not feasible, any drilling on Open Space should be subjected to additional strict criteria to protect wildlife, land, air, water and soil. This should include buffers around water bodies, wetlands and riparian areas, as well as strong restrictions for wildlife.
- Air quality protections -- that currently mention ozone, particulate matter, and methane -- should be expanded to include carcinogens, and other airborne pollutants known to be associated with fracking.

Sincerely,  
Joanna Lynden  
2855 10th Street  
Boulder, CO 80304

**From:** [George Ramsey](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** Boulder County Needs Strong Fracking Regulations!  
**Date:** Monday, December 07, 2020 1:56:32 PM

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Dear County Commissioners,

As a longtime resident of Niwot and a person who's been following the steady westward march of fracking operations and the increasing degradation of the atmosphere that accompanies it, I am strongly opposed to fracking in Boulder County.

I am imploring you to please protect me, my friends, and my neighbors.

Thank you!

Sincerely,  
George Ramsey

**From:** [AnnMarie Cleary](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** Boulder County Needs Strong Fracking Regulations!  
**Date:** Monday, December 07, 2020 2:21:53 PM

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Dear Boukder County,

I am writing you to please adopt the strongest scientific based health and safety regulations possible under the new laws of SB-181. We fought hard to get SB-181 as law and us citizens fought hard for nearly a decade to try and protect ourselves through initiative.

I have personally been working on health and safety for the people of Colorado as a volunteer for 9 years now including state and local initiatives as well as testimony for 181 during the various committee hearings. I have also testified at the COGCC over the years and COAQCC. This time in history may very well be the most important time with you making the most important decisions of your life for Colorado.

I fought hardest for years in Broomfield and despite the so called gold standard of regulations I assure you that Broomfield is a failure. I have friends texting from the moment the exploration began to even this week again with children with gushing bloody noses, headaches, breathing issues, and sick pets.

The nose bleeds and headaches happen to coincide with documented recorded benzene spikes.

When the drills came in, the noise was so loud dogs barked, babies cried from being woken in the night, and we the people had to endure the sleepless nights and what feels like torture in our own homes and during a pandemic no less.

We were told the measurements were fine and that of a vacuum. Can you sleep with a vacuum on?

We have court cases about the infractions that wait in the works and the drills continue to drill, leaks continue to pour out. The oil and gas industry does what they want regardless of law and safety and the people always always pay the price.

If you'd like to speak with impacted citizens I can arrange meetings, for we as a community want to help others in any we can not to go through what we endure.

Please consider real science, real people's testimony and real protections when you write your rules. The health and safety of your people is in your hands and they are counting on you to learn from those around you and stand stronger to do what it takes to truly protect our future.

Sincerely,

AnnMarie Cleary

730-308-4446

amhere@comcast.net

Sent from my iPhone

**From:** [STEWART GUTHRIE](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Cc:** [info@lookoutalliance.org](mailto:info@lookoutalliance.org)  
**Subject:** Boulder County Needs (absent a ban) Strong Regulations on Fracking!  
**Date:** Monday, December 07, 2020 3:00:48 PM

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Dear Commissioners Gardner, Jones and Jones,

Thank you for your efforts so far to protect your constituents. However, I support not regulating, but banning fracking from Boulder County. As a fracking engineer testified before you about six years ago, the phrase "regulating fracking" is oxymoronic. Once the fracking fluids are deep underground and the layers of rock are fractured, no one can predict where they and the released gases and liquids will go, much less regulate them. Moreover, once those heretofore-sealed rock layers are perforated by wells, and after the concrete well linings eventually crack, the indefinitely large volumes of remaining fluids and gases, like benzene and radon, will have permanent access to the surface.

Thus our legacy will be a permanently toxified county, and one that has also contributed to the climate change that already is bringing us record wildfires. "Regulation" here makes as much sense as saying to one who complains that someone is punching him in the face, "Don't worry, we'll regulate it."

My wife and I have been breathing fumes from Weld for decades, and for her, even a ban is too late, as she has died of a circulatory failure (a cerebral hemorrhage) of the sort known to be associated with fracking emissions.

Assuming, however, that you feel unable to ban fracking, please insist on a set back of *at least* 2,500 feet from occupied structures, proof that no significant volumes of toxins including carcinogens will be emitted, and a ban of fracking on Open Space. Last, if toxins are in fact emitted, please tax them at a rate sufficient to quickly dissuade the emitters.

Thank you,  
Stewart Guthrie  
7898 Devonshire Way  
Boulder 80301

**From:** [Jennie Gershater](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** protecting our BOULDER COUNTY  
**Date:** Monday, December 07, 2020 3:19:57 PM

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Dear BOCC and Staff,

Thank you for all of your work to develop strong oil and gas regulations for Boulder County. As a citizen of Boulder County I want to urge the strongest possible regulations whenever a total ban of fracking is not possible.

I support the following 3 essential points as part of Boulder Counties Oil and Gas Regulations. Please include them in your final plan.

Thank you!

Jennie Gershater  
650 Fordham St.  
Longmont, CO 80503

- Scientific research supports a minimum 2500-foot setback to protect human health and safety. This setback should include all occupied structures (i.e., homes, schools, workplaces), as well as other areas commonly used by people (i.e, trails, trailheads, etc.).
- Oil and gas drilling should be prohibited on Open Space. If a prohibition is not feasible, any drilling on Open Space should be subjected to additional strict criteria to protect wildlife, land, air, water and soil. This should include buffers around water bodies, wetlands and riparian areas, as well as strong restrictions for wildlife.
- Air quality protections -- that currently mention ozone, particulate matter, and methane -- should be expanded to include carcinogens, and other airborne pollutants known to be associated with fracking.

*"We are the ones we have been waiting for."*

*The Elders Oraibi  
Arizona Hopi Nation*

Jennie Gershater, MA, LMT,  
Somatic Therapist, Holistic Bodyworker, Dance Movement Therapist, Doula, Guide

**From:** [Gossard, Megan](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** Boulder County Needs Strong Fracking Regulations!  
**Date:** Monday, December 07, 2020 5:03:45 PM

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Dear BOCC,

I am a Gunbarrel resident. I am very concerned about the fracking site that is slated to go in near Niwot High School. PLEASE protect the people and animals who live in this area as well as the environment by putting stringent protective regulations in place. Scientific research should dictate safety norms. I urge you to consider the following:

1. Fracking sites should have at at a minimum a 2500-foot setback to protect human health and safety. This setback should include all occupied structures (i.e., homes, schools, workplaces), as well as other areas commonly used by people (i.e, trails, trailheads, etc.)
2. Oil and gas drilling should be prohibited on Open Space. If a prohibition is not feasible, any drilling on Open Space should be subjected to additional strict criteria to protect wildlife, land, air, water and soil. This should include buffers around water bodies, wetlands and riparian areas, as well as strong restrictions for wildlife.
3. Include air quality protections -- that currently mention ozone, particulate matter, and methane -- should be expanded to include carcinogens, and other [airborne pollutants known to be associated with fracking](#)

The decisions you make today will have consequences, good or bad, on our future generations and the general health of our environment. Our communities in this area are counting on you to prioritize the health of humanity and our planet when making these important decisions.

thank you for your time,

Megan Gossard

**From:** [Terry Snyder](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** Boulder County Needs Strong Fracking Regulations!  
**Date:** Monday, December 07, 2020 5:06:38 PM

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Boulder County Commissioners,

In 2018, Proposition 112 showed us that Boulder County voters overwhelmingly support 2,500 foot setbacks from oil and gas operations. We are counting on you to enact those setbacks for us now.

It's also clear that Boulder County voters never intended for Open Space to be drilled upon. We voted to protect that land and drilling doesn't protect it. Oil and gas drilling should be prohibited on County Open Space. If you cannot directly prohibit drilling then we are counting on you to prevent it through strong regulations which protect wildlife, air quality, and water. We especially need buffers around bodies of water, wetlands, and riparian areas.

Additional Points:

- **Scientific research supports a minimum 2500-foot setback to protect human health and safety. This setback should include all occupied structures (i.e., homes, schools, workplaces), as well as other areas commonly used by people (i.e, trails, trailheads, etc.).**
- **Air quality protections -- that currently mention ozone, particulate matter, and methane -- should be expanded to include carcinogens, and other [airborne pollutants known to be associated with fracking](#).**

Thank you for your hard work protecting Boulder County.

Sincerely,

Ms. Terry Snyder  
4738 McKinley Drive  
Boulder



**From:** [julia hanke](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** Boulder County Needs Strong Fracking Regulations!  
**Date:** Monday, December 07, 2020 5:24:38 PM

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Dear County commissioners,  
These points listed below are very important to us.

- Scientific research supports a minimum 2500-foot setback to protect human health and safety. This setback should include all occupied structures (i.e., homes, schools, workplaces), as well as other areas commonly used by people (i.e., trails, trailheads, etc.).
- Oil and gas drilling should be prohibited on Open Space. If a prohibition is not feasible, any drilling on Open Space should be subjected to additional strict criteria to protect wildlife, land, air, water and soil. This should include buffers around water bodies, wetlands and riparian areas, as well as strong restrictions for wildlife.
- Sincerely,
- Julia Hanke
- 4711 Berkshire Ct, Boulder, Co 80301

**From:** [April Tierney](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** Urging for strong regulations on fracking  
**Date:** Monday, December 07, 2020 5:25:38 PM

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Dear BOCC and Staff,

Thank you for all of your work to develop strong oil and gas regulations for Boulder County. As a longtime resident and lover of this gorgeous land, I want to urge the strongest possible regulations whenever a total ban of fracking is not possible.

I support the following 3 essential points as part of Boulder Counties Oil and Gas Regulations. Please include them in your final plan. Thank you!

April Tierney, 1193 Rowell Dr.

- Scientific research supports a minimum 2500-foot setback to protect human health and safety. This setback should include all occupied structures (i.e., homes, schools, workplaces), as well as other areas commonly used by people (i.e, trails, trailheads, etc.).
- Oil and gas drilling should be prohibited on Open Space. If a prohibition is not feasible, any drilling on Open Space should be subjected to additional strict criteria to protect wildlife, land, air, water and soil. This should include buffers around water bodies, wetlands and riparian areas, as well as strong restrictions for wildlife.
- Air quality protections -- that currently mention ozone, particulate matter, and methane -- should be expanded to include carcinogens, and other [airborne pollutants known to be associated with fracking](#).

**From:** [Yasmin Suarez Shaddox](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** Boulder County Needs Strong Fracking Regulations!  
**Date:** Monday, December 07, 2020 6:00:59 PM

---

Dear BOCC and Staff,

Thank you for all of your work to develop strong oil and gas regulations for Boulder County. I want to urge the strongest possible regulations whenever a total ban of fracking is not possible. I support the following 3 essential points as part of Boulder Counties Oil and Gas Regulations. Please include them in your final plan. Thank you!

Yasmin Suarez Shaddox  
1553 Rowell Dr.  
Lyons, Co 80540

- Scientific research supports a minimum 2500-foot setback to protect human health and safety. This setback should include all occupied structures (i.e., homes, schools, workplaces), as well as other areas commonly used by people (i.e, trails, trailheads, etc.).
- Oil and gas drilling should be prohibited on Open Space. If a prohibition is not feasible, any drilling on Open Space should be subjected to additional strict criteria to protect wildlife, land, air, water and soil. This should include buffers around water bodies, wetlands and riparian areas, as well as strong restrictions for wildlife.
- Air quality protections -- that currently mention ozone, particulate matter, and methane -- should be expanded to include carcinogens, and other [airborne pollutants known to be associated with fracking](#).

**From:** [Phyllis Hunt](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** Boulder County Needs Strong Fracking Regulations!  
**Date:** Monday, December 07, 2020 7:02:21 PM

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Dear Boulder County Board of County Commissioners and staff:

My husband and I are Niwot residents. That means we live some 3-4 miles from the proposed 140 fracking wells. You've heard all the arguments in opposition to this proposal, so I'm not going to waste my time or yours repeating the scientific research on the impact of the toxic fracking chemicals that will dangerously affect air quality in the immediate area and beyond.

We oppose the fracking proposal and join the many others who strongly urge you to adopt the strictest regulations possible. As people who have always supported Open Space, it is totally outrageous that drilling could occur on, let alone dangerously near, Open Space property. Shame, shame, shame on all stakeholders in this dystopian reality. That all we can hope for is band-aids in the form of the strictest regulations possible is more than discouraging, but let's hope that alleviates some of the human misery and rape of the environment.

Phyllis Hunt

**From:** [Taylor Moffitt](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Date:** Monday, December 07, 2020 7:02:35 PM

---

Dear BOCC and Staff,

Thank you for all of your work to develop strong oil and gas regulations for Boulder County. I want to urge the strongest possible regulations whenever a total ban of fracking is not possible. I support the following 3 essential points as part of Boulder Counties Oil and Gas Regulations. Please include them in your final plan. Thank you!

Taylor White Moffitt  
3669 Silverton Street  
Boulder, CO 80301  
303-946-9123

- Scientific research supports a minimum 2500-foot setback to protect human health and safety. This setback should include all occupied structures (i.e., homes, schools, workplaces), as well as other areas commonly used by people (i.e, trails, trailheads, etc.).
- Oil and gas drilling should be prohibited on Open Space. If a prohibition is not feasible, any drilling on Open Space should be subjected to additional strict criteria to protect wildlife, land, air, water and soil. This should include buffers around water bodies, wetlands and riparian areas, as well as strong restrictions for wildlife.
- Air quality protections -- that currently mention ozone, particulate matter, and methane -- should be expanded to include carcinogens, and other [airborne pollutants known to be associated with fracking](#).

**From:** [Kim Obert](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** Boulder County Needs Strong Fracking Regulations!  
**Date:** Monday, December 07, 2020 8:45:03 PM

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As a Boulder county resident and past long-time Gunbarrel resident, I am concerned about the 140-well fracking site is targeted for 3 miles from Niwot High School. I urge you to adopt the strongest, most pro-active regulations possible regarding fracking in East Boulder County. Boulder is a leader in renewable energy, living sustainably, and a healthy lifestyle. Let's be guided by these principles as we consider fracking in our county.

Scientific research supports a minimum 2500-foot setback to protect human health and safety. This setback should include all occupied structures (i.e., homes, schools, workplaces), as well as other areas commonly used by people (i.e, trails, trailheads, etc.). Oil and gas drilling should always be prohibited on Open Space. Air quality protection should be expanded to include carcinogens and other airborne pollutants that are known to be associated with fracking.

Please make the best decision for the health of our citizens and community.

Sincerely,  
Kim Obert

**From:** [Maren Waldman](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** Boulder County Needs Strong Fracking Regulations!  
**Date:** Monday, December 07, 2020 9:01:34 PM

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Dear BOCC and Staff,

Thank you for all of your work to develop strong oil and gas regulations for Boulder County. As a citizen of Boulder County I want to urge the strongest possible regulations whenever a total ban of fracking is not possible.

I support the following 3 essential points as part of Boulder Counties Oil and Gas Regulations. Please include them in your final plan. Thank you!

Maren Waldman  
4502 Portofino Dr  
Longmont CO 80503

- Scientific research supports a minimum 2500-foot setback to protect human health and safety. This setback should include all occupied structures (i.e., homes, schools, workplaces), as well as other areas commonly used by people (i.e, trails, trailheads, etc.).
- Oil and gas drilling should be prohibited on Open Space. If a prohibition is not feasible, any drilling on Open Space should be subjected to additional strict criteria to protect wildlife, land, air, water and soil. This should include buffers around water bodies, wetlands and riparian areas, as well as strong restrictions for wildlife.
- Air quality protections -- that currently mention ozone, particulate matter, and methane -- should be expanded to include carcinogens, and other [airborne pollutants known to be associated with fracking](#).

Thank you for protecting Life,  
Maren Waldman

**From:** [Patrick Fowler](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** Boulder County Fracking  
**Date:** Monday, December 07, 2020 9:44:24 PM

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Boulder County Board of Commissioners

I am sure by now you have heard from many Boulder County residents and I want to add my comments by voice to those who implore you to develop strong regulations regarding fracking in our community. Boulder County leads the country in their approach to protecting natural spaces and to let oil and gas drilling impact our crown jewel the Open Space would work against the historical efforts that have been made. We must protect all aspects of this valuable resource Boulder County has spent so many years to develop as a protected space for wildlife, air, soil and water. I ask that you take a strong stance against fracking now so that we can again show Boulder County as a model of environmental stewardship.

Sincerely

--

Patrick Fowler  
704-490-0518  
[paddyofowler@gmail.com](mailto:paddyofowler@gmail.com)



**From:** [tracey holderman](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** Boulder County Needs Strong Fracking Regulations!  
**Date:** Tuesday, December 08, 2020 7:56:19 AM

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Dear BOCC and Staff,

Thank you for all of your work to develop strong oil and gas regulations for Boulder County. I want to urge the strongest possible regulations whenever a total ban of fracking is not possible. I support the following 3 essential points as part of Boulder Counties Oil and Gas Regulations. Please include them in your final plan. Thank you!

Tracey Holderman  
P.O. Box 436  
435 Vasquez Ct  
Lyons, CO  
80540

- Scientific research supports a minimum 2500-foot setback to protect human health and safety. This setback should include all occupied structures (i.e., homes, schools, workplaces), as well as other areas commonly used by people (i.e, trails, trailheads, etc.).
- Oil and gas drilling should be prohibited on Open Space. If a prohibition is not feasible, any drilling on Open Space should be subjected to additional strict criteria to protect wildlife, land, air, water and soil. This should include buffers around water bodies, wetlands and riparian areas, as well as strong restrictions for wildlife.
- Air quality protections -- that currently mention ozone, particulate matter, and methane -- should be expanded to include carcinogens, and other airborne pollutants known to be associated with fracking.

Sent from my iPhone

**From:** [Sara Koury](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** Boulder County Needs Strong Fracking Regulations!  
**Date:** Tuesday, December 08, 2020 8:00:18 AM

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Hello,

I am a long-time resident of Gunbarrel and I feel very strongly that BOCC should adopt the strongest most pro-active regulations as possible for the future of Colorado Fracking. It's obvious we can't stop it completely at this point but for those of us who live in the area, they are concentrating on at least consider the feelings of residents and their children.

The 2500 foot setback to protect HUMAN health and safety has been backed by scientific research. This includes all occupied structures including homes, schools, and workplaces as well as areas commonly used by people.

It should most definitely be prohibited on Open Space that has been designed for that very purpose. To be open and free from harmful activities such as fracking. If that isn't possible it should definitely have strict criteria to protect our WILDLIFE, OUR AIR, AND OUR WATER AND THE SOIL. Including around bodies of water, wetlands, and riparian areas.

With the air quality as fragile as it is here there should be strict air quality protections. This includes ozone, particulate matter, and methane and should be expanded to include carcinogens and other airborne pollutants known to be associated with fracking.

I just don't know how sleep comes easy for those who are willing to trade our quality of life and the future of our planet that don't consider these facts. If not for those of us who live in those areas, for the future of our children and their children, please consider the ramifications if stricter regulations are not put into place.

Thank you,  
Sara and Matthew Koury

Thank you,

--

Sara Koury  
REALTOR at Real Realty Colorado  
773-968-4722  
[sarakoury@gmail.com](mailto:sarakoury@gmail.com)  
*Real people, real advice!*

**From:** [Kris Gibson](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** Boulder County Needs Strong Fracking Regulations!  
**Date:** Tuesday, December 08, 2020 8:48:29 AM

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- Dear Boulder County government
- Please consider the following points in regards to decision made for fracking in Boulder County,
- 
- Scientific research supports a minimum 2500-foot setback to protect human health and safety. This setback should include all occupied structures (i.e., homes, schools, workplaces), as well as other areas commonly used by people (i.e, trails, trailheads, etc.).
- 
- Oil and gas drilling should be prohibited on Open Space. If a prohibition is not feasible, any drilling on Open Space should be subjected to additional strict criteria to protect wildlife, land, air, water and soil. T
- 
- This should include buffers around water bodies, wetlands and riparian areas, as well as strong restrictions for wildlife.
- Air quality protections -- that currently mention ozone, particulate matter, and methane -- should be expanded to include carcinogens, and other [airborne pollutants known to be associated with fracking](#).

thank you,

Kris Gibson  
Gold Hill  
Boulder, CO 80302

**From:** [Jasmin Cori](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** Boulder County Needs Strong Fracking Regulations!  
**Date:** Tuesday, December 08, 2020 9:39:32 AM

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As a long time Boulder resident who enjoys our open spaces, and now a Gunbarrel resident, I implore you to be as proactive as possible with the oil and gas regulations. Please do everything you can to protect our open space and make our neighborhoods and our air safe. It's been a long process of getting here; let's make it a 'homerun' now.

Thank you.

Jasmin Cori  
4945 Twin Lakes Rd,  
Apt 44  
Boulder, CO 80301  
720-401-1764

**From:** [Sally King](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** strongest restrictions possible please!  
**Date:** Tuesday, December 08, 2020 9:41:54 AM

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Hello Boulder County...

Please put in place the strongest restrictions possible to not allow fracking in Boulder County. This process seriously damages our water table and the life of our future generations!

Thank you, Sally King

**From:** [Meri Gibb](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** Current proposed oil and gas regulations  
**Date:** Tuesday, December 08, 2020 11:55:41 AM

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- Scientific research supports a MINIMUM 2500-foot setback to protect human health and safety. This setback should include all occupied structures (i.e., homes, schools, workplaces), as well as other areas commonly used by people (i.e, trails, trailheads, etc.).

-- Oil and gas drilling should be prohibited on open space. If a prohibition is not feasible, any drilling on open space should be subjected to additional strict criteria to protect wildlife, land, air, water and soil. This should include buffers around water bodies, wetlands and riparian areas, as well as strong restrictions for wildlife.

-- Air quality protections (that currently mention ozone, particulate matter, and methane) should be expanded to include carcinogens, and other airborne pollutants known to be associated with fracking.

We oppose the proposed Crestone Fracking site that is just three miles from Niwot High School, due to its proximity to the school and its exterior athletic fields, and the close-by residential areas. Three miles away are too close for the health and safety of thousands of people.

Meri and Paul Gibb  
8091 Meadowdale Sq  
Niwot, CO 80503

**From:** [Heather Wicken](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** TODAY for Strong Fracking Regulations  
**Date:** Tuesday, December 08, 2020 2:45:21 PM

---

Dear BOCC and Staff,

Thank you for all of your work to develop strong oil and gas regulations for Boulder County. I want to urge the strongest possible regulations whenever a total ban of fracking is not possible. I support the following 3 essential points as part of Boulder Counties Oil and Gas Regulations. Please include them in your final plan. Thank you!

Heather Wicken  
2150 Emerald Rd  
Boulder CO 80304

- Scientific research supports a minimum 2500-foot setback to protect human health and safety. This setback should include all occupied structures (i.e., homes, schools, workplaces), as well as other areas commonly used by people (i.e, trails, trailheads, etc.).
- Oil and gas drilling should be prohibited on Open Space. If a prohibition is not feasible, any drilling on Open Space should be subjected to additional strict criteria to protect wildlife, land, air, water and soil. This should include buffers around water bodies, wetlands and riparian areas, as well as strong restrictions for wildlife.
- Air quality protections -- that currently mention ozone, particulate matter, and methane -- should be expanded to include carcinogens, and other airborne pollutants known to be associated with fracking.

--

Heather Wicken

**From:** [gail margolis](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** Request/Feedback  
**Date:** Tuesday, December 08, 2020 3:22:01 PM

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Dear BOCC and Staff,

Thank you for all of your work to develop strong oil and gas regulations for Boulder County. I want to urge the strongest possible regulations whenever a total ban of fracking is not possible. I support the following 3 essential points as part of Boulder Counties Oil and Gas Regulations. Please include them in your final plan. Thank you!

Gail Margolis  
3663 Roundtree Court  
Boulder, CO 80304

- Scientific research supports a minimum 2500-foot setback to protect human health and safety. This setback should include all occupied structures (i.e., homes, schools, workplaces), as well as other areas commonly used by people (i.e, trails, trailheads, etc.).
- Oil and gas drilling should be prohibited on Open Space. If a prohibition is not feasible, any drilling on Open Space should be subjected to additional strict criteria to protect wildlife, land, air, water and soil. This should include buffers around water bodies, wetlands and riparian areas, as well as strong restrictions for wildlife.
- Air quality protections -- that currently mention ozone, particulate matter, and methane -- should be expanded to include carcinogens, and other airborne pollutants known to be associated with fracking.
- 

Thank you,  
Gail



**From:** [Fiona Nugent](#)  
**To:** [Boulder County Board of Commissioners](#)  
**Subject:** Strict Updated Regulations on Fracking => a Healthier, Safer Community  
**Date:** Tuesday, December 08, 2020 3:28:41 PM

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To the Commissioners of Boulder County:

My name is Fiona Nugent, and I'm a senior at Niwot High School. I'm a member of the Environmental Club and a constituent of District 3.

You are likely receiving hundreds of emails from your constituents regarding the Crestone Project and the new regulations that are in the works. They are anxious about the threats that fracking will pose for their health and the land of Boulder County.

I want to emphasize the other future: the good one in which Boulder County residents do not have to fear that toxic chemicals in their water will give them cancer. Where our air will be clean enough so that we only need to wear cloth masks for COVID, not heavy duty masks to protect us from smog and pollution. One in which I can attend CU Boulder and be proud of the example my community has set for the country in regards to fracking. One in which the priority will be placed on people, not industries.

Commissioner Jones, Commissioner Jones, and Commissioner Gardner: I know that you three share those same goals with me.

Let's make it a reality. Please set and enforce 2,500 ft setbacks from all buildings of high occupancy.

Thank you,  
Fiona Nugent

8178 Dry Creek Circle  
Niwot, CO 80503

**From:** [Bovaird, Emma](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** The Importance of Increasing Fracking Regulations  
**Date:** Tuesday, December 08, 2020 3:40:03 PM

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Hello,

Even as a high school senior, I recognize the implications of the Crestone Project. My neighbors, community members, and even the kids I babysit will be impacted. I'm heading off to college in a year, but after such an incredible childhood I can't let kids be robbed of the same.

Being only three miles from my school, this project poses a health threat to our community. It has the potential to limit people's futures because of air and water pollution. For example, those with respiratory diseases, including asthma, would be more restricted just in going outside.

I implore you to consider the implications of the Crestone Project. By strengthening Boulder County fracking regulations, all of my community members may live happier, healthier lives.

Thank you for your time,  
Emma Bovaird  
Graduating Class of 2021

**From:** [Lily Sykes](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** Public Comment on Fracking in Boulder County  
**Date:** Tuesday, December 08, 2020 3:42:04 PM

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Hello. My name is Lily Sykes, and I live at 362 Blue Mountain Road. I am a freshman at Niwot High School.

I am a member of the Niwot High School Environmental Club. Therefore, it is my responsibility to advocate for the environment wherever and whenever possible, as the environment is my future and my community. We must take care of our planet, and you have the power to determine how well we do.

Fracking creates immense health detriments, releasing harsh toxins into the air that not only harm the environment through air quality, but also increase the risk for cancer, heart disease, asthma, and other severe issues. Fracking also worsens the failing air quality, increases pollution, harms vegetation, and puts many individuals in danger.

I, along with the Environmental Club at Niwot High School, demand 2500 foot setbacks from any fracking site to any other building, including housing, business buildings, and schools. You must stand up for us, as we do not have the power to make the changes we must. As you make decisions regarding the environment, please remember one thing.

This is our future.

Lily Sykes  
Environmental Club  
Niwot High School

For more youth voices against fracking, please watch this short video:  
<https://www.youtube.com/watch?v=srSUEOmgTHM>

**From:** [Maya Beauvineau](#)  
**To:** [Boulder County Oil and Gas Comment](#); [Boulder County Board of Commissioners](#)  
**Subject:** Please, Protect Our Future  
**Date:** Tuesday, December 08, 2020 4:08:33 PM

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Dear Boulder County Oil and Gas Commissioners and Staff,

I am emailing, today, to express my hope that in the coming days, the updated oil and gas regulations will be released, reflecting science and the overwhelming public support for increased setbacks of 2,500 feet from open space as well as buildings of human occupancy.

My peers and I at Niwot High School are terrified that the current updated regulations will not be sufficiently stringent to thwart the development of the Crestone Peak Resources fracking site, located only three miles from our school.

Thus, again, I implore you to take advantage of the opportunity presented by SB19-181, to genuinely protect the health and wellbeing of Boulder County citizens as well as the environment AND wildlife by:

1. Increasing setbacks to 2,500feet
2. Including open space as well as all buildings of human occupancy in the setback specifications

It is time we recognize the feasibility and necessity of the immediate transition away from oil and gas. Please lead the state of Colorado and the nation in the first step.

Our future depends on it.

Thank you,

Maya Beauvineau  
984 Pine Glade Rd. Nederland Colorado, 80466  
720-416-6777

**From:** [Gerber, Victor](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** New Fracking Regulations  
**Date:** Tuesday, December 08, 2020 5:16:54 PM

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Dear Boulder County Commissioners,

I am writing as a student at Niwot High School and a member of the Niwot High School Environmental Club. As I am sure you are well aware by this point Niwot High School is around three miles away from a fracking site proposed by Crestone Peak Resources, which would contain 140 new wells, making it the largest in the State of Colorado. This will adversely affect not only my generation of students, but all of the generations which succeed us at Niwot High School. While I applaud you for the tremendous amount of progress you have made toward the implementation of stricter regulations on fracking thus far, I strongly urge you, for the sake of the students of Niwot High School, as well as that of the people and wildlife of Boulder county, to go further.

While I am aware that the legality of an outright ban on fracking continues to be a disputed issue, there are still a number of areas in which the regulations can be strengthened to better protect the health of people and the environment. Studies have shown that 2,500 foot setbacks between oil and gas are on the lower end of what is necessary to protect human health, and it is important that these setbacks are applied not just for buildings intended for human occupancy, but to open space as well. In addition, wildlife and water must be proactively protected by these regulations. Thank you for your efforts towards protecting the health of Boulder County residents and the environment.

Sincerely,  
Victor Gerber

**From:** [Catherine Griesbach](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** Boulder County Needs Strong Fracking Regulations!  
**Date:** Wednesday, December 09, 2020 1:04:20 AM

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Dear BOCC,

I'm writing to ask you to please work for the most stringent O&G guidelines regarding any future fracking in Boulder County.

Once you allow fracking in Boulder County on a large scale, as I've heard is a possibility near Niwot High School, there is no going back. Any fracking that takes place, especially on such a large scale, puts all nearby residents, including children, at great risk of experiencing health issues from the VOC's that will be emitted during and after the drilling process.

When I lived nearer to over a hundred wells and active fracking, I experienced painfully dry eyes, rapid heartbeat after being outside, nausea, and post-nasal drip for three years. I was concerned for my young son, who got sick a lot. After moving to a different part of Boulder County, my symptoms disappeared. I had not attributed my symptoms to be from fracking at the time, but after doing some research, I found that these are common symptoms people can experience living near wells and active drilling. Some of my neighbors complained of migraines they had never experienced before. Others mentioned their children were experiencing chronic nosebleeds.

Fracking also pollutes our air. Studies conducted by Professor Detlev Helmig, who I heard speak in Niwot about two years ago, revealed that pollution from fracking done in Weld County was affecting air quality adversely as far away as Boulder Reservoir. Our air was ranked 4th most polluted in the nation in January of this year. We are beginning to experience wildfires on a scale and intensity not seen in the past. Boulder County, and our beautiful state are being damaged by the harmful effects of fracking.

I ask you to please heed the warnings and listen to the studies that have shown how harmful fracking is to the environment as well as to the adults, children, and animals who must live near it. We will all pay the price.

Please protect residents and wildlife by holding to the most stringent regulations for fracking. Please be very specific and limiting on what the oil and gas industry may and may not do in Boulder County for the sake of current and future generations.

Thank you for your time and for considering my comments.

Sincerely,  
Catherine Griesbach

**From:** [Wufoo](#)  
**To:** [Boulder County Board of Commissioners](#)  
**Subject:** Contact County Commissioners [#1774] - [Name: Cherry, Nancy] Re: oil and gas development regulations in Boulder county  
**Date:** Wednesday, December 09, 2020 9:49:45 AM

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Name *	Nancy Cherry
Email *	<a href="mailto:nanccherry@yahoo.com">nanccherry@yahoo.com</a>
Address or General Area (optional)	<input type="checkbox"/> 6118 Old Brompton Road Boulder, Colorado 80301
Phone Number (optional)	(720) 299-4554
Subject *	oil and gas development regulations in Boulder county
Comments, Question or Feedback *	Please update your regulations to include setbacks of at least 2,500 feet from high occupancy buildings, residences and open space. Please include protection provisions for wildlife, water and other natural resources.
Please check box below *	<ul style="list-style-type: none"><li>• I acknowledge receipt of the Open Records Notification</li></ul>

**From:** [Carrie ballas](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** Boulder County Needs Strong Fracking Regulations!  
**Date:** Wednesday, December 09, 2020 10:07:20 AM

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Dear BOCC and Staff,

Thank you for all of your work to develop strong oil and gas regulations for Boulder County. I want to urge the strongest possible regulations whenever a total ban of fracking is not possible. I support the following 3 essential points as part of Boulder Counties Oil and Gas Regulations. Please include them in your final plan. Thank you!

Carrie Ballas, Nurse Practitioner  
2204 Mapleton Ave Boulder, CO

- Scientific research supports a minimum 2500-foot setback to protect human health and safety. This setback should include all occupied structures (i.e., homes, schools, workplaces), as well as other areas commonly used by people (i.e, trails, trailheads, etc.).
- Oil and gas drilling should be prohibited on Open Space. If a prohibition is not feasible, any drilling on Open Space should be subjected to additional strict criteria to protect wildlife, land, air, water and soil. This should include buffers around water bodies, wetlands and riparian areas, as well as strong restrictions for wildlife.
- Air quality protections -- that currently mention ozone, particulate matter, and methane -- should be expanded to include carcinogens, and other airborne pollutants known to be associated with fracking.

Thank you for your consideration

--

Carrie Ballas, BSN, MS, FNP-C, ABAAHP



**Boulder Integrative Health**

1455 Yarmouth Ave Ste #112      P 303-459-4875  
Boulder, CO 80304      F 303-323-6242

[www.boulderintegrativehealth.com](http://www.boulderintegrativehealth.com)

**From:** [Kieuly Dang](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** My two cents  
**Date:** Wednesday, December 09, 2020 1:26:12 PM

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Good day Commissioners Deb, Matt, Elise,

I am a mother of two young daughters in the town of Niwot, CO. I moved to Niwot in June 2019 from Boulder, CO; I lived there since July 2006. As I sit here in front of my laptop, I am stumped as what to write regarding the upcoming date of December 31, 2020 - the day the moratorium is set to end.

I know you and the staff have worked tirelessly to update the local rules and regulations of Boulder County regarding oil and gas drilling. I remember back in the fall of 2012 when I first became involved in the anti-fracking movement; I learned a lot about the industry but also about myself. I learned that my opinion is not the only one out there and no matter how much I (and you might feel the same) would love for fracking to be banned, there are many forces opposing this path. It must be so frustrating and tiresome to feel as though you are being pulled in two different directions; I do not envy your position but rather respect your willingness to step into the roles you play, especially Deb. You've been a commissioner for quite some years now; you must love the work.

Needless to say, I am sad about the moratorium ending. I am including some points I wanted to share with you. I'm hoping you will take them into consideration if other comments have not touched upon them yet. Perhaps you've already considered these points on your own. The following are my concerns:

### **Lack of Oil & Gas Monitoring & Inspectors:**

Food for thought - CDPHE does not have the bandwidth to monitor all wells and enforce compliance. What is or will be done at the local level regarding inspection? Especially during the initial phase of drilling?

Former oil and gas inspector speaks out

- <https://www.coloradoindependent.com/2019/04/16/colorado-oil-gas-emissions-regulation/>

Lack of inspectors and fast-growing number of oil/gas wells built

- <https://www.coloradoan.com/story/news/local/colorado/2019/04/22/colorado-inspections-oil-and-gas-sites-showing-results/3542771002/>

### **Suggestions for Oil and Gas Companies: (to include in application process)**

Reforestation funding/efforts by COGA or organization applying for drilling

To reduce human error, perhaps all oil and gas employees should be subject to random

alcohol and drug testing prior to operational work; To be conducted randomly, frequently and consistently. Mental capacity needs to be addressed/monitored as well.

In Trust and Light,  
Kieuly Dang  
6866 Countryside Ln, #246  
Niwot, CO 80503  
303-502-7979

**From:** [Philippa Sorley](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** Strong Fracking Regulations  
**Date:** Wednesday, December 09, 2020 1:43:41 PM

---

Dear BOCC and Staff,

Thank you for all of your work to develop strong oil and gas regulations for Boulder County. I want to urge the strongest possible regulations whenever a total ban of fracking is not possible. I support the following 3 essential points as part of Boulder Counties Oil and Gas Regulations. Please include them in your final plan. Thank you!

Pippa Sorley  
817 E Moorhead Cir, Boulder, CO 80305

- Scientific research supports a minimum 2500-foot setback to protect human health and safety. This setback should include all occupied structures (i.e., homes, schools, workplaces), as well as other areas commonly used by people (i.e, trails, trailheads, etc.).
- Oil and gas drilling should be prohibited on Open Space. If a prohibition is not feasible, any drilling on Open Space should be subjected to additional strict criteria to protect wildlife, land, air, water and soil. This should include buffers around water bodies, wetlands and riparian areas, as well as strong restrictions for wildlife.
- Air quality protections -- that currently mention ozone, particulate matter, and methane -- should be expanded to include carcinogens, and other airborne pollutants known to be associated with fracking.

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**Pippa Sorley**  
Finance Director

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**P** 720.284.1918 **E** [pippa@earthguardians.org](mailto:pippa@earthguardians.org)

**W** [EarthGuardians.org](http://EarthGuardians.org)



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**From:** [Laura Hickernell](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** Urgent: Deny Crestone's permit  
**Date:** Wednesday, December 09, 2020 8:47:39 PM

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Dear Commissioners,

We ask that you take a stand against Crestone and deny their ability to drill in Boulder County. We are neck-deep in the climate crisis and have got to take a stand against further drilling of fracked gas. This would set us far back in our climate goals while polluting and endangering our communities - in particular the sacred community of children.

Students are asking us to stand up for their future. It is our duty to fight for their ability to survive.

Laura Hickernell  
on behalf of 2,000 members of Mothers Out Front across the state

**From:** [Maya Beauvineau](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** Proposed edits to final updated regulations  
**Date:** Thursday, December 10, 2020 7:25:01 AM

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Dear Boulder County Commissioners, Jones, Jones and Gardner, and Staff including Deputy Director Sanchez:

Thank you for your recommendations and modifications that reflect necessary protections to public health, safety, welfare, wildlife and the environment to the latest draft of oil and gas regulations. This is one step closer to the stringent regulations that will help protect the future of Colorado.

I would like to express my support for the following edits to the regulations, proposed by Leslie Weise. The section #s and relevant excerpts are included below, with yellow highlight for further proposed text additions, and strikethrough for deletions. These would serve to clarify certain of the provisions.

I hope you will consider and implement these suggestions, or a version of them, before the regulations are finalized. This is the time to enact the most stringent regulations possible, and these suggested edits, while small, will make a large difference.

Thank you for your consideration.

Sincerely,

Maya Beauvineau

12-900-D.1.B.iii

Models the impacts on air quality from the proposed oil and gas facilities and operations over their lifetime, ~~through completed final reclamation~~, including the compounding effects of climate change, ~~and those effects~~ on ozone and particulate pollution in the county, ~~and taking into account and identifying all relevant factors including natural conditions and other air quality impacts from any existing or foreseeable source.~~

12-1000-Q. Electrification. ~~Oil and gas operations will avoid or sufficiently minimize and mitigate adverse impacts from the use of generators and fossil fuel combustion.~~ Operations will be electrified to the highest degree possible. Renewable energy sources will be required unless the Applicant ~~is able to prove that they are not feasible~~ ~~attainable~~, in which case the Director may ~~consider whether to deny the application or~~ whether off-site renewable offsets may be substituted.

12-1000-W. Surrounding Land Uses. ~~Oil and gas facilities will be located to avoid or sufficiently minimize and mitigate adverse impacts to surrounding land uses and protect public health, safety, and welfare, the environment and wildlife. The Board will consider separation between proposed oil and gas operations and existing land use as a primary means of avoiding adverse~~

impacts. Under 12-1100(A), unless an Operator can show avoidance of adverse impacts will result from propose oil and gas operations, the Board may relocate will require Well Pads of proposed oil and gas facilities, in order to meet the standards under this Section, which would generally require Well Pads to be located 2,500 feet or more from an existing Dwelling and related residential uses; an Educational Facility or licensed Child Care Center; and public trails and trailheads owned and maintained by the County or any municipality; and workplaces located in the LI, GI, C, B, and T zoning districts. In all cases, a Well Pad at an oil and gas facility must be located a minimum of 2,000 feet from: an existing Dwelling and related residential uses; an Educational Facility or licensed Child Care Center; and public trails and trailheads owned and maintained by the County or any municipality; and workplaces located in the LI, GI, C, B, and T zoning districts.

**From:** [angela Lortie](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** Boulder County Needs Strong Fracking Regulations!  
**Date:** Thursday, December 10, 2020 9:21:37 AM

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Dear Commissioners-

Please increase the setbacks of oil and gas development to at least 2,500 feet from dwellings and schools, etc. and commonly used spaces, such as trailheads and popular trails. Scientific data supports this distance as a bare minimum protective requirement for human health. Please also add air quality protections to include carcinogens and other pollutants associated with fracking, and increase air monitoring requirements for permitted activities.

Additionally, please include meaningful, science-backed protective buffers around sensitive wildlife habitat, such as wetlands, riparian corridors, and areas occupied by special status wildlife species. Research has found that noise and vibration increases stress in wildlife, masks communications, and negatively affects reproduction and development. Please consider a 1,500-foot setback for sensitive natural areas, and implement the distances recommended by Colorado Parks and Wildlife for raptors, which vary by species.

Thank you for working to protect your constituents' health and the wildlife that inhabits Boulder County.

Angela Lortie



**From:** [Ruby Lortie](#)  
**To:** [Boulder County Oil and Gas Comment](#)  
**Subject:** Strong fracking rules!  
**Date:** Thursday, December 10, 2020 9:46:33 AM

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Hi,

I'm a student at one of the high schools in Boulder County. I do not want any kind of unhealthy oil and gas development near or where I live and go to school. It's unhealthy for those around it, including wildlife. It's important that I breathe healthy air, as well as my friends, parents, and classmates too. Do not endanger people or wildlife by allowing fracking near houses or schools, or areas that wildlife rely on. Wildlife depends on the open spaces and if it keeps getting chopped up and ruined by industries and development, then they have nowhere to go. Please vote for strong rules for any oil and gas development in Boulder County.

Thank you,  
Ruby Lortie

**From:** Leslie Weise <[lesliex@yahoo.com](mailto:lesliex@yahoo.com)>

**Sent:** Wednesday, December 9, 2020 11:40 PM

**To:** Jones, Elise <[ejones@bouldercounty.org](mailto:ejones@bouldercounty.org)>; Jones, Matt <[mjones@bouldercounty.org](mailto:mjones@bouldercounty.org)>; Gardner, Deb <[dgardner@bouldercounty.org](mailto:dgardner@bouldercounty.org)>; Sanchez, Kimberly <[ksanchez@bouldercounty.org](mailto:ksanchez@bouldercounty.org)>

**Cc:** Gabrielle Katz Heatherwood <[healthyheatherwood@gmail.com](mailto:healthyheatherwood@gmail.com)>; Deborah McNamara <[campaigns@350colorado.org](mailto:campaigns@350colorado.org)>; Micah Parkin <[micah@350colorado.org](mailto:micah@350colorado.org)>; Amy Allen <[amyallen@alumni.stanford.edu](mailto:amyallen@alumni.stanford.edu)>; Tricia Olson <[olynmawr@msn.com](mailto:olynmawr@msn.com)>; Giselle Herzfeld <[giselle@350colorado.org](mailto:giselle@350colorado.org)>; Bhatt <[bhattlex@yahoo.com](mailto:bhattlex@yahoo.com)>; Maya Beauvineau <[maya@350colorado.org](mailto:maya@350colorado.org)>

**Subject:** Additional Comments re 4th Draft Fw: REMINDER: Board of County Commissioners' Dec. 10 (virtual) public meeting on proposed oil & gas regulations

Dear Boulder County Commissioners, Jones, Jones and Gardner, and Staff including Deputy Director Sanchez:

Thank you for your recommendations and modifications that reflect necessary protections to public health, safety, welfare, wildlife and the environment to the latest draft of oil and gas regulations.

I would like to suggest a few additional edits (the section #s and relevant excerpts included below, with yellow highlight for further proposed text additions, and strikethrough for deletions) that would serve to clarify certain of the provisions. I hope you will find these suggestions helpful and will incorporate them, or a version of them, before the regulations are finalized. Please let me know if you have any questions. Thank you for your consideration.

Best regards,  
Leslie Weise

12-900-D.1.B.iii

1. Models the impacts on air quality from the proposed oil and gas facilities and operations over their lifetime, ~~through completed final reclamation~~, including the compounding effects of climate change, ~~and those effects~~ on ozone and particulate pollution in the county, ~~and taking into account and identifying all relevant factors including natural conditions and other air quality impacts from any existing or foreseeable source.~~

12-1000-Q. Electrification. Oil and gas operations will avoid or sufficiently minimize and mitigate adverse impacts from the use of generators and fossil fuel combustion. Operations will be electrified to the highest degree possible. Renewable energy sources will be required unless the Applicant is able to prove that they are not ~~feasible~~ attainable, in which case the Director may consider whether to deny the application or whether off-site renewable offsets may be substituted.

12-1000-W. Surrounding Land Uses. Oil and gas facilities will be located to avoid or sufficiently minimize and mitigate adverse impacts to surrounding land uses and protect public health, safety, and welfare, the environment and wildlife. The Board will consider separation between proposed oil and gas operations and existing land use as a primary means of avoiding adverse impacts. Under 12-1100(A), unless an Operator can show avoidance of adverse impacts will result from propose oil and gas operations, the Board ~~may relocate~~ will require Well Pads of proposed oil and gas facilities, in order to meet the standards under this Section, ~~which would generally require~~

Well Pads to be located 2,500 feet or more from an existing Dwelling and related residential uses; an Educational Facility or licensed Child Care Center; and public trails and trailheads owned and maintained by the County or any municipality; and workplaces located in the LI, GI, C, B, and T zoning districts. In all cases, a Well Pad at an oil and gas facility must be located a minimum of 2,000 feet from: an existing Dwelling and related residential uses; an Educational Facility or licensed Child Care Center; and public trails and trailheads owned and maintained by the County or any municipality; and workplaces located in the LI, GI, C, B, and T zoning districts.

----- Forwarded Message -----

**From:** Boulder County Oil & Gas News <[bouldercounty@public.govdelivery.com](mailto:bouldercounty@public.govdelivery.com)>

**To:** "[leslielx@yahoo.com](mailto:leslielx@yahoo.com)" <[leslielx@yahoo.com](mailto:leslielx@yahoo.com)>

**Sent:** Wednesday, December 9, 2020, 05:11:20 PM MST

**Subject:** REMINDER: Board of County Commissioners' Dec. 10 (virtual) public meeting on proposed oil & gas regulations

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For news and updates on oil and gas development in Boulder County, visit the county's [Oil and Gas website](#)

#### **Boulder County News & Updates**

Oil & Gas Development

Dec. 9, 2020

Contact:

[Kim Sanchez](#), 720-564-2627

(Deputy Director,  
Community Planning & Permitting)

## **REMINDER: Board of County Commissioners' Dec. 10 (virtual) public meeting on proposed oil & gas regulations**

***The Board of County Commissioners will reconvene on Thursday, Dec. 10, at 4 p.m. to consider changes to draft Oil & Gas Regulations (DC-19-0002)***

The Board of County Commissioners (BOCC) will hold a Public Meeting on Thursday, Dec. 10, 2020 at 4 p.m. to discuss the changes to Docket DC-19-0002: Amendments to Article 12 of the Land Use Code – Land Use Code Amendments addressing Oil and Gas development, seismic testing, and companion changes to the Land Use Code that they

requested at their Dec. 3 public meeting. *No additional public testimony will be taken on Dec. 10.*

View the [Dec. 10, 2020 staff memo and revised 4th Draft regulations \(dated Dec. 9, 2020\)](#).

The staff memo outlines the changes made to the draft regulations following the Commissioners' direction given on Dec. 3. The 4th Draft regulations (dated Dec. 9, 2020) are a redline from the 3rd Draft (dated Nov. 23, 2020), which the BOCC reviewed at their public hearing on December 1st and public meeting on Dec. 3rd and includes the changes that the BOCC requested be considered.

Information on how to join the virtual public meeting on Dec.10 is posted on the [county's oil and gas website](#). Registration is not required to attend.

#### Link to join the virtual public meeting:

- **Public Meeting:** DC-19-0002 Oil & Gas Regulations
- **Date/time:** Thursday, Dec. 10 at 4 p.m.
- **Join:** Zoom Webinar Attendee Link: <https://boco.org/BOCC-DC190002>

Alternatively, call-in to the meeting: 1-833-568-8864, Webinar ID: 161 503 8158#

If you have questions about joining the meeting, please email [hearings@bouldercounty.org](mailto:hearings@bouldercounty.org).

For more information on Boulder County's efforts related to oil and gas development, please visit the [county's oil and gas website](#).

### Oil & Gas Development in Boulder County

Boulder County is concerned about the potential for significantly expanded oil and gas development in Boulder County and on county open space land.\* We support appropriate tighter restrictions and increased local control to help mitigate the potentially hazardous impacts from these industrial activities.

We pledge to continue to protect our local public health, safety, and the environment from the impacts of intensive oil and gas development using a [multi-pronged approach](#) of legislative, legal, environmental, and public health strategies. In 2017, Boulder County adopted [the strongest set of regulations on oil and gas development in the State of Colorado](#). Read more at [www.boco.org/OilGas](http://www.boco.org/OilGas).

\*Read the county's [Statement on Oil & Gas Development on Open Space](#).

Read the [latest news on oil and gas development](#) in Boulder County. | [Sign-up](#) to receive updates via email or SMS text.



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