



AGENDA ITEM SUMMARY

City Council

STAFF

Kirk Longstein, Senior Environmental Planner
Brad Yatabe, Legal

SUBJECT

First Reading of Ordinance No. 116, 2023, Amending the Land Use Code Regarding Buffering Between Buildings with Occupiable Space and Oil and Gas Facilities.

EXECUTIVE SUMMARY

Based on Council direction during the October 25, 2022, Work Session discussion and the April 2023 adoption of Ordinance No. 151, 2022 for new oil and gas well sittings, staff seek to update the reverse setback development standards (LUC 3.8.26) to reflect recent changes in the **Colorado Energy and Carbon Management Commission (ECMC)** regulations, recently adopted Ordinance No. 151, 2022 – AMENDING THE LAND USE CODE TO REGULATE OIL AND GAS FACILITIES AND PIPELINES, and lessons learned over the past 4 years, including:

- Apply reverse setback buffers to all occupiable buildings, not just residential uses; and
- Explicitly state required setback buffers, rather than refer generally to ECMC rules; and
- Create a more predictable pathway for abandoned/inactive well types; and
- Eliminate the buffer exemption for crossings of arterial roadways.

STAFF RECOMMENDATION

Staff recommends adoption of the Ordinance on First Reading.

BACKGROUND / DISCUSSION

In the Fort Collins field, the vast majority of the oil is produced from an underground formation called the Muddy formation. These wells require high pressure water injection lines which pressurize the formation and bring a mixture of water (~97%), oil (~3%) and gas (minimal) to the surface for separation and distribution.

The Fort Collins Land Use Code (LUC 3.8.26) currently requires a five hundred (500) foot minimum buffer between a residential dwelling and any oil and gas location, or the Colorado Oil and Gas Conservation Commission designated setback distance, whichever is greater. For wells that are fully reclaimed to the ECMC standards, the Code allows an alternative compliance pathway to reduce the buffer to 150 feet. Alternative compliance requires the applicant to submit an alternative compliance buffering plan which includes five years of soil gas and ground water monitoring.

Existing Oil and Gas Facility Buffers:

Number of Wells	ECMC Well Status	Short Description	Current Buffering Standards	Proposed Code UPDATES Buffering Standard	
4	Producing	Wells where produced oil and/or gas is collected from underground reservoirs.	500-feet	Well Not Abandoned	2,000-feet
6	Injection	Wells used for the exclusive purpose of injecting fluids for enhanced oil recovery (EOR).	500-feet	Well Not Abandoned	2,000-feet
6	Drilled (Dry) and Abandoned	A well that is dry and abandoned, and never produced.	500-feet	Abandoned Well, Not Reclaimed	500-feet
14	Plugged and Abandoned	A well that has been plugged by means of cementing of a well, with removal of associated production facilities, abandonment of its flowline(s), and the remediation and reclamation of the wellsite.	150 – feet (alternative compliance)	Abandoned Well, Reclaimed	150-feet

The current buffer requirements were specifically intended to align with the ECMC setback requirements for new wells prior to the passage of SB19-181. This is why the current code language states, “The minimum buffer between a dwelling and any oil and gas location shall be five hundred (500) feet, or the Colorado Oil and Gas Conservation Commission designated setback distance, whichever is greater.” However, staff did not intend to apply the variance criteria set forth by the ECMC rules. Since then, ECMC has updated its setbacks for new oil and gas wells to 2,000 feet, and the reverse setback code (LUC 3.8.26) is silent on whether City staff would accept a variance request from the setbacks as outlined by ECMC Rule 604b. Updating the City’s buffer requirements to 2,000 feet from all occupiable structures would be consistent with State-level regulation and Council’s previous discussions when adopting regulations related to new oil and gas siting: [Ordinance No. 151, 2022](#) - AMENDING THE LAND USE CODE TO REGULATE OIL AND GAS FACILITIES AND PIPELINES.

ADDITIONAL COUNCIL CONSIDERATIONS FOR CODE UPDATES SUMMARIZED UNDER THE ATTACHMENTS:

Abandoned and Not Reclaimed.

Drilled (Dry) and abandoned wells can serve as conduits for contaminants to migrate. Dealing with the contamination risk associated with abandoned wells can add additional cost to a development. There is less of a risk for contamination from abandoned wells that have never been in production. If a well was producing at some point and then was abandoned, greater risks need to be considered, such as:

- Past producing abandoned wells can become pathways for the migration of oil, or other fluids to the surface and these substances can leak into surrounding soil, groundwater, or surface water.
- Over time, abandoned wells can lead to land subsidence or sinking due to the changes in underground pressure and stability caused by the extraction and absence of fluids.

Wells in the Fort Collins field consist primarily of abandoned and not full reclaimed wells that never produced oil, and so there is less risk to hydrocarbon exposure from these types of wells. Staff recommends a 500-foot buffer and five years of monitoring related to the existing waste associated with drilling the well, and the benefits of fully reclaiming these sites.

Secondary Structures within the Buffer.

Staff recommend prescriptive Code language for secondary structures allowed within the established oil and gas buffer and to cross reference the City's adopted building code. These standards would apply to new developments and existing homes within the oil and gas buffer. As such, the policy intent is to limit new occupancies and permanent structures within the buffer. The recommendation includes no permanent playgrounds, play structures, recreational fields, or permanent community gathering spaces within the buffer. For the purposes of the proposed buffer standards, it is important to note that occupiable space does not always mean habitable space. Almost all structures that are given an occupancy classification would be considered occupiable space and are issued a Certificate of Occupancy to support that. As an example, sheds and greenhouses would be an allowed use within the oil and gas buffer yard standard since they are not occupiable and do not receive a Certificate of Occupancy upon completion. Structures that receive a Certificate of Occupancy include structures with specific egress, light or ventilation facility components and meet the definition for occupiable space. These regulations would permit additions to homes on parcels that are within the buffer zone of an existing oil and gas well. Applicants can seek a modification of standard to the prohibition of secondary structures and detached occupiable buildings within the buffer.

Soil-Gas and Groundwater Monitoring.

The proposed Code updates include prescriptive language that requires a Phase II **Environmental Site Assessment (ESA)** traditionally conducted for sites observing industrial containments. Monitoring requirements are specific to abandoned well type and not wells unabandoned given state inspection requirements. The Environmental Site Assessment standards of practices are maintained by ASTM International as a globally recognized leader in the development and delivery of voluntary consensus standards. As prescribed by the Code, monitoring must occur within a 1/2 mile of the well. In practice, an environmental professional will develop a sampling plan to evaluate the potential presence of contamination from hazardous substances on the property and determine the sources of contamination and exposure risk. The report is reviewed by the City Planner ahead of the development construction permit and the Planner will determine if additional remediation is conditioned with the permit. As an example, a Phase II ESA was conducted at the Country Club Reserve well site and found that sampled contaminants were within acceptable limits per federal and state standards (ATTACHMENT). Stakeholder feedback has included a recommendation to require monitoring in perpetuity/indefinity. Staff has addressed this stakeholder comment through the required point of sale disclosure by unveiling environmental site assessments through future real estate transactions.

Point of Sale Disclosure.

In Colorado, the Seller's Property Disclosure is an important disclosure form for the real estate broker to discuss with their respective client. Both the seller and listing broker have obligations concerning the use of this form, and the buyer and buyer's broker need to have an understanding of what this form represents by way of disclosures. More information about the Seller's property disclosure forms is available at Colorado Department of Regulatory Agencies, Division of Real Estate website:

<https://dre.colorado.gov/division-notifications/understanding-sellers-property-disclosure-forms>

The proposed Fort Collins Code outlines that the seller or lessor of any building containing occupiable space within the buffer standards specific to the well's active or abandoned status is required to provide a purchaser with the following specific language in addition to a recorded plat and covenants which likely will be provided to the buyer or lessee through the real estate transaction:

As required by 3.8.36 of the Fort Collins Land Use Code, notice is hereby given that [insert description of lot] is within [insert buffer standard set forth in Subsection (D) including well status and distance from well]. At the time of [sale or lease], environmental assessments, studies or reports done involving the physical condition of the Property impacted by oil and gas production are within the acceptable Environmental Protection Agency limits. For more information contact the City of Fort Collins Environmental Planner or the Energy and Colorado Carbon Management Commission formerly known as the Colorado Oil and Gas Conservation Commission.

Enhanced Oil Recovery Injection Wells.

Enhanced Oil Recovery (EOR) injection wells are categorized by the EPA as a Class II Underground Injection Control (UIC). The Colorado ECMC has primacy over Class II UIC wells, being delegated such from the Environmental Protection Agency. Class II UIC wells are permitted by the ECMC according to the Federal Safe Drinking Water Act to be protective of Underground Sources of Drinking Water. Attached is a peer review of communities along the Front Range with adopted reverse setback buffer standards from EOR injection wells.

There are currently six EOR injecting wells within the City limits. Although an EOR injection well within the Fort Collins field operates on a closed loop system, the main community concern for these types of wells relates to the potential impacts from leaks, spill or loss of integrity of the well and associated flowlines. A key question during community engagement was what is an appropriate buffer if an injection well receives a reduced buffer requirement, especially if the well changes status from injection to a producing well? The Water Edge Subdivision's development team has submitted a report and recommendations regarding appropriate reverse setback buffer (see attached). The report suggests a 75-foot reverse setback from EOR Injection Wells.

The distances where contamination related to UIC wells ranges from 0.25 mile up to 2 miles from a potential source of pollution. It is within these distances where the potential for contamination may occur and therefore the proposed 2,000-foot reverse setback is a conservative approach to mitigating the potential risks permeating from the "the Zone of Endangering influence" as defined by the Federal Safe Drinking Water Act, 40 CFR 146.6.

Modification of Standards.

[Ordinance No. 151, 2022](#) setback standards for new oil and gas facilities (2,000-foot) are not subject to a modification of standards, which means these setbacks cannot be reduced. It is assumed that EOR Injection wells are less common across the state and therefore less common locally if a new oil and gas applications is received in Fort Collins. Furthermore, the Fort Collins Code does not allow EOR wells for waste disposal. That said, Fort Collins currently hosts six existing EOR wells near the northern aspect of the city limits. Because the peer-reviewed scientific literature is incomplete for buffering from EOR injection wells, staff recommend a modification of standards from EOR injection wells when the operator can meet one of the four modification criteria in LUC 2.8.2 (H). Attached is a peer review of neighboring jurisdictions that offer a modification of standards to EOR injection well setbacks.

Existing Oil and Gas Well Recompletion.

Prospect Energy has expressed interest in developing the Codell formation within the Fort Collins field, which is shallower than the Muddy formation and would require no new drilling (see attached Prospect Energy Form 2 Decision). Full development would allow for the Muddy zones to be permanently abandoned, which would eliminate the need for high pressure water injection and water treatment. This would also introduce increased gas volumes, which could potentially be used to generate electricity on site. In 2019, Prospect Energy shared their intention to further develop existing oil and gas wells (see attached Prospect Energy letter, August 29, 2019).

Since the adoption of the City's oil and gas development standards ([Ordinance No. 151, 2022](#)) the following scenarios may apply:

1. For the purposes of recompletion and entering a new formation – ECMC Rule 300 applies, and the operator would need to submit a form 2 to the ECMC in addition to a Type II development application to the City of Fort Collins per the Land Use Code.
2. For the purposes of entering the same formation for the purposes of production – ECMC Rule 811 – Form 4 Sundry notice is all that is required.

If Prospect Energy shares interest in recompletion of an existing well and the need to install new equipment on the surface, the City's new Land Use Code requirements for permitting oil and gas facilities would apply. Given the uncertain nature of these wells, staff does not recommend differentiating reverse setback distances from active operating oil and gas wells.

CITY FINANCIAL IMPACTS

There are no financial impacts related to adopting oil and gas regulations. Costs related to processing development applications, administering permits, and conducting inspections would be recovered through fees.

BOARD / COMMISSION / COMMITTEE RECOMMENDATION

Staff meet with the Air Quality Advisory Board (AQAB) on July 17 and August 21, 2023. Based on information presented the board provided the following information. In addition to the bullets below, the AQAB will provide a memo directly to Council (copy attached).

- Unabandoned Wells - the AQAB recommends that Council adopt the staff proposal (2,000 ft. setback with a conditional potential variance to 500 ft.)
- Enhanced Oil Recovery (EOR) Injection Wells - the AQAB recommends that Council adopt the staff proposal (2,000 ft. setback with a conditional potential variance to 500 ft.)
- Not Fully Reclaimed Abandoned Wells - the AQAB recommends that Council adopt the staff proposal (500 ft.)
- Fully Reclaimed Abandoned Wells - the AQAB recommends that Council NOT adopt the staff proposal but instead set this reverse setback at 500 ft., similar to that of not fully reclaimed abandoned wells

On July 19, 2023, The Natural Resources Advisory Board reviewed the proposed changes and shared general support for the staff recommendations with the following feedback:

- Supports monitoring of fully reclaimed wells within the first year following permit followed by periodic monitoring indefinitely.
- Does not support a modification of standards for EOR wells.
- Does not support a prohibition on detached occupiable buildings and recommends placing the onus of this decision on the property owner and requiring the disclosure to renters/point-of-sale.

During the Planning and Zoning Commission hearing on July 20, 2023, the Commission unanimously recommend that the Council adopt the Land Use Code amendment addressing setbacks from existing oil and gas facilities, including language that permits any applicant that submits a completed basic development review project plan, planned unit development, or building permit application prior to the effective date of the proposed ordinance to continue development review under standards adopted by Ordinance No. 114, 2018. The Commission's discussion highlighted the following themes:

- Scenarios related to a modification of standards from the 2,000-foot setback in the instances of the operator recompleting existing injection wells for the purposes of oil and gas production.
- Impacts on existing homes currently located within the proposed buffer standards.
- Discussed how point of sale disclosure requirements are enforced.

Staff has incorporated stakeholder feedback from boards and commissions into the first reading of the ordinance.

PUBLIC OUTREACH

Staff circulated a memo to Council on August 10, 2023, summarizing community feedback. For reference, the memo has been provided as an attachment to Council's materials.

ATTACHMENTS

1. Ordinance for Consideration
2. Council Work Session Summary, October 25, 2022
3. Summary of Code Updates
4. Council Memo - Community Engagement Summary, August 10, 2023
5. 2018 Phase II Environmental Site Assessment at Country Club Reserve
6. Peer City Review of Injection Well Reverse Setback Buffers
7. Peer City Review of Modification of Standards from Reverse Setback Buffers
8. Water's Edge Subdivision Report and Recommendations, October 13, 2022
9. Prospect Energy Form 2 Decision, April 5, 2022
10. Prospect Energy Letter, August 29, 2019
11. Air Quality Advisory Board Minutes, July 17, 2023
12. Air Quality Advisory Board Memo to Council/Response, August 28, 2023
13. Natural Resources Advisory Board Memo, August 16, 2023
14. Planning & Zoning Commission Draft Hearing Minutes, July 20, 2023