



Land Use

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BOULDER COUNTY PLANNING COMMISSION

October 30, 2012, 4:00 P.M.

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

Docket DC-12-0003: Amendments to Oil and Gas Development Regulations

Public Meeting for the Planning Commission to consider proposed Land Use Code amendments addressing oil and gas development within the Boulder County Land Use Code

Coordinating Staff: Kimberly Sanchez, Planning Division Manager (Land Use Department)
Jeff Robbins, Outside Counsel on Oil and Gas Issues

AGENDA:

1. COUNTY STAFF PRESENTATION
 - a. Kim Sanchez / Jeff Robbins – Revisions to Draft Regulations
 - b. David Haines (Land Use Department, GIS) – Maps
2. PLANNING COMMISSION DISCUSSION / FINAL ACTION (Recommendation to the Board of County Commissioners)

Please note: No public testimony will be taken. All public comment received to date is available on the County's oil and gas website at: <http://www.bouldercounty.org/dept/landuse/pages/oilgas.aspx>

PACKET CONTENTS:

Item	Pages
o Land Use Department Memo	2 – 6
o REVISED Draft Regulations (Attachment A)	A1 – A39
o Motion from October 17, 2012 Planning Commission public hearing (Attachment B)	B1–B2
o Maps (Attachments C1, C2, C3, C4 show 1000' setback from occupied structures; Attachments C5, C6, C7, and C8 show existing well pads under proposed regulations)	C1–C8
o Memo from County's technical consultant (Attachment D)	D1–D3
o Proposed edits submitted by Dan Frazier at October 17 public hearing (Attachment E)	E1

SUMMARY

Today's public meeting is to consider the Draft Regulations which were revised by Staff, for a second time, in response to the direction received from the Planning Commission on October 17. Planning Commission closed the public hearing on October 17 and tabled Docket DC-12-0003 to October 30 at 4:00 p.m. for the limited purpose of further discussion on the discrete set of issues raised in their motion(s) made on October 17.

At the October 17 public hearing, Planning Commission reviewed the requested changes made to the initial draft presented on September 24 and directed Staff to make some additional changes to the Draft Regulations (see Planning Commission Motion – Attachment B). Included in their motion(s) was the recommendation for a 1000' setback from occupied structures (rather than 1500' as was requested previously and discussed on October 17) for the Expedited DPR eligibility criteria. They also authorized a number of other minor edits, which are addressed individually in the table below.

Of note is that Planning Commission, by a vote of 4-1, recommended that the Board of County Commissioners (BOCC) extend the moratorium on the intake and processing for oil and gas development plan review applications for an additional 3-6 months.

Other Follow-up Items

During Planning Commission's discussion there was question regarding whether the County's water policy addresses sale/lease of county water rights for energy development. While the County's current water policy does not directly speak to use of water rights for energy development, it is highly unlikely that any County-owned water rights could be used for energy development. Unlike other jurisdictions such as Aurora, Greeley, Ft. Lupton, and Windsor, the County is not a water service provider and as a result the County does not own extensive water rights that could be available to sell for this use or any other industrial use. The water rights the County does own would not be available for the following reasons:

1. Water rights can only be used for the purposes for which they were decreed and Boulder County only owns water rights that it acquired in connection with the acquisition of agricultural land. Most ditch companies in which Boulder County owns shares are limited to the beneficial use of agricultural irrigation. It would take a change of the water right through water court to allow for additional uses.
2. Almost all of Boulder County's water rights were purchased with the proceeds from open space sales taxes and usage of the water rights is restricted to open space purposes as defined in the sales tax resolutions.

Lastly, since the October 17 public hearing, two studies ("Hydrogen Sulfide, Oil and Gas, and People's Health" and "Leakage from Drill Pip Casing Subject to Shear Deformation") submitted by Planning Commissioners Young and Gerstle were circulated for consideration. These studies can be found on the County's oil and gas website at:

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

ACTION REQUESTED FROM PLANNING COMMISSION:

In order to keep on schedule under the time constraints of the moratorium, staff requests that following today's presentation and discussion, the Planning Commission take final action (approve and recommend approval of the Draft Regulations to the Board of County Commissioners).

Anticipated Schedule for Board of County Commissioner’s Review of the Draft Regulations:

- ***Tuesday November 13, 2012 at 4:00 P.M.*** - Staff will present the Draft Regulations to the Board of County Commissioners (BOCC). The BOCC will take public comment and provide direction to staff concerning the Draft Regulations.
- ***Wednesday November 14, 2012 at 11:00 A.M. (TBD)*** – Follow-up meeting if additional BOCC discussion and direction to staff is necessary after the November 14 public meeting [no public comment would be taken at this session].
- ***Meetings to follow will be posted on the County’s oil and gas website:***
<http://www.bouldercounty.org/dept/landuse/pages/oilgas.aspx>

Moratorium is in effect until February 4, 2013.

PROPOSED REVISIONS

The following table breaks down the proposed revisions that were made to the Draft Regulations pursuant to the direction given by Planning Commission at the October 17 public hearing. The items in Planning Commission’s October 17 motion are summarized and Staff’s response to each is discussed accordingly below. The proposed revisions are redlined in the revised Draft Regulations (Attachment A). Note: the revised Draft Regulations incorporated in the redline edits from the draft presented at the October 17, 2012 hearing.

Planning Commission Motion	Staff Response / Proposed Revision
1. Air monitoring	
Consider adding more details in air section, borrowing from water quality provisions, both on area of well site/operation being regulated as well as exact substances being regulated.	✓ No edits made to Draft Regulations. See memo from technical consultant (Mike Matheson) – Attachment D.
2. Silica dust	
Need more explicit regulation addressing silica dust.	✓ No edits made to Draft Regulations. See memo from technical consultant (Mike Matheson) – Attachment D.
3. Coordination with Office of Emergency Management (OEM)	
Commissioner Young made suggestions as to how to incorporate the Office of Emergency Management (OEM)’s comments into the Draft Regulations Emergency Response Standards.	✓ Edits made to Section 12-703(D)(2)(c) and (k). ✓ Chemical Disclosure (Section 12-800.E) was put back into the Draft Regulations.
4. Non-VOCs (Hydrogen sulfide)	
<ul style="list-style-type: none"> • Focusing emissions controls and monitoring on VOCs may miss some important volatile compounds, such as hydrogen sulfide. • Investigate whether requirements should be expanded to include other known noxious emissions from production equipment, compressors, diesel engines, etc. 	✓ No edits made to Draft Regulations. See memo from technical consultant (Mike Matheson)– Attachment D.

Boulder County Planning Commission
Special Session – Docket DC-12-0003: Amendments to Oil and Gas Regulations
October 30, 2012

Planning Commission Motion	Staff Response / Proposed Revision
5. Water quality table	
Commissioner Shanks provided some recommended changes to the water quality table (following Section 12-603 on p. 15).	✓ Edits made to Table 1. Water Quality Analytes (p. 15).
6. Dan Frazier edits (submitted at October 17, 2012 Planning Commission)	
Incorporate suggested edits proposed by Dan Frazier at the October 17 public hearing (see Attachment E).	✓ Made the recommended edits to Section 12-100(B).
7. Transportation requirements for Expedited and Standard DPR	
<ul style="list-style-type: none"> Given the timing of the on-going Oil & Gas Roadway Impact Study, Planning Commission will defer the details regarding Transportation requirements to the Board of County Commissioners (BOCC) for review. Planning Commission would like to see the final Oil & Gas Roadway Impact Study once it is available in order to provide comments to the BOCC, understanding this may not occur before the BOCC makes a final decision on the Draft Regulations. 	✓ Staff is continuing to rework the Transportation requirements with input from the Transportation Department.
8. Additional setbacks	
<ul style="list-style-type: none"> A 1500 ft. setback from occupied structures was presented at the October 17th public hearing. In reaction to these maps, Planning Commission made a motion recommending approval of a 1000 ft. setback from occupied structures. The intent is to allow for a 50/50 split of areas that are eligible for review under the Expedited and Standard processes. 	✓ See attached maps (Attachments C1 – C4) that show the 1000 ft. setback from occupied structures.
9. Utilization of existing well pads	
<ul style="list-style-type: none"> Planning Commission directed Staff to look into the utilization of existing well pads as an additional eligibility criterion for the Expedited review. This will encourage shared use of infrastructure. Need to narrowly define what well pad means. 	<ul style="list-style-type: none"> ✓ See attached maps (Attachments C5 – C8) which will be presented and discussed at the October 30th public meeting. ✓ “Well pad” is defined in Section 12-1400 Definitions. ✓ One benefit here is that an existing well pad would be required to come into compliance with the new regulations to the extent practical if it is utilized.
10. Timeline for review of adopted regulations	
Planning Commission would like the adopted regulations to undergo a review 6 months and 18 months after their effective date.	✓ No Code change necessary. This point will be covered in Planning Commission’s recommendation to the Board of County Commissioners (BOCC) and in the enabling resolution by the BOCC if adopted.

Planning Commission Motion	Staff Response / Proposed Revision
11. Moratorium extension	
Planning Commission, by a vote of 4-1, recommended that the Board of County Commissioners (BOCC) extend the moratorium an additional 3-6 months.	✓ This was a separate motion that will be passed onto the BOCC for their consideration at their first public hearing regarding the Draft Regulations on November 13.
12. Industry edits	
Staff has incorporated additional edits in response to comments received by Industry to date.	<ul style="list-style-type: none"> ✓ Edits made at Section 12-602(A)(1) and Section 12-703(B)(1) under general duty to minimize VOC emissions to address industry concerns about impracticality of eliminating all emissions. ✓ Edits made at Section 12-602(A)(2)(f) and Section 12-703(B)(2)(f) to incorporate option to visible alarm. ✓ Edit made at Section 12-602(A)(6) to address industry concerns about impracticality of capturing all produced gas. ✓ Edit made at Section 12-602(A)(7) to address industry concern that pneumatic controllers are not available for all applications.
13. Other edits	
<ul style="list-style-type: none"> • The provision addressing agricultural land mitigation that was added to the Expedited review needed to be better suited for the expedited process • Staff made additional edits per the request of the Boulder County Transportation Department. • Other staff recommended edits 	<ul style="list-style-type: none"> ✓ Edits made at Section 12-602(E) to flesh out agricultural land mitigation criteria for Expedited DPR. ✓ Edits made to Sections 12-800(H) and (O) concerning dust mitigation in the general conditions of approval. ✓ Edits made to Section 12-701(J) to include details for prevention of “illicit or inadvertent discharges” in the Water Quality Plan required for Standard review. ✓ Edits made to Section 12-601(D)(1) and Section 12-900(B) to clarify that if an operational conflict hearing is requested, the 45 day review period for expedited DPR may be extended. ✓ Edits made to 12-1000 to refine “Other Waivers” language. ✓ Edits made to 12-1200(A) to refine financial guarantee language by clarifying the cost estimate standard and providing Director discretion to waive financial guarantee under certain circumstances. ✓ Edits made to 12-1200(E) to clarify that Board of County Commissioner’s determination on a substantial modification appeal is not a final decision subject to judicial review. ✓ Edits made to 12-1300 to refine enforcement options to the County.

TEXT AMENDMENT CRITERIA REVIEW

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

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

The Planning Commission provides a recommendation to the Board of County Commissioners. The moratorium adopted by the Board of County Commissioners demonstrated the need for the

amendments. The amendments are not contrary to the intent and purpose of the Code but update and revise the outdated DPR regulations that are currently in place. The amendments do not conflict with the Boulder County Comprehensive Plan (BCCP); they implement many of the BCCP policies adopted by the Planning Commission on August 15, 2012. Consequently, staff finds the criteria for text amendments in Article 16-100.B. of the Land Use Code are met.

STAFF RECOMMENDS THAT THE PLANNING COMMISSION APPROVE AND RECOMMEND TO THE BOARD OF COUNTY COMMISSIONERS APPROVAL of Docket DC-12-0003: Amendments to Oil and Gas Development Regulations and the official record of the Docket before the Commission with its staff comments, public testimony, and Commission discussion/action.

ATTACHMENT A.1

Proposed New Article 12

Development Plan Review for Oil & Gas Operations

12-100 Purpose

- A. Boulder County acknowledges the existence of oil and gas mineral property rights within its unincorporated areas. It is the County's objective to exercise its fundamental duty to protect public health, safety, welfare, and the environment from potential adverse impacts of oil and gas exploration and development, and to minimize potential land use conflicts between those activities and current or planned land uses.
- B. Development plan review is the permitting procedure for oil and gas operations. This process is in place to because these operations involve industrial type activities which may occur in or near residential and rural areas. Traditional zoning would generally separate these types of uses to mitigate impacts but, because this use must occur near the resource, separation of uses is not possible and, thus, this Article has been promulgated to address this incompatibility. The purpose is to provide a framework for the ~~responsible~~ exploration and production of oil and gas resources in a manner that ~~is sensitive to~~ considers current, planned or future land uses and that mitigates adverse impacts to ~~and protects~~ the public health, safety, welfare, and the environment of the County.
- C. This Article is consistent with the land use authority over oil and gas operations that the Colorado legislature has provided the County and as has been defined and clarified by Colorado courts. Boulder County recognizes that certain Colorado state agencies and the federal government also have authority to regulate certain aspects of oil and gas operations. The regulations of this Article over the land use aspects of oil and gas operations are consistent with this authority. In particular, this Article is not intended to create and is not be applied so as to cause an operational conflict with the state's exercise of its authority over oil and gas operations, which arises when the effectuation of a local interest materially impedes or destroys the state interest in its regulation of oil and gas operations.

12-200 Authority of Article

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

12-300 Effective Date; Pre-Existing Uses

- A. This Article shall become effective on the date specified in the adopting resolution of the Board of County Commissioners. The provisions of this Article shall apply to all oil and gas operations for which a complete application for development plan review has not been accepted by the County as of the effective date.
- B. Boulder County acknowledges that there are oil and gas operations that were legally established prior to the effective date of this Article that do not conform to this Article. These non-conforming operations shall be allowed to continue provided the post effective date operation remains consistent with the pre-effective date operation. A nonconforming operation shall not

1 be extended, expanded, or altered in a manner that would otherwise be categorized a
2 substantial modification under Section 12-1200(E) of this Article. Any substantial modification to
3 a non-conforming use shall require a new approval under this Article.
4

- 5 C. Section 12-400(D)(1) of this Article provides that the expedited development plan review for new
6 oil and gas operations is not available for applications where the applicant fails to conduct the
7 pre-application conference with the County at least thirty (30) days prior to filing for an
8 Application for Permit to Drill (APD) from the Colorado Oil and Gas Conservation Commission
9 (COGCC). The County recognizes, however, that proposed new oil and gas operations have
10 received APD approval from the COGCC during the development of and prior to the effective
11 date of this Article. For these applications, the County encourages the use of the expedited
12 development plan review process. Accordingly, oil and gas operations with APD approval prior to
13 the effective date of this Article that otherwise qualify for expedited development plan review
14 may be processed as expedited development plan review applications.
15

16 **12-400 General Application Procedure for Expedited DPR and** 17 **Standard DPR**

- 18
19 A. **Development Plan Review Required.** All oil and gas operations on public and private land within
20 the unincorporated areas of Boulder County shall comply with this Article. Prior to the
21 commencement of any oil and gas operations in the unincorporated County, a development plan
22 review application must be submitted and approved in accordance with this Article. No other
23 form of discretionary land use review under this Code is required for oil and gas operations
24 covered by this Article 12. Development plan review approval is also required prior to the
25 issuance of any County building permits, or associated grading, access, floodplain, or other
26 County permits necessary for the oil and gas operation. Oil and gas operations which may not
27 require a building or other associated County permit must still obtain development plan review
28 approval under this Article.
29
- 30 B. **Expedited Development Plan Review Process.** The expedited development plan review process
31 is the County's process for applicants who voluntarily choose to meet its objective criteria and to
32 engage in most effective performance technologies and practices in the planning, development
33 and operation of new or substantially modified oil and gas operations. The process identifies
34 specific objective criteria for oil and gas operations. The expedited development plan review
35 process is optional and, while applicants are encouraged to use it, this Article also offers a
36 standard development plan review process for proposed operations that cannot meet the
37 expedited development plan review criteria or for applicants who choose the standard
38 development plan review process. The expedited development plan review process is an
39 administrative process that only requires review and approval by the Director.
40
- 41 C. **Standard Development Plan Review Process.** The standard development plan review process is
42 a regulatory process based primarily upon subjective or content specific criteria for new or
43 substantially modified oil and gas operations. The standard development plan review process is
44 available for applicants who choose it, for applications that do not qualify for expedited
45 development plan review, or for applications that are reclassified from expedited development
46 plan review to standard development plan review. Such applications shall be classified as
47 standard development plan review applications and shall be reviewed by the County and shall
48 require review, public hearing, and decision by the Board of County Commissioners.
49

1 **D. Pre-Application Conference.** Boulder County requires applicants to engage with local
2 communities, residents and other stakeholders at each phase of an oil and gas operation,
3 starting prior to exploration or development activity, in order to provide sufficient opportunity
4 for comment on plans, operations and performance, and to listen to concerns of the community,
5 and to address all reasonable concerns as a result of its proposed operation. The pre-application
6 conference will be used to meet this requirement.
7

8 **1. Timing.** A pre-application conference as defined in Article 3-201 of this Code shall be held at
9 least thirty (30) days prior to the applicant applying for a COGCC APD and prior to the
10 submission of an application for development plan review. The timing provision for the pre-
11 application conference is intended to allow the County to concurrently carry out its
12 regulatory procedures with those of the COGCC. Except for Applications under Section 12-
13 300(c), if the pre-application conference is not conducted at least thirty (30) days prior to the
14 applicant applying for the APD, the application cannot qualify for expedited development
15 plan review.
16

17 **2. Conference.** At the pre-application conference, the Director and the applicant will discuss
18 the points contained in Article 3-201 of this Code and review the County's development plan
19 review process so that the applicant can plan its proposed oil and gas operation in a manner
20 that ensures compliance with the development plan regulations and applicable state and
21 federal regulations. The pre-application conference will also inform the applicant about the
22 benefits of the expedited development plan review process. The pre-application conference
23 also allows the applicant and Director to explore site-specific concerns and issues that relate
24 to the development plan review process, to discuss project impacts and potential mitigation
25 methods, to discuss coordination of the County process with the state permitting process,
26 and to allow the applicant to preliminarily raise any potential operational conflict concerns.
27 Based upon the foregoing, applicants are encouraged to conduct the pre-application
28 conference with the County prior to completing well siting decisions. Completion of the pre-
29 application conference qualifies the applicant to submit an application for a development
30 plan review provided the application is filed within six (6) months of the pre-application
31 conference.
32

33 **3. Site Visit.** At the discretion of the Director after consultation with the surface owner, the
34 County may require a site visit as part of the pre-application conference with the applicant to
35 evaluate well locations, compliance with this Article, or mitigation measures that may be
36 required to adequately ensure compliance with this Article.
37

38 **E. Application Submission.** The application shall include documentation establishing that the
39 proposed operation is in compliance with all applicable requirements of this Article. Boulder
40 County encourages the submission of the application and supporting documentation in an
41 electronic format. If not electronically submitted, then the applicant shall submit three (3) copies
42 of the proposed development plan with the completed application form to the Land Use
43 Department. The application shall contain a certification from the applicant that the proposed
44 facility complies with all applicable provisions of this Article, and that the information in the
45 application, as well as in any accompanying documentation, is true and accurate. The application
46 shall be signed by the same person or entity who will sign the corresponding application to be
47 submitted to the COGCC. The Director shall determine whether an expedited development
48 plan review application is complete within ten (10) days after receipt of the application or
49 twenty (20) days if outside consultants or staff other than the Land Use Department assist the
50 Director with the completeness determination. The Director shall determine whether a
51 standard development plan review application is complete within twenty (20) days after receipt
52 of the application or forty (40) days if outside consultants or staff other than the Land Use
53 Department assist the Director with the completeness determination.

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1. **Application Deemed Incomplete.** If the application is found to be incomplete, the Director shall inform the applicant in writing of the deficiencies. No further action shall be taken on an application determined to be incomplete until the specified deficiencies have been addressed to the satisfaction of the Director. If the applicant fails to address the deficiencies within thirty (30) days after the notice of incompleteness, the application shall be deemed withdrawn, unless the applicant notifies the Department in writing of the need for additional time. Notwithstanding the foregoing, upon the request of the applicant, the County will process an application that has been deemed incomplete, however, the expedited development plan review application will be denied by the director and the standard development plan review application will receive a recommendation of denial at any hearing before the Board of County Commissioners.
 2. **Application Deemed Complete.** If the application is found to be complete, containing all documentation required by this Article, the Director shall date the application, inform the applicant of the finding of completeness, classify the application, and then review the application for compliance with the applicable standards and requirements of this Article.
- F. Classification of Oil and Gas Operation Application.** As part of the completeness determination, the Director shall also determine whether the application initially qualifies for the expedited development plan review process or whether the application is a standard development plan review application. Boulder County encourages applicants to make use of the expedited development plan review process.
- G. Re-Classification.** At any time prior to administrative action on the expedited development plan review application, the Director may adjust the review process classification for an application. If an application is classified standard development plan review, at any point prior to the time the Department calendars the public hearing before the Board of County Commissioners for the standard development plan review application, the applicant may tender supplemental information and documentation and request the Director reconsider the classification decision for the application.
- H. Notice.**
1. The Applicant shall mail notice to surface owners, to surrounding landowners, and to residents as identified in this section no less than ten (10) days prior to the application being submitted to the Department.
 2. Notice of the application shall be made as follows:
 - a. To the surface owners of the parcels of land on which the oil and gas operation is proposed to be located;
 - b. To the owners of the parcels of land within five hundred (500) feet of a proposed gathering line; and
 - c. To the owners of the parcels of land within one-half mile (2,640 feet) of the parcel on which the oil and gas operation is proposed to be located; and
 - d. To the physical address of all parcels within one-half mile (2,640 feet) of the parcel on which the oil and gas operation is proposed to be located if Boulder County Assessor's records indicate a mailing address for the parcel owner that is different than the physical address.

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2 The County Land Use Department shall provide the list of property owners within one-half
3 mile (2,640 feet) of the parcel on which the oil and gas operations is proposed to be located
4 to the applicant at the pre-application conference.
5

6 **3.** The notice shall contain the following:
7

- 8 a. A description of the proposed operation site location, including a legal description,
9 as well as a street address for the site, if available from the County's rural
10 addressing system; the identification of the applicant for the application; the
11 current business address, telephone number, and email address for the applicant; a
12 vicinity map; and a brief description and overview of the proposed operation including
13 details of the drilling techniques (i.e., whether the operation will include hydraulic
14 fracturing),.
15
16 b. information concerning the facilities and equipment proposed to be located at the
17 site when operational, and proposed access roads and gathering lines. The
18 anticipated submittal date of the application to the Department.
19
20 c. A statement that public comments on the application may be submitted to the
21 County Land Use Department after the application submittal date.
22
23 d. A statement concerning the County's right to enter property that is the subject of
24 the application as follows: "For the purpose of implementing and enforcing the
25 County's development plan review for oil and gas operation regulations, County staff may
26 from time to time need to enter onto the property that is the subject of a
27 development plan review application."
28
29 e. A statement that the applicant will be contacting any entities that maintains any
30 road used for access to the proposed operation to discuss the applicant's
31 transportation needs and to discuss the applicant sharing in road improvement and
32 maintenance through an agreement between the entity and the applicant.
33
34 f. A statement informing the recipients of the notice that they may request written
35 notification by the operator of the commencement of construction and
36 commencement of drilling operations (provided the application is approved).
37
38 g. The current mailing address, website address, and telephone number for the
39 County Land Use Department and the COGCC, as well as a statement that additional
40 information on the application is available from the County Land Use Department.
41
42 **I. Posting Sign Onsite.** The Applicant shall post a sign on the site in a location visible to the
43 public (i.e., visible from a public road) stating that a development plan review application has
44 been applied for and providing the phone number of the County Land Use Department where
45 information regarding the application may be obtained. The sign shall be provided to the
46 applicant by the County and shall be posted within five (5) days after the application has been
47 deemed complete.
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12-500 General Application Submittal Requirements

The following information must be submitted with an expedited development review plan application or a standard development review plan application:

- A. County Application Form.**
- B. Mineral Owner.** Certification of ownership of the mineral estate or all necessary lease interests in the mineral estate.
- C. Date of APD Filing.** The applicant shall provide the anticipated or actual date of its APD filing with the COGCC.
- D. Pre-application Conference Checklist.**
- E. Proof of Notice.** The applicant shall present proof of notice as required by Section 12-400(H) by submitting a copy of the notice letter and a list of the land owners notified.
- F. Verification of Legal Access and Use of Private Roads.** Information demonstrating that the applicant has the right to use private access roads which are necessary for the operation and that the applicant has entered into an agreement with the private road owner regarding maintenance and reimbursement for damages. Recorded or historically used easements providing access to or across the parcel(s) shall be provided.
- G. Proximity of Other Wells and Other Oil and Gas Operations.** A map showing the location of all producing, closed, abandoned, and shut-in wells and other oil and gas operations within one (1) mile of the site.
- H. Site Plan.** A map with north arrow and appropriate scale for the parcel on which the operation is proposed, indicating the following:
 - 1. Well Siting.** The location of wellhead, pumping units, tanks, and treaters. Expedited development plan review applications shall also include information establishing compliance with the well siting criteria of Section 12-601(B).
 - 2. Dimensions of the Site.** Dimensions of the site, indicating area in square feet and acres, and the area of the site to be disturbed for permanent operations and temporary operations.
 - 3. Easements and Rights-of-Way.** Utility line easements and rights-of-way within 150 feet of the proposed site and access road.
 - 4. Improvements.** Existing improvements within 1,500 feet of the location on which the operation is proposed.
 - 5. Existing and Proposed Facilities.** Existing and proposed facilities such as structures, pipelines, tanks, wells, gathering lines, flow lines, staging and storage areas, equipment, temporary use area and permanent well pads.
 - 6. Existing and Proposed Roads.** Existing and proposed roads within the site as well as ingress and egress from public and private roads.

- 1 **7. Site Features.** Site features such as floodplains, water bodies, drainage patterns, ditches,
2 wetlands or aquatic habitat, vegetative cover, wildlife habitat and wildlife migration
3 routes, and geologic features as defined in the Comprehensive Plan or identified onsite and
4 within 1,500 feet of the location on which the operation is proposed.
5
- 6 **8. Topography.** Existing and proposed topography at five-foot intervals to portray the
7 direction and slope of the area affected by operation within 1,500 feet.
8
- 9 **I. Agricultural Land Mitigation Plan.** An assessment of any agricultural lands potentially
10 impacted by the proposed oil and gas operation and a plan for mitigating said impacts in
11 compliance with Section 12-602(E) herein.
12
- 13 **J. Air Quality Plan.** A plan establishing compliance with the air quality provisions of either
14 Section 12-602(A) (for expedited development plan review applications) or Section 12-703(B)
15 (for standard development plan review applications).
16
- 17 **K. Emergency Response Standard and Emergency Preparedness Plan.** A plan establishing
18 compliance with the Emergency Response provisions of either Section 12-602(B) (for expedited
19 development plan review applications) or Section 12-703(D) (for standard development plan
20 review applications).
21
- 22 **L. Land Disturbance Mitigation Plan.** An assessment of areas of land disturbance, landscaping and
23 revegetation, an analysis of the species, character and density of existing vegetation on the site,
24 a summary of the potential impacts to vegetation as a result of the proposed operation, and a
25 plan demonstrating compliance with the standards of Section 12-602(F).
26
- 27 **M. Operation Plan.** A plan including the method and schedule for drilling, completion, transporting,
28 production and post-operation.
29
- 30 **N. Transportation, Roads, Access Standards, and Fees.** A plan establishing compliance with the
31 transportation provisions of either Section 12-602(D) (for expedited development plan review
32 applications) or Section 12-703(K) (for standard development plan review applications).
33
- 34 **O. Water Quality Plan.** A plan establishing compliance with the water quality provisions of either
35 Section 12-602(C) (for expedited development plan review applications) or Section 12-703(L)
36 (for standard development plan review applications).
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12-600 Expedited Development Plan Review

12-601 Process Specific to Expedited DPR

A. Administrative Action. An application that qualifies for the expedited development plan review process shall be reviewed and acted upon by the Director.

B. Eligibility for Expedited Development Plan Review. A proposed operation will qualify for the administrative expedited development plan review process based upon a determination by the Director that it is located in a manner that meets the following siting criteria:

1. The wellhead, pumping units, tanks, and treaters are at least 500 feet from any occupied structure.
2. The wellhead, pumping units, tanks, and treaters are at least 150 feet from any property line, unless verified written consent is obtained from affected property owners.
3. The wellhead, pumping units, tanks, and treaters are at least 500 feet from any surface water body including, but not limited to, ditches and reservoirs as identified and mapped on the County's Ditch and Reservoir Directory.
4. The wellhead, pumping units, tanks, and treaters are at least 500 feet from any domestic or commercial water wells or irrigation wells.
5. The wellhead, pumping units, tanks, and treaters are not located within a platted subdivision or mapped townships.
6. The wellhead, pumping units, tanks, and treaters are not located within a high hazard geologic area as defined in the Comprehensive Plan.
7. The wellhead, pumping units, tanks, and treaters are not located within a floodway as defined in Article 4-400.
8. The wellhead, pumping units, tanks, and treaters are not located within wetlands areas.
9. The wellhead, pumping units, tanks, and treaters are not located within mapped significant natural communities, natural landmarks and natural areas, rare plant areas, significant riparian corridors, or critical wildlife habitat as each is defined in the Comprehensive Plan.

C. Referral by Director.

1. Following determination that an application for expedited development plan review is complete, the Director shall promptly forward one copy to: the County Transportation, and Parks and Open Space Departments; Boulder County Public Health; the appropriate fire district or County Sheriff; and any appropriate municipality for comment. The Director may also refer the application to other government agencies or entities for review and comment. Referral comments on the proposed development plan shall be returned to the Director within fifteen (15) days from the date of transmittal of the referral.
2. The Director shall notify the properties as identified in 12-400(H)(2) of the receipt of the complete application. The notice shall also identify the classification of the application. The

notice shall indicate that a complete development plan review application has been made, include the phone number of the Land Use Department where information regarding the application may be obtained, and include a link to the County website for access to the complete application.

D. Review by Director.

1. The Director shall administratively review and make a determination on an application that qualifies for the expedited development plan review process within forty-five (45) days after it is deemed complete. The applicant shall have the ability to extend the foregoing time period. The Director may extend the foregoing time period if the applicant requests an operational conflict waiver hearing pursuant to Section 12-900(B). Failure to make a determination on the application within this time period shall result in the application being approved subject to the general oil and gas facility operation requirements and standard conditions of approval contained within this Article at Section 12-800.
2. As part of the review, the Director may conduct a site visit. Following review of the completed application within the time period in Section 12-601(D)(1), the Director may approve, approve with conditions necessary to ensure compliance with this Article, or deny the application based upon noncompliance with the expedited development plan review standards at Section 12-602. The Director shall provide its determination to the applicant in writing. The Land Use Department shall also provide public notice of the Director's decision by posting the Director's determination on the Boulder County website.
3. After approval of a development plan review application, the applicant shall comply with the provisions of Section 12-1200(C), Effect of the Approved Development Plan Review.

12-602 Review Standards Specific to Expedited DPR

All expedited development plan review applications shall be reviewed in accordance with the following standards which the Director has determined to be applicable based on the nature and extent of the proposed development. All applications for oil and gas facilities that demonstrate compliance with the following standards shall be approved under the expedited development plan review process.

A. Air Quality Standards. Air emissions from wells shall be in compliance with the permit and control provisions of the Colorado Air Quality Control Program, Title 25, Section 7, C.R.S., and the fugitive dust regulations administered by Boulder County Public Health. In addition, proposed oil and gas operations shall implement an air quality mitigation plan which establishes compliance with the following mitigation measures of this Section.

1. **General Duty to Minimize VOC Emissions.** All continuously operated equipment, including but not limited to, storage vessels, tanks, separators, pneumatic pumps, dehydrators, and compressors, shall route ~~all~~ natural gas and VOC vapors to a capture or control device with at least a 98% VOC destruction efficiency, to the maximum extent practicable. The Applicant shall submit to the County manufacture test or other data demonstrating a 98% VOC destruction or control efficiency. Any flare, auto ignition system, recorder, vapor recovery device or other equipment used to meet the 98% VOC destruction or control efficiency requirement shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manuals.
2. **Flares and Combustion Devices.** All flares shall be designed and operated as follows:

- a. The flare shall be fired with natural gas and shall be operated with a 98% VOC destruction efficiency.
 - b. The flare shall be designed and operated in a manner that will ensure no visible emissions, pursuant to the provisions of 40 CFR 60.18(f), except for periods not to exceed a total of 5 minutes during any 2 consecutive hours.
 - c. The flare shall be operated with a flame present at all times when emissions may be vented to it, pursuant to the methods specified in 40 CFR 60.18(f).
 - d. The flare shall comply with the specifications detailed in 40 CFR 60.18(c)(3)-(6).
 - e. An automatic flame ignition system shall be installed.
 - f. If using a pilot flame ignition system, the presence of a pilot flame shall be monitored using a thermocouple or other equivalent device to detect the presence of a flame. A pilot flame shall be maintained at all times in the flare's pilot light burner. If the pilot flame goes out and does not relight, then if no telemetry alarm system is in place a visible alarm shall be in place on-site and activated.
 - g. If using an electric arc ignition system, the arcing of the electric arc ignition system shall pulse continually and a device shall be installed and used to continuously monitor the electric arc ignition system.
 - h. Any flare, auto ignition system, and recorder shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manuals.
- 3. Fugitive Emissions.** The operator will develop and maintain a leak detection and component repair program, such as a leak detection and repair program, using most effective performance technologies and practices for equipment used on the well site for permanent operations.
- 4. Use of Closed Loop Pitless Systems for the Containment and/or Recycling of Drilling and Completion Fluids.** Wells will be drilled, completed and operated using closed loop pitless systems for containment and/or recycling of all drilling, completion, flowback and produced fluids.
- 5. Green Completions.** For each well completion operation with hydraulic fracturing, the operator must control emissions by the operational procedures set forth below.
- a. For the duration of flowback, route the recovered liquids into one or more storage vessels or re-inject the recovered liquids into the well or another well, and route the recovered gas into a gas flow line or collection system, re-inject the recovered gas into the well or another well, use the recovered gas as an on-site fuel source, or use the recovered gas for another useful purpose that a purchased fuel or raw material would serve, with no direct release to the atmosphere.
 - b. If compliance with the prior paragraph is infeasible the operator must capture and direct flowback emissions to a completion combustion device equipped with a reliable continuous ignition source over the duration of flowback, except in conditions that may result in a fire hazard or explosion, or where high heat emissions from a completion combustion device may negatively impact waterways

1 or nearby structures. Non-flammable gas may be vented temporarily until
2 flammable gas is encountered where capture or combustion is not feasible.
3 Completion combustion devices must be equipped with a reliable continuous
4 ignition source over the duration of flowback.
5

6 c. Operators must maximize resource recovery and minimize releases to the
7 atmosphere during flowback and subsequent recovery / operation.
8

9 d. For wildcat or delineation wells in a location without a pipeline, each well
10 completion operation with hydraulic fracturing at a gas wellhead affected facility
11 must reduce emissions by using a completion combustion device equipped with a
12 reliable continuous ignition source over the duration of flowback.
13

14 e. The operator must maintain a log for each well completion operation at each gas
15 wellhead affected facility. The log must be completed on a daily basis and must
16 contain the records specified in 40 C.F.R. § 60.5420(c)(1)(iii).
17

18 f. The operator of a well must notify the County at least 2 days prior to the
19 commencement of well drilling and completion. The notification shall include
20 contact information for the operator; the API well number, the latitude and
21 longitude coordinates for each well in decimal degrees to an accuracy and precision
22 of five (5) decimals of a degree using the North American Datum of 1983; and the
23 planned date of the beginning of drilling and completion / flowback. The notice may
24 be submitted in writing or in electronic format.
25

26 **6. Capture of Produced Gas from Wells.** Gas produced during production shall be captured
27 and not flared or vented to the maximum extent practicable.
28

29 **7. Pneumatic controllers.** The operator shall use only no bleed pneumatic controllers, where
30 such controllers are available for the proposed application.
31

32 **8. Maintenance During Well Blowdowns.** The operational plan shall require technologies or
33 practices which minimize or eliminate natural gas emissions during well maintenance or
34 blowdowns.
35

36 **9. Maintenance of Gathering Lines and Pipelines.** The operational plan shall require
37 technologies or practices which minimize or eliminate emissions or spills during
38 maintenance of pipelines.
39

40 **10. Rod-Packing Replacement.** Operators shall replace rod-packing from reciprocating
41 compressors every 26,000 hours or 36 months, whichever comes first.
42

43 **11. Certification.** An authorized representative for the operator must submit annual reports to
44 the Director certifying compliance with these air quality requirements and documenting any
45 periods of non-compliance, including the date and duration of each deviation and a
46 compliance plan and schedule to achieve compliance. The reports must contain a
47 certification as to the truth, accuracy and completeness of the reports.
48

49 **B. Emergency Response.** Oil and gas operations shall not cause unreasonable risks of emergency
50 situations such as explosions, fires, gas, oil or water pipeline leaks, ruptures, hydrogen sulfide or
51 other toxic gas or fluid emissions, and hazardous material vehicle accidents or spills. Each operator
52 with an operation in the County is required to implement an emergency preparedness plan as
53 described in Section 12-703(D).

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2 **C. Water Quality Monitoring and Well Testing.** Proposed oil and gas operations shall implement a
3 water quality monitoring and well testing plan which establishes compliance with the criteria of this
4 Section.
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6 **1. Abandoned Well Assessment.** Assessment and monitoring of plugged and abandoned and
7 dry and abandoned wells (abandoned wells) within one-quarter (1/4) mile of the projected
8 track of the borehole of a proposed well.
9

10 a. Based upon examination of COGCC and other publicly available records, operators
11 shall identify all abandoned wells located within one-quarter (1/4) mile of the
12 projected track of the borehole of a proposed well. The operator shall assess the
13 risk of leaking gas or water to the ground surface or into subsurface water
14 resources, taking into account plugging and cementing procedures described in any
15 recompletion or P&A report filed with the COGCC. The operator shall notify the
16 Director and COGCC of the results of the assessment of the plugging and cementing
17 procedures.
18

19 b. Operators shall use reasonable good faith efforts to obtain access to all abandoned
20 wells identified under Section 12-602(C)(1)(a) above to conduct a soil gas survey at
21 all abandoned wells located within one-quarter (1/4) mile of the projected track of
22 the borehole of a proposed well prior to production from the proposed well and
23 again one (1) year and thereafter every three (3) years after production has
24 commenced. Operators shall submit the results of the soil gas survey to the
25 Director and the COGCC within three (3) months of conducting the survey or advise
26 the Director that access to the abandoned wells could not be obtained from the
27 surface owner.
28

29 **2. Water Well Sampling.** Based upon records from the Colorado Division of Water Resources,
30 the operator will identify and offer to sample all water wells located within one quarter mile
31 (¼) mile of the projected track of the borehole of a proposed well. If a well owner desires
32 the well be tested, the operator shall test the well prior to the start of heavy equipment
33 operations at the site. The water well testing described in this Section shall include testing
34 for the analytes listed in Table 1.
35

36 Field observations such as damaged or unsanitary well conditions, adjacent potential
37 pollution sources, odor, water color, sediment, bubbles, and effervescence shall also be
38 included. The location of the water well shall be surveyed using a GPS with sub-meter
39 resolution.
40

41 a. If free gas or a dissolved methane concentration level greater than two (2)
42 milligrams per liter (mg/l) is detected in a water well, gas compositional analysis
43 and stable isotope analysis of the methane (carbon and deuterium) shall be
44 performed to determine gas type. If the test results indicate biogenic gas, no
45 further isotopic testing shall be done. If the test results indicate thermogenic or a
46 mixture of thermogenic and biogenic gas, then the operator shall submit to the
47 Director and COGCC an action plan to determine the source of the gas. If the
48 methane concentration increases by more than five (5) mg/l between sampling
49 periods, or increases to more than ten (10) mg/l, the operator shall notify the
50 Director, the COGCC and the owner of the water well immediately.
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52 b. If BTEX and/or TPH are detected as a result of testing the operator will notify the
53 Director, the COGCC and the owner of the water well immediately.

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- c. Operators shall make a good faith effort to conduct initial baseline testing of the identified water wells prior to the start of heavy equipment operations at the site; however, not conducting baseline testing because access to water wells cannot be obtained shall not be grounds for denial of an Application. Within one (1) year after completion of the proposed well, a “post-completion” test shall be performed for the same analytical parameters listed above and repeated three (3) and six (6) years after the completion of the well. If no significant changes from the baseline have been identified after the third test (i.e. the six-year test), no further testing shall be required, however, a final well test shall be conducted at time of final reclamation of oil and gas location . Additional “post-completion” test(s) may be required if changes in water quality are identified during follow-up testing. The Director may require further water well sampling at any time in response to complaints from water well owners.
 - d. Copies of all test results described above shall be provided to the Director, the COGCC and the water well owner within three (3) months of collecting the samples. The analytical data and surveyed well locations shall also be submitted to the Director and COGCC in an electronic data deliverable format.

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3. **Qualified Independent Professional Consultant.** All abandoned well assessments and water well testing required herein shall be conducted by a qualified independent professional consultant or engineer approved by the Director.

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D. **Transportation, Roads, Access Standards, and Fees.** Access roads on the site and access points to public roads as identified in the application materials shall be reviewed by the County Transportation Department and shall be built and maintained in accordance with the Transportation Standards. All proposed transportation routes to the site shall also be reviewed and approved by the County Transportation Department to minimize traffic hazards and adverse impacts on public roadways. Existing roads shall be used to minimize land disturbance unless traffic safety, visual or noise concerns, or other adverse surface impacts clearly dictate otherwise. All applicable transportation fees shall be paid prior to issuance of a development plan permit which fee shall be in lieu of the applicant having to create a public road transportation impact study and mitigation plan.

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E. **Agricultural Land Mitigation.** Oil and gas operations are to be located primarily based upon the eligibility criteria of Section 12-601(B). Where possible, oil and gas operations shall also be located and conducted so as to use only as much of the surface as is reasonably necessary for the operation of the facility and to avoid the unreasonable loss of agricultural land, including farm or ranch land, or any other vegetated land. {placeholder}

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F. **Land Disturbance Standards.** The following mitigation measures shall be used to achieve compatibility and reduce land use impacts:

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- 1. Pad dimensions of a minimum size necessary to accommodate operational needs while minimizing surface disturbance.
 - 2. Structures and surface equipment of the minimal size necessary to satisfy present and future operational needs.
 - 3. Oil and gas operations located in a manner that minimizes the amount of cut and fill.

1 **G. General Oil and Gas Facility Operational Requirements.** The general oil and gas facility operational
2 requirements set forth at Section 12-800 shall apply to each approved development plan in the form
3 of conditions of approval.
4

5 **H. Pipelines.** Any newly constructed or substantially modified pipelines on site must meet the
6 Additional Provisions listed at Article 4-514(E)(5)(a) – (f). Note: Any newly constructed or
7 substantially modified pipelines off site may, at discretion of the Director, need to comply with all of
8 Article 4-514(E).
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10 **12-603 Reclassification of Expedited DPR Application to Standard** 11 **DPR Application Following Administrative Denial or Conditional** 12 **Approval**

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14 Should the Director deny administrative approval or conditionally approve the application in a manner
15 unacceptable to the applicant, upon written request of the applicant the Director shall reclassify the
16 application as a standard development plan. The applicant must pay the additional fees associated with
17 a standard application and file the additional application submittal requirements necessary for standard
18 development plan review with the County. If the applicant fails to pay the additional fees and file the
19 additional application submittal requirements with the County within ninety (90) days of the Director's
20 determination, the application shall be deemed withdrawn. The applicant has no right of judicial review
21 of a denied or conditionally approved expedited development plan review and must exhaust the
22 administrative remedy of processing the proposed operation through the standard development plan
23 review process as a condition precedent to judicial review pursuant to Section 12-1100.

Table 1. Water Quality Analytes	
GENERAL WATER QUALITY	Alkalinity
	Conductivity & TDS
	pH
	Dissolved Organic Carbon (or Total Organic Carbon)
	Bacteria
	Hydrogen Sulphide
MAJOR IONS	Calcium
	Chloride
	Fluoride
	Magnesium
	Potassium
	Sodium
	Sulfate
	Nitrate + Nitrite (total)
METALS	Arsenic
	Barium
	Boron
	Chromium
	Copper
	Iron
	Lead
	Manganese
	Selenium
	Strontium
VOLATILE ORGANIC COMPOUNDS	Methane
	BTEX compounds (Benzene, Toluene, Ethylbenzene, Xylene)
	Total Petroleum Hydrocarbons (TPH)
OTHER	Water Level
	Stable isotopes of water (<u>Oxygen-18 and Deuterium</u>), carbon <u>13</u> and sulfur <u>34</u> . (Oxygen-18 and Deuterium)

12-700 Standard Development Plan Review

12-701 Application Requirements Specific to Standard DPR

A standard development plan review application shall contain all the general application requirements for the development plan review application at Section 12-500 plus the following assessment and mitigation plans. The assessment and mitigation plans shall be developed based upon the standards in Section 12-703 below and by reference to the Boulder County Comprehensive Plan.

- A. Agricultural Land Mitigation Plan.** An assessment of any agricultural lands potentially impacted by the proposed oil and gas operation and a plan for mitigating said impacts in compliance with Section 12-703(A) herein.
- B. Cultural and Historic Resources Mitigation Plan.** A cultural, historical and archeological survey of the parcel or parcels to be used for the proposed oil and gas operation which demonstrates compliance with the standards of Section 12-703(C).
- C. Geologic Hazard Area Mitigation Plan.** A geologic area mitigation plan which demonstrates compliance with the standards of Section 12-703(E).
- D. Land Disturbance Mitigation Plan.** A plan showing areas of land disturbance, landscaping and revegetation. The plan shall include an analysis of the existing vegetation on the site to establish a baseline for re-vegetation upon temporary or final reclamation or abandonment of the operation. The analysis shall include a written description of the species, character and density of existing vegetation on the site and a summary of the potential impacts to vegetation as a result of the proposed operation. The plan shall demonstrate compliance with the standards of Section 12-703(F).
- E. Natural Resources Mitigation Plan.** Information demonstrating compliance with Section 12-703(G).
- F. Recreational Activity Mitigation Plan.** Information establishing any potential impacts to recreational activities by the proposed oil and gas operation and a plan which demonstrates compliance with the standards of Section 12-703(H).
- G. Scenic Attributes and Rural Character Mitigation Plan.** An assessment of scenic attributes and rural character potentially impacted by the proposed oil and gas operation and a plan for mitigating said impacts in compliance with Section 12-703(I).
- H. Surrounding Land Uses Mitigation Plan** Information establishing surrounding land uses to the proposed oil and gas operation, an assessment of any potential impacts to the adjacent and near land uses, and a plan mitigating said impacts in compliance with Section 12-703(J) herein.
- I. Transportation Plan.** Information establishing compliance with the transportation standards of Section 12-703(K).
- J. Water Quality Plan.** A plan establishing compliance with the water quality provisions of Section 12-703(L). The plan may include details such as the applicant's plans for water quality testing, prevention of illicit or inadvertent discharges, stormwater discharge management, containment of pollutants, and spill notification as required by federal and state agencies. The

provisions of Article 12-602(C) may also be considered and used in the implementation of the plan.

- K. Wetlands Protection Plan.** Information demonstrating compliance with the standards of Section 12-703(M).

12-702 Process Specific to Standard DPR

Upon determination that an application is a standard permit review process and that the application is complete, the Director shall begin review of the application for compliance with this Article.

- A. Applicant Neighborhood Meeting.** The applicant will be required to conduct a neighborhood meeting at a convenient public location with adjacent and surrounding land owners and other interested parties. The meeting must occur no earlier than 30 days in advance of an application being filed and must be held prior to the scheduling of the Board of County Commissioners' public hearing. The neighborhood meeting shall be noticed to the County and to all individuals entitled to notice pursuant to Section 12-400(H)(2) at least ten days prior to the meeting. At the neighborhood meeting, the applicant shall provide an overview of its proposed oil and gas operation and allow those in attendance to provide input as to the proposed operation, including, but not limited to, well siting and well locations, issues that arise from application of this Article to the proposed operation, and suggested mitigation to adequately ensure compliance with this Article. A summary of the neighbor comments shall be provided with the application.
- B. Referral Agency Comments.** Following determination that an application is complete, the Director shall promptly forward one copy to the County Transportation and Parks and Open Space Departments; Boulder County Public Health; the appropriate fire district or County Sheriff; and any appropriate municipality for comment. The Director may also refer the application to other government agencies or entities for review and comment. Referral comments on the proposed development shall be returned to the Director no later than thirty-five (35) days from the date of application.
- C. Consultant Review.** The Director may submit the application for review and recommendation by consultants retained by the County with the necessary expertise to review technical or other aspects of the application which are outside the expertise of the Land Use Department. The applicant shall reimburse the County any costs associated with this consultant review.
- D. Site Visit.** The Department will conduct a site visit for standard development plan applications to allow the Director to determine compliance with these standards. When possible this site visit will be coordinated with site visits required by other governmental agencies.
- E. Notice of Board of County Commissioner's Hearing.** Not less than fourteen (14) days prior to the public hearing on the standard permit review, a legal notice of the public hearing before the Board shall be published in a newspaper of general circulation within the County, and written notice to the surface owner and adjacent property owners of the time and place of the Board's public hearing shall be provided pursuant to Article 3-205(C) herein.
- F. Decision by Board of Commissioners.** The Board of Commissioners shall conduct a noticed public hearing(s) for review of a standard development plan review application. Any action taken by the Board of County Commissioners will be based on the entire record of proceedings on the matter, as that record is maintained by the Land Use Department Director and/or the Clerk of the Board of County Commissioners, including but not limited to: tape recordings or true transcripts of public hearings where the proposal was discussed; all written comments of

1 referral agencies; the review and recommendations of the Land Use Department; and all
2 written commitments, statements, or evidence made or submitted by or in behalf of the
3 applicants, landowners or interest holders or their agents, and interested members of the
4 public. The applicant shall have the burden of proof to show that the applicable criteria for
5 approval have been met. On the basis of the evidence received at such public hearing(s), the
6 Board shall make its determination to approve, approve with conditions necessary to ensure
7 compliance with this Article, or deny the application. The Board's action shall contain
8 appropriate findings or reasons in support of its decision. The Board shall render its decision
9 on the proposed development plan in writing as soon as practical following conclusion of the
10 public hearing.
11

12 **12-703 Review Criteria and Standards Specific to Standard DPR**

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14 All standard development plan review applications shall be reviewed in accordance with the following
15 standards which the Board, based upon advice of the Director, has determined to be applicable based on
16 the nature and extent of the proposed development. When two or more of the standards listed below
17 conflict, the Board, based upon advice of the Director, shall evaluate the applicability and importance of
18 each of the conflicting standards under the facts of the specific application and make a reasonable
19 attempt to balance the conflicting standards in reaching a development plan decision. The Board's
20 decision on a standard development plan review application for an oil and gas operation will be based
21 upon its compliance with all development plan standards.
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23 **A. Agricultural Land Standards**

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25 1. **Loss of Agricultural Land.** Oil and gas operations shall be located and conducted so as to
26 use only as much of the surface as is reasonably necessary for the operation of the
27 facility and to avoid the unreasonable loss of agricultural land, including farm or ranch
28 land, or any other vegetated land.
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30 2. **Impact on Agricultural Operations.** Oil and gas operations shall be located and
31 conducted in a manner to minimize the impact to agricultural operations.
32
33 3. **Impact on Grazing.** Oil and gas operations shall be located and conducted in a manner
34 so as to not cause significant impact to livestock, grazing permits or leases, or grazing
35 permittees or lessees.
36

37 **B. Air Quality Standards.** Air emissions from the wells shall be in compliance with the permit and 38 control provisions of the Colorado Air Quality Control Program, Title 25, Section 7, C.R.S., and the 39 fugitive dust regulations administered by the Boulder County Public Health Department. 40

- 41 1. **General Duty to Minimize VOC Emissions.** All continuously operated equipment, including
42 but not limited to, storage vessels and tanks, separators, pneumatic pumps, dehydrators,
43 and compressors, shall route ~~all~~ natural gas and VOC vapors to a capture or control device
44 with at least a 98% VOC destruction efficiency, to the maximum extent practicable.
45 Operators shall submit to the County manufacture test or other data demonstrating a 98%
46 VOC destruction or control efficiency. Any flare, auto ignition system, recorder, vapor
47 recovery device or other equipment used to meet the 98% VOC destruction or control
48 efficiency requirement shall be installed, calibrated, operated, and maintained in accordance
49 with the manufacturer's recommendations, instructions, and operating manuals.
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51 2. **Flares and Combustion Devices** All flares shall be designed and operated as follows:
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- a. The flare shall be fired with natural gas and shall be operated with a 98% VOC destruction efficiency.
- b. The flare shall be designed and operated in a manner that will ensure no visible emissions, as determined by 40 CFR 60.18(f), except for periods not to exceed a total of 5 minutes during any 2 consecutive hours.
- c. The flare shall be operated with a flame present at all times when emissions may be vented to it, as determined by methods specified in 40 CFR 60.18(f).
- d. The flare shall comply with the specifications detailed in 40 CFR 60.18(c)(3)-(6).
- e. An automatic flame ignition system shall be installed.
- f. If using a pilot flame ignition system, the presence of a pilot flame shall be monitored using a thermocouple or other equivalent device to detect the presence of a flame. A pilot flame shall be maintained at all times in the flare's pilot light burner. If the pilot flame goes out and does not relight, then if no telemetry system is in place a visible alarm shall be in place on-site and activated.
- g. If using an electric arc ignition system, the arcing of the electric arc ignition system shall pulse continually and a device shall be installed and used to continuously monitor the electric arc ignition system.
- h. Any flare, auto ignition system, and recorder shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manuals.

3. Fugitive Emissions. The operator will develop and maintain a leak detection and component repair program, such as a leak detection and repair program, using most effective performance technologies and practices for equipment used on the well site for permanent operations.

4. Certification. An authorized representative for the operator must submit annual reports to the Director certifying compliance with these air quality requirements and documenting any periods of non-compliance, including the date and duration of each deviation and a compliance plan and schedule to achieve compliance. The reports must contain a certification as to the truth, accuracy and completeness of the reports.

C. Cultural and Historic Resources Standards. The installation and operation of any oil and gas operation shall not cause significant degradation of cultural or historic resources, of sites eligible for County landmarking, or the National Historic Register.

D. Emergency Response Standards.

1. In General. Oil and gas operations shall not cause unreasonable risks of emergency situations such as explosions, fires, gas, oil or water pipeline leaks, ruptures, hydrogen sulfide or other toxic gas or fluid emissions, and hazardous material vehicle accidents or spills.

2. Emergency Preparedness Plan. Each operator with an operation in the County is required to implement an emergency preparedness plan for each specific operation site. The plan shall be referred to and approved by the Boulder County Sheriff, the Office of Emergency

1 Management, and the applicable fire district and filed with the County and updated on an
2 annual basis or as conditions change (responsible field personnel change, ownership
3 changes, etc.). The emergency preparedness plan shall consist of at least the following
4 information:
5

6 a. Name, address and phone number, including 24-hour emergency numbers for at least
7 two persons located in or near Boulder County who are responsible for emergency
8 field operations.
9

10 b. An as-built facilities map in a format suitable for input into the County's GIS system
11 depicting the locations and type of above and below ground facilities including sizes,
12 and depths below grade of all oil and gas gathering and transmission lines and
13 associated equipment, isolation valves, surface operations and their functions, as well
14 as transportation routes to and from exploration and development sites, for
15 emergency response and management purposes. The information concerning
16 pipelines and isolation valves shall be held confidentially by the County's Office of
17 Emergency Management, and shall only be disclosed in the event of an emergency.
18 The County shall deny the right of inspection of the as-built facilities maps to the
19 public pursuant to C.R.S. § 24-72-204.
20

21 c. Detailed information addressing each potential emergency that may be associated
22 with the operation. This may include any or all of the following: explosions, fires, gas,
23 oil or water pipeline leaks or ruptures, hydrogen sulfide or other toxic gas emissions,
24 or hazardous material vehicle accidents or spills. For each potential emergency,
25 threshold / trigger levels shall be pre-identified that govern when an emergency state
26 is declared by the operator.
27

28 d. The plan shall include a provision that any spill outside of the containment area or
29 which has the potential to leave the facility or to threaten a water body shall be
30 reported to the emergency dispatch and the Director immediately.
31

32 e. Detailed information identifying access or evacuation routes, and health care facilities
33 anticipated to be used.
34

35 f. Project specific emergency preparedness plans are required for any project that
36 involves drilling or penetrating through known zones of hydrogen sulfide gas.
37

38 g. The plan shall include a provision that obligates the operator to reimburse the
39 appropriate emergency response service providers for costs incurred in connection
40 with any emergency.
41

42 h. Detailed information that the operator has adequate personnel, supplies, and funding
43 to implement the emergency response plan immediately at all times during
44 construction and operations.
45

46 i. The plan shall include a provision that obligates the operator to disclose to the County
47 in table format of the name, CAS number, volume, storage, containment and disposal
48 method for all drilling and completion chemicals (solids, fluids, and gases) used on the
49 proposed well site. The plan shall include a provision that obligates the operator to
50 keep on each site and immediately available current Material Safety Data Sheets
51 (MSDS) for all chemicals used or stored on a site. The MSDS sheets shall be provided
52 immediately upon request to the Director, a public safety officer, or a health
53 professional.

i. The plan shall include a provision requiring the operator to have readily available information onsite identifying the chemicals used in hydraulic fracturing fluids to inform, if necessary, emergency providers of the chemicals in case of a spill requiring emergency response.

j-k. The plan shall include a provision establishing a process by which the operator engages with the surrounding neighbors to educate them on the risks and benefits of the on-site operations and to establish a process for surrounding neighbors to communicate with the operator.

E. Geologic Hazard Area. To the maximum extent practicable, the installation and operation of any oil and gas operation shall not be located in geologic hazard areas as mapped in the Comprehensive Plan. If an operation is located within a geologic hazard area, the applicant shall take all reasonable actions to mitigate impacts to the geologic hazard area.

F. Land Disturbance Standards. The following mitigation measures shall be used to achieve compatibility and reduce land use impacts:

1. Pad dimensions of a minimum size necessary to accommodate operational needs while minimizing surface disturbance.
2. Structures and surface equipment of the minimal size necessary to satisfy present and future operational needs.
3. Oil and gas operations located in a manner that minimizes the amount of cut and fill.
4. Oil and gas operations use and sharing of existing infrastructure, minimizing the installation of new facilities, and avoiding additional disturbance to lands in a manner that reduces the introduction of significant new land use impacts to the environment, landowners and natural resources.
5. Landscaping plans including drought tolerant species that are native and less desirable to wildlife and suitable for the climate and soil conditions of the area. Where buffering is accomplished with vegetation, an irrigation plan is required.
6. The application shall include an analysis of the existing vegetation on the site to establish a baseline for re-vegetation upon temporary or final reclamation or abandonment of the operation. The analysis shall include a written description of the species, character and density of existing vegetation on the site and a summary of the potential impacts to vegetation as a result of the proposed operation. The application shall include any COGCC required interim and final reclamation procedures.

G. Natural Resource Standards. The installation and operation of any oil and gas operation shall not cause significant degradation to mapped significant natural communities, natural landmarks and natural areas, rare plant areas, significant riparian corridors, or critical wildlife habitat as defined in the Comprehensive Plan or identified on site. Among other mitigation measures to achieve compliance with this standard, proposed oil and gas operations shall use the compatibility siting criteria of Section 12-703(J)(1) to prevent degradation of these important County attributes.

H. Recreational Activity Standards. The installation and operation of any oil and gas operation shall not cause significant degradation to the quality and quantity of recreational activities in the County. Methods to achieve compliance with this standard include, but are not limited to, locating operations away from trails and from property used for recreational purposes. .

1
2 **I. Scenic and Rural Character Standards.** The installation and operation of any oil and gas
3 operation shall not cause significant degradation to the scenic attributes and rural character of
4 Boulder County. The following standards are methods to prevent degradation to the scenic
5 attributes and rural character of Boulder County:
6

- 7
- 8 1. **Buffering from Sensitive Visual Areas.** The operation should be buffered from sensitive
9 visual areas (i.e., roads, property lines, or residences) by providing landscaping along
10 the perimeter of the site between the surface equipment and the sensitive visual area.
11
 - 12 2. **Existing Vegetation.** The operation should be located in areas that maximize the
13 amount of natural screening available for the facility. Natural screening includes, but is
14 not limited to, the use of existing vegetation as a background, the construction of the
15 operation near screening stands of vegetation, or placement in valleys allowing
16 topographic screening. The operation should be constructed in a manner to minimize
17 the removal of and damage to existing trees and vegetation. If the operation requires
18 clearing trees or vegetation, the edges of the cleared vegetation should be feathered
19 and thinned and the vegetation should be mowed or brush-hogged while leaving root
20 structure intact, instead of scraping the surface.
21
 - 22 3. **Compatibility Siting Criteria.** Use of the compatibility siting criteria of Section 12-
23 703(J)(1) will also prevent degradation to the scenic attributes and rural character of
24 Boulder County.
25
 - 26 4. **Low Profile.** To the maximum extent practicable, oil and gas operations should use low
27 profile tanks or less intrusive equipment.

28 **J. Surrounding Land Uses Standards.** Oil and gas operations shall be sited and operated in a
29 manner so that the operation is compatible with surrounding land uses to the maximum extent
30 practicable. The following techniques or actions shall be used in order to achieve compatibility
31 between the proposed oil and gas operation and surrounding land uses. Distance from
32 surrounding land uses shall most effectively ensure compatibility between proposed oil and gas
33 operations and existing land uses. In addition, locating the operation based upon the following
34 site-specific characteristics will assist in creating a compatible operation:
35

- 36
- 37 1. Oil and gas operations shall be located as far as possible from surrounding land uses.
38
 - 39 2. Oil and gas operations shall be sited away from prominent natural features such as
40 distinctive rock and land forms, vegetative patterns, river and streams and other
41 landmarks or other identified visual or scenic resources, designated environmental
42 resources, trails, or distinctive vegetative patterns as identified in the Comprehensive
43 Plan, or identifiable on or near the site.
44
 - 45 3. Oil and gas operations shall be located with consideration being given to prevailing
46 weather patterns, including wind directions to mitigate compatibility concerns.
47
 - 48 4. Oil and gas operations shall avoid being located on or across hilltops and ridges, shall
49 avoid silhouetting, and, where possible, should be located at the base of such slopes.
50
 - 51 5. Oil and gas operations should use acoustically insulated housing, a cover to enclose
52 the motor or engine, or an acoustically insulated building to enclose the installation.
53

1 **K. Transportation.**

2
3 1. **Transportation, Roads and Access Standards.** Access roads on the site and access
4 points to public roads as identified in the application materials shall be reviewed by the
5 County Transportation Department and shall be built and maintained in accordance
6 with the Transportation Standards. All proposed transportation routes to the site shall
7 also be reviewed and approved by the County Transportation Department to minimize
8 traffic hazards and adverse impacts on public roadways. Existing roads shall be used to
9 minimize land disturbance unless traffic safety, visual or noise concerns, or other
10 adverse surface impacts clearly dictate otherwise. All applicable transportation fees
11 shall be paid prior to issuance of a development plan review construction permit.
12

13 2. **Multi-Modal Transportation Standards and Applicable Fees.** The installation and
14 operation of any oil and gas operation shall not cause significant degradation to the
15 public roads within Boulder County and shall comply with the Multi-modal
16 Transportation Standards.
17

18 **L. Water Quality Standards.** The installation and operation of any oil and gas operation shall not
19 cause significant degradation to surface or ground waters within Boulder County.
20

21 **M. Wetlands Protection Standards.** The installation and operation of any oil and gas operation shall
22 not cause significant degradation to wetlands within Boulder County.
23

24 **N. General Oil and Gas Facility Operational Requirements.** The general oil and gas facility
25 operational requirements set forth at Section 12-800 shall apply to each approved development plan
26 in the form of conditions of approval.
27

28 **O. Pipelines.** Any newly constructed or substantially modified pipelines on site must meet the
29 Additional Provisions listed at Article 4-514(E)(5)(a) – (f). Note: Any newly constructed or
30 substantially modified pipelines off site may need to comply with all of Article 4-514(E).
31

12-800 General Conditions of Approval

The following general oil and gas facility operational requirements shall apply to all oil and gas facilities in the form of conditions of approval applicable to each approved development plan review permit:

A. Anchoring. All mechanized equipment associated with oil and gas operations shall be anchored so as to minimize transmission of vibrations through the ground.

B. Applications and Permits. Copies of local, state and federal applications required for the operation, and permits, when issued shall be provided to the County.

C. Burning of Trash. No burning of trash shall occur on the site of any oil and gas operation.

D. Chains. ~~Traction c~~Chains from heavy equipment shall be removed before entering a County road.

~~D-E.~~ **Chemical Disclosure.** Disclosure to the County in table format of the name, CAS number, volume, storage, containment and disposal method for all drilling and completion chemicals (solids, fluids and gases) used on the proposed well site.

~~E-F.~~ **Color.** Facilities shall be painted in a uniform, non-contrasting, non-reflective color, to blend with the surrounding landscape and, with colors that match the land rather than the sky. The color should be slightly darker than the surrounding landscape.

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

~~G-H.~~ **Dust Suppression.** Dust associated with on-site activities and traffic on access roads ~~and the site~~ shall be minimized suppressed throughout construction, drilling and operational activities such that there are no visible dust emissions from access roads or the site to the extent practical given wind conditions.

~~H-I.~~ **Electrification.** All permanent operation equipment shall be electrified.

~~I-J.~~ **Exhaust.** The exhaust from all engines, motors, coolers and other mechanized equipment shall be vented up or in a direction away from the closest existing residences.

~~J-K.~~ **Fencing.** Onsite fencing shall consist of basic, two-rung fence of welded iron pipe around the well heads unless safety or agricultural concerns require additional fencing around the operation.

~~K-L.~~ **Flammable Material.** All land near any tank, pit or other structure containing flammable or combustible materials shall be kept free of dry weeds, grass, rubbish or other flammable materials.

~~L-M.~~ **Lighting.** Except during drilling, completion or other operational activities requiring additional lighting, down-lighting is required, meaning that all bulbs must be fully shielded to prevent light emissions above a horizontal plane drawn from the bottom of the fixture. A lighting plan shall be developed to establish compliance with this provision. The lighting plan must

1 indicate the location of all outdoor lighting on the site and any structures, and must include cut
2 sheets (manufacturer's specifications with picture or diagram) of all proposed fixtures.

3
4 **M.N. Maintenance of Machinery.** Routine field maintenance of vehicles or mobile machinery
5 shall not be performed within three hundred (300) feet of any water body.

6
7 **N.O. Mud Tracking.** Operators shall take all practicable measures to ensure that vehicles
8 do not track Tracking-of mud or debris onto roads. Where such tracking occurs, the road shall be
9 cleaned immediately. is prohibited.

10
11 **O.P. Noise.** Any equipment used in drilling, completion, or production of a oil and gas operation must
12 comply with the maximum permissible noise levels set forth at C.R.S. § 25-12-103 .

13
14 **P.Q. Reclamation Plan.** Any application for an oil and gas operations shall include any COGCC required
15 interim and final reclamation procedures.

16
17 **Q.R. Removal of Debris.** When an oil and gas operation becomes operational, all construction-related
18 debris shall be removed from the site for proper disposal. The site shall be maintained free of
19 debris and excess materials at all times during operation. Materials shall not be buried on-site.

20
21 **R.S. Removal of Equipment.** All equipment used for drilling, re-drilling and maintenance of the
22 facility shall be removed from the site within thirty (30) days of completion of the work, unless
23 otherwise agreed to by the surface owner. Permanent storage of equipment on well pad sites
24 shall not be allowed.

25
26 **S.T. Spills.** Chemical spills and releases shall be reported in accordance with applicable state and
27 federal laws, including the Emergency Planning and Community Right To Know Act, the
28 Comprehensive Environmental Response, Compensation and Liability Act, the Oil and Pollution
29 Act, and the Clean Water Act, as applicable.

30
31 **T.U. Stormwater Control Plan.** A stormwater control plan that establishes that all operations shall
32 use most effective performance techniques and practices and best management practices to
33 minimize impacts to surface waters from erosion, sediment, and other sources of nonpoint
34 pollution. The stormwater control plan required by COGCC Rule 1002(f) may be provided to
35 establish compliance with this provision.

36
37 **U.V. Temporary Access Roads.** Property subject to temporary access roads associated with oil and
38 gas operations shall be reclaimed and re-vegetated to its original state within sixty (60)- days of
39 discontinued use of the temporary access roads.

40
41 **V.W. Transportation Permits.** Applicant shall obtain all applicable transportation permits,
42 including but not limited to County access, driveway, utility construction, oversize and
43 overweight permits, as well as all appropriate Colorado Department of Transportation (CDOT)
44 access permits pursuant to the CDOT State Highway Access Code.

45
46 **W.X. Traffic Control Plan.** A Traffic Control Plan shall be provided to the County
47 Transportation Department prior to facility pad construction, drill rig movement commencement
48 of construction, mobilization, demobilization, or any other disruption of two-way traffic.

49
50 **X.Y. Weed Control.** The applicant shall be responsible for ongoing weed control at oil and gas
51 operations, pipelines, and along access roads during construction and operation, until
52 abandonment and final reclamation is completed per County or other applicable agency
53 regulations. The appropriate weed control methods and species to be controlled shall be

determined through review and recommendation by the County Weed Coordinator by reference to the Boulder County Noxious Weed Management Plan and in coordination with the requirements of the surface owner.

~~Y-Z.~~ Well Abandonment. The operator shall comply with any COGCC rules regarding well abandonment. Upon plugging and abandonment of a well, the operator shall provide the County with surveyed coordinates of the abandoned well and shall leave onsite a physical marker of the well location.

~~Z-AA.~~ Representations. The approved development plan review application shall be subject to all conditions and commitments of record, including verbal representations made by the applicant, and in the application file, including without limitation compliance with all approved mitigation plans.

12-900 Operational Conflict Waiver

- A.** Boulder County recognizes that the COGCC regulates oil and gas operations and that Colorado courts have determined that a County regulation must yield to a state regulation where the application of the County regulation to the oil and gas operation would conflict with a state statute, regulation or other requirement and where the conflict results in the material impediment or destruction of the state's interest in the responsible, balanced development, production and utilization of oil and gas consistent with protection of public health, safety, and welfare, including protection of the environment and wildlife resources.
- B.** The applicant may make a written request to the Land Use Department for an Operational Conflict Waiver hearing before the Board of County Commissioners at any time during the development plan review process, but no later than ten (10) days following a final decision on the development plan review application. An Operational Conflict Waiver application shall be heard in a noticed public hearing by the Board of County Commissioners. Notice of the hearing shall be in accordance with Section 3-205(C). The Director may extend the forty-five (45) day review process in Section 12-601(D)(1) in order to accommodate the operational conflict hearing. The hearing shall allow the applicant the opportunity to develop a full evidentiary record concerning the alleged operational conflict between the County regulation and the state regulation. The County shall also provide notice of the hearing to the COGCC and request it to provide information to the Board relative to its position as to the alleged operational conflict. At the hearing, the applicant shall have the burden of pleading and proving an actual operational conflict between the requirements of these regulations and those of the COGCC in the context of the specific application. If the Board determines that an operational conflict exists, it will waive the County requirement or standard to the extent necessary to negate the operational conflict. The Board may also condition the approval of the Operational Conflict Waiver as necessary to protect the public health, safety and welfare by mitigating any adverse impacts arising from the grant of approval. Any such condition shall be designed and enforced so that the condition itself does not operationally conflict with the requirements of the COGCC. If aggrieved by the decision of the Board on the Operational Conflict Waiver request, the applicant may seek review of that decision based upon the fully developed evidentiary record pursuant to Rule 106 (a)(4) of the Colorado Rules of Civil Procedure.

12-1000 Other Waivers

- A.** At any time during the application process, the Director may waive one or more of these regulations if the applicant demonstrates to the satisfaction of the County one of the following:

1. **No Economical Technology.** There is no ~~economical~~ technology commercially available at a reasonable cost to conduct the oil and gas operation in compliance with the standard(s);
2. **Protection of Public Health, Safety, Welfare and the Environment.** Waiving the standard will not ~~result in unreasonable damage to~~ adversely affect the public health, safety, welfare and the environment; or
3. **Alternate Approach Preferable.** Protection of public health, safety, welfare and the environment will be enhanced by an alternate approach not contemplated by the standard.

12-1100 Judicial Review

A final decision by the Board of County Commissioners on a development plan is subject to judicial review pursuant to Rule 106(a)(4) of the Colorado Rules of Civil Procedure.

12-1200 Procedures Following Approval of Permit

- A. **Financial Guarantees.** ~~With regard to each specific~~ Prior to the commencement of an approved oil and gas operation, the applicant shall provide one (1) form of the following security (bond, irrevocable letter of credit or equivalent financial security acceptable to the County) to ensure compliance with this Article in an amount equal to the actual or estimated cost plus ten percent (10%) to implement the operation consistent with the requirements of this Article and any applicable conditions of approval. The amount of the financial guarantee shall be based upon a verified cost estimate of all applicable plan requirements prepared by the applicant and approved by the Director. The Director shall have the discretion to waive the financial guarantee for specific development plan requirements based upon the past performance record of the applicant, particular circumstances of the operations, or other demonstrable circumstances making a financial guarantee unnecessary or redundant. In the discretion of the Director, operations may be released from the performance security requirement provided that all conditions of approval have been met and the operation is in compliance with this Article. This Section is not meant to address COGCC permitting requirements (including, but not limited to, COGCC reclamation requirements) nor does it replace the COGCC's financial assurance requirements.
- B. **Right to Enter.** The applicant shall provide the telephone number of a contact person who may be reached twenty-four (24) hours a day for purposes of being notified of any proposed County inspection under this Section. Any site under an approved development plan may be inspected by the County at any time, to ensure compliance with the requirements of the approved development plan, provided that twenty-four (24) hours prior notice is given to the contact person at the telephone number supplied by the applicant. Each approved development plan shall contain the following statement: "Applicant hereby consents to allow the County the right of inspection of this approved operation provided the County contacts the operator with twenty-four (24) hours prior notice of such inspection."
- C. **Effect of the Approved Development Plan.** After approval of a development plan and following compliance with any applicable conditions of approval, the County Land Use Department shall issue a development plan review construction permit for the proposed oil and gas operation. Following receipt of the development plan review construction permit, the applicant shall be entitled to have processed any necessary building, grading, access, floodplain, or other County permits and is authorized to otherwise proceed with the proposed oil and gas operation. The approval of a development plan review under this Article does not result in the vesting of

development rights, nor does it permit the violation of any County or state regulations or preclude the County Building Official or Transportation Department from refusing to issue a permit if the plans and specifications do not comply with applicable County regulations.

D. Duration of the Approved Development Plan. An approved development plan shall remain effective for a period of three (3) years. If the operation is not commenced within the effective period of the development plan, the permit shall expire and the applicant will have to reapply for a new permit prior to undertaking operations.

E. Amendments to Development Plan. Any proposal to change an approved development plan shall require an application to the Land Use Department to determine whether the proposed change constitutes a substantial modification to the approved development plan.

1. In determining whether the proposed modification to a development plan approval is substantial, the Director shall consider the record of the development plan approval, including any express conditions, limitations, or agreements governing the approved development plan and the nature, character, and the extent of additional land use impacts of the proposed modification. The addition of a new well on an existing pad shall be considered a substantial modification to the entire pad and the entire pad shall be required to come into compliance with this Article, to the extent practical. Other changes shall be considered substantial if they significantly alter the nature, character, or extent of the land use impacts of the development plan approval.

2. If the Director determines that the change constitutes a substantial modification, no such change shall be allowed to proceed until an application to amend the approved development plan is filed with the Director and approval granted in accordance with this Article. The applicant or its successor may appeal the Director's decision to require an amended development plan to the Board of County Commissioners, provided that any such appeal shall be in writing and shall be filed with the Director no later than thirty (30) days following the date of the Director's decision to require a development plan amendment. Any Board of County Commissioner's determination on an appeal shall not be considered a final decision subject to judicial review under Section 12-1100.

12-1300 Enforcement

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

- A. Written Order Suspending Development Plan.** The Director may issue a written order to the applicant (or owner, operator, or agent, as applicable) identifying the violation and suspending the development plan and all activity otherwise allowed by the development plan. If the violation presents an immediate threat to the health, safety or welfare of the public, the Director may immediately issue the written order to the applicant in writing and, upon receipt, the applicant shall cease all activities and operations immediately until the violation is remedied. In all other instances, prior to issuing a written order, the Director shall provide written notice to the applicant describing the violation, and stating a reasonable time within which the violation must be corrected. If, within that time period, the applicant has not either corrected the violation or filed a written appeal with the Board of County Commissioners, the written order shall be delivered to the applicant in writing and, upon receipt, the applicant shall cease all activities and operations immediately until the violation is remedied. Any appeal to the Board of County Commissioners of the threatened or actual issuance of the written order shall be acted upon pursuant to Section 12-1300(e) below.
- B. Draw Against Financial Guarantee.** The Director may draw upon any financial guarantee provided by an applicant to enforce the provisions of this Article.. Prior to drawing upon a financial guarantee, the Director shall provide written notice to the applicant describing the violation, and stating a reasonable time within which the violation must be corrected. If, within that time period, the applicant has not either corrected the violation or filed a written appeal with the Board of County Commissioners, the Director shall be entitled to enter upon the site to take any reasonable measures to correct the violation, and may draw on the financial guarantee to cover the costs of corrective measures.
- C. Appeal Hearing Before Board of County Commissioners.** If the applicant files a timely appeal with the Board of County Commissioners of the Director's determination to issue a written order suspending the development plan or to draw upon a financial guarantee, the Board shall schedule a hearing on the appeal at the soonest possible time of which the applicant shall receive reasonable prior notice. If the Board confirms at the hearing that the violation has occurred and has not been corrected, the Board in its discretion may confirm issuance of a written order suspending the development plan or the determination to draw upon the financial guarantee. The Board, in its discretion, may also give the applicant additional time to correct the violation, or may specify the time at which the Director may take appropriate action to have the violation corrected and draw on the financial guarantee to cover the costs of corrective measures.
- D. Timing of Release of Financial Guarantees.** To insure the Director's ability to enforce the provisions of any approved development plan, the Director shall not release any financial guarantee provided under this Article for an individual development plan, until the Director confirms that all operations have been completed and all provisions of the plan complied with.
- E. Other Enforcement Remedies.** In addition to the foregoing enforcement measures, Boulder County has the right to any and all other enforcement measures and remedies provided by law, including but not limited to seeking relief through the courts to enforce an approved development plan review, or to stop or abate any oil and gas operations occurring or about to occur without the requisite development plan or other county approvals.-

12-1400 Definitions

Terms used herein are defined below. Any terms not specifically defined herein may be defined in Article 18.

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

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

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

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

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

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

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

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

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

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

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

Delineation well. A well drilled in order to determine the boundary of a field or producing reservoir.

Department. Boulder County Land Use Department.

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

1 **Equipment.** Machinery or structures located on well pads or rights-of-way including, but not limited to,
2 wellheads, separators, dehydration units, heaters, meters, storage tanks, compressors, pumping units,
3 internal combustion engines, and electric motors.
4

5 **Exploration and Production Waste or “E and P Waste”:** Wastes associated with Oil and Gas
6 Operations to locate or remove oil or gas from the ground or to remove impurities from such
7 substances and that are uniquely associated with and intrinsic to oil and gas exploration,
8 development or production operations that are exempt from regulation under the Resource
9 Conservation and Recovery Act (RCRA).
10

11 **Flow Line.** Pipeline connecting individual well sites to gathering lines.
12

13 **Gas Well.** Well capable of producing natural gas.
14

15 **Gathering Line.** Pipeline transporting produced gas, oil, or water from multiple well sites to a centralized
16 facility.
17

18 **Grading Plan.** Plan view and cross-section of existing and proposed contours, cuts and fills, topsoil
19 storage location and stabilization methods, and maximum slopes.
20

21 **Ground Water.** Subsurface waters in a zone of saturation.
22

23 **Heavy Equipment.** Drilling rigs, completion rigs, construction equipment, and individual truck/trailer
24 combination vehicles with a gross vehicle weight exceeding five tons.
25

26 **Improvement.** Any new construction activity or addition of equipment or materials to a site.
27

28 **Mitigation.** One or more of the following actions which are prioritized in order of preference:
29

30 **Avoiding Impacts.** Avoiding an impact by not taking a certain action or parts of an action; or
31

32 **Minimizing Impacts.** Limiting the degree or magnitude of the action or its implementation, or
33 by changing its location; or
34

35 **Rectifying Impacts.** Repairing, rehabilitating, or restoring the impact area, facility or service; or
36

37 **Reducing or Eliminating Impacts.** Reducing or eliminating the impact over time by
38 preservation and maintenance operations; and
39

40 **Other Provisions for Addressing Impacts.** Using alternative means not contemplated by this
41 Article to provide equivalent biological, social, environmental and/or physical mitigation
42 actions.
43

44 **Most Effective Performance Techniques and Practices.** The application of proven and emerging
45 techniques, technologies or other Best Management Practices used in conducting oil and gas exploration
46 and development which avoid, neutralize, exclude, eliminate, mitigate or minimize adverse on and off-
47 site impacts to public health and the environment, landowners, and natural resources, and which may
48 reduce conflicts between potentially impacted landowners and the oil and gas industry.
49

50 **Occupied Structure.** Any building or structure that requires a certificate of occupancy or building or
51 structure intended for human occupancy.
52

1 **Oil and Gas Facilities.**

2
3 Site and the equipment associated with a site used for the production, transportation, treatment,
4 and/or storage of oil and gas and waste products; or

5
6 An individual well pad built with one or more wells and operated to produce liquid petroleum
7 and/or natural gas, including associated equipment required for such production; or

8
9 Gathering lines, and ancillary equipment including but not limited to drip stations, vent stations,
10 pigging facilities, chemical injection stations and valve boxes; or

11
12 Temporary storage and construction staging yards in place for less than six months; or

13
14 Any other oil and gas operation which may cause significant degradation.

15
16 **Oil and Gas Operations.** Exploration for oil or gas, including but not limited to conventional oil and gas;
17 the siting, drilling, deepening, recompletion, reworking, refracturing, closure or abandonment of an oil
18 and gas well; production facility and operations including the installation of flow lines and gathering lines;
19 construction, site preparation, reclamation and related activities associated with the development of oil
20 and gas resources.

21
22 **Oil Well.** Well capable of producing crude petroleum oil.

23
24 **Operation.** Oil and Gas Operations.

25
26 **Owner or Operator.** Person who has the right to drill into and produce from a pool and to appropriate
27 the oil or gas produced either for such owner or operator or others.

28
29 **Permanent Equipment.** Equipment located onsite for a duration of time greater than six months effective
30 one year after the drilling and completion of a well.

31
32 **Person.** Any individual, partnership, corporation, association, company, or other public or corporate
33 entity, including but not limited to the State or Federal governments, and any of their political
34 subdivisions, agencies, or instrumentalities.

35
36 **Pit.** Any natural or man-made depression in the ground used for oil or gas exploration or production
37 purposes; a pit does not include steel, fiberglass, concrete or other similar vessels which do not release
38 their contents to surrounding soils.

39
40 **Platted Building Envelope.** Area of land within a buildable lot within which all site structures, buildings
41 and other hardscape elements shall be contained, except driveways.

42
43 **Regulation(s).** Article 12 of the Boulder County Land Use Code.

44
45 **Referral Agency.** An agency, organization, or technical consultant deemed appropriate and necessary, by
46 the County, to review an application and provide professional analysis and recommendations, including
47 without limitation other County offices and departments, municipal, state, or federal agencies having an
48 interest in or authority over all or part of the application or permit and legal consultants.

49
50 **Residential.** All property within unincorporated Boulder County, Colorado.

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

3
4 **Security Fencing.** Six-foot chain link fence topped by three strands of barbed wire, or the equivalent, with
5 a gate that can be secured.

6
7 **Setback.** Distance between the following, including but not limited to, a wellhead, intermediate line,
8 gathering line or major facility structure boundary and the closest projection of a residential, commercial,
9 or industrial building structure, a lot or property line, a permitted facility, or a platted building envelope in
10 a platted subdivision-

11
12 **Significant.** Of considerable or substantial consequence.

13
14 **Site.** Lands, including the surface of a severed mineral estate, on which exploration for, or extraction and
15 removal of oil or gas is authorized under a lease.

16
17 **Surface Owner.** Owner of the surface property on which the facility will be constructed.

18
19 **Surrounding.** Within one-half mile of a proposed oil and gas operation.

20
21 **Temporary Use Area.** Disturbed lands immediately adjacent to the well pad or right of way used by an
22 operator during the construction or maintenance of a well, pipeline or other facility that will be reclaimed
23 for permanent operations.

24
25 **Transmission Line.** Pipeline transporting oil, natural gas or any other products derived from oil and gas
26 production, which is defined as a transmission line by the U.S. Department of Transportation regulations
27 under the Natural Gas Pipeline Safety Act of 1968, as amended.

28
29 **VOC.** Volatile organic compounds.

30
31 **Water or Water Body.** Water or water body is any surface waters which are contained in or flow in or
32 through Boulder County, but does not include ephemeral streams, roadway ditches, water in sewage
33 systems, water in treatment works of disposal systems, water in potable water distribution systems, stock
34 ponds or irrigation ditches not discharging to live streams, and all water withdrawn for use until use and
35 treatment have been completed.

36
37 **Well or Wellhead.** Equipment attached to the casing of an oil, gas or injection well above the surface of
38 the ground.

39
40 **Well Blowdown.** Maintenance activity designed to remove unwanted fluids from mature wells during
41 which time gas is often vented to the atmosphere.

42
43 **Well Completion.**

44 The process that perforates well casing, stimulates the reservoir using various techniques including but
45 not limited to acid treatment and hydraulic fracturing, allows for the flowback of petroleum or natural gas
46 from wells to expel drilling and reservoir fluids, and tests the reservoir flow characteristics, which may
47 vent produced hydrocarbons to the atmosphere via an open pit or tank.

48
49 **Well Pad.** Area in which permanent operations for the well takes place and shall always include, at a
50 minimum, that portion of the pad area occupied by permanent production equipment. Well pads may
51 contain one or more wellheads and associated equipment.

1
2
3
4

Wildcat or Delineation Well. A well outside known fields or the first well drilled in an oil or gas field where no other oil and gas production exists.

DRAFT

ATTACHMENT A.2

Proposed Amendments to Article 4-500 (use definitions)

1. Amend Article 4-506 Industrial Uses to add new use category:

D. Major Oil and Gas Operations

1. Definition: Water injection wells and facilities, centralized water transfer stations, centralized water pump stations, storage yards and construction staging yards in place for longer than six months, and any other oil and gas operation the location of which is not dependent upon development of the mineral resource or subject to Article 12.
2. Districts Permitted: By Special Review in GI
3. Parking Requirements: None
4. Loading Requirements: None
5. Additional Provisions: None

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

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

B. Oil and Gas Operations

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

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

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

Add a new use "Gas and/or Hazardous Liquid Pipelines":

E. Gas and/or Hazardous Liquid Pipelines

1. Definition: Pipelines for the collection and transmission of natural gas or other hazardous liquids.
2. Districts Permitted: In all districts by Limited Impact Special Review, or review under Article 8 (areas and activities of state interest), as applicable. Gathering lines and flow lines which are part of new oil and gas development and which are located on the same parcel or parcels as the well head, pumping units, tanks and/or treaters will be subject to Development Plan Review under Article 12 of this Code.
3. Parking Requirements: None
4. Loading Requirements: None
5. Additional Provisions:
 - a. This use is not required to be located on a building lot, or comply with the minimum lot size requirement for the district in which it is located.
 - b. Flow lines, gathering lines, and transmission lines shall be sited a minimum of fifty (50) feet away from general residential, commercial, and industrial buildings, as well as the high-water mark of any surface water body. This

distance shall be measured from the nearest edge of the pipeline. Pipelines and gathering lines that pass within 150 feet of general residential, commercial, and industrial buildings or the high water mark of any surface water body shall incorporate leak detection, secondary containment, or other mitigation, as appropriate.

- c. To the maximum extent practicable, pipelines should be aligned with established roads in order to minimize surface impacts and reduce habitat fragmentation and disturbance.
- d. To the maximum extent practicable, operators shall share existing pipeline rights-of-way and consolidate new corridors for pipeline rights-of-way to minimize surface impacts.
- e. Operators shall use boring technology or alternative director-approved most effective performance techniques and practices when crossing streams, rivers or irrigation ditches with a pipeline to minimize negative impacts to the channel, bank, and riparian areas.
- f. During pipeline construction for trenches that are left open for more than five (5) days and are greater than five (5) feet in width, install wildlife crossovers and escape ramps where the trench crosses well-defined game trails and at a minimum of one-quarter (1/4) mile intervals where the trench parallels well-defined game trails.
- g. The Department may require an applicant for a pipeline to provide a risk-based engineering study for all or part of its proposed pipeline right of way that may require the implementation of more stringent construction or operation standards or space between the pipeline and other structures.

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

Modify current section 4-514(P) "Utility Service Facility" as follows:

P. Utility Service Facility

- 1. Definition: Any electrical distribution lines, natural gas distribution lines, minor gas regulator stations, cable television lines, telegraph and telephone lines, ~~and gathering lines,~~ or other minor service facilities.
- 2. Districts Permitted: By right in all districts
- 3. Parking Requirements: None
- 4. Loading Requirements: None
- 5. Additional Provisions:
 - a. This use is not required to be located on a building lot, or comply with the minimum lot size requirement for the district in which it is located.
 - b. No buildings shall be associated with this use.
 - c. This use is limited to the following sizes:
 - i. gas lines less than 12 inches; and
 - ii. electric lines of less than 115,000 volts.

ATTACHMENT A.3

Proposed Amendment to Board of Adjustment provisions

Add New Section 4-1205 as follows:

No appeals to the Board of Adjustment or requests for variances before the Board of Adjustment are permitted for any matters under Article 12, Development Plan Review for Oil and Gas Operations.

DRAFT

ATTACHMENT A.4

Proposed Amendments to Article 18 (Land Use Code Definitions)

1. Replace current text of 18-181 with the following:

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

2. Delete 18-196 “Site (Oil & Gas)” due to new definition of same in Article 12.
3. Amend any other definitions as necessary (e.g., 18-166 “Gas Transmission Pipeline”).

ATTACHMENT A.5

Clerical changes necessary to conform rest of Land Use Code to DC-12-0003

1. Delete Article 4-900 (current “Development Plan review for Oil and Gas Operations”)
2. Update Table of Contents and associated cross-references in Code as necessary.
3. Update use tables as necessary.
4. In all of the Article 4 zoning district regulations, for each district, under the listed Mining Uses: substitute “Oil and Gas Operations” for the two uses currently listed (Oil and Gas Drilling and Production, on subdivided land, and Oil and Gas Drilling and Production, on unsubdivided land).
5. Make current Article 4-900A (“Development Plan Review for Subsurface Mining”), Article 4-900. Change Table of Contents and associated cross-references in Code accordingly.
6. All other clerical amendments necessary to conform entire Land Use Code to primary text amendments approved in DC-12-0003 (Article 12, etc.).

BOULDER COUNTY PLANNING COMMISSION

HEARING DATE: October 17, 2012

DOCKET: DC-12-0003: Amendments to Oil and Gas
Development Regulations

SUBSTANTIVE MOTION #1: Pat Shanks: MOVED that the Boulder County Planning Commission recommend to the Board of County Commissioners that they adopt the setbacks proposed by staff in Section 12-601(B), Eligibility for Expedited Development Plan Review, with the exception that setbacks from occupied structures in 12-601(B)(1) should be 1,000 feet instead of 500 feet. Planning Commission's intent is to allow for a 50/50 split between areas eligible for Expedited and Standard review processes.

SECOND: Natalie Feinberg Lopez

VOTE: Motion PASSED 4 to 1

SUBSTANTIVE MOTION #2: Pat Shanks: MOVED that the Boulder County Planning Commission provide direction to staff on potential edits to the draft regulations as set forth below and table the docket until October 30th at 4 p.m. for final action.

SECOND: John Gerstle

VOTE: Motion PASSED 5 to 0

1. Consider adding more detail to air quality section, borrowing from water quality provisions, both on area of well site/operation being regulated as well as exact substances being regulated.
2. Need more explicit regulation addressing silica dust.
3. Consider Commissioner Young's suggestions on how to address the Office of Emergency Management's comments on the Emergency Response Standards section of the draft regulations, 12-703(D)(2). Also, add back in the Chemical Disclosure section to 12-800, General Conditions of Approval.

4. Focusing emission controls and monitoring on Volatile Organic Compounds may miss some important volatile inorganic compounds, such as hydrogen sulfide. Investigate whether requirements should be expanded to include other known noxious emissions from production equipment, compressors, diesel engines, etc.
5. Incorporate Commissioner Shanks's suggested changes to the water quality table.
6. Incorporate the edits to 12-100 proposed by member of the public Dan Frazier at the October 17 public hearing.
7. Given the timing of the ongoing oil & gas roadway impact study, Planning Commission will defer the details regarding transportation requirements to the Board of County Commissioners (BOCC) for review. Planning Commission would like to see the final study once it is available to provide comments to BOCC, understanding this may not occur before BOCC makes a final decision on the draft regulations.
8. To encourage shared use of infrastructure, consider amending the eligibility criteria such that use of an existing well pad qualifies an operator for Expedited DPR.
9. Build in an automatic review provision such that the adopted regulations undergo a review 6 months and 18 months after their effective date.

SUBSTANTIVE MOTION #3: Pat Shanks: MOVED that the Boulder County Planning Commission recommend to the Board of County Commissioners that they extend the current moratorium by three to six months.

SECOND: Natalie Feinberg Lopez

VOTE: Motion PASSED 4 to 1

Attachment C1 Development Plan Review as Proposed in Draft Regulations with 1000' Occupied Building Setback

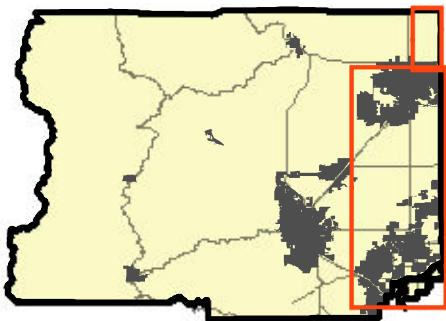
 Areas Eligible for Expedited Review


 Areas for Standard Review

Siting Criteria

- 1. 1000' from occupied structures
- 2. 150' from property lines
- 3. 500' from surface water
- 4. 500' from water wells
- 5. Not within platted subdivisions
- 6. Not within high hazard geologic area
- 7. Not within floodway
- 8. Not within wetlands
- 9. Not within natural communities, natural landmarks and natural areas, rare plant areas, significant riparian corridors, or critical wildlife habitat

 Wattenberg Field
 Municipalities



0 6,000 Feet
1 inch = 6,000 feet
1 inch = 2,000 yards
 6 Football Fields
10/23/2012



*This map is for
illustrated purposes
only, it is not proposed
as a regulatory map.*

Attachment C2 Development Plan Review as Proposed in Draft Regulations with 1000' Occupied Building Setback

 Areas Eligible for Expedited Review

 Areas for Standard Review

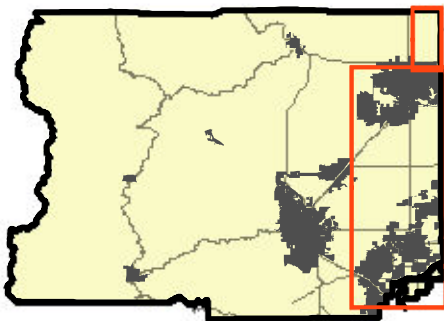
- Well: Producing (243)
- Well: Permit Location (38)


Number of wells includes only those wells located in unincorporated Boulder County and within the Wattenberg Field as retrieved from the COGCC website on 10/6/2012.

Siting Criteria

1. 1000' from occupied structures
2. 150' from property lines
3. 500' from surface water
4. 500' from water wells
5. Not within platted subdivisions
6. Not within high hazard geologic area
7. Not within floodway
8. Not within wetlands
9. Not within natural communities, natural landmarks and natural areas, rare plant areas, significant riparian corridors, or critical wildlife

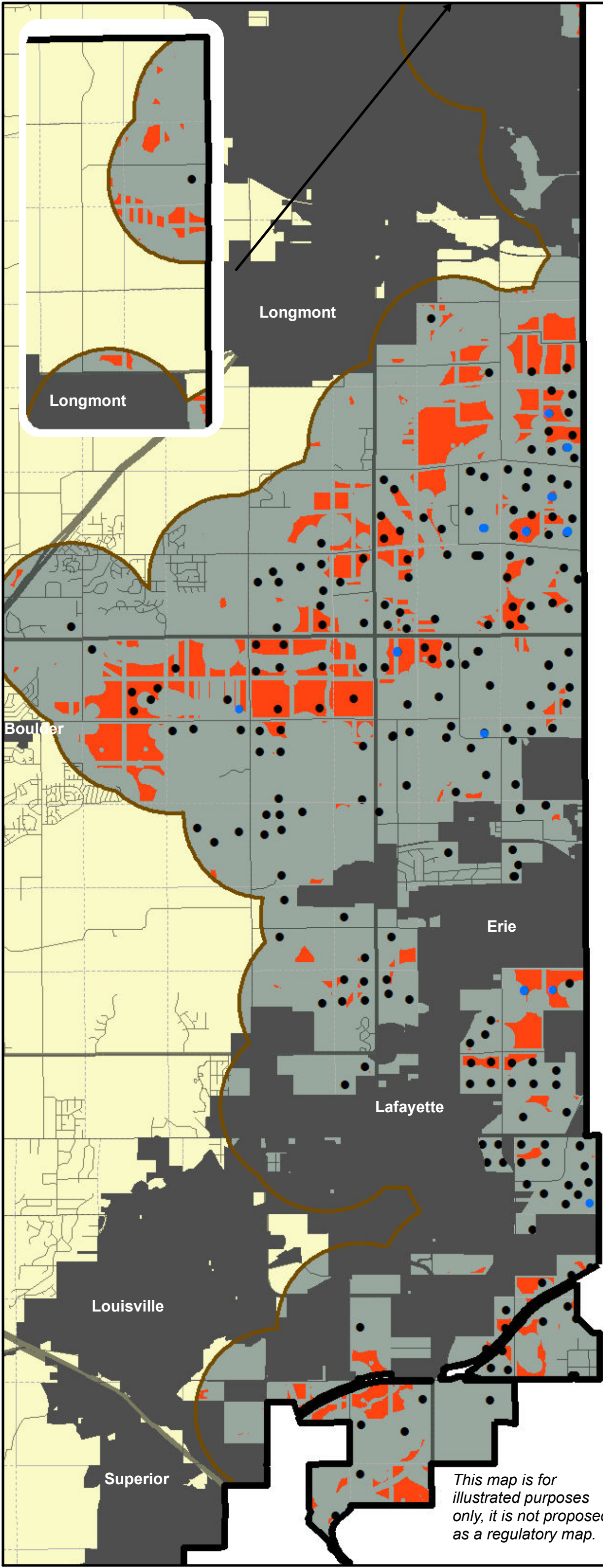
 Wattenberg Field
 Municipalities



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 6 Football Fields
10/23/2012



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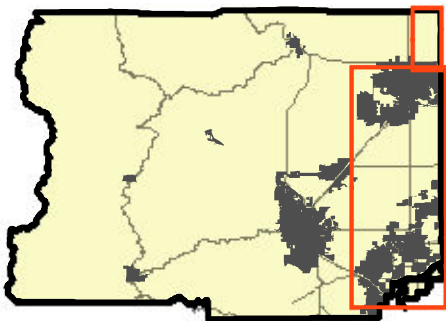


Attachment C3 Development Plan Review by Quarter- Section as Proposed in Draft Regulations with 1000' Occupied Building Setback

- 132 Quarter-Sections
Eligible for Expedited
Review (53%)
- 119 Quarter-Sections
Available For Standard
Review (47%)

- Siting Criteria
- 1. 1000' from occupied structures
 - 2. 150' from property lines
 - 3. 500' from surface water
 - 4. 500' from water wells
 - 5. Not within platted subdivisions
 - 6. Not within high hazard geologic area
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Wattenberg Field
Municipalities



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6 Football Fields

10/23/2012



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Attachment C4 Development Plan Review by Quarter- Section as Proposed in Draft Regulations with 1000' Occupied Building Setback

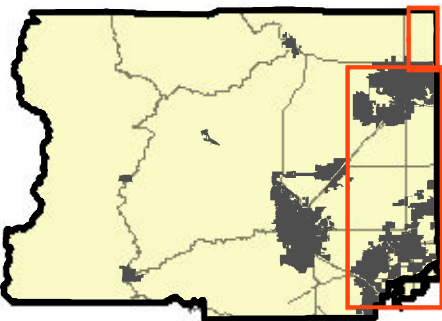
- 132 Quarter-Sections
Eligible for Expedited
Review (53%)
- 119 Quarter-Sections
Available For Standard
Review (47%)
- Well: Producing (243)
- Well: Permit Location (38)

Number of wells includes only those wells located in unincorporated Boulder County and within the Wattenberg Field as retrieved from the COGCC website on 10/6/2012

Siting Criteria

- 1000' from occupied structures
- 150' from property lines
- 500' from surface water
- 500' from water wells
- Not within platted subdivisions
- Not within high hazard geologic area
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- Wattenberg Field
- Municipalities



0

6,000

Feet

1 inch = 6,000 feet

1 inch = 2,000 yards

6 Football Fields

10/23/2012



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Attachment C5 Development Plan Review as Proposed in Draft Regulations with 500' Occupied Building Setback

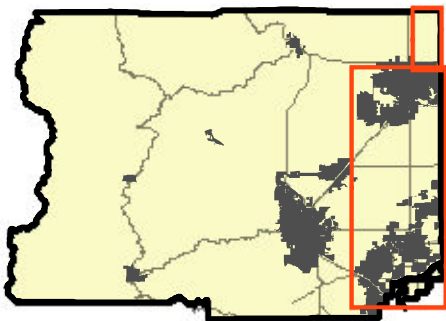
 Areas Eligible for Expedited Review


 Areas for Standard Review

Siting Criteria

- 1. 500' from occupied structures
- 2. 150' from property lines
- 3. 500' from surface water
- 4. 500' from water wells
- 5. Not within platted subdivisions
- 6. Not within high hazard geologic area
- 7. Not within floodway
- 8. Not within wetlands
- 9. Not within natural communities, natural landmarks and natural areas, rare plant areas, significant riparian corridors, or critical wildlife habitat

 Wattenberg Field
 Municipalities



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 6 Football Fields
10/23/2012



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Attachment C6 Development Plan Review as Proposed in Draft Regulations with 500' Occupied Building Setback

 Areas Eligible for Expedited Review

 Areas for Standard Review

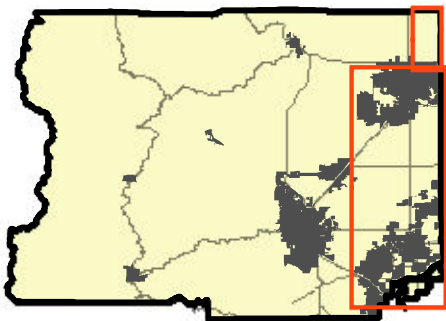
- Well: Producing (243)
- Well: Permit Location (38)


Number of wells includes only those wells located in unincorporated Boulder County and within the Wattenberg Field as retrieved from the COGCC website on 10/6/2012.

Siting Criteria

1. 500' from occupied structures
2. 150' from property lines
3. 500' from surface water
4. 500' from water wells
5. Not within platted subdivisions
6. Not within high hazard geologic area
7. Not within floodway
8. Not within wetlands
9. Not within natural communities, natural landmarks and natural areas, rare plant areas, significant riparian corridors, or critical wildlife

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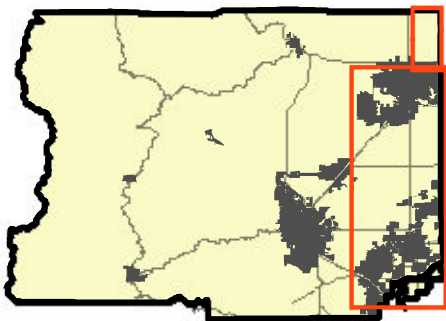
Attachment C7 Development Plan Review by Quarter- Section as Proposed in Draft Regulations with 500' Occupied Building Setback

- 171 Quarter-Sections
Eligible for Expedited
Review (68%)
- 80 Quarter-Sections
Available For Standard
Review (32%)

Siting Criteria

- 1. 500' from occupied structures
- 2. 150' from property lines
- 3. 500' from surface water
- 4. 500' from water wells
- 5. Not within platted subdivisions
- 6. Not within high hazard geologic area
- 7. Not within floodway
- 8. Not within wetlands
- 9. Not within natural communities, natural landmarks and natural areas, rare plant areas, significant riparian corridors, or critical wildlife habitat

Wattenberg Field
Municipalities




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6 Football Fields


10/23/2012



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Attachment C8 Development Plan Review by Quarter- Section as Proposed in Draft Regulations with 500' Occupied Building Setback

 **171 Quarter-Sections
Eligible for Expedited
Review (68%)**

 **80 Quarter-Sections
Available For Standard
Review (32%)**

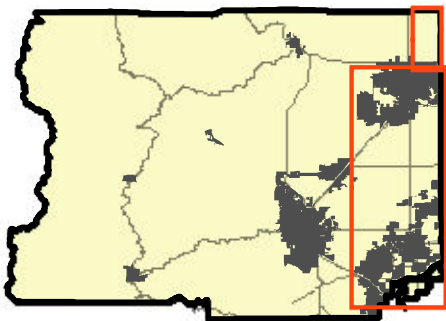
-  **Well: Producing (243)**
-  **Well: Permit Location (38)**


Number of wells includes only those wells located in unincorporated Boulder County and within the Wattenberg Field as retrieved from the COGCC website on 10/6/2012

Siting Criteria

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3. 500' from surface water
4. 500' from water wells
5. Not within platted subdivisions
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 **Wattenberg Field**
 **Municipalities**



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PLATEAU ENVIRONMENTAL SERVICES

*Environmental Assessments
Pollution Control Systems
Wetlands Surveys
Regulatory Permitting
Natural Resources Planning*

October 22, 2012

Mr. Dale Case, Director
Boulder County Plannig Department
Via email

Re: Draft Oil & Gas Code – Air Quality Comments

Dear Mr. Case:

County legal counsel has asked me to respond to comments made by some citizens concerning air quality issues related to potential oil & gas well development and operations in Boulder County. Following are general responses to the questions posed by the citizens. Detailed responses would take textbooks. Hopefully these responses can give the planning commissioners and the BOCC some initial clarity.

Ambient Air Sampling to Monitor Oil & Gas Operations

Some citizens have asked that air quality monitoring requirements be inserted into the new draft code. Ambient air quality monitoring is an important tool in identifying long term trends in an air basin and identifying specific contaminants of concern. Site specific monitoring of oil & gas operations is useful in identifying unintended emissions such as equipment leaks. However, air monitoring is not a simple task and is best described as complicated and expensive.

Many questions must be answered just to start. On what, who, where and when would monitoring be performed? Many scenarios exist. The air near each or some well site(s) at different stages of development? Ambient air at fixed locations over time in the County (some of these already exist in the county)? What to analyze for? What equipment to use? Are samplers continuous, batch or grab samplers? How good is the data? How would data tie into other ongoing studies? How do the observed results relate to other air pollutant sources and weather patterns in the air basin? Is there sufficient existing data to perform simulation modeling for a single new well or a number of projected wells? Would the well operator do the monitoring or would it be done by government or third parties? And so on.

I am not saying ambient air monitoring cannot be done or should not be done. It sure can. But ambient monitoring is a big project to just frame the question(s), collect meaningful data and analyze the meanings, trends and health / climatic effects. Site specific monitoring is addressed in the proposed rule in that operators must establish a leak detection and repair program for well sites. This goes beyond federal or state requirements.

3238 East Fifth Avenue
Durango, Colorado 81301
Telephone 970 247-9200
Fax 970 247-9227



To do ambient air or site specific of studies takes a lot of planning, time and money. They often take place over several seasons or years. Some ambient air monitoring studies are already occurring because the area is non-attainment for National Ambient Air Quality Standards. CDPHE Air Quality Control Commission manages this work. The local health department has discussed possibly monitoring individual well sites but is considering several of the questions posed earlier. Regional and even site specific air quality studies of oil & gas operations are not in the same timeframe as the current rule making. BCO could possibly partner with USEPA, CDPHE, Boulder County Health, CU, etc. to engage in these studies (or existing studies). I would submit that questions of monitoring should be done outside these rules at this time.

Silica Dust

Some citizens have expressed concern over silica dust and the installation and operation of oil & gas wells. Silica dust can be generated from inadvertently released fine sand that is used during the hydraulic fracturing process. Silica dust is also generated from other sources such as driving on gravel paved roads and gravel mining operations.

Concentrated silica dust is a serious health hazard to lungs. It must be managed seriously by the industry (oil & gas and mining) to protect workers and surrounding environs. The studies and standards that one citizen cites concerning silica dust are all related to occupational exposures and not those experienced by the public (including children). Using occupational standards for silica dust monitoring when discussing ambient air quality is comparing apples and oranges. OSHA and other air regulatory agencies would not apply workplace standards to ambient air.

USEPA and CDPHE have established standards for Particulate Matter of different sizes (2.5 and 10 microns; PM 2.5 and PM 10). These values are monitored in Boulder County by CDPHE and consider all sources. The current draft oil & gas regulation establishes a no visible dust emissions standard from a well site (20-800 (H)). This standard is protective for short term ambient air exposure to fine particulates and potential silica dust.

Hydrogen Sulfide, VOC's, & Nitrogen Oxides

Some citizens have expressed concerns about Volatile Organic Compounds (VOC's), Hydrogen Sulfide and Nitrogen Oxides (and other combustion products) as related to oil and gas development. Each is an air pollutant and has unique concerns.

Hydrogen sulfide is a toxic gas that can be deadly in acute concentrations and can cause long term chronic health problems at lower concentrations. At lowest concentrations it has a "rotten egg" odor that can be nuisance. First and perhaps most simply, Hydrogen sulfide is not known in the Wattenberg Field as a significant component of natural gas or oil. It should not be an issue for oil & gas development in Boulder County. That said, if detected by an operator, COGCC rules require that the agency must be notified and a hydrogen sulfide management plan / equipment must be put in place. Sometimes, homeowners detect the rotten egg odor in their well water. This is an indication the shallow aquifer or well is contaminated with sulfate



Mr. Dale Case
October 22, 2012

Attachment D
Re: Air Pollutants
page 3

reducing bacteria which excrete hydrogen sulfide. This usually has nothing to do with oil and gas development but is probably related to sources of bacterial infection to shallow ground water such as animal holding pens, septic systems and improperly sited, constructed and maintained water wells.

VOC's are complex gaseous hydrocarbons that are components of natural gas and light liquid hydrocarbons such as gasoline. Most pose direct health risks that can affect the immune system, nervous system, respiratory system and may cause excess cancer risk and other chronic and acute maladies. Controlling VOC emissions from oil & gas operations are an important component of Federal, State and these proposed Boulder County regulations. There are many technologies to prevent VOC emissions. The best is to not release them at all by limiting direct venting and leaks. If vented, the most common control method is combustion. These proposed rules discuss limiting direct venting, controlling leaks and combusting vented emissions with equipment designed to destroy at least 98% of VOC's.

When burned in a combustor / flare the combustion products include nitrogen oxides, possible sulfur oxides, carbon monoxide, carbon dioxide, particulate matter, water vapor and the approximate 2% of VOC's not combusted. The combustion products such as nitrogen oxides and sulfur oxides do have an influence in smog and ground level ozone formation and carbon dioxide and VOCs are greenhouse gases. Nitrogen oxides, sulfur oxides, particulate matter and carbon monoxide are usually at very low concentrations from burning natural gas (much less than coal or gasoline) and are considered much less hazardous than the VOCs.

Please feel free to call if you have questions or additional needs.

Sincerely;

Michael J. Matheson, P.G.

Page 1, Section 12-100

These regulations are **necessary** but **not sufficient**.

The intent and the reality of the regulations can more accurately be expressed by:

- line 19 -- striking the word **responsible**
- line 20 -- replacing **is sensitive to** with **considers**
- line 21 -- striking the words **and protects**

The result would read:

The purpose is to provide a framework for the ~~responsible~~ exploration and production of oil and gas resources in a manner that ~~is sensitive to~~ considers surrounding current, planned or future land uses and that mitigates adverse impacts to ~~and protects~~ the public health, safety, welfare, and the environment of the County.