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ORDINANCE 8514

AN EMERGENCY ORDINANCE AMENDING TITLE 9, "LAND USE CODE," B.R.C 1981, TO ADD CONDITIONAL USE STANDARDS FOR OIL AND GAS OPERATIONS, AMENDING TITLE 3, "REVENUE AND TAXATION," B.R.C. 1981, TO ADOPT AN OIL AND GAS POLLUTION TAX, REPEALING ORDINANCE 8435, AND SETTING FORTH RELATED DETAILS.

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF BOULDER, COLORADO:

Section 1. Title 3, "Revenue and Taxation," B.R.C. 1981, is amended by the addition of a new Chapter 21, to impose the Oil and Gas Pollution Tax approved by the voters in November, 2018, to read as follows:

**Chapter 21 - Oil and Gas Pollution Tax**

**3-21-1 - Legislative Intent.**

This chapter is to impose the oil and gas pollution tax approved by the voters in November 2018 as provided in Ordinance 8264. This chapter is being added to this code at the same time as the oil and gas provisions in Title 9, "Land Use Code," B.R.C. 1981, allowing the extraction of oil and natural gas within the city limits. The voters approved a tax at the rate of up to \$6.90 per barrel of oil and up to \$0.88 per thousand cubic feet of natural gas for oil or gas extracted within the city limits. The city council has determined to set the rate of the tax at the full amount approved by the voters for oil or gas extracted within the city limits. This rate was determined based on the societal cost of fossil fuels.

**3-21-2 - Imposition and Rate of Tax.**

- (a) Oil Excise Tax. There is levied and shall be paid and collected an excise tax of \$6.90 per barrel of oil extracted within the city limits.
- (b) Natural Gas Excise Tax. There is levied and shall be paid and collected an excise tax of \$0.88 per cubic foot of natural gas extracted within the city limits.

**3-21-3 - Vendor Liable for Tax.**

- (a) Oil Excise Tax. The operator of oil and gas operations with a point of extraction within the city shall pay the tax on oil imposed by this chapter.

- (b) Natural Gas Excise Tax. The operator of oil and gas operations with a point of extraction within the city shall pay the tax on gas imposed by this chapter.
- (c) The burden of proving that any transaction is not subject to the tax imposed by this chapter is upon the person who has the duty to collect the tax imposed.

**3-21-4 - Definitions.**

For purposes of this chapter, extraction occurs at the well pad.

Section 2. Section 4-20-43, “Development Application Fees,” B.R.C 1981, is amended as follows:

**4-20-43. –Development Application Fees.**

....

(b)

....

(30) An operator for an oil and gas operations use registering or renewing an operator registration shall pay  
.....\$500

(31) An applicant for a geophysical exploration permit shall  
pay.....\$1,050

(32) An applicant for a well and pipeline abandonment or decommissioning permit shall  
pay.....\$274

(33) An application fee paid under this section may be refunded, but only if an unambiguous written request to withdraw the application and refund the fee is received in the city office where the application was presented within five days of the date on which the application was received at that office.

Section 3. Section 9-2-1, “Types of Reviews,” B.R.C. 1981, is amended as follows:

**9-2-1. Types of Reviews.**

(a) Purpose: This section identifies the numerous types of administrative and development

review processes and procedures. The review process for each of the major review types is summarized in Table 2-1 of this section.

(b) Summary Chart:

**TABLE 2-1: REVIEW PROCESSES SUMMARY CHART**

<b><i>I. ADMINISTRATIVE REVIEWS</i></b>	<b><i>II. ADMINISTRATIVE REVIEWS - CONDITIONAL USES as noted in Table 6-1 "Use Table"</i></b>	<b><i>III. DEVELOPMENT REVIEW AND BOARD ACTION</i></b>
Affordable housing design review pursuant to Section 9-13-4, B.R.C. 1981	Accessory Units (Dwelling, Owners, Limited)	Annexation/initial zoning
Building permits	Wireless Communications Facilities	BOZA variances
Change of address		Concept plans
Change of street name	Attached Dwelling Units and Efficiency Living Units in the University Hill General Improvement District	Demolition, moving, and removal of buildings with potential historic or architectural significance, per Section 9-11-23, "Review of Permits for Demolition, On-Site Relocation, and Off-Site Relocation of Buildings Not Designated," B.R.C. 1981
Demolition, moving, and removal of buildings with no historic or architectural significance, per Section 9-11-23, "Review of Permits for Demolition, On-Site Relocation, and Off-Site Relocation of Buildings Not Designated," B.R.C. 1981	Bed and Breakfasts	Form-based code review
Easement vacation	Cooperative Housing Units	<u>Geophysical exploration permit</u>
Extension of development approval/staff level	Daycare Centers	Landmark alteration certificates other than those that may be approved by staff per Section 9-11-14, "Staff Review of Application for Landmark Alteration Certificate," B.R.C. 1981
Landmark alteration certificates (staff review per Section 9-11-14, "Staff Review of Application for Landmark Alteration Certificate," B.R.C. 1981)	Detached Dwelling Units with Two Kitchens	Lot line adjustments
Landscape standards variance	Fuel Service Stations	Lot line elimination
Minor modification to	Group Home Facilities	Minor Subdivisions
	Industrial Service Center	
	Manufacturing Uses with Off-Site Impacts	
	Medical or Dental Clinics or Offices or Addiction Recovery Facilities in the Industrial General Zoning District near the Boulder Community Health Foothills	

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approved site plan	Campus	Out of city utility permit
Minor modification to approved form-based code review	Offices, Computer Design and Development, Data Processing, Telecommunications, Medical or Dental Clinics and Offices, or Addiction Recovery Facilities in the Service Commercial Zoning Districts	Rezoning Site review Subdivisions Use review Vacations of street, alley, or access easement
Noise barriers along major streets per Paragraph 9-9-15(c)(7), B.R.C. 1981		
Nonconforming use (extension, change of use (incl. parking))	Offices, Computer Design and Development Facilities, Medical or Dental Clinics and Offices, Addiction Recovery Facilities, and Medical and Dental Laboratories in the BMS, BR and BT Zoning Districts, Not within the University Hill General Improvement District, if the total Floor Area of such Uses on the Lot or Parcel Exceeds 20,000 square feet	
Parking deferral per Subsection 9-9-6(e), B.R.C. 1981		
Parking reduction of up to fifty percent per Subsection 9-9-6(f), B.R.C. 1981		
Parking reductions and modifications for bicycle parking per Paragraph 9-9-6(g)(6), B.R.C. 1981		
Parking stall variances	<u>Permit for Well and Pipeline Abandonment or Decommissioning of an Oil and Gas Operations Use</u>	
Public utility		
Rescission of development approval	Recycling Facilities	
Revocable permit	Residential Care, Custodial Care, and Congregate Care Facilities	
Right-of-way lease		
Setback variance	Residential Development in Industrial Zoning Districts  Residential Uses in the MU-3 Zoning District Fronting Pearl Street	

	Restaurants, Brewpubs, and Taverns	
	Sales or Rental of Vehicles on Lots Located 500 Feet or Less from a Residential Zoning District	
Site access variance	Shelters (Day, Emergency, Overnight, temporary)	
Solar exception	Temporary Sales	
Zoning verification	Transitional Housing	
	Certain Uses in BC Areas designated in Appendix N	

Section 4. Section 9-2-15, "Use Review," B.R.C 1981, is amended as follows:

**9-2-15. Use Review.**

- (a) Purpose: Each zoning district established in Section 9-5-2, "Zoning Districts," B.R.C. 1981, is intended for a predominant use, but other uses designated in section 9-6-1, "Schedule of Permitted Land Uses," B.R.C. 1981, may be allowed by use review if a particular use is demonstrated to be appropriate in the proposed location. Nonconforming uses may be upgraded or expanded under this section if the change would not adversely affect the traffic and the environment of the surrounding area or if the change would reduce the degree of the nonconformity or improve the appearance of the structure or site without increasing the degree of nonconformity. Nonstandard buildings may be changed, expanded or modified consistent with the criteria and standards set forth in this section and subsection 9-10-3(a), B.R.C. 1981.
- (b) Application Requirements: An application for an approval of a use review use may be filed by any person having a demonstrable interest in land for which a use review use is requested and shall be made on a form provided by the city manager that includes, without limitation:
- (1) All materials and information required by subsection 9-2-6(a), B.R.C. 1981;
  - (2) A complete site plan showing the major details of the development, including, without limitation, location of buildings and structures, useable open space, off-street loading areas, service and refuse areas, means of ingress and egress, landscaping, screening and existing and proposed signs;
  - (3) A written statement indicating how the application meets the criteria for approval of

1 subsection (e) of this section. Such written statement shall include information relating  
2 to the intensity of uses, amount of traffic generated, hours of operation and other  
3 information that is necessary to determine how the criteria of subsection (e) of this  
4 section will be met; and

5 (4) For industrial and commercial uses, the city manager may require the applicant to  
6 provide the following additional information and meet the following requirements:

7 (A) A pollution prevention audit;

8 (B) Long-term plans for reducing air emissions and use of hazardous materials;

9 (C) Data on air emissions control processes and demonstration that appropriate  
10 emission control technology is being used;

11 (D) A description of plans for chemical handling, storage, chemical waste disposal  
12 and spill prevention;

13 (E) A description of water and energy conservation measures planned for the use; ~~and~~

14 (F) Plans for recycling and minimizing waste; and

15 (G) The requirements specified in Section 9-6-12(b), B.R.C. 1981, related to oil and  
16 gas operations.

17 (c) Public Notification: After receiving an application the city manager shall provide public  
18 notification pursuant to section 9-4-3, "Public Notice Requirements," B.R.C. 1981, shall be  
19 provided.

20 (d) Review and Recommendation:

21 (1) The city manager will review applications for use review of a nonresidential use in  
22 residential zoning districts, attached and detached dwelling units or a residential use in  
23 a P district, and oil and gas operations and will submit a recommendation to the  
24 planning board for its final action pursuant to subsection 9-2-7(b), B.R.C. 1981.

25 (2) The city manager shall review and make decisions on all other use review applications  
pursuant to subsection 9-2-7(a), B.R.C. 1981.

(3) Reviews by either the city manager or planning board shall be pursuant to section 9-2-  
7, "Development Review Action," B.R.C. 1981.

...

22 (h) Oil and Gas Operations: The criteria for review in subsection (e) shall not apply to an  
23 application for oil and gas operations. An oil and gas operations use shall meet the criteria set  
24 forth in Section 9-6-12(b), "Oil and Gas Operations," B.R.C. 1981. Any use review approval  
25 for an oil and gas operations use shall expire, whether operational or not, in 10 years from the  
date of final approval. Prior to such expiration for an oil and gas operations use, applicants  
will be responsible for submitting a new use review application for an oil and gas operations

1 use proposed for operation beyond 10 years. Following approval of any oil and gas operations  
2 use, the applicant shall have two years to obtain the necessary permits to establish the use.

3 (hi) Amendments and Minor Modifications: No person shall expand or modify any approved  
4 use review use. However, the approved site plan may be modified as provided in Subsection  
5 9-2-14(k), B.R.C. 1981, if it does not expand the use, any changes conform to Section 9-7-  
6 1, "Schedule of Form and Bulk Standards," B.R.C. 1981; the impact on other uses of the  
7 approved use review is not changed; and the change complies with all other provisions of  
8 this title and any other ordinance of the city.

9 (ij) Expiration: Any use review approval or previously approved special review which is  
10 discontinued for at least one year shall expire. The city manager, upon a finding of good  
11 cause, may grant an extension not to exceed six months from the original date of expiration.  
12 In addition, use review approvals for oil and gas operations are subject to expiration  
13 pursuant to the standards in subsection (h) of this section.

14 (jk) Appeals and Call-Ups:

- 15 (1) The applicant or any interested person may appeal the city manager's decision pursuant  
16 to Section 9-4-4, "Appeals, Call-Ups and Public Hearings," B.R.C. 1981.
- 17 (2) A member of the planning board may call-up the manager's decision pursuant to  
18 Section 9-4-4, "Appeals, Call-Ups and Public Hearings," B.R.C. 1981.
- 19 (3) The city council may call-up any planning board decision pursuant to Section 9-4-4,  
20 "Appeals, Call-Ups and Public Hearings," B.R.C. 1981.

21 Section 5. Section 9-4-2, "Development Review Procedures," B.R.C. 1981, is amended

22 as follows:

23 **9-4-2. Development Review Procedures.**

24 (a) Development Review Authority: Table 4-1 of this section summarizes the review and  
25 decision-making responsibilities for the administration of the administrative and  
development review procedures described in this chapter. The table is a summary tool and  
does not describe all types of decisions made under this code. Refer to sections referenced  
for specific requirements. Form and bulk standards may also be varied by site review.  
Additional procedures that are required by this code but located in other chapters are:

- (1) "Historic Preservation," chapter 9-11;
- (2) "Inclusionary Housing," chapter 9-13; and
- (3) "Residential Growth Management System," chapter 9-14.

**TABLE 4-1: SUMMARY OF DECISION AUTHORITY BY PROCESS TYPE**

<i>Standard or Application Type</i>	<i>Staff/City Manager</i>	<i>BOZA</i>	<i>Planning Board</i>	<i>City Council</i>
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Code Interpretation SECTION 9-2-3	D	CA(14)	CA(30)	CA
Setback variance $\leq 20\%$ SECTION 9-2-3	D	D	—	—
Setback variance $> 20\%$ SECTION 9-2-3		D	—	—
Parking access dimensions SECTION 9-2-2	D	—	—	—
Parking deferral SECTION 9-2-2	D	—	—	—
Parking reduction $\leq 25\%$ SECTION 9-2-2	D	—	—	—
Parking reduction $> 25\%$ but $\leq 50\%$ SECTION 9-2-2	D(14)	—	CA, D(30)	CA
Parking reduction $> 50\%$ SUBSECTION 9-9-6(f)		—	D(30)	CA
Parking height, conditional SECTION 9-7-6	D	—	—	—
Building height, less than principal or nonstandard building height max SECTION 9-2-14	D(14)	—	CA, D(30)	CA
Building height, greater than principal building height max SECTION 9-2-14	—	—	D(30)	CA
Building height SECTION 9-7-5	—	—	D(30)	CA
Conditional Use SECTION 9-2-1	D	—	—	—
Limited Use SECTION 9-6-2	D	—	—	—



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Site Review SECTION 9-2-14	D(14)	—	CA, D(30)	CA
Use Review SECTION 9-2-15	D(14)	—	D(30)	CA
Form-Based Code Review SECTION 9-2-16	D(14)	—	CA, D(30)	CA
Annexation SECTION 9-2-17	—	—	R	D
Rezoning SECTION 9-2-19	—	—	R	D
Wetland Permit -Simple SECTION 9-3-9	D	—	—	—
Wetland Permit-Standard SECTION 9-3-9	D(14)	—	D(30)	CA
Extension of Dev't Approval ≤1 yr PARAGRAPH 9-2-12(b)(1)	D	—	—	—
Extension of Dev't Approval >1 yr PARAGRAPH 9-2-12(b)(2)	—	—	D(30)	CA
Rescission of Dev't Approval SUBSECTION 9-2-12(e)	D	—	—	—
Creation of Vested Rights >3 yrs SECTION 9-2-20	—	—	R	D
Floodplain Dev't Permit SECTION 9-3-6	D(14)	—	CA(30)	CA
Wetland Boundary change- Standard SUBSECTION 9-3-9(e)	—	—	R	D
<u>Geophysical Exploration Permit</u> SECTION 9-6-12(b)	<u>D(14)</u>	<u>—</u>	<u>CA(30)</u>	<u>CA</u>

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Substitution of Nonconforming Use SECTION 9-10-3	D	—	—	—
Expansion of Nonconforming Use SECTION 9-10-3	D(14)	—	CA(30)	CA
Subdivision, prelim plat SECTION 9-12-7	D	—	D(30)	CA
Subdivision, final plat SECTION 9-12-8	D(14)	—	CA(30)	CA
Subdivision, minor SECTION 9-12-5	D(14)	—	CA(30)	CA
Subdivision, LLA or LLE SECTIONS 9-12-3 and 9-12-4	D	—	—	—
Solar Exception SUBSECTION 9-9-17(f)	D	D	—	—
Solar Access Permit SUBSECTION 9-9-17(h)	D	D	—	—
Growth Mgmt. Allocations, Std. SECTION 9-14-5	D	—	—	—
Growth Mgmt. Allocations, ≤40 per year SUBSECTION 9-14-3(f)	D(14)	—	CA(30)	CA
Accessory Bldg Coverage SUBSECTION 9-7-8(a)	—	D	—	—
Minor Modification of Discretionary Approval SUBSECTION 9-2-14(k)	D	—	—	—
Minor Amendment of Discretionary Approval SUBSECTION 9-2-14(l)	D(14)	—	CA(30)	CA

Amendment of Discretionary Approval not involving height SUBSECTION 9-2-14(m)	D(14)	—	CA, D(30)	CA
Amendment of Discretionary Approval involving height SECTION 9-2-14	—	—	D(30)	CA
KEY:				
D = Decision Authority      CA = Call-Up and Appeal Authority				
R = Recommendation only      (n) = Maximum number of days for call-up or appeal				

Section 6. Section 9-4-3, “Public Notice Requirements,” B.R.C. 1981, is amended as follows:

**9-4-3. Public Notice Requirements.**

- (a) Process and Options: When a process or procedure identified in this title requires public notice, the city manager shall provide such notice according to Table 4-2 of this section. If a code section does not reference a specific method, the city manager shall determine the most appropriate notification method to be used.

**TABLE 4-2: PUBLIC NOTICE OPTIONS**

<i>Public Notice Type</i>	<i>Type of Application, Meeting or Hearing</i>	<i>Mailed Notice</i>	<i>Posted Notice</i>
1	Administrative Reviews (except those identified below)	none	none
2	Subdivisions and Minor Subdivisions	To adjacent property owners and mineral rights owners a minimum of 10 days before final action	Post property a minimum of 10 days from receipt of application and prior to final action or any hearing

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3	Good neighbor meetings	To property owners within 600 feet of subject property a minimum of 10 days before meeting	none
4	Solar exceptions, solar access permits, accessory units	To adjacent property owners a minimum of 10 days before final action	Post property a minimum of 10 days from receipt of application and prior to final action or any hearing
5	Applications requiring BOZA action, wetland permit and boundary determination	To property owners within 300 feet of subject property a minimum of 10 days before final action	Post property a minimum of 10 days from receipt of application and prior to final action or any hearing
6	Development Review Applications (site review, use review, annexation, rezoning, concept plans)	To property owners within 600 feet of subject property and any mineral rights owners a minimum of 10 days before final action	Post property a minimum of 10 days from receipt of application and prior to final action or any hearing
7	Form-based code review	To property owners and all addresses within 600 feet of the subject property and any mineral rights owners a minimum of 10 days before final action	Post property a minimum of 10 days from receipt of

			application and prior to final action or any hearing
<u>8</u>	<u>Use review applications for oil and gas operations</u>	<u>To property owners, all addresses, and the local government designee of any local government within 5,280 feet (one mile) of the subject property and any mineral rights owners upon finding an application complete and a minimum of 10 days before final action</u>	<u>Post property a minimum of 10 days from receipt of application and prior to final action or any hearing</u>

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Section 7. Section 9-6-1, "Schedule of Permitted Land Uses," B.R.C. 1981, is amended as follows:

**TABLE 6-1: USE TABLE**

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**AGRICULTURE AND NATURAL RESOURCE USES:**

<b>Zo nin g Dis tri ct</b>	<b>R R - 1 , R R - 2 2 , R E - R L - 1</b>	<b>R L - 2 , R M - 2 3</b>	<b>R M - 1 1</b>	<b>R M - X - 2</b>	<b>R H - 1 3 2 7 , R H - 4 , R H</b>	<b>R H - 3 6</b>	<b>R H - 6</b>	<b>M H - 3</b>	<b>M U - 3</b>	<b>M U - 1</b>	<b>M U - 2</b>	<b>M U - 4</b>	<b>B T - 1 , B T - 2</b>	<b>B M S</b>	<b>B C - 1 , B C - 2</b>	<b>B C S</b>	<b>B R - 1 2</b>	<b>D T - 4</b>	<b>D T - 5</b>	<b>D T - 1 2 2 , D T - 3</b>	<b>D T - 1 2</b>	<b>I S - 1 2</b>	<b>I S - 1 2</b>	<b>I G M</b>	<b>I M S</b>	<b>P</b>	<b>A</b>
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Standards," B.R.C. 1981, and the landscaping for the underlying zoning district, except as modified by the following:

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(F) Setbacks from Existing Oil and Gas Operations: The use is located no closer than 2,000 feet from a well pad of an existing single-well oil and gas operations use in pre-production, no closer than 2,500 feet from any well pad of an existing multi-well (two or more) oil and gas operations use in pre-production, and no closer than 500 feet from any well pad of an existing oil and gas operations use in production. The use is located no closer than 250 feet from any oil and gas operations use that is capped and abandoned pursuant to the requirements of Section 9-6-12(b)(15), B.R.C. 1981.

...

Section 9. Section 9-6-5, B.R.C. 1981, is repealed and reserved as follows:

**9-6-5. Reserved**

Section 10. Title 9, "Land Use Code," B.R.C. 1981, is amended by the addition of a new Section 12 within Chapter 6 to read as follows:

**9-6-12. - Conditional Use and Use Review Standards - Agriculture and Natural Resource Uses.**

(a) Community Gardens: The following criteria apply to community garden uses:

- (1) Retail Use Prohibited. Sales of goods or products are prohibited on the community garden unless otherwise permitted by Subsection 9-6-5(c), "Temporary Sales or Outdoor Entertainment," B.R.C. 1981, or within any commercial use permitted within a nonresidential zoning district.
- (2) Use of Manure. No person shall store or use manure in a community garden unless it is dried and unless it is tilled into the ground within forty-eight hours of delivery.
- (3) Water Conveyance. The site must be designed and maintained so that water is conveyed off-site into a city right-of-way or drainage system without adversely affecting adjacent property.
- (4) Water Conservation. No person shall use sprinkler irrigation between the hours of 10 a.m. and 6 p.m. Drip irrigation or watering by hand with a hose may be done at any time.
- (5) Mechanized Equipment. No person shall operate mechanized equipment, including, without limitation, lawn mowers, roto-tillers, garden tractors, and motorized weed trimmers, between the hours of 8 p.m. and 8 a.m. Monday through Friday, and between the hours of 8 p.m. and 10 a.m. Saturday and Sunday.
- (6) Maintenance. No person shall fail to maintain the community garden in an orderly



1 manner, including necessary watering, pruning, pest control, and removal of dead or  
2 diseased plant materials and otherwise in compliance with the provisions of Title 6,  
3 "Health, Safety and Sanitation," B.R.C. 1981.

4 (7) Trash/Compost. No person shall fail to screen trash and compost receptacles from  
5 adjacent properties through landscaping, fencing, or storage within structures and remove  
6 trash and compost from the site weekly. Compost piles shall be set back at least ten feet  
7 from any property line.

8 (8) Setbacks. Structures accessory to the community garden use, such as accessory storage  
9 or utility buildings, gazebos, trellises, or accessory greenhouse structures, and activity  
10 areas exclusive of garden plots, shall comply with all applicable principal structure form  
11 and bulk standards in the applicable zone district per Chapter 9-7, "Form and Bulk  
12 Standards," B.R.C. 1981. No person shall construct a garden trellis that exceeds eight feet  
13 in height within any setback on the property.

14 (9) Identification/Contact Information. The community garden shall post the site with a  
15 clearly visible sign near the public right-of-way that includes the name and contact  
16 information of the garden manager or coordinator. The contact information for the garden  
17 manager or coordinator shall be kept on file with the planning department.

18 (b) Oil and Gas Operations: The following criteria apply to oil and gas operations:

19 (1) Purpose and Scope: The requirements of this subsection shall apply to geophysical  
20 exploration for oil and gas and any oil and gas operations use:

21 (A) Consistent with state legislation enacted by Colorado Senate Bill 19-181, the  
22 intent of this section is to protect and promote the public health, safety, welfare,  
23 and the environment and wildlife resources and regulate the surface impacts of oil  
24 and gas operations in a reasonable manner to address matters including the  
25 following: local land use impacts; the location and siting of oil and gas facilities;  
impacts to public facilities and services; water quality and sources, noise,  
vibration, odor, light, dust, air emissions and air quality, land disturbance,  
reclamation procedures, cultural resources, emergency preparedness and  
coordination with first responders, security, and traffic and transportation impacts;  
financial securities, indemnification, insurance; other nuisance-type effects of oil  
and gas development; and to provide for planned and orderly use of land and  
protection of the environment in a manner consistent with constitutional rights.  
The city will deny applications where the proposed oil and gas operations cannot  
be conducted in a manner that appropriately protects and minimizes adverse  
impact to public health, safety, and welfare, and the environment and wildlife.

(B) In reviewing any oil and gas operations, the city will seek to:

(i) Anticipate and avoid or minimize and mitigate potential environmental  
impacts, including to soil, groundwater, and air, associated with oil and  
gas development, particularly in and around other land uses.

- 1           (ii)   Anticipate and avoid or minimize and mitigate potential impacts to  
2           historical and cultural resources associated with oil and gas development,  
3           particularly in and around other land uses.
- 4           (iii)   Work with operators to identify and locate alternative oil and gas locations  
5           from the perspective of protecting public health, safety, and welfare and  
6           the environment and wildlife.
- 7           (iv)   Gather complete information to assist the city in its analysis of proposed  
8           oil and gas development and proposed locations.
- 9           (v)    Continuously identify and require state-of-the-art equipment, protocols,  
10           and technology to protect the public health, safety, and welfare and the  
11           environment and wildlife.
- 12           (vi)   Avoid, anticipate and minimize and mitigate, through risk analysis and  
13           management, potential risks associated with oil and gas facilities,  
14           processes and pipelines, including accidents and incidents, particularly in  
15           and around other land uses.
- 16           (vii)   Maximize preparedness for emergency accidents and incidents related to  
17           oil and gas development through emergency preparedness and response  
18           planning and infrastructure development such as real-time monitoring,  
19           evacuation routes, and warning systems.
- 20           (viii)   Avoid or minimize and mitigate community impacts including those  
21           related to traffic, noise, odor and air pollution, dust, light pollution, and  
22           visual impacts.
- 23           (ix)    Require operators to have adequate site-specific financial assurances to  
24           cover the full life of operations, including properly plugging and  
25           abandoning wells and environmental reclamation.
- (x)    Monitor and inspect oil and gas facilities in all phases of development and  
          operation for the protection of public health, safety, and welfare and the  
          environment, including wildlife resources.
- (xi)   Use all available methods to enforce the provisions of these regulations.

22   (2) Setback Buffers From Adjacent Land Uses: A well pad for a single-well oil and gas  
23   operation shall be located no closer than 2000 feet and a well pad for a multi-well (two  
24   or more) oil and gas operation shall be located no closer than 2500 feet from any  
25   existing residential use, residential zone, school, daycare center, hospital, senior living  
26   facility, assisted living facility, outdoor venue, playground, permanent sports field,  
27   amphitheater, public park and recreation use, or other similar public outdoor facility,  
28   but not including trails or City of Boulder open space.

1 (3) Surface Use Agreements, Rights of Way, and Easements: Operators of oil and gas  
2 operations commonly enter into surface use agreements, right of way agreements,  
3 easements, and other types of access agreements with landowners. To avoid  
4 inconsistency, the city recommends that agreements with landowners related to the  
5 proposed oil and gas operations not be finalized until the applicant has completed and  
6 received approval for a use review for oil and gas operations.

7 (4) Pre-Application Meeting Required: No person shall file an application for an oil and gas  
8 operations use, including an application for geophysical exploration pursuant to this  
9 subsection (b), until a pre-application review has been completed including a meeting  
10 with the city manager. The purpose of the meeting is for the city manager to review the  
11 proposed oil and gas operation use in a manner that ensures compliance with city  
12 standards and applicable state and federal regulations. The meeting will also enable the  
13 operator and city to explore site-specific concerns associated with the proposed  
14 locations, discuss project impacts and potential mitigation methods, including field  
15 design and infrastructure construction to avoid, minimize and mitigate adverse impacts,  
16 to discuss coordination of field design with other existing or potential development and  
17 operators, to identify sampling and monitoring plans for air and water quality, and other  
18 elements as required by these rules. The meeting shall occur at least 60 days before any  
19 development review application is filed. Any applicant of a pre-application shall submit  
20 registration materials meeting the requirements of Section 9-6-12(b)(14)(A), B.R.C.  
21 1981 and which must be accepted as complete by the city at least 60 days prior to  
22 scheduling a pre-application meeting.

23 (A) Alternative Site Analysis: At the pre-application meeting referenced in this  
24 paragraph (4), the applicant shall identify at least two proposed locations for the  
25 oil and gas operation. The city shall review all proposed locations in order to  
determine which location complies with these rules. If the city determines none of  
the proposed locations comply with the setback requirements contained in  
subsection (2) or the purpose of these rules, the applicant shall submit new  
proposed locations. Following the pre-application meeting, the city will prepare a  
report identifying the location it determines best comports with the requirements  
and purpose of subsection (2). For each location, the applicant shall identify:

(i) The location and zoning.

(ii) Distance of the proposed oil and gas facility to any existing residential  
use, residential zone, school, daycare center, hospital, senior living  
facility, assisted living facility, outdoor venue, playground, permanent  
sports field, amphitheater, public park and recreation use, dwellings and  
recreation use, open space, water body, wetland, floodplain, floodway,  
active, inactive and decommissioned well, and roadway.

(iii) Natural and manmade features.

(iv) Water sources.

(v) Justification for a preferred alternative site.

1           (vi) Materials to be submitted to the COGCC to satisfy the COGCC  
2           alternative location analysis requirement, if requested by the COGCC.

3 (5) Permits for Geophysical Exploration: The following requirements apply to any request  
4 for geophysical mineral testing operations (“seismic testing”):

5 (A) No person shall conduct any seismic testing unless an oil and gas geophysical  
6 exploration permit has been issued by the city manager pursuant the standards of  
7 this section. If the applicant submits information that is inadequate, the city  
8 manager may deny a permit.

9 (B) To apply for a permit, the applicant shall provide:

10 (i) Vibration Monitoring and Control Plan Map. A map of the exploration  
11 area that identifies all of the following within 800 feet of all source  
12 points in the testing area:

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

14 b. Domestic, commercial, and industrial structures;

15 c. Areas affected by previous mining activities;

16 d. Geologic hazards;

17 e. Areas subject to the one hundred-year flood and areas within the  
18 conveyance zone or high hazard zone as defined in Section 9-16,  
19 B.R.C 1981;

20 f. Identification of wildlife resources; and

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

23 (ii) A map showing the proposed travel routes of all vibration-generating  
24 seismic testing equipment;

25 (iii) A complete application for any work in the public right of way and public  
easements pursuant to Chapter 8-5, “Work in the Public Right-of-Way and  
Public Easements,” B.R.C. 1981;

(iv) Insurance Coverage. The following minimum operator insurance coverage  
with an insurance company or companies with a Best rating (or equivalent  
insurance rating agency) of A- or better, authorized to do business in  
Colorado, for any work done pursuant to the permit, which the applicant  
shall

1 provide evidence of and the operator shall maintain at all times while  
2 activities are conducted under the permit, including the required additional  
3 insured language:

- 4 a. Commercial general liability coverage on an occurrence  
5 form, ISO CG00 01 or equivalent, with minimum limits of  
6 \$1,000,000 for each occurrence and a \$2,000,000 general  
7 aggregate and a \$2,000,000 products completed operations  
8 aggregate. Such policy shall include (1) broad form and  
9 blanket contractual liability coverage covering all operations  
10 of the insured, (2) action over coverage for insured's own  
11 employees, (3) blowout, explosion, and cratering liability,  
12 underground resources and equipment liability coverage, and  
13 severability of interests (4) subsidence, (5) sudden and  
14 accidental pollution liability coverage.
- 15 b. Automobile liability coverage for any owned, hired, and non-  
16 owned automotive equipment used in the performance of work  
17 under the permit with minimum limits of \$1,000,000 for each  
18 accident. Such insurance shall include coverage for bodily  
19 injury, death, and property damage arising out of ownership,  
20 maintenance, or use of any motorized vehicle on or off the site,  
21 and contractual liability coverage.
- 22 c. Workers' compensation coverage with the statutory benefits  
23 and limits, and employer's liability coverage with minimum  
24 limits of \$1,000,000 for each accident and with a minimum  
25 \$1,000,000 disease-policy limit and with a minimum  
\$1,000,000 disease-policy limit for each employee.
- d. Umbrella/excess liability coverage on a following form basis or  
at least as broad as underlying in the amount of at least  
\$25,000,000 per occurrence and aggregate, to apply excess of  
commercial general liability, automobile liability, and  
employer's liability.
- e. Professional liability coverage for errors and omissions with  
minimum limits of \$10,000,000 per loss and a \$10,000,000  
aggregate limit if professional services are provided by the  
operator. Professional liability provisions indemnifying the city for  
loss and expense resulting from errors, omission, mistakes or  
malpractice is acceptable and may be written on a claims-made  
basis. Any retroactive date under the policy shall precede the date  
of any work done pursuant to the permit and either continuous  
coverage will be maintained or an extended discovery period will  
be exercised for a period of two years beginning at the time work  
done pursuant to the permit is completed.
- f. Pollution liability coverage for bodily injury, property damage

1 or environmental damage arising out of a pollution incident  
2 caused in whole or in part by any work done pursuant to the  
3 permit including completed operations. The minimum limits  
4 required are a \$15,000,000 aggregate limit. If the coverage is  
5 written on a claims-made basis, the applicant shall warrant that  
6 any retroactive date applicable to coverage under the policy  
7 precedes any work done pursuant to the permit and that  
8 continuous coverage will be maintained or an extended  
9 discovery period will be exercised for a period of 3 years  
10 beginning from the time that work under the permit is  
11 completed.

12 g. Aircraft Coverage. If, as part of the performance of the  
13 operations, operator operates any unmanned aerial system, or  
14 hires any such operations through a vendor or subcontractor,  
15 Operator shall provide and maintain liability insurance for  
16 operations of the unmanned aerial system. This liability  
17 insurance shall be provided by either a separate aviation policy  
18 or an endorsement to the general liability policy required  
19 hereunder, provided that the limits of liability shall be no less  
20 than \$1,000,000 per occurrence.

21 h. The City of Boulder, its elected and appointed officials,  
22 directors, officers, employees, agents and volunteers shall be  
23 included as additional insureds for the general liability  
24 coverage, automobile liability, umbrella/excess coverage, and  
25 pollution liability policies listed above for ongoing and  
26 completed operations. Additional insured endorsement must be  
27 at least as broad as ISO form CG20 10 11 85 for the general  
28 liability policy and umbrella/excess policy and for the other  
29 policies listed above to the extent commercially available.  
30 Coverage shall be primary and non-contributory to any  
31 insurance available to additional insured, which shall be stated  
32 on the Certificate of Insurance. All policies of operator shall  
33 waive subrogation against additional insureds.

34 i. The applicant shall require adequate insurance of its contractors  
35 and subcontractors, including but not limited to professional  
36 liability/errors and omissions with a minimum limit of \$10,000,000  
37 per loss and a \$10,000,000 aggregate limit if professional services  
38 are provided by a contractor or subcontractor with any retroactive  
39 date under the policy preceding the effective date of any work  
40 done pursuant to the permit; and either continuous coverage shall  
41 be maintained or an extended discovery period will be exercised  
42 for a period of two years beginning at the time work under the  
43 permit is completed. The operator and applicant will be responsible  
44 for any and all damage or loss suffered by the city as a result of the  
45 work being performed by the operator or any subcontractor as  
46 described in this subsection.

1           j.       The applicant shall furnish a certificate of insurance to show that  
2               the insurance specified in this paragraph is in force, stating policy  
3               numbers, dates of expiration, limits of liability and coverages  
4               thereunder and endorsements or policy language providing the  
5               coverage under subparagraph g, above. All policies and the  
6               operator shall provide for 30 days' written notice to the city  
7               manager prior to the cancellation, non-renewal or expiration of any  
8               insurance referred to therein. Approval, disapproval or failure to  
9               act by city manager regarding any insurance supplied by the  
10              operator shall not relieve the operator of full responsibility or  
11              liability for damages and accidents.

12           k.       The approving authority may approve an exception to the  
13               insurance coverage requirements if the applicant demonstrates that  
14               the required coverage is not reasonably commercially available  
15               considering the work proposed under the permit and its associated  
16               risk and that the proposed alternative approach is appropriate to  
17               ensure that adverse impacts to public health, safety and welfare  
18               and the environment and wildlife of the geophysical exploration  
19               activities are minimized or mitigated.

20           (i)       A financial guarantee in a form and amount satisfactory to  
21               the city manager sufficient to guarantee applicant's  
22               obligation to restore all property damaged by seismic  
23               testing to its pre-testing condition;

24           (ii)       Copies of written permission from every landowner of  
25               property where the operator is going to use or place  
                  equipment for geophysical exploration;

              (iii)       A vibration monitoring and control plan prepared by a  
                  vibration monitoring specialist. The vibration monitoring  
                  specialist must be an independent, professional engineer  
                  licensed in the state of Colorado or a professional geologist  
                  as defined in C.R.S 34-1-201. This vibration monitoring  
                  and control plan shall 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;





- 1           (ii)       Methods involving explosive material (“shotholes”) are prohibited.
- 2           (iii)       All geophysical activities will be strictly limited to the areas,  
3                   methodologies, and routes indicated in the maps and plans approved by  
4                   the permit.
- 5           (iv)       All geophysical activities will be strictly limited to the hours of operation  
6                   noted in the approved permit. In no case will the city manager permit  
7                   geophysical activities between 6 p.m. and 8 a.m.;
- 8           (v)       The applicant’s vibration monitoring specialist will be on site throughout  
9                   all geophysical activities to ensure city permit conditions are met and will  
10                  report whether the testing complies with the approved permit.
- 11          (vi)       If any utility line(s) or other above or below ground features must be  
12                  removed or altered during geophysical operations, the applicant will  
13                  provide a letter from the utility owner authorizing the removal or  
14                  alteration and notify the city at least three days prior to any such removal  
15                  or modification and comply with any additional permitting requirements  
16                  imposed by the city.
- 17          (vii)       The applicant must obtain any permits required for work in the public  
18                  right of way or public easements pursuant to Chapter 8-5, “Work in the  
19                  Public Right of Way and Public Easements,” B.R.C. 1981.
- 20          (viii)       No seismic testing activities will be permitted in the flood conveyance  
21                  zone. The applicant shall comply with the regulations for floodplains in  
22                  Sections 9-3-2 through 9-3-6, B.R. C. 1981.
- 23          (ix)       Ground vibration monitoring will be required for any source points located  
24                  within 400 feet of any structures identified in the map of the exploration  
25                  area. The vibration monitoring specialist must conduct the analysis and  
                interpretation of the collected vibration monitoring data for comparison to  
                appropriate vibration limits and must prepare weekly reports for weekly  
                submittal to the city.
- (x)       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. The city manager may approve higher values if found  
                                acceptable by the city manager based on the feature of concern.  
                                The applicant must submit an engineering report for review and  
                                approval by the city to request approval of higher values.
1.       If a threshold value is reached, the applicant shall:  
  A.       Immediately notify the city manager;

1 B. Meet with the city manager to discuss the need for  
2 response action(s);

3 C. If directed by the city manager during the above  
4 meeting that a response action is needed, submit  
5 within 24 hours a detailed specific plan of action  
6 based as appropriate on the generalized plan of  
7 action submitted previously as part of the vibration-  
8 monitoring plan. Seismic testing cannot resume  
9 until the detailed specific plan of action is approved  
10 by the city manager; and

11 D. If directed by the city manager, implement response  
12 actions within 24 hours of submitting a detailed  
13 plan of action.

14 2. If a limiting value is reached, the applicant must:

15 A. Immediately notify the city manager and suspend  
16 vibration producing activities in the affected area,  
17 except for those actions necessary to avoid  
18 exceeding the limiting value;

19 B. Meet with the city manager to discuss the need for  
20 response actions; and

21 C. If directed by the city manager during the above  
22 meeting that a response action is needed, submit  
23 within 24 hours a detailed specific plan of action  
24 based as appropriate on the generalized plan of  
25 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 city manager.

D. If directed by the city manager, implement response  
actions within 24 hours of submitting a detailed  
specific plan of action, so that the limiting value is  
not exceeded.

(xi) Ten days prior to vibration monitoring pursuant to the vibration  
monitoring and control plan, the applicant shall submit a certificate of  
calibration to the city manager for any vibration monitoring equipment  
that will be used on site. The certificate must certify that the instruments

1 are calibrated and maintained in accordance with the equipment  
2 manufacturer's calibration requirements and that calibrations are traceable  
3 to the U. S. National Institute of Standards and Technology. All  
4 instrumentation must have been calibrated by the manufacturer or a  
5 certified calibration laboratory within one year of their use on site.

6 (xii) During the exploration activity, the applicant must provide weekly reports  
7 to the city manager summarizing any vibration monitoring data collected.  
8 The reports must be prepared and signed by the vibration monitoring  
9 specialist. The city manager may request a different reporting schedule  
10 where appropriate.

11 (xiii) In addition to the above, the city manager may impose additional  
12 conditions on the conduct of seismic testing that are necessary and  
13 reasonable to protect the public health, safety, and welfare and the  
14 environment or wildlife resources.

15 (C) Notice and Property Inspection.

16 (i) After a permit is issued by the city manager, the applicant shall provide, at  
17 applicant's cost, notice of the seismic testing to each owner of property  
18 and each address located within 800 feet of any source point as depicted in  
19 the approved vibration monitoring and control plan map at least 10 days  
20 before the testing is to occur.

21 a. The notice shall include:

- 22 1. A description of the project including the duration, physical  
23 effects, precautions applicant is taking, and precautions the  
24 property owner should take;
- 25 2. Complaint procedures for property owners and residents;
3. 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 three days prior  
to seismic testing. Results of such testing will be provided  
to the property owner and maintained by applicant for at  
least three years. All baseline condition testing must be  
completed by a qualified technician, who is subject to city  
manager approval, 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 structures, material of structures and  
foundations. The technician must take high resolution  
photographs and video to document the present state of all  
structures on the property, including roads, bridges, and  
sidewalks. The technician should note any chemical and

1 physical weathering or any other structural defects. All  
2 water well samples shall be collected by a qualified  
3 technician and include the date and time of sample,  
4 property owner name, address, contact information and  
5 water type and conditions, well type, depth, age, casing  
6 type and length, drilling contractor, whether the water is  
7 conditioned or filtered, sample point type, and any other  
8 useful information; and

- 9 4. The notice shall further include an offer of property and  
10 water well condition inspections at applicant's expense  
11 after the testing is complete, the results of which will be  
12 provided to the property owner and maintained by applicant  
13 for at least three years.

14 (D) Appeals. Permits for geophysical exploration shall be decided by the city  
15 manager. The decision of the city manager shall be subject to call-up by the  
16 planning board, or appeal by any aggrieved party to the planning board, subject to  
17 the call-up and appeal procedure of Section 9-4-4, "Appeals, Call-Ups, and Public  
18 Hearings," B.R.C. 1981.

19 (6) COGCC Approval: It is the applicant's responsibility to design an oil and gas operation  
20 that is compliant with all applicable federal and state regulations including the  
21 Environment Protection Agency, Colorado Oil and Gas Conservation Commission, Air  
22 Quality Control Commission, and the Colorado Department of Public Health and  
23 Environment requirements. COGCC approval of any application does not constitute  
24 city approval, and compliance with all terms and conditions of this title is required prior  
25 to the commencement of any new oil and gas operations in the city. Wherever the Oil  
and Gas Conservation Act, §§ 34-60-101 et seq., C.R.S., requires local government  
approval prior to COGCC approval, use review pursuant to Section 9-2-15, "Use  
Review", B.R.C. 1981, and findings of compliance with this subsection must be  
completed before applications are submitted to the COGCC.

(7) Review and Approval: All applications to establish oil and gas operations will be  
reviewed pursuant to Section 9-2-15, "Use Review," B.R.C. 1981, and the review  
authority for a use review pursuant to this section shall be the planning board, subject to  
city council call-up. The planning board shall make a decision on the oil and gas  
operations use review application following a staff recommendation based on the  
requirements of this section.

(8) Good Neighbor Meeting Required: Prior to submittal of a use review application for an  
oil and gas operations use, the applicant shall conduct a good neighbor meeting with  
neighboring property owners and residents within one mile of the proposed site and  
other interested parties consistent with Section 9-2-4, "Good Neighbor Meetings and  
Management Plans," B.R.C. 1981, except that the purpose of this meeting is for the  
applicant to inform nearby property owners and residents of the proposed oil and gas  
operations and to inform the applicant and operator of the concerns of neighboring  
property owners and residents. The applicant shall provide mailed notice to all  
property owners and addresses within one mile of the proposed oil and gas operations

1 use site a minimum of ten days before the meeting, and the notice shall provide  
2 information about the proposed use, proposed location, and date and time of the  
3 meeting. The applicant shall provide any interested person an opportunity to comment  
4 on the proposed plans. At the meeting, the applicant must provide an overview of the  
5 proposed oil and gas operations. The issues to be addressed at this meeting may  
6 include, without limitation, facility locations, requirements for oil and gas operations  
7 under this section, suggested mitigation measures to ensure compliance with the  
8 requirements of this section. A good neighbor meeting is not required for an application  
9 for a geophysical exploration permit.

10 (9) Public Notice Requirements: Notice of any use review application for oil and gas  
11 operations shall be provided consistent with the requirements of Table 4-2 in  
12 Subsection 9-4-3(a), B.R.C. 1981. The applicant, at its cost, shall be required to meet  
13 the following notice requirements:

14 (A) Mailed notice shall be provided to owners of wells registered with the Colorado  
15 Division of Water Resources, owners of municipal or other public water bodies,  
16 and owners or managers of irrigation ditches and reservoirs within one mile of  
17 the parcel on which the oil and gas operation is proposed to be located and  
18 within one-half mile of either side of the full length of the planned wellbore and  
19 bottom location. The applicant is responsible for determining the addresses of  
20 such water source owners and providing a list of such owners to the city  
21 manager. If other sites come into consideration during application processing,  
22 the city manager may require the applicant to provide supplemental notice as  
23 described here with reference to the new sites.

24 (B) The notice must contain the following:

25 (i) 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 city manager at the applicant's request;

(ii) A description of the proposed oil and gas operation, including the  
legal description; parcel number; a street address for the site, if  
available from the city; the company name of the applicant; 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);

(iii) Information concerning the facilities and equipment proposed at the  
site when operational, and proposed access roads and gathering lines.

(iv) The case number of the application.

(v) An attachment provided by the city manager explaining the

1 applicable review process and explaining that the public may review  
2 the full application file on the city website or may contact the city  
3 planning department;

4 (vi) A statement concerning the city’s right to enter the property that is  
5 the subject of the application as follows: “For the purpose of  
6 implementing and enforcing the city’s use review process, city staff  
7 may from time to time need to enter onto the property that is the  
8 subject of a use review application.”; and

9 (vii) The current mailing address, website address, email, and telephone  
10 number for both the city planning department and the COGCC, as well as  
11 a statement that additional information on the application will be  
12 available from the planning department.

13 (C) Notice Review. Prior to sending the notice, the applicant must submit a copy of the  
14 proposed notice for review by the city manager. If the city manager determines that  
15 the notice does not comply with the requirements of this subsection the city  
16 manager may require the applicant to modify the notice.

17 (10) Consultant and Public Agency Review and Referrals:

18 (A) Consultant Referrals: The city manager may require the review of a third-party  
19 consultant at the choice of the city manager and at the expense of the applicant to  
20 assist the city in its review of the risks and impacts of oil and gas operations. The  
21 applicant will be notified of the city’s intent to retain consultants and the applicant  
22 shall escrow funds with the city sufficient to cover the anticipated costs of the  
23 consultant review. The applicant will be responsible for the actual costs associated  
24 with the constant review and will be refunded any excess escrowed funds.

25 (B) Public Agency Referrals: Upon the city manager finding an application complete,  
the city manager will refer the application materials to the City Department of  
Open Space and Mountain Parks, the County Department of Parks & Open Space,  
Boulder County Public Health, the Boulder Fire-Rescue Department, the Boulder  
Police Department, the Boulder Office of Emergency Management, the COGCC  
and CDPHE, and any appropriate special district and school district for review  
and comment. As deemed necessary in the city manager’s sole discretion, the city  
manager 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 city manager within 75 days of date of referral, unless the city manager  
determines additional time is necessary. If the proposed oil and gas operation is  
on or within 1,500 feet of City of Boulder open space as defined in charter section  
171 or Boulder County Parks & Open Space property or property over which  
Boulder County holds a conservation easement, the city Open Space and

1           Mountain Parks Director or county Parks and Open Space Director may refer the  
2           Application to the Open Space Board of Trustees (“OSBT”) or the Parks & Open  
3           Space Advisory Committee (“POSAC”) for a public hearing. After the public  
4           hearing, the OSBT or the POSAC may forward recommendations for assuring the  
5           protection of environmental, ecological, wildlife, recreational, historical,  
6           archeological, and agricultural resources of the open space, which may include  
7           recommendations to deny the application or to modify the location or density of  
8           the oil and gas operation.

6           (11) Use Review Application Requirements for Oil and Gas Operations: In addition to any  
7           information required by Section 9-2-15, “Use Review,” B.R.C. 1981, the applicant shall  
8           provide the following information:

9           (A) All materials and information required by Subsection 9-2-6(a), B.R.C. 1981.

10          (B) A written statement containing the following information:

11           (i) A statement of the current ownership and a legal description of all of the  
12           land included in the project.

13           (ii) An explanation of the objectives to be achieved by the project, including,  
14           without limitation, building descriptions, sketches or elevations that may  
15           be required to describe the objectives.

16           (iii) A development schedule indicating the approximate date when  
17           construction of the project or phases of the project can be expected to  
18           begin and be completed.

19           (iv) Copies of any special agreements, conveyances, restrictions or covenants  
20           that will govern the use, maintenance and continued protection of the  
21           goals of the project.

22           (v) Site selection rationale including but not limited to maps and a narrative  
23           explaining the reasons the applicant chose the proposed site or sites for the  
24           oil and gas operations with respect to other possible locations, alternative  
25           locations to the proposed site, and why the alternative locations were not  
              chosen.

(vi) Response to topics raised during the required pre-application meeting and  
              a description of any follow up items or changes since the pre-application  
              review.

(vii) Complaint Protocol. Description of a process for the operator’s

1 acceptance, processing, and resolution of any and all complaints submitted  
2 to state agencies or the operator directly by members of the public  
3 stemming from any adverse impact from oil and gas operations. At a  
4 minimum, the operator shall notify the city manager of any complaints in  
5 writing no later than 24 hours after receipt.

6 (C) Verification of Legal Rights.

7 (i) Mineral Rights and Surface Access Rights. Proof of ownership of, or lease  
8 rights to, the mineral rights and accompanying surface lands where oil and  
9 gas facilities are proposed, including copies of all easements, licenses or  
10 right-of-way agreements necessary to lay any pipelines associated with the  
11 application. Identification of all persons with a real property interest in  
12 the lands where the proposed oil and gas facilities will be located. A  
13 current title report supporting the asserted mineral interests and surface  
14 access. A map of the mineral interests applicant will produce with the  
15 proposed oil and gas operations.

16 (ii) Roads. Information demonstrating that the applicant has or will have the  
17 right to use or construct temporary and permanent private access roads  
18 that are necessary for the proposed oil and gas operations. A copy of any  
19 signed or proposed agreements with landowner(s) regarding road  
20 construction, maintenance, and improvements necessitated by the  
21 proposed oil and gas operations. Any recorded or historical easements  
22 providing access to or across the parcel(s) must be provided.

23 (iii) Pipelines and Gathering Lines. Information demonstrating that the  
24 applicant has or will have the right to use or construct temporary and  
25 permanent gas, oil or water (fresh, produced, or waste) pipelines and  
gathering lines 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 operations.

(D) A certified list of all instances within the ten years prior to the application in  
which the COGCC, CDPHE, other state agency, any federal agency, any city, or  
any county issued a notice of alleged violation or found that the applicant or  
operator violated 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 or alleged violation, the entity or agency issuing the notice or  
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  
applicant or operator must certify to that effect.

(E) A list of all incidents (including but not limited to accidents, spills, releases, and



1 injuries) within the past 10 years that occurred at facilities owned or operated by  
2 the operator or a subsidiary or affiliate under the same management as the  
3 operator, including incidents involving contractors. Applicant shall also list any  
4 root cause analyses conducted and corrective actions taken in response to the  
5 incidents, including internal changes to corporate practices or procedures.

6 (F) Information related to the applicant's financial fitness to undertake the proposed  
7 oil and gas operations, including materials (audited, where appropriate) such as  
8 the following:

9 (i) Balance sheets for the previous 5 fiscal years;

10 (ii) Operating cash flow statements for the previous 5 fiscal years;

11 (iii) List of long- and short-term debt obligations;

12 (iv) List of undercapitalized liabilities;

13 (v) Statements necessary to calculate net profit margin, debt ratio, and instant  
14 or current solvency ratio;

15 (vi) Certified copies of all current financial assurances filed with the COGCC;  
16 and

17 (vii) Tax returns for the prior 5 years.

18 (G) Insurance Coverage. The following minimum operator insurance coverages  
19 with an insurance company or companies with a Best rating (or equivalent  
20 insurance rating agency) of A- or better, authorized to do business in  
21 Colorado, for any work done pursuant to an approval for the oil and gas  
22 operations use, which the applicant shall provide evidence of and maintain at  
23 all times while activities are conducted under the approval, including the  
24 required additional insured language:

25 (i) Commercial General Liability. Commercial general liability  
coverage on an occurrence form, ISO CG00 01 or equivalent, with  
minimum limits of \$1,000,000 for each occurrence and a \$2,000,000  
general aggregate and a \$2,000,000 products completed operations  
aggregate. Such policy shall include (1) broad form and blanket  
contractual liability coverage covering all operations of the insured,  
(2) action over coverage for insured's own employees, (3) blowout,  
explosion, and cratering liability, underground resources and  
equipment liability coverage, and severability of interests (4)  
subsidence, (5) sudden and accidental pollution liability coverage.  
The operator's insurance shall provide products/completed  
operations coverage for three years after completion of oil and gas  
operations. The applicant shall include an endorsement with the  
certificate.

- 1           (ii)   Automobile Liability. Automobile liability coverage for any owned,  
2           hired, and non-owned automotive equipment used in the proposed oil  
3           and gas operations with minimum limits of \$1,000,000 for each  
4           accident. Such insurance shall include coverage for bodily injury,  
5           death, and property damage arising out of ownership, maintenance, or  
6           use of any motorized vehicle on or off the site, and contractual liability  
7           coverage.
- 8           (iii)   Workers' Compensation and Employer's Liability. Workers'  
9           compensation coverage with the statutory benefits and limits, and  
10           employer's liability coverage with minimum limits of \$1,000,000 for  
11           each accident and with a minimum \$1,000,000 disease-policy limit and  
12           with a minimum \$1,000,000 disease-policy limit for each employee.
- 13           (iv)   Umbrella/Excess Liability. Umbrella/excess liability coverage on a  
14           following form basis or at least as broad as underlying in the amount of  
15           at least \$25,000,000 per occurrence and aggregate, to apply excess of  
16           commercial general liability, automobile liability, and employer's  
17           liability.
- 18           (v)    Professional Liability (Errors and Omissions). Professional liability  
19           coverage for errors and omissions with minimum limits of \$10,000,000  
20           per loss and a \$10,000,000 aggregate limit if professional services are  
21           provided by the operator. Professional liability provisions indemnifying  
22           the city for loss and expense resulting from errors, omission, mistakes or  
23           malpractice is acceptable and may be written on a claims-made basis. Any  
24           retroactive date under the policy shall precede the date of the use review  
25           approval and either continuous coverage will be maintained until final  
              reclamation obligations are completed to the city manager's satisfaction.
- (vi)   Pollution Liability. Pollution liability coverage for bodily injury, property  
              damage or environmental damage arising out of a pollution incident  
              caused in whole or in part by the operator 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 limit required is \$25,000,000. If the  
              coverage is written on a claims-made basis, the operator shall warrant that  
              any retroactive date applicable to coverage under the policy precedes the  
              effective date of any use review approval. Continuous coverage shall be  
              maintained until final reclamation obligations are completed to the city  
              manager's satisfaction.
- (vii)   Control of Well Coverage/Operator's Extra Expense. 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, and re-drill and other  
              extra expense incurred to restore the well, to the extent possible, to its pre-  
              loss condition, to the extent reasonably available. The minimum limits  
              required are \$25,000,000 per occurrence/loss. Continuous coverage shall  
              be maintained until final reclamation obligations are completed to the city  
              manager's satisfaction. To the extent available, the city shall be named as  
              an additional insured for ongoing operations and completed operations.

1           (viii) Aircraft coverage. If, as part of the performance of the operations,  
2           operator operates any unmanned aerial system, or hires any such  
3           operations through a vendor or subcontractor, operator shall provide  
4           and maintain liability insurance for operations of the unmanned aerial  
5           system. This liability insurance shall be provided by either a separate  
6           aviation policy or an endorsement to the general liability policy  
7           required hereunder, provided that the limits of liability shall be no less  
8           than \$1,000,000 per occurrence.

9           (ix) Waiver of Subrogation. Operator shall waive and cause its insurers to  
10           waive for the benefit of the city any right of recovery or subrogation  
11           which the insurer may have or acquire against the city or any of its elected  
12           and appointed officials, directors, officers, employees, agents, and  
13           volunteers for payments made or to be made under such policies.

14           (x) Additional Insured. The City of Boulder, its elected and appointed  
15           officials, directors, officers, employees, agents and volunteers shall be  
16           additional insureds for the general liability, automobile liability,  
17           umbrella/excess coverage and pollution liability policies listed above for  
18           ongoing and completed operations. Additional insured endorsement must  
19           be at least as broad as ISO form CG20 10 11 85 for the general liability  
20           policy and umbrella/excess policies and for the other policies listed above  
21           to the extent commercially available. Coverage shall be primary and non-  
22           contributory to any insurance available to additional insured, which shall  
23           be stated on the Certificate of Insurance.

24           (xi) Contractors. The operator shall require adequate insurance of its  
25           contractors and subcontractors, including but not limited to professional  
          liability/errors and omissions with a minimum limit of \$10,000,000 per  
          loss and a \$10,000,000 aggregate limit if professional services are  
          provided by a contractor or subcontractor with any retroactive date under  
          the policy preceding the date of any work done pursuant to the approval of  
          the oil and gas operations use; and either continuous coverage shall be  
          maintained or an extended discovery period will be exercised for a period  
          of two years beginning at the time operation under the approval is  
          completed. The operator shall be responsible for any and all damage or  
          loss suffered by the city as a result of the work being performed by  
          operator or any contractor or subcontractor.

(xii) Operator shall furnish a certificate of insurance to show that the insurance  
          specified in this paragraph is in force, stating policy numbers, dates of  
          expiration, limits of liability and coverages thereunder and endorsements  
          or policy language providing the coverage under paragraphs (ix) and (x)  
          above. All policies and the operator shall provide for 30 days' written  
          notice to city prior to the cancellation, non-renewal or expiration of any  
          insurance referred to therein. Approval, disapproval or failure to act by

1                   city regarding any insurance supplied by the Operator shall not relieve the  
2                   operator of full responsibility or liability for damages and accidents.

3                   (H) Financial Fitness and Assurances. The applicant shall provide adequate financial  
4                   assurances to guarantee performance of all conditions of approval attached to any  
5                   use review approval for the lifetime of the oil and gas facility until final  
6                   reclamation obligations are completed to the city manager's satisfaction. With the  
7                   application, applicant shall submit a description of the type(s) of financial  
8                   assurance it expects to provide to meet those requirements. The type and amount  
9                   of financial assurances provided will be determined by the city manager with any  
10                   use review approval.

11                   (I) Water Wells: A map of any domestic or commercial water wells or irrigation  
12                   wells within one mile of the parcel or parcels on which the proposed oil and  
13                   gas operations will be located and within one mile of either side of the full  
14                   length of each proposed wellbore.

15                   (J) General Site Plan: A site plan with a north arrow showing the major details of the  
16                   proposed development, prepared on a scale of not less than one inch equals one  
17                   hundred feet providing sufficient detail to evaluate the features of the  
18                   development required by this subsection. The site plan shall contain, insofar as  
19                   applicable, the information set forth in this subsection including:

20                   (i) The existing topographic character of the land, showing contours at two-  
21                   foot intervals;

22                   (ii) The site and location of proposed uses with dimensions indicating the  
23                   distance from property lines;

24                   (iii) The location and size of all existing and proposed buildings, structures,  
25                   and improvements and the general location of adjacent streets, structures  
26                   and properties;

27                   (iv) The maximum height of all buildings and building elevations, including  
28                   details on drilling equipment, showing exterior colors and materials;

29                   (v) The internal traffic and circulation systems, off-street parking areas,  
30                   service areas, loading areas, and major points of access to public rights-of-  
31                   way; and

32                   (vi) The areas that are to be conveyed, dedicated, or reserved for streets, alleys,  
33                   and easements.

34                   (K) Wetland Plan: A plan depicting all surface water bodies including but not limited  
35                   to, lakes streams, wetlands or aquatic habitat, riparian areas, and riparian corridors  
36                   identified in the city's adopted streams, wetlands, and water bodies maps or  
37                   otherwise found on or within one mile of the site on which the oil and gas  
38                   operations are proposed to be located, and within one mile of either side of the  
39                   full length of each proposed wellbore. The map shall also depict irrigation ditches  
40                   or laterals and reservoirs.

1  
2 (L) Floodplain Plan: The areas subject to the one-hundred-year flood as defined in  
3 Chapter 9-16, "Definitions," B.R.C. 1981, and any area of the site that is within a  
4 conveyance zone or high hazard zone as defined in Chapter 9-16, B.R.C. 1981.

5 (M) Natural Features Plan: Plans for preservation of natural features existing on the  
6 site or plans for mitigation of adverse impacts to natural features existing on the  
7 site from the proposed development and anticipated uses. Natural features  
8 include, without limitation, healthy long-lived trees, significant plant  
9 communities, ground and surface water, wetlands, riparian areas, drainage areas  
10 aquatic and terrestrial organisms, plant and animal communities, and habitat for  
11 species on the federal Endangered Species List, "Species of Special Concern in  
12 Boulder County" designated by Boulder County, or if prairie dogs  
13 (*Cynomys ludiovicianus*) are present on the site, a statement of intent that  
14 specifies how the applicant will address the prairie dogs consistent with the  
15 standards for prairie dogs in Chapter 6-1, "Animals," B.R.C. 1981.

16 (N) Tree Inventory: A tree inventory that includes the location, size, species and  
17 general health of all trees with a diameter of six inches and over measured fifty-  
18 four inches above the ground on the property or in the landscape setback of any  
19 property adjacent to the development. The inventory shall indicate which trees  
20 will be adversely affected and what if any steps will be taken to mitigate the  
21 impact on the trees. The tree inventory shall be prepared by a certified arborist  
22 that has a valid contractor license pursuant to Chapter 4-28, "Tree Contractor  
23 License," B.R.C. 1981.

24 (O) Landscape Plan: A general landscaping plan at the time of initial submission to be  
25 followed by a detailed landscaping plan prior to or as a condition of approval,  
26 showing the spacing, sizes, specific types of landscaping materials, quantities of  
27 all plants and whether the plant is coniferous or deciduous. All trees with a  
28 diameter of six inches and over measured fifty-four inches above the ground on  
29 the property or in the landscape setback of any property adjacent to the  
30 development shall be shown on the landscaping plan.

31 (P) Vegetation Management Plan: A vegetation management plan identifying plant  
32 species that are on the parcel(s) on which the oil and gas operations are proposed  
33 to be located, their location, and the proposed method of management. This plan  
34 must include an integrated management strategy to prevent and manage the  
35 growth of invasive weeds during oil and gas operations and reclamation or any  
36 mining activities.

37 (Q) Revegetation and Reclamation Plan. A plan illustrating how all disturbed areas  
38 will be revegetated and reclaimed, including areas disturbed during flowline  
39 abandonment. The plan shall include timing, methods, materials to be used,

1 including any proposed soil amendments, and procedures for ensuring successful  
2 revegetation, including an on-going maintenance plan that ensures successful  
3 establishment of vegetation and successful weed management. Revegetation and  
4 reclamation will include the use of native or other plant species, as approved by  
5 the city manager, and full establishment of appropriate vegetation for a minimum  
6 of three consecutive growing seasons.

7 (R) Visual Mitigation and Screening Plan: A preliminary visual mitigation and  
8 screening plan in compliance with applicable COGCC rules, including but not  
9 limited to a list of the proposed colors for the operations, which are observable  
10 from any roadway, providing for paint that is uniform, non-contrasting,  
11 nonreflective color tones, and with colors matched to but slightly darker than the  
12 surrounding landscape and a listing of the operations' equipment. The plan shall  
13 include information on how the operator will screen or fence the proposed facility  
14 in order to mitigate visual impacts, protect wildlife and prevent unauthorized  
15 persons from entering the facility.

16 (S) Land Use Analysis: A land use analysis identifying all existing activities and uses  
17 (including in particular and without limitation any existing residential use,  
18 residential zone, school, daycare center, hospital, senior living facility, assisted  
19 living facility, outdoor venue, playground, permanent sports field, amphitheater,  
20 public park and recreation use, or other similar public outdoor facility) on  
21 surrounding lands within two miles, or as otherwise required by the city manager,  
22 of the parcel(s) where the oil and gas operations are proposed to be located and a  
23 plan demonstrating that the required setbacks to specified land uses in this section  
24 are met.

25 (T) Materials required by the City of Boulder Design and Construction Standards,  
including, without limitation, a traffic study, master utility plan, utility report,  
stormwater management report and plans and drainage report and plan for any  
application that proposes to construct or have an impact on public improvements.

(U) Dust Suppression Plan: A dust suppression plan detailing how the applicant will  
prevent excessive dust escaping from the oil and gas operations and all associated  
roads; a plan for preventing fugitive dust, sand, or silica materials escaping from  
any oil and gas operations.

(V) Facility Layout and Pipeline and Gathering Line Plans: A facility layout plan and  
pipeline and gathering line plan and equipment elevations including but not  
limited to the following:

(i) Construction location diagram and cross-sections including  
location and finish grades.

(ii) Operational facility layout plans including the location of drill sites,

1 storage and staging areas and equipment such as wellheads, pumping  
2 units, tanks, mining equipment and treaters.

3 (ii) The location of access roads and ingress and egress to and from  
4 public roads.

5 (iv) Elevations, diagrams and sample pictures of all structures, wellheads,  
6 pumping units, tanks, treaters, drills, fencing and walls depicting the  
7 location, appearance showing their location, height of any building and  
8 structures calculated per Section 9-7-5, B.R.C. 1981, and materials and  
9 elevations for all fences, temporary workspaces and permanent areas of  
10 disturbance for all phases of development, fencing, and an equipment list.

11 (v) A wellbore risk analysis of the anti-collision evaluation for all proposed  
12 wells conducted for or under the same terms as required in COGCC  
13 Rules.

14 (vi) An area of disturbance map and dimensions of the proposed oil and gas  
15 operations use, indicating both temporary and permanent disturbance  
16 areas, in square feet and acres.;

17 (vii) A map of proposed new roads and improvements to existing roads that  
18 will be necessary for the proposed oil and gas operations use, as well as  
19 identification of the road surface planned for each road or road  
20 improvement.

21 (viii) A pipeline plan including but not limited to the following: The specific  
22 location and route, depicted in plan and profile drawings, of each  
23 flowline, and fresh, produced, or waste water pipeline, and any other  
24 transport pipeline necessary for the oil and gas facilities and operations,  
25 through the lifetime of the oil and gas facilities and operations, and their  
26 distances from: existing or proposed residential, commercial, or industrial  
27 buildings; places of public assembly; surface water bodies; natural  
28 resources identified under subparagraph (M) above; geologic hazards;  
29 agricultural lands; other public and private utility lines within 100 feet of  
30 the pipeline; and public or private roads; the size, operating pressure,  
31 material, and locations of each line and what materials they will carry;  
32 whether pipelines will be co-located with proposed or existing lines; and  
33 identification of all pipeline segments that will be constructed by boring  
34 and the location of the boring operation.

35 (W) Shadow Analysis: A shadow analysis depicting shadows on December 21, as  
36 described in the solar analysis instructions provided by the city manager, and  
37 depicting shadows calculated pursuant to Subsection 9-9-17(d), B.R.C. 1981, for  
38 those buildings that affect adjacent properties.

39 (X) Outdoor Lighting Plan: An outdoor lighting plan meeting the requirements of  
40 Subsection 9-9-16(g), B.R.C. 1981.

41 (Y) Electrification Plan: An electrification plan identifying all sources of electricity

1 that will be brought to or used at the proposed oil and gas location during all  
2 phases, including drilling, completion, and operations, and meeting the  
3 requirements of the City of Boulder Design and Construction Standards.

4 (Z) Operations and Risk Assessment Plan: An operations and risk assessment plan  
5 describing in detail the daily operations of the proposed oil and gas operations use  
6 including the method, schedule, and duration of time for drilling, completion,  
7 production, extraction techniques, and decommissioning, as well as written  
8 procedures detailing employee training requirements and training records and  
9 adherence to safety protocols in response to any potential risks identified in the  
10 risk assessment plan.

11 (AA) The following detailed reports and plans prepared by independent experts,  
12 engineers, or consultants referenced in this section to be retained by the applicant  
13 and subject to approval by the city manager and necessary to determine  
14 compliance with the standards and criteria of this section:

15 (i) Air Quality Report: Air quality report containing the following:

16 a. Analysis of Existing Emissions. An independent expert's inventory  
17 of methane, volatile organic compounds, nitrogen oxides, CO2,  
18 and particulate emissions for all oil and gas facilities and  
19 operations in Boulder County owned or operated by the applicant  
20 for the calendar year prior to registration or renewal. Operators  
21 must submit all air pollution emission notices for hazardous air  
22 pollutants submitted to the CDPHE Air Pollution Control Division  
23 to the independent expert for review.

24 b. Air Quality Modeling. A qualified, independent modeling study  
25 that considers all relevant environmental and atmospheric  
conditions and:

1. Assesses the existing air quality at the proposed site;

2. Predicts the anticipated emissions (including hazardous air  
pollutants, methane, volatile organic compounds, nitrogen  
oxides, 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

3. Models the impacts on air quality from the proposed oil and  
gas facilities and operations over their lifetime, until final  
reclamation obligations are completed to the city's



1 satisfaction, including the compounding effects of climate  
2 change on ozone and particulate pollution in the city and  
3 taking into account and identifying all relevant factors  
4 including natural conditions and other air quality impacts  
5 from any existing or foreseeable source.

6 (ii) Odor Plan: A list of all odor reduction measures that will be used to  
7 address the predicted odors from the proposed oil and gas facilities and  
8 operations and meet Section 9-6-12(b)(12)(E), B.R.C. 1981. Identification  
9 of all natural features (e.g., topography, prevailing wind patterns,  
10 vegetation) that will aggravate or mitigate odor impacts on the areas  
11 within 2000 feet of the parcel(s) where the oil and gas facilities are  
12 proposed to be located. At a minimum, the plan shall indicate that the  
13 applicant will notify the city manager in writing of any complaints no later  
14 than 24 hours after receipt.

15 (iii) Noise and Vibration Study and Plan: A noise and vibration study and plan  
16 including the following:

17 a. Monitoring Plan. An independent expert's plan for the creation of  
18 the baseline report and noise modeling, including the proposed  
19 receptor locations, proposed test periods, and proposed times of  
20 year for monitoring and the software and methodology for  
21 modeling. This plan must be approved by the city manager prior to  
22 the creation of a baseline report or noise modeling. This plan must  
23 demonstrate that the baseline report and noise modeling will  
24 comply with the current version of American National Standards  
25 Institute S 1.4: Specifications for Sound Level Meters.

b. Baseline Noise 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 in different weather  
conditions, according to the monitoring plan. The baseline noise  
reports must include wind speed and 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, and a scaled map showing predicted noise  
levels.

1  
2 d. Vibration Analysis. An analysis of the probability of vibration as a  
3 result of the oil and gas operations and how the possibility of  
4 vibration will be avoided or mitigated.

5 e. Complaint Procedure. A plan for responding to noise or vibration  
6 complaints and communicating the results to the complainant and  
7 to the city manager. The operator shall notify the city manager in  
8 writing of any complaints no later than 24 hours after receipt.

9 (iv) Flood Protection and Mitigation Plan: If the proposed oil and gas  
10 operations are within the one hundred-year or five-hundred-year  
11 floodplain, an independent engineer's plan that describes how flood  
12 protection measures and flood response actions, such as remote shut-in  
13 procedures and anchoring, will be implemented.

14 (v) Baseline Soil Conditions Report and Geotechnical Report: An independent  
15 expert's report detailing the soil conditions on the site on which the  
16 proposed oil and gas operations will be located. The report will address  
17 the United States Department of Agriculture National Resources  
18 Conservation Service classification of the soils, the organic and inorganic  
19 characteristics of the soil, and any existing contamination or sensitive soil  
20 features existing on the site.

21 (vi) Natural Resources Impact Report: An independent expert's report and  
22 maps identifying significant natural ecosystems or environmental features,  
23 significant natural communities, rare plant areas, high biodiversity areas,  
24 natural landmarks, and natural areas, as identified in the Boulder Valley  
25 Comprehensive Plan or through other sources, using the best available  
information, and identifying the anticipated impacts of the proposed oil  
and gas facilities and operations on these resources, and providing  
recommendations for avoiding or minimizing such impacts.

(vii) Cultural and Historical Resources Survey: A cultural, historical, and  
archeological survey of the site where the oil and gas operations are  
proposed to be located done in consultation with History Colorado.

(viii) Traffic and Roadway Impact Report: A traffic and roadway impact report  
containing the following:

a. A transportation impact study, as defined in the Design and  
Construction Standards, covering all areas affected by the  
proposed oil and gas facilities or operations and prepared by a  
Colorado licensed professional engineer.

b. A map of the City of Boulder and Boulder County streets and  
roadways indicating proposed trip routes for all traffic serving the  
oil and gas operations during all phases of well development and  
operations, for the lifetime of the oil and gas operations use until

1 final reclamation obligations are completed to the city manager's  
2 satisfaction.

3 c. For each segment of proposed traffic routes, the types, sizes,  
4 weight, number of axles, volumes, and frequencies (daily, weekly,  
5 total) and timing (times of day) of all vehicles to be used during all  
6 phases of the proposed oil and gas operations.

7 d. The intended measures the applicant will take to ensure safety,  
8 maintenance of road condition, and the quality of life experience of  
9 other users of the transportation system, adjacent residents, and  
10 affected property owners, including without limitation, operational  
11 measures to minimize impacts to the public including, but not  
12 limited to, time of day, time of week, vehicle fuel and emissions  
13 reduction technology, noise minimization, and traffic control  
14 safety measures, maintenance practices on any proposed route,  
15 including without limitation, grading of unpaved roads, dust  
16 suppression, vehicle cleaning necessary to minimize re-entrained  
17 dust and seeds from noxious weeds from adjacent roads, snow and  
18 ice management, sweeping of paved roads and shoulders, pothole  
19 patching, repaving, crack sealing, and chip sealing necessary to  
20 maintain an adequate surface of paved roads along the proposed  
21 route; and any necessary physical infrastructure improvements to  
22 ensure public safety for all modes of travel including non-  
23 motorized modes along travel routes to and from the site.

24 (ix) Agricultural Assessment. An independent expert's report identifying the  
25 anticipated impacts of the proposed oil and gas operations use on any  
26 current agricultural uses and the existing productivity of the lands where  
27 the industrial uses are proposed.

28 (x) Water Quality Report and Plan: A water quality report and plan including  
29 the following:

30 a. Testing of Existing Conditions. A qualified, independent expert's  
31 assessment of existing water quality conditions on and adjacent to  
32 the parcel(s) where the oil and gas operations use will be located  
33 based on testing as follows:

34 1. Identification of and offers to owners to sample all  
35 domestic water wells and water sources located within one  
36 mile of the parcel or parcels on which the oil and gas  
37 operations use is proposed to be located and within one-  
38 half mile of either side of the full length of each proposed  
39 wellbore. For all water wells and water sources for which  
40 the applicant is given permission by the owners;

41 2. Initial collection and testing of baseline samples from  
42 available water sources within 12 months prior to the  
43 commencement of drilling a well, or within 12 months

1 prior to the re-stimulation of an existing well for which no  
2 samples were collected and tested during the previous 12  
3 months;

4 3. Analysis. All sampling shall be performed by the applicant  
5 according to the specified methods in 40 C.F.R. Part 136,  
6 including sample containers, preservation methods, and  
7 holding time limits, for the analytes listed in Table 6-7,  
8 “Water Quality Analytes”; and

9 4. GPS coordinates, at sub-meter resolution, for all water  
10 wells and water sources tested.

11 A. An operator may rely on existing sampling data  
12 collected from water sources within the radius  
13 described above, provided the data was collected  
14 within the previous 12 months, the data includes the  
15 constituents listed in Table 1, and there has been no  
16 oil and gas activity within a one-mile radius in the  
17 time between the original sampling and the present.

18 B. If the operator is unable to locate and obtain  
19 permission from the owner of a water source to be  
20 tested, the operator must advise the city manager  
21 that the operator could not obtain access to the  
22 water source from the surface owner.

23 C. The operator will submit a monitoring report to the  
24 city manager with the application, including  
25 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 6-7 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.

If sampling shows water contamination, the city manager may require  
additional measures including the following: 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) or 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 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 operations use.

**Table 6-7: WATER QUALITY ANALYTES**

<u>General Water Quality</u>	<u>Alkalinity Conductivity &amp; TDS pH,</u> <u>Dissolved Organic Carbon (or Total Organic Carbon),</u> <u>Bacteria, including Total Coliform and E. Coli,</u> <u>Hydrogen Sulfide</u>
<u>Major Ions</u>	<u>Bromide, Chloride, Fluoride,</u> <u>Magnesium, Potassium, Sodium,</u> <u>Sulfate,</u> <u>Nitrate + Nitrite as N (total)</u>
<u>Metals (to be analyzed in dissolved form)</u>	<u>Arsenic, Barium, Boron,</u> <u>Chromium, Copper, Iron,</u> <u>Lead, Manganese, Selenium,</u> <u>Strontium</u>
<u>Dissolved Gases and Volatile Organic Compounds</u>	<u>Methane,</u> <u>Benzene, Toluene, Ethylbenzene, Xylenes (BTEX);</u> <u>Total Petroleum Hydrocarbons (TPH)</u>
<u>Other</u>	<u>Water Level,</u> <u>Stable isotopes of water (Oxygen, Hydrogen),</u> <u>Carbon Phosphorus,</u> <u>Radionuclides,</u> <u>Tracing materials associated with operator’s fracking fluid as identified in the water quality report and plan pursuant to Section 9-6-12(b)(11)(AA)(x), B.R.C. 1981.</u>

- (xi) Water Quantity Control, Supply and Use Report: A water quality control, supply and use report including the following:
- a. An estimate of the amount of water needed for all phases of the oil and gas operations use.
  - b. Considering the prohibitions in Section 11-1-59, “Water Use, Sale, or Supply for Oil and Gas Extraction Prohibited,” B.R.C. 1981, the supply source of water intended for use by the proposed oil and gas facility or operations.
  - c. A list of all available sources of water for the proposed oil and gas operations, and if multiple supply sources are available, analysis of which source is least detrimental to the environment.

1                    d. An independent expert’s assessment of the impacts of the proposed  
2                    use of water described in subparagraphs a. and b. above. Impacts  
3                    to, at a minimum, downstream users, groundwater users,  
4                    agricultural lands and users, terrestrial and aquatic wildlife, plant  
5                    communities, and recreation must be considered.

6                    (xii) Water Management Plan: An independent expert’s recommendation of  
7                    measures that will avoid or minimize the impacts identified in subsection  
8                    (b)(11)(AA)(xi) d. above and address the water use standards in  
9                    Subparagraph 9-6-12(b)(12)(M), B.R.C. 1981. The plan shall include an  
10                   estimate of the amount of produced water and other wastewater that will  
11                   be generated by the proposed oil and gas operations, including a  
12                   description and evaluation of potential flowback and produced water  
13                   volume reduction options through recycling, reuse or other beneficial uses  
14                   and the rationale for the methods to be employed.

15                   (xiii) Stormwater Quality Control: A plan and report for establishing  
16                   compliance with the stormwater management provisions of Chapter 11-5,  
17                   “Stormwater and Flood Management Utility,” B.R.C. 1981, and the City  
18                   of Boulder Design and Construction Standards, and with all water quality  
19                   or stormwater quality control permits obtained from the city or any other  
20                   agency. For purposes of Chapter 11-5, B.R.C. 1981, the oil and gas  
21                   facility shall be considered an applicable development site as defined in  
22                   Section 11-5-2, “Definitions,” B.R.C. 1981. With reference to such  
23                   standards, the plan must include:

24                   a. Containment of pollutants.

25                   b. 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.

c. Spill notification and response plans.

d. 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.

e. The timing and means of applicant providing the city with the  
information it provides to the COGCC ensuring compliance with  
the water quality protection standards contained in COGCC rules  
and associated forms.

(xiv) Flowline Management Plan: A flowline management plan including the  
following:

- 1           a.     Description of how the operator intends to adhere to the integrity  
2           management procedures listed in COGCC Rule 1104.c-f.
- 3           b.     A copy of the leak protection and monitoring plan required by  
4           COGCC Rule 1104.g, as applicable.
- 5           c.     A map at a scale of one inch equals 250 feet (1" = 250') or such  
6           scale as required by COGCC showing the location of all existing  
7           and proposed flowlines associated with the oil and gas operations.  
8           For each existing and proposed flowline, the map shall denote its  
9           size and the maximum pressure at which it is or will be operated,  
10           and its depth from the surface. An electronic map meeting these  
11           requirements and compatible with the city's GIS mapping system  
12           shall also be provided.
- 13           d.     Description of the measures planned to minimize land disturbance  
14           and impacts to vegetation.

15           (xv)   Waste Management Study and Plan: A waste management study and plan  
16           that includes the following:

- 17           a.     Projected Waste: An independent expert's assessment projecting  
18           the types and amounts of waste (including construction waste,  
19           drilling mud, fracking fluids, exploration, and production waste)  
20           that will be generated by the oil and gas operations use throughout  
21           its lifetime, until final reclamation obligations are completed to the  
22           city manager's satisfaction. The assessment will include  
23           description of any sources of technically enhanced naturally  
24           occurring radioactive material used in or generated by the oil and  
25           gas operations use.
- 26           b.     Waste Management Plan: A plan for disposal of all waste  
27           generated by the oil and gas operations use, including use of truck  
28           or pipeline transport with details of anticipated truck trips (routes,  
29           number of trips, timing of trips). The plan will identify whether  
30           waste materials will be stored on site and, if so, how such storage  
31           will avoid adverse impacts to the oil and gas operations use  
32           parcel(s), surrounding lands, water and natural resources, air  
33           quality, and public health, safety, and welfare. The plan must  
34           specify whether on-site storage of drilling mud is contemplated  
35           and, if so, how the applicant will eliminate odors leaving the site.

36           (xvi)   Existing Mines Risk Study: An independent engineer's study and  
37           assessment of the degree and type of risks posed by interaction of the  
38           proposed oil and gas operations use with existing or former mining  
39           operations, such as subsurface features resulting from other mineral  
40           mining activities within one mile of the proposed oil and gas operations

1 use and within one mile of either side of the full length of each proposed  
2 wellbore.

3 (xvii) Hazardous Materials Management Plan: Hazardous materials management  
4 plan that identifies hazardous materials that will be used or stored at the  
5 facility or site, (including those disclosed through the "Frac Focus"  
6 process or other chemical disclosure registry directed by the COGCC), the  
7 physical hazards they present, the quantity on hand (daily and maximum),  
8 the storage method and location, and any other pertinent information that  
9 is of value to employees exposed to the materials and/or first responders in  
10 the event of an accident or incident. Operator shall provide copies of all  
11 safety data sheets to the city manager prior to each phase of operations.  
12 Safety data sheets shall meet the standards of 29 C.F.R. 1910.1200(g).

13 (xviii) Emergency Preparedness Plan: The emergency preparedness plan must  
14 consist of at least the following information:

15 a. Name, address and phone number, including 24-hour emergency  
16 numbers for at least 2 persons located in or near the City of  
17 Boulder who are responsible for emergency field operations. The  
18 operator is responsible for ensuring that at least one of these  
19 emergency contacts can be on the site of any emergency within 15  
20 minutes.

21 b. Protocols for notification of emergency response services and the  
22 city manager, including contact names and numbers for each such  
23 agency, for use in reporting any incident causing or threatening to  
24 cause personal injury or property damage. quickly thereafter as  
25 practicable and in no instance more than 24 hours later.

a. An as-built facilities electronic map compatible with the city's GIS  
b. system, as determined by the city manager, depicting the locations  
c. and type of above and below ground facilities including sizes and  
d. depths below grade of all onsite and offsite oil and gas gathering  
e. and transmission lines and associated equipment, isolation valves,  
f. surface operations and their functions. The as-built map must be  
g. submitted within 30 days of the ready-for-service date.

d. Transportation routes to and from oil and gas operations for  
e. emergency response and management purposes, including at least  
f. two evacuation routes and health care facilities that would be used.

e. Detailed information addressing each potential emergency that  
f. may be associated with the operations. This will include events  
g. such as the following: well integrity issues; explosions; fires; gas,  
h. oil or water pipeline leaks or ruptures; hydrogen sulfide or other



1 toxic or explosive gas emissions; and hazardous material vehicle  
2 accidents or spills. This will also include external hazards to the  
3 site such as earthquakes, lightning, floods, high winds, tornadoes,  
4 blizzards, terrorism, vandalism, or wildfire.

5 f. The threshold or triggers constituting an emergency must be  
6 identified.

7 g. The plan must include a provision that any spill outside of the  
8 containment area or that has the potential to leave the facility or to  
9 threaten a water body or groundwater must be reported to the  
10 emergency dispatch and the city manager immediately, and in no  
11 case more than four hours after such spill is discovered, in addition  
12 to all necessary reporting to state agencies.

13 h. Project-specific emergency preparedness plans are required for any  
14 project that involves drilling or penetrating through known zones  
15 of hydrogen sulfide gas.

16 i. The plan must include a provision that obligates the operator to  
17 reimburse the appropriate emergency response service providers  
18 for costs incurred in connection with any emergency. The  
19 appropriate emergency response service provider may specify  
20 alternative methods for reimbursement of its services. If requested  
21 by the emergency response agency, operator will include a  
22 provision in the plan that addresses regular training exercises.

23 j. Detailed information on safety management showing that the  
24 operator has adequate personnel, ongoing safety training of all on-  
25 site personnel, safety supplies, and funding to be able to always  
immediately implement the emergency response plan 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 of all products used, stored or transported to the site,  
including fracking fluids. Operators must timely provide safety  
data sheets 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

1 and landowners to educate them on the risks of the onsite  
2 operations, explain emergency procedures, engage in evacuation  
3 exercises, and to establish a process for surrounding neighbors to  
4 communicate with the operator.

5 m. The plan must include a process by which the community can  
6 submit concerns and complaints and be assured of responses.

7 n. Operator shall maintain onsite storage of aqueous film forming  
8 foam (which shall not contain PFAS), absorption boom and  
9 granulated materials for ready deployment in case of leaks or other  
10 emergencies. Operator shall notify first responders of the location  
11 of said materials.

12 o. Operator shall provide a copy of its emergency response plan for  
13 any natural gas or hazardous liquid pipelines regulated by the  
14 Pipeline and Hazardous Materials Safety Administration or the  
15 Colorado Public Utilities Commission for those pipelines operated  
16 within the city.

17 (xix) Abandoned Wells Plan: An abandoned wells plan that includes the  
18 following:

19 a. A map at a scale designated by the city manager showing the  
20 location, including the latitude and longitudinal coordinates (GPS  
21 location), of abandoned and temporarily abandoned wells.

22 b. Copy of the most recent mechanical integrity test report submitted  
23 to COGCC for each temporarily abandoned well.

24 c. Copy of Form 6 Notice of Intent to Abandon submitted to  
25 COGCC.

d. Quarterly inspections of temporarily abandoned and shut-in wells  
for surface impacts.

(xx) Wildlife Assessment: An independent expert's report (i) identifying the  
presence and population numbers of: species listed in the Boulder County  
Wildlife Species of Concern listing; Species of Greatest Conservative Need  
Tier 1 and Tier 2 as identified by Colorado Parks and Wildlife; and  
federally-designated threatened or endangered species, (ii) a general  
biodiversity survey, in consultation with the city manager, of the major  
taxa of terrestrial and aquatic organisms, including insects and other  
macroinvertebrates, amphibians and birds, (iii) identifying the anticipated  
impacts of the proposed oil and gas facilities and operations on wildlife  
and wildlife habitat, and (iv) recommending measures for avoiding or  
minimizing such impacts.

1            (xxi) Supplemental Information: If at any point during the use review  
2            process, the city manager determines that additional information is  
3            required to conduct adequate review of the application in light of the  
              standards and criteria, the city manager may suspend the application  
              review until the additional information is received.

4            (12) Criteria: An applicant for an oil and gas operations use must demonstrate that the use  
5            will protect and minimize adverse impacts to public health, safety, and welfare and the  
6            environment and wildlife. To minimize adverse impacts means, to the extent necessary  
7            and reasonable, to protect public health, safety, and welfare and the environment and  
8            wildlife by avoiding adverse impacts from oil and gas operations and minimizing and  
9            mitigating the extent and severity of those impacts that cannot be avoided. If the  
10           approving authority determines that the applicant has not shown that the proposed use  
11           will be designed and conducted in a manner that protects and minimizes adverse  
              impacts to the public health, safety, and welfare and the environment and wildlife, the  
              approving agency will deny the application. In determining whether the use meets the  
              standards, the approving authority shall consider the impacts of the proposed use in  
              light of the direct and indirect impacts and the cumulative impacts. In determining  
              whether the application meets these standards, the approving authority will consider  
              whether the applicant has demonstrated each of the following requirements:

12           (A) Operations and Risk Assessment Plan: The operations and risk assessment plan  
13           includes responses to the review criteria of this paragraph and demonstrates that  
14           the use, if approved, will meet these criteria.

15           (B) Worker Training and Safety: The use will be operated in a manner that avoids or  
16           sufficiently minimizes and mitigates adverse impacts to public health, safety, and  
17           welfare and the environment and wildlife that could be caused by human error or  
18           negligence. All workers, including contractors, at oil and gas operations have any  
19           applicable nationally recognized certifications and training for the work they are  
20           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. The use will be conducted in a manner  
              that avoids or sufficiently minimizes and mitigates risks of personal injury and  
              property damage.

21           (C) Financial Fitness and Assurance: The use will avoid or sufficiently minimize and  
22           mitigate adverse impacts to public health, safety, and welfare and the environment  
23           and wildlife resulting from financial instability of the operator. The applicant has  
24           sufficient financial stability to operate the proposed oil and gas operations use for  
25           the lifetime of the use until final reclamation obligations are completed to the  
              city's satisfaction. The applicant 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 until final reclamation

1 obligations are completed to the city’s satisfaction, which may include  
2 environmental financial guarantees.

3 (D) Air quality and dust: The use will:

4 (i) Avoid or sufficiently minimize and mitigate emission-related impacts to  
5 public health, safety, and welfare and the environment;

6 (ii) Not cause or contribute to exceedances of the National Ambient Air  
7 Quality Standards, cause degradation to air quality, or interfere with the  
8 attainment of ozone standards for the Denver Metro/North Front Range  
9 ozone non-attainment areas established by the US Environmental  
10 Protection Agency;

11 (iii) Not contribute particulate matter to the air in a manner that fails to protect  
12 public health; and

13 (iv) Eliminate, capture, or minimize all potentially harmful emissions,  
14 including methane, minimize and contain dust associated with onsite  
15 activities and traffic to the property, and demonstrate how the operator  
16 will prevent and mitigate gas leaks and air emissions.

17 (E) Odor: The use will avoid or sufficiently minimize and mitigate adverse impacts  
18 on public health, safety, and welfare and the environment and wildlife from odor.  
19 No odor, including any chemical odor, from the use shall be detectable after  
20 dilution with two or more volumes of odor free air as measured at the property  
21 line of the oil and gas operations property.

22 (F) Noise: The use will avoid or sufficiently minimize and mitigate adverse impacts  
23 to public health, safety, and welfare and the environment from noise and vibration  
24 and not create noise that unreasonably exceeds the existing ambient noise levels.  
25 In no instance may the use produce dBA noise exceeding limits set by the  
COGCC or exceeding the limits set in Chapter 5-9, “Noise,” B.R.C. 1981. For  
purposes of the noise standards under Chapter 5-9, B.R.C. 1981, drilling,  
completions, and hydraulic fracturing shall not be considered construction work  
activity.

(G) Vibration: The use will avoid or sufficiently minimize and mitigate adverse  
impacts related to vibrations significant enough or long enough in duration to  
cause adverse impacts to the public health, safety, and welfare, the environment,  
wildlife, or quality of life of surrounding residents and occupants or damage to  
existing structures.

- 1           (H) Outdoor Lighting: The use will be conducted in a manner that avoids or  
2           sufficiently minimizes and mitigates light pollution on neighboring properties  
3           and is compliant with Chapter 9-9-16, "Outdoor Lighting," B.R.C. 1981.
- 4           (I) Grading, Drainage, and Erosion: To prevent adverse impacts to the environment,  
5           the use will not cause erosion or sedimentation and will be conducted consistent  
6           with any approved grading, drainage, stormwater management and erosion  
7           control plan(s).
- 8           (J) Protection of Water Bodies, Riparian Areas and Wetlands: The use will avoid or  
9           sufficiently minimize and mitigate adverse impacts to all surface water bodies  
10           including, but not limited to, irrigation ditches and reservoirs, as well as wetlands  
11           or aquatic habitat, riparian areas, and riparian corridors mapped on the city's  
12           adopted stream, wetland and water body maps or identified through the use  
13           review process using the best available information and is compliant with Section  
14           9-3-9, "Stream, Wetlands, and Water Body Protection," B.R.C. 1981.
- 15           (K) Floodplains and Floodways: In addition to compliance with the flood protection  
16           measures in Chapter 9-3, "Overlay Districts," B.R.C. 1981, the use will avoid or  
17           sufficiently minimize and mitigate the risk of adverse impacts to public health,  
18           safety, and welfare and the environment and wildlife from floods. Above-ground  
19           oil and gas facilities are prohibited in the flood conveyance zone and flood high  
20           hazard zone. Above-ground oil and gas facilities must be located outside a  
21           floodplain unless the applicant proves that no other sites can be reasonably used,  
22           or if reasonably necessary to avoid or sufficiently minimize and mitigate adverse  
23           impacts to public health, safety, and welfare, the environment and wildlife.
- 24           (L) Adequate Water Supply: The available and proposed water supply is the least  
25           detrimental to the environment among the available sources and adequate to meet  
              the needs of the facility.
- (M) Water Use and Quality: The use will prevent adverse impacts to public health,  
              safety, and welfare and the environment by avoiding degradation of surface and  
              ground waters which may otherwise adversely impact, without limitation water  
              users, groundwater users, water delivery systems, agricultural lands and  
              operations, recreational water body health, terrestrial and aquatic life.
- (N) Land Disturbance and Soil Quality: The use will:
- (i) Avoid or sufficiently minimize and mitigate adverse impacts to the surface  
                  lands under and immediately surrounding all oil and gas operations use.  
                  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,  
                  run-off and erosion potential, and soil stability, and

1           (ii) Avoid or sufficiently minimize and mitigate adverse impacts to baseline  
2           soil conditions.

3           (O) Natural Resources: The use will avoid or sufficiently minimize and mitigate  
4           adverse impacts to significant natural ecosystems or environmental features,  
5           significant natural communities, rare plant areas, high biodiversity areas, natural  
6           landmarks, and natural areas, as identified in the Boulder Valley Comprehensive  
7           Plan, other sources, or through the use review process using the best available  
8           information.

9           (P) Cultural and Historic Resources: The use will avoid or sufficiently minimize and  
10           mitigate adverse impacts to or loss of potentially significant cultural, historic, or  
11           archaeological resources as identified in the city's historic survey information or  
12           through the use review process, resources eligible for city designation as a  
13           historical landmark, and sites listed in or eligible for listing in the State or  
14           National Registers of Historic Places.

15           (Q) Transportation, Roadways, and Access: The use shall be designed and  
16           implemented to avoid or minimize and mitigate impacts to physical infrastructure  
17           of the city's multi-modal transportation system, ensure public safety, avoid traffic  
18           conflicts and crashes, and maintain quality of life for other users of the city  
19           transportation system, adjacent residents, and affected property owners as a result  
20           of truck traffic associated with the site.

21           (R) Surrounding Buildings: The use shall be sited and operated in a manner so that the  
22           facility is compatible with surrounding buildings. In applying this standard,  
23           separation from surrounding buildings shall be considered the most effective  
24           measure to ensure compatibility between proposed oil and gas operations use and  
25           existing buildings. Considerations for application of this standard may also  
26           include, but are not limited to, impacts on used or occupied structures; the natural  
27           topography and existing vegetation; the location of surrounding buildings,  
28           prevailing weather patterns, including wind directions and air flow; and hilltops,  
29           ridges, slopes, and silhouetting.

30           (S) Recreational Activity, Trails, Bikeways: The use will avoid or sufficiently  
31           minimize and mitigate adverse impacts to the quality and quantity of both active  
32           and passive recreational activities, trails, and bikeways maintained by the city or  
33           that are mapped or identified through the use review process using the best  
34           available information.

35           (T) Visual Impact and Screening: The use, including but not limited to drilling rigs,  
36           holding tanks, parking areas, equipment storage areas, and pipelines, shall be  
37           screened from adjacent properties and the public right-of-way by either  
38           landscaping or walls or combination thereof. Any screening and the facility shall  
39           be designed and painted to avoid causing visual degradation to the scenic  
40           attributes or character of the area.

1 (U) Revegetation, Reclamation, and Vegetation Management: Oil and gas operations  
2 will avoid or sufficiently minimize and mitigate adverse impacts to affected lands  
3 resulting from land disturbance, vegetation clearing, and weed incursion. The  
4 operator must fully reclaim all areas of disturbance and revegetate if necessary.  
5 Vegetation must be fully established pursuant to approved revegetation and  
6 reclamation plans and the vegetation management plan.

7 (V) Electrification: The use will avoid or sufficiently minimize and mitigate adverse  
8 impacts from the use of generators and fossil fuel combustion. Operations will be  
9 electrified to the highest degree possible. Renewable energy sources will be  
10 required unless the applicant proves that they are not feasible in which case off-  
11 site renewable offsets may be substituted.

12 (W) Pipelines and Gathering Lines: All flowlines and fresh, produced, or wastewater  
13 pipelines and gathering lines: will be routed and constructed to avoid or  
14 sufficiently minimize and mitigate adverse impacts to current and planned  
15 infrastructure and natural resources and to public health, safety, and welfare and  
16 the environment and wildlife, without compromising pipeline integrity and safety;  
17 any such lines constructed in public right-of-way and easements shall meet the  
18 requirements of Chapter 8-6, "Public Right-of-Way Encroachments," B.R.C.  
19 1981. Pipelines crossing streams, ditches, or other water bodies must be bored  
20 underneath the water body meeting the requirements of the City of Boulder  
21 Design and Construction Standards and Chapter 9-3-9 "Stream, Wetlands, and  
22 Water Body Protection." B.R.C. 1981.

23 (X) Waste: The use will avoid or sufficiently minimize and mitigate adverse impacts  
24 to public health, safety, and welfare and the environment and wildlife from waste  
25 materials. All waste generated by oil and gas facilities and operations will be  
stored, transported, and disposed of safely. Injection wells and disposal wells are  
prohibited.

(Y) Emergency Preparedness and Response: In response to a developed risks analysis  
plan, the use will avoid or sufficiently minimize and mitigate risks of and  
appropriately prepare for emergency situations such as explosions, fires, gas, oil  
or water pipeline leaks, ruptures, hydrogen sulfide or other toxic gas or fluid  
emissions, and hazardous material vehicle accidents or spills. Oil and gas  
operations shall ensure that, in the event of an emergency, adequate practices,  
procedures, and infrastructure are in place to protect public, health, safety, and  
welfare and the environment and wildlife and repair damage caused by  
emergencies.

(Z) Abandoned Wells: The abandoned wells plan demonstrates how adverse impacts  
to public health, safety, and welfare and the environment are prevented and how  
risks associated with abandoned wells are eliminated or minimized and mitigated.

(AA) Wildlife Impacts: Oil and gas facilities and operations will avoid or sufficiently

1 minimize and mitigate adverse impacts to wildlife habitat and migration corridors  
2 and wildlife, including species listed in the Boulder County Wildlife Species of  
3 Concern listing; Species of Greatest Conservation Need Tier 1 and Tier 2 as  
4 identified by Colorado Parks and Wildlife; and federally designated threatened or  
5 endangered species, as mapped by those agencies, or identified on the site.

6 (13) Conditions of Approval and Operating Standards for Oil and Gas Operations Use: The  
7 approving authority will not approve an application unless the applicant demonstrates that  
8 the oil and gas operation use will avoid or minimize and mitigate impacts to the public  
9 health, safety and welfare and the environment. If the application is approvable, the  
10 approving authority may add conditions if they are necessary for the application to meet  
11 the review criteria or to ensure compliance with the standards in this subsection (b).  
12 Conditions may include but are not limited to the following:

13 (A) Locational Restrictions: The approving authority may adjust or restrict the locations  
14 of any or all proposed oil and gas operations, which may include, without limitation,  
15 consolidating, distributing, or re-locating facilities; sharing of existing infrastructure  
16 by multiple oil and gas operations; minimizing the installation of new facilities and  
17 avoiding additional disturbance to the environment, landowners, and natural  
18 resources; or modification of proposed travel routes for some or all phases of the oil  
19 and gas operations.

20 (B) Scope Adjustments: The approving authority may adjust the scope of operations  
21 such as to change the size and density of facilities which may include, without  
22 limitation, reductions or limitations on the number of total wells, reductions or  
23 limitations on the number of wells per pad; or changes to the dimensions of the  
24 proposed facilities.

25 (C) Timing and Phasing: The approving authority may restrict the timing and phasing  
including, but not limited to, separating the overall project into phases over a  
period of time; establishing the timeline for commencement and duration of all or  
some phases of oil and gas operations use; 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 limiting times  
of day and night in which operations are conducted.

(D) Air Quality: To protect air quality and public health, the approving authority may  
require emissions control measures, including, but not limited to, one or more of the  
following unless otherwise stated as a requirement:

(i) 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, Centers for Disease Control, or other relevant  
authorities.

(ii) Continuous monitoring during all phases from pre-production through the  
end of production, which may monitor air quality at the oil and gas  
operation, nearby properties, and other areas of concern. Monitoring system  
must be capable of immediately alerting operator of increases in monitored



1 air pollutant concentrations.

2 (iii) A leak detection and repair program that may include:

3 a. Use of best available technology leak detection, such as infra-red  
4 cameras and hydrocarbon analyzers;

5 b. Regular on-site inspections at a frequency determined by the city  
6 manager;

7 c. Immediate leak repair;

8 d. Reporting of monitoring and inspection results to the city manager,  
9 who may make such reports available to the public;

10 e. Operator maintenance of all images and data obtained from leak  
11 detection devices for 10 years, to be made available to the city  
12 manager upon request; and

13 f. Immediate reporting of all leaks detected to the city manager.

14 (iv) Completion of wells using reduced emission completion practices.

15 (v) Requiring closed-loop pitless systems for containment and/or recycling of  
16 all drilling, completion, flowback and produced fluids.

17 (vi) Routine flaring is prohibited. In the event of an emergency, operators may  
18 be required to shut-in the well if the emergency lasts longer than 24 hours;  
19 routine maintenance does not constitute an emergency.

20 a. Routine flaring is the flaring of natural gas during the normal course  
21 of oil and gas production for reasons other than safety, emergencies,  
22 during well maintenance activities, or other conditions outside of the  
23 control of the operator.

24 b. For any permitted flaring, other than during flaring permitted during  
25 pre-production, operators must comply with the following:

1. Provide manufacture test or other data demonstrating  
2. hydrocarbon destruction or control efficiency that complies  
3. with a design destruction efficiency of 98% or better;

4. Use an auto igniter or continuous pilot light;

5. Provide proof that any flare, auto ignition system, recorder,  
6. vapor recovery device or other equipment used to meet the  
7. hydrocarbon destruction or control efficiency requirement is  
8. installed, calibrated, operated, and maintained in accordance  
9. with the manufacturer's recommendations, instructions, and  
10. operating manuals; and



- 1 (i) Requirement for use of pipelines to transport all gas and fluid materials, including oil, natural gas, produced water, and waste products, to and from the oil and gas facilities.
- 2
- 3 (ii) Delay of well completions until pipeline or gathering line transport is in place for all hydrocarbon products and produced water or other wastewater.
- 4
- 5 (iii) Limitations on on-site storage tanks.
- 6
- 7 (iv) Restrictions on field maintenance of vehicles involving hazardous materials.
- 8
- 9 (v) Requirement that vehicles are only refueled on impervious surfaces and never during storm events.

10 (F) Inspections:

- 11 (i) Operators shall inspect all their oil and gas facilities, including their shut-in and temporarily abandoned facilities, as follows:
  - 12 a. Soil sampling for contamination within the boundaries of existing facility pads annually and along pipeline routes annually or after any spill required to be reported.
  - 13 b. Visual inspections for liquid leaks at least every 30 days and along pipeline routes at least every 30 days
- 14
- 15 (ii) Operators shall report the date, methodology, subject, and results of all inspections to the city manager monthly.
- 16
- 17 (iii) Notice of Completion of Clean-Up Activities: Following successful completion of clean-up activities, the operator shall provide written notice to the city manager and owners of abutting properties within three days of completion.
- 18

19 (G) Water Supply:

- 20 (i) Measures necessary to avoid, minimize, and mitigate the impacts of the proposed water use, including recycling.
- 21
- 22 (ii) Any necessary water agreements must be secured prior to any oil and gas operations commencing.

23 (H) Waste: Compliance with the city-approved waste management plan, including routine testing of all applicable waste for technically enhanced naturally occurring radioactive material.

24

25

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

3 (i) Follow-up and on-going testing of all water sources and water wells within  
4 one mile of the parcel or parcels on which the oil and gas facilities are  
5 proposed to be located and within one-half mile of either side of the full  
6 length of each proposed wellbore. Sampling requirements may include:

7 a. Testing for the analytes listed in Table 6-7, Water Quality Analytes.

8 b. Post-completions and periodic on-going monitoring samples  
9 collected from one up-gradient and one down-gradient source and  
10 tested pursuant to the following time frame:

11 1. One sample within 6 months after completion.

12 2. One sample between 12 and 18 months after completion.

13 3. One sample between 60 and 72 months after completion.

14 4. For multi-well pads, collection shall occur annually during  
15 active drilling and completion and on the subsequent dates  
16 listed in this section.

17 c. If the operator is unable to locate and obtain permission from the  
18 surface owner of a water source to be tested, the operator must  
19 advise the city manager that the applicant could not obtain access to  
20 the water source from the surface owner.

21 d. In any case, the city manager may require the applicant to drill a  
22 water monitoring well on the well pad to ensure that groundwater  
23 samples are collected from the aquifer(s) through which the well will  
24 penetrate.

25 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 city 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 6-7 analytes found. Copies of

1                   the report will be provided to the COGCC and the water source  
2                   owners within 10 days after the operator's receipt of the report.

3                   i.    If sampling shows water contamination, additional measures may be  
4                   required including the following:

5                   1.    If free gas or a dissolved methane concentration level greater  
6                   than one milligram per liter (mg/l) is detected in a water  
7                   source, determination of the gas type using gas compositional  
8                   analysis and stable isotope analysis of the methane (carbon  
9                   and hydrogen).

10                  2.    If the test results indicate thermogenic or a mixture of  
11                  thermogenic and biogenic gas, an action plan to determine  
12                  the source of the gas.

13                  3.    Immediate notification to the city manager, the COGCC,  
14                  Boulder County Public Health, and the owner of the water  
15                  source if the methane concentration increases by more than 5  
16                  mg/l between sampling periods, or increases to more than 10  
17                  mg/l.

18                  4.    Immediate notification to the city manager, the COGCC,  
19                  Boulder County Public Health, and the owner of the water  
20                  source if benzene, toluene, ethylbenzene or xylene (BTEX)  
21                  or total petroleum hydrocarbons (TPH) are detected as a  
22                  result of testing. Such detections may result in required  
23                  subsequent sampling for additional analytes.

24                  5.    Further water source sampling in response to complaints  
25                  from water source owners.

j.    Timely production and distribution of test results, well location, and  
                  analytical data in electronic deliverable format to the city manager,  
                  the COGCC, Boulder County Public Health, and the water source  
                  owners.

k.    The city may limit or prohibit toxic chemicals in hydraulic fracturing  
                  fluids to avoid, minimize and mitigate surface impacts.

l.    No produced water or other wastewater may be sprayed or otherwise  
                  dispersed on any lands or waters within the city.

m.   Compliance with Chapter 11-5, "Stormwater and Flood Management  
                  Utility," B.R.C. 1981, the City of Boulder Design and Construction  
                  Standards, and all water quality or stormwater quality permits from  
                  the city, state, and other agencies.

n.    Flowback and produced water reporting including:

- 1                   1.     A complete characterization of the operator’s flowback and  
2                   produced water streams, including chemical analyses,  
3                   radioactivity analyses, total dissolved solid concentrations and  
4                   rate of flowback and production fluid at each well;
- 5                   2.     Amount of flowback and production fluid generated by each  
6                   well that is recycled or reused for oil and gas operations; and
- 7                   3.     An accounting of all flowback and produced water from the  
8                   well to final disposal, including all temporary holding  
9                   facilities.

10                   (J) Spills, Leaks, and Releases:

- 11                   (i)     Containment: Secondary or tertiary containment for oil and gas operations  
12                   may be required.
- 13                   (ii)    Reporting: Spills, leaks, and releases of any substance other than fresh  
14                   water, including spills of produced water, oil, condensate, natural gas  
15                   liquids, all spills, gas leaks, and exploration and production waste, must be  
16                   reported to emergency response as required and to the city immediately  
17                   upon discovery and no later than 6 hours thereafter. If the city determines  
18                   the spill or leak is reportable to any agency when the operator disagrees, the  
19                   city may make such report.
- 20                   (iii)   Clean-Up: Any leak, release, or spill will be cleaned up according to  
21                   applicable city, state and federal laws, including Colorado Water Quality  
22                   Control Commission regulations, the Oil and Pollution Act and the Clean  
23                   Water Act. Operators will notify the city immediately upon completion of  
24                   clean-up activities, at which time the city will inspect the site and either  
25                   approve the clean-up or impose additional requirements and remedies for  
                      violations.
- (iv)    Root Cause Analysis: Submission to the city of a root cause analysis of any  
                    spill, leak, or release of any substance other than fresh water that resulted in  
                    serious bodily injury, fatality, or serious environmental harm, was a Grade 1  
                    gas leak as defined by the COGCC, or is otherwise requested by the city  
                    manager within 30 days of the leak, spill, or release.

(K) Revegetation and Reclamation:

- (i)     Specific revegetation and reclamation measures for all areas disturbed by  
                    any oil and gas, including pipelines, in accordance with the revegetation and  
                    reclamation plan approved by the city.
- (ii)    Revegetation and reclamation shall include the use of native or other plant  
                    species approved by the city manager, integrated management of weed  
                    control and preventions, and full establishment of appropriate vegetation for  
                    a minimum of three consecutive growing seasons.

1           (iii) Requirement that revegetation and reclamation, both preliminary and final,  
2 begin as soon as possible after decommissioning of any oil and gas  
3 operations or completion of construction and in no case later than 60 days  
4 thereafter. Full establishment of revegetation and reclamation occurs only  
5 after a minimum of 3 growing seasons demonstrating establishment of  
6 desirable plant species.

7           (L) Site Management:

8           (i) Trash: Prohibition on burning of trash in association with an oil and gas  
9 operation.

10          (ii) Removal of Non-Permanent Equipment: Time limits for non-permanent  
11 equipment remaining on site.

12          (iii) Access Roads: Conditions to prevent run-off, erosion and other negative  
13 impacts to access roads and abutting lands.

14          (M) Vegetation Management: Oil and gas operations uses must manage vegetation and  
15 comply with the approved vegetation management plan.

16          (N) Drought-Tolerant Landscaping: All landscaping for screening and reclamation or  
17 other purposes will include drought tolerant species that are native and suitable for  
18 current and projected future climate conditions and the soil conditions of the area.

19          (O) Soils: Post-completion analysis. Pre-reclamation analysis of soil profiles including  
20 soil invertebrates and microorganisms.

21          (P) Compliance with Emergency Response Plan: Following use review approval, if  
22 applicable, adherence to a city approved emergency response plan is an on-going  
23 condition of approval.

24          (Q) Site Security: Oil and gas facilities must be kept secure from trespassers and risk of  
25 vandalism.

          (R) Remote Monitoring and Control: Use of supervisory control and data acquisition or  
other remote monitoring of wells, including remote telemetry units, onsite control  
valves, onsite data acquisition devices, radio network/ modems, and the ability to  
trigger an automatic shut-down of a facility.

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

          (i) Seismic events greater than 2 .0 on Richter scale shall be reported to the city  
manager and to COGCC.

          (ii) If a seismic event occurs, the city manager may require cessation of  
operations immediately. If the manager orders cessation, the operator may

1 only resume work once the city manager is satisfied with the actions taken to  
2 reduce the likelihood of further seismicity and has notified the operator that  
3 work may be resumed.

4 (iii) Operations shall be immediately suspended for any seismic event measuring  
5 4.0 or above on the Richter scale. Operator may only resume work once the  
6 city manager is satisfied with the actions taken to reduce the likelihood of  
7 further seismicity and has notified the operator that work may be resumed.

8 (T) Noise:

9 (i) The operator shall conduct the use in compliance with and ensure  
10 compliance of the use with Chapter 5-9, "Noise," B.R.C 1981. Based on  
11 results of ambient noise testing and other site-specific conditions, additional  
12 noise limits and conditions may be imposed on a case-by-case basis.

13 (ii) Continuous noise monitoring of any oil and gas operations use meeting the  
14 most recent version of the American National Standard Institute's  
15 Specification for Sound Level Meters.

16 (iii) Use of sound walls and other physical barriers to prevent noise leaving the  
17 site.

18 (iv) Electrification from on-site renewable energy sources or, if approved by the  
19 city manager, through the purchase of an adequate share in a community  
20 facility that is located so that the energy will be delivered to the oil and gas  
21 operations site by direct connection to the off-site renewable energy facility,  
22 so that the generator delivers the energy to the local utility or distribution  
23 entity serving the oil and gas operations site, or so that the generator delivers  
24 to an electrical network that is interconnected with the local utility or  
25 distribution entity serving the oil and gas operations site.

(v) Use of quiet drilling and completion equipment, such as the Quiet Fleet  
design provided by Liberty Oilfield Services.

(vi) For well pads that are not electrically operated, use of quiet design mufflers (also  
referred to as hospital grade or dual dissipative) or equivalent.

(vii) Use of electric drill rigs.

(viii) The use of liquefied natural gas dual fuel hydraulic fracturing pumps.

(ix) Use of acoustically insulated housing or covers to enclose motors or  
engines.

(x) No pipe unloading or workover operations will occur between 7 p.m. and  
the following 7 a.m.

(U) Odor:



1  
2 (i) Compliance with Section 9-6-12(b)(12)(E), B.R.C. 1981, including on-  
3 going monitoring for compliance.

4 (ii) Odor reduction requirements may include:

5 a. Using minimum low odor Category IV or better drilling fluid. This  
6 could include non-diesel-based drilling muds including drilling muds  
7 that are low odor and do not contain benzene, toluene, ethylbenzene  
8 or xylene.

9 b. Adding odorants that are not a masking agent.

10 c. Additional or enhanced measures during peak odor-producing phases  
11 or times such as increasing additive concentration.

12 d. Wipe down drill pipe each time drilling operation “trips” out.

13 e. Adding chillers to the mud systems.

14 f. Using filtration systems or additives to minimize odors from drilling  
15 and fracturing fluids except that the operator shall not mask odors.

16 g. Enclosing shale shakers to contain fumes from exposed mud where  
17 safe and feasible.

18 h. Removing drilling mud from drill pipe as it is removed from the  
19 well.

20 i. Prohibition on exposed drilling mud.

21 j. Limitation or prohibition on use of diesel generators.

22 (V) Visual Impacts: Conditions to reduce adverse visual impacts such as; specifications on  
23 facility color, screening measures such as berming, visual barriers, and landscaping.

24 (W) Dust: Limitations on or requirements for activities to control dust; storage  
25 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.

(X) 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.

(Y) City Transportation Infrastructure:

- 1           (i)    Maintenance practices to protect transportation infrastructure and  
2           compliance with the City of Boulder Design and Construction Standards.
- 3           (ii)   Improvements to existing transportation system infrastructure to support the  
4           proposed oil and gas facilities at applicant's cost. These improvements may  
5           have to be constructed by the applicant or may be constructed by the city. If  
6           the applicant disputes the city's statement of necessary transportation  
7           infrastructure improvements or the costs thereof, the applicant may engage a  
8           licensed civil engineer to perform an independent study and provide the  
9           results thereof to the city for its consideration, at the applicant's cost.
- 10          (iii)   Standards and specifications for construction and maintenance of access roads  
11          required for the proposed oil and gas operations.
- 12          (iv)   Measures to protect existing transportation infrastructure, such as weight  
13          restrictions, prevention of mud and sediment tracking, and prohibition on the  
14          use of tire chains.

15          (Z)   Pipeline Conditions: To minimize surface impacts from pipelines or subsurface work to  
16          pipelines that may create surface impacts, the following conditions related to pipelines  
17          may be considered:

- 18          (i)    Requirements for pipelines to be in place or imminently available prior to  
19          completion of any new well.
- 20          (ii)   Specific setbacks from features of concern.
- 21          (iii)   Conditions on depth of cover and clearance distances from subsurface features  
22          or improvements.
- 23          (iv)   Conditions for protection of trenches during construction.
- 24          (v)    Construction conditions related to protection of streams, rivers, irrigation  
25          ditches and wetlands.
- (vi)   As-built reporting, including the latitudinal and longitudinal coordinates  
            (GPS coordinates), materials and operating pressures of all flowlines and  
            fresh water, produced water, or wastewater pipelines and depicting the  
            locations of other subsurface features or improvements crossed by such  
            lines.
- (vii)   Leak detection system.
- (viii)   Inspection protocol, in addition to city inspections.
- (ix)   A risk-based engineering study by an independent, Colorado licensed  
            professional engineer retained by the applicant and subject to approval by  
            the city prior to placement and construction of proposed pipelines.

1           (x)     Without compromising pipeline integrity and safety, applicant may be  
2                     required to share existing pipeline rights-of-way and consolidate new  
3                     corridors for pipeline rights-of-way to minimize impact.

4           (AA)    Gathering Line Conditions: To minimize surface impacts from gathering lines or  
5                     subsurface work to gathering lines that may create surface impacts, the following  
6                     conditions related to gathering lines may be considered:

7                     (i)     Gathering lines shall be sited to avoid areas containing existing or  
8                     proposed residential, commercial, and industrial buildings; places of  
9                     public assembly; surface water bodies; and city open space and parks.

10                    (ii)    Without compromising pipeline and gathering line integrity and safety, the  
11                    operator shall share existing pipeline or gathering line rights-of-way and  
12                    consolidate new corridors for pipeline or gathering line rights-of-way to  
13                    minimize adverse impacts.

14                    (iii)   Setbacks from residential, commercial, or industrial buildings, places of  
15                    public assembly, the high-water mark of any surface water body and  
16                    sensitive environmental features will be determined on a case-by-case  
17                    basis in consideration of the size and type of gathering line proposed and  
18                    features of the proposed site.

19                    (iv)    The operator must make available to the city manager upon request all  
20                    records submitted to Pipeline and Hazardous Materials Safety  
21                    Administration or the Colorado Public Utilities Commission including  
22                    those related to inspections, pressure testing, pipeline accidents and other  
23                    safety events.

24           (AB) Flood Protection: Compliance with a city-approved flood mitigation plan; any  
25                     additional conditions necessary to avoid, minimize, and mitigate risks of adverse  
26                     impacts from oil and gas operations.

27           (AC) Applications and Permits: The applicant must obtain city, state and federal permits  
28                     or approvals required for the operations and provide copies to the city manager  
29                     prior to any construction activities. In addition to use review approval, applicants  
30                     may be required to obtain city permits including but not limited to floodplain  
31                     development permits, grading and erosion control permits, building or construction  
32                     permits, oversize/overweight permits, and working in the public right-of-way or  
33                     easement permits.

34           (AD) Certification and Reporting: The operator will submit to the city manager copies of  
35                     all reports related to the oil and gas operations use made to any agency at the local,  
36                     state or federal level within 30 days of their submission to the original recipient.

37           (AE) Financial Guarantees:

38                     (i)     Financial guarantees such as irrevocable letters of credit, irrevocable trusts,  
39                     or other financial guarantees in a form satisfactory to the city. These may  
40                     include environmental financial guarantees.

- 1
- 2 (ii) Additional assurances may be required if circumstances during the lifetime  
3 of the oil and gas operations through the time final reclamation are  
4 completed to the city's satisfaction.
- 5 (iii) Copies of all financial guarantees and insurance renewals promptly supplied  
6 to the city manager.
- 7 (iv) Upon transfer, financial guarantees will only be returned or cancelled once  
8 they are replaced by equivalent financial guarantees secured by the  
9 applicant/operator.

10 (AF) Notice of Financial or Legal Status Change: Operators will provide notice to the  
11 city manager within 10 days of any significant change in status related to the  
12 operator's financial condition or legal status, including but not limited to  
13 insolvency, filing for bankruptcy protections, change of entity type, merger with or  
14 acquisition by another entity, and receipt of cease and desist or stop work orders  
15 issued by any applicable agency or entity.

16 (AG) Re-Assessment of Conditions: All conditions of approval may specify that the city  
17 may re-assess their effectiveness in meeting the standards of this subsection after  
18 commencement of oil and gas operations.

19 (AH) Representations of Record: Any approved use review is subject to all commitments  
20 of record, including verbal representations made by the applicant at any public  
21 hearing and written commitments in the application file, and without limitation must  
22 encompass compliance with all approved mitigation plans.

23 (14) Additional Requirements: The following additional requirements apply to any person  
24 intending to apply for an oil and gas operations use in the city or any oil and gas  
25 operations use approved pursuant to this subsection:

(A) Registration Required: All operators for an oil and gas operations use within the  
city must have a current and valid city registration in place meeting the following  
requirements.

(i) 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 city as "confidential" and if the city 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 subparagraph  
(E)(vii) below:

a. Operator company name, address, email, and mobile phone contact  
information and the name, address, email, and mobile phone contact  
information of two individuals serving as a 24-hour emergency

1 contact and who can ensure a timely and comprehensive response to  
2 any emergency.

3 b. A map that shows all of the operator's mineral rights, including lease  
4 rights, whether owned by the operator named in Subsection (a) and a  
5 subsidiary or affiliate under the same management as the operator,  
6 within the city or inside or within 2000' feet of the boundaries of  
7 Boulder County.

8 c. A certified list of all instances within the 10 years prior to the  
9 registration in which the COGCC, CDPHE, other state agency, any  
10 federal agency, any city, or any county issued a notice of alleged  
11 violation or found that the operator violated applicable state, federal,  
12 or local requirements during the course of drilling, operations, or  
13 decommissioning of a well. The list must identify the date of the  
14 violation or alleged violation, the entity or agency issuing the notice  
15 or making the determination, the nature of the non-compliance, and,  
16 if applicable, the final resolution of the issue. If no such instances of  
17 non-compliance exist, the operator must certify to that effect.

18 d. A list of all incidents (including but not limited to accidents, spills,  
19 releases, and injuries) within the past 10 years that occurred at  
20 facilities owned or operated by operator or a subsidiary or affiliate  
21 under the same management as the operator, including incidents  
22 involving contractors. The operator shall also list any root cause  
23 analyses conducted and corrective actions taken in response to the  
24 incidents, including internal changes to corporate practices or  
25 procedures.

e. Information related to the operator's financial fitness to undertake  
the proposed oil and gas operations use, including materials  
(audited, where appropriate) such as the following: balance sheets  
for the previous 5 fiscal years; operating cash flow statements for  
the previous 5 fiscal years; list of long- and short-term debt  
obligations; list of undercapitalized liabilities; statements necessary  
to calculate net profit margin, debt ratio, and instant or current  
solvency ratio; certified copies of all current financial assurances  
filed with the COGCC; and tax returns for the prior 5 years.

f. Complaint Protocol: 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  
operations use.

g. Copy of emergency response plan for any natural gas or  
hazardous liquid pipelines regulated by PHMSA or the PUC  
operated in the city.

(ii) New operators to City of Boulder must submit registration materials that

1                   are accepted by the city at least 60 days prior to scheduling a pre-  
2                   application meeting.

3                   (iii) Operator registration must be updated and renewed by July 31 of each year.

4                   (B) Inspections: Any oil and gas operations use may be inspected by the city at any  
5                   time to ensure compliance with the requirements of any applicable city permits or  
6                   the provisions of this subsection. Unless urgent circumstances exist, the city will  
7                   use best efforts to ensure that four hours prior notice is given to the operator's  
8                   contact person at the telephone number on file. City inspections will be coordinated  
9                   with the operator to ensure operator presence onsite to the extent possible and to  
10                   ensure the site visit is conducted in accordance with all applicable operator safety  
11                   requirements. Inspections in response to odor complaints will occur as soon as  
12                   feasible upon receipt of the complaint.

13                   (C) Records: Operators will make available to the city at its request all records or  
14                   reports required by the CDPHE, the COGCC, the Colorado Public Utilities  
15                   Commission, the Occupational Safety and Health Administration, and the  
16                   Pipeline and Hazardous Materials Safety Administration.

17                   (D) Suit to Enjoin COGCC Rule Violation: If the city manager discovers a  
18                   violation or threatened violation of Title 34, Article 60 of the Colorado  
19                   Revised Statutes or any rule, regulation, or order made under that  
20                   Article, the city manager will notify the COGCC in writing. If the  
21                   COGCC fails to bring suit to enjoin any actual or threatened violation,  
22                   then the City Attorney's Office may file an action on behalf of the city  
23                   seeking injunctive relief.

24                   (E) Other Remedies: In addition to the remedies listed in Subsection 9-15-3,  
25                   "Administrative Procedures and Remedies," the city manager may take one or  
                      more of the following actions to remedy a violation of this subsection, or of a use  
                      review approval for oil and gas operations:

(i) Require increased operator or city inspection frequency at operator's  
                      expense.

(ii) Require mandatory equipment upgrades.

(iii) Require audit of the systems or equipment involved in the violation(s).

(iv) Require increased reporting to the city.

(v) Require independent third parties to conduct the inspections required in  
                      subparagraph (b)(13)(F).

(vi) If three or more violations of the standards of this subsection or of any  
                      conditions of approval have been found to have occurred within 6 months,  
                      the city manager may suspend the use review approval until all violations  
                      have been remedied or for a period of 30 days.

1           (vii) If the city manager finds that the applicant, including any employee,  
2 officer, agent, or representative of the applicant, has made a false  
3 representation of, or omitted material facts in the application, or in support  
4 thereof, in writing or orally to any city employee, or the planning board or  
5 city council, which the applicant, its employee, officer agent and/or  
6 representative knew or reasonably should have known was materially  
7 false, misleading, deceptive, or inaccurate, the city manager may revoke  
8 the use review approval.

9           (viii) If the city manager determines that the public health, safety, or welfare  
10 requires emergency suspension of the use, the city manager may take such  
11 action subject to the standards of Section 1-3-4, "Exceptions for  
12 Emergencies," B.R.C. 1981.

13       (F) Other Enforcement Remedies: In addition to any enforcement measures  
14 referenced in this subsection (b), the city has the right to any and all other  
15 enforcement measures and remedies provided in this title, the Boulder Revised  
16 Code or by other law, including but not limited to seeking relief through the  
17 courts to enforce an approved use, or to stop or abate any oil and gas operations  
18 use occurring or about to occur without the use review, required permits, or other  
19 city approvals or inconsistent with these regulations or any conditions of  
20 approval. Nothing in this section shall limit the remedies available to the city for a  
21 violation of any provision of this subsection.

22       (15) Permit for Well and Pipeline Abandonment or Decommissioning of an Oil and Gas  
23 Operation:

24       (A) An operator may not commence activities to plug, re-plug, abandon, or otherwise  
25 decommission an oil and gas well, flowline, or associated fresh water, produced  
26 water or wastewater pipeline until the city manager has reviewed and provided  
27 written approval for entry and surface operations to the operator as part an  
28 administrative review pursuant to Section 9-2-2, "Administrative Review," B.R.C.  
29 1981.

30       (B) Plugging/Re-Plugging, Abandoning or Decommissioning Wells:

31           (i) COGCC rules: Operators will comply with all  
32 COGCC rules regarding plugging, abandoning, and  
33 decommissioning oil and gas wells.

34           (ii) Coordinates: The operator must provide the city with the  
35 surveyed coordinates of the decommissioned, plugged, or  
36 abandoned well.

37           (iii) Marking: Unless otherwise requested by the surface owner,  
38 the operator must leave onsite a permanent physical marker  
39 of the well location.

40       (C) Pipeline Abandonment: Operators shall remove any flowline or fresh water,  
41 produced water, or associated wastewater pipeline proposed to be abandoned

1 or decommissioned unless otherwise authorized in writing by the city manager  
2 after consultation with the landowner. If the city manager approves of  
3 abandonment in place of the line, operator shall strictly comply with all  
4 COGCC rules.

5 (D) Conditions of Approval of Well and Pipeline Abandonment: With any approval of  
6 a permit, the city manager will provide the operator with city requirements for  
7 surface activities for plugging and abandoning wells and pipelines. These  
8 requirements may include but are not limited to:

9 (i) Timing constraints.

10 (ii) With respect to any pipeline abandoned in place, a tracer in any nonmetal  
11 line.

12 (iii) Specific reclamation and revegetation requirements.

13 (16) Exceptions: As part of the use review process, an applicant may request an exception  
14 from any standard of this subsection. A request for an exception may be included in the  
15 applicant's application and shall be processed, reviewed, and granted, granted with  
16 conditions, or denied in accordance with and as part of the use review. An exception  
17 from the application of any standard of this subsection may be requested on the basis of  
18 one or more of the following circumstances:

19 (A) There is no technology commercially available to conduct the proposed oil and  
20 gas operations in compliance with the standard and granting an exception from  
21 the standard will not have an adverse effect on the public health, safety, and  
22 welfare and the environment and wildlife.

23 (B) An alternative approach not contemplated by the standard is demonstrated to  
24 provide a level of protection of the public health, safety, and welfare and the  
25 environment and wildlife, that would be at least equivalent to the otherwise  
applicable standard.

(C) Because of unique physical circumstances or conditions existing on or near the  
site of the oil and gas operations use, the application of the standard would create  
an undue or unnecessary hardship or would jeopardize public health, safety, or  
welfare or the environment or wildlife and granting the exception from the  
standard will not have an adverse effect on the public health, safety, and welfare  
and the environment and wildlife.

(D) An exception to the 2500-foot setback standards under Paragraph (b)(2), "Setback  
Buffers from Adjacent Land Uses," B.R.C. 1981, but to no less than 2,000 feet,  
may be approved if the applicant demonstrates that the proposed location for the  
oil and gas operations, operating plans, and conditions of approval will provide  
substantially equivalent protections for public health, safety, and welfare and the  
environment and wildlife resources compared to the otherwise required setback.



1           (E) An exception to the insurance coverage requirements may be approved if the  
2           applicant demonstrates that the required coverage is not reasonably commercially  
3           available considering the size of the use and its associate risk and that the  
4           proposed alternative approach is appropriate to ensure compliance with the  
5           standards of this Subsection (b), "Oil and Gas Operations," B.R.C. 1981.

6           (17) Coordination with the State on Air Quality: Pursuant to section 25-7-128(4), C.R.S.,  
7           upon the issuance of any notice and order or approval of any permit or use review  
8           pursuant to this subsection, the city shall transmit to the Air Quality Control  
9           Commission a copy of any notice and order, permit, or notice of disposition for a use  
10           review. Pursuant to section 25-7-128(6), C.R.S., the city shall confer and coordinate its  
11           activities regarding efforts to control or abate air pollution consistent with that standard.

12           Section 11. -Section 9-7-2, "Setback Standards," B.R.C. 1981, is amended by addition of  
13 a new subsection (f) as follows:

14 **9-7-2. Setback Standards.**

15 ...

16 (f) Oil and Gas Operations and Other Uses: Oil and gas operations shall be set back from any  
17 residential use, residential zone, school, daycare center, hospital, senior living facility,  
18 assisted living facility, outdoor venue, playground, permanent sports field, amphitheater,  
19 public park and recreation use, or other similar public outdoor facility, but not including  
20 trails or City of Boulder open space, in accordance with the standards of Section 9-6-  
21 12(b)(2), B.R.C. 1981. No residential use, school, daycare center, hospital, senior living  
22 facility, assisted living facility, outdoor venue, playground, permanent sports field,  
23 amphitheater, public park and recreation use, or other similar public outdoor facility, but not  
24 including trails or City of Boulder open space, shall be located closer than 2,000 feet from  
25 any single-well well pad of an oil and gas operation in pre-production, closer than 2,500 feet  
from any multi-well well pad of an oil and gas operation in pre-production, closer than 500  
feet from any well pad of an oil and gas operation in production, and closer than 250 feet  
from an oil and gas operation that has been capped and abandoned pursuant to the  
requirements of Section 9-6-12(b)(16), B.R.C. 1981.

Section 12. Section 9-16-1, "General Definitions," B.R.C. 1981, is amended as follows:

**9-16-1. General Definitions.**

- (a) The definitions contained in Chapter 1-2, "Definitions," B.R.C. 1981, apply to this title unless a term is defined differently in this chapter.
- (b) Terms identified with the references shown below after the definition are limited to those specific sections or chapters of this title:
- (1) Airport influence zone (AIZ).

- 1 (2) Floodplain regulations (Floodplain).
- 2 (3) Historic preservation (Historic).
- 3 (4) Inclusionary housing (Inclusionary Housing).
- 4 (5) Residential growth management system (RGMS).
- 5 (6) Solar access (Solar).
- 6 (7) Wetlands Protection (Wetlands).
- 7 (8) Signs (Signs).

8 (c) The following terms as used in this title have the following meanings unless the context  
9 clearly indicates otherwise:

10 Abandonment means the permanent decommissioning of an oil and gas facility, including any  
11 single well or portion of pipeline.

12 ...

13 Applicant means the owner of a particular property, who may be represented by an agent  
14 designated in writing, who applies for any process or permit governed by this title. For an oil and  
15 gas operations use, applicant shall mean a person, corporation or other legal entity possessing the  
16 legal right to develop a mineral resource who has filed an application under this title for an oil  
17 and gas operations use.

18 ...

19 CDPHE means Colorado Department of Public Health & Environment

20 ...

21 Closed-loop pitless system means a system consisting of steel tanks for mud mixing and storage  
22 and the use of solids removal equipment by some combination of shakes, mud cleaners and  
23 centrifuges to separate drill cutting solids from the mud stream. The solids are placed in  
24 containment provided on the site. A closed-loop pitless system does not include use of a pit.

25 COGCC means Colorado Oil & Gas Conservation Commission.

...

Cumulative impacts means the combined impacts of a use over time, considering the effects of  
adding impacts to other impacts and impacts interacting with each other, and any compounding  
of effects over time. The cumulative impacts of a use can be viewed as the total effects on public  
health, safety, and welfare or the environment or wildlife of the use and all other activities  
affecting them.

...

1 Flowline means a segment of pipe transferring oil, gas, or condensate between a wellhead and  
2 processing equipment to the load point or point of delivery to a U.S. Department of  
3 Transportation Pipeline and Hazardous Materials Safety Administration or Colorado Public  
4 Utilities Commission regulated gathering line or a segment of pipe transferring produced water  
5 between a wellhead and the point of disposal, discharge, or loading. This definition of flowline  
6 includes lines within a well pad and those that are outside a well pad and includes flowlines  
7 connecting to gas compressors and gas plants.

8 ...

9 Gathering line means a gathering pipeline or system as defined by the Colorado Utilities  
10 Commission, Regulation No. 4, 4 C.C.R. 723-4901, Part 4, (4 C.C.R. 723-4901) or a pipeline  
11 regulated by the U.S. Department of Transportation Pipeline and Hazardous Materials Safety  
12 Administration pursuant to 49 C.F.R. §§ 195.2 or 192.8. 49 C.F.R. §§ 195.2 or 192.8 and 4  
13 C.C.R. 723-4901 in existence as of the date of this regulation and does not include later  
14 amendments.

15 Geophysical operation means operations that involve the transmittal of seismic waves into and  
16 through the ground to model the geophysical properties of the earth's crust.

17 Local government designee means the office designated to receive, on behalf of the local  
18 government, copies of all documents required to be filed with the local government designee  
19 pursuant to COGCC Rules.

20 ...

21 Mining industries means a facility or business engaged in the removal of any earth materials,  
22 including those extracted from open mining and oil and natural gas drilling or production and oil  
23 and natural gas drilling or production, and from places of natural occurrence to surface locations  
24 but excluding oil and gas operations.

25 ...

26 Oil and gas operations means exploration for oil and gas, including the conduct of seismic  
27 operations and drilling of test bores; the siting, drilling, deepening, recompletion, reworking, or  
28 abandonment of a well; production operations related to any such well including the installation  
29 of flow lines and gathering system; the generation, transportation, storage, treatment, or disposal  
30 of exploration and production wastes; the construction, operation, maintenance and repair of any  
31 oil and gas facility, and any construction, site preparation, or reclamation activities associated  
32 with such operations.

33 Oil and gas facilities means the equipment and improvements used or installed for the  
34 exploration, production, transportation, treatment, and/or storage of oil and gas and waste  
35 products, including: an individual well pad built with one or more wells and operated to produce  
36 liquid petroleum and/or natural gas, including associated equipment required for such  
37 production; flowlines and ancillary equipment including but not limited to drip stations, vent

1 stations, pigging facilities, chemical injection stations and valve boxes; and temporary storage  
2 and construction staging yards in place for less than 6 months.

3 ...

4 Operator means any person who exercises the right to control the conduct of oil and gas  
5 operations.

6 ...

7 Pipeline means any flowline or crude oil transfer line as defined by the COGCC.

8 Pit means any natural or man-made depression in the ground used for oil and gas exploration or  
9 production purposes excluding steel, fiberglass, concrete or other similar vessels which do not  
10 release their contents to surrounding soil.

11 ...

12 Pre-production means the period preceding production in which oil and gas operations are  
13 prepared, including construction of well pads and access roads, installation of drilling rigs,  
14 drilling activities, cement casing of subsurface drilled wells, testing of the wells, the well  
15 completion process, and the hydraulic fracturing process.

16 ...

17 Produced water means water produced from a well or wellbore, including treatment fluid.

18 Production means the period in which one or more oil and gas wells is capable of producing  
19 hydrocarbons that flow through permanent separator facilities and into the pipeline gathering  
20 system.

21 ...

22 Water source means water bodies that supply domestic, agricultural or municipal uses, water  
23 wells that are registered with the Colorado Division of Water Resources, including household,  
24 domestic, livestock, irrigation, municipal/public and commercial wells, permitted or adjudicated  
25 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 means an oil or gas well, a hole drilled for the purpose of producing oil or gas,  
a well into which fluids are injected for the purpose of oil or gas exploration, a stratigraphic well  
for the purpose of oil or gas exploration, a gas storage well, or a well used for the purpose of  
monitoring or observing an oil or reservoir.

1 Well pad means areas that are directly disturbed during the drilling and subsequent operation of,  
2 or affected by production facilities directly associated with, any oil well or gas well.

3 ...

4 Section 13. This Ordinance repeals Ordinance 8435, extending to December 31, 2021 a  
5 moratorium imposed by Ordinance 8392 on the acceptance and processing of applications for  
6 any city permits on city open space properties and for any city permits or use review of new  
7 “Mining Industries” uses involving oil and gas extraction or exploration, which repeal shall be  
8 effective upon the effective date of this Ordinance.

9 Section 14. The immediate passage of this ordinance is necessary for the preservation of  
10 the public peace, health, or property and justify the adoption of this ordinance as an emergency  
11 measure. Studies have shown that oil and gas operations can have significant damaging effects  
12 on the public health, safety, and welfare of the environment and wildlife. The city council is  
13 passing the standards for oil and gas operations adopted with this ordinance to protect and  
14 minimize adverse impacts to public health, safety, and welfare and the environment from oil and  
15 gas operations. To protect the public’s health, safety, and welfare and to protect the environment  
16 and wildlife, the city council had adopted Ordinance 8392 which imposed a moratorium on the  
17 acceptance and process of applications for any city permits on city open space properties and for  
18 any city permits or use reviews of new “Mining Industries” uses involving oil and gas extraction  
19 or exploration to allow the city to prepare development standards for such uses consistent with  
20 Senate Bill 19-181 and considering studies on impacts of these uses on the public health, safety  
21 and welfare and the environment and wildlife and rules and regulations promulgated by the  
22 Colorado Oil and Gas Conservation Commission and the city’s neighboring jurisdictions. The  
23 moratorium was extended by Ordinance 8435 to December 31, 2021. Under the terms of  
24  
25

1 Ordinance 8435, said moratorium will expire on December 31, 2021. Immediate passage of this  
2 ordinance is necessary to ensure that the standards of this ordinance will be in effect prior to  
3 expiration of said moratorium. Therefore, this ordinance is hereby declared to be an emergency  
4 measure and as such shall be in full force and effect upon its passage.

5 Section 15. This ordinance is necessary to protect the public health, safety, and welfare  
6 of the residents of the city and covers matters of local concern.

7 Section 16. The city council deems it appropriate that this ordinance be published by title  
8 only and orders that copies of this ordinance be made available in the office of the city clerk for  
9 public inspection and acquisition.  
10

11  
12 INTRODUCED, READ ON FIRST READING, AND ORDERED PUBLISHED BY  
13 TITLE ONLY this 16<sup>th</sup> day of November 2021.

14  
15   
16 \_\_\_\_\_  
Aaron Brockett, Mayor

17 Attest:

18   
19 \_\_\_\_\_  
Elesha Johnson, City Clerk  
20  
21  
22  
23  
24  
25

1 READ ON SECOND READING, AMENDED, PASSED AND ADOPTED AS AN  
2 EMERGENCY MEASURE BY TWO-THIRDS OF THE COUNCIL MEMBERS PRESENT this  
3 14<sup>th</sup> day of December 2021.  
4

5   
6 \_\_\_\_\_  
7 Aaron Brockett, Mayor

8 Attest:

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10 \_\_\_\_\_  
11 Elesha Johnson, City Clerk  
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