

SUBJECT

Items Relating to an Operator Agreement between the City and Prospect Energy, LLC.

- A. Resolution 2013-024 Approving an Oil and Gas Operator Agreement Between the City and Prospect Energy, LLC.
- B. First Reading of Ordinance No. 057, 2013, Terminating the Moratorium Imposed by Ordinance No. 145, 2012 with Respect to Oil and Gas Operations Conducted under an Oil and Gas Operator Agreement Between the City and Prospect Energy, LLC.

EXECUTIVE SUMMARY

Council is considering the approval an Operator's Agreement with Prospect Energy that would permit Prospect Energy to conduct oil and gas operations in the city limits. The terms of the Agreement ensure stringent public health and safety measures are in place through Best Management Practices (BMPs), which generally exceed current requirements mandated by the Colorado Oil and Gas Conservation Commission (COGCC), and provide strict controls on the release of methane gases and other volatile organic compounds (VOCs). If the Agreement is approved, Council will consider adopting Ordinance No. 057, 2013 removing the Moratorium imposed by Ordinance No. 145, 2012 with respect to an Oil and Gas Operator Agreement with Prospect Energy.

BACKGROUND / DISCUSSION

Oil and gas production is currently limited to the Fort Collins Field (Attachment #2), located in the northeast portion of the city. The Fort Collins Field is regulated by the COGCC and has been in production since about 1925. In the city limits, the field consists of seven oil producing wells and seven injecting wells, all of which are managed by one operator, Prospect Energy. Prospect Energy is unable to drill new wells since Ordinance No. 145 (Moratorium) was approved December, 2012. In addition, the company is no longer able to utilize hydraulic fracturing since the adoption of Ordinance No. 032. Prospect Energy also holds certain leasehold interests within the City described as the Undeveloped Area (UDA), as depicted in Attachment #2. Council allowed for exemptions from Ordinance No. 032 provided a Council approved operator agreement was in place that includes strict controls on methane release and adequately protects the public health, safety and welfare of the city. The recommended agreement with Prospect Energy contains such provisions. A summary of those provisions follows with more detailed information contained in Exhibit A to Resolution 2013-024.

Summary of Controls for Methane Gas

Prospect Energy captures all gases from production and tanks and routes them to a thermal oxidizer for destruction. This method currently results in over 99% of all emissions being destroyed. The COGCC rule requires 95% of emissions be destroyed. This proposed Agreement requires at least 98% destruction and use of a thermo-oxidizer for emission destruction to be utilized for any new wells in the Fort Collins Field. In the UDA, Prospect Energy will capture and destroy emissions at the well (Exhibit A -Section 21 (b)) or send through a thermal oxidizer. Prospect Energy also agrees to comply with:

- Environmental Protection Agency (EPA) Method 21 (Section 21 – Exhibit A)
- No uncontrolled venting of methane (Section 21 – Exhibit A)
- Minimal flaring during drilling and completions (Section 21 – Exhibit A)
- Develop and maintain a Leak Detection and Repair (LDAR) (Section 21 – Exhibit A)
 - Use a Forward-Looking Infrared (FLIR) camera
 - Notify the City for observation of testing
- Green Completions (Section 22- Exhibit A)

- Containment of all produced water or flowback fluids and no permanent storage of waste products (Section 45 – Exhibit A)

**Summary of Best Management Practices
(Public Health and Safety Measures – details in Exhibit A)**

Setbacks – Any new wells drilled will conform to the current COGCC rules which will be five hundred (500) feet from any building and one thousand (1,000) feet from any institutional facility beginning August 1, 2013. However, in the Fort Collins Field, new wells must be constructed on existing well pads because of an existing Surface Use Agreement (SUA), which conform to previous COGCC setbacks. Those well pads are located near or within Water's Edge, Richard's Lake and Hearthfire subdivisions.

Conceptual Review – No less than thirty (30) days prior to the submission of an Application for a Permit to Drill (APD) (note: APD is the COGCC permitting process), Prospect Energy will schedule a meeting with the City to review the proposed new well or drilling activity. The goal of this meeting would be for staff and the applicant to review the proposed oil and gas operation in a manner that ensures compliance with the operator agreement and applicable state and federal regulations. This pre-submittal meeting will also allow the applicant and staff to explore site-specific concerns, to discuss project impacts and potential mitigation methods including field design and infrastructure construction to minimize impacts, to discuss coordination of field design with other existing or potential development and operators, to identify sampling and monitoring plans for air and water quality, and other elements of the operator agreement as contained in Exhibit A.

Community Notice –Prospect Energy must provide community and staff notice. Prior to an APD, the Agreement specifies mailed notice, posted notice, neighborhood meetings and also a notification to the public prior to the commencement of drilling. Consistent with Option "B" of the proposed Land Use Code regulations, notice is required for any oil and gas operation to surface owners within two thousand six hundred forty (2,640) feet of the parcel and to persons registered in writing with the Planning Director.

Closed Loop Pitless Systems – are required 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.

Chemical disclosure and storage - the City will be provided, in table format, the name, Chemical Abstract Services (CAS) number, volume, storage, containment and disposal method for all drilling and completion chemicals (solids, fluids, and gases) used on the well pad. Fracture chemicals will be uploaded onto the Frac Focus website. The City will also post such information on the City website. The Company will not permanently store hydraulic fracturing chemicals, flowback from hydraulic fracturing, or produced water in the current City limits.

Electric equipment – Prospect Energy will be required to utilize electric-powered engines for motors, compressors, and drilling equipment and for pumping systems when feasible in order to mitigate noise and reduce emissions.

Emergency preparedness plan – Prospect Energy is required to develop an emergency preparedness plan for each specific facility site, which shall be in compliance with the International Fire Code. Among other provisions, the plan shall be filed with the Poudre Fire Authority and the City of Fort Collins Office of Emergency Management and updated on an annual basis or as conditions change (responsible field personnel change, ownership changes, etc.). The plan includes a provision establishing a process by which the operator engages with the surrounding neighbors to educate them on the risks of the on-site operations and to establish a process for surrounding neighbors to communicate with Prospect Energy.

Air Quality – Prospect Energy must comply with emissions regulations as required by State and Federal laws. In addition, there will be no uncontrolled venting of methane. All gas vapors will be captured to the extent practicable. Vapor capture equipment will operate at 98% efficiency or better. There are no gas sales lines in the Fort Collins field because the quantity and quality of gas is low and not marketable. If salable gas were to occur in the UDA, a sales line would be constructed. The Operator will develop and maintain a leak detection and component repair (LDAR) program according to EPA Method 21 for equipment used in permanent operations. LDAR will be performed on newly installed equipment, and then on an annual basis. A forward-looking infrared (FLIR) camera will be used as the preferred implementation method of EPA Method 21 as available from the state; if unavailable, other methods will be

used in compliance with this method. Upon request from the City, Prospect Energy will implement EPA Method 21 should additional concerns arise. At least once per year, Prospect Energy will notify the City prior to FLIR camera use in case the City wishes to observe the method.

Prospect Energy and the City will split the costs of baseline sampling and analytical work performed by a third party consultant agreeable to both parties over a five (5) day sampling period. Prospect Energy will conduct air sampling during well completion. Periodic air monitoring will be performed for hydrogen sulfide (H₂S), a hazardous air pollutant (HAP). Prospect Energy will perform field monitoring using the Jerome 631 XC or equivalent instrument annually, or until such time that odors are not detected past the Fort Collins Tank Battery fence line in City Limits. The City may require additional air monitoring as needed to respond to emergency events such as spill, process upsets, or accidental releases or in response to odor complaints in City Limits.

During well completion, the capture and beneficial use of natural gas is preferred over flaring. However since the Fort Collins field has so little natural gas it is not reasonable to capture the gas and as such minimal flaring will occur. What flaring does occur will be monitored twenty-four (24) hours per day. During production the flare shall be fired with natural gas and shall be operated with a ninety eight (98) percent or higher VOC destruction efficiency. An automatic pilot system shall be used when feasible. Other ignition systems will include the installation and operation of a telemetry alarm system or an on-site visible indicator showing proper function.

Water Quality Monitoring Plan – Prospect Energy shall comply with COGCC Rule 609. In summary, this requires pre- and post-drilling testing. The rules require oil and gas operators to sample all “Available Water Sources” (owner has given consent for sampling and testing and has consented to having the sample data obtained made available to the public), with a cap of four (4) water sources, within one-half (1/2) mile radius of a proposed well, multi-well site, or dedicated injection well. Water sources include registered water wells, permitted or adjudicated springs, and certain monitoring wells. Prospect Energy agrees to the following requirements above and beyond the COGCC requirements: analyzing for dissolved metals as indicated in the Land Use Code; sampling intervals to be baseline (before drilling), post-drilling at one, three, and six years. Analytical results will be shared with the COGCC, the City, and the landowner. All spills, for new and existing wells, shall be managed in accordance with COGCC regulations.

Soil Gas Monitoring – The City, at its discretion, may conduct soil gas monitoring to assess well casing integrity. This would be typically completed within 90 days of new well completion. The City shall notify the Operator prior to entering the site for soil gas monitoring.

Spills - The Company shall comply with COGCC Rule 609 “Spills and Releases”, and notify the City and whenever there is notification to the COGCC. The Company shall also copy the City on any written correspondence to the COGCC or other regulatory authority.

Transportation and circulation - Prospect Energy 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, trips per day and any other information required by the Traffic Engineer. Preliminary information is required for this item for the Conceptual Review meeting, in accordance with Exhibit A. The Company shall comply with all Transportation and Circulation requirements as contained in the Land Use Code as may be reasonably required by the City’s Traffic Engineer.

Wastewater and Waste Management - There will be minimal waste water in the Fort Collins Field, as there will be no tank batteries (produced water and oil storage) in the City for the Fort Collins field. As described in “Closed Loop System” and “Green Completions,” there is no discharge of fluids and fluids are contained. Storage, transportation, and treatment of wastes during well drilling and completion are handled by third party contractors, under the direction of the Operator. Waste is stored in tanks, transported by tanker truck, and disposed of at licensed disposal facilities.

In the UDA, new secondary containment shall be constructed of steel, with sufficient perimeter and height to hold one and one-half (1.5) times the volume of the largest tank and sufficient freeboard to prevent overflow. No potential ignition sources shall be installed inside the secondary containment area unless the containment enclosed a fired vessel. The requirements for secondary containment will meet the Fort Collins Stormwater Criteria Manual. No land treatment of oil impacted or contaminated drill cuttings are permitted. The use of a closed loop drilling system precludes discharge of produced water or flowback to the ground or the use of pits. Produced water or flowback will not be used for dust suppression. A copy of the field’s Spill Prevention, Control, and Countermeasure Plan (SPCC)

will be given to the City, which describes spill prevention and mitigation practices. The Company will provide the City documentation of waste disposal and its final disposition.

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

Comparison with LUC Option “B”

During Council deliberations, direction was given to staff to proceed with negotiations for an Agreement with Prospect Energy that was consistent with the Land Use Code provisions reviewed by Council in Ordinance No. 144. While Ordinance No. 144 was not adopted it contained regulation for oil and gas exploration and production. One of the options was for a single-track development review process that generally contained more stringent regulations than currently required by the COGCC and was described as Option “B”. Staff prepared a matrix illustrating how the proposed agreement with Prospect Energy meets or exceeds requirements in Option B (Attachment 3).

Other Conditions of the Agreement

Through this Agreement, Prospect Energy will comply with all BMPs for New Wells as defined as a “Company-operated well spudded during the term of this agreement, and located on either a currently existing well pad or a new well pad that is located within the City limits.” In other words, BMPs will not apply to previously developed wells either inside or outside the city limits owned by Prospect Energy. Approving this agreement requires Prospect Energy to comply with the terms of the Agreement and removes any further development review permitting process. However, the Agreement provides for public and staff notice, staff review and periodic inspections of any New Wells. Prospect Energy will also be required to use the most stringent regulation in effect whether the regulation is a State, Federal or required by this Agreement.

The term proposed in the Agreement is for five (5) years with successive five (5) year terms, until either Party wishes to terminate the Agreement. The Agreement is binding to anyone who acquires either the Fort Collins Field or the Undeveloped Acreage (UDA). There is also a non-performance clause in the Agreement which allows for mediation and court remedies in the event the performance is not “cured.”

If Council approves this agreement, Prospect Energy has indicated they would continue operating the Fort Collins Field and potentially increase the number of wells by six (6) to eight (8). As required by a SUA all new wells will be drilled from existing well pads thus minimizing any future surface impact from the new drilling. It is likely that hydraulic fracturing would be utilized in the operation of the field. This fracturing would not be in conjunction with horizontal drilling and does not require intensive water usage seen in other natural gas developments. For example, the last six (6) hydraulic fracturing processes in the Muddy J Formation - Fort Collins Field averaged 114,129 gallons of water compared to 380,272 for a Wattenberg Vertical well or a Wattenberg Horizontal well requiring 2,992,374 gallons (data provided by COGCC). In addition, it is likely that the Fort Collins Field will not produce any marketable gas due to the extremely low quantity of gas contained in the field.

Prospect Energy also holds certain leasehold interests within the City described as the Undeveloped Area (UDA) as depicted in (Attachment #2). If Council approves this agreement Prospect Energy intends to explore oil and gas development in the UDA. It should be noted that Prospect Energy has Surface Use Agreements with the surface owners for the Fort Collins Field (since 1988, amended 2001) and the UDA (2011). Those agreements govern any potential well locations and associated facilities within the Subdivisions and other specified terms, including, but not limited to, landscaping and fencing around wells and associated production equipment.

FINANCIAL / ECONOMIC IMPACTS

A true triple bottom line analysis includes an assessment of environmental, social, and economic impacts. Staff analysis to date has focused on potential and possible environmental impacts if hydraulic fracturing is allowed. Staff was unable to conclusively determine financial impacts of any health and safety hazard related to hydraulic fracturing due to the significant number of variables that relate to the hydraulic fracturing process, transportation of material and waste produced, and removal of waste materials. A social impact analysis has not yet been undertaken for this

discussion. It is assumed that social impacts of hydraulic fracturing are discussed and addressed in terms of concerns about health impacts, impacts to property and housing values, and quality of life.

Prospect Energy indicates that without this Agreement they would no longer be able to adequately operate the Fort Collins Field or expand into other existing lease holdings currently within the city limits.

ENVIRONMENTAL IMPACTS

Documented in Agenda Item Summary (AIS) 26, prepared for Council Hearing February 19, 2013.

STAFF RECOMMENDATION

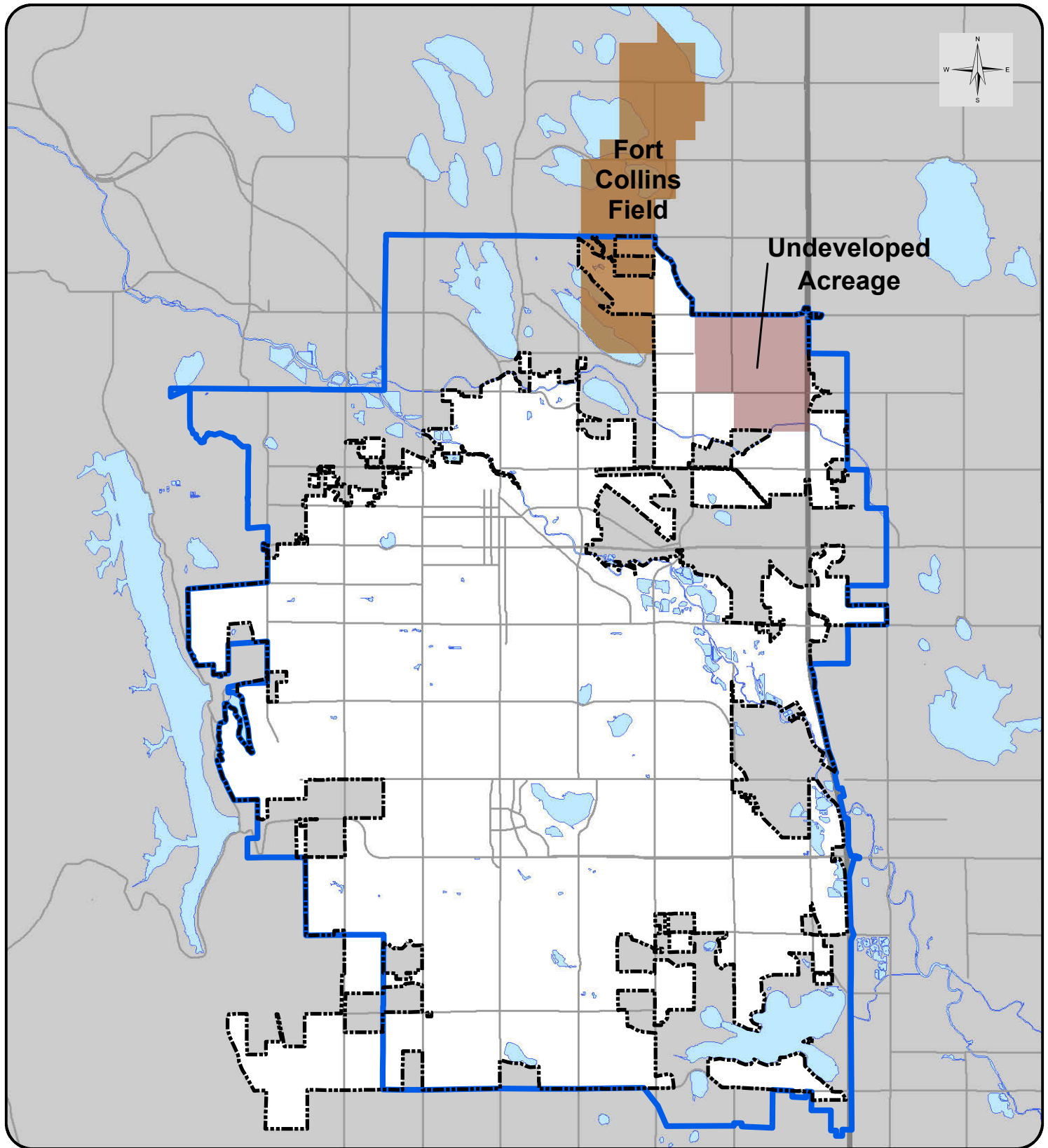
Staff recommends adoption of Resolution 2013-024. If adopted, staff recommends exempting Prospect Energy from the moratorium enacted by Ordinance No. 145, 2013.

ATTACHMENTS

1. Vicinity Map
2. Fort Collins Field & UDA
3. Matrix Comparing Agreement & LUC Option B




City of Fort Collins

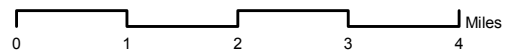
Prospect Energy Oil/Gas Fields



**CITY OF FORT COLLINS
GEOGRAPHIC INFORMATION SYSTEM MAP PRODUCTS**

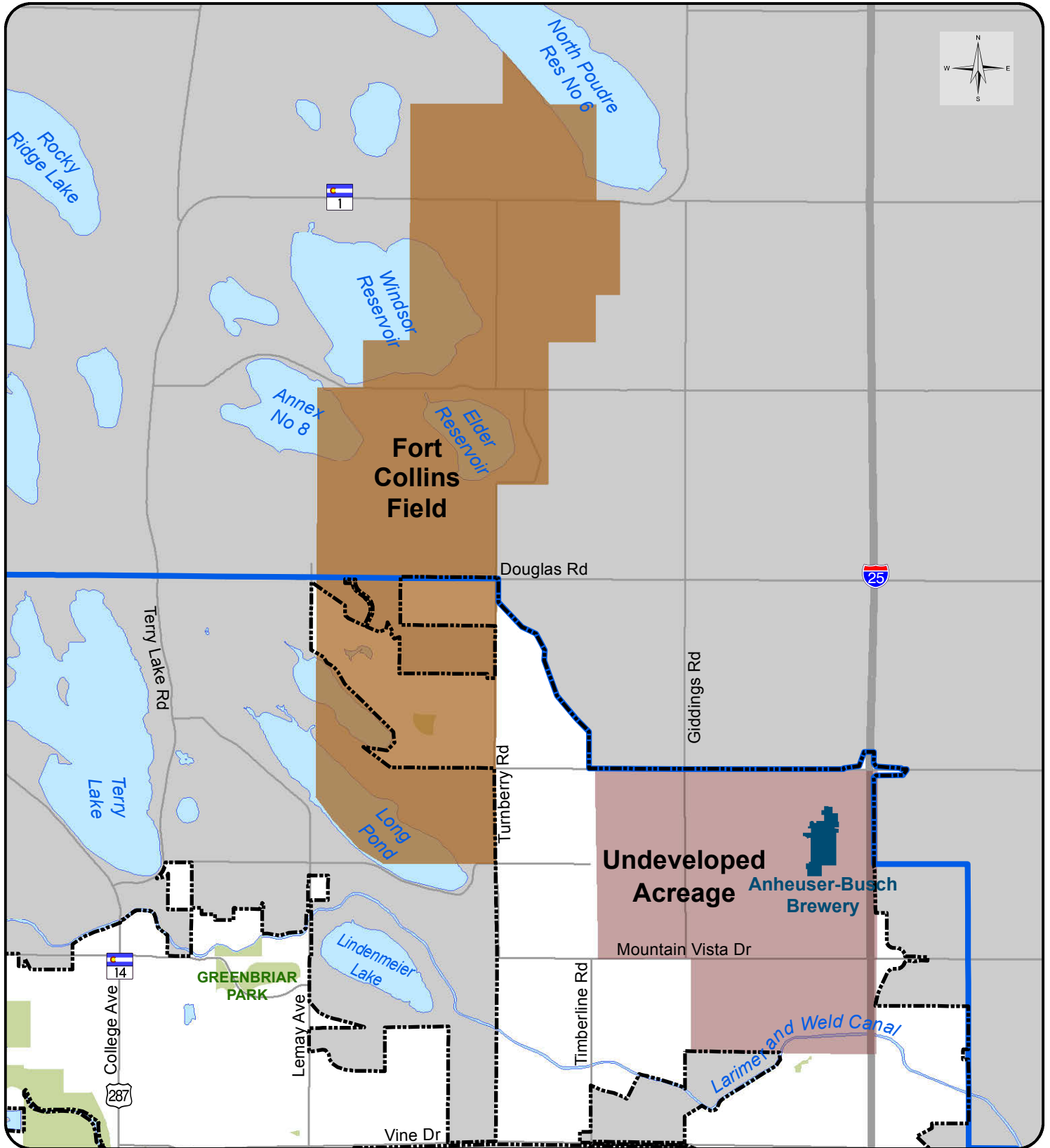
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-  Fort Collins Field
-  Undeveloped Acreage
-  City of Fort Collins
-  Growth Management Area



City of Fort Collins

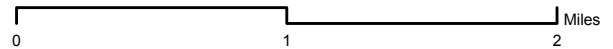
Prospect Energy Oil/Gas Fields



**CITY OF FORT COLLINS
GEOGRAPHIC INFORMATION SYSTEM MAP PRODUCTS**

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- Fort Collins Field
- Undeveloped Acreage
- City Limits
- Growth Management Area



Oil and Gas Operator Agreement Comparison with Proposed Land Use Code Regulations

How this Matrix is Organized: This matrix compares the proposed Operator Agreement with the regulations from the Land Use Code “Option B” proposed regulations. The first column includes the Best Management Practices from Appendix A (or where noted, the body of the Operator Agreement) as compared to the different standards from the proposed Land Use Code regulations. The final column includes comments from staff comparing what’s contained in the Operator Agreement with the Land Use Code regulations.

Proposed Operator Agreement	City of Fort Collins - Option B – Proposed Regulations	Staff Comments
1: General Application Procedure		
<p>Operator Agreement Body: 4. City Regulatory Approvals. The Company shall not be required to obtain any project development plan or final plan approval from the City to conduct its oil and gas operations within the City limits, as long as the Company complies with the terms and conditions contained herein, and this Agreement shall control all oil and gas operations conducted by the Company within the City limits. Prior to the submission of a COGCC Form 2 and/or Form 2A to the COGCC, the Company shall meet with the City to review the proposed oil and gas operation to ensure compliance with this Agreement, all applicable state and federal regulations, and any site-specific concerns, which concerns may include overall project impacts and economically and technically feasible mitigation measures or BMPs related to field design and infrastructure construction to minimize potential adverse impacts to public health, safety and welfare. At such time, if at all, that the City and Larimer County, Colorado (the “County”) enter into a written agreement that authorizes the City to regulate the oil and gas operations of the Company within the Growth Management Area,</p>	<p>Requires applications to be processed through a development review process, including:</p> <ul style="list-style-type: none"> • Conceptual Review • Neighborhood Meeting • Plan Submittal and Staff Review • Hearing (Type 2 or Planning and Zoning Board) • Final Plan Submittal and Recording, if approved <p style="text-align: center;">-OR -</p> <p>3.8.14(B)(2) <i>Development Plan Review Not Required.</i> 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 and in its sole discretion, 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.</p>	<p>As proposed in the Land Use Code, if an Operator has an agreement with the City, then the development review process is not required.</p> <p>However, the City will still hold a conceptual review meeting at least 30 days prior to the submittal of a permit to the COGCC to review the operator’s plan for air quality, water quality, emergency response, traffic, etc. during that meeting and schedule a neighborhood meeting, as applicable (see below).</p>

Proposed Operator Agreement	City of Fort Collins - Option B – Proposed Regulations	Staff Comments
<p>such operations shall thereafter be governed by the terms and conditions of this Agreement and shall be subject to the City’s regulatory authority as provided in this Agreement. “Growth Management Area” shall be as described in that certain Intergovernmental Agreement entered into by the City of Fort Collins and Larimer County on June 24,2008, nunc pro func [sic] October 17, 2006.</p> <p>Appendix A</p> <p>1. Regulations. The Company shall comply with all applicable state and federal regulations in addition to the terms of this agreement and the Best Management Practices included below. Whichever regulation is most stringent shall apply.</p> <p>3. Conceptual Review. No less than thirty (30) days prior to the submission of an Application for a Permit to Drill, the Company agrees to schedule a meeting with the City to review the proposed new well or drilling activity. The goal of this meeting shall be for staff and the applicant to review the proposed oil and gas operation in a manner that ensures compliance with the operator agreement and applicable state and federal regulations. This pre-submittal meeting shall also allow the applicant and staff to explore site-specific concerns, to discuss project impacts and potential mitigation methods including field design and infrastructure construction to minimize impacts, to discuss coordination of field design with other existing or potential development and operators, to identify sampling and monitoring plans for air and water quality, and other elements of the</p>		

Proposed Operator Agreement	City of Fort Collins - Option B – Proposed Regulations	Staff Comments
<p>operator agreement as contained in Appendices A and B. Based upon the foregoing, applicants are encouraged to conduct the pre-submittal meeting with the City prior to completing well siting decisions, to the extent reasonably feasible.</p>		
<p>2. Setbacks</p>		
<p>2. Setbacks for New Wells. It is the intent of the Company to maximize equipment and wellhead setbacks from occupied buildings and residences beyond the setbacks required by the COGCC to the extent feasible and practicable.</p> <p>The Parties recognize that a portion of the Field is within the Fort Collins City Limits and as such, development has occurred within the already established Field. The surface owner has obtained permitted plats for residential areas in the vicinity of existing oil and gas activities, including a constructed city park and contemplated building units and public roads within three hundred fifty (350) feet of an existing well. Further, the Parties acknowledge that the Commission rules require a minimum of five hundred (500) feet safety setback for New Well construction from a building unit and one thousand feet (1,000) from a high occupancy building.</p> <p>Any New Wells drilled shall conform to the Commission setback rules then in effect. In the Fort Collins Field, New Wells shall be constructed on existing Well Pads, which due to previous setback requirements, and City approval of residential development, do not conform to five hundred (500) feet setbacks, and are given an</p>	<p>(45) Setbacks. Oil and gas operations that do not utilize an existing well pad must meet the following siting criteria:</p> <ul style="list-style-type: none"> (a) The wellhead, pumping units, tanks, and treaters are proposed to be at least five hundred (500) feet from any occupied structure, or such greater distance as may be required by the Commission. (b) The wellhead, pumping units, tanks, and treaters are proposed to be at least one hundred fifty (150) feet from any property line, unless verified written consent is obtained from affected property owners. (c) The wellhead, pumping units, tanks, and treaters are at least five hundred (500) feet from any City-owned 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. (d) The wellhead, pumping units, tanks, and treaters are proposed to be at least five hundred (500) feet from any domestic or commercial water wells. 	<p>Except on existing well pads, all new wells will be a minimum of 500’ setback from a building and 1,000’ from a high occupancy building, which includes schools, nursing facilities, hospitals, correctional facilities, and child care centers.</p> <p>The only opportunity for decreasing that setback on new well pads is if landowners affected by the decreased setback, e.g., the land upon which the well is located, were to sign off on that decrease. The COGCC estimated there have been approximately 5 variances granted statewide to the standard building setback rule (formerly 150’, currently 500’) and approximately 20 variances for the high density setbacks (formerly 350’, currently 1000’).</p>

Proposed Operator Agreement	City of Fort Collins - Option B – Proposed Regulations	Staff Comments
<p>exemption from the Commission in the Rules now in effect.</p> <p>The Parties recognize the existence of a Surface Use Agreement (the “SUA”) between the Company and the surface owner which expressly governs the locations of wells and associated facilities within the Water’s Edge, Richard’s Lake and Hearthfire subdivisions (the “Subdivisions”), and that certain terms found in the SUA may affect Commission setbacks and other Commission rules.</p>		
3. Notice		
<p>4. Mailed Notice. The City shall mail notice of the pending Application for a Permit to Drill no more than ten (10) days after the conceptual review meeting has taken place. The Company shall reimburse the City for the costs of the mailing. Owners of record shall be ascertained according to the records of the Larimer County Assessor’s Office, unless more current information is made available in writing to the City prior to the mailing of the notices. Notice of the pending application shall include reference to the neighborhood meeting, if applicable, and be made as follows:</p> <ul style="list-style-type: none"> — To the surface owners of the parcels of land on which the oil and gas operation is proposed to be located; — To the surface owners of the parcels of land within five hundred (500) feet of a proposed gathering line; 	<p>(5) <i>Application Notice to Surface Owners and Surrounding Landowners.</i> 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.</p> <p>(a) The Director shall mail notice 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:</p> <ol style="list-style-type: none"> 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 	<p>The notice requirements outlined in the Land Use Code Option B and in the proposed Operator Agreement are nearly identical. The only difference is that, in the Land Use Code option, the determination of a complete application is what triggers the notice process, whereas in the Operator Agreement, the conceptual review meeting initiates the notice process.</p>

Proposed Operator Agreement	City of Fort Collins - Option B – Proposed Regulations	Staff Comments
<p>— 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</p> <p>— To persons registered in writing with the City as representing bona fide neighborhood groups and organizations and homeowners' associations within the area of notification.</p> <p>5. Posted Notice. The real property proposed to be developed shall also be posted with a sign, giving notice to the general public of the proposed development. For parcels of land exceeding ten (10) acres in size, two (2) signs shall be posted. The size of the sign(s) required to be posted shall be as established in the Supplemental Notice Requirements of Section 2.2.6(D) of the City's Land Use Code. Such signs shall be provided by the City and shall be posted on the subject property in a manner and at a location or locations reasonably calculated by the City to afford the best notice to the public, which posting shall occur within ten (10) days following the Conceptual Review meeting.</p> <p>6. Neighborhood Meetings. A neighborhood meeting shall be required on any New Well, even on existing Well Pads, that requires an Application for a Permit to Drill. Notice of the neighborhood meeting shall be provided in accordance with Sections 4 and 5 above. The Company shall attend the neighborhood meeting. The City shall be responsible for scheduling and coordinating the neighborhood meeting and shall hold the meeting</p>	<p>neighborhood groups and organizations and homeowners' associations within the area of notification.</p> <p>(b) The Director shall also provide public notice of the application received by posting the application on the City's website for public review, but excluding any information required by the Commission to be kept confidential.</p> <p>(c) Notice shall also be provided by the Director of the neighborhood meeting and public hearing in accordance with Section 2.2.6 of this Land Use Code.</p> <p>(6) <i>Posting Site.</i> 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.</p>	

Proposed Operator Agreement	City of Fort Collins - Option B – Proposed Regulations	Staff Comments
<p>in the vicinity of the proposed development. A written summary of the neighborhood meeting shall be prepared by the City. The written summary shall be included in the Local Government Designee (LGD) comments provided to the COGCC at the time of the public hearing or permit review to consider the Application for a Permit to Drill.</p> <p>7. Notification to the City and the public regarding commencement of operations. Prior to the commencement of any new drilling operations, the Company shall provide to the City Manager for posting on the website the information outlined in Appendix B regarding commencement of operations, which the Company may revise from time-to-time during operations, with prior approval from the City.</p>		
<p>4. Development Standards</p>		
<p>8. Inspections. The City shall have the right to inspect the Company’s operations and its sites during business hours, upon the giving of twenty-four (24) hour advance written notice to the Company.</p>	<p>3.8.14(F)(2) <i>Right to Enter.</i> 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</p>	<p>Only difference is that notice shall now be provided in a written format (email is an acceptable form of notice, see #13 in the body of the Operator Agreement).</p>

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	with twenty- four (24) hours prior notice of such inspection.”	
<p>9. Containment berms. The Company shall utilize steel-rim berms around tanks and separators at new Well Pads. All berms and containment devices shall be inspected at regular intervals and maintained in good condition. No potential ignition sources shall be installed inside the secondary containment area unless the containment area encloses a fired vessel. Refer to American Petroleum Institute Recommended Practices, API RP - D16.</p> <ul style="list-style-type: none"> a) Containment berms shall be constructed of steel rings, designed and installed to prevent leakage and resist degradation from erosion or routine operation. b) Secondary containment for tanks shall be constructed with a synthetic or engineered liner that contains all primary containment vessels and flowlines and is mechanically connected to the steel ring to prevent leakage. c) For locations within five hundred (500) feet and upgradient of a surface water body, tertiary containment, such as an earthen berm, is required around production facilities. 	N/A	<p>After the initial of the draft Land Use Code changes for oil and gas operations, staff worked with Prospect Energy to also compile best management practices for waste management and waste containment (see also #43 below). Staff will be adding similar language to the proposed Land Use Code changes prior to bringing the changes to Council.</p>
<p>10. 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.</p>	<p>3.8.14(C)(40)(d) <i>Use of Closed Loop Pitless Systems for the Containment and/or Recycling of Drilling and Completion Fluids.</i> 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.</p>	
<p>11. Anchoring. All equipment at drilling and production sites shall be anchored to the extent necessary to resist flotation, collapse, lateral movement, or subsidence. All guy line anchors left</p>	<p>3.8.14(C)(1) <i>Anchoring.</i> All mechanized heavy equipment associated with oil and gas operations shall be anchored so as to minimize transmission of vibrations through the ground.</p>	

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buried for future use shall be identified by a marker of bright color not less than four (4) feet in height and not greater than one (1) foot east of the guy line anchor.		
12. Burning. No open burning shall occur on the site of any oil and gas operation.	3.8.14(C)(3) <i>Burning of Trash.</i> No burning of trash shall occur on the site of any oil and gas operation.	Operator Agreement clarifies that no open burning, of any items, is allowed within City limits. Staff will update the Land Use Code to reflect this language.
13. Chains. Traction chains from heavy equipment shall be removed before entering a City street.	3.8.14(C)(4) <i>Chains.</i> Traction chains from heavy equipment shall be removed before entering a City street.	
14. Chemical disclosure and storage. The City shall be provided, in table format, the name, Chemical Abstracts Service (CAS) number, volume, storage, containment and disposal method for all drilling and completion chemicals (solids, fluids, and gases) used on the Well Pad. Fracture chemicals shall be uploaded onto the Frac Focus website. The Company shall not permanently store hydraulic fracturing chemicals, flowback from hydraulic fracturing, or produced water in the City limits.	3.8.14(C)(5) <i>Chemical Disclosure.</i> The Director shall be provided a copy of all disclosures provided to the Commission under Commission Rule 205A.	This standard also includes the safety requirement that no chemicals may be permanently stored on the site.
15. 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.	3.8.14(C)(6) <i>Color.</i> 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.	
16. Cultural and Historical Resource Protection. If a significant surface or sub-surface archaeological site is discovered during construction, the Company shall be responsible for immediately contacting the City to report the discovery. If any disturbance of the resource occurs, the Company shall be responsible for mitigating the disturbance	3.8.14(C)(7) <i>Cultural and Historic Resources Standards.</i> The installation and operation of any oil and gas operation shall not cause significant degradation of cultural or historic resources, of sites eligible as City Landmarks or the State or National Historic Register, as outlined in Section 3.4.7 of the Land Use Code.	The intent of the standards is the same – to protect cultural and historical resources and if any damage is to occur, then mitigation is required. In the Fort Collins Field and in the Undeveloped Acreage (UDA), staff is not aware of any resources, so the standard is tailored to the discovery of any resource during site construction.

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to the cultural or historical property through a data recovery plan approved by the City.		
17. 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.	3.8.14(C)(8) <i>Discharge valves.</i> 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.	
18. Dust suppression. Dust associated with on-site activities and traffic on access roads shall be minimized throughout construction, drilling and operational activities such that there are no visible dust emissions from access roads or the site to the extent practical given wind conditions. No produced water or other process fluids shall be used for dust suppression. The Company will avoid dust suppression activities within three hundred (300) feet of the ordinary high water mark of any waterbody, unless the dust suppressant is water. Material Safety Data Sheets (MSDS) for any chemical based dust suppressant shall be submitted to the City for approval prior to use.	3.8.14(C)(9) <i>Dust Suppression.</i> Dust associated with on-site activities and traffic on access roads shall be minimized throughout construction, drilling and operational activities such that there are no visible dust emissions from access roads or the site to the extent practical given wind conditions.	Operator Agreement clarifies that no produced water shall be used for dust suppression and that dust suppression within 300 of a water body shall be avoided unless the dust suppressant is water. Staff will update the Land Use Code to reflect this language.
19. Electric equipment. Electric-powered engines for motors, compressors, and drilling equipment and for pumping systems shall be used in order to mitigate noise and to reduce emissions when feasible.	3.8.14(C)(10) <i>Electric Equipment.</i> The use of electric-powered motors for pumping systems and compressors shall be required if an oil and gas operation is located in reasonably close proximity to available electric transmission lines.	The intent of the statements is similar. The Operator Agreement clarifies the purpose of the standard. Staff will update the Land Use Code to reflect this language.
20. Emergency preparedness plan. The Company is required to develop an emergency preparedness plan for each specific facility site, which shall be in compliance with the International Fire Code. The plan shall be filed with the Poudre Fire Authority and the City of Fort Collins Office of Emergency Management and updated on an annual basis or as	3.8.14(C)(11) <i>Emergency Preparedness Plan.</i> (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.	

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<p>conditions change (responsible field personnel change, ownership changes, etc.). The emergency preparedness plan shall consist of at least the following information:</p> <ul style="list-style-type: none"> a) Name, address and phone number, including twenty-four (24) hour emergency numbers for at least two persons responsible for emergency field operations. b) 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 the Battalion Chief, and shall only be disclosed in the event of an emergency or to emergency responders. 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. c) Detailed information addressing each reasonable 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. A provision that any spill 	<p>(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, which shall be in compliance with the applicable provisions of the International Fire Code. 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:</p> <ul style="list-style-type: none"> 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 	

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<p>outside of the containment area, that has the potential to leave the facility or to threaten waters of the state, or as required by the City-approved Emergency Preparedness Plan shall be reported to the local emergency dispatch and the COGCC Director in accordance with COGCC regulations.</p> <p>d) Detailed information identifying access or evacuation routes, and health care facilities anticipated to be used.</p> <p>e) A project specific emergency preparedness plan for any project that involves drilling or penetrating through known zones of hydrogen sulfide gas.</p> <p>f) Detailed information showing that the Company has adequate personnel, supplies, and training to implement the emergency response plan immediately at all times during construction and operations.</p> <p>g) The Company shall have 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 City officials, a public safety officer, or a health professional.</p> <p>h) The plan shall include a provision establishing a process by which the Company engages with the surrounding neighbors to educate them on the risks of the on-site operations and to establish a process for surrounding neighbors to communicate with the Company.</p> <p>i) All training associated with the Emergency Preparedness plan shall be coordinated with the City’s Office of Emergency Management</p>	<p>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. For each potential emergency, threshold/trigger levels shall be pre-identified to determine when a state of emergency should be declared.</p> <p>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.</p> <p>5. Detailed information identifying access or evacuation routes, and health care facilities anticipated to be used.</p> <p>6. A project specific emergency preparedness plans for any project that involves drilling or penetrating through known zones of hydrogen sulfide gas.</p> <p>7. A provision obligating the operator to reimburse the appropriate emergency response service providers for costs incurred in connection with any emergency.</p> <p>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.</p> <p>9. A provision obligating the operator to have immediately available on each site 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.</p>	

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<p>and Poudre Fire Authority. j) A provision obligating the Company to reimburse the appropriate emergency response service providers for costs incurred in connection with any emergency in accordance with Colorado State Statutes.</p>	<p>10. The plan shall include a provision establishing a process by which the operator engages with the surrounding neighbors to educate them on the risks of the on-site operations and to establish a process for surrounding neighbors to communicate with the operator.</p>	
<p>21. Air quality. The Company must comply with emissions regulations governed by the Colorado Department of Public Health and Environment (CDPHE), Air Pollution Control Division (APCD). 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., COGCC Rule 805, and all state and federal regulations for the control of fugitive dust, and control of ozone, ozone precursors, methane, and hazardous air pollutants by the Larimer County Public Health Department, and the CDPHE-APCD. The Company must comply with 40 CFR Subpart OOOO as published on August 16, 2012 (Quad O).</p> <p>a) General Duty to Minimize Emissions. The Company shall incorporate in the development plan; operations, procedures, and field design features to the maximum extent feasible that minimize air pollutant emissions including but not limited to:</p> <ol style="list-style-type: none"> 1) Consolidation of product treatment and storage facilities 2) Centralization of compression facilities 3) Liquids gathering and water delivery systems 4) Telemetric control and monitoring systems 	<p>(40) 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., Commission Rule 805, and all state and federal regulations for the control of fugitive dust, and control of ozone, ozone precursors, methane, and hazardous air pollutants by the Larimer County Public Health Department, Air Pollution Control Division, and the Commission. In addition, proposed oil and gas operations shall submit an air quality mitigation plan which establishes compliance with the following mitigation measures of this Section.</p> <p>(a) 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 natural gas and VOC vapors to a capture or control device with at least a ninety eight (98) percent VOC destruction efficiency, to the maximum extent feasible. 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</p>	<p>Note that certain sections, e.g., green completions (below) and closed loop pitless systems (above) are represented elsewhere in this matrix.</p> <p>Key similarities between the Land Use Code and the Operator Agreement:</p> <ul style="list-style-type: none"> -There is a general duty to minimize emissions in both documents. -All VOCs will be captured and destroyed at a 98% efficiency rate or higher. -If plunger lifts are used, then low-bleed pneumatic controllers will be used. -Use of flares will be minimized. When used, they will destroy VOCs at a 98% efficiency rate or higher. -Baseline, well completion and ongoing air quality monitoring are a component of both documents, though the operator agreement tests air quality for only five days instead of the seven outlined in the Land Use Code and the City shares the cost of the baseline monitoring in the operator agreement. <p>Key differences between the Land Use Code and the Operator Agreement:</p> <ul style="list-style-type: none"> -The Fort Collins Field produces little gas and cannot capture the gas and place it to beneficial use. -The operator will not have to report emissions from newly installed storage vessels because

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<p>5) Pipeline infrastructure prior to well completion.</p> <p>b) In the UDA, the Company will utilize a high-low pressure vessel (HLP) and vapor recovery unit (VRU) for New Wells that are placed on production. The Company may remove the VRU at such time it determines that the VRU system is no longer necessary due to reduced emission recoveries and/or efficiencies, but no earlier than one (1) year after the new well is placed on production. The Company may opt to capture gas and send through a thermal oxidizer in lieu of a HLP and VRU.</p> <p>c) Plunger lifts are not typically used in the Fort Collins Field due to insufficient gas. However if there is future use of plunger lifts, emissions shall be controlled from the motor control valve using low bleed pneumatic controllers.</p> <p>d) There shall be no uncontrolled venting of methane. All gas vapors shall be captured to the extent practicable. Vapor capture equipment shall operate at ninety-eight percent (98) percent efficiency or better. There are no gas sales lines in the Fort Collins field because the quantity and quality of gas is low and not marketable. If salable gas were to occur in the UDA, a sales line shall be constructed.</p>	<p>requirement shall be installed, calibrated, operated, and maintained in accordance with the manufacturer’s recommendations, instructions, and operating manuals.</p> <p>(b) Flares and Combustion Devices. All flares shall be designed and operated as follows:</p> <ol style="list-style-type: none"> 1. The flare shall be fired with natural gas and shall be operated with a ninety eight (98) percent VOC destruction efficiency. 2. 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. 3. 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). 4. An automatic ignition system shall be installed. 5. If using a pilot 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, and if no telemetry alarm system is in place, an on-site, visible alarm shall be immediately activated. 6. 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. 7. Any flare, auto ignition system, and 	<p>current CDPHE (Colorado Dept. of Public Health and the Environment) require reporting and control for condensate tanks, though this Company does not have condensate. State regulations are also being considered for amendments and in the next year, the CDPHE will likely require reporting for all new tanks. The other controls and measures agreed to by the operator have a more significant impact on air quality than these measures. Being more stringent than current state regulations is not suggested at this time.</p> <p>-Regarding blowdowns, blowdowns are not considered to be a significant source of fugitive air emissions from this operator’s type of development/operations. In addition, the operator has agreed to no uncontrolled venting of methane and the capture of all gas vapors to the extent practicable.</p> <p>-The operator agreement does not require rod-packing replacement; this is a specific requirement included in the NSPS Quad O for some types of compressors. So if it applies, operator will be required to do it under that regulation.</p> <p>-The operator agreement does not require annual certification, because the City is not the regulatory agency that certifies compliance with air quality regulations and these certifications are readily available on the internet.</p>

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<p>e) Flaring during drilling and completions: During well completion, the capture and beneficial use of natural gas is preferred over flaring. Minimal flaring may occur in the Fort Collins field, because there is minimal gas in the field. Flaring shall be continuously monitored on-site by the Company, under twenty-four (24) hour watch and is regulated by COGCC Rules 317, 805B(3)B, and 912. No venting of gas may occur, except under COGCC Green Completion Practices (Rule 805 B(3)B), or in very limited cases under Rule 912 with the COGCC Director approval.</p> <p>f) Flaring during production operations:</p> <ol style="list-style-type: none"> 1) The flare shall be fired with natural gas and shall be operated with a ninety eight (98) percent or higher VOC destruction efficiency. 2) The flare shall be designed and operated in a manner that shall 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. Where applicable, flares shall also be in compliance with 5 CCR 1001-9 Regulation 7 Section XVIIIB for non-condensate oil. 3) 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). 4) An automatic pilot system shall be used 	<p>recorder shall be installed, calibrated, operated, and maintained in accordance with the manufacturer’s recommendations, instructions, and operating manuals.</p> <p>(c) Fugitive Emissions. The operator shall develop and maintain a leak detection and component repair program, such as a leak detection and repair program appropriately scaled to the size of the facility or a directed inspection and infrared leak detection and maintenance program, using the most effective performance technologies and practices (e.g., EPA Method 21) for equipment used on the well site for permanent operations. A description of the leak detection and component repair program shall be included in the air quality mitigation plan submitted to the Director.</p> <p>(f) 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.</p> <p>(g) Capture of Produced Gas from Wells. Gas produced during production shall be captured, to the maximum extent feasible, and not flared or vented except in situations where flaring or venting is required to ensure that associated natural gas can be safely disposed of in emergency shut-down situations to prevent the risk of fire and explosion.</p> <p>(h) Pneumatic controllers. The operator shall use only no-bleed or low-bleed pneumatic</p>	

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<p>when feasible. Other ignition systems may include the installation and operation of a telemetry alarm system or an on-site visible indicator showing proper function.</p> <p>g) Leak Detection and Repair (LDAR) – The Company shall develop and maintain a leak detection and component repair program according to EPA Method 21 for equipment used in permanent operations. LDAR shall be performed on newly installed equipment, and then on an annual basis. A Forward-Looking Infrared (FLIR) camera shall be used as the preferred implementation method of EPA Method 21 as available from the state; if unavailable, other methods shall be used in compliance with this method. Upon request from the City, the Company shall implement EPA Method 21 upon additional concerns. At least once per year, the Company shall notify the City prior to FLIR camera use in case the City wishes to observe the method.</p> <p>h) One Time Baseline Air Quality Monitoring - the Company and the City shall split the cost for a one time Baseline Sampling and Analytical. The work shall be done by a third party consultant agreeable to both parties over a five day sampling period with each location sampled per day. The sampling locations shall be as follows:</p> <ol style="list-style-type: none"> 1) Upwind of Tank Battery 2) Downwind of Tank Battery 3) City Park 4) One location downtown, such as 	<p>controllers, where such controllers are available for the proposed application.</p> <p>(i) 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.</p> <p>(j) 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.</p> <p>(k) Rod-Packing Replacement. Operators shall replace rod-packing from reciprocating compressors every twenty six thousand (26,000) hours or thirty six (36) months.</p> <p>(l) 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 operator shall provide air toxics monitoring during well completion and 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.</p> <p>(m) 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-</p>	

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<p>New Belgium Brewery or Wild Boar Coffee</p> <p>i) One Time Air Sampling During Well Completion – The Company shall conduct air sampling during well completion. The work shall be done by a third party consultant agreeable to both parties. This shall be done over a five day sampling period with each location sampled per day. The sampling shall be for one well completion in the City (City’s choice of which well completion). The sampling locations shall be as follows:</p> <ol style="list-style-type: none"> 1) Upwind of well 2) Downwind of well <p>j) Ongoing Air Quality Monitoring - Periodic air monitoring shall be performed for hydrogen sulfide (H₂S), a hazardous air pollutant (HAP). The Company shall perform field monitoring using the Jerome 631 XC or equivalent instrument annually, or until such time that odors are not detected past the Fort Collins Tank Battery fence line in City Limits.</p> <p>k) The City may require the Company to conduct additional air monitoring as needed to respond to emergency events such as spill, process upsets, or accidental releases or in response to odor complaints in City Limits.</p> <ol style="list-style-type: none"> 1) In response to emergency events that involve the potential release of hazardous air pollutants, the Company may be required to conduct air sampling in accordance with subsection i above. 2) In response to odor complaints, 	<p>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.</p>	

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<p>the Company may be required to conduct air sampling in accordance with subsection j above or use a photo-ionization detector (PID) to measure detected levels of VOCs that exceed acute health-based exposure thresholds, or other air sampling methodology depending on the nature of the complaint.</p> <p>l) Air Quality Action Days. The Company shall respond to air quality Action Day advisories posted by the Colorado Department of Public Health and Environment for the Front Range Area by implementing air emission reduction measures committed to in the Air Quality Mitigation Plan. Emission reduction measures shall be implemented for the duration of an air quality Action Day advisory and may include measures such as:</p> <ol style="list-style-type: none"> 1) Minimize vehicle and engine idling 2) Reduce truck traffic and worker traffic 3) Delay vehicle refueling 4) Suspend or delay use of fossil fuel powered ancillary equipment 5) Postpone construction activities 		
<p>22. Green completions.</p> <p>a) Gas gathering lines, separators, and sand traps capable of supporting green completions as described in COGCC Rule 805 shall be installed at any location at which commercial quantities of gas are reasonably expected to be produced based on existing adjacent wells within one (1) mile or well.</p> <p>b) Uncontrolled venting is prohibited.</p>	<p>(e) <i>Green Completions.</i> For each well completion operation, the operator shall control emissions by the operational procedures set forth below:</p> <ol style="list-style-type: none"> 1. For the duration of flowback, route the recovered gas to the sales pipeline once the fluid flowing from the well has enough gas to safely operate the separator and liquid control valves. 	<p>The Company does not have gas in volumes that are commercially viable, and this is clarified in the Operator Agreement. However, the company has committed to compliance with Quad O (see above) and with COGCC and federal rules, which also require green completions where feasible.</p>

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<p>c) Temporary flowback flaring and oxidizing equipment shall include the following:</p> <ol style="list-style-type: none"> 1) Adequately sized equipment to handle 1.5 times the largest flowback volume of gas experienced in a ten (10) mile radius producing from the same formation; 2) Valves and porting available to divert gas to flaring and oxidizing equipment; and 3) Auxiliary fueled with sufficient supply and heat to combust or oxidize non-combustible gases in order to control odors and hazardous gases. The flowback combustion device shall be equipped with a reliable continuous ignition source over the duration of flowback, except in conditions that may result in a fire hazard or explosion. 4) The Company has a general duty to safely maximize resource recovery and minimize releases to the atmosphere during flowback and subsequent recovery/operation. 	<ol style="list-style-type: none"> 2. 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. 3. Operators have a general duty to safely maximize resource recovery and minimize releases to the atmosphere during flowback and subsequent recovery / operation. 4. 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. 5. 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). 6. The operator of a well shall notify the Director at least two (2) days prior to the commencement of 	

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	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.	
23. 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.	3.8.14(C)(13) <i>Exhaust.</i> 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.	
24. Fencing. Permanent perimeter fencing shall be installed around production equipment, and shall be secured. The main purpose of the fencing is to deter entrance by unauthorized people. The Company shall use visually interesting fencing, when feasible, but the parties recognize that there is a need for air circulation, and for the field personnel who regularly inspect the facilities to be able to identify visual operational deficiencies when driving by. Landscaping may be used for screening. If a chain link fence is required to achieve safety requirements set by the COGCC, then landscaping and other screening mechanisms shall be required that comply with the City's Land Use Code regulations and the Company's safety requirements.	3.8.14(C)(14) <i>Fencing.</i> Permanent perimeter fencing shall be solid, opaque and consist of masonry, stucco steel, or other similar materials. Chain link fencing 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.	Prospect Energy needs to have the wells ventilated and solid fencing conflicts with this need. In the past, the operator has used chain link fencing to achieve this objective. As the Land Use Code does not allow chain link fencing, staff will work with the operator at each new well site to find an alternate material that will achieve the same objectives. If chain link fencing is the only option, then staff will work with the operator to sufficiently screen the fence while also allowing the operator to visually inspect the site by driving by.
25. Flammable material. All land within twenty five (25) feet of any tank, or other structure containing flammable or combustible materials shall be kept free of dry weeds, grass or rubbish, and will conform to Section 315 of the International Fire Code.	3.8.14(C)(15) <i>Flammable material.</i> All land within twenty five (25) feet of any tank, or other structure containing flammable or combustible materials shall be kept free of dry weeds, grass or rubbish.	The Operator Agreement clarifies this standard is in a compliance with the International Fire Code. Staff will update the Land Use Code to reflect this language.

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<p>26. Floodplains. All oil and gas operations shall comply with Chapter 10 of the City Code.</p>	<p>3.8.14(C)(15) <i>Floodplains.</i> All oil and gas operations shall comply with Chapter 10 of the City Code.</p>	
<p>27. Water Quality Monitoring Plan. The Company shall comply with COGCC Rule 609. In summary, this requires pre- and post-drilling testing. The rules require oil and gas operators to sample all “Available Water Sources” (owner has given consent for sampling and testing and has consented to having the sample data obtained made available to the public), with a cap of four (4) water sources, within one-half (1/2) mile radius of a proposed well, multi-well site, or dedicated injection well. Water sources include registered water wells, permitted or adjudicated springs, and certain monitoring wells. The Company agrees to the following requirements above and beyond the COGCC requirements: analyzing for dissolved metals as indicated in the Land Use Code; and sampling intervals to be baseline (before drilling), post-drilling at one, three, and six years. Analytical results shall be shared with the COGCC, the City, and the landowner. All spills, for new and existing wells, shall be managed in accordance with COGCC regulations.</p>	<p>(41) 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.</p> <p>(a) Water Well and Groundwater Monitoring.</p> <ol style="list-style-type: none"> 1. Based upon records from the Colorado Division of Water Resources, the operator shall identify locations where groundwater may be monitored upgradient and downgradient of a proposed well. To meet this requirement, the operator may sample existing water wells. If access to the well is not allowed, the operator may sample other groundwater features to meet the requirements of this section. 2. If access is allowed, the operator shall identify and sample at least four (4) water wells within a one-half (1/2) mile radius of the surface casing of a proposed oil and gas well. One (1) well shall be located up gradient of the proposed oil and gas well and at least one (1) well shall be located down gradient of the proposed oil and gas well. Wells closest to the proposed well are preferred. Where multiple defined aquifers are present, the sampling locations shall sample from different aquifers when possible. 3. If a water well owner allows access, the operator shall conduct baseline monitoring of the water well during two (2) sampling events prior to the start of heavy equipment operations at the oil and gas well site. If monitoring is desired by the water well owner, samples shall be 	<p>The COGCC updated their regulations after staff initially drafted the Land Use Code regulations. The Operator has committed to exceed COGCC regulations, similar to what the Land Use Code required, by requiring post-completion sampling at one, three and six years (the state only requires post-completion sampling at one and six years). In addition, the operator has agreed to test the full list of analytes proposed by the City, which also exceeds COGCC regulations.</p> <p>In the agreement, the City would conduct the soil gas monitoring (an early warning system for any potential contamination). The operator agreement does not require compliance with the Public Water Supply Protection Standards of the COGCC because no public water supply has been identified (by the COGCC, who oversees this standard) within the operational boundaries.</p>

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	<p>collected at the same location one year, three years, and six years after the conclusion of the oil and gas well completion.</p> <p>4. If a water well cannot be sampled within one-half mile of the proposed oil or gas well, the Operator shall identify groundwater features with reasonable access, such as groundwater seeps or springs, for baseline testing. If a groundwater feature does not exist or is not accessible within one-half mile, the Operator may be required to install groundwater monitoring wells upgradient and downgradient of the proposed well. The operator shall conduct baseline monitoring prior to the start of heavy equipment operations at the oil and gas well site. Post- completion test(s) may be required if changes in water quality provide evidence of possible groundwater contamination from oil and gas operations.</p> <p>5. After any COGCC water sampling, if any additional sampling is requested, the Director may require further groundwater sampling at any time in response to complaints from water well owners. All water well monitoring results shall be reported to the water well owner and the Director. All other groundwater feature monitoring results shall be reported to the Director.</p> <p>6. The water well and groundwater sampling described in this Section shall include testing for the analytes listed in Table 1, and the operator must measure the depth to water in the water well. Current applicable EPA-approved analytical methods for drinking water shall be used and analyses shall be</p>	

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	<p>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.</p> <p>7. 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.</p> <p>8. If, at any time, monitoring indicates contamination, the operator shall immediately notify the Director, the Commission and the owner of the water well.</p> <p>9. 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</p>	

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	<p>data and surveyed well locations shall also be submitted to the Director and Commission in an electronic data deliverable format.</p> <p>10. 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.</p> <p>11. Operators shall conduct an active soil gas survey in proximity to the wellhead ninety (90) days after production begins to determine if any leaks/releases have occurred as a result of drilling, stimulation, and completion activities.</p> <p>(b) Public Water Supply Protection. The Operator shall comply with all requirements of Commission Rule 317(b) regarding Public Water Supply Protection.</p> <p>(c) Surface Water Sampling and Monitoring.</p> <p>1. Baseline Monitoring.</p> <p>a. The Operator shall collect and analyze representative samples of surface water from classified water bodies within one-half 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.</p> <p>b. Analytes for surface water shall include, at a minimum, those outlined in the Commission</p>	

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	<p>Sampling and Analysis Plan (Table 1).</p> <p>c. 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.</p> <p>2. 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.</p> <p>3. Surface and Groundwater Monitoring. If, based on the test results of active soil gas monitoring, there is an indication that contamination may impact water quality cross and down gradient of the contamination, then the operator shall conduct additional post-completion testing to identify any impacts to groundwater and surface water. 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 or groundwater, but in no case less than annually, and in accordance with the approved Water Quality Monitoring Plan.</p> <p>4. 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.</p>	
<p>28. Landscaping. In the Fort Collins Field, existing Well Pads shall be used for any New Wells and all landscaping shall be in compliance with the City of</p>	<p>3.8.14(C)(18) <i>Landscaping.</i> If an oil and gas operation has frontage on a public street, street trees shall be planted along the roadway in</p>	<p>The Operator Agreement requires that a Visual Mitigation Plan be prepared and submitted to the City for the Conceptual Review meeting and with</p>

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<p>Fort Collins Land Use Code standards and in compliance with the safety requirements of the Company. Existing vegetation shall be minimally impacted. In the UDA, motorized equipment shall be restricted to the Well Pad and access roads to the Well Pads. A Visual Mitigation Plan, along with fencing and landscaping, shall be developed for new construction.</p>	<p>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.</p> <p>See also sections on Land Disturbance Standards (Section 3.8.14(C)(17)) and Scenic and Rural Character Standards (Section 3.8.14(C)(27)).</p>	<p>the state permit so that landscaping and other visual mitigation standards can be discussed on a case-by-case basis.</p>
<p>29. 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.</p>	<p>3.8.14(C)(19). <i>Lighting.</i> 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.</p>	
<p>30. Maintenance of machinery. Routine field maintenance of vehicles or mobile machinery shall not be performed within three hundred (300) feet of any water body.</p>	<p>3.8.14(C)(20) <i>Maintenance of machinery.</i> Routine field maintenance of vehicles or mobile machinery shall not be performed within three hundred (300) feet of any water body.</p>	
<p>31. Mud Tracking. The Company shall take all practicable measures to ensure that vehicles do not track mud or debris onto City streets. If mud or debris is nonetheless deposited on City streets, the streets shall be cleaned immediately by the Company using pressured water from a water truck. This shall be done as part of maintenance. If for some reason it cannot be done, or needs to be postponed, the LGD shall be notified of the Company's plan for mud removal.</p>	<p>23. <i>Mud Tracking.</i> The Company shall take all practicable measures to ensure that vehicles do not track mud or debris onto City streets. If mud or debris is nonetheless deposited on City streets, the streets shall be cleaned immediately.</p>	<p>The Operator Agreement clarifies what will happen if mud is deposited and the communication measures to be taken. Staff will update the Land Use Code with this updated language.</p>

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<p>32. Natural Resources. An Ecological Characterization Study shall be provided if any New Well is within 500 feet of a Natural Habitat or Feature, and if impacting these resources, mitigation plans to ensure no net resource loss per Fort Collins Land Use Code 3.4.1.</p>	<p>3.8.14(C)(42) <i>Natural Resources.</i> 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.</p>	<p>Staff analyzed the presence of natural habitats and features and found that the overlap of these features with the fields is minimal and that all features should be able to be avoided and protected through the process. However, staff is incorporating the “no net loss” language that the City has used in the Energy by Design process as well.</p>
<p>33. Noise mitigation. Noise mitigation measures shall be constructed along any edge of any oil and gas operation site if such edge is between the oil and gas operation and existing residential development or land which is zoned for future residential development. The noise mitigation measures shall, to the maximum extent feasible, decrease noise from the oil and gas operations to comply with the sound limitation regulations set forth in Commission Rule 802. A noise mitigation study shall be submitted with the application to demonstrate that noise shall be decreased to the maximum extent feasible.</p>	<p>3.8.14(C)(43) <i>Noise mitigation.</i> A noise mitigation screen shall be constructed along any edge of any oil and gas operation site if such edge is between the oil and gas operation and existing residential development or land which is zoned for future residential development. The noise mitigation screen shall, to the maximum extent feasible, decrease noise from the oil and gas operations to comply with the sound limitation regulations set forth in Commission Rule 802. A noise mitigation study shall be submitted with the application to demonstrate that noise will be decreased to the maximum extent feasible.</p>	<p>The Operator Agreement focuses on all noise mitigation measures and not just a screen, providing more flexibility to respond to noise issues on a case-by-case basis. Staff will update the Land Use Code to reflect this intent as well.</p>
<p>34. Pipelines. Any newly constructed or substantially modified pipelines on site shall meet the following requirements:</p> <p>(a) To the maximum extent feasible, all 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</p>	<p>3.8.14(C)(44). <i>Pipelines.</i> Any newly constructed or substantially modified pipelines on site shall meet the following requirements:</p> <p>(a) All 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</p>	<p>Pipelines are frequently regulated or bound by a Surface Use Agreement. As Surface Use Agreements are already held for the Fort Collins Field and the Undeveloped Acreage (UDA), these standards shall be applied to the maximum extent feasible.</p>

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<p>high water mark of any surface water body shall incorporate leak detection, secondary containment, or other mitigation, as appropriate.</p> <p>(b) To the maximum extent feasible, pipelines shall be aligned with established roads in order to minimize surface impacts and reduce habitat fragmentation and disturbance.</p> <p>(c) 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.</p> <p>(d) To the maximum extent feasible, 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.</p>	<p>body shall incorporate leak detection, secondary containment, or other mitigation, as appropriate.</p> <p>(b) To the maximum extent feasible, pipelines shall be aligned with established roads in order to minimize surface impacts and reduce habitat fragmentation and disturbance.</p> <p>(c) 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.</p> <p>(d) 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.</p>	
<p>35. Recordation of flowlines. All new flowlines, including transmission and gathering systems, shall have the legal description of the location recorded with the City Clerk and the Larimer County Clerk and Recorder within thirty (30) days of completion of construction. Abandonment of any recorded flowlines shall be recorded with the Larimer County Clerk and Recorder’s office within thirty (30) days after abandonment.</p>	<p>3.8.14(C)(23) <i>Recordation of flow lines.</i> 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.</p>	<p>The key difference is that the operator has committed to recording all new flowlines instead of all existing flowlines.</p>
<p>36. 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, or by using existing Well Pads.</p>	<p>3.8.14(C)(24) <i>Recreational Activity Standards.</i> 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, or by using existing well pads.</p>	

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<p>37. Removal of debris. When an oil and gas operation becomes operational, all construction-related debris shall be removed from the site for proper disposal. The site shall be maintained free of debris and excess materials at all times during operation. Materials shall not be buried or burned on-site.</p>	<p>3.8.14(C)(25) <i>Removal of debris.</i> When an oil and gas operation becomes operational, all construction-related debris shall be removed from the site for proper disposal. The site shall be maintained free of debris and excess materials at all times during operation. Materials shall not be buried on-site.</p>	<p>The Operator Agreement clarifies that materials cannot be buried or burned on site. Staff will update this language in the proposed Land Use Code changes.</p>
<p>38. Removal of equipment. All equipment used for drilling, re-completion 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.</p>	<p>3.8.14(C)(26) <i>Removal of equipment.</i> All equipment used for drilling, re-completion 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.</p>	
<p>39. Soil Gas Monitoring. The City, at its discretion, may conduct soil gas monitoring to assess well casing integrity. This shall be typically completed within ninety (90) days of New Well completion. The City shall notify the Company prior to entering the site for soil gas monitoring.</p>	<p>2. 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.</p>	<p>As indicated above, in the agreement, the City would conduct the soil gas monitoring (an early warning system for any potential contamination).</p>
<p>40. Spills. The Company shall comply with COGCC Rule 609 “Spills and Releases”, and notify the City and whenever there is notification to the COGCC. The Company shall also copy the City on any written correspondence to the COGCC or other regulatory authority.</p>	<p>3.8.14(C)(29) <i>Spills.</i> 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 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.</p>	

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<p>41. 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.</p>	<p>3.8.14(C)(30). <i>Stormwater control plan.</i> 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.</p>	
<p>42. Temporary access roads. Temporary access roads associated with oil and gas operations shall be reclaimed and re-vegetated to the original state.</p>	<p>3.8.14(C)(32) <i>Temporary access roads.</i> Temporary access roads associated with oil and gas operations shall be reclaimed and re-vegetated to the original state.</p>	
<p>43. Trailers. A construction trailer or office is permitted as an accessory use during active drilling and well completion only.</p>	<p>3.8.14(C)(33) <i>Temporary housing.</i> Temporary housing at any oil and gas operations, including without limitation, trailers, modular homes and recreational vehicles shall be prohibited.</p>	<p>Allowing a trailer or office on the site during active drilling and completion ensures that staff is available to immediately respond to any concerns.</p>
<p>44. Transportation and circulation. All applicants for drilling and completion operations (New Wells) 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, trips per day and any other information required by the Traffic Engineer. Preliminary information is required for this item for the Conceptual Review meeting, in accordance with Appendix B. The Company shall comply with all Transportation and Circulation requirements as contained in the Land Use Code as may be reasonably required by the City’s Traffic Engineer.</p>	<p>3.8.14(C)(34) <i>Transportation and circulation.</i> 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,</p>	<p>The only difference in the Operator Agreement is that the requirement for a bond for protection of the City’s infrastructure is implicit within the “requirements as contained in the Land Use Code as may be reasonably required by the City’s Traffic Engineer.” It is further clarified in Appendix B that a bond will be required during active drilling and completion to protect public infrastructure.</p>

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	without limitation, water, sand, waste fluids, waste solids and mixed wastes.	
<p>45. Wastewater and Waste Management. In the Fort Collins Field, all fluids shall be contained and there shall be no discharge of fluids, as described in the Closed Loop System and Green Completions section of this Appendix. Waste shall be stored in tanks, transported by tanker trucks, and disposed of at licensed disposal fields. In the UDA, new secondary containment shall be constructed of galvanized steel, with sufficient perimeter and height to hold one and one-half (1.5) times the volume of the largest tank and sufficient freeboard to prevent overflow. No potential ignition sources shall be installed inside the secondary containment area unless the containment enclosed a fired vessel. The requirements for secondary containment shall meet the Fort Collins Stormwater Criteria Manual. No land treatment of oil impacted soil or contaminated drill cuttings are permitted. The use of a closed loop drilling system precludes discharge of produced water or flowback to the ground or the use of pits. Produced water or flowback shall not be used for dust suppression. A copy of the field’s Spill Prevention, Control, and Countermeasure Plan (SPCC) shall be provided to the City, which describes spill prevention and mitigation practices. The Company shall provide the City documentation of waste disposal and its final disposition.</p>		<p>As with containment berms, the draft Land Use Code changes for oil and gas operations did not contain language regarding wastewater and waste management. Staff will be adding similar language to the proposed Land Use Code changes prior to bringing the changes to Council.</p>
<p>46. Water supply. The Company 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</p>	<p>3.8.14(C)(36) <i>Water supply.</i> 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</p>	

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<p>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 including anticipated haul routes, approximate number of vehicles needed to supply and dispose of water and the final destination for water used in operation.</p>	<p>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 including anticipated haul routes, approximate number of vehicles needed to supply and dispose of water and the final destination for water used in operation.</p>	
<p>47. Weed control. The Company 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.</p>	<p>3.8.14(C)(37) <i>Weed control.</i> The Company 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.</p>	
	<p><u>Other Sections of the Proposed Land Use Code Regulations:</u> Applications and Permits – addressed in Appendix B Engineering Standards – building permits are not required Reclamation – addressed in Appendix B Trash and Recycling Enclosure – not applicable Representations – not applicable Well Abandonment – required by the COGCC</p>	

RESOLUTION 2013-024
OF THE COUNCIL OF THE CITY OF FORT COLLINS
APPROVING AN OIL AND GAS OPERATOR AGREEMENT
BETWEEN THE CITY AND PROSPECT ENERGY, LLC

WHEREAS, by Ordinance No. 032, 2013, the City Council amended the City Code by adding new Sections 12-135 and 12-136 imposing a ban on hydraulic fracturing and open pit storage but providing exemptions for oil and gas operations that are the subject of an operator agreement between the City and an oil or gas operator, as long as such agreement includes strict controls on methane release and, in the judgment of the City Council, adequately protects the public health, safety and welfare; and

WHEREAS, the City Manager has presented a draft Oil and Gas Operator Agreement between the City and Prospect Energy, LLC to the City Council which, in the judgment of the City Council, contains strict controls on methane release and adequately protects the public health, safety and welfare; and

WHEREAS, the City Council has determined that the approval and execution of the proposed Oil and Gas Operator Agreement between the City and Prospect Energy, LLC is in the best interests of the City.

NOW, THEREFORE, BE IT RESOLVED BY THE COUNCIL OF THE CITY OF FORT COLLINS as follows:

Section 1. That the proposed Oil and Gas Operator Agreement between the City and Prospect Energy, LLC, a copy of which is attached hereto as Exhibit "A", is hereby determined by the City Council to include strict controls on methane release and to adequately protect the public health, safety and welfare of the City, and is hereby approved.

Section 2. That the City Manager is hereby authorized and directed to execute said agreement in substantially the same terms and conditions shown on Exhibit "A" subject to such minor modifications in form or substance as the City Manager, in consultation with the City Attorney, determines to be necessary and appropriate to protect the interests of the City or effectuate the purpose of this Ordinance.

Section 3. That the Oil and Gas Operator Agreement may only be amended by the City Council by resolution.

Passed and adopted at a regular meeting of the Council of the City of Fort Collins this 19th day of March, A.D. 2013.

Mayor

ATTEST:

City Clerk

OIL AND GAS OPERATOR AGREEMENT

THIS OIL AND GAS OPERATOR AGREEMENT (“Agreement”) is made and entered into this ____ day of _____, 2013 , by and through Prospect Energy, LLC, whose address is 1600 Stout Street, Suite 1710, Denver, CO 80202 (referred to hereinafter as the “Company”), and The City of Fort Collins (referred to hereinafter as the “City”) with an address of 300 LaPorte Avenue, Fort Collins, CO 80522, which may be collectively referred to herein as the “Parties”, or individually as a “Party”.

WHEREAS, the Company and its affiliates, namely, Black Diamond Minerals, LLC (“BDM”), the parent of the Company, engage in the exploration, development, production and marketing of natural gas, oil and natural gas liquids in the Rocky Mountains, including the State of Colorado. The Company currently operates the Fort Collins Field (the “Field”) located in Larimer County, with certain portions of the Field located within the City, as depicted in Exhibit A, and, as such, is the only operator with active oil and gas operations within the City. The Company through its parent BDM, also holds certain leasehold interests within the City described as the Undeveloped Area (the “UDA”), as depicted in Exhibit B.

WHEREAS, the Field was discovered in 1924, and has continually produced oil and associated hydrocarbons to this day. As is common with other older, once remote, oil and gas developments around the state, urban growth and subsequent annexation of certain lands by the City have encroached upon the Field. These annexations, including the Richard’s Lake subdivision (developed in the late 1990’s) and the Hearthfire subdivision (developed in the mid 2000’s), have allowed developers to place residential areas in the vicinity of active oil and gas operations. Some property lines are now within 150 feet of oil wells constructed on then-rural well pads.

WHEREAS, the Field is an oil producing field unitized for waterflood operations from the Muddy Sandstone Formation (which yields the majority of the Field’s production), but the Field also produces oil from the Niobrara, Codell, Dakota, and Lyons Formations, all of which may need future development.

WHEREAS, recent engineering and geological analysis indicates that certain parts of the Field may yield substantial incremental resource recovery by expanding the secondary recovery waterflood project by drilling and hydraulic fracturing new wells drilled from lands currently called Waters Edge, Richard’s Lake and Hearthfire subdivisions (the “Subdivisions”). The Company is presently studying the UDA to assess whether it would support the development of mineral resources.

WHEREAS, in the Field and UDA, the Company has entered into Surface Use Agreements with the surface owners, dated December 19, 1988, as amended April 19, 2001, and

March 17, 2011, respectively, which expressly govern the locations of wells and associated facilities within the Subdivisions, and other specified terms, including, but not limited to, landscaping and fencing around wells and associated production equipment.

WHEREAS, the City and the Company value a balanced approach to oil and gas development that is protective of public health, safety and welfare, including the environment and wildlife resources. To that end, in order to achieve those goals in a cooperative manner, the City and the Company enter into this Agreement to identify best management practices (“BMPs”) for the Company’s future drilling operations within the City’s boundaries.

WHEREAS, the Field extends beyond the City limits and the Company, as a responsible oil and gas operator, has installed a vapor recovery unit at its existing production facility located just south of Douglas Road (the “Fort Collins Tank Battery”) as shown in the Exhibit A attached hereto which lies outside of the City limits. All water, oil and gas produced from any New Well, as defined herein, and located in the Field, will flow into existing or future pipelines to the Fort Collins Tank Battery where gas will be captured and sent to the thermal oxidizer for destruction. Equipment, both at the Fort Collins Tank Battery and within City limits, will capture and destroy at least 98% of any methane and volatile organic compounds (VOC).

WHEREAS, the Colorado Oil and Gas Conservation Act, C.R.S. §34-60-101 *et. seq.* (the “Act”), authorizes the Colorado Oil and Gas Conservation Commission (“COGCC” or “Commission”) to adopt statewide rules and regulations, which the Commission has done. Further, the Commission continues to consider changes to the rules and regulations.

WHEREAS, on December 18, 2012, by the adoption of Ordinance 145, 2012, the City Council imposed a temporary moratorium until July 31, 2013 on the acceptance, processing and approval of any land use applications relating to new oil and gas development (the “Moratorium”).

WHEREAS, on March 5, 2013, by the adoption of Ordinance No. 032, 2013, the City Council enacted Sec. 12-135 of the City Code prohibiting the use of hydraulic fracturing in the City, as well as the storage in open pits of solid or liquid wastes and /or flowback (the “Ban”) and, through the enactment of City Code Sec. 12-136, exempted from the Ban any oil or gas wells or pad sites existing within the City as of February 19, 2013, that become the subject of an operator agreement between the operator of the same and the City, as long as such agreement includes strict controls on methane release and, in the judgment of the City Council, adequately protects the public health, safety and welfare.

WHEREAS, by Resolution _____, the City Council has approved this Oil and Gas Operator Agreement with the Company, and the Parties agree to the terms and conditions contained below.

NOW THEREFORE, in consideration of the covenants and mutual promises set forth in this Agreement, including in the recitals, the Parties agree as follows:

1. Effective Date. When this Agreement is presented to the City Council for its consideration, City staff will also present to the City Council an ordinance exempting all Company operations from the Moratorium and the Ban, which exemption will continue in effect as long as the Company's operations are conducted in accordance with this Agreement. The Effective Date of such ordinance shall be the "Effective Date" of this Agreement. Notwithstanding the foregoing, this Agreement shall be void and of no effect as of August 1, 2013, unless this Agreement is fully executed by the Parties on or before such date.

2. The Company's Best Management Practices ("BMPs") within City Limits. The Company shall include the BMPs listed in Appendix A, attached hereto and by reference made a part hereof, on all Applications for Permit-to-Drill, Form 2, and Oil and Gas Location Assessments, Form 2A, submitted to the Commission for a "New Well". For the purposes of this provision, "New Well" shall mean any Company-operated well spudded during the term of this Agreement, and located on either a currently existing well pad or a New Well pad that is located within the City limits, and a "New Well Pad" shall mean any area that is directly disturbed during the drilling and subsequent operation of a New Well, including any production facilities directly associated with such well, and its associated Well Pad, insofar as it covers lands located in the City limits. The BMPs shall apply to all New Wells drilled by the Company while this Agreement is effective.

3. City Regulatory Approvals. The Company shall not be required to obtain any project development plan or final plan approval from the City to conduct its oil and gas operations within the City limits, as long as the Company complies with the terms and conditions contained herein, and this Agreement shall control all oil and gas operations conducted by the Company within the City limits. Prior to the submission of a COGCC Form 2 and/or Form 2A to the COGCC, the Company shall meet with the City to review the proposed oil and gas operation to ensure compliance with this Agreement, all applicable state and federal regulations, and any site-specific concerns, which concerns may include overall project impacts and economically and technically feasible mitigation measures or BMPs related to field design and infrastructure construction to minimize potential adverse impacts to public health, safety and welfare. At such time, if at all, that the City and Larimer County, Colorado (the "County") enter into a written agreement that authorizes the City to regulate the oil and gas operations of the Company within the Growth Management Area, such operations shall thereafter be governed by the terms and conditions of this Agreement and shall be subject to the City's regulatory authority as provided

in this Agreement. "Growth Management Area" shall be as described in that certain Intergovernmental Agreement entered into by the City of Fort Collins and Larimer County on June 24, 2008, nunc pro tunc [sic] October 17, 2006.

4. Operations on Existing Facilities. For any Facility owned by the Company and existing prior to the Effective Date and located within the City limits, the Parties hereby agree that the Company may perform routine maintenance operations on said Facility and perform such operations the Company deems prudent and necessary, including, but not limited to, stimulating existing wells through hydraulic fracturing and temporarily storing chemicals on existing well pads for that purpose. The Company agrees to conduct such operations as a prudent operator in accordance with the rules and regulation of the COGCC; however, the Company shall not be subject to the BMP's as attached hereto, except for Appendix A paragraphs 20(j) and 20(k) thereof. "Facility" as used in this provision shall include wells, pipelines, and all equipment necessary and appurtenant to such wells and pipelines.

5. Term. This Agreement is effective upon the Effective Date and shall remain in effect for five (5) years from the Effective Date, at which time the Agreement shall be automatically renewed and extended for successive five (5) year terms, unless and until either Party elects to terminate the Agreement at the end of the then current five (5) year term by providing written notice of such intent to the other party at least thirty (30) days before the expiration of said term.

6. Force Majeure. Neither Party will be liable for any delay or failure in performing under this Agreement in the event and to the extent that the delay or failure arises out of causes beyond a Party's reasonable control, including, without limitation, war, civil commotion, act of God, strike or other stoppage (whether partial or total) of labor, or any law, decree, regulation, or order of any government or governmental body (including any court or tribunal).

7. Authority to Execute Agreement. Each Party represents that the undersigned have the full right and authority to enter into this Agreement and bind the Parties to the terms and conditions contained herein. This Agreement may be amended only by an instrument executed by both Parties hereto.

8. Successors and Assigns. The terms and conditions of this Agreement shall bind and extend to the City and the Company, and the Company's successors and assigns.

9. No Third Party Beneficiaries. Except for the rights of enforcement by the Commission with respect to the BMPs, this Agreement is not intended to, and does not create, any right, benefit, responsibility or obligation that may be enforced by any non-party. Additionally, nothing in the Agreement shall entitle any third party to any claims, rights or remedies of any kind.

10. Notices. All notices and other correspondence related to this Agreement shall be in writing and shall be delivered by: (i) certified mail with return receipt, (ii) hand delivery with signature or delivery receipt provided by a third party courier service (such as FedEx, UPS, etc.), (iii) fax transmission if verification of receipt is obtained, or (iv) email with return receipt, to the designated representative of the Party as indicated below. A Party may change its designated representative for notice purposes at any time by written notice to the other Party. The initial representatives of the Parties are as follows:

11.

City: City of Fort Collins
300 LaPorte Avenue
P.O. Box 580
Fort Collins, CO 80522
Attn: City Manager
Telephone: 970-416-2253
Fax: 970-224-6107
Email: datteberry@fcgov.com

Company: Prospect Energy, LLC
1600 Stout Street, Suite 1710
Denver, CO 80202
Attn: Scott D. Hall, Manager
Telephone: 303-973-3228, ext. 223
Fax: 303-346-4893
Email: sdhall@bdminerals.com

12. Default; Remedies. If either party believes that the other Party has failed to comply with any provision of this Agreement, or if any other kind of dispute arises under any provision of this Agreement that cannot be resolved by good faith negotiation between the Parties, the Party claiming that a breach of this Agreement has occurred or seeking resolution of any other dispute under this Agreement shall send written notice to the other Party, specifying its position in the matter and invoking the dispute resolution process in this section. Within fifteen (15) days of the date of delivery of such notice, the Parties shall meet to resolve the matter described in the notice. If either Party believes that mediation would be advantageous in connection with such meeting, or if a resolution of the matter cannot be achieved at the meeting, both parties agree to make a reasonable effort to work through and with a mutually acceptable mediator to attempt to resolve the dispute. Notwithstanding the foregoing, if either Party believes that the dispute will not otherwise be resolved in a sufficiently prompt and effective manner, such Party may, at its discretion, take such legal action and seek such legal or equitable remedies as it determines to be appropriate or necessary to protect and enforce its rights under this Agreement. Such remedies may include, without limitation, an injunction to stop an alleged violation or an order requiring the performance of all acts and things required to be performed hereunder by the other Party.

13. Integration Clause: This Agreement, along with all exhibits and appendices attached hereto encompasses the entire agreement of the Parties and supersedes all previous understandings and agreements between the Parties, whether oral or written.

14. Governing Law. This Agreement shall be governed and construed in accordance with the laws of the State of Colorado without reference to its conflicts of laws provisions.

IN WITNESS WHEREOF, the Parties have caused this Agreement to be executed by a duly authorized representative on the day and year first written above.

THE CITY:

CITY OF FORT COLLINS, COLORADO
A MUNICIPAL CORPORATION

By: _____
Darin Atteberry, City Manager

ATTEST:

City Clerk

APPROVED AS TO FORM:

Deputy City Attorney

THE COMPANY:

PROSPECT ENERGY, LLC

By (signature):

Scott Hall, CEO

List of Exhibits

Exhibit A - Map of the Fort Collins Field and City boundaries

Exhibit B - Map of the Undeveloped Acreage (UDA) and City Boundaries

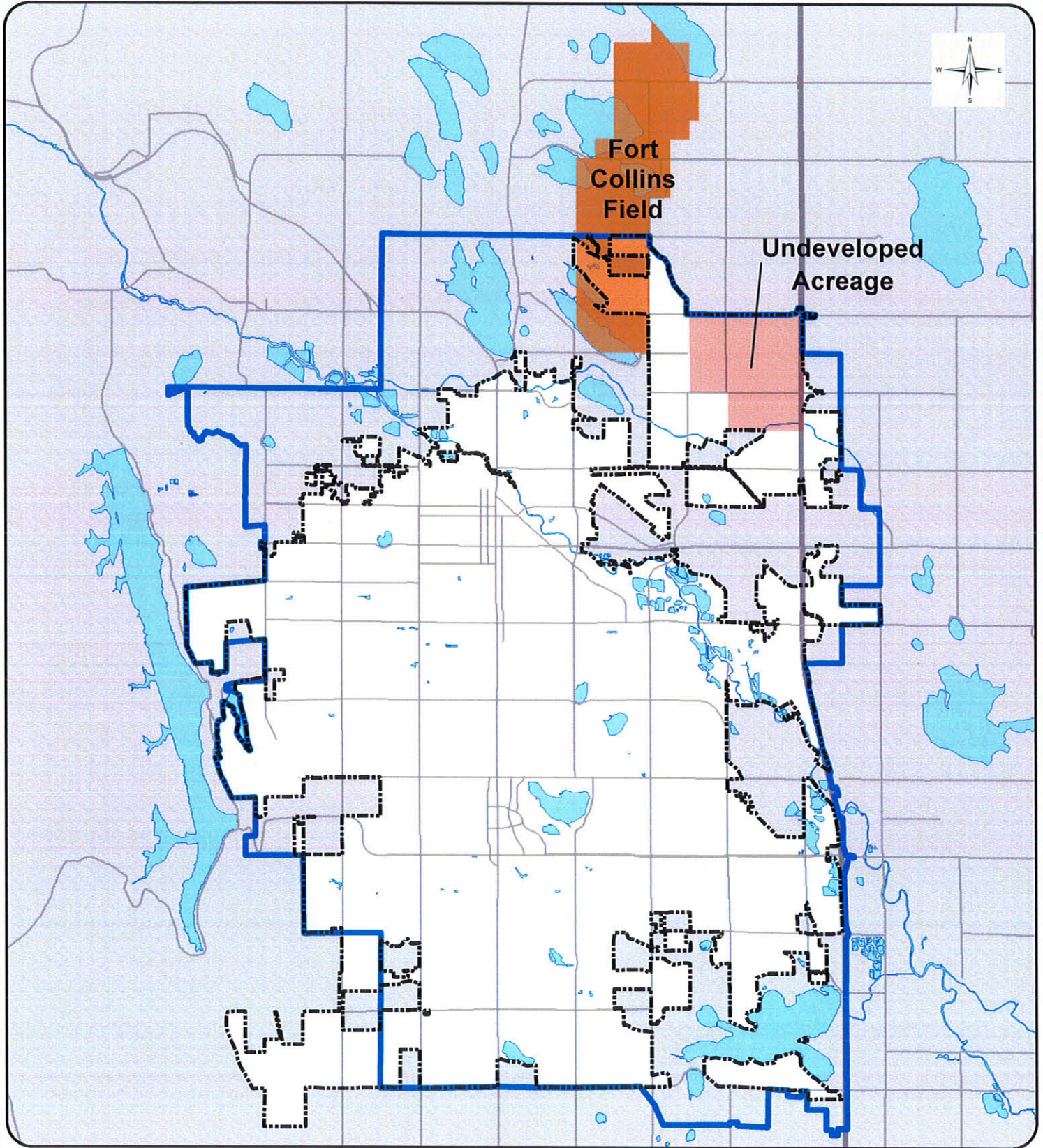
Appendix A – List of BMP's

Appendix B – Submittal Requirements

City of Fort Collins

Prospect Energy Oil/Gas Fields

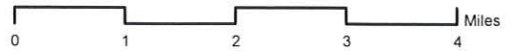
EXHIBIT A



**CITY OF FORT COLLINS
GEOGRAPHIC INFORMATION SYSTEM MAP PRODUCTS**

These map products and all underlying data are developed for use by the City of Fort Collins for its internal purposes only, and were not designed or intended for general use by members of the public. The City makes no representation or warranty as to its accuracy, timeliness, or completeness, and in particular, its accuracy in labeling or displaying dimensions, contours, property boundaries, or placement of location of any map features hereon. THE CITY OF FORT COLLINS MAKES NO WARRANTY OF MERCHANTABILITY OR WARRANTY FOR FITNESS OF USE FOR PARTICULAR PURPOSE, EXPRESSED OR IMPLIED, WITH RESPECT TO THESE MAP PRODUCTS OR THE UNDERLYING DATA. Any users of these map products, map applications, or data, accepts them AS IS, WITH ALL FAULTS, and assumes all responsibility of the use thereof, and further covenants and agrees to hold the City harmless from and against all damage, loss, or liability arising from any use of this map product, in consideration of the City's having made this information available. Independent verification of all data contained herein should be obtained by any users of these products, or underlying data. The City disclaims, and shall not be held liable for any and all damage, loss, or liability, whether direct, indirect, or consequential, which arises or may arise from these map products or the use thereof by any person or entity.

-  Fort Collins Field
-  Undeveloped Acreage
-  City of Fort Collins
-  Growth Management Area

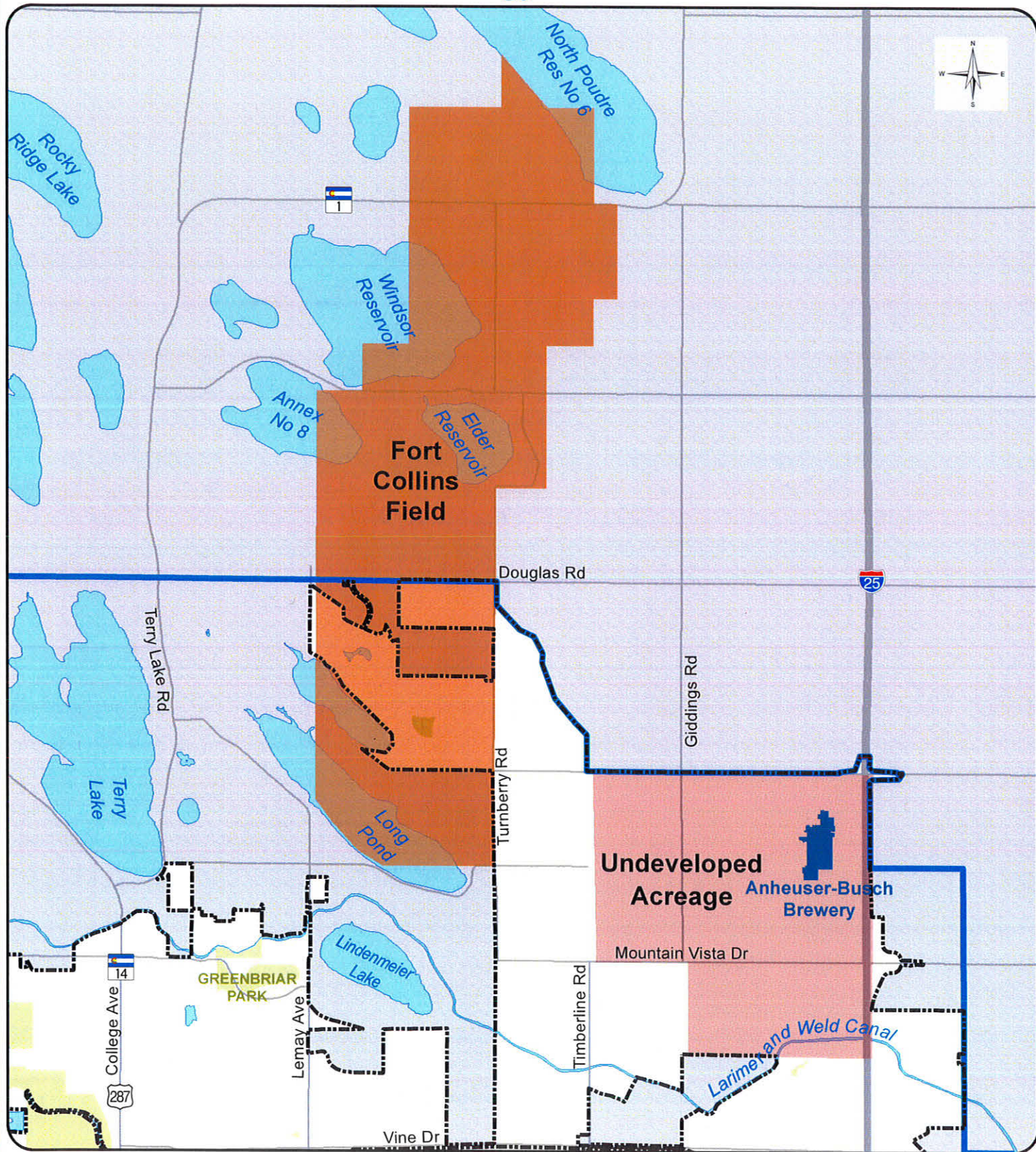


Printed: March 12, 2013

City of Fort Collins

Prospect Energy Oil/Gas Fields

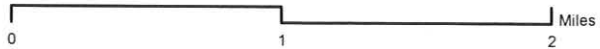
EXHIBIT B



**CITY OF FORT COLLINS
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- Fort Collins Field
- Undeveloped Acreage
- City Limits
- Growth Management Area



Printed: March 12, 2013

APPENDIX A

BEST MANAGEMENT PRACTICES FOR LOCATIONS WITHIN THE CITY LIMITS OF FORT COLLINS

Pursuant to the terms of this Agreement, the Company shall include the best management practices listed below on all Applications for Permit-to-Drill, Form 2, and Oil and Gas Location Assessments, Form 2A, (for New Well Pads only), submitted to the Commission for New Wells the Company drills after the Effective Date within the city limits of Fort Collins.

1. *Regulations.* The Company shall comply with all applicable state, and federal regulations in addition to the terms of this agreement and the Best Management Practices included below. Whichever regulation is most stringent shall apply.
2. *Setbacks for New Wells.* It is the intent of the Company to maximize equipment and wellhead setbacks from occupied buildings and residences beyond the setbacks required by the COGCC to the extent feasible and practicable.

The Parties recognize that a portion of the Field is within the Fort Collins City Limits and as such, development has occurred within the already established Field. The surface owner has obtained permitted plats for residential areas in the vicinity of existing oil and gas activities, including a constructed city park and contemplated building units and public roads within three hundred fifty (350) feet of an existing well. Further, the Parties acknowledge that the Commission rules require a minimum of five hundred (500) feet safety setback for New Well construction from a building unit and one thousand feet (1,000) from a high occupancy building.

Any New Wells drilled shall conform to the Commission setback rules then in effect. In the Fort Collins Field, New Wells shall be constructed on existing Well Pads, which due to previous setback requirements, and City approval of residential development, do not conform to five hundred (500) feet setbacks, and are given an exemption from the Commission in the Rules now in effect.

The Parties recognize the existence of a Surface Use Agreement (the "SUA") between the Company and the surface owner which expressly governs the locations of wells and associated facilities within the Water's Edge, Richard's Lake and Hearthfire subdivisions (the "Subdivisions"), and that certain terms found in the SUA may affect Commission setbacks and other Commission rules.

3. *Conceptual Review.* No less than thirty (30) days prior to the submission of an Application for a Permit to Drill, the Company agrees to schedule a meeting with the City

to review the proposed new well or drilling activity. The goal of this meeting shall be for staff and the applicant to review the proposed oil and gas operation in a manner that ensures compliance with the operator agreement and applicable state and federal regulations. This pre-submittal meeting shall also allow the applicant and staff to explore site-specific concerns, to discuss project impacts and potential mitigation methods including field design and infrastructure construction to minimize impacts, to discuss coordination of field design with other existing or potential development and operators, to identify sampling and monitoring plans for air and water quality, and other elements of the operator agreement as contained in Appendices A and B. Based upon the foregoing, applicants are encouraged to conduct the pre-submittal meeting with the City prior to completing well siting decisions, to the extent reasonably feasible.

4. *Mailed Notice.* The City shall mail notice of the pending Application for a Permit to Drill no more than ten (10) days after the conceptual review meeting has taken place. The Company shall reimburse the City for the costs of the mailing. Owners of record shall be ascertained according to the records of the Larimer County Assessor's Office, unless more current information is made available in writing to the City prior to the mailing of the notices. Notice of the pending application shall include reference to the neighborhood meeting, if applicable, and be made as follows:
 - To the surface owners of the parcels of land on which the oil and gas operation is proposed to be located;
 - To the surface owners of the parcels of land within five hundred (500) feet of a proposed gathering line;
 - 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
 - To persons registered in writing with the City as representing bona fide neighborhood groups and organizations and homeowners' associations within the area of notification.
5. *Posted Notice.* The real property proposed to be developed shall also be posted with a sign, giving notice to the general public of the proposed development. For parcels of land exceeding ten (10) acres in size, two (2) signs shall be posted. The size of the sign(s) required to be posted shall be as established in the Supplemental Notice Requirements of Section 2.2.6(D) of the City's Land Use Code. Such signs shall be provided by the City and shall be posted on the subject property in a manner and at a location or locations reasonably calculated by the City to afford the best notice to the public, which posting shall occur within ten (10) days following the Conceptual Review meeting.
6. *Neighborhood Meetings.* A neighborhood meeting shall be required on any New Well, even on existing Well Pads, that requires an Application for a Permit to Drill. Notice of

the neighborhood meeting shall be provided in accordance with Sections 4 and 5 above. The Company shall attend the neighborhood meeting. The City shall be responsible for scheduling and coordinating the neighborhood meeting and shall hold the meeting in the vicinity of the proposed development. A written summary of the neighborhood meeting shall be prepared by the City. The written summary shall be included in the Local Government Designee (LGD) comments provided to the COGCC at the time of the public hearing or permit review to consider the Application for a Permit to Drill.

7. *Notification to the City and the public regarding commencement of operations.* Prior to the commencement of any new drilling operations, the Company shall provide to the City Manager for posting on the website the information outlined in Appendix B regarding commencement of operations, which the Company may revise from time-to-time during operations, with prior approval from the City.
8. *Inspections.* The City shall have the right to inspect the Company's operations and its sites during business hours, upon the giving of twenty-four (24) hour advance written notice to the Company.
9. *Containment berms.* The Company shall utilize steel-rim berms around tanks and separators at new Well Pads. All berms and containment devices shall be inspected at regular intervals and maintained in good condition. No potential ignition sources shall be installed inside the secondary containment area unless the containment area encloses a fired vessel. Refer to American Petroleum Institute Recommended Practices, API RP - D16.
 - a) Containment berms shall be constructed of steel rings, designed and installed to prevent leakage and resist degradation from erosion or routine operation.
 - b) Secondary containment for tanks shall be constructed with a synthetic or engineered liner that contains all primary containment vessels and flowlines and is mechanically connected to the steel ring to prevent leakage.
 - c) For locations within five hundred (500) feet and upgradient of a surface water body, tertiary containment, such as an earthen berm, is required around production facilities.
10. *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.
11. *Anchoring.* All equipment at drilling and production sites shall be anchored to the extent necessary to resist flotation, collapse, lateral movement, or subsidence. All guy line

anchors left buried for future use shall be identified by a marker of bright color not less than four (4) feet in height and not greater than one (1) foot east of the guy line anchor.

12. *Burning.* No open burning shall occur on the site of any oil and gas operation.
13. *Chains.* Traction chains from heavy equipment shall be removed before entering a City street.
14. *Chemical disclosure and storage.* The City shall be provided, in table format, the name, Chemical Abstracts Service (CAS) number, volume, storage, containment and disposal method for all drilling and completion chemicals (solids, fluids, and gases) used on the Well Pad. Fracture chemicals shall be uploaded onto the Frac Focus website. The Company shall not permanently store hydraulic fracturing chemicals, flowback from hydraulic fracturing, or produced water in the City limits.
15. *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.
16. *Cultural and Historical Resource Protection.* If a significant surface or sub-surface archaeological site is discovered during construction, the Company shall be responsible for immediately contacting the City to report the discovery. If any disturbance of the resource occurs, the Company shall be responsible for mitigating the disturbance to the cultural or historical property through a data recovery plan approved by the City.
17. *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.
18. *Dust suppression.* Dust associated with on-site activities and traffic on access roads shall be minimized throughout construction, drilling and operational activities such that there are no visible dust emissions from access roads or the site to the extent practical given wind conditions. No produced water or other process fluids shall be used for dust suppression. The Company will avoid dust suppression activities within three hundred (300) feet of the ordinary high water mark of any waterbody, unless the dust suppressant is water. Material Safety Data Sheets (MSDS) for any chemical based dust suppressant shall be submitted to the City for approval prior to use.
19. *Electric equipment.* Electric-powered engines for motors, compressors, and drilling equipment and for pumping systems shall be used in order to mitigate noise and to reduce emissions when feasible.

20. *Emergency preparedness plan.* The Company is required to develop an emergency preparedness plan for each specific facility site, which shall be in compliance with the International Fire Code. The plan shall be filed with the Poudre Fire Authority and the City of Fort Collins Office of Emergency Management 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:

- a) Name, address and phone number, including twenty-four (24)-hour emergency numbers for at least two persons responsible for emergency field operations.
- b) 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 the Battalion Chief, and shall only be disclosed in the event of an emergency or to emergency responders. The City shall deny the right of inspection of the as-built facilities maps to the public or for the training of emergency responders pursuant to C.R.S. § 24-72-204.
- c) Detailed information addressing each reasonable 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. A provision that any spill outside of the containment area, that has the potential to leave the facility or to threaten waters of the state, or as required by the City-approved Emergency Preparedness Plan shall be reported to the local emergency dispatch and the COGCC Director in accordance with COGCC regulations.
- d) Detailed information identifying access or evacuation routes, and health care facilities anticipated to be used.
- e) A project specific emergency preparedness plan for any project that involves drilling or penetrating through known zones of hydrogen sulfide gas.
- f) Detailed information showing that the Company has adequate personnel, supplies, and training to implement the emergency response plan immediately at all times during construction and operations.

- g) The Company shall have 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 City officials, a public safety officer, or a health professional.
 - h) The plan shall include a provision establishing a process by which the Company engages with the surrounding neighbors to educate them on the risks of the on-site operations and to establish a process for surrounding neighbors to communicate with the Company.
 - i) All training associated with the Emergency Preparedness plan shall be coordinated with the City's Office of Emergency Management and Poudre Fire Authority.
 - j) A provision obligating the Company to reimburse the appropriate emergency response service providers for costs incurred in connection with any emergency in accordance with Colorado State Statutes.
21. *Air quality.* The Company must comply with emissions regulations governed by the Colorado Department of Public Health and Environment (CDPHE), Air Pollution Control Division (APCD). 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., COGCC Rule 805, and all state and federal regulations for the control of fugitive dust, and control of ozone, ozone precursors, methane, and hazardous air pollutants by the Larimer County Public Health Department, and the CDPHE-APCD. The Company must comply with 40 CFR Subpart OOOO as published on August 16, 2012 (Quad O).
- a) General Duty to Minimize Emissions. The Company shall incorporate in the development plan; operations, procedures, and field design features to the maximum extent feasible that minimize air pollutant emissions including but not limited to:
 - 1) Consolidation of product treatment and storage facilities
 - 2) Centralization of compression facilities
 - 3) Liquids gathering and water delivery systems
 - 4) Telemetric control and monitoring systems
 - 5) Pipeline infrastructure prior to well completion.
 - b) In the UDA, the Company shall utilize a high-low pressure vessel (HLP) and vapor recovery unit (VRU) for New Wells that are placed on production. The Company may remove the VRU at such time it determines that the VRU system is

no longer necessary due to reduced emission recoveries and/or efficiencies, but no earlier than one (1) year after the New Well is placed on production. The Company may opt to capture gas and send through a thermal oxidizer in lieu of a HLP and VRU.

- c) Plunger lifts are not typically used in the Fort Collins Field due to insufficient gas. However if there is future use of plunger lifts, emissions shall be controlled from the motor control valve using low bleed pneumatic controllers.
- d) There will be no uncontrolled venting of methane. All gas vapors shall be captured to the extent practicable. Vapor capture equipment shall operate at ninety-eight percent (98%) efficiency or better. There are no gas sales lines in the Fort Collins field because the quantity and quality of gas is low and not marketable. If salable gas were to occur in the UDA, a sales line shall be constructed.
- e) Flaring during drilling and completions:
During well completion, the capture and beneficial use of natural gas is preferred over flaring. Minimal flaring may occur in the Fort Collins field, because there is minimal gas in the field. Flaring shall be continuously monitored on-site by the Company, under twenty-four (24) hour watch and is regulated by COGCC Rules 317, 805B(3)B, and 912. No venting of gas may occur, except under COGCC Green Completion Practices (Rule 805 B(3)B), or in very limit cases under Rule 912 with the COGCC Director approval.
- f) Flaring during production operations:
 - 1) The flare shall be fired with natural gas and shall be operated with a ninety eight (98) percent or higher VOC destruction efficiency.
 - 2) The flare shall be designed and operated in a manner that shall 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. Where applicable, flares shall also be in compliance with 5 CCR 1001-9 Regulation 7 Section XVIIB for non-condensate oil.
 - 3) 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).

- 4) An automatic pilot system shall be used when feasible. Other ignition systems may include the installation and operation of a telemetry alarm system or an on-site visible indicator showing proper function.
- g) Leak Detection and Repair (LDAR) – The Company shall develop and maintain a leak detection and component repair program according to EPA Method 21 for equipment used in permanent operations. LDAR shall be performed on newly installed equipment, and then on an annual basis. A Forward-Looking Infrared (FLIR) camera shall be used as the preferred implementation method of EPA Method 21 as available from the state; if unavailable, other methods shall be used in compliance with this method. Upon request from the City, the Company shall implement EPA Method 21 upon additional concerns. At least once per year, the Company shall notify the City prior to FLIR camera use in case the City wishes to observe the method.
- h) One Time Baseline Air Quality Monitoring - the Company and the City shall split the cost for a one time Baseline Sampling and Analytical. The work shall be done by a third party consultant agreeable to both parties over a five day sampling period with each location sampled per day. The sampling locations shall be as follows:
 - 1) Upwind of Tank Battery
 - 2) Downwind of Tank Battery
 - 3) City Park
 - 4) One location downtown, such as New Belgium Brewery or Wild Boar Coffee
- i) One Time Air Sampling During Well Completion – The Company shall conduct air sampling during well completion. The work shall be done by a third party consultant agreeable to both parties. This shall be done over a five day sampling period with each location sampled per day. The sampling shall be for one well completion in the City (City’s choice of which well completion). The sampling locations shall be as follows:
 - 1) Upwind of well
 - 2) Downwind of well
- j) Ongoing Air Quality Monitoring - Periodic air monitoring shall be performed for hydrogen sulfide (H₂S), a hazardous air pollutant (HAP). The Company shall perform field monitoring using the Jerome 631 XC or equivalent instrument

annually, or until such time that odors are not detected past the Fort Collins Tank Battery fence line in City Limits.

- k) The City may require the Company to conduct additional air monitoring as needed to respond to emergency events such as spill, process upsets, or accidental releases or in response to odor complaints in City Limits.
 - 1) In response to emergency events that involve the potential release of hazardous air pollutants, the Company may be required to conduct air sampling in accordance with Subsection i. above.
 - 2) In response to odor complaints, the Company may be required to conduct air sampling in accordance with subsection j above or use a photo-ionization detector (PID) to measure detected levels of VOCs that exceed acute health-based exposure thresholds, or other air sampling methodology depending on the nature of the complaint.
- l) Air Quality Action Days. The Company shall respond to air quality Action Day advisories posted by the Colorado Department of Public Health and Environment for the Front Range Area by implementing air emission reduction measures committed to in the Air Quality Mitigation Plan. Emission reduction measures shall be implemented for the duration of an air quality Action Day advisory and may include measures such as:
 - 1) Minimize vehicle and engine idling
 - 2) Reduce truck traffic and worker traffic
 - 3) Delay vehicle refueling
 - 4) Suspend or delay use of fossil fuel powered ancillary equipment
 - 5) Postpone construction activities

22. *Green completions.*

- a) Gas gathering lines, separators, and sand traps capable of supporting green completions as described in COGCC Rule 805 shall be installed at any location at which commercial quantities of gas are reasonably expected to be produced based on existing adjacent wells within one (1) mile or well in the Fort Collins Field, whichever is greater.
- b) Uncontrolled venting is prohibited.
- c) Temporary flowback flaring and oxidizing equipment shall include the following:

- 1) Adequately sized equipment to handle 1.5 times the largest flowback volume of gas experienced in a one (1) mile radius (or well in the Fort Collins Field), whichever is greater;
 - 2) Valves and porting available to divert gas to flaring and oxidizing equipment; and
 - 3) Auxiliary fueled with sufficient supply and heat to combust or oxidize non-combustible gases in order to control odors and hazardous gases. The flowback combustion device shall be equipped with a reliable continuous ignition source over the duration of flowback, except in conditions that may result in a fire hazard or explosion.
 - 4) The Company has a general duty to safely maximize resource recovery and minimize releases to the atmosphere during flowback and subsequent recovery/operation.
23. *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.
24. *Fencing.* Permanent perimeter fencing shall be installed around production equipment, and shall be secured. The main purpose of the fencing is to deter entrance by unauthorized people. The Company shall use visually interesting fencing, when feasible, but the parties recognize that there is a need for air circulation, and for the field personnel who regularly inspect the facilities to be able to identify visual operational deficiencies when driving by. Landscaping may be used for screening. If a chain link fence is required to achieve safety requirements set by the COGCC, then landscaping and other screening mechanisms shall be required that comply with the City's Land Use Code regulations and the Company's safety requirements.
25. *Flammable material.* All land within twenty five (25) feet of any tank, or other structure containing flammable or combustible materials shall be kept free of dry weeds, grass or rubbish, and shall conform to Section 315 of the International Fire Code.
26. *Floodplains.* All oil and gas operations shall comply with Chapter 10 of the City Code.
27. *Water Quality Monitoring Plan.* The Company shall comply with COGCC Rule 609. In summary, this requires pre- and post-drilling testing. The rules require oil and gas operators to sample all "Available Water Sources" (owner has given consent for sampling and testing and has consented to having the sample data obtained made available to the public), with a cap of four (4) water sources, within one-half (1/2) mile radius of a proposed well, multi-well site, or dedicated injection well. Water sources include registered water wells, permitted or adjudicated springs, and certain monitoring wells.

The Company agrees to the following requirements above and beyond the COGCC requirements: analyzing for dissolved metals as indicated in the Land Use Code and sampling intervals to be baseline (before drilling), post-drilling at one, three, and six years. Analytical results shall be shared with the COGCC, the City, and the landowner. All spills, for new and existing wells, shall be managed in accordance with COGCC regulations.

28. *Landscaping.* In the Fort Collins Field, existing Well Pads shall be used for any New Wells and all landscaping shall be in compliance with the City of Fort Collins Land Use Code standards and in compliance with the safety requirements of the Company. Existing vegetation shall be minimally impacted. In the UDA, motorized equipment shall be restricted to the Well Pad and access roads to the Well Pads. A Visual Mitigation Plan, along with fencing and landscaping shall be developed for new construction.
29. *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.
30. *Maintenance of machinery.* Routine field maintenance of vehicles or mobile machinery shall not be performed within three hundred (300) feet of any water body.
31. *Mud Tracking.* The Company shall take all practicable measures to ensure that vehicles do not track mud or debris onto City streets. If mud or debris is nonetheless deposited on City streets, the streets shall be cleaned immediately by the Company using pressured water from a water truck. This shall be done as part of maintenance. If for some reason it cannot be done, or needs to be postponed, the LGD shall be notified of the Company's plan for mud removal.
32. *Natural Resources – An Ecological Characterization Study* shall be provided if any New Well is within 500 feet of a Natural Habitat or Feature, and if impacting these resources, mitigation plans to ensure no net resource loss per Fort Collins Land Use Code 3.4.1.
33. *Noise mitigation.* Noise mitigation measures shall be constructed along any edge of any oil and gas operation site if such edge is between the oil and gas operation and existing residential development or land which is zoned for future residential development. The noise mitigation measures shall, to the maximum extent feasible, decrease noise from the oil and gas operations to comply with the sound limitation regulations set forth in Commission Rule 802. A noise mitigation study shall be submitted with the application to demonstrate that noise will be decreased to the maximum extent feasible.

34. *Pipelines.* Any newly constructed or substantially modified pipelines on site shall meet the following requirements:
- (a) To the maximum extent feasible, all 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.
 - (b) To the maximum extent feasible, pipelines shall be aligned with established roads in order to minimize surface impacts and reduce habitat fragmentation and disturbance.
 - (c) 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.
 - (d) To the maximum extent feasible, 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.
35. *Recordation of flowlines.* All new flowlines, including transmission and gathering systems, shall have the legal description of the location recorded with the City Clerk and the Larimer County Clerk and Recorder within thirty (30) days of completion of construction. Abandonment of any recorded flowlines shall be recorded with the Larimer County Clerk and Recorder's office within thirty (30) days after abandonment.
36. *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, or by using existing Well Pads.
37. *Removal of debris.* When an oil and gas operation becomes operational, all construction-related debris shall be removed from the site for proper disposal. The site shall be maintained free of debris and excess materials at all times during operation. Materials shall not be buried or burned on-site.
38. *Removal of equipment.* All equipment used for drilling, re-completion 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.

39. *Soil Gas Monitoring* – The City, at its discretion, may conduct soil gas monitoring to assess well casing integrity. This shall be typically completed within ninety (90) days of New Well completion. The City shall notify the Company prior to entering the site for soil gas monitoring.
40. *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, the Clean Water Act, the Resource Conservation and Recovery Act and the Spill Control Prevention and Countermeasure plan, as applicable. If a spill or release impacts or threatens to impact surface water or a water well, the Company shall notify the affected or potentially affected owner immediately following discovery of the release, and the spill or release shall be reported to the City and to the surface water or water well owner within twenty-four (24) hours of becoming aware of the spill or release.
41. *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.
42. *Temporary access roads*. Temporary access roads associated with oil and gas operations shall be reclaimed and re-vegetated to the original state.
43. *Trailers*. A construction trailer or office is permitted as an accessory use during active drilling and well completion only.
44. *Transportation and circulation*. All applicants for drilling and completion operations (New Wells) 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, trips per day and any other information required by the Traffic Engineer. Preliminary information is required for this item for the Conceptual Review meeting, in accordance with Appendix B. The Company shall comply with all Transportation and Circulation requirements as contained in the Land Use Code as may be reasonably required by the City's Traffic Engineer.
45. *Wastewater and Waste Management*. In the Fort Collins Field, all fluids shall be contained and there shall be no discharge of fluids, as described in the Closed Loop

System and Green Completions section of this Appendix. Waste shall be stored in tanks, transported by tanker trucks, and disposed of at licensed disposal fields. In the UDA, new secondary containment shall be constructed of steel, with sufficient perimeter and height to hold one and one-half (1.5) times the volume of the largest tank and sufficient freeboard to prevent overflow. No potential ignition sources shall be installed inside the secondary containment area unless the containment enclosed a fired vessel. The requirements for secondary containment will meet the Fort Collins Stormwater Criteria Manual. No land treatment of oil impacted or contaminated drill cuttings are permitted. The use of a closed loop drilling system precludes discharge of produced water or flowback to the ground or the use of pits. Produced water or flowback will not be used for dust suppression. A copy of the field's Spill Prevention, Control, and Countermeasure Plan (SPCC) will be given to the City, which describes spill prevention and mitigation practices. The Company will provide the City documentation of waste disposal and its final disposition.

46. *Water supply.* The Company 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, if requested by the City Manager. The disposal of water used on site shall also be detailed including anticipated haul routes, approximate number of vehicles needed to supply and dispose of water and the final destination for water used in operation.
47. *Weed control.* The Company 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.

APPENDIX B

SUBMITTAL REQUIREMENTS FOR THE COMPANY FOR NEW WELL LOCATIONS WITHIN THE CITY LIMITS OF FORT COLLINS

1. *Conceptual Review Submittal Requirements.* The following documents shall be submitted prior to the Conceptual Review meeting outlined in Appendix A:
 - a) A preliminary summary of planned operations, including identified access points and operational timeline for posting to a local community information web-page;
 - b) A preliminary site plan for site preparation, mobilization and demobilization;
 - c) A preliminary plan for interim reclamation and revegetation of the well pad and final reclamation of the well pad;
 - d) A preliminary plan for noise, light and dust mitigation;
 - e) A preliminary traffic management plan;
 - f) A preliminary Visual Mitigation Plan, including but not limited to, a list of the proposed colors for the operations' equipment, proposed fencing and screening in accordance with Appendix A.
 - g) A preliminary list of permits that shall be submitted in conjunction with the APD and any exceptions proposed to be requested.
 - h) A draft air quality mitigation plan in accordance with Appendix A.
 - i) A draft emergency response preparedness plan in accordance with Appendix A.
 - j) Preliminary list of chemicals proposed to be disclosed through the "Frac Focus" uploading mechanism and regulated through the COGCC Rule 205.
 - k) Proposed sampling locations in accordance with the water quality monitoring plan outlined in Appendix A.

2. *Submittal Requirements Prior to Commencement.* The following documents shall be submitted by the Company prior to the commencement of drilling and completion:
 - a) A response letter that outlines how staff comments from the Conceptual Review were addressed during the APD permitting process.

- b) A summary of planned operations, including identified access points and operational timeline for posting to a local community information web-page;
 - c) A site plan for site preparation, mobilization and demobilization;
 - d) A plan for interim reclamation and revegetation of the well pad and final reclamation of the well pad;
 - e) A plan for noise, light and dust mitigation, to the extent reasonably feasible;
 - f) A traffic management plan, if applicable, and a reasonable bond to cover any damage to public infrastructure during active drilling and completion;
 - g) A Visual Mitigation Plan, including but not limited to, a list of the proposed colors for the operations' equipment, proposed fencing and screening in accordance with Appendix A.
 - h) Copies of all permits requested, including any exceptions.
 - i) A final air quality mitigation plan in accordance with Appendix A.
 - j) A final emergency response preparedness plan in accordance with Appendix A.
 - k) Updated preliminary Chemical disclosure using the "Frac Focus" uploading mechanism, and Chemical Inventory per COGCC Rule 205.
 - l) Baseline water quality data collected in accordance with the Water Quality Monitoring Plan.
3. *Submittal Requirements Post Well-Completion.* The following documents shall be submitted by the Company after well-completion:
- a) Chemical disclosure using the "Frac Focus" uploading mechanism, and Chemical Inventory per COGCC Rule 205.
 - b) Water quality data collected at 1, 3, and 6 year post-completion intervals, as described in Appendix A.

- c) Air quality and other data collected throughout the post-completion phase, as identified in Appendix A.

ORDINANCE NO. 057, 2013
OF THE COUNCIL OF THE CITY OF FORT COLLINS
TERMINATING THE MORATORIUM IMPOSED BY ORDINANCE NO. 145, 2012
WITH RESPECT TO OIL AND GAS OPERATIONS CONDUCTED
UNDER AN OIL AND GAS OPERATOR AGREEMENT BETWEEN THE CITY
AND PROSPECT ENERGY, LLC **AND EXEMPTING SUCH OPERATIONS FROM
THE PROHIBITIONS CONTAINED IN SECTION 12-135 OF THE CITY CODE**

WHEREAS, by Ordinance No. 145, 2012, the City Council established a moratorium on the acceptance or processing of land use applications, permit applications and other applications seeking approval to conduct oil and gas extraction or related operations within the City (the Moratorium”); and

WHEREAS, Section 12-135 of the City Code prohibits hydraulic fracturing and open pit storage in the City; and

WHEREAS, by Resolution 2013-024 of the Council of the City of Fort Collins, the City Council has approved an Oil and Gas Operator Agreement between the City and Prospect Energy, LLC dated March 19, 2013; and

WHEREAS, the City Council has determined that the oil and gas operations of Prospect Energy, LLC should be exempted from the Moratorium **and the prohibitions contained in Section 12-135 of the City Code** as long as such operations are conducted in conformance with the terms and conditions of said agreement.

NOW, THEREFORE, BE IT ORDAINED BY THE COUNCIL OF THE CITY OF FORT COLLINS ~~that~~ **as follows:**

Section 1. The moratorium imposed by Ordinance No. 145, 2012 is hereby terminated with respect to all oil and gas operations conducted in conformance with the terms and conditions of that certain Oil and Gas Operator Agreement between the City and Prospect Energy, LLC dated March 19, 2013.

Section 2. The prohibitions contained in Section 12-135 of the City Code shall not apply to oil and gas operations conducted by Prospect Energy, LLC as long as Prospect Energy, LLC conducts its operations in conformance with the terms and conditions of that certain Oil and Gas Operator Agreement between the City and Prospect Energy, LLC, dated March 19, 2013, and provided further that in the event that a conflict exists between the provisions contained in Section 12-135 of the City Code and this ordinance, this ordinance shall control.

Introduced, considered favorably on first reading, and ordered published this 19th day of March, A.D. 2013, and to be presented for final passage on the 16th day of April, A.D. 2013.

Mayor

ATTEST:

City Clerk

Passed and adopted on final reading on the 16th day of April, A.D. 2013.

Mayor

ATTEST:

City Clerk