



BROOMFIELD CITY COUNCIL

STUDY SESSION

To: Mayor and City Council
From: Jennifer Hoffman, City and County Manager
Presented by: Anna Bertanzetti, Planning Director
Tami Yellico, Director of Strategic Initiatives

| Meeting Date | Agenda Item # |
|---|----------------------|
| March 30, 2021 | 5(a) |
| Council Request for Direction Regarding Reverse Setbacks Regarding Oil and Gas Facilities | |
| Summary | |
| <ul style="list-style-type: none">• This memorandum is presented to City Council for discussion regarding reverse setbacks from oil and gas facilities. Reverse setbacks are land use regulations that limit where residential development can occur in proximity to oil and gas facilities.• Broomfield currently requires new residential lots be a minimum of 1,320 feet from producing oil and gas facilities unless specific notice is recorded against the title and provided to the lot purchaser. Additionally, no residential units may be built within 200 feet of an existing oil and gas facility.• For plugged and abandoned wells, the Municipal Code requires notice to lot purchasers within 200 feet and requires a 50 foot by 100 foot easement. Structures are not permitted within the easement.• Background information is provided regarding how other jurisdictions in Colorado regulate setbacks for new development from existing oil and gas facilities.• Since the reverse setbacks have the potential to change anticipated land use patterns, staff is also presenting an overview of existing and planned residential developments in areas with existing oil and gas facilities. Depending on the scale of the proposed reverse setbacks, staff would expect a need to adjust anticipated locations for residential development within existing PUD plans, the Long Range Financial Plan, and Broomfield Comprehensive Plan Land Use Map.• Staff is not aware of any scientific studies or reports that identify exactly what distance is necessary and appropriate to maintain between residences and producing oil and gas wells or between residences and plugged and abandoned wells.• A range of setbacks from other municipalities are presented in the memorandum both from producing oil and gas wells as well as from plugged and abandoned wells.• This memorandum addresses and focuses on potential reverse setbacks from residential uses (single family and multi-family units), but does not address the possibility of reverse setbacks from other land uses such as commercial, employment, institutional, or parks/open lands. If directed by Council, the draft ordinance can address other land uses and staff can provide additional analysis concurrent with the first reading of the ordinance.• This memorandum includes summary information on the findings of the 2019 CDPHE Human Health Risk Assessment Study, including a summary from CDPHE of what the study does and does not do and a link to staff summary about the 2019 study.• Staff is requesting direction from City Council regarding the reverse setbacks in order to draft an ordinance for future consideration by the City Council. | |
| Prior Council Action | |
| <ul style="list-style-type: none">• July 17, 2018 - City Council study session regarding oil and gas regulations, including potential reverse setbacks.• August 14, 2018 - City Council considered proposed Ordinances No. 2076 regarding reverse setbacks. Council voted to postpone the ordinance to a future study session.• January 15, 2019 - City Council discussed setbacks from oil and gas facilities at a study session.• March 12, 2019 - City Council approved Ordinance 2076 regarding changes to setbacks from oil and gas facilities. | |

| <i>Financial Considerations</i> |
|---|
| <ul style="list-style-type: none">• Depending on the scale of proposed reverse setbacks, there will be impacts to land use patterns in areas with existing producing and plugged and abandoned wells. Changes to land use development patterns will have an impact on the Long Range Financial Plan. Reductions in residential development will impact the ability to support planned non-residential development in Broomfield. If reverse setbacks are applied to residential, commercial, and parks, there will be financial impact as well. At this stage, staff was not able to quantify impacts, but additional analysis can be provided depending on the direction provided to staff regarding drafting a potential ordinance on reverse setbacks. |
| <i>Alternatives</i> |
| <ul style="list-style-type: none">• Make no changes to the Broomfield Municipal Code.• Make changes to the Broomfield Municipal Code as directed by City Council. |
| <i>Proposed Actions/Recommendations</i> |
| As desired by Council. |

INTRODUCTION

Following an executive session on March 2, 2021, that was held to receive legal advice related to reverse setbacks, City Council directed staff to prepare a study session outlining options for considering changes to reverse setbacks from oil and gas facilities.

This memorandum provides the following sections:

1. Overview of what other local jurisdictions in Colorado are doing in regard to regulating with respect to reverse setbacks from oil and gas facilities
2. Potential impacts of reverse setbacks on land use patterns anticipated in Broomfield with a focus on residential land use impacts
3. Options for reverse setbacks

Staff will prepare an ordinance based on the direction of the City Council, if so directed, following the study session. A first and second reading with public hearing will be required to consider changing the Broomfield Municipal Code regulations related to reverse setbacks from oil and gas facilities.

PREVIOUS COUNCIL ACTION

The Oil and Gas Chapter of the Broomfield Comprehensive Plan includes Action Step OG-18.1 regarding setbacks of new surface developments from existing oil or gas wells.

Action Step OG-18.1: Require all new surface developments to be no closer than 1,320 feet to an existing oil or gas well, unless there is written notice and informed consent from each individual surface property purchaser and owner

Based on the recommendations in the Oil and Gas Comprehensive Plan Chapter and to implement Action Step OG-18.1, City Council approved [Ordinance No. 2076 in 2019](#) which requires a written notice that will be recorded against the title of lots within 1,320 feet of an existing or proposed oil or gas well when a dwelling unit or school could be built on such lot. In addition, when a lot is first sold to a purchaser intending to occupy the dwelling unit, the seller must provide the same written notice.

BACKGROUND INFORMATION

Broomfield BMC 16-28-180 - Oil and gas wells or injection wells.

- (A) No residential lots in any subdivision shall be platted any closer than 200 feet from an oil and gas facility as defined in section 17-54-020, B.M.C.
- (B) No public or private school building in any subdivision shall be located any closer than 500 feet from an oil and gas facility as defined in section 17-54-020, B.M.C.

The following table provides a summary regarding how other local jurisdictions in Colorado are regulating with respect to reverse setbacks from existing oil and gas facilities, including plugged and abandoned wells. Additional detail is provided in [Attachment 1](#).

| Municipality | Reciprocal Setback |
|-------------------------------|---|
| Broomfield | Residential lot: 200 feet School: 500 feet * |
| Boulder | None |
| Fort Collins | Residential buffer: 500 feet (or COGCC designated setback, whichever is greater) High Occupancy buffer: 1,000 feet Public or private playgrounds, parks, recreational fields, or community gathering spaces are not allow within the “buffer” <i>High Occupancy Building Unit</i> means same as COGCC's regulations a. Any School, nursing facility, hospital, life care institution or correctional facility provided the facility or institution regularly serves 50 or more persons; b. An operating Child Care Center; or c. A multifamily dwelling unit with four or more units. |
| Erie | Residential lots and nonresidential buildings, community parks, neighborhood parks and pocket parks: 350 feet Street rights-of-way and trails: 150 feet |
| Commerce City | 1,000 feet “for permitted or existing Well Sites where all permitted wells have not been plugged and abandoned in compliance with COGCC standards and regulations.” Plugged/Abandoned: 50 feet (Code requires a “plat designation surrounding such wells and expressly prohibiting any habitable building or structure within 50 feet.” see page 42). |
| Thornton | Any development within 500 feet of the city will notify the owner/operator and triggers certain requirements |
| Aurora | None |
| Loveland | Residential: 500 feet High Occupancy: 1000 feet |
| Longmont | Proposed occupied buildings, platted residential lots, sports fields and playgrounds shall be 750 feet or more, or the maximum distance practicable as determined by the city, from existing oil and gas wells and production facilities. Plugged/Abandoned: 150 feet |

*It is important to note that Colorado State law does not require public schools, including charter schools, to abide by local zoning requirements. Therefore, including reverse setbacks to public schools may deter placement of a school in a specific site, but Broomfield would not be able to prohibit a public school from locating on a property not meeting a Broomfield reverse setback requirement.

VARYING SETBACKS BASED ON DRILLING/DEVELOPMENT PHASES

Some jurisdictions create two different setbacks: one from existing well sites and a second from plugged and abandoned wells. The setback from existing well sites are the same regardless of the development phase of the well site.

Staff is not aware of a jurisdiction that has adopted setback distances from existing well sites based on the drilling/development phase of the wells at the oil and gas facility. Creating a variable set back distance based on the drilling/development phase would mean that a land developer's ability to develop/build on a portion of land would depend on the actions of a third-party oil and gas developer. Commerce City considered [an amendment to its recently-adopted regulations](#) that would have created a setback dependent on whether the well was pre-completion, entered completion, or plugged and abandoned. If entered in the completion phase, there was a different setback dependent on well count. (Commerce City's definition of completion can be found [here](#) on pg 52).

In essence, Commerce City's proposed amendment was:

| | | | |
|---|---|-------------------------|------------------------------|
| Permitted or Existing Well Sites (pre-Completions) | No new residential lots within 1000 feet. | | |
| Entered Completions, permit lapsed, been revoked, or forfeited, and is not subject to renewal or reissuance | 1-10 Wells 300 feet | 11-24 Wells 400 feet | 25 or more Wells 500 feet |
| Plugged and Abandoned | No habitable building or structure within 50 feet | | |

Staff is not aware of a jurisdiction that has adopted setback distances from existing well sites based on the stage of development for the property.

MATRIX RE: COUNCILMEMBER QUESTIONS AND REQUESTS FOR INFORMATION

The following matrix has been compiled to address questions and requests for information the City Council has made to Strategic Initiatives, Public Health and Geographic Information Systems regarding potential reverse setbacks. Please see [this link](#). Questions and requests for information are included regarding: current setback information, data from Broomfield's own oil & gas programs, links to case studies on setbacks from oil & gas, maps showing potential impacts of reverse setbacks and other topics.

CDPHE STUDY

Included in the matrix at the link above is information on the 2019 CDPHE Human Health Risk Assessment Study, including a summary from CDPHE of [what the study does and does not do and a link to staff summary about the 2019 study](#). From the CDPHE study, the risk of negative short-term health effects were:

- Highest risk during flowback, lower for drilling and fracking
- Risk drivers: benzene, toluene, ethyltoluene

- Risk holds true all modeled distances, impacts can occur at 300 to 2,000 feet

From the CDPHE study, the risk of long-term health effects were:

- Slightly elevated risk of blood and nervous system effects from multiple chemicals at 500 ft but not at 2,000 ft.
- Cancer risk within EPA acceptable risk range.
- Did not assess the cumulative long-term health effects in areas that have multiple well pads.
- Acute exposure: At the most-exposed (downwind) locations at 500 ft from the well pads, the highest estimated 1-hour exposures exceeded guideline levels for a small number of chemicals, including benzene during development and production activities, and toluene and ethyltoluenes during development activities (see pg. 120 in report for more info).
- Chronic exposure: At the 500-ft distance from the well pads, chronic exposures during these long, multi-well flowback activities were far below chemical guideline levels, though neurotoxicity and hematological HIs (hazard indices) slightly exceeded 1 due primarily to the contributions of n-nonane, benzene, m+p-xylene, and trimethylbenzenes (see pg. 121 in report for more info).

POTENTIAL IMPACT ON LAND USE

The Land Use Map included in the Broomfield Comprehensive Plan establishes the preferred development patterns by designating land use categories for specific geographical locations. The land use designations implement the overall goals and policies described throughout the Comprehensive Plan.

The Land Use map reinforces and supports the Comprehensive Plan's primary themes:

- Maintaining fiscal sustainability
- Enhancing environmental stewardship
- Enhancing Broomfield as a community of neighborhoods and gathering places
- Supporting existing neighborhoods and facilities
- Planning for areas of change and stability
- Strengthening an interconnected system of open lands and the "Green Edge"
- Enriching community services and facilities
- Ensuring a walkable and bikeable community
- Adapting to changing demographics
- Enhancing multimodal transportation
- Anticipating the impact of technology

The Land Use Map is the basis for the financial analysis and models within the City and County of Broomfield's Long Range Financial Plan.

Implementation of reverse setbacks will impact the available land able to be utilized for land uses prohibited from locating within the specified distance of an oil and gas facility. Depending on the scale of the setback, it may be appropriate to re-evaluate areas for future development. Although residential land uses are not a revenue generator for Broomfield, if reverse setback implementation results in reduced residential dwelling units, this could impact Broomfield's ability to support the planned density of commercial and employment uses. Staff will provide additional analysis regarding potential impacts based on the direction of the City Council.

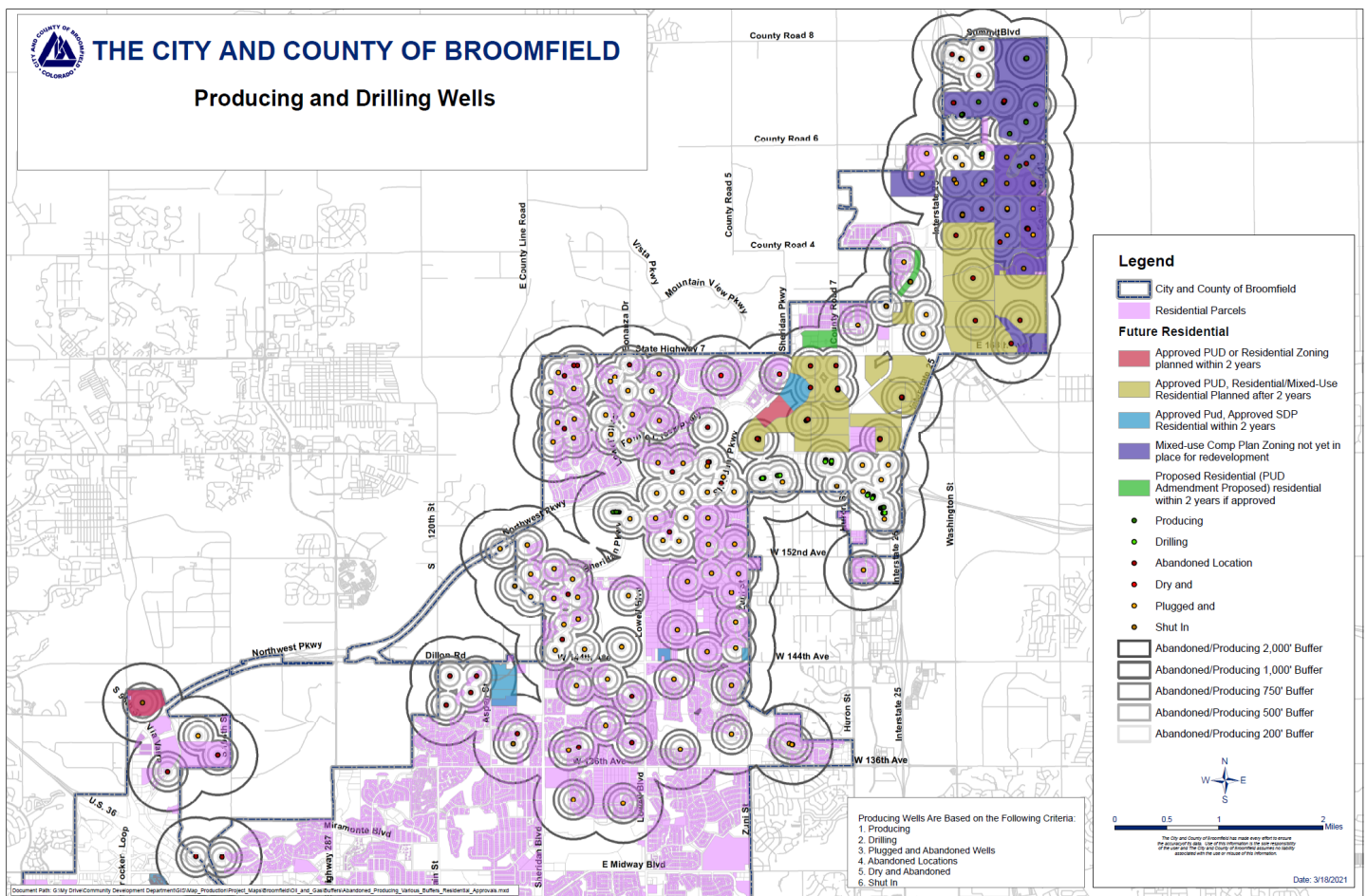
Since Planned Unit Development Plans are reviewed for consistency with the Comprehensive Plan Land Use Map, many PUD plans have previously been approved in areas surrounding oil and gas facilities which allow for residential use or mixed-use with both non-residential and residential uses. Additionally, some proposed developments are at various stages of development review within 1,000 feet of oil and gas facilities. Staff has compiled a list of potential projects below. A map of all PUD plans with approved residential uses can be found

[at this link](#) (please note, the map shows overall PUD areas and residential uses may be limited to particular portions of a PUD area).

| Development | Location | Proximity to Oil and Gas Facility | Use | Status |
|------------------------------------|--|--|---|-------------------------------------|
| Palisade Park Brownstones | South of 169th Avenue and West of CR 7 | Some units are less than 200 feet from p/a well, within 2000 feet of shut-in wells | Apartments | SDP Approved Under Construction |
| Anthem Filing No. 24 | South of Sheridan Parkway and West of Lowell Blvd. | Some homes within 200 feet from p/a wells, all homes within 2000 feet of p/a wells | Single-Family Residential | SDP Approved Under Construction |
| Anthem Filing No. 20 | North of Preble Creek Parkway and West of Lowell Blvd. | Some homes within 200 feet from p/a wells, almost all homes within 2000 feet of p/a wells | Single-Family Residential | SDP Approved Under Construction |
| Baseline (North Park) West Village | West of Sheridan Parkway and North of Preble Creek Parkway | Some units within 200 feet from p/a wells, more than half of units within 2000 feet of p/a wells | Single-Family Attached and Detached Residential | SDP Approved Under Construction |
| Baseline Apartments | West of Sheridan Parkway and South of CO7 | Some units within 500 feet from p/a wells, all units within 2000 feet of p/a wells | Apartments | SDP Approved Under Construction |
| Northlands | East of Huron Street and North of CO7 | Residential units could be within 750 feet of a p/a well location | Apartments | PUD Approved |
| Baseline (Future) | South of CO7 and West of I25 | Some units could be under 200 feet from a p/a well location | Single and Multi-family | PUD Approved |
| Varra Estates | North of Northwest Parkway and East | All planned homes within 1000 feet of a shut in well, | Single Family | PUD Approved SDP and Plat in Review |

| | | | | |
|---|--|---|-------------------------|---------------------------------------|
| | of 96th Street | some planned homes just over 200 feet of shut in wells | | |
| Westbrooke Preserve | East of Huron Street and South of 152nd Street | All homes within 1000 feet of a plugged and abandoned well, some homes just over 200 feet of p/a well | Single Family | PUD Approved SDP and Plat Approved |
| 257 Land | East of I25 and North of Colorado 7 | Plugged and abandoned locations within the PUD area with some residential units within 500 feet | Single and Multi-Family | PUD Approved |
| Wilcox Annexation (not Wilcox neighborhood) | East of I25 and North of Colorado 7 | Plugged and abandoned locations within 500 feet of the PUD area | Multi-Family | PUD Approved |

The following map provides an overview for where residential developments have been approved, including the stage of approvals and construction as applicable with various potential setbacks shown from well facilities in Broomfield. A higher resolution map is available [at this link](#).



The most significant impacts to land use would be experienced in areas north of W. 144th Avenue. Staff is highlighting some areas of impact for the purpose of discussion by the City Council.

Wilcox neighborhood

The Wilcox neighborhood is generally located north of W. 144th Avenue between Lowell Blvd. and Zuni Street. There are 11 plugged and abandoned wells located in this immediate area, including those in the Spruce Meadows subdivision. A reverse setback implemented in this area could impact ability to build homes on currently undeveloped lots. Broomfield has seen an increase in requests to subdivide larger lots (2.5 to 10 acres) into smaller lots (1 to 2.5 acres) and a reverse setback may not allow additional residential units to be built or residential lots if within the specified distance from plugged/abandoned wells.

In addition to limiting additional residential units, a reverse setback will create non-conforming residential units (homes existing today that could not be permitted based on changes to the Municipal Code) since there are homes previously constructed within the various reverse setback distances. City Council will need to consider how these residential units will be considered moving forward. The Municipal Code allows non-conforming uses to remain in place, but places limitations on the owner's ability to modify or replace the use unless a specific language is included in the ordinance to ensure an owner's ability to repair, modify, and replace the structure as necessary in the future even though it is within the reverse setback distance (see [BMC 17-36, Non Conforming Uses](#)). The issue regarding existing homes already located within setback distances from plugged and abandoned well sites would also be an issue in Lambertson Farms, Anthem, Wildgrass, Redleaf, and Broadlands neighborhoods.

Baseline

The Baseline PUD area includes 9 plugged and abandoned well sites. Portions of the development are also located within some of the proposed setback areas from the Extraction well sites located along Northwest Parkway. Baseline is envisioned and approved for as a mixed-use development. The densities intended in this development area are intended to support the future employment and commercial uses as well as the Bus Rapid Transit corridor along Colorado 7.

A reverse setback for residential land uses, including mixed use development containing residential units, would impact the developer's ability to realize the intended development pattern as approved within the Baseline Planned Unit Development Plan.

Northeast Broomfield

The area of Broomfield located east of Interstate 25 and north of Colorado 7 has both producing and plugged/abandoned oil and gas wells. The southern half of this area of Broomfield is largely zoned PUD and has previously approved PUD plans in place allowing mixed use development including commercial, employment and residential uses. The northern half of the area is largely zoned for agricultural uses, but is identified in the Broomfield Comprehensive Plan for future mixed use development. Given the number of wells located in this area, development in the area would become increasingly challenging with larger setbacks from oil and gas well sites.

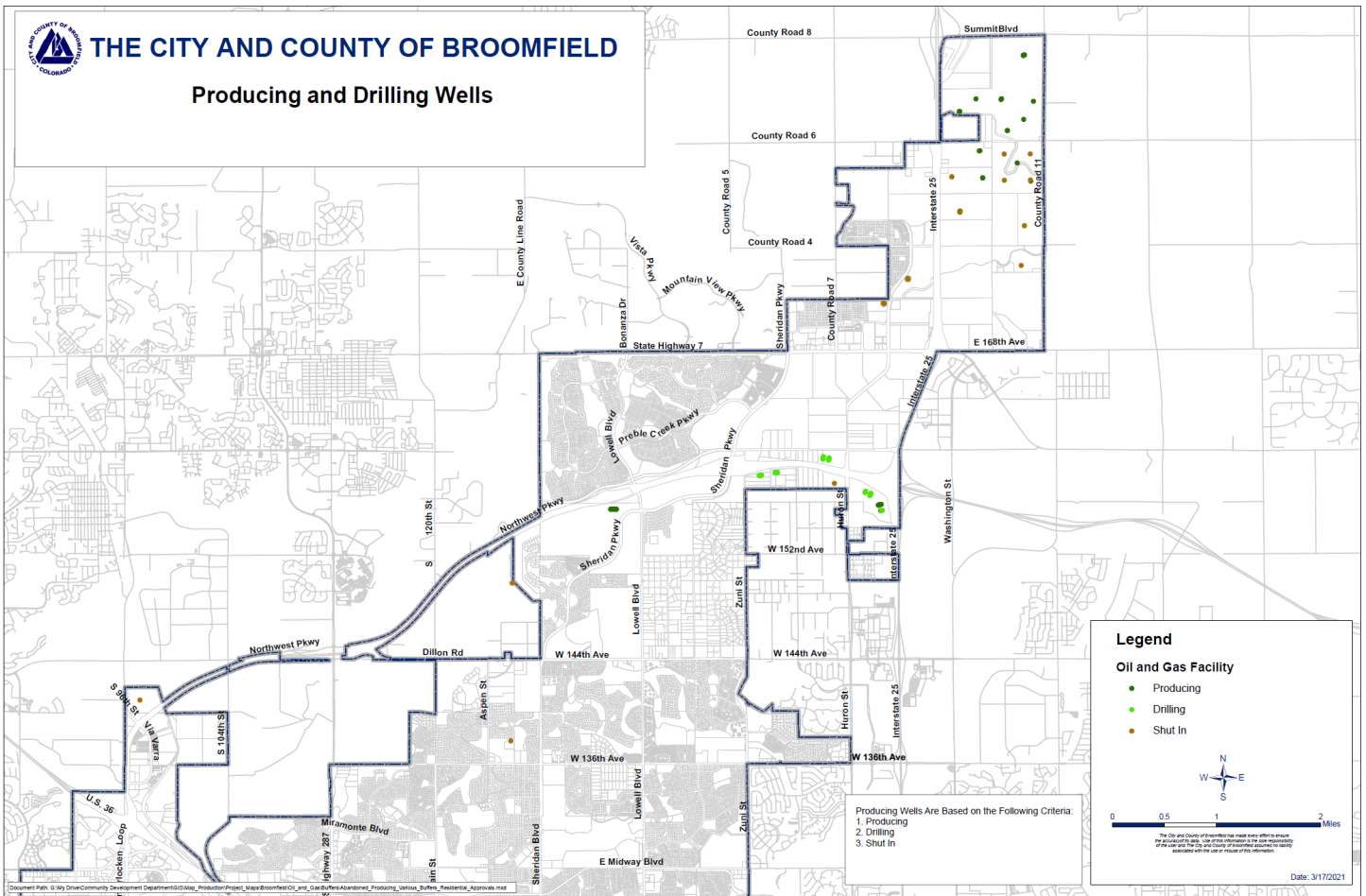
REVERSE SETBACK OPTIONS

Staff is not aware of any direct studies or reports that identify what particular distance is necessary and appropriate to maintain between residences and producing oil and gas wells or between residences and plugged and abandoned wells. Since a direct study or report providing a specified necessary distance is not available at this stage, staff is instead providing City Council information regarding various setbacks for the purpose of discussion during the study session. Staff will base a future ordinance, if directed to draft such, on the discussion and direction of the City Council.

Analysis of the following setback options are provided by staff: 250 feet, 500 feet, and 1000 feet. Options are provided should Council direct staff to implement such reverse setback from producing/active and/or plugged and abandoned well facilities. For the purpose of seeking clear direction regarding the desired setbacks, staff will provide discussion regarding reverse setbacks from producing and plugged/abandoned wells separately.

Producing/Drilling Wells

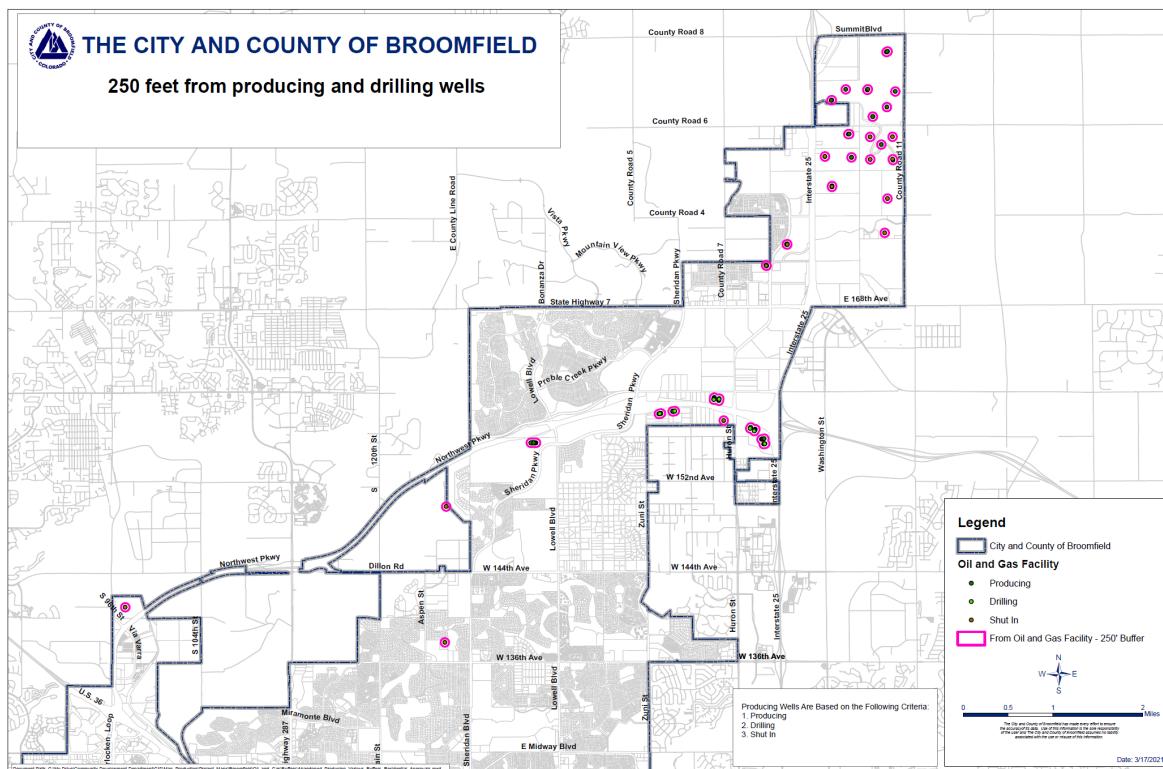
A map showing the location of existing producing oil and gas wells is provided below and a direct link to a higher resolution version can be found here [at this link](#). The map also includes shut-in wells. Most producing/drilling wells are located north of W. 144th Avenue and many are along Northwest Parkway or east of I-25.



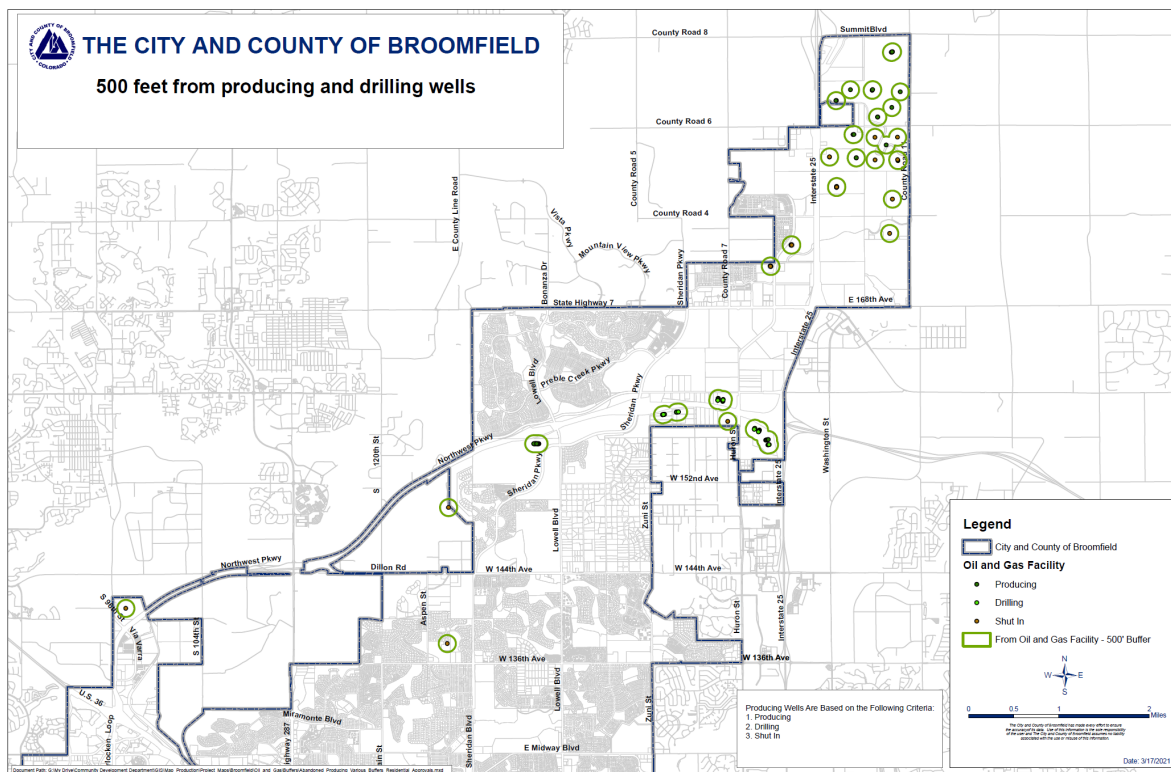
It is possible that some of the wells shown may eventually be plugged and abandoned as operators move toward horizontal drilling operations. The only horizontally drilled wells are located generally along Northwest Parkway with Extraction as the operator. All other wells drilled in Broomfield have been vertical or diagonal drilled.

Maps have been prepared showing potential impacts on land use development should City Council direct staff to proceed with oil and gas setbacks of 250, 500 and 1000 feet from plugged and abandoned wells.

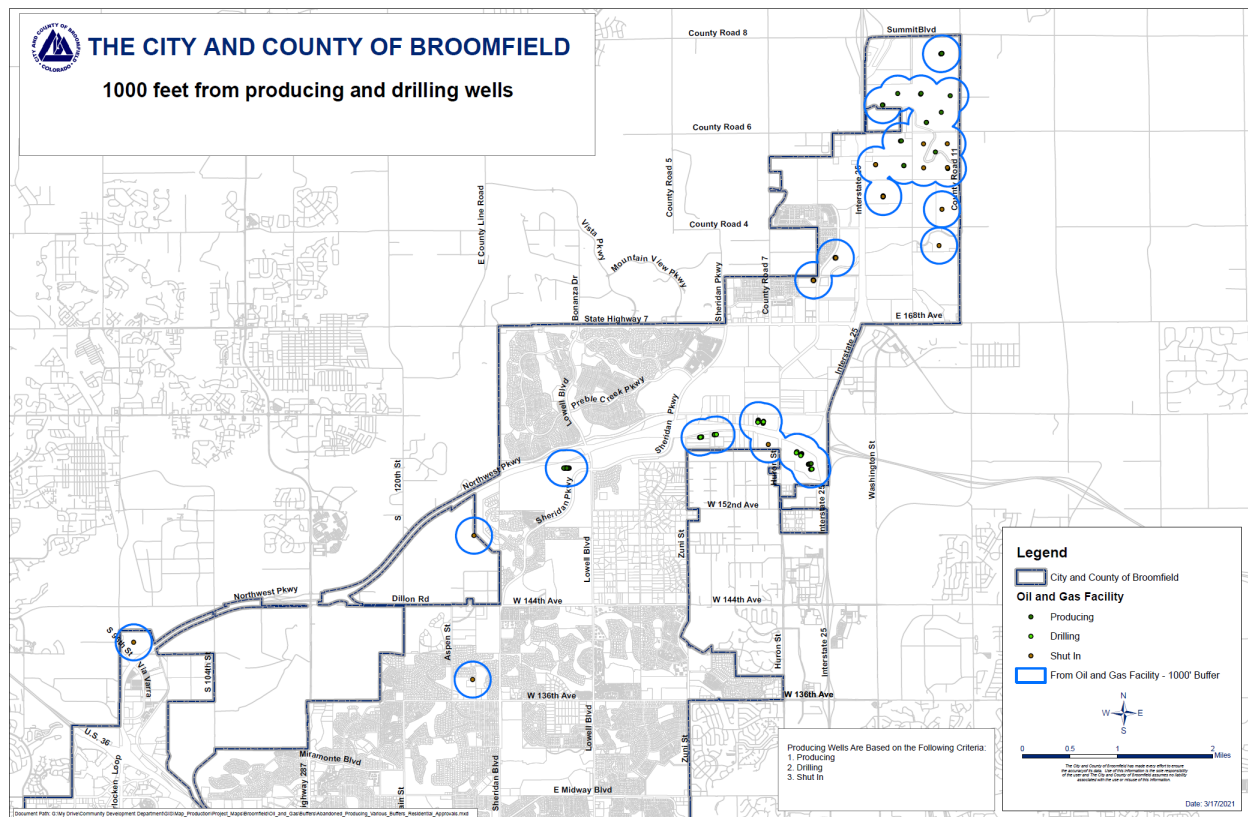
Map 2A - 250 feet from Producing, Drilling, and Shut In Wells



Map 2B - 500 feet from Producing, Drilling, and Shut In Wells



Map 2C - 1000 feet from Producing, Drilling, and Shut In Wells



Plugged and Abandoned Wells

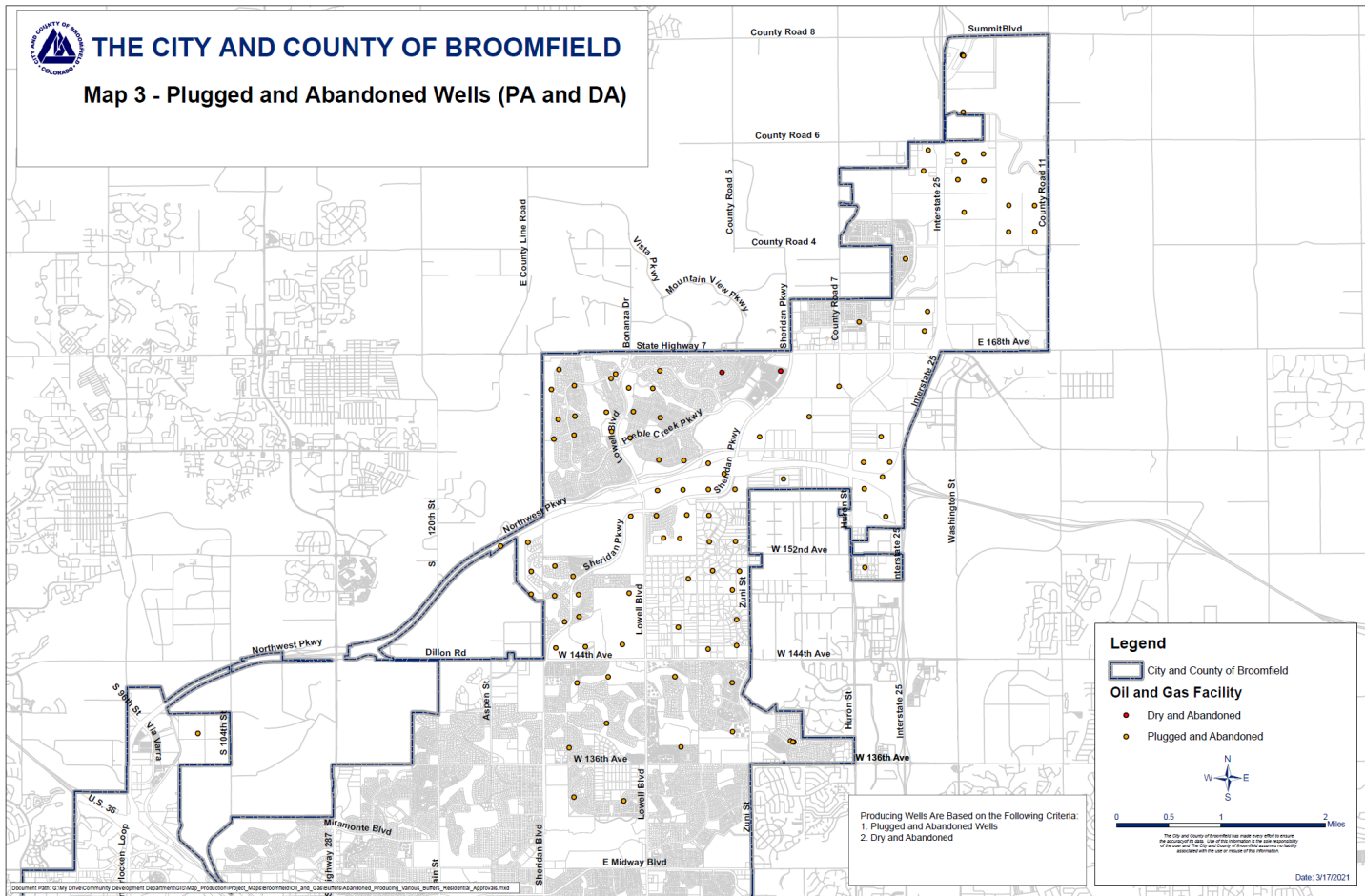
Reverse setbacks can be considered from plugged and abandoned well sites. Broomfield requires plugged and abandoned wells to be centered within a workover easement with minimum dimensions of 50 feet by 100 feet. Structures are not allowed to be placed within the easement area and therefore the easement itself serves as the current required reverse setback of new residential, commercial, and industrial buildings from the plugged/abandoned well site.

Many of the plugged/abandoned wells are located north of W. 136th Avenue and are located in streets, drives, parking lots, or landscaped areas of individual lots.

In 2019, one well, Davis 43-6, was found to be a site of a methane leak based on Broomfield's soil gas monitoring and testing. The well is located in the right-of-way within the Anthem neighborhood in an area under development. This [public notice](#) has been posted to Broomfield's oil and gas webpage and summarizes the history of the Davis 43-6 well since the methane leak was discovered.

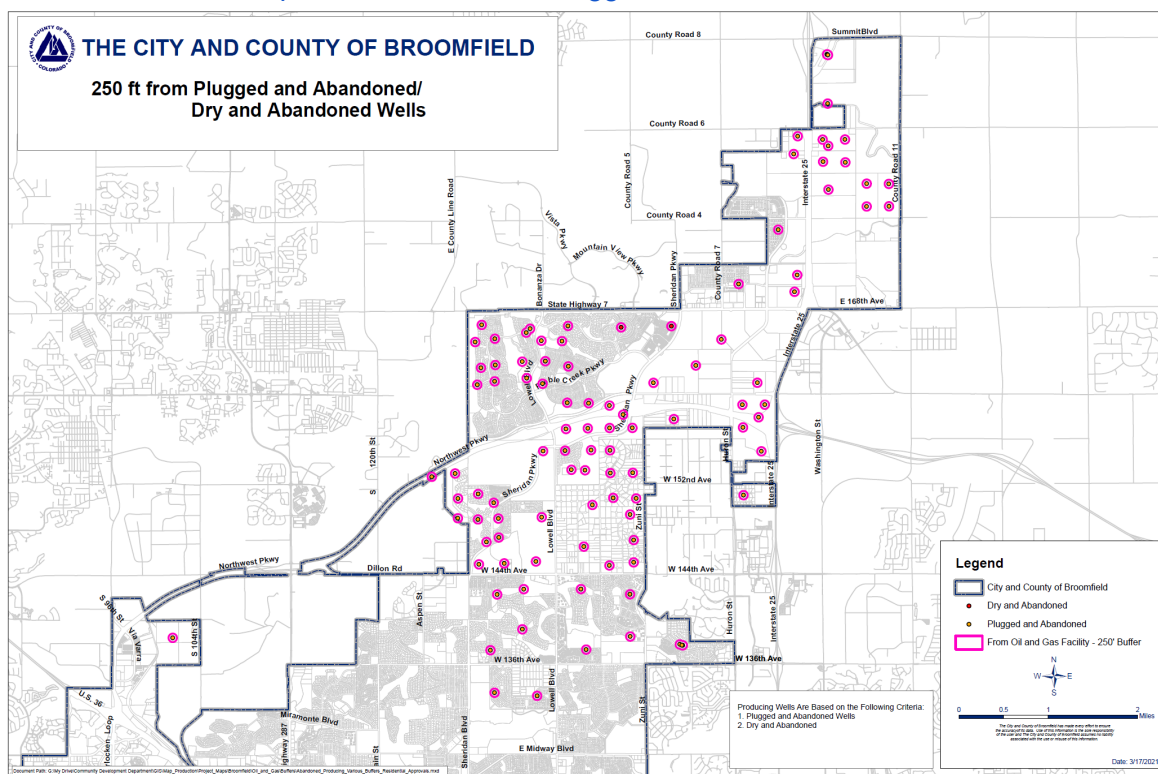
A map showing the location of existing plugged/abandoned oil and gas wells is provided below and a direct link to a higher resolution version can be found [here at this link](#). Operators have recently plugged and abandoned oil and gas wells within Broomfield and additional wells may be plugged and abandoned in the future. Surface owners do not typically control when an operator will plug and abandon a well, but some surface owners have worked with operators to provide monetary compensation for plugging and abandoning producing or shut in wells in order to allow surface development to occur.

MAP of plugged/abandoned wells

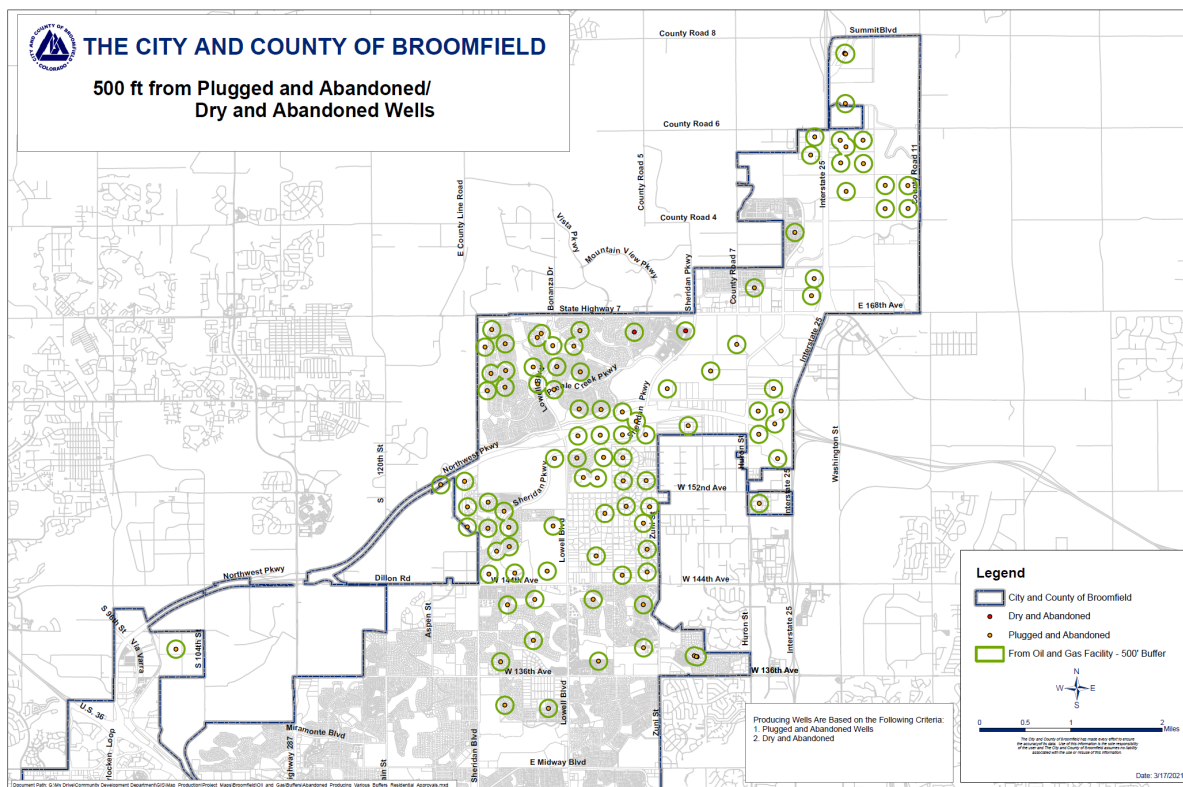


Maps have been prepared showing potential impacts on land use development if City Council proceeds with oil and gas setbacks of 250, 500 and 1000 feet from plugged and abandoned wells.

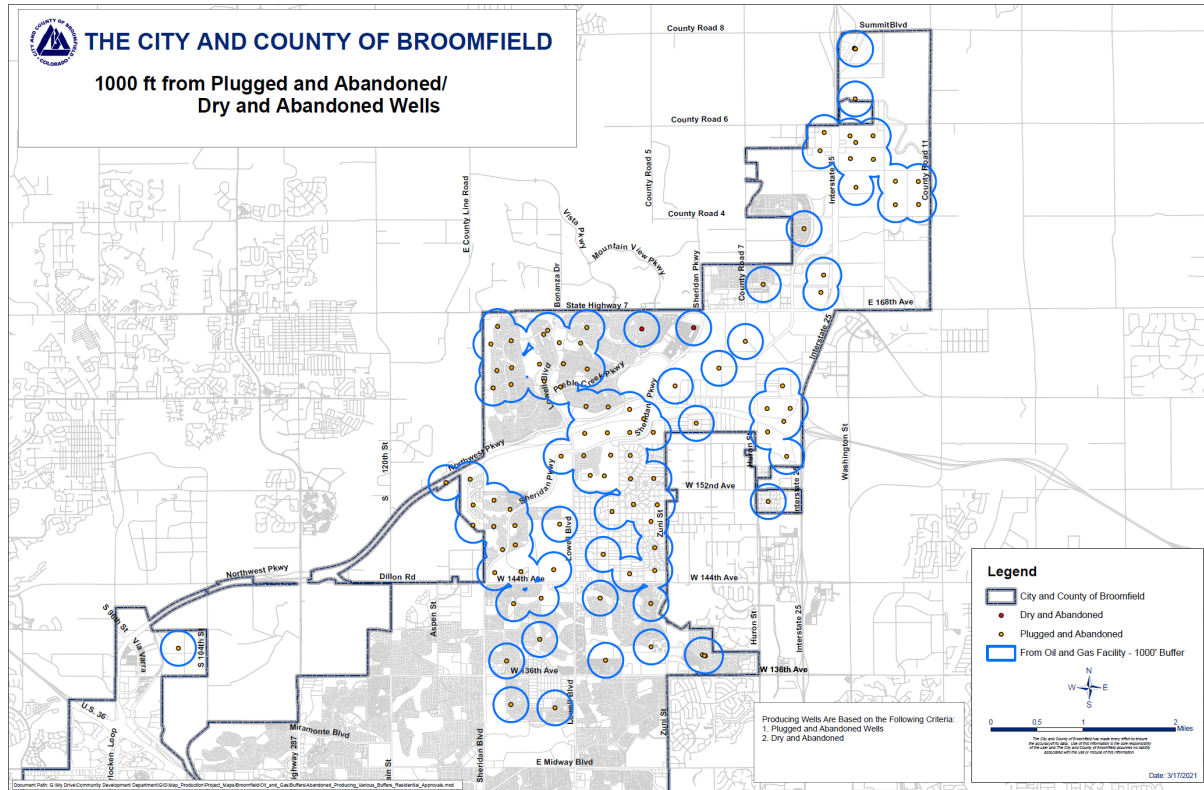
Map 3A - 250 feet from Plugged and Abandoned Wells



Map 3B - 500 feet from Plugged and Abandoned Wells

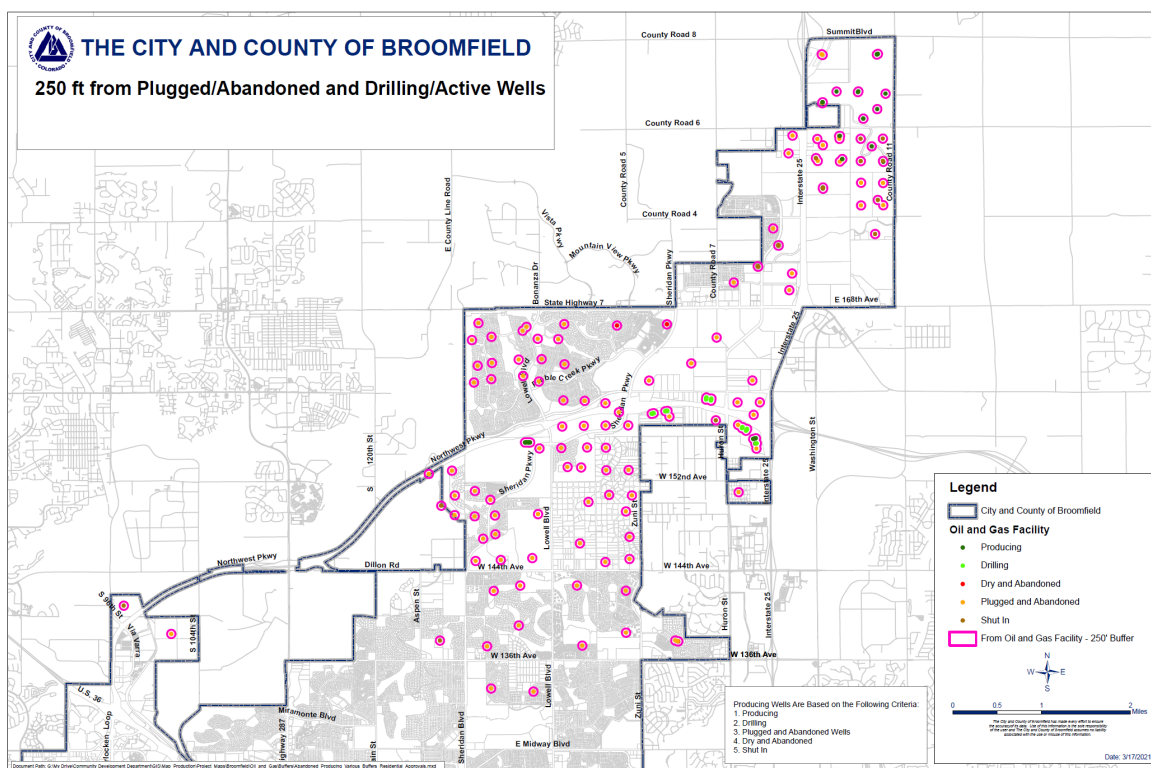


Map 3C - 1000 feet from Plugged and Abandoned Wells

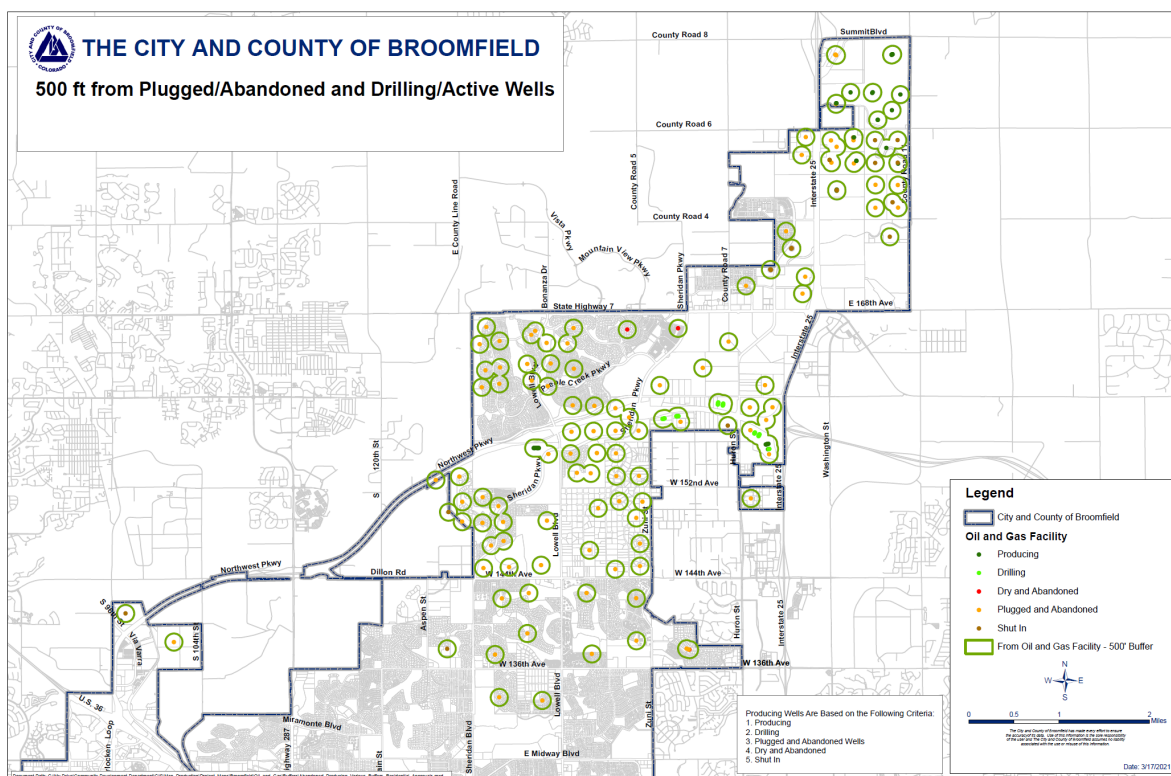


The following maps are a composite showing the setbacks of 250, 500, and 1000 feet from all of the above well statuses (Producing, Drilling, Shut In and Plugged and Abandoned) to show the setbacks areas if the same setback was established from all these well statuses.

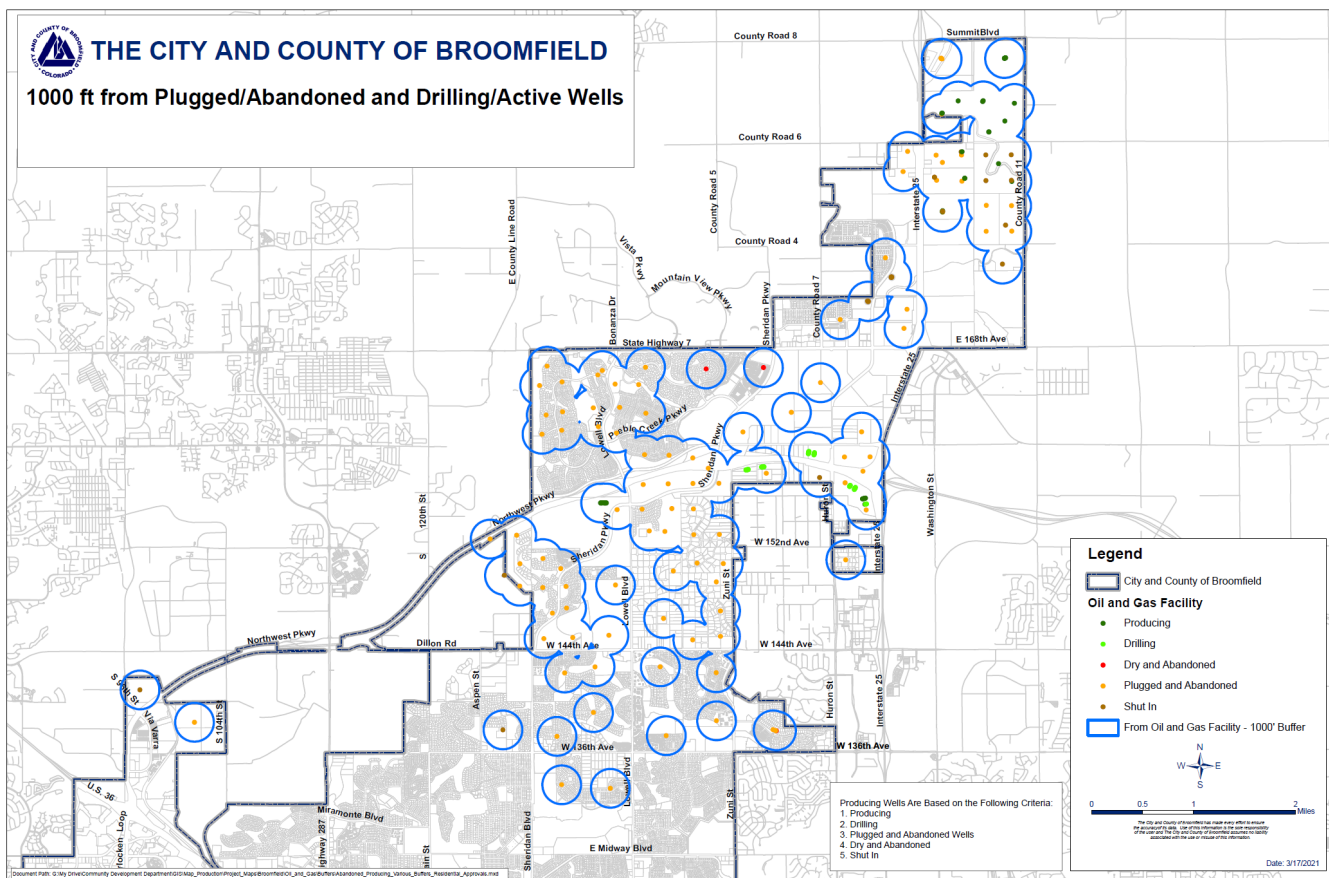
Map 4A - 250 feet from Producing, Drilling, Shut In, and Plugged and Abandoned Wells



Map 4B - 500 feet from Producing, Drilling, Shut In, and Plugged and Abandoned Wells



Map 4C - 1000 feet from Producing, Drilling, Shut In, and Plugged and Abandoned Wells



NEXT STEPS

Staff is requesting direction regarding the reverse setbacks.

First, staff is asking if the City Council is interested in moving forward with a draft ordinance requiring reverse setbacks.

If City Council desires to review such an ordinance:

- What setback distance should be included in the initial draft for active/producing/drilled oil and gas facilities?
- Should setbacks vary based on whether the well was vertically, diagonally or horizontally drilled?
- What setback distance should be included in the initial draft for plugged and abandoned well facilities?
- Regarding existing and fully constructed residential usages, does Council want to incorporate language to allow these uses to remain and continue without limitation in the future? Alternatively, does Council want the draft ordinance to include requiring existing residential uses to follow typical non-conforming requirements for any future construction or development?
- This memorandum focused on reverse setbacks from residential uses. Does City Council want staff to prepare the ordinance to cover reverse setbacks from other land uses (commercial, employment, open lands/parks, or institutional)?
- Does Council want to consider changes to the notices provided for new residential lots within 1,320 feet of active wells and 200 feet of plugged/abandoned well facilities in conjunction with or in lieu of changes to reverse setbacks?

- Require a larger notice area?
- Require a notice as part of leases for multi-family development?
- Make changes to the required method or content of existing notices?

If directed by the City Council, staff will bring forward an ordinance for consideration on first reading, with the potential changes to the reverse setbacks from oil and gas facilities. A public hearing will be scheduled with the second reading of the ordinance.

MEMORANDUM

This memo describes how local jurisdictions in Colorado are regulating with respect to reverse setbacks from existing oil and gas facilities, including plugged and abandoned wells. Reverse setbacks regulate the distance within which a residential developer may construct a new home near an existing oil and gas facility. Below is a summary of various municipalities and their reverse setbacks.

| Municipality | Reciprocal Setback |
|----------------------|--|
| Broomfield | Residential: 200 feet Schools: 500 feet |
| Boulder | None |
| Fort Collins | Residential: 500 feet High Occupancy: 1,000 feet |
| Erie | 350 feet |
| Commerce City | 1,000 feet |
| Thornton | Any development within 500 feet of the city will notify the owner/operator and triggers certain requirements |
| Aurora | None |
| Loveland | Residential: 500 feet High Occupancy: 1000 feet |
| Longmont | Residential: 750 feet Plugged/Abandoned: 150 feet |

I. City and County of Broomfield

Broomfield regulations stipulate that no residential lots in any subdivision will be platted any closer than 200 feet from an oil and gas facility. In addition, the regulations state that no public or private school building will be located any closer than 500 feet from an oil and gas facility.

16-28-180 - Oil and gas wells or injection wells.

- (A) No residential lots in any subdivision shall be platted any closer than 200 feet from an oil and gas facility as defined in section 17-54-020, B.M.C.
- (B) No public or private school building in any subdivision shall be located any closer than 500 feet from an oil and gas facility as defined in section 17-54-020, B.M.C.

II. Boulder

Boulder does not appear to have reverse setbacks from oil and gas facilities in place at this time. They have rules for [Yards, Lot Lines, & Setbacks](#), but I do not see anything specific to setbacks in relation to existing oil and gas facilities.

III. Fort Collins

Fort Collins' regulations provide for reverse setbacks. For residential development, the rules require a minimum buffer between a dwelling and any oil and gas location of 500 feet. For High Occupancy Building Units, the rules require a minimum buffer distance of 1,000 feet. Fort Collins updated this rule in 2018 to increase the minimum distances (from 350 feet to 500 feet for residential, and from 500 feet to 1,000 feet for HOBUs).

Fort Collins bases the purpose of their reverse setback in terms of avoiding nuisances and other adverse impacts:

The purpose of this Section is to provide standards to separate residential land uses and high occupancy building units from existing industrial uses in order to eliminate or minimize potential nuisances such as dirt, litter, noise, glare of lights and unsightly buildings or parking areas, or to provide spacing to reduce adverse impacts of noise, odor, air pollutants, hazardous materials or site contamination, or danger from fires or explosions.

3.8.26 - Buffering for Residential and High Occupancy Building Units

(C)(4)

(b) Minimum Buffer Distances. The following minimum buffer distances shall apply:

1. Residential Development. 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. Public playgrounds, parks, recreational fields, or community gathering spaces shall not be placed within a buffer. Private common areas within a buffer shall not contain playgrounds, parks, recreational fields, or community gathering spaces.
2. High Occupancy Building Units. The minimum buffer between a high occupancy building unit and any oil and gas location shall be one thousand (1,000) feet, or the Colorado Oil and Gas Conservation Commission designated setback distance, whichever is greater. Public or private playgrounds, parks, recreational fields, or community gathering spaces shall not be allowed within a buffer.

(c) Alternative compliance buffer reduction from plugged and abandoned wells.

Upon applicant request, the decision maker may approve a reduced buffer distance from a plugged and abandoned well for which reclamation has been completed, all of the aforementioned in accordance with Colorado Oil and Gas Conservation Commission regulations, in lieu of the minimum buffer distances set forth in the immediately preceding Subsection (b), provided that the approved reduced buffer is no less than 150 feet from the permanently abandoned well and meets the requirements specified below.

1. Procedure. To request alternative compliance, an alternative compliance buffer reduction plan shall be prepared and submitted in accordance with the submittal requirements established by the Director. At a minimum, the plan must:
 - a. Clearly identify and discuss the proposed buffer reduction and the ways in which the plan will equally well or better eliminate or

minimize the nuisances and reduce the adverse effects referenced in the purpose of this Section than would a plan which complies with the separation and spacing standards of this Section.

b. Include information regarding environmental testing and monitoring for the site. Site investigation, sampling, and monitoring shall be conducted to demonstrate that the well has been properly abandoned and that soil, air and water quality have not been adversely impacted by oil and gas operations or facilities or other sources of contamination. Such sampling and monitoring shall be conducted by a qualified environmental engineering or consulting firm with experience in oil and gas investigations. Director approval that the sampling and monitoring plan contains the information required pursuant to this subsection b) is required prior to sampling occurring and such plan shall include, but is not limited to, the following:

- i. Site survey, historical research, and/or physical locating techniques to determine exact location and extent of oil and gas operations and facilities.
- ii. Documentation of plugging activities, abandonment and any subsequent inspections.
- iii. Soil sampling, including soil gas testing.
- iv. Groundwater sampling.
- v. Installation of permanent groundwater wells for future site investigations.
- vi. A minimum of five (5) years of annual soil gas and groundwater monitoring at the well location.

c. Upon completion of the site investigation and sampling, not including the ongoing monitoring, the consultant must provide a written report verifying that the soil and groundwater samples meet applicable EPA and State residential regulations and that a reduced buffer would not pose a greater health or safety risk for future residents or users of the site. Otherwise, the decision maker may specify an appropriate buffer distance or require that the following actions be completed by a qualified professional before development may occur, including but not limited to:

- i. Remediation of environmental contamination to background levels.
- ii. Well repair or re-plugging of a previously abandoned well.

2. Review Criteria. To approve an alternative compliance buffer reduction plan, the decision maker must first find that the proposed alternative plan eliminates or minimizes the nuisances and reduces the adverse effects referenced in the purpose of this Section equally well or better than would a plan which complies with the separation and spacing standards of this Section. An approved alternative compliance buffer reduction plan shall be exempt from the screening requirements of Chart 2 - Buffer Yard Types and below Subsection (e) regarding fencing.

- (d) Disclosure. If any residential development or dwelling, or high occupancy building unit is proposed to be located within one thousand (1,000) feet of an oil and gas location, the following requirements shall apply:
1. At such time as the property to be developed is platted or replatted, the plat shall show the one-thousand-foot radius on the property from such oil and gas location and shall contain a note informing subsequent property owners that certain lots shown on the plat are in close proximity to an existing oil and gas location.
 2. For residential developments requiring a declaration pursuant to the Colorado Common Interest Ownership Act, a statement shall be included in such declaration specifying the lots within such residential development upon which dwellings may be constructed that are within one thousand (1,000) feet of an oil and gas location. The approved plat for such residential development shall be attached to the recorded declaration. Where no such declaration is required, the property owner shall record a statement on the property where the dwelling is located indicating that such property is located within one thousand feet of an oil and gas location.
- (e) Fencing. If any residential development is proposed to be located within five hundred (500) feet of an oil and gas location, and if an existing fence does not surround the oil and gas location, the developer must erect a fence that restricts public access to the oil and gas location along the property boundary between the oil and gas location and the development.

IV. Erie

Erie's rules require residential lots and non-residential buildings, community parks, neighborhood parks and pocket parks, to be set back a minimum of 350 feet from existing oil and gas wells and production facilities. The rules also contemplate future development and mandate that all subdivisions that have oil and gas rights associated with the property that have not been executed need to take those rights into consideration when platting. The Town strongly encourages developers to either purchase the mineral rights or to negotiate the co-location of future and/or existing wells to minimize the impact on subdivision of the property.

Erie includes a broad purpose section in this part of their rules:

A. Purpose: The standards in this chapter apply to the physical layout and design of development in the town. These provisions address the physical relationship between development and adjacent properties, public streets, neighborhoods, and the natural environment. The general intent is to implement the town's comprehensive master plan vision of an attractive, efficient, and livable community that features stable neighborhoods and promotes a mix of uses in well-designed community focal points. The specific purposes of this chapter include:

1. To encourage the proper use of the land by promoting an appropriate balance between the built environment and the preservation and protection of open space and natural resources;

2. To protect public and private investment through preservation of open spaces, protection of natural resources including existing trees, providing buffers between incompatible uses and along roadways, and encouraging the planting of new trees and vegetation as deemed appropriate;
3. To promote sound management of water quality and quantity through preservation of natural areas and by encouraging the use of native plant materials;
4. To provide appropriate standards to ensure a high quality appearance for the Town and promote good design while also allowing flexibility, individuality, creativity, and artistic expression;
5. To strengthen and protect the image, identity, and unique character of the Town and thereby to enhance its business economy;
6. To encourage high quality retail commercial businesses that provide positive sustainable revenue sources to the town;
7. To protect and enhance residential neighborhoods, commercial districts, and other areas by encouraging physical development that is of high quality and is compatible with the character, scale, and function of its surrounding area; and
8. To encourage developments that relate to adjoining public streets, open spaces, parks, trails, and neighborhoods with building orientation and physical connections that contribute to the surrounding network of streets and walkways.

10.6.14 Development and Design Standards to Accommodate Oil and Gas Wells and Production Facilities

A. Existing Oil and Gas Wells and Production Facilities

1. All development with existing oil and gas wells and associated above ground production facilities shall provide the following setback to lots, buildings, streets, trails and parks from existing wells and associated above ground production facilities:
 - a. Residential lots and non-residential buildings, community parks, neighborhood parks and pocket parks, shall be set back a minimum of 350 feet.
 - b. Street right-of-ways and trails shall be setback a minimum of 150 feet.
 - c. Exceptions to A.1.a shall be as follows:
 - i. Residential lots platted prior to May 4, 2018 and residential lots designated in plats submitted to the Town pursuant to completed Preliminary Plat, Final Plat, or Minor Subdivision applications prior to May 4, 2018 shall be subject to the former minimum 150 foot setback standard.
 - ii. Non-residential buildings, other than assembly buildings, shall be subject to the former minimum 150 foot setback standard if at least one of the following conditions exists prior to May 4, 2018:
 - (A) The non-residential building is existing.
 - (B) The non-residential lot is existing.
 - (C) The non-residential lot is proposed in a completed Preliminary Plat, Final Plat, or Minor Subdivision application submitted to the Town.

D. Future Oil and Gas Wells and Production Facilities

1. All subdivisions that have oil and gas rights associated with the property that have not been executed need to take those rights into consideration when platting. The Town strongly encourages developers to either purchase the mineral rights or to negotiate the co-location of future and/or existing wells to minimize the impact on subdivision of the property.
2. Any agreements between the property owner and mineral right owner shall be submitted to the Town. Location and setback information agreed to in the agreement shall be reflected on the plat.
3. If co-location of facilities will affect existing or proposed Town owned sites, then the Town shall be a party to the agreement.
4. The following setbacks shall be provided to future oil and gas wells and above ground production facilities:
 - a. Residential lots and non-residential buildings shall be set back a minimum of 350 feet. This setback may be reduced as an incentive to developers to co-locate facilities. Developers who propose to co-locate facilities shall provide the Town with a copy of a recorded surface use agreement with the mineral right owner/lessee prior to approval of a Site Plan, Final Plat, or Minor Subdivision. For applications that require a Preliminary Plat, the applicant shall provide the Town with a draft of the surface use agreement and/or a letter from the mineral right owner/lessee acknowledging that they are actively negotiating a surface use agreement to colocate the facilities as represented by the applicant. Any reduction of the 350 foot setback proposed by the applicant for Town consideration shall be in compliance with all COGCC regulations and requirements.
 - b. Street right-of-ways shall be setback a minimum of 150 feet from future oil and gas wells and above ground facilities.
5. The future oil and gas well and production facilities setbacks identified above shall be identified on the plat.
6. In a residential subdivision the future well and associated production facilities shall be placed in a tract.
7. Subdivision design shall address the following Town requirements for future access roads and pipelines to future oil and gas wells and associated production facilities:
 - a. Subdivision design shall minimize the need for future access roads to connect with local street classifications. If future access roads are designed to connect to local streets then the local streets accessed shall be designed to address the weight load requirements of the vehicles accessing the well and production facilities.
 - b. An access plan for the future well, production facilities, and pipelines shall be submitted to the Town. The Plan shall identify which local streets that are impacted by well access needs. The streets identified shall be designed to address the weight load requirements of the vehicles accessing the well and production facilities. The Plan shall also identify routing of future

pipelines so that the appropriate easements and or tracts can be created during the platting process to accommodate the pipelines.

- c. Future gas and oil well pipelines and their associated easements on the Final Plat shall not be located on residential lots.
- d. Streets shall be platted so future pipelines will cross at a substantially right angle to the street.
- e. The Final Plat shall show easements for future gas and oil well pipelines that are a minimum of 30 feet wide.

V. Commerce City

Commerce City is currently proposing regulations for reverse setbacks. Since the last version of this memo, Commerce City has updated their proposed rule on reverse setbacks. Their updated proposed rule mandates no new residential lots may be platted within 1000 feet of permitted well sites. The prior version of their proposed rules used a tiered reverse setback system, wherein for wells that are already producing, the proposal would set back new housing development 300' from 1-10 wells, 400' from 11-24 wells, and 500' from 25 or more wells.

[EXHIBIT G TO ORDINANCE 2266](#)

Sec. 21-6280. Additional Subdivision Standards relating to Oil & Gas Sites Oil & Gas Site Setbacks.

- (1) For permitted Well Sites where all permitted wells have not been plugged and abandoned in compliance with all applicable COGCC standards and regulations, no new residential lots may be platted within 1,000' of such site.
- (2) Measurements shall be taken from the edge of the production site, in the same manner as defined in 21-5266(6)
- (3) Plat requirements. The following information shall be denoted on all final plats:
 - a. The location of any oil and gas wells, flowlines, and gathering lines, and any associated easements;
 - b. The location of all recorded surface use agreements; and
 - c. The location of any plugged and abandoned oil and gas wells, flowlines and gathering lines, including a plat designation surrounding such wells and expressly prohibiting any habitable building or structure within 50 feet.
- (4) Vacation of Existing Easements. No easement may be vacated for a previous or existing well, flowline, or gathering line, unless documentation is provided to the city demonstrating such well, flowline, or gathering line has been vacated in compliance with all applicable COGCC regulations.

VI. Thornton

Thornton regulations require certain measures when the city approves any type of residentially zoned real property that will be located within 500 feet of any well site or production site. These include lighting study and noise management plan and signage requirements. The city manager must provide written notice to the relevant operator of the approval of residential development

within 500 feet of the existing oil and gas operations. The standards triggered by the new development must be satisfied by the operator within 90 days.

Thornton's oil and gas regulations base their authority in land use and other police powers:

The purpose of these regulations is to use the city's land use and other police powers to provide a framework for the responsible exploration and production of oil and gas resources in a manner that is compatible with surrounding land uses, mitigates adverse impacts, and is consistent with and subject to the protection of public health, safety, welfare and the environment. These regulations are intended to harmonize with state laws, regulations, and rules pertaining to oil and gas development.

Sec. 18-861. Applicability.

(d) Pre-existing oil and gas operations.

- (1) Except for the requirements of Section 18-861 (d)(2), these regulations do not apply to oil and gas operations that exist as of the effective date of these regulations.
- (2) When the city approves any type of residentially zoned real property that will be located within 500 feet of any well site or production site in use by an oil and gas operation in existence as of the effective date of these regulations, the operator shall be required to implement the lighting study set forth in Section 18-870(f)(2) and the noise management plan set forth in Section 18-870(f)(3) and will be required to follow the signage requirements in Section 18-881 (h) of these regulations. Measurement of the 500-foot restriction shall be taken from the closest edge of either the well pad or aboveground production facilities to the boundary line of the residentially zoned real property. The operator shall coordinate with the developer of the residentially zoned real property to provide the location of all existing flowlines and gathering lines associated with the oil and gas operation. The operator shall mark all such lines within the oil and gas location.
- (3) The city manager shall provide written notice to the operator of the approval of residential development within 500 feet of the existing oil and gas operations. The standards triggered by the new development must be satisfied by the operator within 90 days unless otherwise agreed to by the City Manager.

VII. Aurora

I do not see any reverse setback requirements for Aurora.

VIII. Loveland

Loveland regulations require residential development to be 500 feet from oil and gas facilities and High Occupancy buildings to be 1,000 feet away.

Loveland bases their authority for reverse setbacks in order to protect public health, safety and welfare:

18.10.401 Purpose of Division

The purpose of this Division is to set out the standards within overlay zones in the vicinity of existing oil and gas facilities. The overlay zones allow certain land uses that

are compatible with the industrial nature of oil and gas facilities, and disallow other land uses in order to protect the public health, safety and welfare. Nothing in this Division is intended to regulate the location of an oil and gas facility, but only to regulate the use of land proposed to be developed for other uses and purposes.

18.10.402 Oil and Gas Overlay Zone and Sub-Zone Boundaries

The boundaries of the Oil and Gas Overlay (“OGO”) Zone extend 1,000 feet from the boundaries of each oil and gas facility within the City limits, or within 1,000 feet outside of the City limits. OGO Zone boundaries surrounding oil and gas facilities outside of the City limits shall only be mapped within the City limits. The OGO Zone is divided into three subzones:

1. The Critical Sub-Zone (“OGO-CZ”), which extends 200 feet from the outer boundary of each oil and gas facility;
2. The Restricted Sub-Zone (“OGO-RZ”), which extends 300 feet from the outer boundary of each OGO-CZ; and
3. The High Occupancy Building Sub-Zone (“OGO-HO”), which extends 500 feet from the outer boundary of each OGORZ.

18.10.403 Land Use Restrictions

- A. Generally. Notwithstanding the land uses that are allowed by the underlying zones established in this title, land that is located in the Critical Zone (“OGO-CZ”), Restricted Zone (“OGO-RZ”), or High Occupancy Building Zone (“OGO-HO”), development of such land shall be subject to and shall comply with the applicable restrictions set out in this Division.
- B. Critical Zone. In the OGO-CZ, land uses shall be limited to any of the following:
 1. Essential underground public utility facilities; and
 2. Undeveloped, access-restricted open space.
- C. Restricted Zone.
 1. Land Use. In the OGO-RZ, land uses shall be limited to any of the following:
 - a. Airport, heliport, or helistop;
 - b. Composting facility;
 - c. Storage yard;
 - d. Essential public utility uses, facilities, services and structures;
 - e. Heavy industry;
 - f. Wireless telecommunications facilities (all types);
 - g. Nursery or greenhouse, wholesale;
 - h. Recycling collection center (attended); Recyclable materials processing;
 - i. Resource extraction (minerals);
 - j. Resource extraction (oil and gas);
 - k. Self-storage;
 - l. Street;
 - m. Heavy logistics center;
 - n. Waste transfer station;
 - o. Disposal;
 - p. Passenger motor vehicle sales or rental;
 - q. Heavy motor vehicle sales or rental;

- r. Motorcycle, scooter, or ATV sales or rental.
- 2. Approval Process. Generally, the land uses listed in subsection C.1., above, shall be permitted in the OGO-RZ if approved by adaptable use review, even if the underlying zoning or approved development plan governing the subject property prohibits such land use. However, if the underlying zone requires conditional use review for the proposed use, then conditional use review is required.
- 3. Restrictions. None of the uses listed above shall include an outdoor assembly area, building, or surface or structured parking lot within the OGO-RZ.
- D. High-Occupancy Building Zone. In the high occupancy building zone, all land uses authorized for the affected land by the land's underlying zone as provided in this UDC shall be allowed subject to the requirements of that zone, except that high occupancy buildings and outdoor assembly areas shall not be allowed within this zoning overlay district.

IX. Longmont

Longmont regulations stipulate that proposed structures including residential lots, parks, sports fields and playgrounds must be located 750 feet or more from existing oil and gas wells and production facilities. The rules also require proposed occupied structures or additions, sports fields or playgrounds be located 150 feet or more from existing plugged and abandoned or dry and abandoned oil and gas wells.

Longmont bases its authority to regulate oil and gas operations and facilities in land use authority and police power:

- a. Purpose Statement.
 - i. The purpose of this section is to facilitate the exploration and production of oil and gas resources within the City in a responsible manner. The City has a recognized, traditional authority and responsibility to regulate land use within its jurisdiction, including oil and gas drilling, to provide for the orderly development and protection of the community. These regulations are intended as an exercise of this land use authority and the police power.
 - ii. These regulations are enacted to preserve the rights and privileges of surface and mineral estate owners and lessors, while ensuring the health, safety, and general welfare of the present and future residents of Longmont and surrounding areas and the preservation and protection of wildlife and the environment. The City's goal is to work cooperatively with oil and gas applicants and operators, affected individuals, groups or institutions, the Colorado Oil and Gas Conservation Commission, and other municipal, county, state and federal agencies and interested parties to ensure that potential land use and environmental conflicts are adequately addressed and mitigated.

32. Oil and Gas Operations and Facilities.

- w. Specific Development Standards

- ii. Setbacks/Location of Proposed Structures, Platted Residential Lots, Parks, Sports Fields and Playgrounds, Designated Outside Activity Areas, Public Roads, and Major Above Ground Utility Lines from Existing Wells and Production Facilities. Proposed occupied structures, platted residential lots, sports fields and playgrounds, and designated outside activity areas shall be located 750 feet or more from existing oil and gas wells and production facilities. Proposed unoccupied structures shall comply with local fire code requirements. Proposed public roads and major above ground utility lines shall be located 150 feet or more from existing oil and gas wells and production facilities
- iii. Setbacks/Location of Proposed Structures, Platted Residential Lots, Sports Fields and Playgrounds from Plugged and Abandoned or Dry and Abandoned Wells. Proposed occupied structures or additions, sports fields or playgrounds shall be located 150 feet or more from existing plugged and abandoned or dry and abandoned oil and gas wells. Proposed unoccupied structures shall be located 50 feet or more from existing plugged and abandoned or dry and abandoned wells. No proposed residential lots shall include any portion of plugged and abandoned or dry and abandoned oil and gas wells.