



# Land Use

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**BOULDER COUNTY  
BOARD OF COUNTY COMMISSIONERS**

**March 14, 2017, 2:00 P.M.**

**Commissioners' Hearing Room, Third Floor  
Boulder County Courthouse  
Boulder, Colorado**

**Docket DC-16-0004: Amendments to Oil and Gas Development Regulations  
Public Hearing for the Board of County Commissioners to consider proposed Land Use Code amendments addressing oil and gas development within the Boulder County Land Use Code**

*Staff:* Kimberly Sanchez, Chief Planner (Land Use Department)  
David Hughes, Deputy County Attorney (County Attorney's Office)

**AGENDA**

1. COUNTY STAFF PRESENTATION
2. BOARD OF COUNTY COMMISSIONERS QUESTIONS TO STAFF
3. PUBLIC COMMENT (3-min allowance per individual speaker\*\*)

\*\*Time may be pooled (up to 10 minutes maximum) provided all individuals who are pooling time are present.

All public comment received to date is available on the County's oil and gas website at:  
<http://www.bouldercounty.org/dept/landuse/pages/oilgas.aspx>

**PACKET CONTENTS**

Item	Pages
o Land Use Department Memo	1 – 11
o Draft Regulations (Attachment A), as revised by staff pursuant to BOCC direction given in November 2016	A1 – A46
o Disruption Payment Appendices (Attachment B)	B1–B3
o Resolution 2016-137, establishing a New Moratorium on Processing Oil and Gas Development Applications until May 1, 2017 (Attachment C)	C1–C4

## **ACTION REQUESTED FROM BOARD OF COUNTY COMMISSIONERS**

Today's public hearing is for the Board of County Commissioners (BOCC) to consider the Boulder County Land Use Code amendments ("Draft Regulations"), which were revised by staff in response to the direction received from the BOCC in November 2016 (see revised Draft Regulations - Attachment A). Following today's staff presentation, staff requests that the BOCC ask questions of staff and then take public testimony. Since the March 14 public hearing is expected to take several hours, the Commissioners do not anticipate making a decision on March 14 but plan to table the docket to a public meeting on March 23 at 2 p.m., at which time they will discuss and consider whether to adopt the proposed regulations.

### ***Schedule for Adoption of the Draft Regulations***

- **Tuesday, March 14, 2 p.m.** Board of County Commissioners public **hearing** – public comment to be taken. (Note: Online speaker sign-ups began on March 1, but speakers may still sign-up on March 14. Limit 3 min. per speaker)
- **Thursday, March 23, 2 p.m.** Board of County Commissioners public **meeting** – no further testimony will be taken.

Any updates to the schedule will be posted on the County's oil and gas website:

<http://www.bouldercounty.org/dept/landuse/pages/oilgas.aspx>

## **BACKGROUND AND OVERVIEW OF DRAFT REGULATIONS**

After Colorado Supreme Court rulings in the Longmont and Fort Collins oil and gas cases invalidated fracking bans and long-term moratoriums, Boulder County terminated its moratorium that was set to run through July 2018 and adopted a new, temporary moratorium of a materially shorter duration (Resolution 2016-137).

The purpose of the new temporary moratorium, which is set to expire May 1, 2017, is to provide the County enough time to review and update the oil and gas regulations that were adopted in December of 2012 in order to better reflect changed conditions and more recent industry practices, as well as to prepare for successful implementation of the regulations. Namely, the County's 2012 regulations did not adequately address the shift toward large-scale consolidated facilities that residents are now witnessing across the Front Range: operators are now proposing to drill 20 to 40 wells per well site instead of the one to four wells per pad that had been historically drilled in this area. Additionally, at least two state agencies, Colorado Oil & Gas Conservation Commission and Air Quality Control Commission, changed their regulations since the adoption of the County's 2012 regulations.

On February 14, 2017, the Colorado Attorney General filed a suit against the County challenging the validity of the County's prior moratorium and the current moratorium. On February 25, 2017, the Colorado Oil and Gas Association and the American Petroleum Institute joined the lawsuit as plaintiffs against the County. The County is defending the lawsuit and the moratorium because it believes it is consistent with the Colorado Supreme Court decisions.

During the time the recent moratorium has been in place, the County has been working on updated regulations. Under the proposed amended regulations, the County will 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 oil and gas development proposal, along with the

application of conditions on the development that will reduce the impacts on neighboring landowners and preserve the County land and environment.

The County’s proposed regulations provide for close scrutiny of all proposed oil and gas development and multiple opportunities for public input prior to any decision being made. They also allow staff, the Planning Commission, and the Board of County Commissioners to consider site-specific circumstances related to each oil and gas development application and to customize avoidance, minimization, and mitigation measures to best address unique site conditions. Finally, the proposed regulations will ensure close monitoring and compliance with all requirements and mitigation measures.

**For a comprehensive summary of the key elements and regulatory areas included in the Draft Regulations please see the November 15, 2016 BOCC staff report:**

<http://www.bouldercounty.org/doc/landuse/dc160004bocc20161115.pdf>

**PROPOSED REVISIONS TO THE REGULATIONS, AS DIRECTED BY THE BOCC IN NOVEMBER 2016**

The following table summarizes the revisions to the Draft Regulations pursuant to the BOCC’s direction at their November 15, 2016 public hearing on Docket DC-16-0004. These changes are redlined in the revised Draft Regulations (Attachment A).

Board of County Commissioners Questions / Direction	Staff Response / Proposed Revision
<b>1. Public nuisance</b>	
Determine if oil and gas operations may be a public nuisance if they are uneconomic	✓ Edits made to Section 12-200 to include public nuisance as a basis for our regulations to support any potential nuisance claims
<b>2. Financial viability of operators</b>	
Explore annual submission of audited financial statements from operators	<ul style="list-style-type: none"> <li>✓ Edit made to Section 12-400(B)(4)(a) to require operators to provide a list of prior violations within the last ten years</li> <li>✓ For the purpose of determining the likelihood of an operator complying with permit conditions and remedying violations, a record of its past performance is a more effective method than an annual financial report</li> <li>✓ Considered requiring submission of Securities and Exchange (SEC) documents for publicly-traded companies, but it is unclear how the County would use this information, which is already publicly available</li> </ul>
<b>3. Financial assurances / bonding</b>	
Ensure that operators are financially solvent to move forward with a safe operation and able to clean up existing site when done, including consideration of a stand-by trust	<ul style="list-style-type: none"> <li>✓ Edits made to Section 12-400(B)(4)(b) requiring copies of financial assurances filed with COGCC be provided to the County</li> <li>✓ Allows County to ensure an operator is in compliance with State bonding requirements</li> <li>✓ Performance guarantee under 12-700(R)</li> <li>✓ Section 12-400(B)(5) added to require operators and their successors to register with the County and provide information on past operations, insurance, and other topics</li> </ul>

Board of County Commissioners Questions / Direction	Staff Response / Proposed Revision
<b>4. Insurance for operators</b>	
Look at environmental insurance policy for operators	<ul style="list-style-type: none"> <li>✓ Edit made to Section 12-400(B)(4)(c) to require proof of \$1 million general liability insurance, duplicating COGCC rule</li> </ul>
<b>5. Water testing requirements</b>	
Clarify and expand on water testing requirements	<ul style="list-style-type: none"> <li>✓ Numerous modifications to water source testing requirements in Section 12-701(B)(2), including periodic post-completion testing post-stimulation testing up to one mile up-gradient and down-gradient of a well</li> </ul>
<b>6. Baseline testing for water</b>	
Additional baseline testing for water	<ul style="list-style-type: none"> <li>✓ Edits made to Section 12-701(B)(2)(b) to require baseline sampling of all water sources within an increased distance of ½ mile (vs. ¼ mile) of radius of the projected track of the borehole and proposed well or multi-well site</li> <li>✓ Additional analytes added to Table 1 based on Environmental Defense Fund recommendations</li> <li>✓ Added definition of “water source” in Section 12-1400</li> </ul>
<b>7. Baseline testing for soil</b>	
Clarify and expand soil testing requirements	<ul style="list-style-type: none"> <li>✓ Edits made to Section 12-701(C)(12) to include an option for a condition of approval requiring contamination based soil testing and remediation</li> <li>✓ Scientific consensus is that baseline testing of soil would not provide useful information. Soil testing is typically conducted in the event of a known spill. At that point, baseline information is not necessary because new soil contamination will be apparent from the test results</li> <li>✓ University of Colorado researchers indicated to Boulder County Public Health that water and air testing would provide better information as to the potential impacts from increased oil and gas development. There are tools (ex. Picarro mobile methane device) that can be used at oil and gas facilities to identify subsurface releases, but researchers felt this would be better deployed in response to a known or suspected release</li> </ul>
<b>8. Respond to Yale study and new EPA report</b>	
Does the water quality monitoring that we are doing tell us about the chemicals identified in these studies	<ul style="list-style-type: none"> <li>✓ Edits made to Section 12-701(B)(1) and (2)</li> <li>✓ Optional condition of approval banning orally toxic chemicals in fracking fluids</li> <li>✓ Included follow-up testing requirements that could require testing for additional chemical components if BTEX is detected</li> </ul>

Board of County Commissioners Questions / Direction	Staff Response / Proposed Revision
<b>9. Waterless Fracking</b>	
Interest in exploring waterless fracking as a way to conserve water in the practice of hydraulic fracturing	<ul style="list-style-type: none"> <li>✓ Staff discussed this technique with Industry, and waterless fracking is a nascent technology that is not used by local operators. It is fringe technology and not in common use. Some experiments with waterless fracking have been done elsewhere but involve the use of chemicals to replace water, meaning that it is likely not a preferable alternative</li> <li>✓ For example, due to explosion risks, and the bankruptcy of GASFRAC (2014), propane fracking seems to have been largely abandoned<sup>1</sup>. An explosion in 2011 left a dozen workers seriously injured when a well in Alberta, Canada exploded during a fracking operation using propane</li> </ul>
<b>10. Water recycling</b>	
Include as much stewardship of water resources as possible, recognizing importance of water	<ul style="list-style-type: none"> <li>✓ Existing Section 701(A)(q) addresses this issue by including the optional condition of approval for closed loop pitless systems, which allows for recycling of all fluids, including water</li> </ul>
<b>11. Inspections</b>	
Industry to pay costs for inspections	<ul style="list-style-type: none"> <li>✓ Edits made to Section 17-300(E) to recover costs for zoning enforcement in general</li> <li>✓ Proposed amendment would allow Land Use and Public Health departments to charge for follow-up inspections on all zoning violations</li> </ul>
<b>12. Continuous monitoring</b>	
Continuous monitoring everywhere technologically possible	<ul style="list-style-type: none"> <li>✓ Edits made to Sections 12-700(S)(3)(c) pipelines and 12-701(C)(11) wells</li> <li>✓ Remote monitoring is standard for most operators</li> <li>✓ Applicant must report required testing and monitoring to the Director under 12-700(D)</li> </ul>

<sup>1</sup> Knox, Tom. **Waterless fracking 'mothballed' by new owners of GasFrac**. Columbus Business First. 2015. <http://www.bizjournals.com/columbus/blog/ohio-energy-inc/2015/09/waterless-fracking-mothballed-by-new-owners-of.html>

Board of County Commissioners Questions / Direction	Staff Response / Proposed Revision
<b>13. Disruption Payments</b>	
Refine disruption payments (see Attachment B)	<ul style="list-style-type: none"> <li>✓ Edits made to Section 12-701(C)(3) and creation of disruption payment appendices (Attachment B)</li> <li>✓ Payment information was based on publicly-available sources (U.S. Department of Housing and Urban Development and American Moving &amp; Storage Association) so a consultant was not deemed necessary</li> <li>✓ The provision is modified to apply to residents within one mile of a well or production facility and will be graduated depending on a structure's proximity to the site, the local topography and other impact factors.</li> <li>✓ For certainty and conformity, the payments may be calculated based on equivalent home rental and moving costs obtained from government and trade association sources, provided in the Appendices included in Attachment B, with reference to the expected duration of activity from initial construction through well completion.</li> <li>✓ Modifications may be made for occupants with special needs, home business or agricultural needs or other individual special factors. To assist in residents' planning, payments will be made at least 60 days before the commencement of construction.</li> </ul>
<b>14. Pipelines</b>	
Closer look at pipeline regulations	<ul style="list-style-type: none"> <li>✓ Edits made to Section 12-600(K), 12-700(S), 12-701(C)(14) and 4-514(E)</li> <li>✓ Substantial changes were made to all pipeline sections. Pipelines that are part of well-drilling projects are covered in Article 12 and will be reviewed as part of the overall project</li> <li>✓ Any pipelines proposed independently of a well project will be reviewed under Article 4; however, such pipelines must be connected to a particular well site to avoid uncontrolled development of infrastructure that may define siting of future wells without County review and input</li> <li>✓ Flow lines, gathering lines and transmission lines are separated and subject to appropriate standards depending on their function and relevant state or federal regulation</li> <li>✓ The amendments address siting and setbacks, certain construction requirements, record-keeping, inspection, monitoring, testing, maintenance and abandonment. The amendments are designed to maximally enhance safety and limit impacts of pipelines within the County's legal authority</li> </ul>

Board of County Commissioners Questions / Direction	Staff Response / Proposed Revision
<b>15. Pipeline setbacks</b>	
Increase 50' distance between pipelines and occupied structures	<ul style="list-style-type: none"> <li>✓ Edits made to Sections 12-600(K)(6), 12-700(S)(1)(d), 12-701(C)(14) and 4-514(E)(4)(d):</li> <li>✓ Setbacks from surface features will generally be determined on a case-by-case basis, but presumption is a setback of at least 150' except under extraordinary circumstances</li> <li>✓ All pipelines will be at least 12" away from any underground structure</li> <li>✓ Outside the well pad, the surface setback will be presumed to be no less than 150' from residential, commercial, or industrial buildings, places of public assembly, the high-water mark of surface water bodies and sensitive environmental features, except for crossings or in extraordinary circumstances</li> <li>✓ For pipelines within the well pad, the setback will be determined on a case-by-case basis with no presumptive surface setback. The amendments reserve discretion with pipeline setbacks to allow the Director to encourage use of pipelines to transport gas, oil and water to avoid the use of trucks on County roads where appropriate</li> <li>✓ The Director will have the option of requiring a risk-based engineering study to determine the proper setback where the type of pipeline or proposed sites pose particular hazards</li> </ul>
<b>16. LDAR on pipelines</b>	
Provide explanation of how LDAR on pipelines works	<ul style="list-style-type: none"> <li>✓ There are many options for pipeline LDAR programs and making certain the pipeline integrity is maintained. The modern tools, such as the use of helicopter, car or hand-held lasers, hydrocarbon analyzers and infrared cameras are able to quickly and accurately detect and pinpoint the location of leaks. Many operators continue to use older techniques, such as sensors that detect pressure changes as well as "smart" pigs that detect pipeline abnormalities inside a pipeline</li> <li>✓ Edits made to Sections 12-700(S)(3) and 4-514(E)(5)(g) to strengthen and modify existing language in conformity with information learned from Industry and other agencies' regulations</li> </ul>
<b>17. Emergencies</b>	
Concern on 10-day response time for notice of accident	<ul style="list-style-type: none"> <li>✓ Edits made to create 24 hour notification for every situation we can think of:  Section 12-600(J) – 24 hours for odor  Section 12-700(D) – 24 hours for spill, failure, accident, natural event  Section 12-700(X) – 24 hours for hydrocarbon spills and releases  Section 4-514(E)(5)(g)(i) and 12-700(S)(3)(a) – 24 hour notice for pipeline spills and test failures</li> <li>✓ Ten day notification removed from Section 12-700(D)</li> </ul>

Board of County Commissioners Questions / Direction	Staff Response / Proposed Revision
<b>18. Dust handling</b>	
Can we require anything that produces dust to be permanently covered?	<ul style="list-style-type: none"> <li>✓ Edit made to Section 12-700(6) to require covered storage for sand and silica</li> <li>✓ Industry reported that this is a standard practice for them</li> <li>✓ The “sandbox” technology is fully contained until the sand enters the “blender”</li> <li>✓ Technology has changed over the past few years and enclosed containers are now used</li> </ul>
<b>19. Neighborhood meeting</b>	
Video recording of neighborhood meeting	✓ Edit made to Section 12-400(E)
<b>20. Odor</b>	
Odor concerns	✓ Edit made to Section 12-600(J) to reference AQCC and COGCC requirements
<b>21. Wastewater handling</b>	
Concern with spreading of wastewater on roads	<ul style="list-style-type: none"> <li>✓ Edits made to Section 4-506(D)(1) to prohibit spreading produced water, fracking fluid, and flowback water on roads in unincorporated Boulder County</li> <li>✓ Although certain instances of this practice have been reported, it is not the usual practice of industry and not generally approved by the COGCC</li> </ul>
<b>22. Fire hazards</b>	
Compliance with fire code	✓ Edits made to Section 12-700(I) to include a condition of approval requiring compliance with any applicable fire code adopted by the applicable fire district
<b>23. Signs near highest traffic intersections</b>	
Higher visibility notification	<p>No change made to Draft Regulations.</p> <ul style="list-style-type: none"> <li>✓ Current practice allows the Director to determine the best location for signage and allows for multiple signs if necessary</li> </ul>
<b>24. Alarms when leaks detected</b>	
Need for alarms on site?	<p>No change made to Draft Regulations.</p> <ul style="list-style-type: none"> <li>✓ Remote monitoring and inspections are a better solution than auditory alarms since alarms could disturb residents or wildlife, or may not be heard</li> </ul>
<b>25. Standards for plugging and abandoning wells</b>	
Can we do more or are we preempted?	<ul style="list-style-type: none"> <li>✓ Draft Regulations already include provisions in Section 12-700(GG)</li> <li>✓ Refers to COGCC express standards for plugging and abandoning wells</li> </ul>

Additionally, staff made other minor changes, clarifications, and clerical corrections throughout the Draft Regulations.

## **OTHER EFFORTS**

Recognizing that the impacts of oil and gas drilling in Boulder County may not be addressed singly through local regulation, Boulder County will continue our “multi-pronged” approach to tackling oil and gas issues including:

- Changes to state and federal legislation
- Changes to Colorado Oil and Gas Conservation Commission (COGCC) rules
- Changes to state Air Quality Control Commission (AQCC) rules
- Statewide initiatives

The BOCC, in November 2016, directed staff to pursue a number of efforts outside of the subject regulations proposed in Docket DC-16-0004 Amendments to Oil and Gas Development Regulations:

### ***Baseline Air Quality Monitoring Study***

The BOCC approved a supplemental budget request by Boulder County Public Health to fund an air quality monitoring study that will be conducted by researchers from the University of Colorado’s Institute for Arctic and Alpine Research.

In order to assess the potential air quality impacts of new oil and natural gas development in Boulder County, researchers will be monitoring methane, volatile organic compounds (VOC), and nitrogen oxide at the Colorado Department of Public Health and Environment’s Boulder Reservoir site. This monitoring will be continuous, high time resolution, and longer than a full annual cycle (i.e. summer-winter-summer). Methane and VOC will be monitored with gas chromatography (GC) techniques.

This study will further enable us to quantify and better understand the impact of oil and gas emissions on air quality in Boulder County. Monitoring for oil and gas emissions will be co-located with the State of Colorado’s ozone monitoring site at the Boulder Reservoir. This will help us to understand how oil and gas emissions may be impacting the unhealthy ozone levels being recorded at that site. This study will also provide us with a baseline against which we can measure future increases in the amount of local and regional oil and gas emissions (including ozone-forming VOCs and toxic air pollutants).

### ***Baseline Water Quality Monitoring Proposal***

Boulder County Public Health has been working collaboratively with researchers at the University of Colorado to design a water sampling study that would evaluate current conditions in domestic water wells in eastern Boulder County, and allow for the creation of a baseline groundwater database. This project is still under development and would require substantial funding. If it moves forward, it would provide the County with a robust set of baseline groundwater samples for assessing changes caused by future oil and gas development. The sampling program would also create a record of any changes in groundwater quality that may occur during oil and gas development. The success of this project would depend on well owners’ willingness to participate in this project.

### ***Transportation Impact Fee Update***

In May 2013, Boulder County also adopted a Transportation Impact Fee in the amount of \$38,600 per well for oil and gas activities in the unincorporated county based on an Oil & Gas Roadway Impact Study the County procured. To the extent that oil and gas development would come with

pipelines rather than truck traffic, the model and the impact fee may need to change. The Transportation Impact Fee update is underway.

***Special Use Review, Permitting, and Inspection Fees***

Also in process is an update to the fee structure for the review and permitting of any oil and gas operations. The current fees were adopted in 2013 and were based on the 2012 set of regulations, which are different than today's regulations. The Land Use Department is developing a fee system which will bill for actual time spent on review and monitoring of oil and gas development by involved County Departments. In order to account for the variability and the complexity of applications, a fee system is being developed where each department or agency reviewing, monitoring or inspecting the development will have an individual billing rate per hour of time spent. Fees will include initial Special Use application and review fee, Construction Development or building permit fee, on-going monitoring and inspection fees, and enforcement fees.

There also may be a need for consultants to review aspects of a proposal where the County might not have the necessary staff expertise to adequately review the proposal. The fee system will include a mechanism for the County to recoup these costs as well.

We anticipate that the staffing and inspection needs of the County will increase with implementation of the new regulations. On top of the inspections that are being conducted at existing oil and gas facilities that are currently in operation, there will be a need for inspections during all phases of development, response to complaints, ongoing inspections as the facilities move into the production phase, and follow up inspections to confirm the repair of any identified issues.

***Climate Change Impacts***

In order to evaluate the climate impacts of oil and gas facilities in Boulder County, the County intends to work with the University of Colorado and other institutions to assess the cumulative impacts of oil and gas development with regard to emissions and climate change.

**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*

Boulder County is extremely concerned about the potential for expanded oil and gas development within the County and intends to adopt appropriate local restrictions to mitigate the impacts of these activities. The moratorium adopted by the Board of County Commissioners allowed for the subject amendments and update to the regulations adopted in 2012 based on changed circumstances, including shifts in industry practices and changes to State regulations since the adoption of the County's 2012 regulations. The amendments are not contrary to the intent and purpose of the Code but update and address the issues raised by the Commissioners in May and November 2016. The amendments do not conflict with the Boulder County Comprehensive Plan (BCCP); rather, they are intended to address issues raised by the Planning Commission in its update of the Comprehensive Plan policies applicable to oil and gas development. The Planning Commission motion to the Board of County Commissioners included a recommendation to approve the proposed regulations with the edits and direction they provided at the October 27, 2016 public meeting. 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 use our local land use authority to enact the most protective regulations governing new oil and gas operations. **STAFF RECOMMENDS THAT THE BOARD OF COUNTY COMMISSIONERS APPROVE Docket DC-16-0004: Amendments to Oil and Gas Development Regulations and the official record of the Docket before the Commission with its staff comments, public testimony, and Board's discussion/action.**

**Attachment A**  
**New Article 12**  
**Special Review for Oil and Gas Operations**

## **12-100 Purpose**

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

## **12-200 Authority of Article**

This article is authorized by C.R.S. §§ 25-8-101 et seq., 29-20-101 et seq., 30-28-101 et seq., 34-60-101 et seq., 25-7-101 et seq., [Colorado common law related to public nuisances](#), and other authority as applicable.

## **12-300 Effective Date; Pre-Existing Uses**

- A. This Article shall become effective on the date specified in the adopting resolution of the Board. The provisions of this Article shall apply to all oil and gas operations for which a complete application for special review has not been accepted by the County as of the effective date.
  
- B. Oil and gas operations that were legally established prior to the effective date of this Article but do not conform to this Article shall be allowed to continue. Any substantial modification of such oil and gas operations requires special review under this Article. [For any proposed amendment,](#)

- modification, maintenance, or repair. The Director shall make substantial modification determinations for such oil and gas operations as provided in 12-900(D) and (E).
- C. Should the Applicant dispute the Director's determination that a pre-effective date operation is not effectively the same as the post-effective date operation, the Applicant may appeal the Director's determination to the Boulder County Board of Adjustment. During the course of any Board of Adjustment Proceeding or subsequent appeal, the application shall not be processed.

## 12-400 Application Procedure for Special Review

### A. Review and Community Engagement

1. **Special Review Required.** Except as provided for in 12-300, all 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 oil and gas operations in the unincorporated County, an Applicant must submit a special review application and the Board must approve the application according to this Article. No other form of discretionary land use review under this Code is required for oil and gas operations covered by this Article 12. Special review approval is also required prior to the issuance of any County building permits, or associated pipeline, grading, access, floodplain, transportation impact fee, or other County permits necessary for the oil and gas operation. Oil and gas operations that may not require a building or other associated County permit must still obtain special review approval under this Article.
2. **Community Engagement.** Boulder County requires Applicants to engage with local communities, residents, and other stakeholders prior to exploration or development activity. The purpose of this engagement is to provide sufficient opportunity for comment on plans, operations, and performance, to listen to concerns of the community, and to address all reasonable concerns as a result of a proposed operation.
3. **Surface Use Agreements.** Oil and gas operators commonly enter into surface use agreements with landowners at or near the location of the development. The County recommends that surface agreements not be finalized until the Applicant has completed special review, at which time the impacts related to the proposed siting of the operation will be analyzed.
4. **APD approval.** Application and Permit to Drill ("APD") approval from the COGCC is not local approval, and compliance with all terms and conditions of special review approval is required in addition to the requirements of APD approval. The County strongly recommends that applicants apply to the County for special review prior to applying for APD so that the Applicant is aware of applicable County requirements and mitigation measures prior to filing its APD application.

- B. **Operator Registration and Renewal.** All operators operating or planning to operate oil and gas operations within the County must complete an Operator Registration Form submit the following operator registration information and pay the registration or renewal fee before requesting a pre-application conference. ~~The Operator Registration Form must contain the following information:~~

1. Company name, address, email and mobile phone contact information for two individuals associated with the company who live within thirty miles of Boulder County and who will serve as 24 hour emergency contacts.

2. Comprehensive planning information as follows:
  - a. Based on an operator's business plan as of the date of the request, a good faith estimate of the number of wells the operator intends to drill in the next five years within unincorporated Boulder County. A publicly traded company's well estimates may be based on reserves classified as "proved undeveloped" for SEC reporting purposes.
  - b. A map showing the location within unincorporated Boulder County of the Operator's existing well sites and related production facilities; sites for which the operator has approved or has submitted applications for drilling and spacing orders, or Form 2s or Form 2As; and sites the operator has identified for development within the next five years on its current drilling schedule for which it has not yet submitted applications for COGCC permits.
3. Well estimates provided under this subsection must be made using reasonable business judgment based on information known to the operator as of the date the estimates are requested. The operator must update the Form at the time of any changes.
4. Information demonstrating that the operator is capable of fulfilling and is likely to fulfill the obligations imposed by this Article and the Oil and Gas Conservation Act, including:
  - a. A certified list of all instances within the past ten years where the COGCC, other state agency, city, or county found that the Operator has not complied with applicable state or local requirements with respect to drilling, operation, or decommissioning of a well. The list must identify the date of the determination, 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.
  - b. Certified copies of all financial assurances filed with the COGCC under COGCC Rules 703, 706, and 707.
  - c. A certified copy of a policy of general liability insurance or a self-insurance program approved by the Colorado Insurance Commission, in the amount of no less than \$1,000,000.00 per occurrence, insuring the Applicant against property damage and bodily injury to third parties. The policy shall be written by a company authorized to do business in the State of Colorado unless the applicant provides evidence to the Director that the applicant is adequately self-insured. The policy shall include the COGCC as a certificate holder.
  - d. A report on greenhouse gas emissions for all oil and gas facilities in Boulder County owned or leased by the operator for the calendar year prior to registration or renewal. The report must be in form required by the United State Environmental Protection Agency for reporting greenhouse gas emissions (EPA sub part W).
5. An operator must submit its operator registration and fee:
  - a. If already operating wells in Boulder County, within thirty (30) days of the effective date of this article;
  - b. If not already operating wells in Boulder County, at least thirty (30) days prior to assuming responsibility for operating an existing well; and
  - c. In all cases, an Applicant must submit an operator and registration and fee prior to scheduling a pre-application conference.
- 3-6. An operator registration must be updated and renewed annually.

**C. Special Review Process.** The special review process is a regulatory process based primarily upon subjective or context-specific criteria for new or substantially modified oil and gas operations. Special review applications require staff review, public hearing, and recommendation by the Planning Commission followed by review, public hearing, and decision by the Board of County Commissioners. Some applications may also require review by the Parks and Open Space Advisory Committee as provided for in subsection (I).

**D. Pre-Application Conference.**

1. **Timing.** A pre-application conference as defined in Article 3-201 of this Code must be held at prior to the Applicant submitting an application for special review.
2. **Conference.** At the pre-application conference, the Director and the Applicant will discuss the points contained in Article 3-201 of this Code and review the County's special review process so that the Applicant can plan its proposed oil and gas operation in a manner that ensures compliance with the special review regulations and applicable state and federal regulations. The pre-application conference allows the Applicant and Director to identify potential site-specific concerns related to the potential well and well pad location and issues that relate to the special review process, to discuss project impacts and potential mitigation methods, and to discuss coordination of the County process with the State permitting process. Applicants are encouraged to conduct the pre-application conference with the County prior to ~~completing-finalizing~~ well siting decisions. Completion of the pre-application conference qualifies the Applicant to submit an application for a special review provided the application is filed within six (6) months after the pre-application conference.
3. **Site Visit.** At the discretion of the Director ~~after consultation with the landowner~~, the Director may require the Applicant to secure permission from the surface owner(s) to conduct a site visit as part of the pre-application conference with the Applicant to evaluate well locations, compliance with this Article, or mitigation measures that may be required to adequately ensure compliance with this Article.

**E. Applicant Neighborhood Meeting.** The Applicant must conduct a neighborhood meeting with adjacent and surrounding land owners and other interested parties at a convenient date, time, and public location. The meeting must occur at least twenty days (20) after the pre-application conference. The neighborhood meeting must be noticed to the County and to all individuals entitled to notice pursuant to Section 12-400(H)(2) at least fourteen (14) days prior to the meeting. 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 County Special Review process, and allow those in attendance to provide input as to the proposed operation, including, but not limited to, well siting and well locations, issues that arise from application of this Article to the proposed operation, and suggested mitigation to adequately ensure compliance with this Article. The Applicant may not submit an application until at least twenty (20) days after the neighborhood meeting and must provide video recording of the meeting and a report of all of the neighbor comments and any proposals from the Applicant for addressing neighborhood concerns to the Director with the Application. If warranted by the location of the proposal or in other appropriate circumstances, the Director may approve video conferencing or other remote attendance options for the neighborhood meeting.

**F. Application Submission.** The application must include documentation establishing how the proposed operation complies with all applicable requirements of Section 12-600. The Applicant must submit the application, the application fee, and supporting documentation in electronic format with up to two (2) 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 proposed operation complies with all applicable provisions of this Article and~~ 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 the course of processing 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 Land Use staff needs consultants or staff other than the Land Use Department to assist the Director with the completeness determination. Upon review of the application materials by the Director and any necessary outside consultants, the Director shall determine whether a special review application is complete. The Director shall make a completeness determination within forty-five (45) days of acceptance of the application. After notice to and consultation with the Applicant and an appropriate time for the Applicant to cure deficiencies, the Director may reconsider his completeness determination at any time during the application process, including upon the request of a referral agency.

**1. Application Deemed Incomplete.** If the Director finds that the application is incomplete, the Director shall inform the Applicant of the deficiencies. No further action shall be taken on an incomplete application until all of the specified deficiencies have been addressed. Should the Applicant fail to correct deficiencies within twenty-four (24) months, the application shall expire and the Applicant may submit a new application and fee as specified in section (F) above. The twenty-four (24) month time frame may be extended by the Director according to Article 4-604(D). Should the Applicant dispute the Director's completeness determination, the Applicant may appeal the Director's determination to the Boulder County Board of Adjustment. During the course of any Board of Adjustment Proceeding or subsequent appeal, the application shall not be processed.

**2. Application Deemed Complete.** If the Director finds that the application is complete, containing all documentation required by this Article, the Director shall process the application.

**H. Notice.**

**1.** The Applicant must mail notice to surface owners, to surrounding landowners, to water well owners, and to residents as identified in this section after the neighborhood meeting but no ~~more~~ less than ten (10) days ~~after~~ ~~prior~~ to the application ~~is accepted being submitted to~~ the Department. If approved by the Director, the Applicant may ~~provide~~ ~~deliver the~~ notice defined in this section using ~~alternative notice methods~~ methods other than mail.

**2.** 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; and
- b. To the owners of the parcels of land within one-half mile (2,640 feet) of the parcel on which the oil and gas operation is proposed to be located; and
- c. To the physical address of all parcels within one-half mile (2,640 feet) 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.
- d. Water well source owners within one-half mile (2,640 feet) of the parcel on which the oil and gas operation is proposed to be located. The Applicant is responsible for determining the addresses of such well owners and providing a list of such owners to the Director.

The Land Use Department shall provide the list of addresses of record for property owners within one-half mile (2,640 feet) 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.

3. The notice must contain the following:
  - a. A message in bolded 14-point or larger font on the front page of the notice that states as follows: **“Attention: An oil and gas operation consisting of [number of wells] 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 operation site location, including the legal description; parcel number; a street address for the site, if available from the County’s rural addressing system; the company name of the operator; the name of a company contact; the current business address, telephone number, and email address for the Applicant; a vicinity map; and a brief description and overview of the proposed operation including details of the drilling techniques (i.e., a detailed description of the type and estimated duration of any proposed hydraulic fracturing).
  - c. Information concerning the facilities and equipment proposed at the site when operational, and proposed access roads and gathering lines.
  - d. The anticipated submittal date of the application to the Department.
  - e. [An attachment provided by the Director explaining the Special review process and explaining statement](#) that public comments on the application may be submitted to the County Land Use Department after the application submittal date.
  - f. A statement concerning the County’s right to enter property that is the subject of the application as follows: “For the purpose of implementing and enforcing the County’s special review for oil and gas operation regulations, County staff may from time to time need to enter onto the property that is the subject of a special review application.”
  - g. The current mailing address, website address, email, and telephone number for both the County Land Use Department and the COGCC, as well as a statement that additional information on the application will be available from the County Land Use Department.
4. **Notice Review.** The Applicant must submit a copy of the 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 so send additional notice complying with this Article.
5. **Posting Public Notice Signage Onsite.** Within five (5) days after submitting the application, the Applicant must post a public notice sign or signs on the site of the proposed operation that meet the following requirements:
  - a. The sign must be posted in a location visible to the public (i.e., visible from a public road) and approved by the Director. If the Director determines that a single sign will

- not provide adequate public notice, multiple signs meeting the requirements of this section may be required.
- b. Signs must be four feet by six feet in area. The background must be bright yellow and the lettering must be in black.
  - c. In lettering clearly visible and proportionate to the size of the sign, the sign must contain the following:
    - i. "Attention: An oil and gas operation consisting of potentially [number of wells] is being proposed in your area. Please read this notice carefully."
    - ii. "The applicant has applied for Special Review, [docket number]"
    - iii. "Information regarding this application may be obtained from the Boulder County Land Use Department at [phone number]"
  - d. Within five (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 not comply with the requirements of this Article, the Director may require the applicant post a sign or signs complying with this Article.
  - e. The approved sign or signs must be posted kept on the site until the special review process is complete. The Applicant must repair or replace signs that are damaged or defaced within five (5) days of learning of damage or defacement.

**I. Referral Agency Comments Requirements and Agency Review.**

1. Following the determination that an application is complete, the ~~Director shall forward~~ Land Use Department shall refer the application materials one copy to the County Transportation and Parks and Open Space Departments; Boulder County Public Health; the appropriate fire district; County Sheriff; and any appropriate municipality and school district for review and comment. Referral comments on the proposal shall be returned to the Director within seventy-five (75) days of date of referral, unless the referral agency or consultant makes a reasonable request to the Director for additional time.
- ~~1.2.~~ The Applicant is responsible for preparing the referral packets in the manner prescribed by the Director. An error made by the applicant in the preparation of referral packets may result in a delay in processing of the application so that the proper referrals can be accomplished.
- ~~2.3.~~ Following the determination that an application is complete, the Director shall send a referral notice to all individuals entitled to notice pursuant to Section 12-400(H)(2). The notice shall also include information on where to access application materials on the County's website and provide staff contact information. The complete application referral packet shall be available for public review in hard copy form at the County Land Use Department during business hours. Referral responses must be received by the Director within seventy-five (75 days) of transmittal in order to insure that comments are considered.
- ~~4.~~ If the proposed well site is on or within 1,500 feet of County Parks and Open Space property, the Parks and Open Space Director may refer the application to the Parks and Open Space Advisory Committee for a public hearing. After the public hearing, the Parks and Open Space Advisory Committee may forward recommendations for assuring the protection of environmental, ecological, wildlife, historical, archeological, and agricultural resources of the open space. The Director may also refer the application to other government agencies or entities for review and comment. Referral comments on the proposed development shall be returned to the Director within seventy five (75) days of date of referral, unless the referral agency or consultant makes a reasonable request to the Director for additional time.

**↳J. Consultant Review.** Where reasonable and necessary, the Director may submit the application for review and recommendation by consultants retained by the County with the necessary expertise to review technical or other aspects of the application. Among other consultant reviews, third party consultant review may be required to evaluate the risks and associated mitigation plans addressing the use of hydraulic fracturing near residential development. The Applicant shall be notified if the Director decides to retain a consultant, shall be given the opportunity to provide input concerning consultant selection and scope of work, and shall escrow funds sufficient to cover the anticipated cost of the consultant's review. The Applicant shall be responsible for the actual costs associated with this consultant review and shall be refunded any excess escrowed funds.

**↳K. Site Visit.** The Department will conduct a site visit to allow the Director to determine compliance with these standards. The Department may coordinate a site visit with other County departments and governmental agencies.

**↳L. Planning Commission Notice and Hearing.** Not less than fourteen (14) days prior to the Planning Commissioner's public hearing, a legal notice of the public hearing shall be published in a newspaper of general circulation within the County, and written notice to the surface owners and surrounding property owners of the time and place of the Planning Commission's public hearing shall be provided pursuant to Section 12-400(H). The Planning Commission shall hold a public hearing on the application and shall make a recommendation of approval, approval with conditions necessary to ensure compliance with this Article, or denial, and the recommendation shall be forwarded to the Board of County Commissioners.

**↳M. Notice of Board of County Commissioners' Hearing.** Not less than fourteen (14) days prior to the Board of County Commissioners' public hearing on the standard permit review, a legal notice of the public hearing shall be published in a newspaper of general circulation within the County, and written notice to the surface owner and surrounding property owners of the time and place of the Board's public hearing shall be provided pursuant to Section 12-400(H).

**↳N. Board of County Commissioners Hearing and Decision.** The Board of Commissioners shall conduct a noticed public hearing for review of a special review application. Any action taken by the Board of County Commissioners will be based on the entire record of proceedings on the matter, as that record is maintained by the Land Use Department Director and/or the Clerk of the Board of County Commissioners, including but not limited to: recordings or transcripts of public hearings; all written comments of referral agencies; the review and recommendations of the Land Use Department; and all written commitments, statements, or evidence made or submitted by or in behalf of the Applicants, landowners or interest holders or their agents, and interested members of the public. The Applicant shall have the burden of proof to show that the applicable criteria for approval have been met. On the basis of the evidence received at such public hearing(s), the Board shall make its determination to approve, approve with conditions necessary to ensure compliance with this Article, or deny the application. The Board's action shall contain appropriate findings or reasons in support of its decision. The Board shall render its decision on the special review application in writing following the conclusion of the public hearing.

## 12-500 Application Submittal Requirements

Unless the submittal requirement is waived or modified by the Director based upon 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 operations. If the contents or relevant information in any required submittal material changes, the Applicant must promptly update those materials with the Land Use Department. The Director may waive or modify the submission requirements in this section if (1) because of the nature of the Application, the requested information is unlikely to be useful to the Board in applying the special review criteria or determining appropriate mitigation measures; (2) the usefulness of the information is substantially outweighed by the hardship placed on the Applicant in providing the information. Should the Applicant request a modification or waiver and dispute the Director's determination a submission requirement under this section should not be modified or waived, the Applicant may appeal the Director's determination to the Boulder County Board of Adjustment. During the course of any Board of Adjustment Proceeding or subsequent appeal, the application shall not be processed.

**A. County Application Form.**

**B. Ownership.** Certification of ownership of the mineral estate proposed for development or of all necessary lease interests in the mineral estate proposed for development. Identification of all persons with a real property interest in surface of the subject property. A title report supporting the certification of mineral interest ownership and identification of the surface interests. A map of the mineral interests Applicant will extract, including ownership interests, lease interests, and statutory pooling.

**C. Neighborhood Meeting Information.** A video recording of the meeting and a report identifying all neighbor comments and specific proposals from the Applicant for addressing neighborhood concerns.

**D. Date of APD Filing.** Anticipated or actual date of associated APD filing with the COGCC. If the APD filing has occurred prior the filing of the application, the Applicant must include a written explanation regarding why the Applicant chose to proceed with APD prior to special review.

**E. Surface Agreements.** The County recommends that surface agreements not be finalized until after the Applicant has completed special review. Nonetheless, Applicant will provide a copy of any surface use agreements or memorandums of surface use agreements the Applicant entered into related to the oil and gas operation.

**F. Proof of pre-application Conference.** Date the Applicant conducted the pre-application conference with the Department.

**G. Proof of Notice.** Certification of proper notice, including Director approval of the notice, as required by Section 12-400(H).

**H. ~~Verification of~~ Legal Access and Use of Private Roads.** Information demonstrating that the Applicant has or will have the right to use private access roads that are necessary for the operation. A copy of any signed or proposed and that the Applicant has entered into an agreements with the private road owners regarding maintenance, improvements necessitated by the proposed oil and gas operation, and reimbursement for damages must be provided. The County recommends that surface agreements not be finalized until the Applicant has completed special review. Recorded or historically used easements providing access to or across the parcel(s) must be provided.

**I. Proximity of Other Wells and Other Oil and Gas Operations.** A map showing the location of all producing, closed, abandoned, and shut-in wells and any other oil and gas operations within one (1) mile of the site.

**J. Site Plan and Parcel Information.** The following information must be included:

1. **Facility siting.** The proposed location of wellhead, pumping units, tanks, treaters, staging and storage areas, temporary use areas and permanent well pads for all phases, fencing, and equipment associated with the oil and gas operation.
2. **Alternative site analysis.** Submission of an alternative site analysis that identifies and examines the feasibility of at least three (3) alternative well locations that would allow for extraction of the resource and that considers concentration of multiple wells on a single well pad versus smaller well pads with fewer or single wells. The Applicant shall show that reasonable consideration has been given to such alternative sites.
3. **Existing structures.** Identification of all existing occupied structures and other improvements within one (1) mile from any wellhead, pumping units, tanks, and treaters.
4. **Water bodies.** Any surface water bodies including, but not limited to, ditches and reservoirs as identified and mapped on the County's Ditch and Reservoir Directory, within one (1) mile of the wellhead, pumping units, tanks, and treaters.
5. **Water wells.** Any domestic or commercial water wells or irrigation wells within one-half mile of the wellhead, pumping units, tanks, and treaters.
6. **Geologic hazards.** All high hazard geologic areas as defined in the Comprehensive Plan within one-half mile of the wellhead, pumping units, tanks, and treaters.
7. **Floodplain.** Mapping of all floodplains and floodways as defined in Article 4-400, including the FEMA Floodplain and the Boulder County Floodplain, within one-half mile of the wellhead, pumping units, tanks, and treaters.
8. **Comprehensive Plan natural resources.** All mapped significant natural communities, natural landmarks and natural areas, rare plant areas, significant riparian corridors, or critical wildlife habitat as each is defined in the Comprehensive Plan, in effect as of the effective date of this Article within one (1) mile of the wellhead, pumping units, tanks, and treaters.
9. **Drainage.** Drainage patterns, ditches, wetlands or aquatic habitat, vegetative cover, wildlife habitat and wildlife migration routes, and geologic features as defined in the Comprehensive Plan or identified onsite and within one-half mile of the location on which the operation is proposed.
10. **Site disturbance.** Dimensions of the site, indicating area in square feet and acres, and the area of the site to be disturbed for permanent operations and temporary operations.
11. **Easements and Rights-of-Way.** Utility line easements and rights-of-way within 150 feet of the proposed site and access road.
12. **Existing and Proposed Lines.** Existing and proposed water pipelines to or from the site and all other pipelines, tanks, wells, gathering lines, and flow lines serving the site, including information on the age, location, depth, diameter, thickness, typical and maximum operating pressures, the nature of the material carried in the pipes.
13. **Existing and Proposed Roads.** Existing and proposed roads within the parcel and on the site as well as ingress and egress from public and private roads.

- 14. Topography.** Existing and proposed topography at five-foot intervals to portray the direction and slope of the area within 1500 feet of the operation.
- K. Agricultural Land Mitigation Plan.** An assessment of any agricultural lands potentially impacted by the proposed operation and a plan for mitigating impacts in compliance with Section 12-600(B).
- L. Air Quality Plan.** A plan establishing compliance with the air quality provisions of Section 12-600, including a leak detection and repair program.
- M. Emergency Preparedness Plan.** Each Applicant with an operation in the County is required to implement an emergency preparedness plan for each oil and gas operation. The emergency preparedness plan must consist of at least the following information:
1. Name, address and phone number, including 24-hour emergency numbers for at least two persons located in or near Boulder County who are responsible for emergency field operations. The Applicant is responsible for ensuring that at least one of these emergency contacts can respond to a phone call within thirty (30) minutes.
  2. 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 with thirty (30) days of removal of the completions crew from the specific oil and gas location.
  3. Transportation routes to and from exploration and development sites for emergency response and management purposes, including at least two evacuation routes.
  4. Detailed information addressing each potential emergency that may be associated with the operation. This may include any or all of the following: explosions, fires, gas, oil or water pipeline leaks or ruptures, hydrogen sulfide or other toxic gas emissions, or hazardous material vehicle accidents or spills. This may also include hazards to the site such as earthquakes, floods, or wildfire. For each potential emergency, threshold / trigger levels shall be pre-identified that govern when an emergency state is declared by the Applicant.
  5. 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 twenty-four (24) hours.
  6. Detailed information identifying access or evacuation routes, and health care facilities anticipated to be used.
  7. Project specific emergency preparedness plans are required for any project that involves drilling or penetrating through known zones of hydrogen sulfide gas.
  8. The plan must include a provision that obligates the Applicant 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, a provision in the plan that includes regular training exercises.

9. Detailed information that the Applicant has adequate personnel, supplies, and funding to implement the emergency response plan immediately at all times during construction and operations.
10. The plan must include provisions that obligate the Applicant to keep onsite and make immediately available to any emergency responders the identification and corresponding Safety Data Sheets (SDS) of all products used, stored or transported to the site. The SDS must be updated weekly and provided immediately upon request to the Director, emergency responders, a County Public Health representative, or a health professional. 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.
11. The plan must include a provision establishing a process by which the Applicant engages with the surrounding neighbors to educate them on the risks and benefits of the onsite operations and to establish a process for surrounding neighbors to communicate with the Applicant.

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

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

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

1. Map indicating proposed trip routes for all traffic serving the oil and gas operation during all phases of well development and operations.
2. Indicate for each segment of the proposed route in Boulder County the types, sizes, weight, number of axles, volumes, and frequencies (daily, weekly, total) and timing (times of day) of all vehicles to be used for the proposed oil and gas operation.
3. Identify all measures necessary to ensure the safety and quality of life experience of other users of the county transportation system, adjacent residents, and affected property owners, including without limitation:
  - a. operational measures to minimize impacts to the public including, but not limited to, time of day, time of week, vehicle fuel and emissions reduction technology, noise minimization, and traffic control safety measures;
  - b. maintenance practices on the proposed route, including without limitation, grading of unpaved roads, dust suppression, vehicle cleaning necessary to minimize re-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

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

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

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

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

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

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

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

**U. Geologic Hazard Area Mitigation Plan.** A geologic hazard mitigation plan identifying hazard types and areas on the parcels demonstrating compliance with the standards of Section 12-600. If the Applicant proposes above-ground oil and gas facilities in the floodplain, a flood mitigation plan must be included as a part of the geologic hazard mitigation plan.

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

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

- X. Scenic Attributes and Rural Character Mitigation Plan.** An assessment of scenic attributes and rural character potentially impacted by the proposed oil and gas operation and a plan for mitigating impacts in compliance with Section 12-600.
- Y. Surrounding Land Uses Mitigation Plan.** Information identifying surrounding land uses within one-half (1/2) mile of the proposed oil and gas operation, an assessment of any potential impacts to surrounding land uses, and a plan mitigating impacts in compliance with Section 12-600.
- Z. Waste Disposal Plan.** Information identifying the projected waste from the site and plans for disposal of such waste.
- AA. Water Quality Plan.** A plan establishing compliance with the water quality provisions of Section 12-600. The plan may include details such as the Applicant's plans for water quality testing, prevention of illicit or inadvertent discharges, stormwater discharge management, containment of pollutants, and spill notification and response as required by federal and state agencies. The Applicant shall provide the County with the information it provides to the COGCC ensuring compliance with the water quality protection standards contained in Rule 317(B), Rule 910, and any other applicable COGCC rules governing water quality protection. The Applicant shall provide all water well-source test results. The Applicant shall provide its plans concerning downhole construction details and installation practices, including casing and cementing design, and shall inform the County how the plans establish that the operation does not create significant degradation to surface waters or drinking water aquifers.
- BB. Wetlands Protection Plan.** Information identifying wetlands in the area and demonstrating compliance with the standards of Section 12-600.
- ~~BB-CC.~~ Operator Registration. Operator registration materials for the applicant are incorporated into the application materials. The Director, Planning Commission, or Board, may consider such materials in reviewing any special use application.
- ~~CC-DD.~~ **Additional Information.** If the Director determines that the County needs additional information to determine whether the proposed oil and gas operation meets the criteria in Section 12-600, the Director may require the Applicant to submit such information.

## 12-600 Special Review Standards

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

- A. Adequate Water Supply.** Development applications for proposed oil and gas operations must demonstrate that the available water supply is the least detrimental to the environment among

the available sources and adequate to meet the needs of the development. Special review approval may be conditioned upon sufficient proof of adequate water supply.

- B. Agricultural Land.** Oil and gas operations shall, to the maximum extent practicable, avoid the loss of agricultural land, including farm or ranch land, or any other vegetated land; shall minimize impacts on agricultural operations, including irrigation water, water delivery systems and irrigation schedules; and shall avoid impacts to livestock, grazing permits or leases, or grazing permittees or lessees.
- C. Air Quality.** The installation and operation of any oil and gas operation shall, to the maximum extent practicable, avoid causing degradation to air quality. To the maximum extent practicable, the installation and operation of any oil and gas operation must eliminate, capture, or minimize all potentially harmful emissions and dust associated with onsite activities and traffic on access roads must be minimized.
- D. Cultural and Historic Resources.** Oil and gas operations shall, to the maximum extent practicable, avoid causing degradation of cultural or historic or archaeological resources, sites eligible for County landmarking, or sites in the National Historic Register.
- E. Emergency Prevention and Response.** Oil and gas operations shall, to the maximum extent practicable, avoid risks of emergency situations such as explosions, fires, gas, oil or water pipeline leaks, ruptures, hydrogen sulfide or other toxic gas or fluid emissions, and hazardous material vehicle accidents or spills. Oil and gas operations shall ensure that, in the event of an emergency, adequate practices and procedures are in place to protect public health and safety and repair damage caused by emergencies.
- F. Floodplains and Floodways.** Above ground oil and gas operations are prohibited in floodways. Above ground oil and gas operations shall not be located in a floodplain unless all alternate locations outside of the floodplain that allow for extraction or transportation of the resource are more detrimental to health, safety, welfare or the environment than the proposed location in the floodplain. All above-ground oil and gas operations approved in a floodplain must comply with the flood protection measures in Article 4-400. Tanks in the 500 year floodplain also require flood protection measures.
- G. Geologic Hazard Areas Other than Floodplains and Floodways.** To the maximum extent practicable, oil and gas operations shall not be located in geologic hazard areas as mapped in the Comprehensive Plan.
- H. Land Disturbance.** The installation and operation of any oil and gas operation shall, to the maximum extent practicable, avoid causing degradation to the surface of the property used for the oil and gas operation. Considerations for application of this standard include, but are not limited to, the natural topography and existing vegetation, unnecessary or excessive site disturbance, and minimization of the amount of cut and fill.
- I. Natural Resources.** The installation and operation of any oil and gas operation shall, to the maximum extent practicable, avoid causing degradation to mapped significant natural communities, natural landmarks and natural areas, rare plant areas, significant riparian corridors, prominent natural features such as distinctive rock and land forms, rivers and streams and other landmarks or other identified visual or scenic resources, wildlife, or critical wildlife habitat as defined in the Comprehensive Plan or identified on the site.
- J. Odor.** Oil and gas operations must comply with Department of Public Health and Environment, Air Quality Control Commission, Regulation No.2 Odor Emissions, 5 CCR 1001-4, Regulation No. 3,

5 CCR 1001-5, and Regulation No. 7, 5 CCR 1001-9 Section VII and VIII.- The operator must notify the Director no later than 24-hours after receiving an odor complaint.

**K. Pipelines.**

1. Any newly constructed or substantially modified oil and gas flow lines, gathering lines or transmission lines located on the site of Applicant's oil and gas operations are subject to special review under this Article 12. ~~pipelines on site must meet the Additional Provisions listed at Article 4-514(E)(5)(a) - (f).~~ If the Applicant's special review application under Article 12 includes or creates a need for new or substantially modified oil and gas pipelines located off the site of the special review application but within Boulder County, such pipelines are subject to separate special review under Article 4-514(E), which the special review application must be processed in tandem with ~~the separate application for Applicant's special review application under Article 12. required for such offsite pipelines under Article 4-514(E).~~ In such case, any approval of the special review application for oil and gas operations under Article 12 shall be conditioned on approval of the separate Article 4 special review application for the associated off-site Gas and/or Hazardous Liquid Pipelines, and vice versa. If ~~the an Applicant's~~ special review under Article 12 creates a need for new or substantially modified water or wastewater pipelines located on the site of Applicant's oil and gas operations, such pipelines are subject to special review under Article 12. If Applicant's special review under this Article 12 includes or creates a need for new or substantially modified water or wastewater pipelines located off the site of the ~~special review application Applicant's operations~~ but within Boulder County, the special review application must be processed in tandem with the separate special review required for permanent offsite pipelines under Article 4-514(K) or limited impact review required for temporary offsite water or wastewater transmission lines under Article 4-517(J). Any approval of the Article 12 special review application for oil and gas operations shall be conditioned on approval of the separate Article 4 special review or limited impact special review application, as applicable, for the associated water or wastewater pipelines, and vice versa.
2. To the maximum extent practicable, and subject to any provisions contained elsewhere in Article 12, gathering lines and flow lines within Applicant's area of operations shall be sited to avoid areas containing residential, commercial, and industrial buildings; places of public assembly; and surface water bodies.
3. Flow lines within Applicant's well pad shall be located as necessary for efficient use of the well pad area, efficient and safe transport of oil and gas, and maximum avoidance of residential, commercial, or industrial buildings, places of public assembly, the high-water mark of any surface water body and sensitive environmental features.
4. Any pipelines outside of the well pad and subject to Article 12 review 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.
5. To the maximum extent practicable, Applicant shall share existing pipeline rights-of-way and consolidate new corridors for pipeline rights-of-way to minimize impact.
6. For pipelines outside the well pad and subject to Article 12 review, setbacks from residential, commercial, or industrial buildings, places of public assembly, the high-water mark of any surface water body and sensitive environmental features will be determined on a case-by-case basis in consideration of the size and type of pipeline proposed and features of the proposed site. ~~In no instance may a~~ pipeline must not be located closer than one hundred and fifty (150) feet from a residential, commercial or industrial building, a place of public assembly, or the high-water mark of any surface water body except in extraordinary circumstances. All setback distances will be measured from the nearest edge of the pipeline.

**~~K-L~~. Recreational Activity.** Oil and gas operations shall, to the maximum extent practicable, avoid causing degradation to the quality and quantity of recreational activities in the County. Considerations for application of this standard include, but are not limited to, designated environmental resources, trails, and recreational uses, as identified in the Comprehensive Plan or identifiable on or near the site.

**~~L-M~~. Scenic Attributes and Rural Character.** Oil and gas operations shall, to the maximum extent practicable, avoid causing degradation to the scenic attributes and rural character of the area.

**~~M-N~~. Surrounding Land Uses.** Oil and gas operations shall be, to the maximum extent practicable, sited and operated in a manner so that the operation is compatible with surrounding land uses. In applying this standard, separation from surrounding land uses shall be considered the most effective measure to ensure compatibility between proposed oil and gas operations and existing land uses. Considerations for application of this standard also include, but are not limited to, impacts on used or occupied structures; the natural topography and existing vegetation; the location of surrounding land uses; prevailing weather patterns, including wind directions; and hilltops, ridges, slopes, and silhouetting.

**~~N-O~~. Transportation, Roads, and Access.** Oil and gas operations shall, to the maximum extent practicable, be designed and implemented to minimize or mitigate impacts to physical infrastructure of the county transportation system, ensure public safety, and maintain quality of life for other users of the county transportation system, adjacent residents, and affected property owners. Where available, existing private roads must be used to minimize land disturbance unless traffic safety, visual concerns, noise concerns, or other adverse surface impacts dictate otherwise.

**~~O-P~~. Water Quality.** Oil and gas operations shall, to the maximum extent practicable, avoid causing degradation to surface or ground waters within Boulder County.

**~~P-Q~~. Wetlands Protection.** Oil and gas operations shall, to the maximum extent practicable, avoid causing degradation to wetlands within Boulder County. Among other methods to achieve compliance with this standard, the proposed oil and gas operation shall not alter historic drainage patterns and/or flow rates or shall include acceptable mitigation measures to compensate for anticipated drainage impacts.

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

The following oil and gas facility operational requirements and mitigation measures are likely necessary to meet the approval criteria in 12-600. Accordingly, unless the Board deems a condition unnecessary to establish compliance with this Article, all of the following shall apply to all oil and gas operations in the form of conditions of approval applicable to each special review permit:

**A. Access. 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.**

~~A.~~**B. Anchoring.** All mechanized equipment associated with oil and gas operations must be anchored to minimize transmission of vibrations through the ground and prevent flood hazards.

~~B.~~**C. Applications and Permits.** The Applicant must provide copies of local, state and federal applications required for the operation, and permits, when issued, to the Director.

~~C.~~**D. Certification and Reporting.** An authorized representative for the Applicant must submit monthly reports to the Director certifying compliance with all ~~air quality~~testing and monitoring requirements imposed by the State and the County as conditions of approval and documenting any periods of non-compliance, including the date and duration of each deviation and a compliance plan and schedule to achieve compliance. The reports must contain a certification as to the truth, accuracy and completeness of the reports. The Applicant must immediately notify the Director whenever public health or safety is in jeopardy. The Applicant must notify the Director within twenty-four (24) hours of any uncontrolled oil, gas, ~~or~~ water flowing from a well ~~or. The Applicant must otherwise notify the Director within ten days of~~ any significant downhole problem, mechanical failure, or accident or natural event that results in injuries to a member of the public requiring medical treatment or significant damage to the well site.

~~D.~~**E. Color.** Facilities must be painted in a uniform, non-contrasting, non-reflective color that blend with the surrounding landscape.

~~E.~~**F. Discharge Valves.** Open-ended discharge valves on all storage tanks, pipelines and other containers must be secured where the operation site is unattended or is accessible to the general public. Open-ended discharge valves must be placed within the interior of the tank secondary containment.

~~F.~~**G. Dust Suppression and Fugitive Dust.** Dust associated with on-site activities and traffic on access roads must be minimized throughout construction, drilling and operational activities such that there are no visible dust emissions from access roads or the site to the extent practicable given wind conditions. On-site sand, silica, or similar material must be stored in covered containers. The Applicant must comply with permit and control provisions of the Colorado Air Quality Control Program, Boulder County Public Health's best management practices for dust suppression.

~~G.~~**H. Emergency Preparedness Plan.** The Applicant must implement the Emergency Preparedness plan approved by the Director. The plan must be updated on an annual basis, or as conditions change, such as responsible field personnel and ownership.

~~H.~~**I. Exhaust.** The exhaust from all engines, motors, coolers and other mechanized equipment must be vented up or in a direction away from the closest occupied structures.

~~I.~~**J. ~~Flammable Material~~Fire Hazards.** Oil and gas operations must comply with COGCC rules concerning control of fire hazards. The Applicant must comply with the applicable provisions of any fire code adopted by the fire district with jurisdiction over the site of the Applicant's oil and gas operations.

~~J.~~**K. Flares and Combustion Devices.** All flares shall be designed and operated as follows:

1. The flare must be fired with natural gas.
2. The flare must be designed and operated in a manner that will ensure no visible emissions during normal operation. Visible emissions means observations of smoke for any period or periods of duration greater than or equal to one (1) minute in any fifteen

(15) minute period during normal operation, pursuant to EPA Method 22. Visible emissions do not include radiant energy or water vapor.

3. The flare must be operated with a flame present at all times when emissions may be vented to it.
4. All combustion devices must be equipped with an operating auto-igniter.
5. If using a pilot flame ignition system, the presence of a pilot flame must be monitored using a thermocouple or other equivalent device to detect the presence of a flame. A pilot flame must be maintained at all times in the flare's pilot light burner. If the pilot flame goes out and does not relight, then if no telemetry system is in place, a visible alarm shall be in place on-site and activated.
6. If using an electric arc ignition system, the arcing of the electric arc ignition system must pulse continually and a device must be installed and used to continuously monitor the electric arc ignition system.

**K.L. Hydrocarbon Emissions Leak and Detection and Repair.** The Applicant must develop and maintain a leak detection and repair program approved by the Director using modern leak detection technologies, such as infra-red cameras, for equipment used on the well site. Any leaks discovered should be reported to the County immediately. Operators must repair leaks as quickly as practicable; if more than 48-hours repair time is needed after a leak is discovered, an explanation of why more time is required must be submitted to the Director.

**L.M. Lighting.** Except during drilling, completion or other operational activities requiring additional lighting, down-lighting is required, meaning that all bulbs must be fully shielded to prevent light emissions above a horizontal plane drawn from the bottom of the fixture. A lighting plan must be developed to establish compliance with this provision. The lighting plan must indicate the location of all outdoor lighting on the site and any structures, and must include cut sheets (manufacturer's specifications with picture or diagram) of all proposed fixtures. Lighting must be no greater than required for safe operation.

**M.N. Log.** The Applicant must maintain a log for each well completion operation at each gas wellhead affected facility. The log must be completed on a daily basis and must contain the records specified in 40 C.F.R. § 60.5420(c)(1)(iii).

**N.O. Maintenance of Machinery.** Routine field maintenance of vehicles or mobile machinery must not be performed within three hundred (300) feet of any water body.

**O.P. Noise.** Any equipment used in drilling, completion, or production of an oil and gas operation must comply with the maximum permissible noise levels set forth in COGCC regulations.

**P.Q. Notice of Commencement.** The Applicant must mail notice to the Department; surface owners of the parcels of land on which the oil and gas operation is located; owners of the parcels of land within one-half mile (2,640 feet) of the parcel on which the oil and gas operation is located; and the physical addresses of all parcels within one-half mile (2,640 feet) of the parcel on which the oil and gas operation is located at least thirty (30) days prior to the commencement of the drilling and completion phase. The notification must include contact information for the Applicant; the American Petroleum Institute (API) well number; the latitude and longitude coordinates for each well in decimal degrees to an accuracy and precision of five (5) decimals of a degree using the North American Datum of 1983; and the planned date of the beginning of drilling and estimated date of completion.

**R. Performance Guarantee.** If approval is conditioned upon revegetation, road improvements, or similar specific site improvements, the Applicant will be required to submit a letter of credit or other financial guarantee in a form satisfactory to the County for the full cost of such

improvements prior to issuance of a special review construction permit. The Applicant may apply to the Director for release of the letter of credit upon completion of the improvements.

Q.S. Pipelines.

1. Construction

a. Flow lines and gathering lines within Applicant's area of operations must 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 is at least three (3) feet.

b. During pipeline construction, for trenches that are left open for more than five (5) days and are greater than five feet in width, wildlife crossovers and escape ramps must be installed where the trench crosses well-defined game trails. If the trench parallels well-defined game trails, wildlife crossovers and escape ramps must be placed at a minimum of one-quarter mile intervals

c. 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.

a-d. Any pipe installed underground must have at least twelve (12) inches of clearance between the outside of the pipe and the extremity of any other underground structure, except that for drainage tile the minimum clearance may be less than 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.

b-e. To minimize negative impacts to channels, banks and riparian areas, when crossing streams, rivers or irrigation ditches, operators must use boring technology or alternative, Director-approved performance techniques and standards.

2. Records. A complete record that shows the following must be maintained by the operator for the life of each pipeline subject to Article 12 special review and a copy provided to the Director in electronic format compatible with the County's geographic information system for reference in case of emergency:

a. The total number of girth welds and the number nondestructively tested, including the number rejected and the disposition of each rejected weld.

b. The amount, location, and cover of each size of pipe installed.

c. The location of each crossing of another pipeline.

d. The location of each buried utility crossing.

e. The location of each overhead crossing.

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

g. Copies of all monitoring results and pipeline integrity and pressure test results for the past five years.

3. Inspection, Monitoring, Testing and Maintenance.

a. All gathering lines within Applicant's area of operations must use a supervisory control and data acquisition (SCADA-type) monitoring system for leak detection unless, upon Applicant's request, the Director determines that an equivalent or better, ~~and~~ commercially available technology appropriate to the line and the site may be used instead. Flow meters on the SCADA system must be accurate to within one percent. 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.

b. Flow lines within Applicant's area of operations and operating at 15 psig or higher must be pressure tested at least once each calendar year unless risk factors suggest

- more frequent testing is warranted, or unless the operation uses a continuous monitoring program including SCADA-type monitoring as described above.
- c. All pipelines 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 equipments. 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 changes in these requirements to address specific system operating requirements.
- d. Pipe clamps, wooden plugs, or screw-in plugs must not be used for any permanent repair.
- e. Operators must visually inspect all aboveground pipelines for leaks and corrosion on a monthly basis.
4. Abandonment. If an operator plans to abandon any gathering line subject to this Article 12, the operator must submit proposed pipeline abandonment procedures to the Director for review and approval. Flow lines will be abandoned consistent with COGCC Rule 1103 as amended.

**R.T. Reclamation Plan.** Any special review approval must include any COGCC required interim and final reclamation procedures.

**S.U. Removal of Debris.** Oil and gas operations must comply with COGCC rules concerning removal of debris. Burning of trash must not occur in association with an oil and gas operation per C.R.S. 25-7-128(5).

**T.V. Removal of Equipment.** All equipment used for drilling, re-drilling and maintenance of the facility must be removed from the site within thirty (30) days after completion of the work, unless otherwise agreed to by the surface owner and the Director. Permanent storage of equipment on well pad sites is not allowed.

**U.W. Representations.** The 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.

**V.X. Spills and Leaks.** Chemical spills and releases, including spills of produced water, oil, condensate, natural gas liquids, all spills outside of secondary containment, and E & P waste, must be reported and cleaned up according to applicable state and federal laws, including the Oil and Pollution Act and the Clean Water Act, as applicable. Operators must report spills and hydrocarbon emissions leaks to the Director immediately and no later than twenty-four (24) hours of the time the leak or spill is discovered.

**W.Y. Stormwater Control.** A stormwater control plan that establishes that all operations shall use most effective performance techniques and best management practices to minimize impacts to surface waters from erosion, sediment, and other sources of pollution such as chemicals. The stormwater control plan required by COGCC Rule 1002(f) may be provided to establish compliance with this stormwater control plan provision. Prior to commencement of operations, the Applicant must also provide the Director with a letter from the Water Quality Control Division of the Colorado Department of Public Health and Environment showing that the project is covered under the Colorado Discharge Permit System (CDPS) general permit for

*Stormwater Discharges Associated with Construction Activities* (state stormwater discharge permit), when applicable.

~~X-Z.~~ **Temporary Access Roads.** Property subject to temporary access roads associated with oil and gas operations shall be reclaimed and re-vegetated to its original state within sixty (60) days after discontinued use of the temporary access roads.

~~Y-AA.~~ **Transportation Fees.** All applicable transportation fees shall be paid prior to issuance of a special review construction permit, including without limitation:

1. access permit fees;
2. oversize/overweight permit fees;
3. right of way construction permit fees; and
4. fees to mitigate the cumulative impacts of heavy truck traffic on the county transportation system.

~~Z-BB.~~ **Transportation Infrastructure.** Any costs to improve county transportation system infrastructure necessitated by the proposed oil and gas operation shall be the responsibility of the Applicant. All transportation system infrastructure improvements and associated costs shall be determined by the County Transportation Department after consultation with the Applicant. The County shall perform the work or arrange for it to be performed. If the Applicant disagrees with the infrastructure improvements or associated costs as assessed by County Transportation, it may request that County Transportation approve a different route for its proposed oil and gas operation that avoids the need for such improvements. Alternatively, the Applicant may engage a licensed civil engineering firm to perform a study to independently evaluate county transportation system infrastructure improvements necessitated by the proposed oil and gas operation. The County Transportation Department shall consider the results of such a study in making a final determination on infrastructure improvements.

~~AA-CC.~~ **Transportation Permits.** Applicant shall obtain all applicable transportation permits as specified in the County's Multimodal Transportation Standards, including but not limited to County access, driveway, utility construction, and oversize and overweight permits, as well as all appropriate Colorado Department of Transportation (CDOT) access permits pursuant to the CDOT State Highway Access Code. Access roads on the site and access points to public roads as identified in the application materials shall be reviewed by the County Transportation Department and shall be built and maintained in accordance with the engineering specifications and access road standards defined in the Multimodal Transportation Standards.

~~BB-DD.~~ **Vegetation.** An analysis of the existing vegetation on the site establishing a baseline for re-vegetation upon temporary or final reclamation or abandonment of the operation.

~~CC-EE.~~ **Vehicle Tracking Control Practices.** Vehicle tracking control practices must be used to control potential sediment discharges from operational roads, well pads, and other unpaved surfaces. Practices could include road and pad design and maintenance to minimize rutting and tracking, controlling site access, street sweeping or scraping, tracking pads, wash racks, education, or other sediment controls. Traction chains from heavy equipment shall be removed before entering a County road.

~~DD-FF.~~ **Water Quality.** A water quality control plan that establishes that all operations shall use most effective performance techniques and best management practices to minimize impacts to water quality, including plans for water quality testing, prevention of illicit or inadvertent discharges, and containment of pollutants as required by state and federal agencies.

~~EE~~**.GG.** **Weed Control.** Oil and gas operations must keep wells and surface production facilities free of weeds. The Applicant is also responsible for ongoing weed control along access roads during construction and operation, until abandonment and final reclamation is completed per County or other applicable agency regulations. For access roads, the appropriate weed control methods and species to be controlled must be determined through review and recommendation by the County Weed Coordinator by reference to the Boulder County Noxious Weed Management Plan and, where appropriate, in coordination with the requirements of the surface owner.

~~FF~~**.HH.** **Well Abandonment or Decommissioning.** The Applicant must comply with any COGCC rules regarding well abandonment, decommission, or reclamation. Upon plugging and reclaiming a well, the Applicant must provide the County with surveyed coordinates of the decommissioned or reclaimed well. Unless otherwise requested by the surface owner, the Applicant must leave onsite a permanent physical marker of the well location.

## 12-701 Potential Site Specific Mitigation Measures

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

### A. Air Quality.

1. **Minimization of Hydrocarbon Emissions.** To protect air quality, hydrocarbon emissions control measures may be required, including, but not limited to, one or more of the following:
  - a. Electrification from the power grid or from renewable sources of all permanent operation equipment with engines or motors that can be electrified.
  - b. Pipelines for water delivery to the site.
  - c. Pipelines for transportation of oil and gas away from the site.
  - d. Limitations on truck traffic to and from the site.
  - e. Implementation of "tankless" production techniques.
  - f. Environmentally sensitive and efficient production techniques, such as using natural gas onsite rather than flaring.
  - g. For well pads that are not electrically operated, use of quiet design mufflers (also referred to as hospital grade or dual dissipative) or equivalent.
  - h. Use of acoustically insulated housing or covers to enclose the motor or engine.
  - i. Manufacture test or other data demonstrating hydrocarbon destruction or control efficiency that complies with a design destruction efficiency of 98% or better.
  - j. Bleed and vent restrictions on continuous bleed pneumatic devices, intermittent vent pneumatic devices, compressor engines, heater treaters, dehydrator reboilers, process heaters-pilot flames.
  - k. Proof that any flare, auto ignition system, recorder, vapor recovery device or other equipment used to meet the hydrocarbon destruction or control efficiency requirement is installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manuals.

- l. Emissions controls of 90% or better for glycol dehydrators.
- m. Zero-emission desiccant dehydrators.
- n. Hydrocarbon control of 95% or better for crude oil, condensate, and produced water tanks with uncontrolled actual emissions of VOCs greater than five (5) TPY.
- o. Year-round application of odor requirements as set forth in 5 C.C.R. 1001-9, § XII (as amended).
- p. Electronic surveillance monitors to detect when pilot lights on control devices are extinguished.
- q. Drilling, completion and operation of wells using closed loop pitless systems for containment and/or recycling of all drilling, completion, flowback and produced fluids.
- r. Emission controls of hydrocarbon emissions of 95% or better for centrifugal compressors and reciprocating compressors.
- s. Dry seals on centrifugal compressors.
- t. Routing of emissions from rod-packing and other components on reciprocating compressors to vapor collection systems.
- u. Reduction or elimination of emissions of associated gas from hybrid gas-oil wells (i.e. gas that is co-produced from a well that primarily produces oil), including prohibition of uncontrolled venting.
- v. Emission control of 90% or better during liquids unloading (i.e. maintenance activities to remove liquids from existing wells that are inhibiting production), including the installation of an automated plunger lift.
- w. Reduction or elimination of emissions from oil and gas pipeline maintenance activities such as pigging, including routing emissions to a vapor collection system.
- x. Proof of compliance with State-required dust control measures and imposition of an opacity requirement as tested using EPA Method 9.
- y. Odor reduction or elimination outside a specified distance from the well site.
- z. Use of an automated tank gauging system.

**2. Hydrocarbon Emissions Leak Detection and Repair and Air Quality Monitoring.** The Applicant may be required to develop and maintain an acceptable leak detection and repair program using modern leak detection technologies such as infra-red cameras for equipment used on the well site. Operators may be required to repair leaks on a schedule approved by the Director. Continuous ambient air quality monitoring to measure hydrocarbon emissions and meteorological data may be required.

## **B. Water Quality**

**1. Chemicals Dangerous to Human Health.** To prevent harm to human health, limitations or prohibitions on orally toxic chemicals in hydraulic fracturing fluids.

**3-2. Monitoring and Well Testing.** To protect local water quality, the Board may require the Applicant to implement a water quality monitoring and well testing plan. Water quality testing and control measures may be required, including, but not limited to, one or more of the following:

~~a. **Notice to Well Owners.** Sixty (60) days prior to completing or hydraulic fracturing a well, the Applicant must identify and provide notice to all water well owners with wells located within one quarter (¼) mile of the projected track of the borehole of a proposed well and within one half mile of the proposed well and those who have requested notice under 12-400(H)(3)(a). The notice must contain the following provision: "Boulder County informs owners of water wells near the (name of well) that in order to establish base line water well data, it would be prudent to conduct a water well test, in~~

~~conformance with Boulder County Land Use Code Section 12-700, prior to the anticipated (completion) / (hydraulic fracturing) on (date)."~~

~~b-a.~~ **Decommissioned Oil and Gas Well Assessment.** Assessment and monitoring of plugged and decommissioned or removed from use and dry and removed from use oil and gas wells (abandoned wells) within one-quarter (¼) mile of the projected track of the borehole of a proposed well. This may include:

1. Based upon examination of COGCC and other publicly available records, identification of all abandoned wells located within one-quarter (¼) mile of the projected track of the borehole of a proposed well.
2. Risk assessment of leaking gas or water to the ground surface or into subsurface water resources, taking into account plugging and cementing procedures described in any recompletion or plugged and abandoned (P&A) report filed with the COGCC.
3. Notification of the Director and COGCC of the results of the assessment of the plugging and cementing procedures.
4. Permission from each surface owner who has an abandoned well on the surface owner's property to access the property in order to test the abandoned well. If a surface owner has not provided permission to access after thirty (30) days from receiving notice, the Applicant shall not be required to test the abandoned well.
5. For each abandoned well for which access is granted, a soil gas survey of the abandoned well prior to production from the proposed well and again one (1) year and then every three (3) years after production has commenced.
6. Notification of the results of the soil gas survey to the Director and the COGCC within three (3) months of conducting the survey or advise the Director that access to the abandoned wells could not be obtained from the surface owner.

~~e-b.~~ **Water Well-Source Sampling and Testing.** ~~Based upon~~Using records of the Colorado Division of Water Resources, the Applicant may be required to identify and offer to sample all available water ~~wells-sources~~ located within one- ~~quarter-half (¼) (1/2)~~ mile of the projected track of the borehole of a proposed well and within one-half (1/2) mile of the radius of the proposed well or multi-well site. Sampling requirements may include:

1. Initial baseline samples and subsequent monitoring samples shall be collected from all available water sources within (1/2) mile of the projected track of the borehole of a proposed well and one-half (1/2) mile radius of the well site or multi-well site.
2. Initial collection and testing of baseline samples from available water sources shall occur 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.
3. Post-stimulation samples of available water sources shall be collected and tested pursuant to the following time frame:
  - a. One sample between 6 and 12 months after completion; and
  - b. One sample between 60 and 72 months after completion.
  - c. For multi-well pads, collection shall occur annually during active drilling and completion
4. Operators shall collect a sample from at least one up-gradient and two down-gradient water sources within a one-half (1/2) mile radius of the

well site or multi-well site. If no such water sources are available, operator shall collect samples from additional water sources within a radius of up to one (1) mile from the well site or multi-well site until samples from a total of at least one up-gradient and two down-gradient water sources are collected. Operators should give priority to the selection of water sources closest to the well site or multi-well site. ~~Sampling wells on either side of the borehole track and in different aquifers, where applicable.~~

~~1-5.~~ An operator may rely on existing groundwater sampling data collected from any water source within the radii described above, provided the data was collected within the 12 months preceding the commencement of drilling the well, the data includes measurement of all of the constituents measured in Table 1 and there has been no significant oil and gas activity within a one-mile radius in the time period between the original sampling and the commencement of drilling the well.

~~2-6.~~ For each water well sampled, atThe Operator shall make reasonable efforts to obtain the consent of the owner of the water source. If the operator is unable to locate and obtain permission from the surface owner of the water source, the operator must least a thirty (30) day notice to respective surface owners and opportunity to respond to the notice regarding sampling the water well or advise the Director that the Applicant could not obtain access to the ~~abandoned well~~water source from the surface owner.

~~3.~~ Testing prior to setting of the conductor casing.

7. Testing for the analytes listed in Table 1, and subsequent testing as necessary or appropriate

~~4-8.~~ Operators must follow standard industry procedures in collecting samples, consistent with the COGCC model Sampling and Analysis Plan.

~~5-9.~~ Reporting the location of the water ~~well~~source using a GPS with sub-meter resolution.

~~e-c.~~ **Field observations.** Reporting on damaged or unsanitary well conditions, adjacent potential pollution sources, odor, water color, sediment, bubbles, and effervescence.

~~e.~~ **Post Completion Testing.** ~~Within one (1) year after completion of the proposed well, post completion testing using the same analytical parameters as above and repeated two (2) and six (6) years after the completion of the well. Additional post completion tests if changes in water quality are identified during follow up testing or in response to complaints from water well owners.~~

~~f-d.~~ **Test results.** Provide copies of all test results described above to the Director, the COGCC, and the water ~~well~~source owners within three (3) months after collecting the samples.

~~g-e.~~ **~~Resolution and mitigation~~Subsequent sampling.** If sampling shows water contamination, additional measures may be required including the following: ~~mitigation of the contamination may be required. Mitigation measures may include the following:~~

1. If free gas or a dissolved methane concentration level greater than one (1) milligram per liter (mg/l) is detected in a water ~~well~~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, and the owner of the water well-source if the methane concentration increases by more than five (5) mg/l between sampling periods, or increases to more than ten (10) mg/l.
4. Immediate notification to the Director, the COGCC and the owner of the water well-source if BTEX and/or TPH are detected as a result of testing. Such detections may result in required subsequent sampling for additional analytes.  
~~Reasonable good faith efforts to conduct initial baseline testing of the identified water wells prior to the setting of the conductor casing at the site. Post completion tests for the same analytical parameters listed above.~~
5. Further water well-source sampling in response to complaints from water well-source owners.
6. Timely production and distribution of test results, well location, and analytical data in electronic deliverable format to the Director, the COGCC and the water well-source owners.

h.f. **Qualified Independent Professional Consultant.** All abandoned well assessments and water well-source testing must be conducted by the Applicant or, if requested by a surface owner, by a qualified independent professional consultant approved by the Director.

<b>Table 1. Water Quality Analytes</b>	
<b>GENERAL WATER QUALITY</b>	Alkalinity Conductivity & TDS pH Dissolved Organic Carbon (or Total Organic Carbon)
	Bacteria
	Hydrogen Sulphide
<b>MAJOR IONS</b>	<del>Calcium</del> <u>Bromide</u> Chloride Fluoride Magnesium Potassium Sodium Sulfate Nitrate + Nitrite <u>as N</u> (total)
<b>METALS</b>	Arsenic Barium Boron Chromium Copper Iron Lead

	Manganese Selenium Strontium
<b><u>DISSOLVED GASES and VOLATILE ORGANIC COMPOUNDS</u></b>	Methane <u>Ethane</u> <u>Propane</u> BTEX <del>as compounds</del> (Benzene, Toluene, Ethylbenzene, Xylenes)
	Total Petroleum Hydrocarbons (TPH)
<b>OTHER</b>	Water Level Stable isotopes of water (Oxygen, Hydrogen, Carbon) <u>Phosphorus-</u>

**B.C. Land Disturbance and Compatibility.** Conditions of approval that will reduce impacts to the site, natural resources, environmental resources, agricultural resources, floodways and floodplains, wetlands, and recreational activities, and will enhance compatibility with the surrounding area or scenic and rural character may be required, including, but not limited to, one or more of the following:

- 1. Location.** A change of the proposed location of the well pad that allows for extraction of the resource and mitigates the land use impacts.
- 2. Reduction.** A reduction of the number of wells on a single pad.
- 3. Disruption.** If ~~surrounding~~ occupants of residential structures within one mile of a well or production facility site are significantly adversely affected by drilling and completion activities, reasonable disruption payments to those occupants. The presumptive amount of disruption payments ~~shall may~~ be calculated as provided for in appendix 1, using market data prepared by a qualified independent professional consultant, with reference to the expected time period from initiation of well construction through well completion and giving consideration given to existing surface use agreements with such occupants. The presumptive disruption payments may be subject to changes based on special circumstances, such as the presence of ~~Consideration shall be given to the effect of disruption of health, sleep patterns, lifestyle, or the cost of replacement housing,~~ home or land-based occupations, accommodations for occupants with special needs, loss of business income, moving costs, transportation costs, and other factors affecting residents. Any required disruption payments must be made at least sixty (60) days before commencement of well construction.
- 4. Pad dimensions.** Adjustment of pad dimensions to the minimum size necessary to accommodate operational needs while minimizing surface disturbance.
- 5. Structures and surface equipment.** Adjustment of structures and surface equipment to the minimal size necessary to satisfy operational needs.
- 6. Shared infrastructure.** Use of shared existing infrastructure by oil and gas operations, minimizing the installation of new facilities and avoiding additional disturbance to lands in a manner that reduces the introduction of significant new land use impacts to the environment, landowners and natural resources.
- 7. Landscaping and irrigation.**

- a. Landscaping plans including drought tolerant species that are native and less desirable to wildlife and suitable for the climate and soil conditions of the area.
  - b. An irrigation plan may be required where buffering is accomplished with vegetation.
8. **Buffering of Visual Impacts.** Landscaping, berming, or other types of screening materials along the perimeter of the site between the surface equipment and surrounding areas.
  9. **Vegetation.** Maximization of the amount of natural screening available for the facility. Natural screening includes, but is not limited to, the use of existing vegetation as a background, the construction of the operation near screening stands of vegetation, or placement in valleys allowing topographic screening. Construction of the operation in a manner that minimizes the removal of and damage to existing trees and vegetation. If the operation requires clearing trees or vegetation, feathering and thinning of the edges of the cleared vegetation and mowing or brush-hogging of the vegetation while leaving root structure intact, instead of scraping the surface.
  10. **Equipment.** Use of buried or low profile tanks and less intrusive equipment. Use of "quiet" drilling and completion equipment, such as the Quiet Fleet design provided by Liberty Oilfield Services..
  11. **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, and radio network/modems. The ability to trigger an automatic shut-down of a facility for any reason at any time.
  12. **Soils.** Testing of soil samples to determine the extent of contamination from any spill or release, as well as to determine the adequacy of any remediation efforts. ~~impacts to soil quality, which may include baseline testing.~~
  13. **Spills and leaks.** A leak detection plan to monitor for fluid leaks.
  14. **Pipelines.** A risk-based engineering study for proposed pipelines and modified construction, operation, or spacing standards that may exceed the minimum requirements in 12-700(R) for pipelines based on the outcome of the study.

**C.D. Transportation.** Conditions of approval that will ensure public safety for all modes of travel along travel routes to and from the site and maintain quality of life for other users of the county transportation system, adjacent residents, and affected property owners, including a requirement that the Applicant use a particular route for some or all of the pad construction, drilling, and completion phases of the oil and gas operation; maintenance practices on the proposed route during pad construction, drilling, and completion designed and implement to adequately minimize impacts; and compliance with Boulder County's Multimodal Transportation Standards.

## 12-800 Judicial Review

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

## 12-900 Procedures Following Approval of a Special Review Application

- A. **Right to Enter.** Any site under an approved special review may be inspected by the County at any time to ensure compliance with the requirements of the approved special review, provided that

four (4) hours prior notice is given to the contact person at the telephone number supplied by the Applicant. The Applicant shall provide the telephone number of a contact person who may be reached twenty-four (24) hours a day for purposes of being notified of any proposed County inspection under this Section. Each approved special review shall contain the following statement: "Applicant consents to allow the County the right of inspection of this approved operation provided the County contacts the Applicant with four (4) hours prior notice of such inspection." County inspections shall be coordinated with the Applicant to ensure Applicant presence onsite and to ensure the site visit is conducted in accordance with all applicable Applicant safety requirements.

- B. Effect of the Approved Special Review.** After approval of a special review application and following compliance with any applicable conditions of approval, the County Land Use Department shall issue a construction permit for the proposed oil and gas operation. Following receipt of the permit, the Applicant must obtain any necessary building, grading, access, floodplain, or other County permits and, following the receipt of these additional permits, is authorized to otherwise proceed with the proposed oil and gas operation. The approval of the special review application under this Article does not result in the vesting of development rights, nor does it authorize the violation of any County or state regulations or preclude the County from refusing to issue any other permit or authorization if the plans and specifications do not comply with applicable County regulations.
- C. Duration of the Approved Special Review.** An approved special review application shall remain effective for a period of three (3) calendar years following the date of the Board's approval resolution. If the operation is not commenced within three (3) calendar years the permit shall expire and the Applicant will have to reapply for a new permit prior to undertaking operations.
- D. Amendments and Modifications.** Prior to changing ~~or~~ modifying a special use approved under this Article or any other existing oil and gas operation, ~~the Applicantan Operator shall~~ must submit a written request for modification as specified under Article 4-603. Upon submission of such a request, the Director shall proceed as specified in Article 4-603 except that the Director shall consider the additional criteria specified in this subsection. Unless approved in the original special review permit, the addition of ~~one or more~~ new wells on an existing pad ~~shall~~ may be considered a substantial modification to the entire pad and the entire pad ~~shall~~ may be required to come into compliance with this Article, to the extent practical. Other changes shall be considered substantial if they significantly alter the nature, character, or extent of the land use impacts of the special review approval or will result in an increase in hydrocarbon emissions. Refracking of an existing well shall be considered a substantial modification. A modification may ~~shall~~ 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.
- E. Maintenance and Repair.** If an Operator anticipates undertaking routine maintenance or making a repair to any oil and gas operation, the Operator must provide written notice to the Director as soon in advance of the maintenance or repair as practicable. For emergency repairs, the Operator must provide notice to the Director within twenty-four (24) hours of commencement of the repair. 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 maintenance and repair activities that ~~the Director does not consider substantial modifications but rather maintenance and repair. Activities on the list an Operator~~ may ~~be~~ undertaken without County review or approval.

## 12-1000 Enforcement

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

- A. Written Order Suspending the Approval.** The Director may issue a written order to the Applicant (or owner, Applicant, or agent, as applicable) identifying the violation and suspending the approved special use and all activity otherwise allowed by the special use approval. If the violation presents an immediate threat to the health, safety or welfare of the public, the Director may immediately issue the written order to the Applicant in writing and, upon receipt, the Applicant must cease all activities and operations immediately until the violation is remedied. In all other instances, prior to issuing a written order, the Director shall provide written notice to the Applicant describing the violation, and stating a reasonable time within which the violation must be corrected. If, within that time period, the Applicant has not either corrected the violation or filed a written appeal with the Board of County Commissioners, the written order shall be delivered to the Applicant in writing and, upon receipt, the Applicant must cease all activities and operations immediately until the violation is remedied. Any appeal to the Board of County Commissioners of the threatened or actual issuance of the written order shall be acted upon pursuant to Section 12-1300(B) below.
- B. Appeal Hearing Before Board of County Commissioners.** If the Applicant files a timely appeal with the Board of County Commissioners of the Director's determination to issue a written order suspending the special use, the Board shall schedule a hearing on the appeal at the soonest possible time of which the Applicant shall receive reasonable prior notice. If the Board confirms at the hearing that the violation has occurred and has not been corrected, the Board in its discretion may confirm issuance of a written order suspending the special use or the determination to draw upon the financial guarantee. The Board, in its discretion, may also give the Applicant additional time to correct the violation, or may specify the time at which the Director may take appropriate action to have the violation corrected.
- C. 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 shall 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.
- D. Falsification.** If the Director, in the course of administering this Article, learns that any person, has made a false entry, omitted an entry, or altered an entry in violation of CRS § 34-60-121, the Director may report such information to the District Attorney for criminal prosecution.
- E. Other Enforcement Remedies.** In addition to the foregoing enforcement measures, Boulder County has the right to any and all other enforcement measures and remedies provided by law, including but not limited to seeking relief through the courts to enforce an approved special review, or to stop or abate any oil and gas operations occurring or about to occur without the requisite special use or other county approvals.

## 12-1400 Definitions

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

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

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

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

**Adversely Affected or Adverse Impact.** The impact of an action, after mitigation, that is considerable or substantial, and unfavorable or harmful, including social, economic, physical, health, aesthetic, historical and/or biological impacts, including but not limited to, effects on natural resources, the structure or function of affected ecosystems, or persons, structures or communities.

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

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

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

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

**COGCC.** The Colorado Oil and Gas Conservation Commission.

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

**Corridor.** Tracts of land within which a water, wastewater, or oil and gas pipeline right-of-way is located.

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

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

**Department.** Boulder County Land Use Department.

**Drilling Operation.** Any work or actual operation undertaken for the purposes of carrying out any of the rights, privileges or duties of a lessee for drilling of an oil well, gas well, or cathodic protection well.

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

**Flow Line.** Those segments of pipe from the wellhead ~~downstream~~ downstream through the production facilities ending at: (a) in the case of gas lines, the gas metering equipment; (b) in the case of oil lines, the oil loading point or lease automated custody transfer unit; or (c) in the case of water line, the water loading point, the point of discharge to a pit, or the permitted surface water discharge point.

**Gas Well.** A well, the principal production of which at the mouth of the well is gas, as defined by the Oil and Gas Conservation Act.

**Gathering Line.** A pipeline and equipment described below that transports gas from a production facility (ordinarily commencing downstream of the final production separator at the inlet flange of the custody transfer meter) to a natural gas processing plant or transmission line or main. The term “gathering line” includes valves, metering equipment, communication equipment, cathodic protection facilities, and pig launchers and receivers, but does not include dehydrators, treaters, tanks, separators, or compressors located downstream of the final production facilities and upstream of the natural gas processing plants, transmission lines, or main lines.

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

**Ground Water.** Subsurface waters in a zone of saturation.

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

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

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

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

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

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

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

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

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

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

**Oil and Gas Facilities.**

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

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

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

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

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

**Oil and Gas Operations.** Exploratory drilling; the siting, drilling, deepening, recompletion, reworking, refracturing, closure or abandonment of an oil and gas well or pipeline; construction, substantial modification, or decommissioning of oil and gas facilities; and construction, site preparation, reclamation associated with the development of oil and gas resources. With respect to any submittal or review requirements under this Section, “oil and gas operations” shall refer to the particular oil and gas operations for which the Applicant is seeking County approval.

**Oil Well.** A well, the principal production of which at the mouth of the well is oil, as defined by the Oil and Gas Conservation Act.

**Operation.** Oil and Gas Operations.

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

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

**Permanent Equipment.** Equipment located onsite for a duration greater than one (1) year effective one (1) year after the date of first production of a well.

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

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

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

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

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

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

**Site.** The areas that are disturbed during the drilling and subsequent operation of, or affected by production facilities associated with, any oil well or gas well and its associated well pad.

**Surface Owner.** The owner of the surface property on which the oil and gas operation will be located or constructed.

**Surrounding.** Within one-half mile of a proposed oil and gas operation.

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

**TPY.** Tons per year.

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

**VOC.** Volatile organic compounds.

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

**Water Source.** Water source shall mean 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.

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

**Well or Wellhead.** 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 Blowdown.** Maintenance activity designed to remove unwanted fluids from mature wells during which time gas is often vented to the atmosphere.

**Well Completion.** An oil well shall be considered completed when the first new oil is produced through wellhead equipment into lease tanks from the ultimate producing interval after the production string has been run. A gas well shall be considered completed when the well is capable of producing gas through wellhead equipment from the ultimate producing zone after the production string has been run. A dry hole shall be considered completed ninety (90) days after reaching total depth. If approved by the Director of the COGCC, a well that requires extensive testing shall be considered completed when the drilling rig is released or six months after reaching total depth, whichever is later.

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

# EXHIBIT A.2

## Amendment to Article 2

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

### C. Duties and Responsibilities

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

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

g. from any provision of Article 12.

## Amendment to Article 3

### 3-300 Application Submittals and Processing

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

## Amendments to Article 4-500 (use definitions)

- 1. **Amend Article 4-506(D) to exclude injection wells as a permitted use in the General Industrial District.**

### D. Major Oil and Gas Operations

1. Definition: ~~Water injection wells and facilities,~~ Centralized water transfer stations, centralized water pump stations, storage yards and construction staging yards in place for

longer than six months, and any other oil and gas operation the location of which is not dependent upon development of the mineral resource or subject to Article 12.

Districts Permitted: By Special Review in GI

Parking Requirements: None

Loading Requirements: None

Additional Provisions: Water injection wells and facilities are prohibited in all districts.

Disposal of produced waters, water-based bentonitic drilling fluids, or flowback fluids by roadspreading on public or private roads is prohibited in all districts.

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

B. Oil and Gas Operations

1. Definition: See Article 12-1400
2. Districts Permitted: By special development plan review for oil and gas operations in all districts (Article 12)
3. Parking Requirements: None
4. Loading Requirements: None
5. Additional Provisions: None

Re-order remaining items and update cross-references as needed.

**3. Amend Article 4-514 Utility and Public Service Uses:**

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

E. Gas and/or Hazardous Liquid Pipelines

1. Definition: Pipelines for the collection and transmission of crude oil, natural gas or other hazardous liquids, including:
  - a. flow lines: 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. transmission lines: pipelines transporting oil, natural gas or any other products derived from oil and gas production, which is defined as a transmission line by the U.S. Department of Transportation regulations under the Natural Gas Pipeline Safety Act of 1968, as amended).
2. Districts Permitted: In all districts by Special Review under Article 4,~~or review under Article 8~~ (areas and activities of state interest), or Article 12 as applicable. Gathering lines and flow lines that are part of new oil and gas development and are located on the same parcel as ~~the a~~ well head, pumping units, tanks and treaters will be subject to Special Review under Article 12 of this Code. Gathering lines and 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 and approval shall be conditioned on approval of the special review under Article 12 of the oil and gas operations with which such lines are associated, and vice versa.

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. The Applicant must provide written notice of the application to all property owners within 500 feet of the centerline of the proposed pipeline.
  - ~~b-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.
  - ~~c-d.~~ Siting.
    - i. ~~Such Pipelines~~ subject to Article 4 review shall, to the maximum extent practicable, be sited to avoid areas containing residential, commercial, ~~and or~~ industrial buildings; places of public assembly; ~~and the high mark of any~~ surface water ~~bodies~~ body; 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, Applicants shall share existing pipeline rights-of-way and consolidate new corridors for pipeline rights-of-way to minimize surface impacts.
    - iv. Setbacks from residential, commercial, or industrial buildings, places of public assembly and the high-water 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 in no instance may 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. ~~This d~~ All setback distances shall be measured from the nearest edge of the pipeline. ~~Pipelines and gathering lines that pass within 150 feet of general residential, commercial, and industrial buildings or the high water mark of any surface water body shall incorporate leak detection and repair, secondary containment, or other mitigation monitoring and response technology, as appropriate.~~
    - 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.
- ~~d-e.~~ Construction.
  - i. Flow lines, gathering lines, and transmission lines shall be buried below the level of cultivation, and must be installed so that the cover between the top of the pipe and the ground level, road bed, river bottom, or underwater natural bottom is at least ~~four (4)~~ 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 feet in width, install wildlife crossovers and escape ramps where the trench crosses well-defined game trails and at a minimum of one-quarter mile intervals where the trench parallels well-defined game trails.
- 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. Any pipe installed underground must have at least twelve (12) inches of clearance between the outside of the pipe and the extremity of any other underground structure, except that for drainage tile the minimum clearance may be less than 12 inches but not less than two (2) inches. Where twelve (12) inches of clearance is impracticable, the Director may approve a request by the operator to reduce the minimum clearance if adequate provisions are made for corrosion control.

e.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 ~~County 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. All pipelines gathering and transmission lines must use a supervisory control and data acquisition (SCADA-type) monitoring system for leak detection unless, upon Applicant's request, the Director determines that an equivalent or better, and commercially available technology appropriate to the line and the site may be used instead. Flow meters on the SCADA system must be accurate to within one percent. 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. Flow lines subject to Article 4 special review and operating at 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 SCADA-type monitoring as described above.
- ii. All pipelines 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 equipments. 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.
- iii. Pipe clamps, wooden plugs, or screw-in plugs must not be used for any permanent repair.

iv. Operators must visually inspect all aboveground pipelines for leaks and corrosion on a monthly basis.

h. Abandonment. If an operator plans to abandon a pipeline gathering line or transmission line, the operator must submit proposed pipeline abandonment procedures to the Director for review and approval. Flow lines must be abandoned consistent with COGCC Rule 1103 as amended.

f.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.

Amend existing use definition in 4-514(K) as follows:

Sewage, Wastewater, or Water Transmission Lines

1. Definition: Pipelines used for the transport of water, wastewater, or sewage.
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 facility, in which case special review in all districts.
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.

Add a new Temporary Use as 4-517(J):

Temporary Water or Wastewater Transmission Line

1. Definition: Temporary above-ground pipelines used for the transport of water or wastewater to or from an oil and gas facility or location.
2. Districts Permitted: By limited impact special review in all districts
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.

# EXHIBIT A.3

## Amendment to Board of Adjustment provisions

Modify section 4-1201(D) as follows:

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

Add new section 4-1204 as follows:

### **4-1204 Appeal**

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

## EXHIBIT A.4

### Development Standards

Modify section 7-904(D)(4) as follows:

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

## EXHIBIT A.5

### Amendment to zoning regulation enforcement provisions

Modify section 17-300(E) as follows:

#### E. Inspection and Administrative Action against Violations

1. The Director, Building Official, County Engineer, Director of Public Health, or their authorized representatives are empowered, in conformity with the requirements of this subsection (E), to inspect and examine any building, other structure, or parcel or other area of land (collectively, 'premises'), concerning which they have reasonable cause to believe that a use exists, or a violation of a condition of approval as occurred, or construction or alteration work is being performed, or has been performed, in violation of the applicable provisions of this code. If the Director, Building Official, County Engineer or their authorized representatives discover a violation of this Code, the Building Code or a violation of a condition of approval, the Director, in the Director's discretion, may charge the violator for the actual cost to the County of any follow-up inspections and testing to determine if the violation has been remedied. When the Director, Building Official, or authorized representative (collectively, 'the enforcing official') has reasonable cause to believe that a violation of this code is likely to exist on a premises, and that entry onto the premises is necessary to verify the violation, the enforcing official shall first make a reasonable effort to locate the owner or other person having charge or control of the premises, or portion thereof desired to be inspected, and request consent to enter and inspect the premises. If the owner or other person in charge or control of the premises cannot be located or if entry is refused, the enforcing official may seek entry by submitting a sworn affidavit to the proper court of jurisdiction, setting forth facts sufficient to support a reasonable belief that the violation is likely to exist, and that further investigation of the premises is warranted. Any subsequent entry and inspection shall be conducted in accordance with an administrative search warrant issued by the court.

2. Consent to enter or an administrative search warrant shall not be required in the following circumstances:

- a. To conduct inspections during regular county business hours under an applied for or issued building permit, for work authorized under that permit prior to the issuance of a final Certificate of Occupancy;
- b. To conduct inspections within the scope of another official document, such as a duly executed zoning compliance affidavit, which grants express or clearly implied consent to enter and inspect;
- c. To make observations of the premises in plain view from public property or from portions of the premises which are open or accessible to the public, or in which the owner or occupant otherwise lacks a reasonable expectation of privacy;
- d. To make observations of the premises from private property when the owner of the private property gives consent to do so; or
- e. In emergency situations in which the enforcing official has reason to believe that the public health or safety is in imminent danger and could be jeopardized by any delay in securing entry.

~~2-3.~~ 3. If a violation is found to exist, the enforcing official shall by written order direct that such remedial action be taken forthwith as will result in full compliance with the applicable provisions of this code; provided, however, that the issuance of such order shall in no way or manner be deemed a prerequisite to the institution of such enforcement proceedings as are set forth in this Article 17; and provided further that compliance with such order shall not necessarily be deemed to be a defense to any alleged violation of this code in any court action instituted seeking full compliance therewith.

4. In addition to any other enforcement remedy specified in this Code, the Building Official, the Director, or the County Engineer may withhold or demand the withholding of the issuance of any building permit or other permit under this Code, or may refuse to accept or process any application or authorization for a structure, activity, or use, involving any property on which a violation of this

Code has been determined to exist. The Director or the County Engineer may withhold or demand the withholding of the issuance of any building permit or other permit under this Code, or may refuse to accept or process any application or authorization for a structure, activity, or use, involving any applicant who has failed to pay a required fee.

## EXHIBIT A.5

### Clerical changes necessary to conform rest of Land Use Code to DC-16-~~0004~~

1. Delete references to “Development Plan review for Oil and Gas Operations” and replace with “Special Review for Oil and Gas Operations”
2. Delete references to “Development Plan Review” and “DPR” and replace with “Special Review.”
3. Update Table of Contents and associated cross-references in Code as necessary.
4. Update use tables as necessary.
5. All other clerical amendments necessary to conform entire Land Use Code to primary text amendments approved in this DC-16-~~0004~~.

## Attachment B: Disruption Payment Appendices

As provided for under 12-701(D)(3), the following formula applies to the calculation of disruption payments:

$$\begin{array}{r} \text{Table A} \quad \times \text{Number of Months} \\ + \text{Table B} = \\ \hline \text{\$ Total Disruption Payment} \end{array}$$

These appendices detail the calculation of a given disruption payment: the cost of replacement rental multiplied by the duration of construction and drilling, plus the cost to move away and back.

**Attachment B: Disruption Payment Appendices**  
**Table A Rent Equivalencies**

Distance From well (ft)	House/Unit Size						
	Efficiency	1 Bedroom	2 Bedroom	3 Bedroom	4 Bedroom	5 Bedroom	6 bedroom
1-1320	\$905	\$1,021	\$1,240	\$1,763	\$2,065	\$2,374.75	\$2,684.50
1321 to 2640	\$452.50	\$510.50	\$620.00	\$881.50	\$1,032.50	\$1,187.38	\$1,342.25
2671 to 5280	\$90.5	\$102.1	\$124.0	\$176.3	\$206.5	\$237.5	\$268.5

Rents shown are for 2017

Rent Equivalencies for units/houses within 1 to 1320 feet of the well are valued at the Fair Market Rent as set by HUD for the year of disruption.

Distance from well is as defined in COGCC regulation 604(a) concerning Setbacks

Table A provides the replacement rental amounts or rental equivalencies. The rates match the regional Fair Market Rent rates determined for the Boulder County area in 2017 by the U.S. Department of Housing and Urban Development. The costs are organized by the size of the replacement home and the distance from the wellsite and may be adjusted for special circumstances or special needs (such as home-based businesses, agricultural activities and animals or residents' disabilities). Within a quarter-mile from a wellsite, payments are the full HUD rental value. For homes between a quarter and a half mile from the site, payments are 50% of the HUD value, and for locations between a half-mile and one mile, payments are 10% of the HUD value. These percentages were determined based on the likelihood and intensity of impacts at the stated distances. The table will be updated each year to match the current HUD rates.

Attachment B: Disruption Payment Appendices  
Table B Moving Equivalencies

Distance From well	Rate
1-1320	\$2,300
1320 to 2640	\$1,150.0
2641 to 5280	\$230.0

Moving equivalencies shown above are for 2017. Each year starting in 2018 these rates shall be adjusted by the Consumer Price Index as set by the United States Department of Labor, Bureau of Labor Statistics for Denver-Boulder, all items, all urban consumers, or its successor index.

Table B provides the replacement rental amounts or rental equivalencies. The rates match the regional Fair Market Rent rates determined for the Boulder County area in 2017 by the U.S. Department of Housing and Urban Development. The costs are organized by the size of the replacement home and the distance from the wellsite and may be adjusted for special circumstances or special needs (such as home-based businesses, agricultural activities and animals or residents' disabilities). Within a quarter-mile from a wellsite, payments are the full HUD rental value. For homes between a quarter and a half mile from the site, payments are 50% of the HUD value, and for locations between a half-mile and one mile, payments are 10% of the HUD value. These percentages were determined based on the likelihood and intensity of impacts at the stated distances. The table will be updated each year to match the current HUD rates.

## RESOLUTION 2016-137

Extending the Moratorium on Processing Oil and Gas Development Applications first Enacted by Resolution 2016-65.

### Recitals

A. On November 15, 2016, the Boulder County Board of County Commissioners ("Board") extended the temporary moratorium on processing oil and gas development applications first enacted May 19, 2016, by Resolution 2016-65, on an emergency basis through January 31, 2017.

B. The moratorium was extended to allow staff to research and incorporate numerous additional matters into the proposed amended oil and gas permitting regulations presented to the Board on November 15, 2016. Because the temporary moratorium was scheduled to expire November 18, 2016, the Board imposed an emergency extension to allow time for staff and the public to comment on the need for and length of a moratorium extension.

C. At a duly noticed public meeting on December 13, 2016, the Board considered a presentation from staff and written comments from the public.

D. Staff recommended that the moratorium be extended to allow for the research and drafting necessary to complete amendments to the draft regulations requested by the Board and to allow for concurrent planning and efforts to prepare staff to process oil and gas development applications when the moratorium terminates. Staff recommended the moratorium be extended to and through May 1, 2017.

E. Staff proposed to present a revised draft of the regulations at a public hearing on March 14, 2017. This timeframe allows for finalization and adoption of the proposed regulations alongside implementation planning before the termination of the moratorium on May 1, 2017.

**NOW, THEREFORE,** the Board resolves:

1. The temporary moratorium first enacted by Resolution 2016-65 is extended to and through May 1, 2017.

2. The extension of the moratorium is reasonable and necessary to protect the public health, safety, and welfare of the County and prevent irreparable harm. The purpose of the moratorium extension is to allow time to finalize and adopt amendments to the current County land use and environmental regulations governing oil and gas development in unincorporated areas.

3. Staff will present a revised set of amendments to the regulations at a public hearing March 14, 2017, at 2:00 p.m. and will concurrently prepare for implementation of the new regulations when adopted and at the termination of the moratorium.

A motion to this effect was made at the December 13, 2016 public meeting by Commissioner Gardner, seconded by Commissioner Domenico, and passed by a 3-0 vote of the Board.

ADOPTED on this 15 day of December 2016.

BOARD OF COUNTY COMMISSIONERS OF BOULDER COUNTY:



Handwritten signature of Elise Jones in black ink, written over a horizontal line.

Elise Jones, Chair

Handwritten signature of Cindy Domenico in black ink, written over a horizontal line.

Cindy Domenico, Vice Chair

Handwritten signature of Deb Gardner in black ink, written over a horizontal line.

Deb Gardner, Commissioner

ATTEST:

Handwritten signature of Andrea J. Lacey in black ink, written over a horizontal line.

Clerk to the Board

## Exhibit A

### **Categories of Exemption from the Moratorium, Process for Requesting an Exemption, and Process for Evaluating Exemption Requests**

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1. **Types of Work Exempted.** The Temporary Moratorium does not apply to the following:
  - a. Any complete application for oil or gas exploration, development, or production currently being processed by the Land Use Department, which may continue to be processed and reviewed as provided in the Land Use Code.
  - b. Any application for oil or gas exploration, development, or production already approved by the Land Use Department prior to the effective date of this Resolution where such approval is validly maintained thereafter.
  - c. Development that possesses either a statutory or common law vested right.
  - d. Minor modifications to existing permits.
  - e. Plugging and abandonment of existing facilities, with the exception that associated rerouting of flowlines, gathering lines, or other pipelines will be subject to section 4-514.E of the Land Use Code, unless the Director waives one or more of the requirements of that section as inapplicable in light of the nature and extent of the proposed work.
  - f. Work on existing oil and gas facilities which the Land Use Director in his sole discretion deems necessary to either (i) repair facilities impacted by acts of God such as, without limitation, the flooding and severe weather events of September 2013, (ii) reconfigure or relocate facilities in a manner that better protects public health, safety, and welfare and the environment, or (iii) perform routine maintenance and repairs. In determining whether work is "routine maintenance or repairs," the Director may consider whether the work will require other county permits, such as floodplain development permits. For purposes of this Section, "oil and gas facilities" means the site and associated equipment used for the production, transportation, treatment, and/or storage of oil and gas and waste products; or an individual well pad built with one or more wells and operated to produce liquid petroleum and/or natural gas, including associated equipment required for such production; or gathering lines, and ancillary equipment including but not limited to drip stations, vent stations, pigging facilities, chemical injection stations and valve boxes; or any other oil and gas operation which may cause significant degradation. In no case may the Land Use Director approve repairs, reconfiguration, or relocation under this subsection where the work would involve drilling a new well or hydraulic fracturing.

2. **Request for Exemption.** If an oil and gas operator believes certain activity is not subject to the temporary moratorium given the exceptions listed in Section 5 as amended by this Resolution, the operator must submit a request for exemption in writing to the Land Use Director. Unless waived by the Land Use Director for good cause shown, the request must include at a minimum:

- a. a site plan showing the existing and planned location of the facilities;
- b. a description of the desired work;
- c. the reason(s) why the work is not subject to the moratorium including any benefit to public health, safety, and welfare and the environment;
- d. the time and dates when the work would occur;
- e. the duration of the work;
- f. any mitigating measures to reduce impacts to neighbors and other affected parties;
- g. a list of all parties that will receive notice from the operator prior to commencement of work;
- h. documentation that the operator can obtain and maintain all other required local, state, or federal permits, including without limitation county Floodplain Development Permits and any permits required by COGCC, CDPHE, and the U.S. Army Corps of Engineers.

3. **Process for Evaluating Exemption Request.** Work eligible for an administrative exemption from the moratorium may only proceed upon written approval of the Land Use Director.

- a. In evaluating a request for an exemption, the Director will use the Standard DPR Approval Standards in section 12-703 of the Boulder County Land Use Code as well as the pipeline regulations in 4-514.E as a guide. Where two or more of the standards in 12-703 or 4-514.E conflict when applied to the proposed work, the Director shall analyze the applicability and importance of each of the conflicting standards under the specific facts of the application and make a reasonable attempt to balance the conflicting standards in reaching a decision.
- b. In considering an exemption request, the Director shall notify adjacent property owners. The Director shall not issue the approval for seven days following such notification and shall consider any comments received by the public. To the extent necessary, the Director may refer requests for administrative exemptions from the moratorium to other agencies. In his sole discretion, the Director may waive this notice requirement for good cause shown (for example, necessary and routine maintenance and repairs not likely to affect adjacent property owners).
- c. Where appropriate given the nature and extent of the proposed work, the Director may impose reasonable conditions of approval to mitigate impacts, using sections 12-703, 12-800, and 4-514.E, as a guide.