

**CITY OF FORT COLLINS
SPECIAL HEARING
PLANNING AND ZONING BOARD**

WORKSESSION

Tuesday, October 30, 2012, 12:00 – 3:00 PM, 281 N. College, Conf. Room A

HEARING

Thursday, November 1, 2012 – 6 PM, Chambers, 300 Laporte Avenue

Proposed Land Use Code regulation for Local Oil and Gas Development
City of Fort Collins staff is in the process of reviewing and updating its land use regulations concerning oil and gas exploration and developing options for mitigating impacts upon the community. The City's goal is to develop strategies and tools that best reflect Fort Collins' community values. In order to accomplish the best outcome, staff has engaged residents through an extensive public engagement process, including boards and commissions and the formation of an advisory committee, composed of representatives from eight City Boards and Commissions, to assist in developing regulations that reflect community values.

Applicant: City of Fort Collins

Staff: Laurie Kadrach, Dan Weinheimer, and Lindsay Ex,

AGENDA

PLANNING AND ZONING BOARD SPECIAL HEARING

CITY OF FORT COLLINS

Interested persons are invited to attend and be heard at the time and place specified. Please contact the Current Planning Department for further information on any of the agenda items at 221-6750.

DATE:	Thursday, November 1, 2012
TIME:	6:00 P.M.
PLACE:	Council Chambers, City Hall West, 300 LaPorte Avenue, Fort Collins, CO

A. Roll Call

B. Agenda Review: If the Thursday, November 1, 2012 special hearing should run past 11:00 p.m., the remaining items may be continued to Thursday, November 8, 2012 at 6:00 p.m., in the Council Chambers, City Hall West.

C. Citizen Participation (30 minutes total for non-agenda and pending application topics)

D. Consent Agenda: The Consent agenda consists of items with no known opposition or concern and is considered for approval as a group allowing the Planning and Zoning Board to spend its time and energy on the controversial items. Any member of the Board, staff, or audience may request an item be "pulled" off the Consent Agenda.

None

E. Discussion Agenda: Specific time for public input has been set aside for discussion on the following items:

The Planning and Zoning Board provides a recommendation to City Council on the following items:

1. Proposed Land Use Code regulation for Local Oil and Gas Development

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F. Other Business

G. Adjourn



Planning, Development & Transportation Services

Community Development & Neighborhood Services
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TO: Planning and Zoning Board

FROM: Laurie M. Kadrach, Director of Community Development and Neighborhood Services, Lindsay Ex, Environmental Planner

DATE: October 30, 2012

RE: Proposed Land Use Code regulation for local oil and gas development

ISSUES FOR PLANNING AND ZONING BOARD CONSIDERATION

- *Should the P&Z recommend the adoption of the proposed standards to the City Council and support a dual track process of a Type II (Standard) and Basic Development Review (Expedited) option?*
- *Other Issues of Interest?*

SUMMARY

City of Fort Collins staff is in the process of reviewing and updating its land use regulations concerning oil and gas exploration and developing options for mitigating impacts upon the community. The City's goal is to develop strategies and tools that best reflect Fort Collins' community values. In order to accomplish the best outcome, staff has engaged residents through an extensive public engagement process, including boards and commissions and the formation of an advisory committee, composed of representatives from eight City Boards and Commissions, to assist in developing regulations that reflect community values.

MECHANISMS FOR THE CITY TO ADDRESS OIL AND GAS OPERATIONS

The City is pursuing at least five mechanisms to address oil and gas operations to ensure community concerns are addressed and our quality of life is protected:

- Local Government Designee – this tool establishes a staff representative who participates in the state's review of oil and gas applications and provides local comments onto the oil and gas applications at the state level;
- Operator Agreements – is a negotiated agreement between the City and any operator wishing to conduct oil and gas operations in the City, that could include additional, prescriptive requirements such as enhanced baseline and ongoing monitoring;
- Intergovernmental Agreement with the State – this could allow for the City to have inspection authority, which would increase the oversight of oil and gas operations within City Limits ; also includes opportunities for partnering with our surrounding municipalities on a regional basis for inspection authority (see page6 for suggestions related to natural resources);
- Surface Use Agreements – is a negotiated agreement between the landowner and any operator wishing to conduct oil and gas operations; another tool to obtain enhanced conditions; and
- Land Use Regulations – a set of regulations and control mechanisms that are protective of public health, the environment, and community values.

PROPOSED DEVELOPMENT REVIEW PROCESS

Staff is proposing two primary processes for the permitting of a new oil and gas operations: the Standard (Type II) Development Review process and the Expedited (Basic) Development Review process. While the Standard Review process requires the operator to locate a well and operate in a manner that does not degrade quality of life (e.g. adjacent land uses, natural resources, water quality, air quality, visual and scenic resources, etc.), the Expedited Review process requires operators (who voluntarily choose this option) to meet specific, objective criteria that is prescribed in the review process. Additional detail regarding the requirements for each process is described in the tables below. This is a model that has been utilized by other local governments to address oil and gas development and has achieved some success in engaging operators in meeting specific objective criteria.

The two processes can be distinguished as follows:

1. Standard Review and Expedited Review Comparisons

Standard Review Process (Type II Review)	Expedited Review Process (Basic Development Review)
In both processes, goal is to protect and preserve quality of life, environment and public health.	
Open to all operators	Open to qualified operators
Must meet all City regulations	Must meet ALL enhanced City regulations and requirements
Applicant must conduct a neighborhood meeting and public hearing	Only notice of application received and application approved
Planning and Zoning Board approval	Director approval
	Only eligible if all setbacks are met: 500' from an occupied structure, water well, Natural Area or City Park <u>and</u> 150' from any property line OR if on an existing well pad

2. Standard and Expedited Land Use Regulations Comparisons

	Standard Review	Expedited Review
Air Quality		
98% VOC destruction efficiency	✓	✓
Leak detection and repair program	✓	✓

	Standard Review	Expedited Review
Submit certification of emission compliance	✓	✓
Closed Loop Drilling Systems		✓
Report emissions immediately		✓
Cannot flare or vent gas		✓
Use only no-bleed pneumatic controllers		✓
No gas emissions during well maintenance		✓
No spills during maintenance of pipelines		✓
Baseline and post production air quality sampling required		✓
Water Quality		
Water Quality Plan	Must submit a water quality addressing elements that ensure no degradation of water quality	Must submit a water quality plan according to the City's criteria
Water Supply Well Monitoring	None prescribed	Water well sampling within ¼ mile radius of the wellhead casing
Baseline Monitoring	None prescribed	Sample two groundwater features within ½ mile cross and downgradient
Soil gas monitoring	None prescribed	Active soil gas monitoring could trigger additional groundwater and surface water monitoring
Groundwater and Surface Water Monitoring	None prescribed	If soil gas monitoring indicates, install monitoring wells cross and downgradient
Stormwater Protection	Current City regulations apply	Same as Standard Review
Waterbody setbacks	Operations shall be sited away from waterbodies	Cannot qualify for expedited review without being at least 500' from a waterbody or

	Standard Review	Expedited Review
		wetland
Floodplains	Current City regulations apply	Same as Standard Review
Disclosure of source of water supply	Operator must disclose their source of water	Same as Standard Review
Natural Resources		
Natural Resources Protection	<p>Installation and operation shall not cause significant degradation to mapped natural features, areas or habitats; and</p> <p>Buffer for sensitive visual areas; and</p> <p>Minimize existing vegetation disturbance</p>	<p>Compliance with City's natural habitat buffer standards, which requires:</p> <ul style="list-style-type: none"> • Ecological Characterization Study, • Setbacks from natural habitats and features, • Construction timing requirements, • Buffering from sensitive visual areas, and, • Preservation of existing vegetation.
Reciprocal setbacks – applies to future residential development proposals in proximity of oil and gas operations		
Abandoned and plugged wells	Setback ranges from 20-50 feet from the abandoned and plugged well, based on screening, berming, and fencing options	Same as Standard Review
Any oil and gas well that has not been plugged and abandoned	<p>Setback ranges from 150-250 feet from all other wells, based on screening, berming and fencing options</p> <p>From a safety perspective, the minimum setback should never be less than 150'</p>	Same as Standard Review

BOARD RECOMMENDATIONS

City staff has presented the proposed Land Use Code regulations with numerous City Boards and Commissions. Formal recommendations were made by the Water Board (8-1) and the Natural Resources Advisory Board (6-1) to support the Standard (Type II) and Expedited (Basic Development Review) processes and associated regulations. The Air Quality Advisory Board and the Land Conservation Stewardship Board indicated general support for the Standard and Expedited review but needed more information on specific regulations; staff will meet with these Boards again at their November meetings.

SCHEDULE FOR OUTREACH AND REVIEW OF DRAFT REGULATIONS

- *October 4, 2012. Water Board Work Session*
- *October 10, 2012 Land Conservation and Stewardship Board*
- *October 15, 2012. Air Quality Advisory Board*
- *October 17, 2012. Natural Resources Advisory Board*
- *October 17, 2012. Economic Advisory Commission*
- *October 18, 2012. Water Board Meeting*
- *October 30, 2012. Planning and Zoning Board Work Session*
- *November 1, 2012. Planning and Zoning Board Hearing*
- *December 4, 2012. City Council meeting, First Reading of Oil and Gas Ordinance*
- *December 18, 2012. City Council meeting, Second Reading of Oil and Gas Ordinance*

ATTACHMENTS

1. Proposed Land Use Code Ordinance for oil and gas operations
2. Draft Board minutes – Natural Resources Advisory Board
3. Draft Board minutes – Air Quality Advisory Board
4. Draft Board minutes – Water Board

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ORDINANCE NO. _____, 2012
OF THE COUNCIL OF THE CITY OF FORT COLLINS
AMENDING THE LAND USE CODE PERTAINING TO OIL AND GAS
EXPLORATION AND PRODUCTION REGULATIONS

WHEREAS, presently, the Land Use Code contains no specific regulations regarding oil and gas, but rather, contains some general regulations in Section 3.8.14 regarding “preemption uses”; and

WHEREAS, the City Council has determined that it is in the best interests of the City that Section 3.8.14 be amended by replacing the present language with more specific regulations; and

WHEREAS, after extensive public input has been received and upon the favorable recommendation of the Planning and Zoning Board, the City Council has determined that it is in the best interest of the City that these proposed amendments be adopted.

NOW, THEREFORE, BE IT ORDAINED BY THE COUNCIL OF THE CITY OF FORT COLLINS as that the Land Use Code be amended as follows:

Section 1. That Section 2.3.2(H) of the Land Use Code is hereby amended by the addition of a new subparagraph (8) which reads in its entirety as follows:

(H) *Step 8* (Standards): Applicable. An overall development plan shall comply with the following criteria:

...
(8) The overall development plan shall identify the location of any potential future oil and gas well or oil and gas operations.
...

Section 2. That Section 3.1.1 of the Land Use Code is hereby amended to read as follows:

3.1.1 Applicability

All development applications and building permit applications shall comply with the applicable standards contained in Divisions 3.1 through 3.9, except that single-family dwellings and extra occupancy rental houses that are subject only to basic development review under Article 4, as well as any accessory buildings, structures and accessory uses associated with such single-family dwellings and extra occupancy rental houses, need to comply only with: (A) the standards contained in Article 4 for the zone district in which such uses are located; (B) the standards contained in Division 3.8; and (C) with respect to extra occupancy rental houses, the standards contained in Section 3.2.2(K)(1)(j). Oil and gas operations need only comply with those provisions that are either specifically set out

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in Section 3.8.14 or referenced in Section 3.8.14. In addition to the foregoing, this Land Use Code shall also apply to the use of land following development to the extent that the provisions of this Land Use Code can be reasonably and logically interpreted as having such ongoing application.

Section 3. That Section 3.1.2 of the Land Use Code is hereby amended to read as follows:

3.1.2 Relation to Zone District Standards (Article 4)

In the event of a conflict between a standard or requirement contained in Article 3 and Article 4, the standard in Article 4 shall prevail. Oil and gas operations shall be permitted in all zone districts contained in Article 4 of this Land Use code, subject to either basic development review or review and approval by the Planning and Zoning Board as provided in Section 3.8.14 of this Land Use Code, and such oil and gas operations shall be exempt from all regulations contained in Article 4.

Section 4. That Section 3.8.14 of the Land Use Code is hereby repealed and reenacted to read in its entirety as follows:

3.8.14 Oil and Gas Operations

(A) Purpose.

- (1) The provisions of this Section are intended to acknowledge and protect the rights of mineral interest holders to access and extract the minerals that they own or lease, while also protecting the public health, safety, and welfare, as well as the natural environment, from the 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.
- (2) Development plan review is the City's permitting procedure for oil and gas operations. This process is in place to recognize that these operations involve industrial type activities that by their nature may occur in or near residential and rural areas. Traditional zoning would generally separate these types of uses so as to mitigate their impacts; however, this use must occur near the resource to be extracted, so the separation of uses is not possible. Thus, the purpose of this Section is to provide a framework for the responsible exploration and production of oil and gas resources in a manner that is sensitive to surrounding current, planned or future land uses and that mitigates adverse impacts to, and protects the public health, safety, welfare, and the natural environment of, the City.
- (3) The City recognizes that certain Colorado state agencies and the federal government also have authority to regulate various aspects of oil and gas operations. The regulations of this Section over the land use aspects of oil

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and gas operations are intended to be consistent with said authority. In particular, this Section is not intended to create and is not to 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.

(B) *General Application Procedure.*

- (1) *Development Plan Review Required.* All oil and gas operations on public and private land within the City shall comply with this Section except as provided in subparagraph (2) below or as may be waived or modified in accordance with subsections (G) or (H) hereof. Prior to the commencement of any oil and gas operations in the City, a development plan application must be submitted and approved in accordance with this Section. No other form of discretionary land use review under this Land Use Code is required for oil and gas operations. Project development plan review and approval is also required prior to the issuance of any use or building permits, or associated grading, access, floodplain, or other permits necessary for the oil and gas operation. Oil and gas operations that may not require a building permit or other associated permit must still obtain project development plan review and approval under this Section and obtain a use permit. Division 2.2 applies to all applications for approval of an oil and gas operation, except to the extent that the provisions thereof are expressly superseded, or are superseded by implication, when applying the principles of statutory construction contained in Title 2, Article 2 of the Colorado Revised Statutes.
- (2) *Development Plan Review Not Required.* An oil and gas operation on public and private land within the City need not comply with this Section if such oil and gas operation is the subject of a valid operator agreement between the City and the operator that has been approved by the City Council by resolution provided, however, that if the oil and gas operation is located on City property, the operation must also be conducted in accordance with a surface use agreement approved by the City Council by resolution.
- (3) *Basic Development Review Process.* The basic development review process is a voluntary, expedited process for reviewing a project development plan for oil and gas operations that meet certain objective criteria and utilize the most effective performance technologies and practices in the planning, development and operation of new or substantially modified oil and gas operations. The basic development review process is optional and, while applicants are encouraged to use it, this Section also contains the standard project development review process for proposed operations that cannot meet the basic development review

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criteria or for applicants who choose the standard project development plan review process. With respect to Division 2.2 of this Land Use Code, only Sections 2.2.1, 2.2.3, 2.2.4, 2.2.8, 2.2.9, 2.2.10, and 2.2.11 apply to Basic Development Review.

- (4) *Standard Development Review Process.* The standard development review process is available for those applicants who choose not to file an application under the basic development review process and also for those applications that are reclassified from, basic development plan review to standard development review. Such applications shall be classified as standard development review applications and shall be reviewed as “Type 2” review by the Planning and Zoning Board.
- (5) *Conceptual Review.* The City requires applicants to meet with City staff regarding any proposed oil and gas operation prior to submitting an application for exploration or development activity, in order to provide sufficient opportunity for comment on plans, operations and performance, and to address all reasonable concerns as a result of its proposed operation, as provided in Section 2.2.1 of this Land Use Code.
 - (a) *Timing.* Conceptual review shall be held at least thirty (30) days prior to the applicant applying for a Commission Application for Permit to Drill (APD) and at least one (1) day prior to the submission of an application for development plan review. This requirement is intended to allow the City to harmonize its regulatory procedures with those of the Commission. If the conceptual review is not conducted at least thirty (30) days prior to the applicant applying for the APD, the application cannot qualify for basic development plan review.
 - (b) *Meeting.* At conceptual review, the Director and the applicant will review the City’s development plan review process so that the applicant can plan its proposed oil and gas operation in a manner that ensures compliance with the development plan regulations and applicable state and federal regulations. Conceptual review will also inform the applicant about the basic development plan review process option; and allow the applicant and Director to explore site-specific concerns and issues that relate to the development plan review process, to discuss project impacts and potential mitigation methods, to discuss coordination of the City process with the state permitting process; and allow the applicant to preliminarily raise any potential operational conflict concerns. Based upon the foregoing, applicants are encouraged to conduct the conceptual review with the City prior to completing well siting decisions. Completion of the conceptual review qualifies the applicant to submit an application for a development plan review

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provided the application is filed within six (6) months of the conceptual review.

- (6) *Classification of Oil and Gas Operation Application.* When determining whether an application submitted under this Section is complete, the Director shall also determine whether the application initially qualifies for the basic development plan review process or whether the application is a standard project development plan review application.
- (7) *Application Submission and Determination of Completeness.* The application shall include all documentation required pursuant to Section 2.2.3 of this Land Use Code and applicable requirements of this Section. The Director shall determine whether a basic development plan review application is complete within ten (10) days after receipt of the application or twenty (20) days if outside consultants or staff other than the Community Development and Neighborhood Services Department assist the Director with the completeness determination. The Director shall determine whether a standard project development plan review application is complete within twenty (20) days after receipt of a complete application or forty (40) days if outside consultants or staff other than the Planning Department assist the Director with the completeness determination.
 - (a) *Application Deemed Incomplete.* If an 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 Director in writing of the need for additional time.
 - (b) *Application Deemed Complete.* If an application is found to be complete, containing all documentation required by this Section, 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 Section.
- (8) *Application Notice to Surface Owners and Surrounding Landowners.* This subsection shall apply to oil and gas operations instead of the notice provisions contained in Section 2.2.6 of this Land Use Code.

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- (a) Notice shall be mailed no less than five (5) days after the application has been deemed complete by the Director. Notice of the application shall be made as follows:
 - 1. To the surface owners of the parcels of land on which the oil and gas operation is proposed to be located;
 - 2. To the surface owners of the parcels of land within five hundred (500) feet of a proposed gathering line;
 - 3. To the surface owners of the parcels of land within two thousand six hundred forty (2,640) feet of the parcel on which the oil and gas operation is proposed to be located; and
 - 4. To persons registered in writing with the Director as representing bona fide neighborhood groups and organizations and homeowners' associations within the area of notification.
 - (b) The Director shall also provide public notice of the application received by posting the application on the City's website.
 - (c) For applications processed through Basic Development Review, the Director shall also provide written notice of the determination to the applicant and shall mail notice of any determination of approval to all surface owners and neighborhood organizations as provided in subsection (a) above.
 - (d) For applications processed through the Standard Development Plan Review, notice shall be provided of the neighborhood meeting and public hearing in accordance with Section 2.2.6 of this Land Use Code.
- (9) *Posting Site.* The Applicant shall post a sign on the site in a location visible to the public (i.e., visible from a public road) stating that a development plan review application has been applied for and providing the phone number of the Planning Department where information regarding the application may be obtained. All signs for oil and gas operations shall be twelve (12) square feet in size. For parcels of land exceeding ten (10) acres in size, two (2) signs shall be posted. Such signs shall be provided by the Director and shall be posted on the subject property in a manner and at a location or locations reasonably calculated by the Director to afford the best notice to the public, which posting shall occur within fourteen (14) days following submittal of a development application to the Director.

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- (C) ***Standards Applicable to both Basic Development Review and Standard Project Development Plan Review.*** The following general oil and gas facility operational requirements shall apply to all project development plan use permits for oil and gas operations, whether approved through the basic development review process or the standard project development plan review:
- (1) *Anchoring.* All mechanized equipment associated with oil and gas operations shall be anchored so as to minimize transmission of vibrations through the ground.
 - (2) *Applications and Permits.* Copies of all local, state and federal applications and permits that are required for the operation shall be provided to the Director.
 - (3) *Burning of Trash.* No burning of trash shall occur on the site of any oil and gas operation.
 - (4) *Chains.* Chains from heavy equipment shall be removed before entering a City street.
 - (5) *Chemical Disclosure.* The Director shall be provided, in table format, 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.
 - (6) *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.
 - (7) *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 City landmarking, or the National Historic Register.
 - (8) *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.
 - (9) *Dust Suppression.* Dust associated with traffic on access roads and the site shall be 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.

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- (10) *Electric Equipment.* The use of electric-powered motors for pumping systems shall be required if an oil and gas operation is located in reasonably close proximity to available electric transmission lines.
- (11) *Emergency Response Standards.*
- (a) *In General.* Oil and gas operations shall not cause an unreasonable risk of emergency situations such as explosions, fires, gas, oil or water pipeline leaks, ruptures, hydrogen sulfide or other toxic gas or fluid emissions, hazardous material vehicle accidents or spills.
- (b) *Emergency Preparedness Plan.* Each operator with an operation in the City is required to develop an emergency preparedness plan for each specific facility site. The plan shall be filed with the Poudre Fire Authority and updated on an annual basis or as conditions change (responsible field personnel change, ownership changes, etc.). The emergency preparedness plan shall consist of at least the following information:
1. Name, address and phone number, including 24-hour emergency numbers for at least two persons responsible for emergency field operations.
 2. An as-built facilities map in a format suitable for input into the City's GIS system depicting the locations and type of above and below ground facilities including sizes, and depths below grade of all oil and gas gathering and transmission lines and associated equipment, isolation valves, surface operations and their functions, as well as transportation routes to and from exploration and development sites, for emergency response and management purposes. The information concerning pipelines and isolation valves shall be held confidentially by the City's Office of Emergency Management, and shall only be disclosed in the event of an emergency. The City shall deny the right of inspection of the as-built facilities maps to the public pursuant to C.R.S. § 24-72-204.
 3. Detailed information addressing each potential emergency that may be associated with the operation. This may include any or all of the following: explosions, fires, gas, oil or water pipeline leaks or ruptures, hydrogen sulfide or other toxic gas emissions, or hazardous material vehicle accidents or spills.

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4. A provision that any spill outside of the containment area or that has the potential to leave the facility or to threaten waters of the state shall be reported to the emergency dispatch and the Director immediately.
 5. Detailed information identifying access or evacuation routes, and health care facilities anticipated to be used.
 6. A project specific emergency preparedness plans for any project that involves drilling or penetrating through known zones of hydrogen sulfide gas.
 7. A provision obligating the operator to reimburse the appropriate emergency response service providers for costs incurred in connection with any emergency.
 8. Detailed information showing that the operator has adequate personnel, supplies, and funding to implement the emergency response plan immediately at all times during construction and operations.
 9. A provision obligating the operator to have immediately available on each site a current Material Safety Data Sheets (MSDS) for all chemicals used or stored on a site. The MSDS sheets shall be provided immediately upon request to the Director, a public safety officer, or a health professional.
- (12) *Engineering standards.* Applicants for oil and gas operations shall comply with all requirements contained in Division 3.3 of this Land Use Code, to the maximum extent feasible. With respect to oil and gas operations, the references in Section 3.3 and particularly in Section 3.3.2(D) to “building permit” shall mean “use permit”. In lieu of issuing a “building permit,” the Chief Building Official shall issue a “use permit” to any applicant for an oil and gas operation complying with the applicable regulations of this Land Use Code. No oil and gas operation may be conducted until a use permit for such operation has been issued by the City. Building permits must also be obtained for all structures to which the International Fire Code and/or International Building Code apply.
- (13) *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.
- (14) *Fencing.* Permanent perimeter fencing shall be solid, opaque and consist of masonry, stucco steel, or other similar materials. Chain link fencing

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shall be prohibited as a perimeter screening material. If fencing is used along collector or arterials streets, such fencing shall be made visually interesting and shall avoid creating a “tunnel” effect.

- (15) *Flammable Material.* All land within twenty five (25) feet of any tank, pit or other structure containing flammable or combustible materials shall be kept free of dry weeds, grass or rubbish.
- (16) *Floodplains.* All oil and gas operations shall comply with Chapter 10 of the City Code.
- (17) *Land Disturbance Standards.* The following mitigation measures shall be used to achieve compatibility and reduce land use impacts:
 - (a) Pad dimensions for a well shall be the minimum size necessary to accommodate operational needs while minimizing surface disturbance.
 - (b) Oil and gas operations shall use structures and surface equipment of the minimal size necessary to satisfy present and future operational needs.
 - (c) Oil and gas operations shall be located in a manner that minimizes the amount of cut and fill.
 - (d) Oil and gas operations shall use and share existing infrastructure, minimize the installation of new facilities, and avoid additional disturbance to lands in a manner that reduces the introduction of significant new land use impacts to the environment, landowners and natural resources.
 - (e) Landscaping plans shall include 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 shall be required for the first two years after establishment of the vegetation and the operator shall agree to provide a financial guarantee that complies with subsection I or is otherwise acceptable to the Director. Produced water may not be used for landscaping purposes.
 - (f) 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

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operation. The application shall include any Commission-required interim and final reclamation procedures and any measures developed from a consultation with the Director staff regarding site specific re-vegetation plan recommendations.

- (18) *Landscaping.* If an oil and gas operation has frontage on a public street, street trees shall be planted along the roadway in accordance with Section 3.2.1(D)(2) of this Land Use Code. Tree mitigation, if applicable, shall comport with Section 3.2.1(F) of this Land Use Code.
- (19) *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 shall indicate the location of all outdoor lighting on the site and any structures, and include cut sheets (manufacturer's specifications with picture or diagram) of all proposed fixtures.
- (20) *Maintenance of Machinery.* Routine field maintenance of vehicles or mobile machinery shall not be performed within three hundred (300) feet of any water body.
- (21) *Mud Tracking.* Tracking of mud or debris onto City streets is prohibited.
- (22) *Reclamation Plan.* Any application for an oil and gas operation shall include any Commission-required interim and final reclamation procedures.
- (23) *Recordation of flow lines.* All flow lines, including transmission and gathering systems, shall have the legal description of the location recorded with the City Clerk and County Recorder within thirty (30) days of completion of construction. Abandonment of any flow lines shall be recorded with the Clerk and Recorder's office within thirty (30) days after abandonment.
- (24) *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 City. 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.
- (25) *Removal of Debris.* When an oil and gas operation becomes operational, all construction-related debris shall be removed from the site for proper

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disposal. The site shall be maintained free of debris and excess materials at all times during operation. Materials shall not be buried on-site.

- (26) *Removal of Equipment.* All equipment used for drilling, re-drilling and maintenance of the facility shall be removed from the site within thirty (30) days of completion of the work, unless otherwise agreed to by the surface owner. Permanent storage of equipment on well pad sites shall not be allowed.
- (27) *Scenic and Rural Character Standards.* The installation and operation of any oil and gas operation shall not cause significant degradation to the scenic attributes of the City. The following standards are methods that shall be implemented to prevent degradation to the scenic attributes of the City:
- (a) *Buffering from Sensitive Visual Areas.* The operation shall be buffered from sensitive visual areas (i.e., roads, property lines, or residences) by providing landscaping along the perimeter of the site between the surface equipment and the sensitive visual area.
- (b) *Existing Vegetation.* The operation shall be located in areas that maximize the amount of natural screening available for the facility. Natural screening includes, but is not limited to, the use of existing vegetation as a background, the construction of the operation near screening stands of vegetation, or placement in valleys allowing topographic screening. The operation shall be constructed in a manner to minimize the removal of and damage to existing trees and vegetation. If the operation requires clearing trees or vegetation, the edges of the cleared vegetation shall be feathered and thinned and the vegetation shall be mowed or brush-hogged while leaving root structure intact, instead of scraping the surface.
- (c) *Low Profile.* To the maximum extent feasible, oil and gas operations shall use low profile tanks.
- (28) *Signs.* All applicants for oil and gas operations shall comply with the requirements contained in Section 3.8.7 of this Land Use Code pertaining to signs.
- (29) *Spills.* Chemical spills and releases shall be reported in accordance with applicable state and federal laws, including the Emergency Planning and Community Right To Know Act, the Comprehensive Environmental Response, Compensation and Liability Act, the Oil and Pollution Act, and the Clean Water Act, as applicable. If a spill or release impacts or threatens to impact a water well, the operator shall notify the affected or potentially affected water well owner immediately following discovery of

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the release, and the spill or release shall be reported to the City and to the water well owner within twenty-four (24) hours of becoming aware of the spill or release.

- (30) *Stormwater Control Plan.* All oil and gas operations shall comply and conform with the Fort Collins Storm Criteria Manual (FCSCM), including submission of an Erosion Control Report and Plan. These criteria of the City may be more restrictive than those of the Colorado Department of Public Health and Environment (CDPHE) and/or Environmental Protection Agency (EPA), and it is the responsibility of the oil and gas entity to ensure that the most restrictive aspects of development are met.
- (31) *Surrounding Land Uses Standards.* Oil and gas operations shall be sited and operated in a manner so that the operation is compatible with surrounding land uses to the maximum extent feasible. The following techniques or actions shall be used in order to achieve compatibility between the proposed oil and gas operation and surrounding land uses.
- (a) *Compatibility Siting Criteria.* Adequate separation from surrounding land uses most effectively ensures compatibility between proposed oil and gas operations and existing land uses. In addition, locating the operation based upon the following site-specific characteristics will assist in creating a compatible operation:
1. Oil and gas operations shall be located as far as possible from surrounding land uses.
 2. Oil and gas operations shall be sited away from prominent natural features such as distinctive rock and land forms, vegetative patterns, river and streams and other landmarks or other identified visual or scenic resources, designated environmental resources, trails, or distinctive vegetative patterns if such features are identified on the Natural Habitats and Features Inventory or if any portion of the development site possesses characteristics (including, without limitation, wetlands, riparian areas or foothills forest) that would have supported their inclusion on the Natural Habitats and Features Inventory Map, and such areas are discovered during site evaluation and/or reconnaissance associated with the development review process.
 3. Oil and gas operations shall be located with consideration being given to prevailing weather patterns, including wind directions, to mitigate compatibility concerns.

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4. Oil and gas operations shall, to the extent reasonably feasible, not be located on or across hilltops and ridges, shall avoid silhouetting, and, where possible, shall be located at the base of such slopes.
 5. Oil and gas operations shall use acoustically or hospital-grade insulated housing, a cover to enclose the motor or engine, or an acoustically insulated building to enclose the installation.
 6. Any equipment used in drilling, completion, or production of an oil and gas operation shall comply with the maximum permissible noise levels set forth at C.R.S. § 25-12-103 for residential zones.
- (32) *Temporary Access Roads.* Temporary access roads associated with oil and gas operations shall be reclaimed and re-vegetated to the original state.
- (33) *Transportation and circulation.* All applicants for oil and gas operations shall comply with the requirements contained in Division 3.6 of this Land Use Code pertaining to transportation and circulation. All applicants for oil and gas operations shall include in their applications detailed descriptions of all proposed access routes for equipment, water, sand, waste fluids, waste solids, mixed waste and all other material to be hauled on the public streets and roads of the City. The submittal shall also include the estimated weights of vehicles when loaded, a description of the vehicles, including the number of wheels and axles of such vehicles and any other information required by the Traffic Engineer. In addition to any other bonding or indemnification requirements of the City as may be reasonably imposed, all applicants for oil and gas operations shall provide the City with a policy of insurance in an amount determined by the City Manager to be sufficient to protect the City against any damages that may occur to the City's streets, roads or rights-of-way as a result of any weight stresses or spillage of hauled materials including, without limitation, water, sand, waste fluids, waste solids and mixed wastes.
- (34) *Trash and recycling enclosures.* All applicants for oil and gas operations shall comply with the requirements contained in Section 3.2.5 of this Land Use Code, to the maximum extent feasible.
- (35) *Water supply.* The operator shall identify in the site plan its source for water used in both the drilling and production phases of operations. The sources and amount of water used in the City shall be documented and this record shall be provided to the City annually or sooner, upon request of the City Manager. The disposal of water used on site shall also be detailed

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including anticipated haul routes, approximate number of vehicles needed to supply and dispose of water and the final destination for water used in operation.

- (36) *Weed Control.* The applicant shall be responsible for ongoing weed control at oil and gas operations, pipelines, and along access roads during construction and operation, until abandonment and final reclamation is completed per City, Larimer County or other applicable agency 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 Larimer County Noxious Weed Management Plan and in coordination with the requirements of the surface owner.
 - (37) *Well Abandonment.* The operator shall comply with any Commission rules regarding well abandonment. Upon plugging and abandonment of a well, the operator shall provide the Director with surveyed coordinates of the abandoned well and shall leave onsite a physical marker of the well location.
 - (38) *Representations.* The approved project 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.
- (D) ***Basic Development Review.*** The procedures and standards set forth in this subsection shall be applied only to applications qualifying for basic development plan review.
- (1) *Procedure Specific to Basic Development Review.*
 - (a) *Administrative Action.* An application that qualifies for the Basic Development Plan review process shall be reviewed and acted upon by the Director, and shall not be subject to the procedural requirements contained in Division 2.4 of this Land Use Code.
 - (b) *Eligibility for Basic Development Review.* A proposed operation will qualify for the basic development review process based upon a determination by the Director that a well pad already exists for the proposed oil and gas operation, or if not, that the proposed location of the oil and gas operation meets the following siting criteria:
 - 1. The wellhead, pumping units, tanks, and treaters are at least five hundred (500) feet from any occupied structure, or such greater distance as may be required by the Commission.

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2. The wellhead, pumping units, tanks, and treaters are at least one hundred fifty (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 five hundred (500) feet from any natural area, any property managed by the City's Natural Areas Department, any City Park, and any surface water body including, but not limited to, rivers, streams, ditches, wetlands, reservoirs and lakes.
4. The wellhead, pumping units, tanks, and treaters are at least five hundred (500) feet from any domestic or commercial water wells.

(c) *Referral by Director and Staff Review.*

1. *Timing.* After determining that a development application is complete, the Director shall refer the development application to the appropriate review. Referral comments on the proposed development plan shall be returned to the Director within fifteen (15) business days from the date of transmittal of the referral.
2. *Meeting.* Upon completion of the referral comments, the Director, staff, and the applicant will review the City's referral comments for compliance with the development plan regulations and applicable state and federal regulations. A resubmittal and additional staff review may be required to address all referral comments. Additional meetings shall occur no later than ten (10) business days following resubmittal.
3. *Consultant Review.* The Director may submit the application for review and recommendation by consultants retained by the City with the necessary expertise to review technical or other aspects of the application which are outside the expertise of the Community Development and Neighborhood Services Department. The applicant shall reimburse the City for any costs associated with the consultant review.

(d) *Review by Director.*

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1. The Director shall review and make a determination on an application that qualifies for the basic development review process within forty-five (45) days after the application is deemed complete. The applicant may extend the foregoing time period. 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 standards contained in subsection C of this Section.
 2. Following review of the completed application within the time period set out in subsection 1. above, the Director may approve, approve with conditions necessary to ensure compliance with this Section, or deny the application based upon noncompliance with the basic development review standards as contained in subsection (D)(2) below.
- (2) *Review Standards Specific to Basic Development Review.* All applications for oil and gas facilities that demonstrate compliance with the following standards shall be approved under the basic development review process.
- (a) *Air Quality.* 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 all state and federal regulations for the control of fugitive dust, and control of ozone, ozone precursors, and hazardous air pollutants by the Larimer County Public Health Department. 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 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 ninety eight (98) percent VOC destruction efficiency. The applicant shall submit to the Director a manufacture test or other data demonstrating a ninety eight (98) percent VOC destruction or control efficiency. Any flare, auto ignition system, recorder, vapor recovery device or other equipment used to meet the ninety eight (98) percent VOC destruction or control efficiency requirement shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manuals.

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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 ninety eight (98) percent 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 five (5) minutes during any two (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 a visible alarm shall be 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 shall develop and maintain a leak detection and component repair program,

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such as a Leak Detection and Repair program or a Directed Inspection and Maintenance program, using the 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 shall 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, the operator shall 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 shall 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 or nearby structures. Non-flammable gas may be vented temporarily until flammable gas is encountered where capture or combustion is not feasible. Completion combustion devices shall be equipped with a reliable continuous ignition source over the duration of flowback.
 - c. Operators have a general duty to safely maximize resource recovery and minimize releases to the atmosphere during flowback and subsequent recovery / operation.

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- d. For wildcat or delineation wells in a location without a pipeline, each well completion operation at a gas wellhead affected facility shall reduce emissions by using a completion combustion device equipped with a reliable continuous ignition source over the duration of flowback.
 - e. The operator shall maintain a log for each well completion operation at each gas wellhead affected facility. The log shall be completed on a daily basis and must contain the records specified in 40 C.F.R. § 60.5420(c)(1)(iii).
 - f. The operator of a well shall notify the Director at least two (2) days prior to the commencement of well drilling and completion. The notification shall include contact information for the operator; the API well number, the latitude and longitude coordinates for each well in decimal degrees to an accuracy and precision of five (5) decimals of a degree using the North American Datum of 1983; and the planned date of the beginning of drilling and completion / flowback. The notice may be submitted in writing or in electronic format.
6. *Storage Vessels.* The operator shall estimate and report emissions immediately from new or modified storage vessels added to well sites with existing production wells or within 30 days for vessels located at well sites with no existing wells in production.
 7. *Capture of Produced Gas from Wells.* Gas produced during production shall be captured and not flared or vented.
 8. *Pneumatic controllers.* The operator shall use only no-bleed pneumatic controllers.
 9. *Maintenance During Well Blowdowns.* The Air Quality Plan shall require the use of technologies or practices that minimize or eliminate natural gas emissions during well maintenance or blowdowns.
 10. *Maintenance of Gathering Lines and Pipelines.* The Air Quality Plan shall require technologies or practices that minimize or eliminate emissions or spills during maintenance of pipelines.

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11. *Rod-Packing Replacement.* Operators shall replace rod-packing from reciprocating compressors every twenty six thousand (26,000) hours or thirty six (36) months.
 12. *Air Quality Monitoring for Air Toxics.* The operator shall be responsible for conducting baseline air quality monitoring as specified in the City's *Air Quality Baseline and Follow-up Monitoring Plan* and providing a report and copies of all test results to the Director and Commission in an electronic data deliverable format. The Director may require additional post-completion test(s) if changes in air quality are identified during follow-up testing or in response to citizen complaints.
 13. *Certification.* An authorized representative for the operator shall 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 shall contain a certification as to the truth, accuracy and completeness of the reports.
- (b) *Water Quality Monitoring and Well Testing.* Proposed oil and gas operations shall implement a water quality monitoring and well testing plan that establishes compliance with the criteria of this subsection.
1. *Water Well Sampling.*
 - a. Based upon records from the Colorado Division of Water Resources, the operator shall identify and offer to sample all water wells located within a one quarter mile ($\frac{1}{4}$) mile radius of the oil and gas well casing of a proposed oil and gas well. If no water well exists within a one-quarter ($\frac{1}{4}$) mile or if the operator is denied access, then the operator shall offer to sample water wells within a one-half ($\frac{1}{2}$) mile radius. If a water well owner desires that the water well be tested, the operator shall conduct baseline monitoring of the water well prior to the start of heavy equipment operations at the oil and gas well site. If desired by the water well owner, samples shall be collected at the same location one year, three years, and six years after the conclusion

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of the oil and gas well completion. 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. All water well monitoring results shall be reported to the Director and to the water well owner.

- b. The water well testing described in this Section shall include testing for the analytes listed in Table 1. Current applicable EPA-approved analytical methods for drinking water shall be used and analyses shall be performed by laboratories that maintain state or nationally accredited programs. Field observations such as damaged or unsanitary water well conditions, adjacent potential pollution sources, odor, water color, sediment, bubbles, and effervescence shall also be included. The location of the water well shall be surveyed using a sub meter GPS.
- c. If the monitoring samples collected after the oil and gas well completion indicate free gas or a dissolved methane concentration level greater than two (2) milligrams per liter (mg/l) is detected in a water well, gas compositional analysis and stable isotope analysis of the methane (carbon and deuterium) shall be performed to determine gas type. If the test results indicate biogenic gas, no further isotopic testing shall be done. If the test results indicate thermogenic or a mixture of thermogenic and biogenic gas, then the operator shall submit to the Director and Commission an action plan to determine the source of the gas. If the methane concentration increases by more than five (5) mg/l between sampling periods, or increases to more than ten (10) mg/l, the operator shall notify the Director, the Commission and the owner of the water well immediately.
- d. If, at any time, monitoring indicates contamination, the operator shall immediately notify the Director, the Commission and the owner of the water well.

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- e. Copies of all test results described above shall be provided to the Director, the Commission 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 Commission in an electronic data deliverable format.
 - f. If a spill or release impacts or threatens to impact a water well, the operator shall notify the affected or potentially affected water well owner immediately following discovery of the release, and the spill or release shall be reported to the Director and to the water well owner within 24 hours of becoming aware of the spill or release.
2. *Public Water Supply Protection.* The Operator shall comply with all requirements of Commission Rule 317(b) regarding Public Water Supply Protection.
3. *Groundwater and Surface Water Sampling and Monitoring.*
- a. Baseline Monitoring.
 - 1) The Operator shall collect and analyze representative samples of groundwater from the two closest groundwater features with reasonable access, such as permitted and registered water wells, groundwater wells or groundwater seeps and springs, which are located within 1/2 mile cross and down gradient of the oil and gas well casing of the proposed oil and gas well. If there is not a groundwater feature within 1/2 mile of the oil and gas well casing, the Operator shall install two groundwater monitoring wells within close proximity, cross and down gradient of the proposed oil and gas well. The baseline samples shall be collected prior to the start of heavy equipment operations at the site. Samples shall be collected at the same location one year after the conclusion of the oil and gas well completion.
 - 2) The Operator shall collect and analyze representative samples of surface water from

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water bodies within ½ mile cross and down gradient of the well casing of the proposed oil and gas well. The baseline samples shall be collected prior to the start of heavy equipment operations at the site. Samples shall be collected at the same location one year after the conclusion of the oil and gas well completion.

- 3) Analytes for groundwater and surface water shall include, at a minimum, those outlined in the COGA Sampling and Analysis Plan (Table 1).
 - 4) Copies of all baseline monitoring results described above shall be provided to the Director prior to the issuance of a permit and within three months for samples collected after the conclusion of well completion.
- b. *Active Soil Gas Monitoring.* Operators shall conduct an active soil gas survey in proximity to the wellhead 90 days after production begins to determine if any leaks/releases have occurred as a result of drilling, stimulation, and completion activities.
- c. *Groundwater Monitoring.* If, based on results of active soil gas monitoring, there is an indication of a spill or release, the operator shall be required to install groundwater monitoring wells and conduct groundwater monitoring cross gradient and down gradient of the soil gas contamination to determine the extent of the contamination and possible impacts to water supplies and water bodies. Sampling frequency and contaminants analyzed shall be based on the risks associated with the type and concentration of the contaminants identified, hydrogeological conditions, and the beneficial use of the water body, but in no case less than quarterly, and in accordance with the approved Water Quality Monitoring Plan.

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- d. *Surface Water Monitoring.* If, based on the results of active soil gas monitoring and groundwater monitoring, there is an indication that contamination may impact water bodies cross and down gradient of the contamination, then the Operator shall conduct surface water sampling of the potentially impacted water body. Sampling frequency and contaminants analyzed shall be based on the risks associated with the type and concentration of the contaminants identified and the beneficial use of the water body, but in no case less than quarterly, and in accordance with the approved Water Quality Monitoring Plan.

- e. *Additional Monitoring.* The operator shall notify the Director if groundwater or surface water monitoring is required based on the results of soil gas monitoring and shall provide details regarding the associated monitoring plan.

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)

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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 (Oxygen-18 and Deuterium)

- (c) *Natural Resources.* All applicants for oil and gas operations under Basic Development Review shall comply with the requirements contained in Section 3.4.1 of this Land Use Code.
- (d) *Pipelines.* Any newly constructed or substantially modified pipelines on site shall meet the following requirements:
1. 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.
 2. To the maximum extent feasible, pipelines shall be aligned with established roads in order to minimize surface impacts and reduce habitat fragmentation and disturbance.

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3. To the maximum extent feasible, operators shall share existing pipeline rights-of-way and consolidate new corridors for pipeline rights-of-way to minimize surface impacts.
4. Operators shall use boring technology when crossing streams, rivers or irrigation ditches with a pipeline to minimize negative impacts to the channel, bank, and riparian areas.

basic development review

(E) *Standard Development Review.* The procedures and standards set forth in this subsection shall be applied to applications qualifying for standard project development plan review.

(1) *Procedure Specific to Standard Project Development Plan Review.* Upon determination that an application is a standard project development plan review application and that the application is complete, the Director shall begin review of the application for compliance with this subsection.

(a) *Referral by Director and Staff Review.* The project development plan shall be subject to the provisions contained in Division 2.4 of this Land Use Code and the following additional procedural requirements:

1. *Timing.* After determining that a development application is sufficient, the Director shall refer the development application to the appropriate review agencies for review of the development application. 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.
2. *Meeting.* Upon completion of the referral comments, the Director, staff, and the applicant will review the City's referral comments for compliance with the development plan regulations and applicable state and federal regulations. A resubmittal and additional staff review may be required to address all referral comments. Additional meetings shall occur no later than ten (10) business days following resubmittal.

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3. *Consultant Review.* The Director may submit the application for review and recommendation by consultants retained by the City with the necessary expertise to review technical or other aspects of the application which are outside the expertise of the Community Development and Neighborhood Services Department. The applicant shall reimburse the City for any costs associated with this consultant review.
- (2) *Review Criteria and Standards Specific to Standard Project Development Review.* The Planning and Zoning Board's decision on a standard project development plan review application for an oil and gas operation will be based upon the plan's compliance with all applicable development plan standards as set out in this Section 3.8.14 or referenced in Section 3.8.14, except those standards that are specific to Basic Development Review, and upon its compliance with the following additional standards:
- (a) *Air Quality Standards.* Air emissions from the 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 all state and federal regulations for the control of fugitive dust, and control of ozone, ozone precursors, and hazardous air pollutants.
 1. *General Duty to Minimize Emissions.* All continuously operated equipment, including but not limited to, storage vessels and 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 ninety eight (98) percent VOC destruction efficiency. Operators shall submit to the Director manufacture test or other data demonstrating a ninety eight (98) percent VOC destruction or control efficiency. Any flare, auto ignition system, recorder, vapor recovery device or other equipment used to meet the ninety eight (98) percent VOC destruction or control efficiency requirement shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manuals.
 - a. *Flares and Combustion Devices.* All flares shall be designed and operated as follows:
 - 1) The flare shall be fired with natural gas and shall be operated with a ninety eight (98) percent VOC destruction efficiency.

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- 2) 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 five (5) minutes during any two (2) consecutive hours.
 - 3) 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).
 - 4) The flare shall comply with the specifications detailed in 40 CFR 60.18(c)(3)-(6).
 - 5) An automatic flame ignition system shall be installed.
 - 6) 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 a visible alarm shall be activated.
 - 7) 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.
 - 8) 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.
- b. *Fugitive Emissions.* The operator shall develop and maintain a leak detection and component repair program, such as a Leak Detection and Repair program (LDAR) or a Directed Inspection and Maintenance program, using the most effective performance technologies and practices for

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equipment used on the well site for permanent operations.

- c. *Certification.* An authorized representative for the operator must submit annual reports to the Director certifying compliance with these air quality requirements and the Commission 805 Rule requirements for green completions and pneumatic controllers 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 shall contain a certification as to the truth, accuracy and completeness of the reports.
- (2) *Water Quality Standards.* The operator shall provide sufficient evidence to ensure that the installation and operation of any oil and gas operation will not cause significant degradation of surface or ground waters within the City, cause water bodies to not meet their intended beneficial uses, or cause an exceedance of water quality standards as determined by the Colorado Department of Public Health and the Environment – Water Quality Control Commission regulations.
 - (3) *Natural Resource Standards.* The installation and operation of any oil and gas operation shall not cause significant degradation to any area identified on the Natural Habitats and Features Inventory or if any portion of the development site possesses characteristics (including, without limitation, wetlands, riparian areas or foothills forest) which would have supported their inclusion on the Natural Habitats and Features Inventory Map, and such areas are discovered during site evaluation and/or reconnaissance associated with the development review process.

(F) Reclassification.

- (a) *From Basic Development Review to Standard Development Review.* The Director may, upon request of the applicant, reclassify an application that has been filed under the basic development review process at any time prior to the Director's final approval of the application if the Director determines that the proposed oil and gas operation will not meet the applicable criteria or if the Director denies approval of the application or approves the application on conditions unacceptable to the applicant. Upon such reclassification, the application shall be processed under the standard development review process, provided that the applicant pays any additional fees and meets any additional application submittal requirements associated with such process. If the applicant fails to pay such additional fees and file the additional application submittal

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requirements within ninety (90) days of the Director's determination, the application shall be deemed withdrawn. By pursuing a reclassified application under the standard development review process, the applicant shall be deemed to have waived any right of administrative or judicial review related to the earlier processing of the application under the basic development review process.

- (b) *From Standard Development Review to Basic Development Review.* If an application has been submitted for review under the standard development review process, the Director may, upon the request of the applicant at any time prior to a decision on the application by the Planning and Zoning Board, reclassify the application. Upon such reclassification, the application shall be processed under the basic development review process, provided that the applicant pays any additional fees and meets any additional application submittal requirements associated with such process. If the applicant fails to pay such additional fees and file the additional application submittal requirements within ninety (90) days of the Director's determination, the application shall be deemed withdrawn. By pursuing a reclassified application under the basic development review process, the applicant shall be deemed to have waived any right of administrative or judicial review related to the earlier processing of the application under the standard development review process.

(G) Operational Conflict Waiver.

- (1) The City recognizes that the Commission regulates oil and gas operations and that the Colorado appellate courts have determined that, if the application of a City regulation to an oil and gas operation would conflict with a state statute, regulation or other requirement, and if such conflict would materially impede or destroy 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, the City regulation is superseded by the conflicting state requirement. Accordingly, if the City determines, upon the request of an applicant as provided in subsection (G)(2) below, that the application of one or more standards contained in this Section would create an operational conflict, the City will waive the application of the conflicting standard(s).
- (2) The applicant may make a written request to the Director for an Operational Conflict Waiver hearing before the Planning and Zoning Board 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 Planning and Zoning Board.

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Notice of the hearing shall be in accordance with Section 2.2.6 of this Land Use Code. The hearing shall allow the applicant the opportunity to develop a full evidentiary record concerning the alleged operational conflict between the City regulation and the state regulation. The Director shall also provide notice of the hearing to the Commission and request that the Commission provide information to the Planning and Zoning 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 Commission in the context of the specific application. If the Planning and Zoning Board determines that an operational conflict exists, it will waive the City requirement or standard to the extent necessary to negate the operational conflict. The Planning and Zoning 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 conflict with the requirements of the Commission. Any party-in-interest, as defined in Section 2-4 of the City Code, may appeal the decision of the Planning and Zoning Board on the operational conflict waiver request to the City Council in accordance with Section 2.2.12 of this Land Use Code. Any decision of the City Council may be further subject to judicial review under rule 106(a)(4) of the Colorado Rules of Civil Procedure.

- (3) *Other waivers.* At any time during the application process, the Director may waive one or more of the regulations contained in this Section if the applicant demonstrates to the satisfaction of the City one of the following:
- (a) That there is no economical technology commercially available to conduct the oil and gas operation in compliance with the standard(s);
 - (b) That waiving the standard will not result in unreasonable damage to public health, safety, welfare and the environment; or
 - (c) Protection of the public health, safety, welfare and the environment would be enhanced by an alternate approach not contemplated by the standard.

(H) *Modification of Standards and Variances.* Division 2.8 of this Land Use Code shall apply to applications under this Section. Division 2.10 of this Land Use Code shall not apply to applications under this Section or to oil and gas operations generally.

(I) *Procedures Following Approval of Permit.*

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- (1) *Financial Guarantees.* The applicant shall provide one (1) form of the following security (bond, irrevocable letter of credit or equivalent financial security acceptable to the City) to ensure compliance with this Section in an amount equal to the actual estimated cost plus ten (10) percent to implement the operation consistent with the requirements of this Section and any applicable conditions of approval. Operations may be released from this performance security requirement if the applicant demonstrates to the Director's satisfaction that all conditions of approval have been met and the operation is in compliance with this Section. If the installation of plant and landscape materials is required as mitigation measures under this Article, the performance security for these measures shall remain in place for two years after installation. This provision is not meant to address Commission Application for Permit to Drill permitting requirements nor does it replace the Commission's financial assurance requirements.
- (2) *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 the purpose of being notified of any proposed City inspection under this Section. Any site under an approved development plan may be inspected by the City at any time, to ensure compliance with the requirements of the approved project 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 project development plan shall contain the following statement: "Applicant hereby consents to allow the City the right of inspection of this approved operation provided the City contacts the operator with twenty- four (24) hours prior notice of such inspection."
- (3) *Effect of the Approved Development Plan.* In addition to the provisions set out in Section 2.1.4 of this Land Use Code, after approval of a development plan and following compliance with any applicable conditions of approval, the City Engineer may issue a project development plan use construction permit for the proposed oil and gas operation. Following receipt of the project development plan use construction permit, the applicant may request processing of any necessary building, grading, access, floodplain, or other City permits and may otherwise proceed with the proposed oil and gas operation. The approval of a project development plan review under this Section shall not result in the vesting of development rights, nor shall it permit the violation of any City or state regulations or preclude the City Engineer from refusing to issue a permit if the plans and specifications do not comply with applicable City regulations.
- (4) *Amendments to Development Plan.* Any proposal to change an approved development plan shall require an application to the Director to determine

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whether the proposed change constitutes a minor or major amendment and shall be processed under Section 2.2.10 accordingly.

(J) *Enforcement.*

- (1) In addition to the provisions set out in Division 2.14 of this Land Use Code, the Director shall be entitled to draw on any financial guarantee provided by an applicant pursuant to this Section, if the applicant violates any term or condition of an approved project development plan. If the Director has reason to believe that a violation of an approved project development plan for which a financial guarantee has been provided has occurred, 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 either not corrected the violation or filed a written appeal with the City Manager, 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.
- (2) If the applicant files a timely appeal with the City Manager, the City Manager shall schedule a hearing on the appeal as soon as reasonably possible and shall provide written notice of the date, time and place of the hearing to the applicant. If the City Manager confirms at the hearing that the violation has occurred and has not been corrected, the City Manager in his or her discretion may 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.
- (3) To ensure the Director's ability to enforce the provisions of any approved project development plan, the Director shall not release any financial guarantee provided under this Section for an individual development plan until the Director confirms that all operations have been completed and all provisions of the plan have been met. The Director shall not release any bond or other financial guarantee provided under this Section unless he or she is satisfied that the person providing the bond has adequately declared his or her intention to conduct no further oil and gas operations in the City in the foreseeable future. The Director shall also be empowered to release a financial guarantee if a successor to an applicant provides satisfactory guarantees in accordance with this Section.

Section 5. That Section 3.8.26(C)(2) of the Land Use Code is hereby amended to read as follows:

3.8.26 Residential Buffering

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...

- (2) There are ~~three (3)~~ **four (4)** types of buffer yards which are established according to land use intensity as described in Chart 1 below. Buffer yard distances are established in Chart 2 below and specify deciduous or coniferous plants required per one hundred (100) linear feet along the affected property line, on an average basis.

...

Section 6. That Chart 1 contained in Section 3.8.26 of the Land Use Code is hereby amended to read as follows:

**Chart 1
Land Use Intensity Categories**

<i>Land Use</i>	<i>Intensity Category</i>	<i>Buffer Yard</i>
Airports/airstrips	Very High	C
Composting facilities	High	B
Dry cleaning plants	Very High	C
Feedlots	Very High	C
Heavy industrial uses	Very High	C
Light industrial uses	High	B
Junkyards	High	B
Outdoor storage facilities	High	B
Recreation vehicle, boat, truck storage	Medium	A
Recycling facilities	High	B
Agricultural research laboratories	High	B
Resource extraction, including abandoned and plugged oil and gas wells	Very High	C
Resource extraction, including any oil and gas wells that have not been plugged and abandoned	Very High	D
Transportation terminals (truck, container storage)	High	B
Warehouse & distribution facilities	High	B
Workshops and custom small industry	Medium	A

Section 7. That Chart 2 contained in Section 3.8.26 of the Land Use Code is hereby amended to read as follows:

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**Chart 2
Buffer Yard Types**

<i>Type – Base Standard (plants per 100 linear feet along affected property line)*</i>	<i>Option Width</i>	<i>Plant Multiplier**</i>	<i>Option: Add 6' Wall</i>	<i>Option: Add 3' Berm or 6' Fence</i>
Buffer Yard A:	15 feet	1.00		
3 Shade Trees	20 feet	.90		
2 Ornamental Trees or Type 2 Shrubs ***	25 feet	.80	.65	.80
3 Evergreen Trees	30 feet	.70		
15 Shrubs (33% Type 1, 67% Type 2)	35 feet	.60		
	40 feet	.50		
Buffer Yard B:	15 feet	1.25		
	20 feet	1.00		
4 Shade Trees	25 feet	.90		
4 Ornamental Trees or Type 2 Shrubs ***	30 feet	.80	.75	.85
3 Evergreen Trees	35 feet	.70		
25 Shrubs (Type 2)	40 feet	.60		
	45 feet	.50		
Buffer Yard C:	20 feet	1.25		
	25 feet	1.00		
5 Shade Trees	30 feet	.90		
6 Ornamental Trees or Type 2 Shrubs ***	35 feet	.80	.75	.85
4 Evergreen Trees	40 feet	.70		
30 Shrubs (Type 2)	45 feet	.60		
	50 feet	.50		
Buffer Yard D:	150 feet	1.00	.75	.85
6 Shade Trees	170 feet	.90		
7 Ornamental Trees of Type 2 Shrubs***	190 feet	.80		
	210 feet	.70		
5 Evergreen Trees	230 feet	.60		
35 Shrubs (Type 2)	250 feet	.50		

* "Base standard" for each type of buffer yard is that width which has a plant multiplier.

** "Plant multipliers" are used to increase or decrease the amount of required plants based on providing a buffer yard of reduced or greater width or by the addition of a wall, berm or fence.

*** Shrub types: Type 1: 4' - 8' High Type 2: Over 8' High

Section 8. That Section 5.1.2 of the Land Use Code is hereby amended by the addition of following new definitions which read in their entirety as follows:

Adverse effect or adverse impact shall mean the impact of an action, after mitigation, that is considerable or substantial, and unfavorable or harmful. The term 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.

APD shall mean an application for a permit to drill, deepen, re-enter or recomplete and operate under Rule 303 of the Commission.

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Closed loop drilling process or system shall mean a closed loop mud drilling system typically consisting 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.

Commission shall mean the Oil and Gas Conservation Commission of the State of Colorado.

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

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

Flow line shall mean a pipeline connecting individual well sites to gathering lines.

Gas shall mean all natural gases and all hydrocarbons not defined in this section as oil.

Gathering line shall mean a pipeline transporting produced gas, oil, or water from multiple well sites to a centralized facility.

Oil shall mean crude petroleum oil and any other hydrocarbons, regardless of gravities, which are produced at the well in liquid form by ordinary production methods, and which are not the result of condensation of gas before or after it leaves the reservoir.

Oil and gas operation shall mean exploration for oil and gas, including the conduct of seismic operations and the drilling of test bores; the siting, drilling, deepening, recompletion, reworking, or abandonment of an oil and gas well, underground injection well, or gas storage well; production operations related to any such well including the installation of flow lines and gathering systems; the generation, transportation, storage, treatment, or disposal of exploration and production wastes; and any construction, site preparation, or reclamation activities associated with such operations.

Operator shall mean . . .

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

VOC shall mean volatile organic compounds.

Well blowdown shall mean maintenance activity designed to remove unwanted fluids from mature wells during which time gas is often vented to the atmosphere.

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

Section 9. That the definition of “*Development*” contained in Section 5.1.2 of the Land Use Code is hereby amended by the addition of a new subparagraph (1)(k) which reads in its entirety as follows:

(1) *Development* shall also include:

...

(k) the conducting of any oil and gas operations.

Introduced, considered favorably on first reading, and ordered published this ___ day of _____, A.D. 2012, and to be presented for final passage on the ___ day of _____, A.D. 2012.

Mayor

ATTEST:

City Clerk

Passed and adopted on final reading on the _____ day of _____, A.D. 2012.

Mayor

ATTEST:

City Clerk

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Remaining Issues to Address:

- Major oil and gas facilities, are these covered under these prohibited uses outlined in the I zone:
 - (2) All establishments falling within Standard Industrial Classification (SIC) Major Group No. 29, Petroleum Refining and Related Industries, as identified in the Standard Industrial Classification Manual (OMB 1987).

Natural Resources Advisory Board
October 17, 2012

NRAB Members Present: Justin Shephard, Harry Edwards, Joe Halseth, Joe Piesman, Liz Pruessner, John Bartholow, Phil Friedman

Staff Present: Caroline Mitchell, Dan Weinheimer, Lindsay Ex, Kelly Unger, Laurie Kadrach, Carol Webb, Bonnie Pierce, Daylan Figgs

General Discussion/Questions

- John Bartholow: If you put new language into the land use code would it go into effect immediately? (10 days after the appeal). The current land use code does not mention oil and gas, this will be addressed December 14th
- Joe Piesman: Who monitors noise regulations? (There is a line to register complaints and 17 inspectors in the state.) Suggestion to put the noise complaint form online at the city's website.
- Phil Friedman: What is put into the green completion incinerator? (The gas contaminants which are burned off and released as CO₂.)
- Liz: How often are well completion test done? (They are submitted monthly to the COGCC). Staff was asked to find out how often this information is actually reviewed.
- Joe Piesman: Is there any operator agreement in place now? (Not currently.) Would a locally hired inspector have enforcement authority? (They would work in conjunction with the state. It would be ideal to form a regional partnership to hire an inspector.)
- Joe Piesman: Who decides which process (expedited vs standard review) to take? (The director of the company)
- Phil: How are the setbacks determined? (It varies at the State level. In some cases it's the facility boundary and others it's the wellhead). Staff will follow up and clarify language in proposed regulations.
- Liz: Would it go through Planning and Zoning in expedited review? (No.)
- Liz: What if drilling is near a natural? (There will be notified if within 500 ft.)
- Joe Piesman: Is the company required to report water contamination? (Yes, they would report to the surface owner and the State).
- Joe Piesman: Is all the vegetation stripped on the site? (Yes, and a concrete pad is put down)
- Liz: Would Fort Collins sell water? (It is being brought up to the Water Board and Council)
- Liz: What happens after drilling is complete? (There is reclamation standards in place)
- Harry: Does the City intend to address the issue of the reuse of used water in drilling?
- Liz: What is the timeline for the expedited vs. standard process?
- Justin: Do you think the public would be okay with expedited process without the public review process?
- Liz: It may be helpful to have more public outreach and input before the expedited review
- Phil: Is the public shutout entirely during the expedited review?

- Harry: What is the potential cost to the tax payers in standard vs expedited review?
- Liz: Will the company's really be held liable for potential ground water contamination?

Closing Remarks

- John: This seems like a good balanced approach and well researched.
- Phil: Given the fact local governments have for limited regulatory authority, the two process approach is good. To the public, the expedited review process may be confusing. It's important to communicate how rigorous this process would be.

*The NRAB made a motion that was seconded to support the two process of standard and expedited review.

Harry objected to the motion. (He was not persuaded that two levels are needed. He thinks we should have one rigorous process with opportunity for public review and comment.)

Excerpt from DRAFT Air Quality Advisory Board meeting October 15, 2012

Oil and Gas Regulations

The AQAB reviewed air quality aspects of the draft Fort Collins Oil and Gas Regulations in advance of City Council consideration on November 20, 2012. Staff present to answer questions were: Dan Weinheimer, Policy and Project Manager; Lindsay Ex, Environmental Planner; Laurie Kadrich, Director, Community Development and Neighborhood Services; and Bonnie Pierce, Environmental Data Analyst.

- As background, Lucinda Smith stated the board had been sent some materials that identified the Land Use Codes as they relate to air quality. Tonight's presentation gave an overview of oil and gas activity in the area and provided background on the oil and gas regulatory framework that the City's Oil and Gas Staff Team has been working on.
- The City Oil and Gas team is suggesting two options that they feel would protect and preserve the quality of life, environment, and public health in Fort Collins without causing legal action from the oil and gas industry.
 - A standard review process – (through a Planning Zoning Board) – Intended to go through a public process.
 - Be open to all operators
 - Hold pre-application meeting
 - Must meet all City regulations
 - Applicant must conduct a neighborhood meeting and public hearing
 - A third-party consultant may review application as determined by the City
 - A Planning and Zoning Board hearing resulting in a notice of approval
 - Operator encouraged to execute operator agreement.
 - An expedited review process - (Basic Development Review) – would have more prescriptive standards.
 - Be open to qualified operators
 - Applicant cannot qualify without pre-application meeting.
 - Must meet all enhanced City regulations and requirements such as meeting all setbacks: 500' from occupied structure/water wells, Natural Areas, City Park, and water body or wetland
 - Director approved
 - Operator must execute operator agreement.
- City Council has delayed hearing this item until December 4. This gives the AQAB extra time to draft any recommendations they may have.
- The team then asked the AQAB if they supported any or all of the suggested regulations or did they have any additional air quality protection approaches that should be considered.

Discussion:

- Nancy York: There should be more widespread public notice. Lindsay Ex: there will be postings in the local paper and on the City's website.

- David Dietrich: What is the difference in in staff time for each process? Laurie Kadrach: both will have same review process by internal staff. Most of the time is spent in review of the application.
- Hugh Mackay: It seems citizens would have the most protection with an expedited review. However, would there be problems if public meetings are not required? Lindsay Ex: Other communities have dealt with this differently and what works well there might not work well here. Our goal is to draft a process that works best here. Based on our research, an expedited process may afford protections we would not get in a different type of review.
- Hugh Mackay: Is the Oil and Gas Commission OK with the City having local inspectors? Lindsay Ex: Yes, however, our inspectors would have to use the same standards as the federal inspectors. Also, the City cannot charge the oil and gas operators for the inspectors because they are already paying for federal inspectors. Bonnie Pierce: Monitoring would also depend on the City's ability to fund the inspectors.
- Dennis Georg: Clarity of what the real-time monitoring requirements are will help the operators know what their costs will be. Real-time monitoring is a community "right to know" issue. I envision the operators paying for this. He suggested both sampling and monitoring and looking at what other states have done. Bonnie Pierce: The initial approach was based on what the City can afford. The question becomes at what threshold, or how many wells, would real-time monitoring be needed. The state has staff and modelers that could work with the data we would give them.
- Rich Fisher: Have you discriminated between sampling of leakage and ambient sampling of the air? Bonnie Pierce: The appendix of the proposal does address that.
- Rich Fisher: Would the monitoring plan be developed by the City? Bonnie Pierce: The original vision was for the City to work closely with CSU to determine funding for processes that would provide acceptable data to the state of Colorado because the City cannot assess fees. There is also the data management aspect by staff to monitoring. Lucinda Smith: The monitoring protocol needs to be fleshed out and any input from the board regarding monitoring would be appreciated. This is a proposal only. The City is not staffed or budgeted to fund any of this at this time.
- David Dietrich: We have to have a scientific monitoring approach that is accepted by industry. We are looking at a small number of sites within the City. Cooperation from larger companies would be more likely.
- Dennis George: Operators are generally willing to invest in monitoring to increase their certainty.
- Dan Weinheimer: We have talked to Innosphere and other local companies developing technology for real time monitors and are trying to add ways that local businesses can be involved in this process.
- Dennis Georg: I see a gap in sampling and monitoring the post-production and closing of a well. Bonnie Pierce: The State has good regulations in place from production onward. For that reason we focused on the early phase where we know most of the emissions are. Lucinda Smith: The Air Quality and Control Commission talked about a public stakeholder process to bring Federal regulations into state regulations next year to have the entire air quality regulations controlled by the Air Quality and Control Commission and not COGCC.

- Greg McMaster: We are also concerned about air quality outside the City and wanted to be more proactive for what is around us. Lucinda Smith: We are looking for board comments on two areas: the land use code regulations within the city limits and also all the non-city regulatory issues.
- Rich Fisher: Is night sky part of the regulations? Lindsay Ex: Lighting is a part of our key universal standards.
- Lindsay Ex: We have 3 questions for the AQAB:
 - Should the AQAB support the proposed standard vs. expedited review process?
 - Should the AQAB support the proposed requirements for air quality protection?
 - Are there additional air quality protection approaches that should be considered?
- Dennis Georg: I am bothered about the lack of specificity of the monitoring. Can we delay regulations until we get a specific proposal from an operator? I don't think we have gone far enough with the Land Use Code. It seems too early to go to Council to say we have Part One of the Land Use Code ready and not the other part to protect air quality. Lucinda Smith: Could we identify a few specific cut points in the Land Use Code regulations that would apply to the number of wells being applied for and what would be required for that number of wells?
- Scott Groen: I don't see that all this planning will do any good because current drilling technology allows operators outside the City limits to drill 3-5 miles laterally back underneath the City limits. How can you monitor that? If the City of Fort Collins expands its borders, what are the rules for the oil and gas wells that are already there? Lindsay Ex: They are grandfathered. These regulations are helping us get prepared for future technology. Lucinda Smith: These Land Use Code regulations just pertain to surface activities that are within the City limits. Laurie Kadrich: Any area that is in the Growth Management Area that might be annexed into the City will also comply with City standards regarding oil and gas development because of an intergovernmental agreement the City has with Larimer County.
- Greg McMaster: We live in an air shed and would like to know when an application for oil and gas development is submitted. Dan Weinheimer: There are many communication options about oil and gas applications. Local governments can comment on applications that have been submitted. Larimer County shares with us when they are submitted. Weld County does not share the applications but you can find them on the CPGCC website.
- Rich Fisher: I am concerned there is a lack of ability for citizens to comment.
- David Dietrich: Thresholds are good things but how do you address bad odor and sickness caused by an oil and gas operation? This tends to be a major complaint. The COGCC will probably not send inspectors if air quality records within standards. I think the City has a responsibility to provide appropriate air quality readings. City inspectors could go and check these complaints.
- Tom Moore, Western Regional Air Partnership: Ambient monitoring won't provide a lot of information because it is mixed with other things. Infrared cameras might help know where to look for leaks. Be sure all the control devices you have are working at maximum efficiency. Also, the setbacks should be as far away as possible, not just

150 feet. That's how you head off problems. Setbacks for a sewage treatment plan are 1,000 ft.

- Rich Fisher: How receptive would the oil and gas operators be to determine how much leakage there is currently in the 8 wells within the City limits?
- Greg McMaster: We know oil and gas development is coming and we can't stop it, but I feel we need to push the envelope as much as possible on regulations.
- Dennis Georg: Since we have a start, but no finish for proposed requirements, I think we should tell Council we will come back with a recommendation later. I propose a recommendation stating the AQAB supports the proposed standard vs. expedited review process and recommend that Council request staff to come back to Council with an updated proposal including the monitoring portion of the recommendation no later than June 1, 2013.
- Hugh Mackay: I supports question 1 but not sure about 2 and 3.
- Laurie Kadrich: If the AQAB isn't comfortable with specifics of the recommendation, is the board is willing to support what we have here to get it on the table and request that, no later than June 1, 2013, staff visit the air quality section of the regulations. Council doesn't want to ramrod this over the objections of boards. What are other components the AQAB would like to see.
- Greg McMaster: I suggest we consider Dennis Georg's proposed motion, email comments and suggestions and discuss at the November meeting. The board agreed.

Excerpt from Unapproved Water Board Minutes, October 18, 2012

Oil and Gas Regulations

(Attachments available upon request).

Environmental Regulatory Specialist Lois Rellergert introduced the item and introduced Policy and Project Manager Dan Weinheimer and Environmental Planner Lindsay Ex. This item was also discussed at the October Water Board Work Session as well as some other City boards. Staff was asked to develop a section of the land use code that will apply to oil and gas operations within the City of Fort Collins. They also needed to address the concerns of Fort Collins residents and align the code with state regulations. Staff has created a standard review and an expedited review process for permitting of new oil and gas developments within the City.

Staff requests the Water Board's support on the following items:

- Standard review and expedited review processes
- Requirements for water quality and water resources protection outlined in the draft land use code

Staff recommends the board outline their recommendations regarding the issues noted above in letters to the Planning and Zoning Board and City Council. Staff also recommends that the board consider a recommendation regarding provision of Utilities services to the oil and gas industry.

Ms. Rellergert noted a change to the expedited review process since the item was discussed at the Water Board Work Session. The requirement for abandoned oil and gas well assessments has been removed. Ms. Ex stated the regulations were modeled after Boulder County's regulations; however, this particular item does not apply to City of Fort Collins regulations.

Ms. Rellergert opened the floor for questions.

Highlights from the discussion:

- The board members discussed the changes in the proposed regulations since the October Work Session.
- Per a board member's request, Ms. Ex presented a summary of other board meetings attended:
 - At the Land Conservation and Stewardship Board, they specifically talked about how the regulations would impact natural areas. They also talked about the expedited review process. The board requested an eligibility requirement. Within 500 feet of a natural area, CIPO projects managed... there should be a community dialogue...
 - They discussed air quality monitoring requirements at the Air Quality Advisory Board. The board requested a longer dialogue on this topic; however, they did support the standard review and expedited review processes.
 - The Natural Resources Advisory Board supported the regulations and the overall process with a five to one vote for the proposed regulations.
 - Staff also met with the Economic Advisory Committee. They discussed conducting an economic impact analysis on the community.
- A board member stated he feels comfortable with the process since this is consistent with other development approaches the City uses.
- A board member asked for clarification on the floodplain issue for critical facilities. All of the floodplain standards apply whether the operator is applying for the standard or expedited review process. A wellhead will not be allowed in a floodplain.

Excerpt from Unapproved Water Board Minutes, October 18, 2012

- A board member feels both the standard review and expedited review processes are straight forward.
- A board member asked for clarification on treated water use. Water Engineering and Field Operations Manager Jon Haukaas stated there is a filling station at the Utilities Service Center, but this is not set up for high volume of semi-truck usage. Access could be granted through metered fire hydrants.
- A board member asked about the process for allowing operator trucks to fill with water. Mr. Haukaas stated the standard process is a hydrant rental application.
- A board member asked if the Triple Bottom Line (TBL) approach was used to develop the regulations. Ms. Rellergert stated the process was used to develop the memo regarding possible requests for Utilities services from the oil and gas industry. The board member feels “fracking” would not pass the environmental aspect of the TBL analysis. The board member feels it could not be properly regulated.
- A board member asked about the plan for updating the regulations. Should the issue be revisited every year, two years, five years, etc? Does staff feel they have assembled the Best Management Practices as seen with other municipalities? Ms. Ex stated staff feels they have incorporated the best practices they can apply to the City of Fort Collins. She also stated the Land Use Code is updated on an annual basis. Changes can be presented before the annual update would take place. Ms. Rellergert stated the Utilities Regulatory and Government Affairs (RGA) Department looks at regulations on a regular basis. Mr. Weinheimer also stated there is collaboration with Colorado State University (CSU) on the subject matter.
- A board member feels the proposed regulations are an attempt to get the issues in front of the industry, rather than the other way around...reflect more on what individuals want in the community, not rely on existing code and state regulations...

Board Member Brown moved that the Water Board support the proposed Standard Review and Expedited Review processes proposed by City Staff for permitting of new oil and gas development within the City. Board Member Garner seconded the motion.

Discussion on the motion:

A board member asked for clarification on the timeline for City Council. Mr. Weinheimer stated the item will be presented to City Council for first reading on December 4, 2012 and second reading on December 18, 2012. It will be presented to the Planning and Zoning Board on November 1, 2012.

A board member asked for clarification on the discussions with oil and gas operators. Mr. Weinheimer stated staff had an initial meeting with Prospect Energy, an operator in Fort Collins. A second meeting has been scheduled.

Vote on the motion: 8 for, 1 against.

Reason for the nay vote:

Board Member Brunswig: The proposed regulations are not protective enough to her satisfaction.

Additional discussion:

- A board member feels that monitoring air quality is very important. This item will continue to be discussed at the Air Quality Advisory Board.

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Mr. Weinheimer presented a map showing existing well activity. Currently, no permits are issued in the City.

- A board member asked for a definition of “temporarily abandoned.” Temporarily abandoned means the well is not formally abandoned and equipment is still present.
- A board member asked what other municipalities are doing in regards to the issue. The City of Loveland is going through the process of developing regulations.
- A board member feels the City of Fort Collins can provide a model for other municipalities to consider (for example, Weld County or the City of Loveland).
- A board member asked for clarification on the additives added to water for “fracking.” The list was provided to the board (Groundwater Sampling and Analysis Program). There is no reason to think something is missing...
- A board member asked if the list is part of the code. Ms. Rellergert stated it will be listed in a manual. It is referred to in the Land Use Code. The list can be changed...

Ms. Ex reminded the board the ordinance is still being reviewed by the City Attorney’s Office. The ordinance may be revised before it is presented to City Council in December.

A board member believes “fracking” operations require a lot of water. The board member feels this may not be the best use of water supply resources.

Board Member Brown moved that the Water Board support the proposed requirements for water quality and water resources protection outlined in the draft land use code regulations for oil and gas development. Board Member Garner seconded the motion.

Discussion on the motion:

A board member feels the board needs more data. He would like to see the item presented to the board again.

A board member is impressed with the level of detail presented by staff; however, he feels it would be helpful to have a table presenting the monitoring timeline.

The board members discussed a draft memo to City Council regarding the issue. Vice Chairperson Malers asked Board Members Brown and Brunswig if they will draft a memo since they were part of the Oil and Gas Committee.

Vote on the motion: 8 for, 1 against.

Reason for the nay vote:

Board Member Brunswig: The proposed Land Use Code regulations will not be protective enough of water quality and water resources to her satisfaction.

Additional discussion:

- A board member asked for clarification on Board Member’s Brunswig nay vote on the issue. He asked for clarification on her opinion towards regulations...
- A board member questioned what happens if Council does not support the proposed motions. What happens if these proposed regulations are voted against? Ms. Ex stated the

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City would still work with operators on operator agreements. Land use code regulations will not be in place...

- A board member feels the oil and gas industry cannot “frack” a well and protect ground water, surface water, etc.

Vice Chairperson reminded the board staff is not asking if the Water Board is in favor of “fracking.” He feels the board is being asked if they support Utilities providing water to the industry. He suggested a work session to further discuss the memo regarding possible requests for Utilities services from the oil and gas industry. The board member would like further information on the topic.

- A board member asked if TBL Analysis can be addressed. What are the economic, social, and environmental benefits? The issue of water supply may also need to be addressed if there will be a low water supply next year.
- A board member stated he would like limitations on tiered rates. Is it possible to transfer funds, what are the alternatives if the City does not provide services... Cost benefit analysis, rates versus costs
- A board member asked if Utilities can tier services so agriculture is prioritized over the oil and gas industry.
- A board member asked for clarification on the ability to treat “frack” water in a typical water treatment plant. Water Resources and Treatment Operations Manager Kevin Gertig stated a typical wastewater plant is not capable of treating this type of water; however, this is currently being tested by the EPA.
- A board member asked if the discussion can be broken into “supply” and “waste.”