



Community Planning & Permitting

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**BOULDER COUNTY
BOARD OF COUNTY COMMISSIONERS
PUBLIC HEARING**

December 1, 2020 at 4:00PM

Due to COVID-19 this hearing will be held virtually

Docket DC-19-0002: Amendments Related to Article 12 of the Land Use Code

Proposed Land Use Code amendments addressing oil and gas development, seismic testing, and companion changes to the Land Use Code

Staff: Kimberly Sanchez, Deputy Director - Planning (Community Planning & Permitting)
Jasmine Rodenburg, Senior Planner (Community Planning & Permitting)
Kate Burke, Senior Assistant County Attorney (County Attorney's Office)

AGENDA

1. December 1, 2020 4 P.M. → COUNTY STAFF PRESENTATION AND PUBLIC COMMENT (2 minutes per individual speaker**)
2. December 3, 2020 4 P.M. → COMMISSIONER QUESTIONS TO STAFF, DELIBERATION, AND ACTION (no additional public comment will be taken)

**Time may be pooled (up to 8 minutes maximum) provided all individuals who are pooling time are present. Advance speaker sign-up is available on the Boulder County oil and gas development website (<https://boco.org/oilgas>).

On December 3, 2020 at 4:00PM, Board of County Commissioners will convene to ask staff any questions, discuss the docket, and either approve the Draft Regulations or provide direction to staff regarding changes.

PACKET CONTENTS

Item	Pages
o Staff Memo	1 – 10
o Draft Article 12 Regulations as amended after Planning Commission (Exhibit A) dated November 23, 2020	A1 – A35
o Other Proposed Conforming Amendments to the Land Use Code as amended after Planning Commission (Exhibit B) dated November 23, 2020	B1-B6
o Summary of Proposed Changes from October 20, 2020 Draft Article 12 Regulations (Exhibit C)	C1-C5

ACTION REQUESTED FROM BOARD OF COUNTY COMMISSIONERS

The December 1, 2020 public hearing and December 3, 2020, public meeting are for the Board of County Commissioners ("BOCC") to consider the Boulder County Land Use Code amendments ("Draft Regulations") that update the County's review of oil and gas development and seismic

testing in unincorporated Boulder County. The Draft Regulations reflect direction given to staff by the BOCC update the regulations following enactment of Senate Bill 19-181, "Protect Public Welfare Oil and Gas Operations," signed into law April 16, 2019.

On December 1, staff will give a presentation on the proposed regulations and public testimony will be taken. No discussion by the BOCC will take place on December 1. On December 3, 2020, the BOCC will ask staff questions and discuss the Draft Regulations. Staff requests they take action (approve Docket DC-19-0002) or provide direction to staff to otherwise modify the Draft Regulations. If the BOCC provides direction to staff to edit the Draft Regulations, staff will bring back any necessary revisions to the BOCC on December 10, 2020.

Schedule for Review of the Draft Regulations (Docket DC-19-0002)

Planning Commission

- **Monday, November 9, 2020, 4:00 p.m.** Planning Commission public hearing – staff presentation on proposed regulations and public comment was taken
- **Tuesday, November 10, 2020, 4:00 p.m.** Planning Commission public meeting – no further testimony was taken. Planning Commission asked questions, discussed, and approved and recommended BOCC approval of DC-19-0002 with limited changes, subject to their discussion at the public meeting.

Board of County Commissioners

- **Tuesday, December 1, 2020, 4 p.m.** Board of County Commissioners public hearing – public comment to be taken.
- **Thursday, December 3, 2020, 4 p.m.** Board of County Commissioners public meeting – no further testimony will be taken.
- **(If necessary) Thursday, December 10, 2020, at 4 p.m.** Board of County Commissioners public proceedings continued, if necessary.
- **(If necessary) Tuesday, December 15, 2020 at 4 p.m.** Board of County Commissioners public proceedings continued, if necessary.

Any updates to the schedule will be posted on the County's oil and gas website:
<https://boco.org/oilgas>

Boulder County's current moratorium on accepting applications for new oil and gas development remains in effect while this update is in process, until December 31, 2020.

BACKGROUND

Boulder County has long been and remains concerned about the adverse impacts on people and the environment from potential expanded oil and gas development within the county. Strong regulations are an important tool for protecting the public health, safety, and welfare, and environment and wildlife of Boulder County. The County adopted its existing oil and gas regulations (found in Article 12 of the Boulder County Land Use Code) in March 2017. No applications for new oil and gas development have been submitted to the County since that time. However, in 2019, Senate Bill 19-181 was enacted, which significantly changed the legal landscape for local governments with respect to regulating oil and gas activities. Therefore, on June 4, 2019, the Board of County Commissioners authorized staff to begin amendments to Article 12 in light of the legal changes made by S.B. 19-181. To give staff the necessary time to complete the regulatory update,

the Board instituted a moratorium on June 28, 2019, directing staff not to accept or process applications for new oil and gas development until after March 28, 2020 (see Resolution 2019-59). Due to the Coronavirus pandemic beginning in March 2020, the original schedule for public meetings necessary to complete the regulatory update was vacated. To accommodate the pandemic response and the significant rulemaking at the Colorado Oil and Gas Conservation Commission to implement S.B. 19-181, in which staff and county residents were deeply involved, the moratorium was extended twice to allow for the subject update to proceed, ultimately through its current end date on December 31, 2020.

On March 6, 2020, staff published an initial draft of the updated regulations. Following the release, staff received public comment and engaged in numerous meetings with internal county departments, expert consultants, industry representatives, environmental and neighborhood advocacy groups, and other local governments. The invaluable input from those sources was carefully considered and implemented as strongly as possible into a new draft, posted to the county oil and gas website on October 20, 2020. Following discussion and recommendations from the Planning Commission, staff edited the Draft Regulations attached as Exhibit A (dated November 23, 2020). That draft is the one currently presented for the Board of County Commissioners' and public's consideration.

Senate Bill 19-181

Senate Bill 19-181 ("181" or the "Bill") amended several sections of the Colorado statutes. The Bill prioritizes the protection of public health, safety, and welfare, and the environment and wildlife in the regulation of oil and gas industry. As relevant to the Article 12 update, the Bill clarified, expanded, and reinforced local governments' regulatory authority over the surface impacts of oil and gas development. Specifically, the Bill clarified that local governments have land use authority over: the siting of oil and gas operations; air emissions and air quality; vibration, noise, odor, light, dust, and all other nuisance-type impacts; water quality and water source; reclamation; cultural resources; emergency preparedness; and traffic and transportation. Additionally, the Bill clarified or established local government power to: require financial securities to guarantee compliance with regulations; inspect facilities for compliance; impose fines for leaks, spills, and emissions; and impose fees on operators or owners to cover the reasonably foreseeable direct and indirect costs of permitting and regulation, including inspection programs. Critically, the Bill established that local government land use regulations regarding oil and gas would not be preempted by overlapping state regulations. These aspects of the Bill created a drastically different landscape than the one under with the existing Article 12 regulations from 2017 were drafted.

PURPOSE OF THE AMENDED REGULATIONS

The County's objective with the amended oil and gas regulations is to protect public health, safety, and welfare, and the environment and wildlife to the maximum extent permitted by law. Oil and gas development is, by its nature, industrial and intensive, and has the potential to significantly impact the surrounding community and environment. Boulder County residents and officials have raised concerns about health problems, air pollution, water contamination, noise, odor, vibration, property damage, and other impacts that may be caused by oil and gas development, particularly the

extraction method known as hydraulic fracturing or fracking. Traditional zoning generally would separate these industrial uses from residential and rural areas. However, due to the unique circumstance of the severed mineral estate, traditional zoning tools are weakened. The Draft Regulations are proposed to minimize potential land use conflicts between oil and gas operations and current or future land uses.

Under the Bill, local governments have regulatory authority to address local impacts of oil and gas development that is independent of state and federal authority. Local authority is limited, however, to the surface impacts of oil and gas; the COGCC retains jurisdiction over many of the technical and “downhole” facets. The Draft Regulations create an intensive and comprehensive review of oil and gas development that includes: (1) the submission of all necessary information related to proposed development and its potential impacts, including expert surveys, assessments, and modeling; (2) thorough analysis and review of such information with respect to clear standards; (3) multiple opportunities for public input; and (4) imposition of conditions necessary to protect public health, safety, and welfare, and the environment and wildlife, or where no conditions can give adequate protections, denial.

SUMMARY OF THE PROPOSED REGULATIONS

The Draft Regulations provide for review of seismic activities and extremely close scrutiny of all proposed oil and gas development with multiple opportunities for public input prior to any decision being made. They also allow staff, the Planning Commission, and the Board of County Commissioners to consider site-specific circumstances related to each development application and to customize avoidance, minimization, and mitigation measures to best address each of these circumstances. Finally, the proposed regulations will help to ensure close monitoring and enforcement of post-approval compliance with all requirements and mitigation measures.

Under its updated regulations, the County will:

- impose requirements for existing oil and gas facilities,
- require an administrative permit prior to any seismic testing, and
- require Special Review for all new oil and gas development in Boulder County.

The Special Review process will allow for a thorough and comprehensive review of any proposal, allow opportunities for public involvement, and provide conditions on the development that will reduce the impacts on neighboring landowners and preserve the County land and environment.

Areas of particular interest in the Draft Regulations include:

- A 2,000’ setback from homes and associated residential uses, schools and childcare centers;
- Strong air quality provisions, including a leak detection and repair (LDAR) program, reporting requirements, and prompt repair of any discovered leaks;
- Careful review, including the use of outside experts, of the impacts threatened by proposed development, including from air emissions, water use, potential contamination, noise, odor, light, dust, and traffic;
- County review of operator-submitted emergency preparedness and response plans;
- Enhanced and clarified reporting requirements for spills and accidents;

- Transportation standards requiring operations to mitigate any adverse impacts to roads and public infrastructure;
- Floodway prohibition;
- A new permitting process for seismic testing activities;
- Protection of cultural and historic resources, recreational areas, scenic and rural character impacts, agricultural land including sensitive soils, wetlands and other natural resources;
- Financial assurances in the form of financial status reporting, greatly expanded insurance coverage requirements, and requirements for financial securities (e.g., bonds or letters of credit);
- Regulation of the abandonment or decommissioning of wells and pipelines;
- Waste management requirements; and
- New provisions for enforcement, including inspections, fines, and other penalties.

The table below summarizes key sections of the proposed regulations.

Key Sections of the Draft Regulations	
1. New Operator Registration and Renewal (12-400)	Operators must register with Boulder County and submit significant information regarding their history as an operator and demonstrating their fitness to undertake the proposed project. Operator registration must be updated and renewed annually.
2. Pre-Existing Facilities (12-500)	New standards to prevent adverse impacts from the existing oil and gas facilities in the county, including the ability to inspect existing facilities. Noise and odor will be evaluated at existing facilities and operators must submit an Emergency Response Plan.
3. Abandonment and Decommissioning of wells and pipelines (12-600)	New oversight over the surface activities related to plugging and abandoning of wells and the decommissioning of pipelines. Decommissioning of pipelines and flowlines will involve an evaluation of whether the lines should be removed from the ground entirely or abandoned in place, with the county's preference being removal unless there are site-specific circumstances that warrant otherwise. The ability to impose timing restrictions and specific revegetation / reclamation requirements has been added.
4. Geophysical Exploration for Oil and Gas, "Seismic Testing" (12-700)	A new administrative permit process before operators can conduct seismic testing, including a requirement that operators offer inspection and testing of residential structures and domestic water wells before and after seismic activities. Copies of written permission from landowners whose property is involved in the seismic testing is required. Notice is required to surrounding property owners 10 days prior to the approved testing.

<p>5. Application Process (12-800)</p>
<p>The following steps are required as part of the public process for a new oil and gas operation:</p> <ul style="list-style-type: none"> • Pre-application conference; registration must be complete before a pre-application conference can be scheduled • Application submission, including all items in Art. 12-900 of the Code • County determination that application is complete • Notice to landowners, residents, tenants, water well owners • Public signs posted by operator • Neighborhood meeting organized and run by operator • Public comment received by County staff at any time after completeness determination • Referrals to relevant agencies, including COGCC and CDPHE and any consultants hired by the county • Site visit by County staff • Staff recommendation (denial, approval with conditions) • If applicable, public hearing before the Parks and Open Space Advisory Committee • Public hearing before the Planning Commission • Planning Commission recommendation to Board • Public hearing before the Board • Board decision
<p>6. Application Submittals (12-900)</p>
<p>For all oil and gas operations, applicants must submit detailed information on the proposal and its anticipated impacts in their application materials. This includes, among other submission requirements, the following:</p> <ul style="list-style-type: none"> • Verification of the operator’s legal rights to use land and access minerals • Insurance coverage including pollution and control of well coverage and a \$25,000,000 umbrella or excess insurance policy • 16 maps and information on current conditions at the proposed location, including the Operator’s rationale behind choosing the selected site with respect to other possible locations • Detailed information on the proposed facility itself, as well as worker training and records • Assessments, studies, and plans from independent experts regarding the various types of anticipated impacts of the development and intended methods for avoiding, mitigating, or minimizing those impacts
<p>7. Review Standards (12-1000)</p>
<p>Protective and specific standards the proposed oil and gas development facility must meet to be approved. Staff, Planning Commission and the Board of County Commissioners will determine whether the proposed oil and gas facility or operation, individually and in light of the cumulative impacts, complies with the Special Review standards. The Applicant bears the burden of proving that the proposed oil and gas facilities and oil and gas operations meet the standards. A proposal meets the standards if it will, respect to the standards in 12-1000, either avoid adverse impacts to public health, safety, welfare, the environment and wildlife resources, or through the imposition of conditions of approval will sufficiently minimize and mitigate unavoidable impacts. In no case will the Board approve oil and gas facilities or operations with impacts that will endanger public health, safety, welfare, the environment or wildlife.</p>
<p>8. Conditions of Approval (12-1100)</p>
<p>Possible conditions that may be applied to an application as specific circumstances require to sufficiently protect public health, safety, and welfare, and the environment and wildlife. If conditions cannot be devised to make a proposed development protective, it will be denied</p>
<p>9. Inspection, Enforcement, Penalties (12-1400, 12-1500)</p>
<p>The County will have the right to inspect oil and gas operations for compliance with the regulations and all conditions of approval and will have the power to impose fines for violations as well as other penalties such as increased reporting and a stop work order</p>

Other Proposed Amendments to the Land Use Code

Other proposed conforming amendments to Article 4 and throughout the Code are also proposed as part of this docket (see Exhibit B).

PUBLIC COMMENT:

All public comment received to date is available on the County's oil and gas website at:

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

Staff has reviewed all of the public comments received and greatly appreciates the involvement of county residents. The public comments are too numerous to specifically list here, but staff found substantial value in comments and suggestions provided by members of the public and implemented several of the suggestions received, including: inclusion of a minimum setback from well pads to residences and their associated residential uses; clarification when and how the County can deny applications for special review for oil and gas development; and several specific suggestions related to various portions of Article 12.

Numerous commenters requested a ban on fracking in the county. Staff is closely monitoring a lawsuit that examines local governments' power to impose a fracking ban under S.B. 19-181 for judicial guidance on this issue. In the meantime, the Board has directed staff to develop the strongest and most protective regulations possible to protect county residents and lands from the impacts of oil and gas development for use if necessary.

INDUSTRY INPUT

The American Petroleum Institute, the Colorado Oil and Gas Association, and Crestone Peak Resources LLC provided comments and proposed redlines. The industry groups pointed out several main issues:

- Potential disparities in the type and depth of operator registration information requested with respect to pre-existing oil and gas facilities;
- Concerns with confidentiality for certain operator registration submissions, including financial documents;
- Concerns with the 12-600 section on plugging and decommissioning oil and gas facilities with respect to the county's legal authority over "downhole" activities;
- Concerns about notice provisions involving lessees and water source owners and how that information is obtained;
- Numerous requests for additional clarity with respect to timing and scope of requirements;
- Concerns about insurance coverage amounts;
- Requests for clarity on certain application submission requirements such as maps of existing facilities and identification of "land uses;"
- Concerns with the subjectivity in several stated standards and requirements;
- Alleged impacts of the proposed 2,000-foot setback on operators' ability to develop their minerals;
- Timing concerns with establishment of pipeline routes;
- Concern with the county's authority to regulate hydraulic fracturing methods and fluid contents;
- Procedural and due process questions regarding the enforcement and penalty provisions;
- Statutory limitations on the county's authority to impose penalties.

Staff made some initial modifications to the draft attached as Exhibit A in response to some of the industry groups' comments and suggestions.

PLANNING COMMISSION'S REVIEW AND RECCOMENDATION TO THE BOCC

On November 9, 2020, staff introduced the proposed Land Use Code amendments addressing oil and gas development and seismic testing to the Planning Commission at a public hearing on the matter. The Planning Commission heard comments from members of the public and industry representatives. Members of the public raised concerns largely echoed in the written public comments including: requests for a ban on all oil and gas development, and requests for greater setback distances as well as from more types of features (open space, etc.). Industry representatives raised concerns as described in the section above.

Subsequently, at a public meeting on November 10, 2020, staff responded to questions raised by the public on November 9, 2020 and answered questions from the Planning Commission. The Planning Commission discussed the Draft Regulations and ultimately recommended approval of DC-19-0002 subject to suggestions made throughout its discussion, as highlighted below.

At the November 10, 2020 Planning Commission public meeting, the planning commissioners asked numerous clarifying questions regarding the Draft Regulations. Some discussion centered around technical requirements related to flaring/venting, the noise requirements and investigations undertaken by Boulder County, the rationale behind the 2000' setback, and seismic testing.

Additionally, the Planning Commission requested that the following items be considered for changes to the Draft Regulations that will be reviewed by the BOCC and public at the BOCC proceedings in December:

- Review the confidentiality concerns raised by Industry related to Article 12-400 in Operator Registration and Renewal.
 - Staff moved the discussion of confidentiality to the beginning of Article 12-400 to provide clarity.
- Clarify the timing for annual registration renewal.
 - Staff added clarification.
- Extend the timing for operators with existing facilities to submit the numerous, required registration materials.
 - Staff changed the timing so operators now have 90 days (not 60 days) from the effective date of the Regulations to submit registration materials.
- Review operator registration requirements for operators with existing facilities to ensure they are proportional and necessary.
 - Staff reviewed these requirements and finds that although the list presents as long, all requirements are necessary and can be provided by an operator. Staff clarified that some plans may cover multiple existing facilities.
- Review the Emergency Response Plan for pre-existing facilities and verify that the requested details are necessary and able to be obtained and add a timeframe for its submittal.
 - Staff edited the requested details and finds that the remaining items are necessary to protect the health, safety, welfare, and the environment in emergency situations at oil and gas facilities. Staff clarified that the timeframe for submittal of these plans is tied to the registration or annual update.

- Review the insurance requirements for contractors and subcontractors to make sure Boulder County is protected in the event those actors damage County property; clarify certification of “adequate insurance” in Section 12-900(A)(5)(j).
 - Staff consulted with the County Risk Management Department and made minor modifications to the insurance provisions.
- Research if it is feasible for operators to determine lessees as required in Section 12-800.H.1
 - Staff clarified language so operators determine “identifiable” lessees, meaning those lessees that are determined through title work or are county-held interests.
- Clarify what water source owners need to receive notice under Section 12-800.H.1
 - Staff clarified this language.
- Clarify introductory language in Section 12-900(D) related to information that is required to be completed by outside experts.
 - Staff clarified this language.
- Clarify what is meant by “Surrounding Land Uses” in Section 12-900.B.7
 - Staff added to this provision to include the types of uses that would be considered.
- Differentiate between basic Wildlife Reports and expert wildlife surveys required to be submitted or obtained by the operators in Article 12-900.
 - Staff differentiated the requirements between the basic Wildlife Reports and expert wildlife surveys.
- Clarify what Worker Training and Records we are asking for under Article 12-900 and whether they are more appropriately part of operator registration.
 - Staff clarified that Worker Training and Records are required to be submitted. Staff added a standard in Article 12-1000 for Worker Training and Records.
- Communicate better to the public how decisions are made under Article 12-1000 and whether cumulative impacts are considered
 - Staff re-organized and clarified these two paragraphs to highlight the pertinent language.
- Define “Operations” and clarify timing and procedures under Article 12-1300.C.
 - Staff thoroughly discussed this provision and made modifications.
- Include operator inspection requirements in Article 12-1100 similar to those for pre-existing facilities.
 - Staff added operator inspection requirements to Article 12-1100 matching those for pre-existing facilities.
- Add ability for Boulder County to recover costs for any increased inspections required as penalties under Article 12-1400(F) from the Operator.
 - Staff added this language.
- Consider reevaluation of Article 12 at regular intervals to ensure its effectiveness and update as necessary.
 - This change does not need to be in the Code (Art. 12) language but the Board could direct staff to review the regulations after a specified timeline, as is typical of many Code changes.
- Clarify the noise provisions throughout Article 12

- Staff edited Article 12-500(E), 12-1000(O), and 12-1100(U) to clarify the noise limitations for pre-existing and new oil and gas facilities. Both pre-existing and new oil and gas facilities cannot unreasonably exceed existing ambient noise levels in the typical, or dBA range; 60 decibels in the very low-frequency or dBC range (very low-frequency noise generally perceived as vibration); and any limitations set by the Colorado Oil and Gas Conservation Commission. Specific noise limitations and requirements will be individually determined for each oil and gas facility based on site-specific ambient noise testing and other conditions.

Staff incorporated many of the changes above into the Draft Regulations in Exhibit A. To the extent Staff did not incorporate suggested changes, the most substantive examples are explained above. Further, Staff made some minor grammatical edits. Between the October 20, 2020 Draft Regulations and the November 9, 2020 Planning Commission hearing, staff also struck the proposed change to Art. 7-904 (Stormwater Quality Management Permit Requirements) as it was determined that this exemption should be eliminated in order for Boulder County to be in compliance with its MS4 Permit.

After Planning Commission finished its discussion, they approved and recommended approval of docket DC-19-0002 with their suggested changes by a vote of 7-0.

TEXT AMENDMENT CRITERIA REVIEW

Pursuant to Article 16-100 of the Land Use Code, no text amendment shall be adopted by the Board of County Commissioners unless the Board has determined that:

1. the existing text is in need of the amendment;
2. the amendment is not contrary to the intent and purpose of this Code; and
3. the amendment is in accordance with the *Boulder County Comprehensive Plan*

The Planning Commission approved and provided a recommendation to the Board of County Commissioners to approve the Draft Regulations with limited changes presented in the November 23, 2020 Draft. The moratorium adopted by the Board of County Commissioners demonstrated the need for the subject amendments and update to the regulations adopted in 2017 based on changes necessitated by S.B.19-181. The amendments are not contrary to the intent and purpose of the Code but update and address the issues raised by the Board in June 2019. The amendments do not conflict with the Boulder County Comprehensive Plan (BCCP); rather, they implement many of the BCCP policies adopted by the Planning Commission on August 15, 2012 when the BCCP was updated to address oil and gas development. Consequently, staff finds the criteria for text amendments in Article 16-100.B. of the Land Use Code are met.

SUMMARY AND RECOMMENDATION

The overall goal contained within the Draft Regulations is to work within the land use authority provided to counties by enacting the most protective regulations governing new oil and gas operations. **STAFF RECOMMENDS THAT THE BOARD OF COUNTY COMMISSIONERS APPROVE Docket DC-19-0002:**

Amendments Related to Article 12 of the Land Use Code (including companion changes to the Land Use Code) and the official record of the Docket before the Board with its staff comments, public testimony, and Board discussion/action.

Article 12



Regulation of Oil and Gas Development, Facilities and Operations

Article 12 • Oil and Gas Development, Facilities and Operations

12-100 Purpose

- A. The County's objective is to (1) protect public health, safety, and welfare and the environment and wildlife resources; and (2) regulate the surface impacts of oil and gas operations in a reasonable manner to address matters including the following: local land use impacts; the location and siting of oil and gas facilities; impacts to public facilities and services; water quality and source; noise; vibration; odor; light; dust; air emissions and air quality; land disturbance; reclamation procedures; cultural resources; emergency preparedness and coordination with first responders; security; traffic and transportation impacts; financial securities; indemnification; insurance; other effects of oil and gas development; and providing for the planned and orderly use of land and protection of the environment in a manner consistent with constitutional rights. The County will deny applications where the proposed oil and gas operations cannot be conducted in a manner that appropriately protects public health, safety, and welfare, the environment and wildlife.
- B. This article is an exercise of the Board of County Commissioners' (the "Board") regulatory authority over oil and gas development. Both the state and County regulate oil and gas operations independently and both may have applicable rules.
- C. The County's review process for new oil and gas facilities and operations includes: (1) the submission of all necessary information related to proposed oil and gas development and its potential impacts; (2) thorough analysis and review of such information; (3) multiple opportunities for public input prior to any decision being made, especially from those who are near the proposed development; and (4) action on the proposal, including a thorough evaluation of and determination about all necessary or warranted mitigation measures

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

12-200 Authority of Article

This article is authorized by C.R.S. §§ 25-8-101 et seq., 29-20-101 et seq., 30-28-101 et seq., 34-60-101 et seq., 25-7-101 et seq., 30-15-401, Colorado common law related to public nuisances, and other authority as applicable.

12-300 Effective Date and Survival

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

12-400 Operator Registration and Renewal

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

- d. List of undercapitalized liabilities;
 - e. Relevant tax documents;
 - f. Statements necessary to calculate net profit margin, debt ratio, and instant or current solvency ratio;
 - g. Certified copies of all current financial assurances filed with the COGCC; and
 - h. Tax returns for the prior 5 years.
6. ~~If an Operator or person designates any portion of a document or submission to the County as "confidential" and if the County determines that the document meets the confidentiality provisions of the Colorado Open Records Act, it may be exempt from disclosure to the public, provided that any page containing such information is clearly labeled with the words "Confidential Information".~~
- 7.—Complaint Protocol. A Description of a process for the Operator's acceptance, processing, and resolution of any and all complaints submitted to state agencies or the Operator directly by members of the public stemming from any adverse impact from oil and gas facilities and operations.
- C. New Operators to Boulder County must submit registration materials that are accepted by the County at least 60 days prior to scheduling a Pre-Application conference. Operators with existing facilities are subject to 12-500(BC).
- D. Operator registration must be updated and renewed annually by July 31.

12-500 Pre-Existing Facilities

- A. ~~A~~—Application to Pre-Existing Facilities. Oil and gas facilities that were legally established prior to the effective date of this Article but do not conform to this Article will be allowed to continue, subject to this section. Any proposed amendment, modification, maintenance, or repair to a pre-existing oil and gas facility or operation is subject to review by the Director under 12-1300(D) and (E). Any modification of such oil and gas operations or facilities that the Director determines to be substantial requires a separate Special Review under this Article.
- ~~B.~~ BAssumption of Existing Oil and Gas Operations. Any operator assuming the ownership or operational responsibility for pre-existing oil and gas facilities or oil and gas operations is subject to the requirements of this section 12-500.
- C. Registration. Operators with existing oil and gas facilities in Boulder County prior to the effective date of Article 12 will submit the registration materials described in 12-400 within ~~60~~90 days after the effective date of this article; or, if not already operating wells in Boulder County, at least 60 days prior to assuming responsibility for operating ~~an~~ existing well~~Oil and Gas Facilities~~. Operator registration must be updated and renewed annually by July 31.
- CD. Inspections.
1. The County may inspect the items listed in this section 12-500 at pre-existing oil and gas facilities under 12-1400.
 2. Operators will inspect all oil and gas facilities, including shut-in and temporarily abandoned facilities, as follows:
 - a. Soil sampling for contamination within the boundaries of existing facility pads annually;
 - b. Equipment-assisted inspection for emissions or releases, including use of best available technology (such as infrared cameras), at least every 30 days; and
 - c. Visual inspections for liquid leaks at least every 30 days.
 3. Operators will report the date, methodology, subject, and results of all inspections to the County monthly.
 4. Spills, leaks, and releases of any substance other than fresh water, including spills of produced water, oil, condensate, natural gas liquids, all spills outside of secondary containment, gas leaks, and E & P waste, must be reported to the County Local Governmental Designee immediately upon discovery and no later than 6 hours thereafter. When leaks, spills, or releases are discovered, by County or Operator inspection, the enforcement mechanisms and penalty provisions in 12-1400 and 12-1500 will apply.
 - a. Reporting. For spills or other releases meeting the Colorado reporting requirements pursuant to Section 25-8-601 (2), C.R.S., operators will adhere to all Colorado reporting requirements. If the County determines the spill or leak is reportable to any agency, the County may make such report.
 - b. Clean-up. Any leak, release, or spill will be cleaned up according to applicable state and federal laws.
 - c. Root Cause Analysis. A root cause analysis of any spill, leak, or release of any substance other than fresh water that resulted in serious bodily injury or fatality, serious environmental harm, was a Grade

1 gas leak as defined by the COGCC, or is otherwise requested by the Director must be submitted to the County within 30 days of the leak, spill, or release.

~~DE.~~ Noise. Existing oil and gas facilities must ~~not create~~ comply with the noise ~~exceeding [] dbA from 7 a.m. to 7 p.m. and [] dbA from 7 p.m. to 7 a.m. as measured from the parcel boundary of the oil and gas facility standards in 12-1000(O).~~

~~EE.~~ Odor. Existing oil and gas facilities must not emit odor detectable after dilution with 5 or more volumes of odor free air.

~~FG.~~ Emergency Response Plan. Each Operator with a pre-existing oil and gas operation in the County is required to submit to the Department an Emergency Response Plan ~~for each oil and gas facility~~ consistent with this section. Operators with multiple pre-existing facilities may submit a single Emergency Response Plan that covers all pre-existing Oil and Gas Facilities. Emergency Response Plans for existing oil and gas facilities must be submitted with the registration and renewal. The emergency response plan must consist of at least the following information:

1. Name, address and phone number, including 24-hour emergency numbers for at least 2 persons located in or near Boulder County who are responsible for emergency field operations. The Operator is responsible for ensuring that at least one of these emergency contacts can be on the site of any emergency within 15 minutes.
2. Protocols for notification of emergency response services and the County, including contact names and numbers for each such agency, for use in reporting any incident causing or threatening to cause personal injury or property damage. Emergency response must be notified immediately upon the imminent threat or occurrence of such incidents; the County must be notified as quickly thereafter as practicable and in no instance more than 24 hours later.
3. An as-built facilities map in a format suitable for input into the County's GIS system depicting the locations and type of above and below ground facilities including sizes and depths below grade of all onsite and offsite oil and gas gathering and transmission lines and associated equipment, isolation valves, surface operations and their functions.
4. Transportation routes to and from oil and gas facilities for emergency response and management purposes, including at least ~~two (2)~~ evacuation routes and health care facilities that would be used. If two evacuation routes do not exist, a plan for ensuring necessary evacuations will be possible in the event of an accident.
5. Detailed information addressing each potential emergency that may be associated with the operation. This may include any or all of the following: well integrity issues; explosions; fires; gas, oil or water pipeline leaks or ruptures; hydrogen sulfide or other toxic or explosive gas emissions; and hazardous material vehicle accidents or spills. This may also include external hazards to the site such as earthquakes, lightning, floods, high winds, tornadoes, terrorism, vandalism, or wildfire.
6. The threshold or triggers constituting various potential types of emergencies must be identified.
7. The plan must include a provision that any spill outside of the containment area or that has the potential to leave the facility or to threaten a water body or groundwater must be reported to the emergency dispatch and the Director immediately, and in no case more than 4 hours after such spill is discovered, in addition to all necessary reporting to state agencies.
- ~~8.~~ Project-specific emergency response plans are required for any project that involves drilling or penetrating through known zones of hydrogen sulfide gas.
- ~~9.8.~~ The plan must include a provision that obligates the Operator to reimburse the appropriate emergency response service providers for costs incurred in connection with any emergency. The appropriate emergency response service provider may specify alternative methods for reimbursement of its services.
- ~~10.9.~~ Detailed information showing that the Operator has adequate personnel, ongoing safety training of all on-site personnel, safety supplies, and funding to implement the emergency response plan immediately at all times during operations.
- ~~11.10.~~ As applicable, the plan must include provisions that obligate the Operator to keep onsite and make immediately available to any emergency responders the identification and corresponding Safety Data Sheets (SDS) of all products used, stored or transported to the site, including fracking fluids. Operators must timely provide SDS to the public in response to a written request. In cases of spills or other emergency events, the plan must include provisions establishing a notification process to emergency responders of potential products they may encounter, including the products used in the hydraulic fracturing fluids.
- ~~12.11.~~ The plan must include a provision establishing a process by which the Operator periodically engages with the surrounding residents and landowners to educate them on the risks of the existing operations, explain emergency procedures, and establish a process for surrounding neighbors to communicate with the

Operator.

~~13-12.~~ The plan must include a process by which the community can submit concerns and complaints and be assured of timely responses.

~~GH.~~ Revegetation and Reclamation. When any pre-existing oil and gas facility is decommissioned, all areas disturbed will be reclaimed and revegetated to the satisfaction of the County, [in consultation with the landowner](#).

~~HJ.~~ Stormwater Quality Control. Adequate stormwater quality control measures must be used to comply with applicable permits and County regulations.

~~IJ.~~ Fines. Violations of this section are subject to the enforcement mechanisms in 12-1400 and 12-1500.

12-600 Well and Pipeline Abandonment or Decommissioning

A. An Operator may not [commence activities to](#) plug, re-plug, abandon, or otherwise decommission an oil and gas well, flowline, or associated fresh, produced or wastewater pipeline until the Director has reviewed and provided written approval [for entry and surface operations](#) to the Operator.

B. Plugging/Re-Plugging, Abandoning or Decommissioning Wells.

1. COGCC rules. Operators will comply with all COGCC rules regarding plugging, abandoning, and decommissioning oil and gas wells.

2. Coordinates. The Operator must provide the County with the surveyed coordinates of the decommissioned, plugged, or abandoned well.

3. Marking. Unless otherwise requested by the surface owner, the Operator must leave onsite a permanent physical marker of the well location.

C. Pipeline Abandonment. Flowlines ~~proposed to be abandoned or decommissioned~~ or fresh, produced or associated wastewater pipelines [proposed to be abandoned or decommissioned](#) must be removed unless otherwise authorized in writing by the Director after consultation with the landowner. If the Director approves of abandonment in place of the line, all COGCC rules will be strictly complied with.

D. Conditions of Approval of Well and Flowline Abandonment.

1. With any approval for work to go forward, the Director will provide the Operator with County requirements for [surface activities for](#) plugging and abandoning wells and pipelines. These requirements may include but are not limited to:

a. Timing Constraints;

b. With respect to pipelines abandoned in place, a tracer ~~will be placed~~ in any nonmetal line; and

c. Specific reclamation and revegetation requirements.

12-700 Geophysical Exploration for Oil and Gas (“Seismic Testing”)

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

A. Prior to conducting any seismic testing, a geophysical exploration permit issued by the Director is required under this section. If the Operator submits information that is inadequate, the Director may deny a permit.

B. To apply for a permit, the Applicant must provide:

1. Vibration Monitoring and Control Plan Map. A map of the exploration area that identifies all of the following within 800 feet of all source points in the testing area:

a. Water supplies for domestic, public, or agricultural use;

b. Domestic, commercial, and industrial structures;

c. Areas affected by previous mining activities or public works;

d. Geologic hazards;

e. Mapped floodplain and floodway;

f. Identification of wildlife resources; and

g. Water, sewer, oil, gas, and chemical facilities and pipelines in the testing area.

2. A map showing the proposed travel routes of all vibration-generating seismic testing equipment;

3. A traffic control plan for any operations that will occur on or impede traffic on a public right-of-way;

4. Insurance Coverage. A copy of the following insurance coverage, including the required Additional Insured Language:

a. Commercial General Liability. This coverage should be provided on an Occurrence Form, ISO CG001 or equivalent, with Minimum limits of \$1,000,000 Each Occurrence, \$2,000,000 General Aggregate

- and \$2,000,000 Products Completed Operations Aggregate.
- b. Automobile Liability. Bodily Injury and Property Damage for any owned, hired, and non-owned vehicles used in the performance of the Contract. Minimum limits \$1,000,000 Each Accident.
 - c. Workers' Compensation and Employer's Liability. Workers' Compensation must be maintained with the statutory limits. Employer's Liability is required for minimum limits of \$100,000 Each Accident/\$500,000 Disease-Policy Limit/\$100,000 Disease-Each Employee.
 - d. Umbrella/Excess Insurance. Umbrella/Excess Liability insurance in the amount \$25,000,000.00, following form.
 - e. Professional Liability (Errors and Omissions). Professional liability coverage with minimum limits of \$10,000,000 Per Loss and \$10,000,000 Aggregate. Professional Liability provisions indemnifying for loss and expense resulting from errors, omission, mistakes or malpractice is acceptable and may be written on a claims-made basis. The contractor warrants that any retroactive date under the policy shall precede the effective date of this Contract; and that either continuous coverage will be maintained or an extended discovery period will be exercised for a period of 2 years beginning at the time work under this Contract is completed.
 - f. Pollution Liability. Coverage pay for those sums the Contractor becomes legally obligated to pay as damages because of Bodily Injury, Property Damage or environmental Damage arising out of a pollution incident caused by the Contractor's work including Completed Operations. Coverage shall include emergency response expenses, pollution liability during transportation (if applicable) and at Non-Owned Waste Disposal Site (if applicable). The Minimum limits required are \$15,000,000 Per Occurrence/Loss and \$15,000,000 Policy Aggregate. If the coverage is written on a claims-made basis, the Contractor warrants that any retroactive date applicable to coverage under the policy precedes the effective date of this Contract; and that continuous coverage will be maintained or an extended discovery period will be exercised for a period of 3 years beginning from the time that work under this contract is completed. County shall be named as an additional insured for ongoing operations and completed operations.
 - g. Additional Insured. Boulder County must be named as an additional insured for the General Liability, Umbrella/Excess Coverage and Pollution Liability policies listed above. Additional insured shall be endorsed to the policy. Additional Insured wording shall be as follows:
County of Boulder, State of Colorado, a body corporate and politic, is named as an Additional Insured.
 - h. Contractors. Operator shall require adequate insurance of its contractors and subcontractors. Operator agrees that it shall~~Operators will~~ be responsible for any and all damage or loss suffered by the County~~county~~ as a result of negligence~~the work being performed~~ by Operator or any subcontractor with these requirements as described in this Article.
5. Financial assurances in a form and amount satisfactory to the Director sufficient to guarantee Applicant's obligation to restore all property damaged by seismic testing to its pre-testing condition;
 6. Copies of written permission from every landowner of property where the Operator is going to use or place equipment for geophysical exploration;
 7. A Vibration Monitoring and Control Plan prepared by a Vibration Monitoring Specialist (VMS). The VMS must be an independent, registered Professional Engineer or Geologist. This Vibration Monitoring and Control Plan must include:
 - a. The name of the Firm providing the vibration monitoring services;
 - b. Specifications of the monitoring equipment to be used;
 - c. Specifications of the energy source to be utilized for the source points;
 - d. If vibroseis trucks will be utilized, the plan should discuss:
 - i. The number of vibroseis trucks;
 - ii. The distance between the vibroseis trucks;
 - iii. The drive level to be used;
 - iv. The sweep duration; and
 - v. The sweep frequency range.
 - e. Measurement locations and field procedures for setting up vibration monitors;
 - f. Procedures for data collection and analysis which include examples of vibration monitoring field sheets and vibration event analysis;

- g. Results of on-site vibration attenuation study (walk away test) with prediction of maximum expected particle velocity at each monitoring location;
 - h. Means and methods of providing warning when the Response Values are reached;
 - i. Generalized plans of action to be implemented in the event any Response Value is reached. This plan must include positive measures by the Operator to control vibrations (e.g. reducing drive level, increasing stand-off distances, dropping source points); and
 - j. Procedures for addressing complaints and claims of damage.
- C. The following requirements will apply to all permits to conduct geophysical exploration:
1. Implementation of a Vibration Monitoring and Control Plan approved by the Director; the Director may require modifications to the plan submitted by the Applicant.
 2. Methods involving explosive material ("shotholes") are prohibited.
 3. All geophysical activities will be strictly limited to the areas, methodologies, and routes indicated in the maps and plans approved by the permit.
 4. All geophysical activities will be strictly limited to the hours of operation noted in the approved permit;
 5. The Applicant's VMS will be on site throughout all geophysical activities to ensure County permit conditions are met and will report whether the testing complies with the approved permit.
 6. If any utility line(s) or other above or below ground features must be removed or altered during geophysical operations, the Applicant will provide a letter from the utility owner authorizing the removal or alteration and notify the County at least 3 days prior to any such removal or modification and comply with any additional permitting requirements imposed by the County.
 7. Applicant must obtain any permits for use of County roads required by the County Public Works Department.
 8. No seismic testing activities will be permitted in a mapped floodway. Activities in a mapped floodplain may require a County Floodplain Development Permit.
 9. Any violation of the terms of a seismic testing permit are subject to the penalties and enforcement mechanisms of Article 12-1400 and 12-1500, in addition to all remedies available at law.
 10. Ground vibration monitoring will be required for any source points located within 400 feet of any structures identified in the map of the exploration area. The VMS must conduct the analysis and interpretation of the collected vibration monitoring data for comparison to appropriate vibration limits and must prepare weekly reports for submittal to the County.
 11. Ground vibration amplitudes will be limited to the following Response Values:
 - a. The Response Values for ground vibration include a Threshold Value of 0.2 inches per second and a Limiting Value of 0.3 inches per second. Higher values may be acceptable based on the feature of concern but the Applicant must submit an engineering report for review and approval by the County.
 - i. If a Threshold Value is reached, the Applicant must:
 1. Immediately notify the County;
 2. Meet with the County to discuss the need for response action(s);
 3. If directed by the County during the above meeting that a response action is needed, submit within 24 hours a detailed specific plan of action based as appropriate on the generalized plan of action submitted previously as part of the vibration-monitoring plan. Seismic testing cannot resume until the detailed specific plan of action is approved by the County; and
 4. If directed by the County, implement response action(s) within 24 hours of submitting a detailed [plan of action](#).
 - ii. If a Limiting Value is reached, the Applicant must:
 1. Immediately notify the County and suspend vibration producing activities in the affected area, with the exception of those actions necessary to avoid exceeding the Limiting Value;
 2. Meet with the County to discuss the need for response action(s); and
 3. If directed by the County during the above meeting that a response action is needed, submit within 24 hours a detailed specific plan of action based as appropriate on the generalized plan of action submitted previously as part of the vibration-monitoring plan. Seismic testing cannot resume until the detailed specific plan of action is approved by the County.
 12. If directed by the County, implement response action(s) within 24 hours of submitting a detailed specific plan of action, so that the Limiting Value is not exceeded. Ten days prior to vibration monitoring

pursuant to the Vibration Monitoring and Control Plan, the Applicant will submit a certificate of calibration for any vibration monitoring equipment that will be used on site. The certificate must certify that the instruments are calibrated and maintained in accordance with the equipment manufacturer's calibration requirements and that calibrations are traceable to the U.S. National Institute of Standards and Technology. All instrumentation must have been calibrated by the manufacturer or a certified calibration laboratory within 1 year of their use on site.

13. During the exploration activity, the Applicant must provide weekly reports summarizing any vibration monitoring data collected. The reports must be prepared and signed by the VMS. The County reserves the right to request a different reporting schedule where appropriate.
14. In addition to the above, the Director may impose additional conditions on the conduct of seismic testing that are necessary and reasonable to protect the public health, safety, and welfare, the environment or wildlife resources.

D. Notice and Property Inspection.

1. After a permit is issued by the Director, the Applicant will provide notice of the seismic testing to each property located within 400 feet of any source point as depicted in the approved Vibration Monitoring and Control Plan Map at least 10 days before the testing is to occur.
 - a. The notice will include:
 - i. A description of the project including the duration, physical effects, precautions Applicant is taking, and precautions the property should make;
 - ii. Complaint procedures for property owners and residents;
 - iii. An offer of property and water well baseline condition inspections at Applicant's expense, which, upon property owner's request, will be completed at least 3 days prior to seismic testing. Results of such testing will be provided to the property owner and maintained by Applicant for at least 3 years. All baseline condition testing must be completed by a qualified technician who will report: the date of inspection, name of property owner, address of property owner, property owner contact information, description of the property, age of structure(s), material of structure(s) and foundation(s). High resolution photographs and video must be taken documenting the present state of all structures on the property, including roads, bridges, and sidewalks. The technician should note any chemical and physical weathering or any other structural defects. All water well samples must be collected by a qualified technician and include the date and time of sample, property owner name, address, contact information and water type and conditions, well type, depth, age, casing type and length, drilling contractor, whether it is conditioned or filtered, sample point type, and any other useful information; and
 - iv. The notice will further include an offer of property and water well condition inspections at Applicant's expense after the testing is complete, the results of which will be provided to the property owner and maintained by Applicant for at least 3 years.

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

12-800 Application Process

- A. Special Review Required. Except as provided in 12-500, all oil and gas facilities and oil and gas operations on public and private land within the unincorporated areas of Boulder County must comply with this Article. Prior to the commencement of any new oil and gas operations in the unincorporated county, an Applicant must submit an application which must receive approval according to this Article. Special Review approval is required prior to the issuance of County permits necessary for the oil and gas facility and operation.
- B. Community Engagement. Boulder County requires Applicant to engage with local communities, residents, and other stakeholders. The purpose of this engagement is to provide sufficient opportunity for public and stakeholder comment on plans, operations, and performance, to listen to concerns of the community, and to address all reasonable concerns related to the proposed oil and gas facility and operation.
- C. Surface Use Agreements, Rights of Way, Easements. Operators commonly enter into surface use agreements, right of way agreements, easements and other types of access agreements with landowners. To avoid inconsistency, the County recommends that agreements with landowners related to the proposed oil and gas facility or oil and gas operation not be finalized until the Applicant has completed Special Review under this Article, at which time the impacts related to the proposed siting will be analyzed.

- D. COGCC approval. Colorado Oil and Gas Conservation Commission (“COGCC”) approval of any application does not constitute local approval, and compliance with all terms and conditions of this Article is required prior to the commencement of any new oil and gas facility and operations in the County. Wherever the Oil and Gas Conservation Act, §§ 34-60-101 et seq., C.R.S., requires local government approval prior to COGCC approval, Special Review under this Article must be completed before applications are submitted to the COGCC.
- E. Pre-Application Conference.
1. Timing. A pre-application conference as defined in Article 3-201 of this Code must be held prior to the Applicant submitting an Application for Special Review. An Applicant must complete registration as defined in 12-400 prior to scheduling a pre-application conference.
 2. Pre-Application Conference. At the pre-application conference, the County and the Applicant will discuss the points contained in Article 3-201 of this Code and review the County’s Special Review process.
 3. Six-month Duration for filing Application. Completion of the pre-application conference qualifies the Applicant to submit an Application for a Special Review provided the Application is filed within 6 months after the pre-application conference.
 4. Site Visit. At the discretion of the Director, a site visit of the parcels involved in the Application may be required as part of the pre-application conference with the Applicant. To the extent necessary, the Applicant will be responsible for securing permission or coordinating with the landowner(s) to conduct the site visit.
- F. Application Submission. The Application must include documentation listed in Section 12-900. The Applicant must submit the Application, the application fee, and supporting documentation in electronic format with a minimum of two additional copies of the Application materials in paper format. The Director may require additional paper copies of the Application, or a portion of the Application materials, if needed for review purposes. The Application must contain a certification from the Applicant that the information in the Application, as well as in any accompanying documentation, is true and accurate. The Application must be signed by a person authorized to sign on behalf of the Applicant and identify who will be the primary contact during processing of the Application. The point of contact information in the Application must be amended to specify the new point of contact if the Applicant’s point of contact changes during the Application process.
- G. Completeness Determination. Upon acceptance of the Application, the Director will determine if the Application satisfactorily meets the requirements of this Article. If County staff needs consultants or staff outside the County to assist the Director with the completeness determination, the County may hire such assistance at the Applicant’s expense. Upon review of the Application materials by the Director and any necessary outside consultants, the Director will determine whether a Special Review Application is complete.
1. Application Deemed Incomplete. If the Director finds that the Application is incomplete, the Director will inform the Applicant of the deficiencies. No further action will be taken on an incomplete Application. Should the Applicant fail to correct deficiencies within 12 months, the Application will expire, and the Applicant may submit a new Application and fee as specified in Section (F) above. The twelve-month timeframe may be extended by the Director according to the standards in Article 4-604(D). Should the Applicant dispute the Director’s completeness determination, the Applicant may appeal the Director’s determination to the Boulder County Board of County Commissioners within 30 days of the Director’s decision. During any Board of County Commissioners proceeding or subsequent appeal, the Application will not be processed.
 2. Application Deemed Complete. If the Director finds that the Application is complete, the Director will process the Application.
- H. Notice.
1. The Applicant must deliver notice to surface owners, to surrounding land owners and lessees, the Local Governmental Designees (LGDs) of any local government within one mile of the proposed oil and gas facilities, and to water source owners as identified in this section no more than 10 days after the Application is deemed complete by the Department. If approved by the Director, the Applicant may deliver the notice defined in this section using secure methods other than mail. Notice of the Application must be made as follows:
 - a. To the surface owners of the parcels of land on which the oil and gas operation is proposed to be located;
 - b. To the owners and identifiable lessees of the parcels of land within one mile of the parcel on which

- the oil and gas operation is proposed to be located;
- c. To the physical address of all parcels within one mile of the parcel on which the oil and gas operation is proposed to be located if Boulder County Assessor's records indicate a mailing address for the parcel owner that is different than the physical address; and
 - d. ~~To water source owners~~[To owners of wells registered with the Colorado Division of Water Resources, owners of municipal/public water bodies, and owners/managers of irrigation ditches and reservoirs](#) within one mile of the parcel on which the oil and gas operation is proposed to be located and within one-half mile of either side of the full length of the planned wellbore and bottom location. The Applicant is responsible for determining the addresses of such water source owners and providing a list of such owners to the Director.
 - e. The Department will provide the list of addresses of record for property owners within one mile of the parcel on which the oil and gas operation is proposed to be located to the Applicant at the pre-application conference so the Applicant can provide notice as required by subsection (a), (b), and (c) of this section.
 - f. If other sites come into consideration during Application processing, the Director may require the Applicant to provide supplemental notice as described here with reference to the new sites.
2. The notice must contain the following:
 - a. A message in bolded 14-point or larger font on the front page of the notice that states as follows: "Attention: An oil and gas operation consisting of up to [number of wells] and [description of other facilities] is being proposed in your area. Please read this notice carefully." Slight variations in this notice language may be approved by the Director at the Applicant's request;
 - b. A description of the proposed oil and gas facility, including the legal description; parcel number; a street address for the site, if available from the County's addressing system; the company name of the Operator; the name of an Applicant contact; the current business address, telephone number, and email address for the Applicant contact; a vicinity map; and a brief description and overview of the proposed oil and gas operation (e.g., a detailed description of the timeframe for facility construction and estimated duration of drilling and any proposed hydraulic fracturing);
 - c. Information concerning the facilities and equipment proposed at the site when operational, and proposed access roads and gathering lines;
 - d. The docket number of the Application and the date of its completeness determination;
 - e. An attachment provided by the Director explaining the applicable review process and explaining that the public may review the full Application file at Department offices and that public comments on the Application may be submitted to the Department;
 - f. A statement concerning the County's right to enter property that is the subject of the Application as follows: "For the purpose of implementing and enforcing the County's Special Review process, County staff may from time to time need to enter onto the property that is the subject of a Special Review Application."; and
 - g. The current mailing address, website address, email, and telephone number for both the Department and the COGCC, as well as a statement that additional information on the Application will be available from the Department.
 3. Notice Review. The Applicant must submit a copy of the proposed notice for review by the Director. If the Director determines that the notice does not comply with the requirements of this Article, the Director may require the Applicant to modify the notice.
 - l. Posting Public Notice Signage Onsite. Within 5 days after the Director has deemed an Application complete, the Applicant must post a public notice sign or signs on the subject parcels, including parcels where flowlines or other pipelines will be constructed, that meet the following requirements:
 1. The sign must be posted in a location visible to the public (i.e., visible from a public road) and approved by the Director. If the Director determines that a single sign or signs on the subject parcel will not provide adequate public notice, multiple signs or signs in additional locations meeting the requirements of this section may be required.
 2. In lettering clearly visible from a passing car and proportionate to the size of the sign, the sign must contain the following:
 - a. "Attention: An oil and gas operation consisting of up to [number of wells] and [description of facilities] is being proposed in your area. Please read this notice carefully.";
 - b. "The Applicant has applied for Special Review, [docket number]"; and

- c. "Information regarding this Application may be obtained from Boulder County Community Planning & Permitting at [phone number / email]".
 3. Within 5 days of the posting of the sign, the Applicant must submit a photograph of the sign or signs as posted for review by the Director. If the Director determines that the sign does not comply with the requirements of this Article, the Director may require the Applicant to post a sign or signs complying with this Article.
 4. The sign or signs must be posted on the sites until the Special Review process is complete. The Applicant must repair or replace signs that are damaged or defaced within 5 days of learning of damage or defacement.
- J. **Neighborhood Meeting.** The Applicant must conduct a neighborhood meeting with adjacent and surrounding landowner(s) and other interested parties at a convenient date, time, and public location. The meeting must occur at least 20 days after the notice is sent and the signs are posted pursuant to Section 12-800(H) and (I). The neighborhood meeting must be noticed to the County and to all individuals entitled to notice pursuant to Section 12-800(H)(1) at least 14 days prior to the meeting. In addition to those parties entitled to notice under 12-800(H)(1), the meeting will be made open to the public. The meeting must be held at an accessible and adequate location. If requested by members of the public or the Director determines remote attendance is necessary for public health reasons, accommodation must be made for remote attendance. At the neighborhood meeting, the Applicant must provide an overview of its proposed oil and gas operation, distribute a handout provided by the Director with an explanation of the Article 12 Special Review process, and allow those in attendance to provide input as to the proposed operation, including, but not limited to, facility locations, issues that arise from Application of this Article to the proposed operation, and suggested mitigation to adequately ensure compliance with this Article. The Applicant must provide a video recording of the meeting and a report of all of attendee comments and any proposals from the Applicant for addressing neighborhood concerns to the Director within 20 days after the meeting.
- K. **Referral Requirements and Agency Review.** Following the determination that an Application is complete, the Director will refer the Application materials to the Boulder County Public Works and Parks and Open Space Departments, Boulder County Public Health, the appropriate fire district, the Boulder County Sheriff, the Boulder County Office of Emergency Management, the COGCC and CDPHE, and any appropriate municipality, special district, and school district for review and comment. As deemed necessary in the Director's sole discretion, the Director may also refer the Application to other government agencies or entities for review and comment. Referral comments on the proposal must be returned to the Director within 75 days of date of referral, unless the Director determines additional time is necessary.
1. Following the determination that an Application is complete the Director will send a referral notice to all individuals entitled to notice pursuant to Section 12-800(H)(1). The notice will include information on where to access Application materials on the County's website. The complete Application referral packet will be available for public review online in hard copy at the Department during business hours. Referral responses must be received by the Director within 75 days of transmittal to ensure that comments are considered.
 2. If the proposed oil and gas facility or oil and gas operation is on or within 1,500 feet of Boulder County Parks and Open Space property or property over which Boulder County owns a conservation easement, the Parks and Open Space Director may refer the Application to the Parks and Open Space Advisory Committee (POSAC) for a public hearing. After the public hearing, the POSAC may forward recommendations for assuring the protection of environmental, ecological, wildlife, historical, archeological, and agricultural resources of the open space, which may include recommendations to deny the Application or to modify the location or density of the oil and gas facility.
 3. The Applicant is responsible for preparing the referral packets in the manner prescribed by the Director. Any errors made by the Applicant in the preparation of referral packets may result in a delay in processing of the Application.
- L. **Consultant Review.** The Director may submit all or parts of the Application for review and recommendation by consultants retained by the County with the necessary expertise to review technical or other aspects of the Application. Among other consultant reviews, third party consultant review may be required to evaluate the risks and impacts of oil and gas development. The Applicant will be notified if the Director decides to retain consultants, and the Applicant will escrow funds sufficient to cover the anticipated cost of the consultants' review. The Applicant will be responsible for the actual costs associated with this consultant

review and will be refunded any excess escrowed funds.

- M. Supplemental Information. If, during the Special Review process, the Director determines that additional information is required to conduct adequate review of the Application in light of the standards and criteria, the Director may suspend the Application review until the additional information is received.
- N. Site Visit. The Department will conduct a site visit to evaluate the Application and the site-specific circumstances on and near the parcel and surrounding parcels on which the facility and operations are located. The Department may coordinate a site visit with other County departments and governmental agencies.
- O. Staff Recommendation. After its review of the Application, staff will make a recommendation for approval with conditions or denial of the Application, based on its analysis of the Special Review Standards, the referral comments and the Applicant's responses to the referral comments. When the staff recommendation is complete, the Application will be scheduled for a public hearing in front of the Planning Commission. The staff recommendation will be made available to the public once it is complete.
- P. Notice of Planning Commission Hearing. Not less than 14 days prior to the Planning Commission's public hearing on the Application, the County will publish a legal notice of the public hearing in a newspaper of general circulation in the County and mail written notice to the people and entities entitled to notice under Section 12-800(H)(1) of the time and place of the Planning Commission's public hearing.
- Q. Planning Commission Hearing and Recommendation. The Planning Commission will hold a public hearing on the Application and will make a recommendation of approval with conditions necessary to ensure compliance with this Article, or denial, which will be forwarded to the Board of County Commissioners.
- R. Notice of Board of County Commissioners' Hearing. Not less than 14 days prior to the Board of County Commissioners' public hearing on the Application, the County will publish a legal notice of the public hearing in a newspaper of general circulation within the County, and written notice to the surface owner and surrounding property owners of the time and place of the Board's public hearing will be provided pursuant to Section 12-800(H)(1).
- S. Board of County Commissioners Hearing and Decision. The Board of County Commissioners (the "Board") will hold a public hearing on the Application. Any action taken by the Board will be based on the entire record of proceedings on the matter, as that record is maintained by the Director and/or the Clerk of the Board, including but not limited to: recordings or transcripts of public hearings; all written comments of referral agencies; the review and recommendations of the Department, POSAC if applicable, and Planning Commission; and all written commitments, statements, or evidence made or submitted by or in behalf of the Applicant, landowners or interest holders or their agents, and interested members of the public. The Applicant will have the burden of proof to show that the applicable standards for approval have been met. Based on the evidence received at such public hearing(s), the Board will make its determination to approve the Application with conditions necessary to ensure compliance with this Article or deny the Application. The Board may designate its determination as final or preliminary and subject to review by a technical review board under Sections 29-20-104(3) and 34-60-104.5(3), C.R.S. The Board's action will contain appropriate findings or reasons in support of its decision. The Board will render its decision on the Application in writing following the conclusion of the public hearing.

12-900 Application Submittal Requirements

Unless a submittal requirement is waived or modified by the Director after the Applicant's request, the Applicant must submit the information and documents specified in this section with the Special Review Application for oil and gas facilities and operations. If the contents or relevant information in any required submittal materially changes, the Applicant must promptly update those materials with the Department. The Director may waive or modify the submission requirements in this section if, because of the nature of the Application, the requested information is unlikely to be useful to the Board in applying the Special Review standards. Each of the following will form the basis for full and independent review by the County and all reviewing bodies. All materials submitted under this section are subject to Section 12-1400(E).

- A. General Information
 - 1. Application Form.
 - 2. Operator Registration. Operator registration materials submitted under Section 12-400 are incorporated into the Application materials. The Director, Parks and Open Space Advisory Committee, Planning Commission, or Board, may consider such materials in reviewing any Article 12 Application.

3. Proof of Pre-Application Conference. Date the Applicant conducted the pre-application conference with the Department.
4. Verification of Legal Rights.
 - a. Mineral Rights and Surface Access Rights. Proof of ownership of, or lease rights to, the mineral rights and accompanying surface lands where oil and gas facilities are proposed, including copies of all easements, licenses or right-of-way agreements necessary to lay any pipelines associated with the Application. Identification of all persons with a real property interest in the proposed oil and gas facilities. A title report supporting the asserted mineral interests and surface access. A map of the mineral interests Applicant will produce with the proposed oil and gas operation.
 - b. Surface Use Agreements. The County strongly recommends that surface agreements not be finalized until after the Applicant has completed Special Review. Nonetheless, if the Applicant has entered any surface use agreements for any proposed oil and gas facilities subject to the Application, Applicant will provide a copy.
 - c. Roads. Information demonstrating that the Applicant has or will have the right to use or construct temporary and permanent private access roads that are necessary for the proposed oil and gas facilities or operations. A copy of any signed or proposed agreements with landowner(s) regarding road construction, maintenance, and improvements necessitated by the proposed oil and gas operation. Any recorded or historical easements providing access to or across the parcel(s) must be provided.
 - d. Pipelines. Information demonstrating that the Applicant has or will have the right to use or construct temporary and permanent gas, oil or water (fresh, produced, or waste) pipelines that are necessary for the proposed oil and gas operations. A copy of any signed or proposed agreements with landowner(s) regarding pipeline construction, maintenance, and improvements necessitated by the proposed oil and gas operation.
5. Insurance Coverage. A copy of the following insurance coverage, including the required Additional Insured language:
 - a. Commercial General Liability. Coverage should be provided on an Occurrence form, ISO CG0001 or equivalent. The policy shall be endorsed to include Additional Insured Owners, Lessees or Contractors endorsements CG 2038 (or equivalent), Designated Construction Project(s) General Aggregate Endorsement CG2503 (or equivalent) and Additional Insured Completed Operations for Owners, Lessees or Contractors CG 2037 (or equivalent). Minimum limits required of \$1,000,000 Each Occurrence, \$2,000,000 General Aggregate and \$2,000,000 Products/Completed Operations Aggregate. The County requires the Products/Completed Operations coverage to be provided 3 years after completion of construction. An endorsement must be included with the certificate.
 - b. Automobile Liability. Bodily Injury and Property Damage for any owned, hired, and non-owned vehicles used in the proposed oil and gas operations. Minimum limits \$1,000,000 Each Accident.
 - c. Workers' Compensation and Employer's Liability. Workers' Compensation must be maintained with the statutory limits. Employer's Liability is required for minimum limits of \$100,000 Each Accident/\$500,000 Disease-Policy Limit/\$100,000 Disease-Each Employee.
 - d. Umbrella/Excess Liability. Umbrella/Excess Liability insurance in the amount \$25,000,000.00, following form.
 - e. Professional Liability (Errors and Omissions). Professional liability coverage with minimum limits of \$10,000,000 Per Loss and \$10,000,000 Aggregate. Professional Liability provisions indemnifying for loss and expense resulting from errors, omission, mistakes or malpractice is acceptable and may be written on a claims-made basis. The Operator warrants that any retroactive date under the policy shall precede the effective date of a Special Review approval; and that continuous coverage will be maintained until final reclamation obligations are completed to the County's satisfaction.
 - f. Pollution Liability. Coverage pay for those sums the Operator becomes legally obligated to pay as damages because of Bodily Injury, Property Damage or environmental Damage arising out of a pollution incident caused by the Operator. Coverage shall include emergency response expenses, pollution liability during transportation (if applicable) and at Non-Owned Waste Disposal Site (if applicable). The Minimum limits required are \$25,000,000 Per Occurrence/Loss and \$25,000,000 Policy Aggregate. If the coverage is written on a claims-made basis, the Operator will warrant that any retroactive date applicable to coverage under the policy precedes the effective date of any Special Review Approval; and that continuous coverage will be maintained until final reclamation

obligations are completed to the County's satisfaction. The County shall be named as an additional insured for ongoing operations and completed operations.

- g. **Control of Well Coverage.** Coverage for costs and expenses related to bringing a well back under control, pollution cleanup costs incurred due to pollution that results from a well out of control event, legal liability for pollution-related bodily injury or property damage arising from a well out of control event, re-drill and other extra expense incurred to restore the well to its pre-loss condition that the Operator becomes legally obligated to pay. The Minimum limits required are \$25,000,000 Per Occurrence/Loss and \$25,000,000 Policy Aggregate. If the coverage is written on a claims-made basis, the Operator will warrant that any retroactive date applicable to coverage under the policy precedes the effective date of any Special Review approval; and that continuous coverage will be maintained until final reclamation obligations are completed to the County's satisfaction. The County shall be named as an additional insured for ongoing operations and completed operations.
- h. **Waiver of Subrogation.** Operator will waive and cause its insurers to waive for the benefit of the County any right of recovery or subrogation which the insurer may have or acquire against the County or any of its affiliates, or its or their employees, officers or directors for payments made or to be made under such policies.
- i. **Additional Insured.** Boulder County must be named as an additional insured for the General Liability, Umbrella/Excess Coverage and Pollution Liability policies listed above. Additional insured shall be endorsed to the policy. Additional Insured wording shall be as follows:
County of Boulder, State of Colorado, a body corporate and politic, is named as an Additional Insured.

~~g.i.~~ **Contractors.** Operator shall require adequate insurance of its contractors and subcontractors. ~~Operator agrees that it shall~~ Operators will be responsible for any and all damage or loss suffered by the County as a result of negligence the work being performed by Operator or any subcontractor with these requirements as described in this Article.

- 6. **Financial Fitness and Assurances.** Applicant will be required to provide adequate financial assurances to guarantee performance of all conditions of approval attached to any Special Review approval for the lifetime of the oil and gas facility. With the Application, Applicant will submit a description of the type(s) of financial assurances it expects to provide to meet those requirements. The type and amount of financial assurances provided will be determined by the County with any Special Review approval.
- B. **Site and Area Information.** Applicant must include maps that meet the following criteria:
 - 1. All maps must be at a scale which best conveys the conceptual aspects of the plan, include written scale, graphic scale, and north arrow (designated as true north), and allow for effective public presentation. All maps and plans must include the date of preparation and revision box.
 - 2. **Topography.** A map of the existing and proposed topography at five-foot intervals to portray the direction and slope of the parcel(s) where the oil and gas facilities are proposed to be located.
 - 3. **Existing Dwellings and Structures.** A map of the location of all existing Dwellings and other structures and improvements within one mile from the parcel(s) on which the proposed oil and gas facility will be located. Dwellings must be specifically identified. This map must depict any setbacks required by this Article.
 - 4. **Existing Roads.** A map depicting all existing roads (designating public and private roads) near and surrounding the proposed oil and gas facilities.
 - 5. **Existing or Pending Oil and Gas Facilities.**
 - a. A map showing the location of all producing, shut-in, temporarily abandoned, dry and abandoned or plugged and abandoned wells, and any other oil and gas facilities and operations for which permits are pending with applicable agencies, on or within one mile of the parcel(s) where the proposed oil and gas facilities will be located and within one mile of either side of the full length of each proposed wellbore.
 - b. A map of existing oil, gas, and water pipelines on or within one mile of the parcel(s) where the proposed oil and gas facilities will be located, including information on the age, location, depth, diameter, thickness, typical and maximum operating pressures, the nature of the material carried in the pipes and the estimated worst-case liquid spill volumes.
 - 6. **Water Wells.** A map of any domestic or commercial water wells or irrigation wells within one mile of the parcel or parcels on which the proposed oil and gas facilities will be located and within one mile of either side of the full length of each proposed wellbore.

7. Surrounding Land ~~Uses~~Use Patterns. Identification of all ~~land~~existing activities and uses on surrounding lands (e.g., agricultural activities, residential, recreational, commercial or businesses) within one mile, or as otherwise determined, of the parcel(s) where the oil and gas facilities are proposed to be located.
 8. Educational Facilities and Child Care Centers. A map of educational facilities and licensed Child Care Centers within one mile of the parcel(s) on which the proposed oil and gas facilities will be located. This map must include the distances between the proposed oil and gas facility and the Educational Facilities and licensed Child Care Centers. This map must depict any setbacks required by this Article.
 9. Agricultural Lands. A map of the agricultural lands on and within one mile of the parcel(s) on which the oil and gas facilities are proposed to be located, including but not limited to agricultural lands of national, statewide, or local importance as identified in the Boulder County Comprehensive Plan; identification of the specific agricultural uses on the parcel(s) and their status; and the existence of irrigation and other agricultural infrastructure.
 10. Water Bodies; Riparian Areas; Wetlands; Ditches. A map depicting all surface water bodies including, but not limited to, lakes, streams, wetlands or aquatic habitat, riparian areas, and riparian corridors identified in the Boulder County Comprehensive Plan or otherwise found on or within one mile of the parcel(s) on which the proposed oil and gas facilities will be located, and within one mile of either side of the full length of each proposed wellbore. The map must also depict irrigation ditches and reservoirs as identified and mapped on the Boulder County's Ditch and Reservoir Directory and the St. Vrain and Left Hand Water Conservation District Ditch and Reservoir Directory.
 11. Natural Resources. A map of all significant natural ecosystems or environmental features, significant natural communities, rare plant areas, high biodiversity areas, natural landmarks, and natural areas, as identified in the Boulder County Comprehensive Plan, found from other sources, or otherwise identified on or, within one mile of the parcel(s) on which the oil and gas facilities are proposed to be located.
 12. Existing vegetation. An inventory of the vegetation (including its quality) at the site of the proposed oil and gas facilities.
 13. Wildlife. ~~An inventory of the wildlife species and population numbers on or within one mile of the parcel(s) on which the oil and gas facilities are proposed to be located, including state or federally designated threatened or endangered species, species of special concern as defined by Colorado Parks and Wildlife, or other types of species making use of the area.~~ A map of critical wildlife habitat and wildlife migration corridors or routes as identified by the Boulder County Comprehensive Plan and Colorado Parks and Wildlife on and within one mile of the parcel(s) on which the oil and gas facilities are proposed to be located.
 14. Natural and Geologic Hazards. A map of all natural and geologic hazard and constraint areas as identified in the Boulder County Comprehensive Plan or using the best available information on or within one mile of the parcel(s) on which the proposed oil and gas facilities will be located and within one mile of either side of the full length of each proposed wellbore. Natural hazards may include, without limitation, expansive soils or claystone, subsiding soils, soil creep areas, or questionable soils where the safe-sustaining power of the soils is in doubt; landslides, mudslides, mudfalls, debris fans, unstable slopes, and rockfalls.
 15. Floodplain and Floodway. A map of all floodplains and floodways, including both the FEMA and Boulder County Floodplains as delineated by the most recent Official Boulder County Floodplain Map defined in Article 4-400, on or within one mile of the parcel(s) on which the proposed oil and gas facilities will be located.
 16. Recreational Activity; Trails; Bikeways. A map and identification of active and passive recreational activity areas, such as public trails, publicly accessible open space, bike paths, and commonly used bike travel ways within one mile of the parcel(s) where the oil and gas facilities are proposed to be located.
 17. Open Space. A map of public open space or lands with conservation easements on or within one mile of the parcel(s) on which the proposed oil and gas facilities will be located.
 18. Site Selection Rationale. Maps and a narrative explaining the reasons the Applicant chose the proposed site(s) for the oil and gas facilities or operations with respect to other possible locations.
 19. Ozone Exceedance. A report of the number of ozone exceedances as measured at any and all CDPHE monitoring stations in Boulder County and the amount by which the 2015 National Ambient Air Quality Standards of 70 parts per billion under the Clean Air Act were exceeded. The report should include all data for the preceding three-year period.
- C. Proposed Development Information.

1. **Facility Layout.** A facility layout diagram, including: construction and operations layout drawings; location construction and operations cross-section plots including location and finish grades; operations facility layout drawings; the location of equipment such as wellheads, pumping units, tanks, treaters, staging and storage areas; the location of access roads and ingress and egress to and from public roads; structures such as sound walls; location, height and materials for all fences; temporary workspaces and permanent areas of disturbance for all phases of development; fencing; and an equipment list.
2. **Wellbore Risk analysis.** A copy of the anti-collision evaluation for all proposed wells conducted for or under the same terms as required in COGCC Rules.
3. **Area of Disturbance.** A map and dimensions of the proposed oil and gas facilities, indicating both temporary and permanent disturbance areas, in square feet and acres.
4. **Roads and Road Improvements.** A map of proposed new roads and improvements to existing roads that will be necessary for the proposed oil and gas facilities, as well as identification of the road surface planned for each road or road improvement.
5. **Pipeline Plan.**
 - a. The specific location and route of each flowline, and fresh, produced, or waste water pipeline and any other transport pipeline necessary for the oil and gas facilities and operations, through the lifetime of the oil and gas facilities and operations, and their distances from: existing or proposed residential, commercial, or industrial buildings; places of public assembly; surface water bodies; natural resources identified under 12-900(B)(11); geologic hazards, agricultural lands; and public or private roads;
 - b. The size, operating pressure, material, and locations of each line and what materials they will carry;
 - c. Whether pipelines will be co-located with proposed or existing lines; and
 - d. Identification of all pipeline segments that will be constructed by boring and the location of the boring operation.
6. **Grading and Drainage Plan.** A plan and information showing location and typical cross-section of all existing and proposed earthwork on the parcel(s) on which the oil and gas facilities are proposed to be located, including earthwork calculations, historic drainage patterns and flow rates, mitigation measures to compensate for anticipated drainage impacts, and geotechnical soil reports. The best available information should be used to identify and evaluate drainage impacts, including without limitation the Boulder County Storm Drainage Criteria Manual. The plan must be certified by a Colorado registered professional engineer.
7. **Landscaping and Screening Plan.** A plan denoting the intended landscaping and visual screening on the parcel(s) on which the oil and gas facilities are proposed to be located; an irrigation plan may be required where visual buffering is proposed to be accomplished with vegetation.
8. **Weed Control Plan.** A Weed Control Plan identifying what County listed noxious weeds are known to be on the parcel(s) on which the oil and gas facilities are proposed to be located, their location, and the proposed method of weed control. This plan must also include a strategy to prevent and manage the growth of noxious weeds during oil and gas operations and reclamation.
9. **Dust Suppression Plan.** A plan detailing how the Applicant will prevent excessive dust escaping from the oil and gas facility site(s) and all associated roads; a plan for preventing fugitive dust, sand, or silica materials escaping from any oil and gas operation.
10. **Lighting Plan and Photometric Study.** A plan indicating the location of all outdoor lighting on the site and structures, including cut sheets (manufacturer's specifications with picture or diagram) of all proposed fixtures. The plan should include the location and type of any emergency lighting and description of situations in which it will be used. A photometric study conducted by an independent consultant to measure the lumens emitted by the oil and gas facilities or operations evaluate lighting impact on surrounding properties must also be included as part of the plan.
11. **Operational Plan.** A plan describing in detail the proposed oil and gas operations including the method, schedule, and duration of time for drilling, completion, production, and decommissioning.
12. **Electrification Plan.** A plan identifying all sources of electricity that will be brought to or used at the proposed oil and gas location during all phases, including drilling, completion, and operations.
13. **Revegetation and Reclamation Plan.** A plan illustrating how all disturbed [areas](#) will be revegetated and reclaimed, including areas disturbed during flowline abandonment. The plan will include timing, methods, materials to be used, including any proposed soil amendments, and procedures for ensuring successful revegetation, including an on-going maintenance plan that ensures successful establishment of vegetation and weed control.

14. Worker Training and Records.

a. ~~Written~~ ~~All workers at oil and gas facilities and involved with oil and gas operations shall have any applicable nationally recognized certifications and training for the work they are performing. This includes, but is not limited to, Hazard Communications Training, Hazardous Waste Operations Certifications, heavy equipment operator training, occupational safety and health training, etc.~~

15.14. Upon request from the County, the Operator shall supply the County written procedures detailing employee training requirements and training records.

D. Assessments, Studies, and Plans by Outside Experts. ~~Any independent~~ Independent experts, engineers or consultants ~~must~~ referenced in this section will be retained by the Applicant and ~~are~~ be subject to approval by Boulder County.

1. Air Quality.

- a. Existing emissions. An independent expert's inventory of methane, VOCs, NO_x, CO₂ and particulate emissions for all oil and gas facilities and operations in Boulder County owned or operated by the Applicant for the calendar year prior to registration or renewal.
- b. Air Quality Modeling. A qualified, independent modeling study that considers all relevant environmental and atmospheric conditions, and includes:
 - i. Assesses the existing air quality at the proposed site;
 - ii. Predicts the anticipated emissions (including methane, VOCs, NO_x, CO₂, and particulate emissions) from the proposed oil and gas facilities and operations, assuming use of and identifying all emissions control equipment and processes intended for use at the oil and gas facilities; and
 - iii. Models the impacts on air quality from the proposed oil and gas facilities and operations over their lifetime, including the compounding effects of climate change on ozone and particulate pollution in the county and taking into account and identifying all relevant factors including natural conditions and other air quality impacts from any existing or foreseeable source.

2. Baseline Soil Conditions. An independent expert's report detailing the soil conditions on the parcel(s) on which the proposed oil and gas facilities will be located. The report will address the NRCS classification of the soils, the organic and inorganic characteristics of the soil, and any existing contamination or sensitive soil features existing on the site.

3. Traffic and Road Use Plan.

- a. A Transportation Impact Study, as defined in the Boulder County Multimodal Transportation Standards, covering all areas affected by the proposed oil and gas facilities or operations and prepared by a Colorado registered professional engineer.
- b. A map indicating proposed trip routes for all traffic serving the oil and gas operation during all phases of well development and operations, for the lifetime of the oil and gas facilities and operations.
- c. For each segment of proposed traffic routes in Boulder County, the types, sizes, weight, number of axles, volumes, and frequencies (daily, weekly, total) and timing (times of day) of all vehicles to be used during all phases of the proposed oil and gas operation.
- d. The intended measures the Applicant will take to ensure safety, maintenance of road condition, and the quality of life experience of other users of the County transportation system, adjacent residents, and affected property owners, including without limitation:
 - i. Operational measures to minimize impacts to the public including, but not limited to, time of day, time of week, vehicle fuel and emissions reduction technology, noise minimization, and traffic control safety measures;
 - ii. Maintenance practices on the proposed route, including without limitation, grading of unpaved roads, dust suppression, vehicle cleaning necessary to minimize re-entrained dust from adjacent roads, snow and ice management, sweeping of paved roads/shoulders, pothole patching, repaving, crack sealing, and chip sealing necessary to maintain an adequate surface of paved roads along the proposed route; and
 - iii. Any necessary physical infrastructure improvements to ensure public safety for all modes of travel including non-motorized modes along travel routes to and from the site.

4. Agriculture. An independent expert's report identifying the anticipated impacts of the proposed oil and gas facilities or operations on the current agricultural uses and the existing productivity of the lands where the oil and gas facilities and operations are proposed.

5. Wildlife. An independent expert's report identifying the wildlife species and population numbers on or within one mile of the parcel(s) on which the oil and gas facilities are proposed to be located, including

state or federally designated threatened or endangered species, species of special concern as defined by Colorado Parks and Wildlife, or other types of species making use of the area and identifying the anticipated impacts of the proposed oil and gas facilities and operations on wildlife and wildlife habitat and recommending measures for avoiding or minimizing such impacts.

6. Natural Resources. An independent expert's report identifying the anticipated impacts of the proposed oil and gas facilities and operations on the resources identified under 12-900(B)(11) and recommendations for avoiding or minimizing such impacts.
7. Water Quantity, Source and Use.
 - a. An estimate of the amount of water needed for all phases of the oil and gas operation.
 - b. The source of water intended for use by the proposed oil and gas facility or operation.
 - i. A list of all available sources of water for the proposed oil and gas operations, and if multiple sources are available, analysis of which source is least detrimental to the environment.
 - c. Impacts of Water Use. An independent expert's assessment of the impacts of the proposed use of water described in subsections (a) and (b) above. Impacts to, at a minimum, downstream users, groundwater users, agricultural lands and users, terrestrial and aquatic wildlife, plant communities, and recreation must be considered.
 - d. Water Management Plan. An independent expert's recommendation of measures that will avoid or minimize the impacts identified in subsection (c) above and address the water use standards in Section 12-1000.
 - e. Produced Water. An estimate of the amount of produced water and other wastewater that will be generated by the proposed oil and gas operations, including a description and evaluation of potential flowback and produced water volume reduction options through recycling, reuse or other beneficial uses and the rationale for the methods to be employed.
 - i. Plans for recycling or reusing water used or produced by the oil and gas operations.
8. Water Quality.
 - a. Testing of existing conditions. A qualified, independent expert's assessment of existing water quality conditions on and adjacent to the parcel(s) where the oil and gas facilities will be located based on testing as follows.
 - i. Identification of and offers to owners to sample all domestic water wells and water sources located within one mile of the parcel or parcels on which the oil and gas facilities are proposed to be located and within one-half mile of either side of the full length of each proposed wellbore. For all water wells and water sources for which the Applicant is given permission:
 1. Initial collection and testing of baseline samples from available water sources within 12 months prior to the commencement of drilling a well, or within 12 months prior to the re-stimulation of an existing well for which no samples were collected and tested during the previous 12 months;
 2. Analytical monitoring. All sampling shall be performed by the Applicant according to the specified methods in 40 C.F.R. Part 136, including sample containers, preservation methods, and holding time limits, for the analytes listed in Table 1 below; and
 3. GPS coordinates, at sub-meter resolution, for all water wells and water sources tested.
 - ii. An Operator may rely on existing sampling data collected from water sources within the radius described above, provided the data was collected within the previous 12 months, the data includes the constituents listed in Table 1, and there has been no oil and gas activity within a one-mile radius in the time between the original sampling and the present.
 - iii. If the Operator is unable to locate and obtain permission from the owner of a water source to be tested, the Operator must advise the Director that the Operator could not obtain access to the water source from the surface owner.
 - iv. The Operator will submit a monitoring report to the Director with the Application, including reporting on damaged or unsanitary water well conditions; existing, adjacent potential pollution sources; water odor; water color; presence of sediment; bubbles and effervescence; and the existence and amount of any Table 1 analytes found. Copies of the report will be provided to the COGCC and the water source owners within 10 days after the Operator's receipt of the report.
 - v. If sampling shows water contamination, additional measures may be required including the following:
 1. If free gas or a dissolved methane concentration level greater than one milligram per liter

- (mg/l) is detected in a water source, determination of the gas type using gas compositional analysis and stable isotope analysis of the methane (carbon and hydrogen);
2. If the test results indicate thermogenic or a mixture of thermogenic and biogenic gas, an action plan to determine the source of the gas; or
 3. Additional reporting to Boulder County Public Health.
- b. Modeling of Impacts. An independent expert's modeling of the water quality impacts on any water bodies and groundwater within one mile, or as otherwise determined, of the oil and gas facilities and operations.
 - c. Stormwater Quality Control. A plan for establishing compliance with the stormwater management provisions of Section 12-1000(DDEE), Boulder County's Illicit Stormwater Discharge Ordinance, the Stormwater Quality Control provisions of Section 7-904, and with all water quality or stormwater quality control permits obtained from the County or any other agency. With reference to such standards, the plan must include:
 - i. Containment of pollutants;
 - ii. A list of the control measures that will be employed to prevent illicit or inadvertent discharges of contaminated stormwater, which may include containment impoundments, energy dissipators, sediment traps, check dams, culverts, and level spreaders or similar devices;
 - iii. Spill notification and response plans;
 - iv. A non-radioactive means of tracing fracking fluid migration from the oil and gas operations, such as identifying the isotopic fingerprint of the Operator's fracking flowback fluids, for use in tracing any subsequent water contamination; and
 - v. The timing and means of Applicant providing the County with the information it provides to the COGCC ensuring compliance with the water quality protection standards contained in COGCC rules and associated forms.
9. Emergency Preparedness Plan. The emergency preparedness plan must consist of at least the following information:
- a. Name, address and phone number, including 24-hour emergency numbers for at least 2 persons located in or near Boulder County who are responsible for emergency field operations. The Operator is responsible for ensuring that at least one of these emergency contacts can be on the site of any emergency within 15 minutes.
 - b. Protocols for notification of emergency response services and the County, including contact names and numbers for each such agency, for use in reporting any incident causing or threatening to cause personal injury or property damage. Emergency response must be notified immediately upon the imminent threat or occurrence of such incidents; the County must be notified as quickly thereafter as practicable and in no instance more than 24 hours later.
 - c. An as-built facilities map in a format suitable for input into the County's GIS system depicting the locations and type of above and below ground facilities including sizes and depths below grade of all onsite and offsite oil and gas gathering and transmission lines and associated equipment, isolation valves, surface operations and their functions. The as-built map must be submitted within 30 days of the ready-for-service date.
 - d. Transportation routes to and from oil and gas facilities for emergency response and management purposes, including at least 2 evacuation routes and health care facilities that would be used.
 - e. Detailed information addressing each potential emergency that may be associated with the operation. This may include any or all of the following: well integrity issues; explosions; fires; gas, oil or water pipeline leaks or ruptures; hydrogen sulfide or other toxic or explosive gas emissions; and hazardous material vehicle accidents or spills. This may also include external hazards to the site such as earthquakes, lightning, floods, high winds, tornadoes, terrorism, vandalism, or wildfire.
 - f. The threshold or triggers constituting an emergency must be identified.
 - g. The plan must include a provision that any spill outside of the containment area or that has the potential to leave the facility or to threaten a water body or groundwater must be reported to the emergency dispatch and the Director immediately, and in no case more than 4 hours after such spill is discovered, in addition to all necessary reporting to state agencies.
 - h. Project-specific emergency preparedness plans are required for any project that involves drilling or penetrating through known zones of hydrogen sulfide gas.
 - i. The plan must include a provision that obligates the Operator to reimburse the appropriate emergency

- response service providers for costs incurred in connection with any emergency. The appropriate emergency response service provider may specify alternative methods for reimbursement of its services. If requested by the emergency response agency, Operator will include a provision in the plan that addresses regular training exercises.
- j. Detailed information on safety management showing that the Operator has adequate personnel, ongoing safety training of all on-site personnel, safety supplies, and funding to implement the emergency response plan immediately at all times during construction and operations.
 - k. As applicable, the plan must include provisions that obligate the Operator to keep onsite and make immediately available to any emergency responders the identification and corresponding Safety Data Sheets (SDS) of all products used, stored or transported to the site, including fracking fluids. Operators must timely provide SDS to the public in response to a written request. In cases of spills or other emergency events, the plan must include provisions establishing a notification process to emergency responders of potential products they may encounter, including the products used in the hydraulic fracturing fluids.
 - l. The plan must include a provision establishing a process by which the Operator periodically engages with the surrounding residents and landowners to educate them on the risks of the onsite operations, explain emergency procedures, engage in evacuation exercises, and to establish a process for surrounding neighbors to communicate with the Operator.
 - m. The plan must include a process by which the community can submit concerns and complaints and be assured of responses.
10. Noise Plan.
- a. Monitoring Plan. An independent expert's plan for the creation of the Baseline Report and noise modeling, including the proposed receptor locations, proposed test periods, and proposed times of year for monitoring and the software and methodology for modeling. This plan must be approved by the County prior to the creation of a Baseline Report or Noise Modeling. This plan must demonstrate that the Baseline Reports and Noise Modeling will comply with the American National Standards Institute S 1.4: Specifications for Sound Level Meters.
 - b. Baseline Report. Report of dBA and dBC ambient noise levels over 24-hour test periods for at least 3 consecutive weekdays and 3 consecutive weekend periods at the site ~~at different and~~ in different weather conditions, according to the Monitoring Plan. Baseline Reports must include wind speed, direction, rainfall data, season conducted, and any other relevant conditions.
 - c. Noise Modeling. Using an industry-recognized noise modeling software, modeling of expected dBA and dBC noise levels from the proposed oil and gas facilities and operations during all phases of development and operation, assuming use of and identifying all noise-mitigating equipment and measures intended for use at the proposed oil and gas facilities or operations. All Noise Modeling must include a list of all noise sources, reference noise data used in the model for each source, noise attenuation specifications for any proposed noise walls, a scaled map showing predicted noise levels.
 - d. Complaint procedure. A plan for responding to noise complaints and communicating the results to the complainant and to the County in a timely manner.
11. Odor Plan. A list of all odor reduction measures that will be used to address the predicted odors from the proposed oil and gas facilities and operations and meet the standards in 12-1000(P). Identification of all natural features (e.g., topography, prevailing wind patterns, vegetation) that will aggravate or mitigate odor impacts on the areas within 2000 feet of the parcel(s) where the oil and gas facilities are proposed to be located. A plan for timely responding to odor complaints and communicating the results to the complainant and to the County.
12. Cultural and Historical Resources Survey. A cultural, historical, and archeological survey of the parcel(s) where the oil and gas facilities or operations are proposed to be located done in consultation with and as required by History Colorado.
13. Flood Protection and Mitigation Plan. If the proposed oil and gas facilities or operations are within a floodplain, an independent engineer's plan that describes how flood protection measures and flood response actions, such as remote shut-in procedures and, anchoring will be implemented.
14. Waste.
- a. Projected waste. An independent expert's assessment projecting the types and amounts of waste (including construction waste, drilling mud, fracking fluids, exploration and production waste) that will be generated by the oil and gas facilities or operations throughout their lifetimes. The assessment will

include description of any sources of technically enhanced naturally occurring radioactive material used in or generated by the oil and gas operations and facilities.

- b. Waste Management Plan. Plan for disposal of all waste generated by the oil and gas facilities or operations, including use of truck or pipeline transport with details of anticipated truck trips (routes, number of trips, timing of trips). The plan will identify whether waste materials will be stored on site and, if so, how such storage will avoid adverse impacts to the oil and gas facility parcel(s), surrounding lands, water and natural resources, air quality, and public health, safety, and welfare. The plan must specify whether on-site storage of drilling mud is contemplated and, if so, how the Applicant will eliminate odors leaving the site.
15. Existing Mines Risk Study. An independent engineer's study and assessment of the degree and type of risks posed by interaction of the proposed oil and gas facilities or operations with existing or former mining operations, such as subsurface features resulting from other mineral mining activities within one mile of the proposed oil and gas facilities and within one mile of either side of the full length of each proposed wellbore.

12-1000 Special Review Standards

All Special Review Applications for new oil and gas development will be reviewed according to the following standards to ensure the protection of public health, safety, and welfare, the environment, and wildlife resources. The Board will determine whether the proposed oil and gas facility or operation, individually and in light of the cumulative impacts of surrounding land uses, complies with these Special Review standards. A proposal meets the standards if it will, with respect to each subject area below, either avoid adverse impacts to public health, safety, and welfare, the environment and wildlife resources or, through imposition of conditions of approval, sufficiently minimize, and mitigate unavoidable impacts. In no case will the Board approve oil and gas facilities or operations with impacts that will endanger public health, safety, and welfare, the environment or wildlife.

The Board, considering the advice of the Director, has determined the following standards to be generally applicable based on the nature and extent of oil and gas development. The Applicant bears the burden of proving that the proposed oil and gas facilities and oil and gas operations will meet the standards. When two or more of the standards listed below conflict, the Board, based upon advice of the Director, will evaluate the applicability and importance of each of the conflicting standards under the facts of the specific Application ~~and make a reasonable attempt to balance the conflicting standards in reaching to reach~~ a decision.

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

- A. Air Quality. Oil and gas facilities and operations will sufficiently avoid, minimize, and mitigate impacts to air quality.
 1. Compliance with National Ambient Air Quality Standards. Oil and gas facilities and operations will not compromise the attainment of ozone standards for the Denver Metro/North Front Range ozone nonattainment area as established by the US Environmental Protection Agency. Oil and gas facilities and operations will not contribute particulate matter to the air in a manner that endangers public health.
 2. Methane. Oil and gas facilities and operations will sufficiently avoid, minimize, and mitigate emissions or release of methane.
- B. Water Use. Use of the proposed water from the proposed supply will not injure water users, groundwater users, water delivery systems, agricultural lands and operations, recreation water body health, terrestrial and aquatic wildlife, and viability, plant communities, wetlands, and wildlife.
- C. Agricultural Land. Oil and gas facilities and operations will sufficiently avoid, minimize, and mitigate loss of and adverse impacts to: agricultural land, including farm or ranch lands and soils; agricultural operations,

including crop and livestock production; irrigation systems and schedules; and improvements including fencing.

- D. Cultural and Historic Resources. Oil and gas facilities and operations will sufficiently avoid, minimize, and mitigate impacts to or loss of cultural or historic or archaeological resources, resources eligible for County landmarking, or sites included in the National Historic Register.
- E. Emergency Prevention and Response. Oil and gas facilities and operations will sufficiently avoid, minimize, and mitigate risks of and appropriately prepare for emergency situations such as explosions, fires, gas, oil or water pipeline leaks or ruptures, hydrogen sulfide or other toxic gas or fluid emissions, and hazardous material vehicle accidents or spills. Oil and gas operations will ensure that, in the event of an emergency, adequate practices and procedures are in place to protect public health and safety and repair damage caused by emergencies.
- F. Financial Fitness and Assurance. Oil and gas operations must not present a significant risk that public funds will be expended to protect the public, health, safety, and welfare in light of the financial viability of the Applicant. Applicants must demonstrate sufficient financial stability to operate the proposed oil and gas operations for the lifetime of the oil and gas operations. Applicants must provide forms of financial assurance sufficient to guarantee performance of all conditions of approval and obligations through the lifetime of the proposed oil and gas operations.
- G. Floodplains and Floodways. Above-ground oil and gas facilities are prohibited in floodways. Above-ground oil and gas facilities must be located outside a floodplain unless there is no way to avoid the floodplain, no other sites can be reasonably used, or if reasonably necessary to avoid significant adverse impacts to public health, safety, welfare or the environment. Oil and gas facilities and operations will sufficiently avoid, minimize, and mitigate flood risks.
- H. Drainage. The oil and gas facilities and operations will not alter historic drainage patterns and/or flow rates or shall include acceptable mitigation measures to compensate for anticipated drainage impacts. The best available information should be used to evaluate these impacts, including the Boulder County Storm Drainage Criteria Manual, hydrologic evaluations to determine peak flows, floodplain mapping studies, updated topographic data, Colorado Geologic Survey landslide, earth/debris flow data, and creek planning studies, as applicable.
- I. Dust. The oil and gas facilities and operations must use all practical measures or operating procedures necessary to minimize dust. Sources must prevent dust from leaving their property. No produced water or other process fluids shall be used for dust suppression.
- J. Geologic and Natural Hazards. Oil and gas facilities and operations will not be located in geologic or natural hazard areas as identified in the Boulder County Comprehensive Plan or through the Special Review process, unless there is no way to avoid the hazard area, no other sites can be reasonably used, or if reasonably necessary to avoid significant adverse impacts to public health, safety, welfare or the environment.
- K. Land Disturbance. The installation and operation of any oil and gas facilities must sufficiently avoid, minimize, and mitigate adverse impacts to the surface lands under and immediately surrounding all oil and gas operations and facilities. Considerations in applying this standard include, but are not limited to, alteration of the natural topography and existing vegetation, the scope of the proposed oil and gas facilities or operations, the amount of cut and fill, and run-off and erosion potential, and soil stability.
- L. Lighting. Lighting associated with oil and gas facilities or operations will sufficiently avoid, minimize, and mitigate adverse impacts on surrounding properties, livestock, and wildlife.
- M. Water Bodies; Riparian Areas; Wetlands. Oil and gas facilities or operations will sufficiently avoid, minimize, and mitigate adverse impacts to all surface water bodies including, but not limited to, irrigation ditches and reservoirs as identified and mapped on Boulder County's Ditch and Reservoir Directory and the St. Vrain and Left Hand Water Conservation District Ditch and Reservoir Directory, wetlands or aquatic habitat, riparian areas, and riparian corridors.
- N. Natural Resources. Oil and gas facilities and operations will sufficiently avoid, minimize, and mitigate adverse impacts to significant natural ecosystems or environmental features, significant natural communities, rare plant areas, high biodiversity areas, natural landmarks, and natural areas, as identified in the Boulder County Comprehensive Plan, other sources, or through the Special Review process.
- O. Noise.
 - 1. No oil and gas operation will create ~~any noise which causes that~~ unreasonably exceeds the existing ambient noise level when measured at the locations approved in the Monitoring Plan where the levels. Specific noise limitations will be assessed and imposed for each proposed oil and gas facility or operation-

is located to:

- a. ~~Exceed the ambient noise level by more than four dBA during daytime hours and more than three dBA during nighttime hours for general operations; and~~
- b. ~~Exceed the ambient dBA noise level by more than three decibels during flowback operations if necessary during nighttime hours.~~

- 2. In no instance may an oil and gas operation produce dBA noise exceeding [] dBA from 7 a.m. to 7 p.m. and [] dBA from 7 p.m. to 7 a.m. limits set by the Colorado Oil and Gas Conservation Commission.
- 3. In no instance may an oil and gas operation produce noise exceeding 60 dBC.
- P. Odor. No odor from the proposed oil and gas facility or oil and gas operations shall be detectable after dilution with 5 or more volumes of odor free air as measured at the property line of the oil and gas location.
- Q. Electrification. Operations will be electrified to the highest degree possible. Renewable energy is preferred.
- R. Pipelines. All flowlines and fresh, produced, or wastewater pipelines will be routed and constructed to sufficiently avoid, minimize, and mitigate adverse impacts to infrastructure and natural resources and to public health, safety, and welfare, the environment, and wildlife without compromising pipeline integrity and safety; any such lines constructed in County-owned right-of-way will also follow the procedures for and requirements of a utility construction permit from the Public Works Department. Pipelines crossing streams, ditches, or other water bodies must be bored underneath the water body, consistent with the Boulder County Stormwater Discharge Control Manual.
- S. Recreational Activity; Trails; Bikeways. Oil and gas facilities and operations must avoid adverse impacts to the quality and quantity of both active and passive recreational activities, trails, and bikeways.
- T. Revegetation and Reclamation. The Operator must fully revegetate and reclaim all areas of disturbance. Vegetation must be fully established to its pre-existing conditions pursuant to approved revegetation and reclamation plans.
- U. Safety. Oil and gas operations must be conducted in a manner to avoid risk of personal injury and property damage.
- V. Setback from Dwellings, Educational Facilities and Child Care Centers.
 - 1. A Well Pad at an oil and gas facility must be located a minimum of 2,000 feet from an existing Dwelling and related residential uses.
 - 2. A Well Pad at an oil and gas facility must be located a minimum of 2,000 feet from an Educational Facility or licensed Child Care Center;
- W. Scenic Attributes and Rural Character. Oil and gas facilities and operations will sufficiently avoid, minimize, and mitigate adverse impacts to the scenic attributes and rural character of the surrounding area. Temporary structures, such as sound walls, or buildings constructed to mitigate impacts of oil and gas development may be approved at heights greater than the maximum building heights for each zoning district.
- X. Soil. Oil and gas facilities and operations will sufficiently avoid, minimize, and mitigate adverse impacts to baseline soil conditions.
- Y. Surrounding Land Uses. Oil and gas facilities and operations must be sited in a manner that sufficiently avoids, minimizes, and mitigates adverse impacts to surrounding land uses. In applying this standard, separation from surrounding land uses will be considered the most effective measure to ensure compatibility between proposed oil and gas operations and existing land uses.
- Z. Transportation, Roads, and Access. Oil and gas facilities and operations must be designed and implemented to: support a multimodal transportation system; avoid adverse impacts to the County transportation system; avoid traffic hazards; minimize use of County-owned gravel roads; and ensure public safety and maintain quality of life.
- AA. Vibration. Oil and gas facilities and operations must not create vibrations significant enough or long enough in duration to cause adverse impacts to the health, safety, welfare, environment, and wildlife, or quality of life of surrounding residents and occupants or damage to existing structures.
- BB. Waste. All waste generated by oil and gas facilities and operations will be stored, transported and disposed of in a manner that avoids adverse impacts to public health, safety, and welfare, the environment, and wildlife. Injection wells and disposal wells are prohibited.
- CC. Water Quality. Oil and gas facilities and operations must sufficiently avoid, minimize, and mitigate adverse impacts to the availability and quality of surface water bodies and groundwater within Boulder County. -
- DD. Worker Training. All workers at oil and gas facilities and involved with oil and gas operations shall have

any applicable nationally recognized certifications and training for the work they are performing. This includes, but is not limited to, Hazard Communications Training, Hazardous Waste Operations Certifications, heavy equipment operator training, occupational safety and health training, etc.

~~DD.EE.~~ Stormwater Quality Control. All stormwater runoff occurring at an oil and gas facility must be controlled to prevent adverse impacts to surrounding natural resources, including wetlands and water bodies.

~~EE.FF.~~ Wildlife. Oil and gas facilities and operations will sufficiently avoid, minimize, and mitigate adverse impacts to wildlife, wildlife habitat and migration corridors as defined in the Boulder County Comprehensive Plan or identified on the site.

12-1100 Conditions of Approval

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

A. Location.

1. Adjustments to the locations of any or all proposed oil and gas facilities or operations, which may include but not be limited to consolidating, distributing, or re-locating facilities;
2. Sharing of existing infrastructure by multiple oil and gas operations, minimizing the installation of new facilities and avoiding additional disturbance to the environment, landowners and natural resources; or
3. Modification of proposed travel routes for some or all phases of the oil and gas operation.

B. Scope. Adjustments to the size and density of facilities that may include but not be limited to:

1. Reductions or limitations on the number of total wells;
2. Reductions or limitations on the number of wells per pad; or
3. Changes to the dimensions of the proposed facilities.

C. Timing and Phasing.

1. Separating the overall project into phases over a period of time;
2. Establishing the timeline for commencement and duration of all or some phases of oil and gas operations;
3. Establishing the times in which all or some phases of oil and gas operations are conducted with respect to weather, agricultural activities, wildlife needs and other seasonal concerns; or
4. Limitations on times of day and night in which operations are conducted.

D. Air Quality.

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

1. Compliance with the current, most protective air quality regulations and health-based standards, which may include regulations and standards set by the EPA, CDPHE, COGCC, CDC or other relevant authorities.
2. Continuous monitoring during all phases from pre-production through the end of production, which may monitor air quality at the oil and gas facilities, nearby properties, and other areas of concern.
3. A leak detection and repair program that may include:
 - a. Use of best available technology leak detection, such as infra-red cameras and hydrocarbon analyzers;
 - b. Regular on-site inspections at a frequency determined by the Director;
 - c. Immediate leak repair;
 - d. Reporting of monitoring and inspection results to the Director, who may make such reports available to the public;
 - e. Operator maintenance of all images and data obtained from leak detection devices for 10 years, to be made available to the Director upon request; and
 - f. Immediate reporting of all leaks detected to the Director;
4. Completion of wells using reduced emission completion practices.
5. Require closed loop pitless systems for containment and/or recycling of all drilling, completion, flowback and produced fluids.
6. Routine flaring is prohibited. In the event of an emergency, Operators may be required to shut-in the well

if the emergency lasts greater than 24 hours; routine maintenance does not constitute an emergency.

- a. Routine flaring is the flaring of natural gas during the normal course of oil and gas production for reasons other than safety and emergencies and other conditions outside of the control of the operator.
 - b. For any permitted flaring, manufacture test or other data demonstrating hydrocarbon destruction or control efficiency that complies with a design destruction efficiency of 98% or better. Proof that any flare, auto ignition system, recorder, vapor recovery device or other equipment used to meet the hydrocarbon destruction or control efficiency requirement is installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manuals. Electronic surveillance monitors to detect when pilot lights on control devices are extinguished
7. Venting is prohibited during all phases unless approved by the Director or required in situations where there is an immediate threat to public health, safety, and welfare, the environment, and wildlife.
 8. Require all pneumatics to be non-emitting pneumatic controllers.
 9. Zero-emission desiccant dehydrators or 98% control of hydrocarbon emissions from glycol dehydrators.
 10. Operator participation in Natural Gas STAR or other voluntary programs to encourage innovation in pollution control.
 11. Emission reduction measures in immediate response to posting of air quality action day advisories by CDPHE for the County area, including minimizing vehicle and engine idling, reducing truck and employee traffic, delaying vehicle refueling, suspending or delaying use of gas-powered ancillary equipment, postponing well maintenance and storage tank hydrocarbon liquid loadout, postponing construction and maintenance activities.
 12. Consolidation and centralization of product treatment and storage equipment and compression equipment.
 13. Use of a pressure-suitable separator and vapor recovery unit.
 14. Hydrocarbon control of 98% or better for crude oil, condensate, and produced water tanks.
 15. Require dry seals on centrifugal compressors.
 16. Routing of emissions from rod-packing and other components on reciprocating compressors to vapor collection systems.
 17. Control emissions by 98% during storage tank hydrocarbon liquids loadout (i.e. loading out liquids from storage tanks to trucks).
 18. Prohibit manual venting during well liquids unloading activities, use best management practices during liquids unloading activities, including the installation of artificial lift, and automated plunger lifts or other forms of artificial lift (98% or better hydrocarbon flare only).
 19. Reduction or elimination of emissions from flowline maintenance activities such as pigging, including routing emissions to a vapor collection system.
- E. Operations.
1. Requirement for use of pipelines to transport all gas and fluid materials, including oil, natural gas, fresh water, produced water, and waste products, to and from the oil and gas facilities.
 2. Delay of well completions until pipeline transport is in place for all hydrocarbon products and produced or wastewater.
 3. Limitations on on-site storage tanks.
 4. Restrictions on field maintenance of vehicles involving hazardous materials
 5. Requirement that vehicles are only refueled on impervious surfaces and never during storm events.

F. Inspections.

1. Operators will inspect all oil and gas facilities, including shut-in and temporarily abandoned facilities, as follows:
 - a. Soil sampling for contamination within the boundaries of existing facility pads annually;
 - b. Equipment-assisted inspection for emissions or releases, including use of best available technology (such as infrared cameras), at least every 30 days; and
 - c. Visual inspections for liquid leaks at least every 30 days.
2. Operators will report the date, methodology, subject, and results of all inspections to the County monthly.
3. Spills, leaks, and releases of any substance other than fresh water, including spills of produced water, oil, condensate, natural gas liquids, all spills outside of secondary containment, gas leaks, and E & P waste,

Exhibit A

must be reported to the County Local Governmental Designee immediately upon discovery and no later than 6 hours thereafter. When leaks, spills, or releases are discovered, by County or Operator inspection, the enforcement mechanisms and penalty provisions in 12-1400 and 12-1500 will apply.

4. Reporting. For spills or other releases meeting the Colorado reporting requirements pursuant to Section 25-8-601 (2), C.R.S., operators will adhere to all Colorado reporting requirements. If the County determines the spill or leak is reportable to any agency, the County may make such report.
5. Clean-up. Any leak, release, or spill will be cleaned up according to applicable state and federal laws.
6. Root Cause Analysis. A root cause analysis of any spill, leak, or release of any substance other than fresh water that resulted in serious bodily injury or fatality, serious environmental harm, was a Grade 1 gas leak as defined by the COGCC, or is otherwise requested by the Director must be submitted to the County within 30 days of the leak, spill, or release.

F.G. Water Supply.

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

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

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

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

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

Table 1. Water Quality Analytes

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

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

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

H.K. Spills, Leaks, and Releases.

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

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

H.M. Site Management.

1. Trash. Prohibition on burning of trash in association with an oil and gas operation per Section 25-7-128(5), C.R.S.
2. Removal of Non-permanent Equipment. Time limits for non-permanent equipment remaining on site.
3. Access Roads. Conditions to prevent run-off, erosion and other negative impacts to access roads and abutting lands.
4. On-site Inspector. Inspection, at Operator's expense, to monitor adherence to all provisions of this Article and conditions of permits and approvals.

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

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

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

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

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

H.S. Remote monitoring and control. Use of Supervisory Control and Data Acquisition or other remote monitoring

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

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

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

T.U. Noise.

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

U.V. Odor.

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

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

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

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

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

Z-AA. County Transportation Infrastructure.

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

AA-BB. Pipeline Conditions.

1. [Requirements for pipelines to be in place or imminently available prior to completion of any new well.](#)
- 1.2. Specific setbacks from features of concern.
- 2.3. Conditions on depth of cover and clearance distances from subsurface features or improvements.
- 3.4. Conditions for protection of trenches during construction.
- 4.5. Construction conditions related to protection of streams, rivers, irrigation ditches and wetlands.
- 5.6. As-built reporting, including the location (with GPS coordinates), materials and operating pressures of all flowlines and fresh, produced or wastewater pipelines and depicting the locations of other subsurface features or improvements crossed by such lines.
- 6.7. Leak detection system.
- 7.8. Inspection protocol, in addition to County inspections.
- 8.9. A risk-based engineering study by an independent engineer retained by the Applicant and subject to approval by the County prior to placement and construction of proposed pipelines.
- 9.10. Without compromising pipeline integrity and safety, Applicant may be required to share existing pipeline rights-of-way and consolidate new corridors for pipeline rights-of-way to minimize impact.

BB-CC. Flood Protection. Compliance with a County-approved flood mitigation plan; any additional conditions necessary to avoid, minimize, and mitigate risks of adverse impacts from oil and gas facilities or operations.**CC-DD.** Applications and Permits. The Applicant must obtain local, state and federal permits or approvals required for the operation and provide copies to the Director prior to any construction activities. In addition to Article 12 approval, Applicants may be required to obtain County permits including but not limited to Floodplain Development Permits, Grading Permits, Building or Construction Permits, Oversize/Overweight Permits, Stormwater Control Permits.**DD-EE.** Certification and Reporting. The Operator will submit to the Director copies of all reports related to oil and gas operations and oil and gas facilities made to any agency at the local, state or federal level within 30 days of their submission to the original recipient.**EE-FF.** Financial Assurances.

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

FF-GG. Re-assessment of Conditions. All conditions of approval may specify that the County may re-assess their effectiveness in meeting the standards of this Article after commencement of oil and gas operations.**GG-HH.** Representations of Record. Any approved Special Review Application is subject to all commitments of record, including verbal representations made by the Applicant at any public hearing and written commitments in the Application file, and without limitation must encompass compliance with all approved mitigation plans.

12-1200 Judicial Review

A final decision by the Board of County Commissioners on any matters in this Article 12 is subject to judicial review in

a court of competent jurisdiction under C.R.C.P. 106(a)(4).

12-1300 Procedures Following Approval of a Special Review Application

- A. Right to Enter. Each approved Special Review will contain the following statement: "Applicant consents to allow the County the right of inspection of this approved oil and gas facility and operation provided the County contacts the Operator with 4 hours prior notice of such inspection."
- B. Effect of the Approved Special Review. After approval of a Special Review Application by the Board and subject to compliance with any applicable conditions of approval, the Department will issue a permit for the proposed oil and gas operation.
 - 1. Following receipt of the permit, the Applicant must obtain any necessary building, grading, access, stormwater control, floodplain, or other County permits and, following the receipt of these additional permits and all necessary permits and permissions from other agencies or persons, is authorized to otherwise proceed with the proposed oil and gas operation.
 - 2. The approval of the Special Review Application under this Article does not result in the vesting of development rights, nor does it authorize the violation of any County or state regulations or preclude the County from refusing to issue any other permit or authorization if the plans and specifications do not comply with applicable County regulations.
- C. Duration of the Approved Special Review.
 - 1. ~~Commencement of operations within 2 years.~~ An approved Special Review Application will remain effective for a period of 2 calendar years following the date of the Board's approval resolution. ~~If the approved operation is not commenced within 2 calendar years, the permit will expire, and the Applicant will have to reapply for Special Review prior to commencing operations, unless otherwise extended by the Director.~~
 - 2. Expiration of approval to operate after 10 years. Unless renewed in a subsequent Special Review approval, all Special Review approvals under this Article 12 will expire 10 years after their effective date and operations must cease and final reclamation commence.
- D. Amendments and Modifications. Prior to changing or modifying a special use approved under this Article or any other existing oil and gas operation, an Operator must submit a written request for modification as specified under Article 4-603. Upon submission of such a request, the Director will proceed as specified in Article 4-603(A) to make a determination whether the modification is substantial, except that the Director will consider the additional criteria specified in this subsection. Unless approved in the original Special Review approval, the addition of new wells on an existing pad will be considered a substantial modification. Other changes will be considered substantial if they meet the criteria in 4-603(B) or significantly alter the nature, character, or extent of the land use impacts of the Special Review approval or will result in an increase in harmful emissions or adverse impacts on public health, safety, and welfare, the environment or wildlife, including as a result of cumulative impacts from the proposed modification in combination with existing land uses. Refracking of an existing well will be considered a substantial modification. A modification may not be considered a substantial modification if it results in a net decrease in hydrocarbon emissions or other net mitigation of existing or potential environmental impacts. Should the Applicant dispute the Director's determination that a proposed modification to a pre-existing oil and gas operation or facility is a substantial modification, the Applicant may appeal the Director's determination to the Board. The County will not process the Application during any appeal.
- E. Maintenance and Repair. If an Operator anticipates undertaking routine maintenance or making a repair to any existing or new oil and gas facility, the Operator must provide written notice to the Director as soon in advance of the maintenance or repair as practicable. For emergency repairs necessary to curtail or prevent threat of property damage or personal injury, if possible, the Operator must provide notice to the Director within 24 hours before commencement of the repair and otherwise as soon thereafter as possible. The notice must include a detailed description of the maintenance or repair. In response to the notice, the Director may approve the repair or maintenance, conditionally approve the repair or maintenance, or require that the Operator apply for a substantial modification determination. The Director may maintain a list of routine maintenance activities that an Operator may undertake without County review or approval.

12-1400 Inspections; Enforcement

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

or more of the following enforcement measures and remedies:

- A. **Right to Enter.** Any oil and gas facility may be inspected by the County at any time to ensure compliance with the requirements of County permits or the provisions of this Article 12. Unless urgent circumstances exist, the County will use best efforts to ensure that 4 hours prior notice is given to the Operator's contact person at the telephone number on file. County inspections will be coordinated with the Operator to ensure Operator presence onsite to the extent possible and to ensure the site visit is conducted in accordance with all applicable Operator safety requirements.
- B. **Records.** Operators will make available to the County at its request all records or reports required by the Colorado Department of Public Health and Environment, the COGCC, the Colorado Public Utilities Commission, the Occupational Safety and Health Administration, and the Pipeline and Hazardous Materials Safety Administration.
- C. **Violations.** Violations of any condition of approval, any provisions of 12-400, 12-500, 12-600, 12-700, will be subject to Section 12-1500.
- D. **Suit to Enjoin COGCC Rule Violation.** If the Director discovers a violation or threatened violation of Title 34, Article 60 of the Colorado Revised Statutes or any rule, regulation, or order made under that Article, the Director will notify the COGCC in writing. If the COGCC fails to bring suit to enjoin any actual or threatened violation, then the County Attorney may file an action on behalf of the Board seeking injunctive relief.
- E. **Falsification.** If the Director, in the course of administering any portion of this Article, learns that the Applicant, including any employee, officer, agent or representative of the Applicant has made a false representation of or omitted material facts the Application may be rejected or summarily denied or, if the Application has been approved, the approval may be revoked and the Director may report such information to the District Attorney for criminal prosecution.
- F. **Other Penalties.** In addition to or in lieu of civil fines, the County may exercise remedies for Operator violations including the following:
 1. Increased [operator or county](#) inspection frequency [at Operator's expense](#);
 2. Mandatory equipment upgrades;
 3. A requirement to conduct an audit of the systems or equipment involved in the violation(s);
 4. A requirement for increased reporting to the County;
 5. **Written Order Suspending the Approval.** As a result of either (i) emergency conditions, or (ii) three or more fines imposed for serious violations within 6 months, the Director may issue a written order to the Applicant (or the Applicant's owner, Operator, or agent) suspending the Special Review Approval. Upon receipt, the Applicant must cease all activities and operations immediately until the violation is remedied. ~~The Applicant may or~~ [The Applicant may or](#) appeal the order suspending approval to the Board of County Commissioners [within 14 days](#).
- G. **Other Enforcement Remedies.** In addition to the foregoing enforcement measures, Boulder County has the right to any and all other enforcement measures and remedies provided by law, including but not limited to seeking relief through the courts to enforce an approved Special Review, or to stop or abate any oil and gas operations occurring or about to occur without the requisite special use, required permits, or other County approvals. Nothing in this section shall limit the remedies available to the County for a violation of any provision of Article 12.

2-1500 Fines and Penalties

- A. **Fines for Violations.** An Operator who violates any condition of approval imposed for the oil and gas facility or operation or any provision of Section 12-400, 12-500, 12-600, or 12-700 will be subject to a civil penalty assessed by the Director.
- B. **Process.**
 1. **Identification of Violation.** If the Director has reasonable cause to believe that a violation has occurred, the Director will issue a Notice of Violation to the Operator. Each violation of an individual condition or Code provision will be considered a separate infraction. Each day that a violation remains will be considered a separate infraction.
 - a. **Contents of Notice of Violation:**
 - i. Provisions of this Article or conditions imposed on a permit that are violated;
 - ii. Short and plain statement of the facts alleged to constitute each violation;
 - iii. A statement that the Operator will be subject to fines as specified in this section; and

- iv. A demand that the violation be remedied.
2. Response. The Operator will have the time specified by the Director in the notice to respond to the Notice of Violation, unless an extension is requested in writing and granted by the Director. The Response must address each violation, including the cause of the violation and any corrective actions taken, and identify any other relevant facts.
3. Assessment of Fine.
 - a. Based on the Operator's response, if any is provided, and any other competent evidence, the Director will determine if a violation has occurred and, if so, the appropriate penalty to assess. Any fine imposed after consideration of the response will be measured with respect to the first date of discovery of the violation or the date the violation first occurred and continues until the violation has been remedied to the satisfaction of the Director.
 - b. If the Operator disputes the Director's determination that a violation occurred or the amount of any fine assessed, an appeal as specified in Section 12-1500(D) must be made within ~~40~~14 days of the determination. Any requirement to remedy the violation will not be stayed during the appeal period.
- C. Penalty Calculation. The Director has discretion to assess a civil penalty between \$300 and \$15,000 per violation per day, depending on the nature and severity of the violation, statutory authority, and ~~Application~~application of the additional factors listed in subsection (b) below.
 1. To evaluate the severity of the violation, the Director will consider the following:
 - a. Degree of threatened or actual impact to public health, safety, welfare, the environment or wildlife;
 - b. Existence, size, and proximity of potentially impacted livestock, wildlife, fish, soil, crops, water, and all other environmental resources;
 - c. Degree of threatened or actual damage to agricultural lands, public lands, private property, freshwater sources, public drinking water, natural resources, environmental features, or wildlife;
 - d. The size of the leak, release, or spill;
 - e. The violation resulted in a significant waste of oil and gas resources;
 - f. Toxicity of leak or spill;
 - g. Violation led to death or serious injury; and
 - h. Duration of the violation.
 2. In addition to considering the severity of the violation, the Director will consider the following:
 - a. Whether the same or similar violations have occurred at the location;
 - b. Whether other violations have occurred at the location in the previous 12 months;
 - c. The timeliness and adequacy of the Operator's corrective actions;
 - d. The degree the violation was outside of the violator's reasonable control and responsibility;
 - e. Whether the violator acted with gross negligence, or knowing and willful misconduct;
 - f. Whether the violator self-reported; and
 - g. Whether violator was cooperative with all agencies involved in working to mitigate the impacts of the violation.
- D. Appeal Hearing Before the Board of County Commissioners. If the Applicant files a written appeal with the Board of County Commissioners of the Director's determination within 10 days of receipt of the determination that a violation occurred or the imposition of any fine or penalty or a written order suspending special use approval, the Board will schedule a hearing on the appeal, of which the Applicant will receive reasonable prior notice. The Board, based on the evidence in the record, may reverse or confirm the Director's determination whether a violation occurred. In addition, based on the evidence in the record, the Board may reverse, confirm, or adjust any remedy or penalty imposed by the Director. The Board, in its discretion, may also give the Applicant additional time to correct the violation(s), or may specify other means of correcting the violation(s) at the Applicant's expense. The Board's determination is subject to judicial review as specified in Section 12-1200.

12-1600 Definitions

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

Abandonment. The permanent decommissioning of an oil and gas facility, including any single well or portion of pipeline.

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

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

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

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

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

Best Management Practices. Practices that are designed to prevent or reduce impacts caused by oil and gas facilities or operations to air, water, soil, or biological resources, and to minimize adverse impacts to public health, safety and welfare, including the environment and wildlife resources.

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

Closed Loop Drilling Process or System. A system consisting of steel tanks for mud mixing and storage and the use of solids removal equipment by some combination of shale shakers, mud cleaners and centrifuges to separate drill cutting solids from the mud stream. The solids are placed in containment provided on the site. A Closed Loop Drilling System does not include use of a Conventional Reserve Drilling Pit.

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

Comprehensive Plan. The Boulder County Comprehensive Plan, available at <https://www.bouldercounty.org/property-and-land/land-use/planning/boulder-county-comprehensive-plan/>.

Department. Boulder County Community Planning & Permitting Department.

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

Dwelling. See Article 18-137.

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

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

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

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

Groundwater. Subsurface waters in a zone of saturation.

NO_x. Nitrogen oxides. Ozone precursor pollutants.

Oil and Gas Facilities. The equipment and improvements used for the exploration, production, transportation, treatment, and/or storage of oil and gas and waste products, including: an individual well pad built with one or more wells and operated to produce liquid petroleum and/or natural gas, including associated equipment required for such production; flowlines and ancillary equipment including but not limited to drip stations, vent stations, pigging facilities, chemical injection stations and valve boxes; and temporary storage and construction staging yards in place for less than 6 months.

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

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

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

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

Recreation (active or passive). Active recreation means outdoor activities that require equipment or physical

exertion or both. Passive recreation means outdoor activities such as nature observation or photography that require a minimum of facilities or development.

Reduced Emissions Completion. A well completion following fracturing or refracturing where gas flowback that is otherwise vented is captured, cleaned, and routed to the gas flow line or collection system, re-injected into the well or another well, used as an onsite fuel source, or used for other useful purpose that a purchased fuel or raw material would serve, with no direct release to the atmosphere.

TPY. Tons per year.

VOC. Volatile organic compounds.

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

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

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

Well or Wellhead. An oil or gas well, a hole drilled for the purpose of producing oil or gas, a well into which fluids are injected, a stratigraphic well, a gas storage well, or a well used for the purpose of monitoring or observing a reservoir.

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

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OTHER PROVISIONS IN THE BOULDER COUNTY LAND USE CODE TO BE AMENDED AS A RESULT OF THE NEW ARTICLE 12 PROVISIONS

2-800 Boulder County Board of Adjustment

C. Duties and Responsibilities

1. The Board of Adjustment holds regular meetings to hear appeals of any order, requirement, decision, or determination made by the Land Use Director or County Engineer in administering or enforcing Article 4 related provisions (e.g. definitions in Article 18) of this Code, to hear appeals of the Director specified provisions of Article 12, and to consider certain variances from the requirements of Article 4 of this Code.
2. The Board of Adjustment does not have the authority to grant any variance:
 - a. from uses permitted in the zoning district;
 - b. from the minimum lot size required or maximum gross density allowed in any zoning district;
 - c. from any definition;
 - d. from the height or yard requirements which may be obtained, or have been denied, through the approval of a special use;
 - e. which authorizes a substantial modification of a planned unit development or special use approved by the Board of County Commissioners; ~~or~~
 - f. which will cause an increase in the base flood to occur; or
 - g. from any provision of Article 12.

Article 3-100 Approvals and Permits Necessary Prior to Development

B. Development Related Permits

1. Dependent on the specific nature of the activity, one or more of these permits will be required prior to undertaking development in the unincorporated areas of Boulder County.
 - d. ~~Special Review for Oil and Gas Facilities~~ and Operations: Administrative Review of oil and gas drilling and production facilities and operations. Applications for this review are available from the Land Use Department. See Article 12.

Article 4-404 Floodplain Development Permits

B. Uses Prohibited in Floodway

15. Above-ground oil and gas facilities and operations, as defined in Article ~~12-1400~~ 12-1600.

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4-508 Mining Uses

B. Oil and Gas Facilities and Operations and Seismic Testing

1. Definitions: See Article ~~12-1400~~ 12-1600
2. Districts Permitted: By special the applicable review process outlined in Article 12 for ~~oil and gas operations~~ in all districts. ~~(Article 12)~~

4-514 Utility and Public Services Uses

E. Gas and/or Hazardous Liquid Pipelines not subject to Article 12

1. Definition: Pipelines for the collection and transmission of natural gas or other hazardous liquids.
2. Districts Permitted: In all districts by Limited Impact Special Review, or review under Article 8 (areas and activities of state interest), as applicable. Gathering lines and flow lines which are part of new oil and gas development and which are located on the same parcel or parcels as the well head, pumping units, tanks and/or treaters will be subject to Development Plan Review under Article 12 of this Code.
3. Parking Requirements: None
4. Loading Requirements: None
5. Additional Provisions:
 - a. This use is not required to be located on a building lot, or comply with the minimum lot size requirement for the district in which it is located.
 - b. Flow lines, gathering lines, and transmission lines shall be buried and shall be sited a minimum of fifty (50) feet away from general residential, commercial, and industrial buildings, as well as the high-water mark of any surface water body. This distance shall be measured from the nearest edge of the pipeline. Pipelines and gathering lines that pass within 150 feet of general residential, commercial, and industrial buildings or the high water mark of any surface water body shall incorporate leak detection, secondary containment, or other mitigation, as appropriate.
 - c. To the maximum extent practicable, pipelines should be aligned with established roads in order to minimize surface impacts and reduce habitat fragmentation and disturbance.
 - d. To the maximum extent practicable, Applicants shall share existing pipeline rights-of-way and consolidate new corridors for pipeline rights-of-way to minimize surface impacts.
 - e. Applicants shall use boring technology or alternative director-approved most effective performance techniques and practices when crossing streams, rivers or irrigation ditches with a pipeline to minimize negative impacts to the channel, bank, and riparian areas.
 - f. During pipeline construction for trenches that are left open for more than five (5) days and are greater than five (5) feet in width, install wildlife crossovers and escape ramps where the trench crosses well-defined game trails and at a minimum of one-quarter (1/4) mile intervals where the trench parallels well-defined game trails.
 - g. The Department may require an Applicant for a pipeline to provide a risk-based engineering study for all or part of its proposed pipeline right of way that may require

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the implementation of more stringent construction or operation standards or space between the pipeline and other structures.

~~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. flowlines: segments of pipe from the wellhead downstream through the production facilities ending at: (i) in the case of gas lines, the gas metering equipment, or (ii) in the case of oil lines, the oil loading point or lease automated custody transfer unit;~~

~~b. gathering lines: pipelines and equipment that transports gas from a production facility, ordinarily commencing downstream of the final production separator at the inlet flange of the custody transfer meter, to a natural gas processing plant or transmission line or main, including valves, metering equipment, communication equipment, cathodic protection facilities, and pig launchers and receivers, but does not include dehydrators, treaters, tanks, separators, or compressors located downstream of the final production facilities and upstream of the natural gas processing plants, transmission lines, or main lines); and~~

~~c. intra-state transmission lines: pipelines within the State of Colorado and defined as transmission lines by the Colorado Public Utilities Commission in 4 C.C.R. 723-4:4901(ee) as amended(6).~~

~~2. Districts Permitted: In all districts by Special Review under Article 4, Article 8 (areas and activities of state interest), or Article 12 as applicable. Gathering lines, intra-state transmission lines and flowlines that are part of new oil and gas development and are located on the same parcel as a well head, pumping units, tanks and treaters will be subject to Special Review under Article 12 of this Code. Gathering lines and intra-state transmission lines that are not associated with new oil and gas development or are not located on the same parcel as a well head, pumping units, tanks and treaters and are not subject to Article 8 are subject to special review under this Article 4.~~

~~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.~~

~~c. The Applicant must submit copies of all necessary surface use agreements and proof of legal access to the site prior to the commencement of any construction activities.~~

~~d. Siting:~~

~~(i) Gathering lines, flowlines and intra-state transmission lines subject to Article 4 review shall, to the maximum extent practicable, be sited to avoid areas containing existing or proposed residential,~~

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commercial, or industrial buildings; places of public assembly; the high mark of any surface waterbody; and sensitive environmental features.

(ii) Such lines shall, to the maximum extent practicable, be sited to avoid areas that will impact county open space or impede road rights-of-way. Surface impacts and habitat fragmentation and disturbance must be minimized where such pipelines are permitted.

(iii) To the maximum extent practicable, without compromising pipeline integrity and safety, Applicants shall share existing pipeline rights-of-way and consolidate new corridors for pipeline rights-of-way to minimize surface impacts.

(iv) Setbacks from residential, commercial, or industrial buildings, places of public assembly and the highwater mark of any surface water body will be determined on a case-by-case basis in consideration of the size and type of the proposed line and features of the proposed site, but a Gas and/or Hazardous Liquid Pipeline subject to Article 4 Special Review must not be located closer than one hundred and fifty (150) feet from a residential, commercial, or industrial buildings; a place of public assembly; or a the high water mark of any surface water body except in extraordinary circumstances. All setback distances shall be measured from the nearest edge of the pipeline.

(v) To minimize negative impacts to the channel, bank, and riparian areas, when crossing streams, rivers or irrigation ditches, operators must use boring technology or alternative Director-approved most effective performance techniques and practices.

e. Construction.

(i) Flowlines, gathering lines, and intra-state transmission lines subject to this Article 4 shall be buried below the level of cultivation, and must be installed so that the cover between the top of the pipe and the ground level, road bed, river bottom, or underwater natural bottom is at least three (3) feet deep.

(ii) The Department may require an Applicant for a pipeline to provide a risk-based engineering study for all or part of its proposed pipeline right of way that may require the implementation of more stringent construction or operation standards or space between the pipeline and other structures.

(iii) During pipeline construction for trenches that are left open for more than five (5) days and are greater than five (5) feet in width, install wildlife crossovers and escape ramps where the trench crosses well-defined game trails and at a minimum of one-quarter (1/4) mile intervals where the trench parallels well-defined game trails.

(iv) All pipe installed in a ditch must be installed in a manner that minimizes the introduction of secondary stresses and the possibility of damage to the pipe.

(v) Gathering lines, flowlines and intra-state transmission lines installed underground must have at least twelve (12) inches of clearance between the outside of the pipe and the extremity of any other underground structure, except that for drainage tile the minimum clearance may be less than twelve (12) inches but not less than two (2) inches. Where twelve (12) inches of clearance is impracticable, the Director may approve a request by the operator to reduce the minimum clearance if adequate provisions are made for corrosion control.

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

~~(i) The total number of girth welds and the number nondestructively tested, including the number rejected and the disposition of each rejected weld.~~

~~(ii) The amount, location, and cover of each size of pipe installed.~~

~~(iii) The location of each crossing of another pipeline.~~

~~(iv) The location of each buried utility crossing.~~

~~(v) The location of each overhead crossing.~~

~~(vi) The location of each valve and corrosion test station.~~

~~(vii) Copies of all monitoring results and pipeline integrity test results for the past five years.~~

~~g. Inspection, Monitoring, Testing and Maintenance.~~

~~(i) Gathering lines, flowlines and intra-state transmission lines must include a leak detection system that includes pressure flow meters, flow balancing, and a computer alarm and communication system in the event of a suspected leak, unless, upon Applicant's request, the Director determines that an equivalent or better, commercially available technology appropriate to the line and the site may be used instead. The leak detection system for gas pipelines must include pressure sensor equipment. The accuracy of the system must be defined once the system is established and tested in a manner approved by the Director. The Director may approve change in these requirements to address specific system operating requirements.~~

~~(ii) Flowlines subject to Article 4 special review and operating at fifteen (15) psig or higher must either be pressure tested at least each calendar year unless risk factors suggest more frequent testing, or use a continuous monitoring program including a continuous leak detection system as described above.~~

~~(iii) If a leak is detected, the operator must report the leak to the Director immediately, at a minimum within twenty-four (24) hours. The operator must notify the Director of any pipeline taken out of service due to a test failure immediately, at a minimum within twenty-four (24) hours.~~

~~(iv) Pipe clamps, wooden plugs, or screw-in plugs must not be used for any permanent repair.~~

~~(v) Operators must visually inspect all aboveground pipelines for leaks and corrosion on a monthly basis.~~

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

~~i. Where appropriate given the context of the application, in reviewing an application or formulating a condition of approval the Director may consult the pipeline guidelines published by the U.S. Department of Transportation Pipeline and Hazardous Materials Safety Administration for~~

Exhibit B

acceptable separation distances between residential, institutional, recreational, commercial, or industrial uses and hazardous operations, available at 24 C.F.R. Part 51.

I. Sewage or Water Transmission Lines

2. Districts Permitted: By review under the regulation of areas and activities of state interest or location and extent review in all districts, unless the line is serving an oil and gas ~~operations or facility~~ **facilities**, in which case special **the applicable** review under Article 12 in all districts.

Article 7-904 Stormwater Quality Management Permit Requirements

D. Requirements for Stormwater Quality Permit; Limited Permit exemptions

~~4. A Special Review permit authorizing oil and gas operations subject to a stormwater control plan approved under Article 12-700 or 12-701 of this Code shall be considered the equivalent of a County Engineer stormwater quality under this Article 7-904 and a separate permit application under this Article 7-904 for such operations shall not be required.~~

Article 18-124C COGCC

Colorado Oil and Gas Conservation Commission

~~18-180 OGCC Oil and Gas Conservation Commission of the State of Colorado.~~

Article 18-180 Oil and Gas Facilities

The equipment and improvements used for the exploration, production, transportation, treatment, and/or storage of oil and gas and waste products, including: an individual well pad built with one or more wells and operated to produce liquid petroleum and/or natural gas, including associated equipment required for such production; flowlines and ancillary equipment including but not limited to drip stations, vent stations, pigging facilities, chemical injection stations and valve boxes; and temporary storage and construction staging yards in place for less than six months.

Article 18-181 Oil and Gas Operations

~~Exploration for oil or gas, including but not limited to conventional oil and gas; the siting, drilling, deepening, recompletion, reworking, refracturing, closure or abandonment of an oil and gas well; production facility and operations including the installation of flow lines and gathering lines; construction, site preparation, reclamation and related activities associated with the development of oil and gas resources.~~

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

Exhibit C

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

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

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

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

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

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

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

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

Exhibit C

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

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

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

III. Provisions modified from the current Article 12

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

Exhibit C

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

Exhibit C

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

IV. Annotated Table of Contents of Revised Article 12

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

Exhibit C

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