



SUBJECT: CASE NO. LDC23-003 – OIL AND GAS LAND DEVELOPMENT CODE AMENDMENT

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PURPOSE AND REQUEST

This County-initiated application proposes amending the existing Oil and Gas rules in Section 5-3.6 of the Land Development Code (LDC) to modify the application process, add two health and safety-related rules, allow data mining on well pads and add a new setback.

BACKGROUND

The proposed new regulations, shown as redlines to the existing Oil and Gas regulations in Attachment 1, reflect recent direction received from the Board of County Commissioners and staff-recommended changes to the Oil and Gas regulations adopted in November of 2021. During the review of several Oil and Gas applications after the adoption of the November 2021 regulations, staff identified a number potential improvements in the areas of health, safety, and implementation. Additionally, the proposed Lowry Ranch Comprehensive Area Plan (CAP), which proposes a number of oil pad sites near the Aurora Reservoir, highlighted deficiencies in public water supply protections. Although the Board of County Commissioners chose not to enact a moratorium on oil and gas development, the Lowry Ranch CAP applicant committed to pausing any applications for six months. The proposed amendments includes the staff-recommended improvements and provide additional reservoir protections. The proposed amendments address the urgent concerns surrounding potential Oil and Gas development near the Aurora Reservoir and correct omissions discovered after the initial adoption of the regulations.

PROPOSED REGULATION SUMMARY AND ANALYSIS

The proposed regulations are listed below. Proposed added or removed language is depicted in italics.

- Add wording to Section B, **Relationship to State of Colorado Rules:** *The Operation of a Facility in violation of any applicable federal, state, or other local law or regulation that results in adverse or negative surface impact(s) on or to public facilities and services, water quality and source, noise, vibration, odor, light, dust, air emissions and air quality, land disturbance, reclamation procedures, cultural resources, emergency preparedness and coordination with first responders, security, or traffic and transportation shall constitute a violation of the Land Development Code which may be enforced by law as other violations of the Land Development Code.*
- Amend Section E. 2, **Neighborhood Meetings.** The applicant shall send notification of the meeting to the Planning Division and to *all* property owners *of record, all occupied residences if occupants are different from the record owner, and all* registered

homeowners' associations to require the notice of the neighborhood meeting to be sent to all occupied residences, if the occupants are different from the recorded owner and all registered homeowners' associations *for residential subdivisions where any portion of the platted subdivision's boundary is within one mile of the proposed facility pad boundary.*

- Add wording to Section E. 4. **Application Submittal Requirements:** *Applications shall include an application narrative, photosimulations of the view of the well pad from nearby properties and documentation of floodplains, wetlands and riparian area boundaries.*
- Amend **Setbacks** Section F.2.b.iii. to add: If an Oil and Gas Facility application that includes a lesser setback is submitted, *it must be approved by the Board of County Commissioners through the Use by Special Review process provided in Section 5-3.4 of the Land Development Code.*
- Add Section F.2.d. **Water Reservoir Setbacks:** *All Oil and Gas Facilities shall be located at least one mile (5,280 feet) from existing or planned and permitted water reservoirs with a capacity of 100 acre/feet or more, unless the applicant can demonstrate that the Oil and Gas Facility is downgradient from the reservoir, in which case the setback shall be 2,000 feet. The water reservoir setback shall be measured from the Oil and Gas Facility's pad boundary to the nearest high watermark of the reservoir or as mapped on reservoir plans approved with permitting for a planned and permitted reservoir.*

The water reservoir setback may be reduced below 2,000 feet if approved through the Use by Special Review process provided in Section 5-3.4. For approval of a lesser setback under this subparagraph, the Operator must establish the following criteria: 1. The oil and gas facility is downgradient from the reservoir; 2. The owner or operator of the reservoir does not object to the lesser setback; 3. Due to topography or other special condition of the property, the lesser setback is necessary to allow for safe construction, installation, and operations at the Facility; 4. Alternative Oil and Gas Facility design, best management practices, control technologies, and/or proposed conditions of approval proposed for the Facility will be effective to avoid, minimize, or mitigate adverse impacts upon such drinking water sources, and that with such mitigative measures, the lesser setback as proposed will provide substantially equivalent protection as the 2,000-foot setback; 5. That granting the lesser setback for the Facility as proposed and designed will not adversely impact public health, safety, or welfare or the environment; and 6. No setback may be reduced below the 500-foot setback applicable to other perennial surface water bodies.

- Amend Section F.3.a. **Health and Safety Requirements**: The initial Emergency Action Plan (EAP) and the initial Tactical Response Plan (TRP) shall be forwarded to the County Office of Emergency Management (“OEM”) for review. *OEM shall review and approve or deny approval of the EAP and TRP within two weeks of submission by the Operator.* ~~at~~ Provided that an Administrative Use by Special Review or full USR has been approved for the proposed Oil and Gas Facility and provided that OEM has approved the initial EAP and the initial TRP and further provided that required engineering permits have been obtained from Arapahoe County, the applicant or other Operator may commence construction of the pad and access road for the proposed Oil and Gas Facility. After the pad and access road have been constructed, the Operator shall prepare ArcGIS Shape files for the well pad and access road.
- Amend Section F.3.a. **Health and Safety Requirements** to remove: *The Operator shall prepare and provide to OEM a detailed EAP and a detailed TRP, which incorporate the ArcGIS information for OEM’s review and approval prior to commencing any drilling at the site. OEM shall review and approve or deny approval of the detailed EAP and TRP within two weeks of submission by the Operator.*
- Amend Section F.3.m. **Post-Incident Reporting** to add: *In addition to the formal incident report, a post-incident meeting shall be required with County staff. The date, time and location of the post-incident meeting shall be determined by the Public Works and Development Director.*
- Add Section F.3.o. **Handwashing Facilities**: *Operator shall provide hand washing facilities meeting local Public Health Department requirements at portable restrooms during drilling and completion operations.*
- Amend Section F.11.b. **Access Road Standards** (to comply with fire code): Access roads shall be constructed to be at *minimum twenty (20’) feet wide with at least six (6”) inch road base, or applicable International Fire Code standard at the time of application.*
- Amend Section F.11.d to add **Alternate Access Road**: *If an Oil and Gas Facility site incident could prevent emergency access to or from public or private roads, the Operator shall construct an alternative access road meeting these standards.*
- Add **Cryptocurrency Data Mining** to the Permitted Uses Table 3-2.1 to allow this as an accessory use to an existing oil and gas facility and not connected to an electrical grid in the A-E and A-1 zones and **add a definition to the Definitions section 5-4**: *The operation of specialized computer equipment for the primary purpose of adding, securing, or verifying transactions to a peer-to-peer network, also known as a blockchain, or mining one or more blockchain-based cryptocurrencies (a form of electronic currency). This activity typically involves large networks of decentralized*

computer servers that work together around the world to perform calculations and solve algorithms as part of the development and maintenance of a blockchain which is a type of distributed virtual ledger maintained on a peer-to-peer network. Typical physical characteristics of cryptocurrency mining include specialized computer hardware; the use of equipment to cool the hardware and operating space; and high density load electricity use.

- Add a new **definition for the term “Downgradient”** in the Definitions section 5-4 of the Code: *At lower elevation from that of the reservoir measured at its average water level elevation or that there is intervening natural terrain or topography that prohibits the surface mitigation of liquids to the reservoir and there is no evidence of other hydrological connection from the proposed location to the reservoir.*
- Add a new **definition for the term “Planned and Permitted Reservoir”** in the Definitions section 5-4 of the Code: *An unconstructed, but planned reservoir that has received all federal, state, and local permit approvals required under applicable law or regulation to locate a public water reservoir of qualifying capacity at a specific and mapped location within unincorporated Arapahoe County.*

DISCUSSION

The Board of County Commissioners (BOCC) approved [Oil and Gas regulations](#) in November 2021. Since then, two new sites and four amendments to existing sites have been approved and staff have identified potential areas of opportunity that could better align regulations with neighboring jurisdictions and industry best practices. At their March 21, 2023 study session meeting, the BOCC directed staff to develop appropriate amendments to further protect public health, safety, and welfare and the environment.

Staff identified areas of the oil and gas regulations that could be strengthened by creating setbacks from public water reservoirs, incorporating new fire district and health and safety rules and improve the application process by clarifying application submittal requirements. The neighboring municipality of the City of Aurora currently has a one-mile setback requirement between water reservoirs and oil/gas operations with provisions to allow a reduced setback under certain circumstances. The proposed code amendment seeks to align regulations with the neighboring municipality. In crafting the draft amendments, staff consulted with the affected area water providers, Aurora Water and Rangeview Metropolitan District. Both water providers concurred that a one-mile setback between oil and gas operations and existing or planned reservoirs is appropriate, and agreed that a mechanism to permit a shorter setback distance could be appropriate under certain circumstances, such as when the oil and gas facility is located downstream from the reservoir.

Additionally, staff added cryptocurrency data mining as an accessory use to existing oil and gas operations when not connected to an electrical grid. This update was prompted by direction from

the BOCC at a previous study session in October of 2022 when they directed staff to create a land use category for cryptocurrency mining in the Land Development Code. There are currently two oil and gas operators in the County who are utilizing existing well pads with this activity and the October 2022 study session discussed alternatives in which the County could permit this type of land use. Neighboring Adams County is currently working on a code update to permit cryptocurrency mining on oil and gas pads in that jurisdiction. A definition of cryptocurrency mining is proposed in this code amendment. While cryptocurrency mining is an emerging technology and an alternative for 'orphan' well pads that are not connected to a pipeline/gathering system and need a venue to flare methane gas (the methane gas powers generators on the pad site that power several computers that do the cryptomining), there are also potential nuisances, such as noise and air pollution. However, CDPHE does not have enough data to confirm that cryptocurrency mining has greater air pollution impacts than vehicle emissions or other industrial uses. Moreover, due to their isolated location in Agricultural zones and with mandatory minimum 2,000-foot setbacks from residential, there does not seem to be a need at this point for additional operational standards. Given the potential air quality concerns, if cryptocurrency mining is removed from the proposed regulations, staff could further study this with future amendments.

NOTICES AND REFERRALS

To announce the draft rules to the public and other stakeholders, over 200 emails were sent to the email addresses of those who had previously commented regarding the county's Oil and Gas Regulations. The comment due date was June 29, 2023.

Staff posted the proposed amendment on the County's Oil and Gas website on May 29, 2023, as well as a notice of the County's open house planned for June 21. Announcements were also made on NextDoor, Twitter, and Facebook.

On June 26, staff contacted 391 stakeholders about the Oil and Gas regulations redlines and the posters displayed at the June 21, 2023 open house, both of which were posted to the Oil and Gas website.

Public notice of the July 18, 2023 Planning Commission hearing was published in the Centennial Citizen, Englewood Herald, and Littleton Independent on July 6, 2023 and the I-70 Scout on July 7, 2023.

On July 10, 2023, 391 stakeholders were notified by email that the Planning Commission hearing would be held on July 18th in the East Hearing Room at the Arapahoe County Administration Building on South Prince Street.

Staff referred the proposed regulations to State agencies including the Division of Water Resources, Colorado Department of Public Health and Environment (CDPHE), the Colorado Oil & Gas Conservation Commission, the Colorado Geologic Survey, the State Land Board, Front

Range local governments, citizen organizations, Arapahoe County oil and gas operators, industry organizations, developers, water providers, utility providers, HOAs, surrounding jurisdictions, local chambers of commerce, the Assessor's Office, Building Division, Engineering Services Division, Transportation, Open Spaces, the Zoning Division, the Office of Emergency Management, the Arapahoe County Public Health Department, and residents who contacted the county.

In addition to the public open house on June 21st, staff held a meeting with industry stakeholders on June 15th to obtain feedback on the proposed regulations.

STAKEHOLDER COMMENTS

Many commentators expressed either opposition to portions of the draft regulations or suggested alternative wording. Attachment 2 provides a summary table of the stakeholder comments.

Generally, comments received from nearby residents indicate that they are not satisfied with the ability for operators to apply for a lesser setback if conditions are warranted and generally, comments received from the industry indicate that they are not supportive of the new setbacks because they do not believe there is adequate scientific evidence to support the setback.

County staff consulted with the two most affected water providers for these regulations, Aurora Water and Rangeview Metropolitan District. Both water providers have submitted written comments expressing support of the proposed reservoir setbacks and mechanism for requesting lesser setbacks. Staff also consulted with the Office of Emergency Management and area fire districts, and have not received any objections to the proposed code amendments. Please see Attachment 3 for copies of all stakeholder comments received.

Any additional comments received after posting this staff report on the County's website will be presented to the Planning Commission at the hearing.

In response to the stakeholder meetings and comments received, staff made changes to the language of the reservoir setback and added new definitions for "downgradient" and "planned and permitted reservoir". Specifically, staff added six criteria that an applicant would need to demonstrate in order to obtain approval of a USR for a reduced setback below 2,000-feet from the Board of County Commissioners. Those final changes have been incorporated into the redlined version in Attachment 1 and are also noted above in the summary of the regulations on pages 1-4.

ALIGNMENT WITH COMPREHENSIVE PLAN

The proposed Land Development Code amendment is supported by, achieves, and addresses the following goals, policies and strategies of the 2018 Arapahoe County Comprehensive Plan:

Goal GM 3 – Reduce the Loss of Life, Health and Property Due to Risks Posed by Natural and Human-caused Hazards

Human-causes hazards in the Comprehensive Plan include airports, highway and railroad noise zones, Superfund sites and oil and gas facilities. The proposed amendments to the oil and gas regulations will provide appropriate distances between well pads and protected water bodies such as reservoirs, and will provide additional health and safety standards, thus reducing the risk of loss.

Policy GM 3.5 – Protect Existing and New Development from Human-caused Hazards

The proposed amendments to the oil and gas regulations seek to further protect the public health, safety and welfare of Arapahoe County residents.

Strategy GM 3.5(b) – Establish Oil and Gas Operation Setbacks

The proposed amendments to oil and gas operation setbacks will align with comprehensive plan goals of establishing a safe distance between drilling operations and protected water bodies.

Policy PFS 1.4 – Protect and Enhance the Quality of Drinking Water in the County

The proposed amendments to the oil and gas regulations will provide appropriate distances between well pads and water reservoirs, and will provide additional health and safety standards.

FISCAL IMPACT

The fiscal impact to the County of adoption of this amendment to the Oil and gas Regulations is expected to be minor and will only entail increased staff time in Planning for review of more application materials, waiver requests and additional recordkeeping.

RECOMMENDATION

Staff recommends approval of the Land Development Code amendment with the following stipulation:

1. Staff, with the approval of the County Attorney, may correct typographical errors and make such revisions to the Code amendment as are necessary to incorporate the approved amendment into the Land Development Code for publication.

ALTERNATIVES

The Planning Commission could take the following actions:

1. Recommend approval of the Land Development Code amendment as proposed or with modifications.
2. Continue the amendment to a time and date certain for more information.
3. Recommend denial of the Land Development Code amendment.

CONCURRENCE

The Public Works and Development Planning, Engineering, Zoning and the Office of Emergency Management, as well as the County Attorney's office, have reviewed the draft regulations, and the Arapahoe County Public Works and Development Department is recommending approval of this case.

DRAFT MOTIONS

Recommend Approval

In the case of LDC23-003, Oil and Gas Regulations, Land Development Code Amendment, I have reviewed the staff report, including all exhibits and attachments, and have listened to the presentation and any public comment as presented at the hearing and hereby move to recommend approval of the proposed amendment to the Land Development Code, subject to the following stipulation:

1. Staff, with the approval of the County Attorney, may correct typographical errors and make such revisions to the Code amendment as are necessary to incorporate the approved amendment into the Land Development Code for publication.

Recommend Denial

In the case of LDC23-003, Oil and Gas Regulations, Land Development Code Amendment, I have reviewed the staff report, including all exhibits and attachments, and have listened to the presentation and any public comment as presented at the hearing and hereby move to recommend denial of the proposed amendment to the Land Development Code.

1. *State any reason for denial.*

Continue to Date Certain:

In the case of LDC23-003, Oil and Gas Regulations, Land Development Code Amendment, I move to continue the hearing to [date certain], 6:30 p.m., to obtain additional information and to further consider the information presented.

ATTACHMENTS

1. Oil and Gas Regulations Amendment, redlined draft.
2. Stakeholder Comments Summary Table
3. Stakeholder Comments Received

5-3.6. Use By Special Review – Oil and Gas Facilities

A. Intent and Applicability

1. The intent of this Section 5-3.6 is to describe the approval process and approval criteria to locate an Oil and Gas Facility in unincorporated Arapahoe County and to regulate the surface impacts of an Oil and Gas Facility's operations to such extent as is reasonable and necessary to protect public health, safety, and welfare and the environment in accordance with the authority provided under SB19-181. Any Oil and Gas Facility and related site preparation or development, including any such Facility that requires a Colorado Oil and Gas Conservation Commission ("COGCC") permit, shall not be located, constructed, or operated within the unincorporated jurisdiction of Arapahoe County without first obtaining Administrative Use by Special Review or Use by Special Review approval in accordance with the Arapahoe County Land Development Code, regardless of the zone district or category in which the operation will be located. If permitted in accordance with the requirements of the Arapahoe County Land Development Code, Oil and Gas Facilities are allowed in all zone districts, including Planned Unit Developments, subject to obtaining all required Federal, State, or other Local permits and approvals, and also subject to continued compliance with the requirements for the Oil and Gas Facility and the operations thereof as set forth in this Land Development Code, unless and to the extent waived or otherwise exempted pursuant to this Land Development Code.
2. The Administrative Use by Special Review process available as provided under this Section 5-3.6 shall apply only to an "Oil and Gas Facility" as defined in Chapter 7-2 of this Land Development Code.
3. Nothing in this Section of the Land Development Code is intended to waive or modify any applicable provision of the Arapahoe County Regulations Governing Areas and Activities of State Interest (1041 Regulations).
4. All Oil and Gas development authorized by this section shall comply with applicable provisions of the Arapahoe County building and engineering standards, including but not limited to, the Floodplain Regulations, the Building Code, the Grading, Erosion, and Sediment Control (GESC) Manual, the Stormwater Management Manual, the Stormwater Ordinance, and the Infrastructure Design and Construction Standards.

B. Relationship to State of Colorado Rules

To the extent that there are differing standards or any conflict between an Arapahoe County requirement and any State of Colorado law, regulation or rule, the stricter standard or law, regulation or rule shall apply. The Operation of a Facility in violation of any applicable federal, state, or other local law or regulation that results in adverse or negative surface impact(s) on or to public facilities and services, water quality and source, noise, vibration, odor, light, dust, air emissions and air quality, land disturbance, reclamation procedures, cultural resources, emergency preparedness and coordination with first responders, security, or traffic and transportation shall constitute a violation of the Land Development Code which may be enforced by law as other violations of the Land Development Code.

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C. Relationship to Section 5-3.4 of the Land Development Code

1. This Section provides for an Administrative Use by Special Review process for Oil and Gas Facilities, so that if an applicant meets administrative approval criteria, as set forth in this Section 5-3.6, and obtains approval pursuant to the process set forth herein, then separate approval under Section 5-3.4.B (Use by Special Review) of this Land Development Code is not required.
2. As an alternative to the Administrative Use by Special Review process set forth in this Section for approval to locate a proposed Oil and Gas Facility in unincorporated Arapahoe County, an applicant may submit an application in compliance with Section 5-3.4 (Use by Special Review), except to the extent modified in 5-3.6.J of this Section. Any Oil and Gas Facility approved through the USR process in Section 5-3.4 as modified by Subsection J of this Section 5-3.6 shall be subject to and operate in compliance with the Operational Standards specified in subsection F of this Section 5-3.6.
3. This Section, and Section 5-3.4 for a USR application if applicable, shall govern all applications for a permit to locate, construct or operate an Oil and Gas Facility, including wells, well pads, access roads and other related infrastructure, within the unincorporated jurisdiction of Arapahoe County. These regulations do not apply to pipelines, gathering systems or transmission lines. Pipelines,

gathering systems and transmission lines are governed by the Use by Special Review process outlined in 5-3.4 and by the Arapahoe County 1041 Regulations.

D. Administrative approval criteria

In order to obtain Administrative Use by Special Review approval for an Oil and Gas Facility, an applicant shall first satisfy the following Administrative Review Criteria:

1. Satisfy Submittal Requirements: The application and exhibits for the Administrative Use by Special Review must satisfy all applicable submittal requirements in this Section 5-3.6 and in the Development Application Manual.
2. Compliance with Land Development Code Requirements: The proposed Oil and Gas Facility must comply with all siting and design requirements and standards specified in this Section 5-3.6.
3. Environmental/Public Health and Safety Impacts: The proposed Oil and Gas Facility must be designed to protect against and minimize adverse impacts to public health, safety, and welfare and to the environment. The Oil and Gas Facility must address and mitigate any site-specific conditions that, by reason of oil and gas operations at that location, present a risk of adverse impacts to the public health, safety, or welfare, or to the environment. Approvals may be conditioned in accordance with these regulations to the extent necessary and reasonable to protect the public health, safety, or welfare and the environment.
4. Emergency Service Providers: The Oil and Gas Facility applicant must provide a commitment to serve ("will serve") letter from the authority having jurisdiction for providing emergency services (fire protection and emergency medical services) for that facility, or if no authority has jurisdiction, provide proof of a contract for emergency services from an emergency services provider with the ability to provide such emergency services.
5. Facilities on Arapahoe County Owned Property: For Oil and Gas Facilities proposed on Arapahoe County owned property, including open space property, the applicant shall provide an Alternative Location Analysis (ALA) for the proposed location that meets the requirements of Rule 304(b)(2)(C), as adopted by the Colorado Oil and Gas Conservation Commission in its Rules and Regulations, as amended from time to time. In the event such ALA demonstrates that a location not on County owned property is technically feasible and can meet the requirements of this Land Development Code for approval, the application for location on County owned property may be denied. In the event the ALA demonstrates that no location other than on the County property is technically feasible, the application shall be processed as a USR in accordance with the provisions of Section 5-3.4 and Section 5-3.6.J of the Land Development Code.

E. Administrative process

1. Application Process
 - a. Applications for an Administrative Use by Special Review for proposed Oil and Gas Facilities will follow the application process outlined in Section 5-2.1.B of the Land Development Code, Common Procedures for an Application.
 - b. Once a complete application has been submitted, County staff will refer the application for review to the various divisions of the PWD and other Arapahoe County Departments or Offices, as deemed appropriate. An application may require and will be referred for review to outside agencies such as Colorado Parks and Wildlife (CPW), any life-safety providers, adjacent jurisdictions, local public health department, the U. S. Army Corps of Engineers, and others as may be deemed appropriate.
 - c. The applicant shall provide a written response to all staff and referral agency comments.
 - d. Upon completion of the referral process and acceptance of the final copy of the complete application and exhibits by the PWD, the application materials will be forwarded for final review to the PWD Director.
2. Neighborhood Meeting

Prior to submitting an application to Arapahoe County, the applicant shall conduct a neighborhood meeting to describe and take neighbors' input on the proposed Oil and Gas Facility. The applicant shall send notification of the meeting to the Planning Division and to all property owners of record, all occupied residences if occupants are different from record owner, and all registered homeowners' associations for residential subdivisions where any portion of the platted subdivision's boundary is within one mile of the proposed facility pad boundary. Meetings may be

conducted in person or utilizing an electronic virtual or remote meeting platform. Notice of the meeting must be sent no less than 15 days prior to the scheduled meeting date. At said meeting, the applicant must provide information concerning the development plans for the specific facility, including the timing and phasing of construction, drilling and completion, the planned access route, and mitigations planned to address noise, light, odor, traffic, and visual impacts. The applicant shall include with its application for the proposed facility a summary of the neighborhood meeting and the list of attendees from the sign-in sheet(s).

3. Application Notice Requirements

- a. The applicant shall provide written notification by U.S. Mail to all property owners of record, all occupied residences if occupants are different from record owner, and all registered homeowners' associations for residential subdivisions where any portion of the platted subdivision's boundary is within one mile of the pad boundary of the proposed Oil and Gas Facility that an application for an Administrative Use by Special Review for an Oil and Gas Facility, will be filed with the County. The Notice of Application shall meet the format prescribed by the County and shall be mailed at the time of filing the application with the County. The property owners of record shall be those identified in the County Assessor's property records. The Planning Division will provide the applicant with the names and addresses of the homeowners' associations. The applicant shall determine whether a residence is occupied by someone other than the owner and shall be responsible for such occupants.
- b. Within five (5) days of filing its application with Arapahoe County, the applicant shall also post a sign listing the case number and type of case (Oil and Gas Facility), the phone number of the Planning Division, and the distance from the sign to the facility. The sign shall meet the format specified in Section 5-2.2.A.3 of the Land Development Code and it shall be posted for a period of at least fourteen (14) consecutive days. The sign shall be posted adjacent to and off the shoulder of the County road or other public highway, and at or near the intersection of the proposed facility's access road and the public road, outside of the right-of-way or at such other location acceptable to and approved by Planning Division staff.

4. Application Submittal Requirements Found in the Development Application Manual (DAM) Applications for an Administrative Use by Special Review or for a Use by Special Review for an Oil and Gas Facility shall also comply with all relevant submittal requirements as set forth in the Development Application Manual. Applications shall include an application narrative, photosimulations of the view of the well pad from nearby properties and documentation of floodplain, wetlands and riparian area boundaries.

5. Waiver Requests

An applicant may apply for a waiver or modification of the following requirements for a proposed Oil and Gas Facility: 1) neighborhood meetings, 2) the burying of temporary water lines at driveway and gravel road intersections, visual mitigation, or 4) any other matter specifically identified as being eligible for a waiver or modification in this Section 5-3.6. A request to waive or modify a regulation shall be made in writing at the time of application and will be evaluated on the merit of the individual request. Requests must be justified by specific and extraordinary conditions of the location that make compliance with the particular standard or requirement not reasonably achievable or unnecessary and a showing that granting the request will not be detrimental to public health, safety, or welfare or the environment and is not otherwise inconsistent with the intent and purpose of the standard or requirement. A request under this Section 5-3.6.E.5 shall be submitted to the Director of Public Works and Development for decision. The applicant may appeal that decision to the Board of County Commissioners as provided in Section 5-3.6.G.7, below. A request for a waiver for a proposed Oil and Gas Facility will be decided in accordance with the provisions of this Section 5-3.6.E.5 and is not processed through the procedures for variances specified in Section 5-5.4 of this Land Development Code or subject to review by the Arapahoe County Board of Adjustment.

F. Standards Required for Oil and Gas Facilities

1. Regular Meetings

The Operator of any Oil and Gas Facility approved under this Section 5-3.6 or as a Use by Special Review as provided herein shall meet with the Director of Public Works and Development or his or her designee annually to monitor and discuss pertinent issues associated with the Operator's Facility or Facilities operating in the unincorporated territory of the County. At such Regular Meetings, the Operator and the Director or his or her designee will discuss the Operator's updated development plans, required reporting and recordkeeping, updates to the field-wide Emergency Response Plan (ERP), the facility-specific Emergency Action Plans (EAP) and Tactical Response Plans (TRP), outstanding training requirements, any health and safety issues, and potential implementation of new technology. An annual meeting may be conducted as a field visit to the Operator's Facility or Facilities and may be conducted more often than annually if desired by the Operator. Additional meetings in any one year may be required as necessary to address incidents, operational issues, or other issues related to the Facility or Facilities.

2. Setbacks

- a. All Oil and Gas Facilities shall be located at least:
 - i. 2,000 feet from any occupied structure as measured from the pad boundary.
 - ii. 2,000 feet from the nearest boundary of a platted lot smaller than 15 acres in area as measured from the pad boundary.
 - iii. 200 feet from any adjacent property's boundary line as measured from the pad boundary.
 - iv. 100 feet from public rights-of-ways as measured from the pad boundary.
 - v. 2,000 feet from a Designated Outside Activity Area as measured from the pad boundary.
 - vi. 2,640 feet from the nearest property line of an operating or closed landfill as measured from the pad boundary.
 - vii. Outside of a 100-year floodplain or at least 500 feet from the edge of any perennial surface water body, the ordinary highwater mark of any perennial or intermittent stream or the edge of any riparian area, whichever is the greater distance, as measured from the pad boundary, unless CPW has waived or modified the setback from the stream, surface water, or the riparian area following in accordance with COGCC Rules 309 and 1202.
 - viii. All access roads shall be at least 250 feet from a residential or non-residential property line, excluding light or heavy industrially zoned properties.
- b. The 2,000 feet setbacks from occupied structures or platted lots referenced in subparagraphs 5-3.6.F.2.a.i and ii above may also be reduced to a lesser setback:
 - i. If the owner(s) of the occupied structure(s) or all owners of the affected platted lots agree in writing to a lesser setback and the fire district agrees to provide service to the Oil and Gas Facility; however, even with owner consent, in no case may the setback be reduced below 500 feet; or
 - ii. If, as shown on the Oil and Gas Facility Operations Plan submitted with the application, any and all wells, tanks, separation equipment, compressors and any stored hazardous or explosive materials on the Oil and Gas Facility pad will be located or stored more than 2,000 feet from the nearest occupied structure or all affected platted lots; or
 - iii. If an Oil and Gas Facility application that includes a lesser setback is submitted, it must be ~~and~~ approved by the Board of County Commissioners through the Use by Special Review process provided in Section 5-3.4 of the Land Development Code. For approval of any lesser setback under this subparagraph, the Operator must establish that the lesser setback as proposed will provide substantially equivalent protection to a 2,000 foot setback and that granting the lesser setback will not adversely impact public health, safety, or welfare or the environment. In reviewing the proposed lesser setback, the Board of County Commissioners shall

consider the extent to which the operator provides an alternative Oil and Gas Facility design, best management practices, control technologies, or proposes conditions of approval that will be effective to avoid, minimize, or mitigate adverse impacts on the affected properties, considering:

(a) geology, technology, and natural features, hazards or topography;

(b) the location and use of occupied structures and proximity to those structures; ~~and~~

(c) the anticipated size, duration, and intensity of all phases of the proposed oil and gas operations at the proposed oil and gas location; ~~and~~

(d) the anticipated size, duration, and intensity of all phases of the proposed oil and gas operations at the proposed oil and gas location.

- iv. However, in no case may the 2000 feet setback from occupied structures or platted lots be reduced below 500 feet.

- c. Reverse Setbacks: No new occupied structure shall be constructed less than:

- i. 250 feet from an existing Oil and Gas well of any status (permitted but not drilled yet, drilling, completing, producing, active gas storage, injecting, shut-in, temporarily abandoned, dry and abandoned, or plugged and abandoned prior to 2014).

- ii. 150 feet from a plugged and abandoned oil and gas well or remaining equipment that was plugged and abandoned from 2014 onward.

- ii.d. Water Reservoir Setbacks: All Oil and Gas Facilities shall be located:

- i. At least one mile (5,280 feet) from existing or planned and permitted water reservoirs with a capacity of 100 acre/feet or more, unless the applicant can demonstrate that the Oil and Gas Facility is downgradient from the reservoir, in which case the setback shall be a 2,000 feet. ~~oot setback may apply.~~ The water reservoir setback shall be measured from the Oil and Gas Facility's pad boundary to the nearest high watermark of the reservoir or as mapped on reservoir plans approved with permitting for a planned and permitted reservoir.

- ii. With approval from the reservoir owner or operator, the water reservoir setback may be reduced below 2,000 feet if approved through the Use by Special Review process provided in Section 5-3.4. For approval of a lesser setback under this subparagraph, the Operator must establish the following criteria: 1. The oil and gas facility is downgradient from the reservoir; 2. The owner or operator of the reservoir does not object to the lesser setback; 3. Due to topography or other special condition of the property, the lesser setback is necessary to allow for safe construction, installation, and operations at the Facility; 4. Alternative Oil and Gas Facility design, best management practices, control technologies, and/or proposed conditions of approval proposed for the Facility will be effective to avoid, minimize, or mitigate adverse impacts upon such drinking water sources, and that with such mitigative measures, the lesser setback as proposed will provide substantially equivalent protection as the 2000 feet setback; 5. That granting the lesser setback for the Facility as proposed and designed will not adversely impact public health, safety, or welfare or the environment; and 6. No setback may be reduced below the 500-foot setback applicable to other perennial surface water bodies.

3. Health and Safety Requirements

- a. The Operator must submit an initial facility-specific Emergency Action Plan (EAP) and an initial facility-specific Tactical Response Plan (TRP) with an application for any new Oil and Gas Facility. The initial EAP and the initial TRP shall be forwarded to the County Office of Emergency Management ("OEM") for review. OEM shall review and approve or deny approval of the EAP and TRP within two weeks of submission by the Operator. ~~al~~. Provided that an Administrative Use by Special Review or full USR has been approved for the proposed Oil and

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Gas Facility and provided that OEM has approved the initial EAP and the initial TRP and further provided that required engineering permits have been obtained from Arapahoe County, the applicant or other Operator may commence construction of the pad and access road for the proposed Oil and Gas Facility. After the pad and access road have been constructed, the Operator shall prepare ArcGIS Shape files for the well pad and access road. ~~The Operator shall prepare and provide to OEM a detailed EAP and a detailed TRP, which incorporate the ArcGIS information for OEM's review and approval prior to commencing any drilling at the site. OEM shall review and approve or deny approval of the detailed EAP and TRP within two weeks of submission by the Operator.~~ The initial and detailed EAP and TRP shall follow the templates as specified in the DAM.

- b. The EAP and TRP shall be updated annually and whenever there is any change in or need to change any of the content of the EAP or TRP, such as but not limited to, the addition or subtraction of chemicals used or stored on site.
- c. The Operator shall coordinate with the fire district having jurisdiction at the facility in establishing evacuation routes in the event of an emergency at the facility. Evacuation route considerations will include any occupied structures, platted lots, critical infrastructure, public facilities, schools, or other high-occupancy buildings that are within proximity to the oil and gas facility, and routes shall be based on guidance from the fire district and OEM.
- d. The Operator shall provide and maintain 24-hour contact information for the Operator and maintain 24-hour contact information for all contractors and subcontractors working at the facility. Operator shall provide all such contact information to the County upon request.
- e. The Operator shall maintain a Hazardous Materials Inventory Statement for all hazardous materials on site at the facility and shall provide the Statement to the fire district having jurisdiction at the facility and OEM on an annual basis.
- f. The Operator shall provide OEM and the fire district having jurisdiction at the facility with a list of all reportable chemicals used or stored on each site from the time of construction to abandonment of the facility. The list of chemicals will be updated whenever new chemicals are added or removed, and such updated list shall be provided promptly to OEM.
- g. Upon reasonable advance notice, no less than 8 hours, to the Operator, the Operator shall provide access to the fire district having jurisdiction over the facility and to County staff for inspection of the Oil and Gas Facility to determine compliance with applicable provisions of this Land Development Code, fire codes, and public safety standards.
- h. The Operator shall mark all wells and all well pads with directional signage in a conspicuous place at or near the intersection of the access road with the public road, from the time of initial drilling until final abandonment. The Operator shall maintain signs in a good and legible condition and shall replace damaged or vandalized signs within fourteen (14) days. Directional signs shall be placed at locations and shall contain directions sufficient to advise emergency crews where drilling or completion is taking place.
- i. A sign with the Operator's 24/7 contact information, COGCC complaint website, shall be placed at the entrance to the Oil and Gas Facility. All signage content shall follow COGCC regulations for such signage, except to the extent that COGCC regulations are inconsistent with the above stated County signage content requirements.
- j. The Operator shall repair any damages to County infrastructure or property caused by Operator's activities or omissions, or that is caused by any emergencies that occur at the facility, in compliance with the Operator's Road Damage Agreement.
- k. Training
 - i. The Operator shall conduct a coordinated training exercise with OEM and the fire district having jurisdiction at the facility for at least one well pad every year. If the Operator's standard well pad design layout changes, then an additional coordinated training exercise will be conducted that year and every time the standard pad design changes.
 - ii. Key personnel at an Oil and Gas Facility are required to complete the National Incident Management System (NIMS) training courses IS-100.C and IS-700.B prior to commencement of drilling operations at the Oil and Gas Facility. Key personnel shall include those employees of the Operator and any field

consultants who are team leads or equivalent having supervisory authority over any of the oil and gas operations conducted at the Facility. OEM may also specify additional specific training requirements pertinent to the proposed Facility that will be required for key personnel prior to the start of drilling. The Operator shall provide to County certificates of completion of the NIMS trainings required in this paragraph at least one week prior to the start of drilling and shall provide certificates of completion for any new or replacement key personnel at a Facility within one month of the person commencing work at the Facility.

l. Fire Prevention and Procedures

- i. The Operator shall work directly with the fire district having jurisdiction over the facility to determine if existing response capabilities are adequate to serve the site. If additional response capabilities are deemed necessary by fire district having jurisdiction over the facility, the operator will work with the fire district having jurisdiction to provide additional fire suppression or emergency response assets needed. The operator will provide the identified assets to the fire district having jurisdiction to maintain and control for emergency response unless otherwise agreed upon in writing by both parties. The need for these additional assets shall be judged on a case by case basis per well pad and may be viewed in terms of the cumulative impact of overall oil & gas development within the fire district having jurisdiction.
- ii. No open burning, except flaring, shall occur on the site of any Oil and Gas Facility.

m. Incident Reporting

- i. All emergencies shall be reported to 911 immediately upon discovery, and as soon as reasonably possible to Office of Emergency Management and the County Local Government Designee (LGD). In the case of an emergency situation where a delay caused by reporting would endanger public health, safety, welfare, or the environment or wildlife, the initial notice may be given orally. Formal incident reports are required for, but not limited to, the following incidents: spills, releases, uncontrolled release of pressure, loss of well control, vandalism, terrorist activity, fires, explosions, detonations, lightning strikes, any accidental or natural event that damages equipment, accidents resulting in fatalities, significant injuries or chemical exposures, or any condition or occurrence that threatens or harms safety on any of the Operator's facilities, including pipelines. Formal written incident reports for all reportable incidents shall be submitted to the Office of Emergency Management, the fire district having jurisdiction at the facility, and the County LGD within three (3) calendar days of the incident. When in doubt as to whether the incident is reportable, the Operator will contact the County LGD.

ii. In addition to the formal incident report, a post-incident meeting shall be required with County staff. The date, time and location of the post-incident meeting shall be determined by the Public Works and Development Director.

iii. The Operator shall submit copies of any initial and supplemental spill report filed with the COGCC to the County LGD, OEM, and the fire district having jurisdiction at the facility, as well as any associated remediation reports, all within three calendar (3) days of filing with the COGCC. Those copies may be submitted electronically, if electronic submission is available.

n. Spill and Release Reporting

- i. The Operator shall provide a copy of the Spill Prevention, Control and Countermeasures (SPCC) Plan for each facility, prepared in compliance with 40 CFR Part 112 (as amended), to the fire district having jurisdiction at the facility and to OEM prior to the start of production. The Operator shall also provide to the fire district and OEM a listing of hazardous chemicals used on site if required by the

Emergency Planning and Community Right-to-Know Act (42 USC 11001, *et seq.* as amended) and related regulations. If the holding capacity of any planned on-site equipment or storage tank is changed from what is identified in the SPCC or if the listing of hazardous chemicals is changed from what was identified in the SPCC, the Operator shall update the SPCC and provide the update to the fire district with jurisdiction over the Facility, to OEM and to the LGD.

- ii. The Operator shall make available at each well pad and shall require its field staff or contractors to carry, spill response kits capable of mitigating small to mid-size spills (5 to 50 gallons).
- iii. Operator shall submit all reports required under COGCC Rule 912.b to OEM, the fire district serving the facility, and to the LGD. Spill containment and treatment does not relieve the Operator of any spill incident reporting obligations required under these or other applicable federal, State, or local law or regulations.
- iv. The Operator will install automated safety systems on all new facilities. Each system will include a Surface Safety Valve ("SSV") or wellhead master control valve, installed before the commencement of the production phase and connected to the production tubing at the surface. The SSV or wellhead master control valve shall be capable of remotely shutting the well in should upset conditions be detected. The SSV will have documented, quarterly testing to ensure functionality per manufacturer's specifications. The Operator shall maintain and keep the quarterly testing results records for at least three years and said records shall be made available to the County upon request by the PWD Director.

~~iv-o.~~ Operator shall provide hand washing facilities meeting Arapahoe County Public Health Department requirements at portable restrooms during drilling and completion operations.

- 4. Lightning Response
 - a. If damage is sustained to any portion of a facility due to a lightning strike, the entire facility shall be shut in immediately and inspected by the Operator prior to restarting operations at the facility.
- 5. Secondary Containment for Onsite Storage Tanks
 - a. Secondary Containment is required around aboveground produced water and crude oil storage tanks and shall be constructed of steel berms with synthetic liners or earthen berms constructed of compacted soil and armored with cobbles. Secondary containment shall be of sufficient capacity and effective to contain at least 1.5 times the volume of the largest tank.
 - b. Secondary containment is required around any other aboveground storage tanks or containers of any liquid substance other than fresh water on well pads, and specifically including but not limited to solvents, methanol, fuels, coolants, antifreezes, or lubricants or lubricating oil, and shall have sufficient capacity and be effective to contain at least 1.5 times the volume of the largest tank.
 - c. All secondary containment shall be inspected for evidence of discharge weekly by the Operator or their contractors and within 48 hours of any precipitation event sufficient to reduce the capacity of the secondary containment to less than 1.5 times the volume of the largest tank. Such accumulated precipitation must be removed within 24 hours of an inspection.
 - d. The Operator shall keep written records of secondary containment inspections and shall maintain such for at least three (3) years; the Operator shall make such records available to the County upon the written request of the PWD Director.
- 6. Disposal of Drill Cuttings
 - a. Drill cuttings must be disposed offsite at least twice weekly, at a State-approved solid waste facility. No onsite disposal is allowed.
- 7. Pad Surface
 - a. The surface of a pad shall be paved with either crushed granite or gravel, in a sufficient amount to eliminate of mud-tracking offsite and to comply with the County's Grading Erosion and Sediment Control regulations.

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8. Number of Tanks and Tank Separation Requirements
 - a. All oil and produced water storage tanks shall be spaced at least 3 feet apart.
 - b. No Oil and Gas Facility shall be permitted to have more than a combined total of nine (9) oil, produced water and/or condensate tanks, or a total Facility capacity of no more than 6750 barrels.
9. Groundwater Baseline Sampling and Monitoring
 - a. The Operator shall, at its own cost, perform initial baseline sampling and testing of all water sources located within one-half (1/2) mile radius of Oil and Gas Facility if requested by the owner of such water source or owner of land upon which such water source is located. If no water sources are available in a one-half mile radius of the proposed Facility, the Operator shall sample and analyze up to two (2) down-gradient water sources in a one-mile radius of the proposed Facility. The written results of such baseline testing shall be provided to the requesting property owner, COGCC and to the County.
 - b. Water sampling and testing shall be performed in accordance with the standards and requirements specified in COGCC's Rule 615 a. through f. and as amended from time to time, except for 615 b. (2) and 615 c. (1).
 - c. The requirement to test a well upon request does not apply if the water well has already been tested by any Operator and the Operator is able to furnish such results to County or if access is denied.
 - d. The Operator shall sample, on a one-time basis, down-gradient and perennial surface water within a one-half (1/2) mile of a proposed well pad prior to the construction phase.
 - e. The Operator shall provide a letter notice to all owners of properties within a one-half (1/2) mile radius of the proposed pad with a water well listed in the State of Colorado Division of Water Resources database, to inform those water well owners of the opportunity to have their water wells sampled prior to drilling.
 - f. For all water sources for which the Operator has performed initial baseline sampling at the request of the property owner in accordance with these regulations, the Operator shall also perform subsequent sampling and testing of such water sources on the schedule specified in and in accordance with COGCC Rule 615 d. The written results of such subsequent testing shall be provided to the requesting property owner, COGCC and to the County.
10. Noise Mitigation Requirements
 - a. Noise emitted from the facility pad shall not exceed 60 dBA or 65dBC, measured at the nearest property line of the property with the nearest occupied structure. These noise levels, as measured, constitute the Maximum Permissible Limit of noise that may be allowed to emanate off site from the Oil and Gas Facility.
 - b. During the hours between 7:00 AM and 7:00 PM, the maximum permissible noise levels may be increased 10 dB(A) for a period not to exceed 15 minutes in any 1-hour period. The increase is permissible only for a 1-hour period during any 12 hours.
 - c. The Operator may apply for a modification or waiver to exceed the Maximum Permissible Limit in accordance with and subject to the standards in Section 5-6-3.6.E.5 above where the Oil and Gas Facility is proposed to be located in an area with existing ambient background noise levels that are at or above the Maximum Permissible Limit or if proposed for an area that is sufficiently remote from any property with an occupied structure or any High Priority Habitat, provided that the lack of High Priority Habitat is supported by recommendation of CPW. The Operator may also apply for a waiver in accordance with and subject to the standards in Section 5-6-3.6.E.5 of the requirements below to prepare a noise survey and noise mitigation plan for a pad site that will not contain any oil and gas wells and will not be drilled or fracked.
 - d. The Operator shall conduct an ambient noise survey for each proposed well pad no more than 90 days prior to application in order to establish baseline noise levels for the site, and the Operator shall also conduct noise modeling for the well pad to simulate noise during drilling and completion.
 - e. The noise surveys and the noise modeling shall be used to create a Noise Mitigation Plan for the site for keeping sound emissions from the site within the Maximum Permissible Limit. The Noise Mitigation Plan shall describe noise mitigation practices, equipment, strategies, infrastructure, or other strategies to be used and implemented at the Oil and Gas Facility in order to comply with the Maximum Permissible Level of noise emanating from the Facility.

The Operator shall update the Noise Mitigation Plan for any changes in equipment that may reasonably be expected to affect the ambient noise levels at the site or if the Facility is not constructed within two (2) years of the date of the County's Administrative Use by Special Review or Use by Special Review approval for the Facility. The Noise Mitigation Plan shall also be updated if any new occupied structure is constructed within 2,000 feet of the pad boundary, between the time of Administrative Use by Special Review or Use by Special Review approval of the Facility and the commencement of drilling. The Operator shall provide the updated Noise Mitigation Plan and implement any strategies identified in the updated plan prior to putting such new equipment into operation or prior to commencing construction of the Facility as applicable.

- f. If the noise modeling indicates that noise levels for either or both A-Scale (dBA) and C-Scale (dBC) noise for drilling and completion will exceed the Maximum Permissible Level at the property line of any property with an occupied structure, where that structure is within 2,000 feet of the pad, additional noise mitigation measures will be required as necessary to achieve the Maximum Permissible Level.
 - g. If the noise modeling indicates that drilling or completion activity or production equipment on a well pad without noise mitigation will exceed the Maximum Permissible Limit, notwithstanding other mitigations that may be proposed in the Noise Mitigation Plan, sound walls shall be constructed prior to both drilling and completion commencing.
 - h. The Noise Mitigation Plan shall address noise/vibration through sound walls and other practices such as, but not limited to, utilizing electric equipment, Tier 4 diesel engines, installing mufflers or covers on noisy equipment or the use of Quiet Fleet™, or similar noise mitigation. If sound walls will be required for mitigation of noise during completion, they shall be erected prior to drilling.
 - i. Additional mitigations, as necessary to achieve the compliance with the Maximum Permissible level, must be described and used by the Operator if C-scale noise levels are increased to the larger of either (i) 5db over ambient or (ii) 65 dBC at the property line of the property upon which the nearest occupied structure exists. The County may require larger setbacks and/or sound walls or other structures on a case-by-case basis for mitigation of C scale noise, based on data from the noise model.
 - j. The Operator shall follow the most recent and most appropriate BMPs to reduce noise related to drilling and completion.
 - k. Tubular goods may not be unloaded from 8 PM to 7 AM unless there are no occupied structures within 2,640 feet
 - l. Engine idling shall be minimized.
 - m. The Operator shall provide a 24-hour contact number for noise complaints on the facility sign required in section 5-3.6.F.3.h, as well as the COGCC's complaint hotline number.
11. Access Road Standards
- a. Prior to commencing construction of the Oil and Gas Facility, the Operator shall connect the site via an access road designed to support an imposed load of 8075,000 pounds that will accommodate emergency response vehicles such as, but not limited to, law enforcement, emergency command vehicles (cars/SUVs), ambulances, hazardous materials response vehicles, water tenders, and fire apparatus during construction and operation of new tank batteries, new drilling activity and reworks or recompletions of existing wells, unless a local fire department or fire district agrees in writing to a different or lesser standard for the access road..
 - b. Access roads shall be constructed to be at minimum, least sixteen twenty (2016') feet wide with at least six four (64") inch road base
 - c. The Operator shall maintain such access roads in good condition and suitable for emergency vehicle use until such time as the Oil and Gas Facility has been plugged and abandoned.
 - ~~c-d.~~ If an Oil and Gas Facility site incident could prevent emergency access on public or private roads, the Operator shall construct an alternative access road meeting these standards.
 - ~~d-e.~~ Best efforts will be made to improve inadequate access to existing tank battery sites identified by the fire district or County as determined through service calls and demonstrated problems of access to the site.

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- e-f. The County and/or appropriate emergency response agency may conduct spot inspections of access roads to ensure that emergency access in accordance with this section is maintained.

12. Odor Mitigation

- a. The Operator shall prevent odors migrating offsite during drilling through the use of low-odor Category III drilling fluid, unless a waiver or modification is allowed under 5-3.6.E.5 of these regulations
- b. The Operator shall use closed-loop systems in place of open pits.
- c. The Operator shall proactively respond to and address odor complaints.
- d. The Operator may be required to address odor complaints with additional measures such as wiping down drill pipe, increasing mud additives, using filtration systems, enclosing shale shakers and frequently transporting drill cuttings offsite for disposal.

13. Site Lighting

- a. All site lighting shall be directed downward and inward to prevent light spill outside the pad.
- b. Wherever possible, lights will be mounted on the inside of the sound wall.
- c. Any lights not concealed by a sound wall must be IES (Illuminating Engineering Society) full cutoff or shielded/screened to minimize the amount of light leaving the pad
- d. During the production phase, site lighting shall be turned off between the hours of 10:00 PM and dawn. Motion-sensing lights may remain active during those hours.
- e. Upon receipt of a lighting complaint and review by the Planning Division, the Operator may be required to address lighting complaints within 24 hours of the Planning Division's review of the complaint, with additional mitigation measures.

14. Visual Mitigation

- a. Well pads within 1,320 feet of a property line of a property containing an occupied structure, a platted lot, or a parcel of 40 acres or smaller, shall be designed with some form of visual mitigation, to include but not be limited to, low-profile production equipment, opaque fencing, berming, or landscaping.
- b. Landscaping or fencing around the perimeter of the pad shall be installed within one year of the first well's completion. The screening shall be designed to minimize visual impacts from adjacent properties and the nearest streets.
- c. Production pads shall be maintained free of vegetation, except such vegetation as may be required for interim reclamation or Arapahoe County GESC regulation requirements, and shall be maintained free of rubbish and debris. For the purposes of this Visual Mitigation regulation only, a production pad may exclude the reclaimed area, approved through a County-issued GESC permit.
- d. Storage of equipment not associated with the on-going oil and gas operations at a specific pad is prohibited on that pad.
- e. Privacy or solid fencing shall be Class 5 – Solid Fencing as defined in section 4.3 of the Land Development Code, at least 8 feet high and painted or stained with natural wood colors.
- f. Whenever possible, the Operator shall use existing natural contours and existing vegetation to conceal the site from view.
- g. Whenever possible, the Operator shall minimize the size and number of tanks and equipment installed or maintained on a production pad. When available, as provided below, use of pipelines to reduce the size and number of tanks and equipment maintained on a production pad is encouraged.

15. Locks/Emergency Access Hardware

- a. The Operator shall provide approved emergency access hardware for any locked facility gates or access points.

16. Traffic Mitigation and Reduction Measures

- a. The Operator shall make best efforts to schedule its traffic to limit heavy truck traffic on County roads during peak commuting hours and during school bus hours and shall comply with any restrictions established in accordance with the Road Damage Agreement.
- b. The Operator shall use pipelines for the transport of produced water and hydrocarbon liquids from the well pad, wherever available.
- c. To reduce traffic associated with the Operator's drilling and completion activities, the Operator is allowed to use temporary surface lines for transportation of water needed during drilling and completion or Modular Large Volume Tanks (MLVTs) for storage of water needed during

drilling and completion. Provided that the MLVT is located on or contiguous with the Oil and Gas Facility pad, the MLVT may be approved with the Administrative Use by Special Review application or by amendment to an approved Administrative Use by Special Review. The Operator may use County Road Right-of-Way, and County drainage culverts, where practical, for the laying and operation of temporary water lines on the surface, provided that the County's Engineering Services Division approves the locations of the temporary water lines through a street-cut/right-of-way permit issued in accordance with the Arapahoe County Infrastructure Design and Construction Standards. The Operator will bury temporary water lines at existing driveway and gravel road crossings, unless the PWD Director approves an alternative to burying the lines in accordance with section 5-3.6.E.5 above.

- d. Prior to commencing construction of an Oil and Gas Facility, the Operator shall execute a Road Damage Agreement for the site or shall have executed a field wide Road Damage Agreement for all sites within the County. Such agreement shall be in a form approved by and acceptable to the County.
 - e. Consistent with the Road Damage Agreement, the Operator shall provide the County with a truck access route for evaluation and approval by the County. The County may require a route that minimizes impact on nearby residents and/or a particular County roadway.
17. Wildlife, Wetlands, Riparian Areas and Stream Channel Measures
- a. The Operator shall implement the recommendations of Colorado Parks & Wildlife (CPW) that address any site-specific site conditions, unless a waiver or modification is approved in accordance with Section 5-3.6.E.5 above.
 - b. Wetlands boundaries shall be determined by a Professional Wetland Scientist (PWS) and those boundaries shall be indicated on the Administrative Use by Special Review plan.
 - c. Crossings of defined streambeds and banks (stream channels) by flowlines and pipelines must be bored underneath and not trenched.
 - d. All crossings of riparian areas by flowlines and pipelines shall be bored under, starting 500 feet from the edge of the riparian area. All crossings of riparian corridors by access roads will be constructed with culverts, approved by Engineering Services Division.
 - e. The Operator shall avoid constructing in CPW-mapped High Priority Habitats (HPH) to the maximum extent possible. If an operator elects to construct in an HPH polygon, then they will be subject to minimization and/or mitigation measures as specified in COGCC's 1200 Series Rules, as well as any applicable CPW recommendations.
 - f. Fencing that bisects streams is prohibited.
18. Floodplains/Floodways Restrictions
- a. Storage of hazardous or floatable materials in the floodplain is prohibited.
 - b. Oil and Gas facilities shall not be located in a floodplain. Access roads, and underground pipelines and flowlines are permitted to cross floodplains provided that they are designed to meet Arapahoe County Floodplain Regulations and the Infrastructure Design and Construction Standards or other applicable Engineering Standards and those crossings are in accordance with a floodplain Development permit issued by the Arapahoe County Floodplain Administrator in accordance with Section 5-4.3 of the Land Development Code.
19. Notification of Commencement of Geophysical Exploration/Seismic Testing, Construction, Drilling, Completion, and Flaring
- a. The Operator shall provide advance written notice to the Planning Division of the projected commencement of geophysical exploration/seismic testing; the construction phase, drilling phase, and completion phase of each new well; and each workover one week prior to the start of each phase.
 - b. Flaring shall be reported to the County LGD via email or text message prior to flaring whenever possible, or during the flaring event. An updated notice will only be required if the commencement of any phase is delayed more than one week from the original date indicated in the notice.
20. New Technologies
- The County may require modifications to equipment for drilling, completion, or production operations to incorporate new technologies for reduction of noise, odor, dust or for mitigating other surface impacts caused by the Oil and Gas Facility or its operations if such new technologies are technologically sound, economically practical, and commercially available to the Operator.

21. Compliance With Laws and Regulations

The Oil and Gas Facility shall be operated in compliance with all applicable federal, state, and local laws and regulations.

G. Approval/Denial/Conditions of Approval of Administrative Use By Special Review/Appeal

1. Action to Approve, Conditionally Approve or Deny

The PWD Director may approve, approve with conditions, or deny an Administrative Use by Special Review application for an Oil and Gas Facility. Written notice of the decision shall promptly be provided to the applicant, and, if denied, the notice shall include a statement of the reason(s) for denial.

2. Revocation of Approval

Approval may be revoked, after notice of the grounds for such proposed revocation and a hearing before the Arapahoe County Board of County Commissioners, if the Operator fails to meet or fails to continue to meet any requirements of this Land Development Code or any Conditions of Approval governing the installation and operation of an Oil and Gas Facility. The hearing will be conducted as a general business item at a regular meeting of the Board of County Commissioners. At said hearing, the Planning Division shall present evidence of the grounds for revocation of the approval and the Operator shall be afforded the opportunity at such hearing to present evidence in response to the proposed revocation. The Operator may appeal the Board of County Commissioners' decision in accordance with Rule 106(a)(IV) of the Colorado Rules of Civil Procedure.

3. Recordation

Arapahoe County Public Works & Development shall record the approved permit for an Administrative Use by Special Review or for a Use by Special Review under Section 5-3.4 of the Land Development Code and the approved site plan in the Office of the Arapahoe County Clerk and Recorder within 30 days of the approval. The applicant shall pay any recordation fees.

4. PWD Director's Discretion to Refer to the Board

In lieu of the PWD Director making a decision on an application, the Director has the discretion to refer any application for Administrative Use by Special Review or amendment thereto to the Board for its consideration and decision at a public hearing. In such event, the Board shall make its determination based upon the requirements of this Section; however, unless waived by the Board, compliance with the notice requirements set forth in Section 5-3.4.C.2. is required prior to the Board hearing. At such public hearing, the Board may approve, approve with conditions, or deny the application.

5. Expiration of Approval

- a. An approval of the Administrative Use by Special Review, as delineated in the application, shall automatically expire three (3) years after the date of recordation, unless the facility is already substantially commenced by the drilling of at least one well on a pad.
- b. For good cause shown, the Planning Division Manager or designee may grant a time extension to the expiration date stated in this Section for up to one year, upon a written request by the applicant. Such request shall be submitted in writing to the Planning Division Manager no less than sixty (60) days before the date of expiration of the approval.
- c. The Board may, for good cause shown, grant an additional extension for an additional one-year period.
- d. If drilling of a well is not completed within the time allowed under the original permit or any extension granted pursuant to this Section 5-3.6.G.5, the approval shall lapse and a new application is required. After a lapsed approval, the Oil and Gas Facility may be constructed, completed, or produced only in compliance with the Land Development Code in effect at the time of the new application.

6. Permits Required Prior to Commencement of Operations

- a. If applicable under the Land Development Code or other Arapahoe County code or regulation, an Access Permit issued under the Infrastructure Design and Construction Standards, a GESC Permit, a Roadway Damage Agreement and Oversize/Overweight Vehicle Permit shall be required prior to the development of an Oil and Gas Facility. A Floodplain Development Permit shall be required prior to any work within a floodplain. A Building Permit may be required prior

to construction of structures or the erection of equipment within the Oil and Gas Facility in accordance with the Arapahoe County Building Code.

7. Appeal of Decision on Application for Administrative Use by Special Review

- a. An applicant may appeal the Public Works and Development Director's denial of an application for an Administrative Use by Special Review for an Oil and Gas Facility, denial of a waiver request, or any conditions of approval, to the Board of County Commissioners for a *de novo* hearing. The Applicant must file the appeal within fourteen (14) calendar days of the date of the PWD Director's decision by submitting a letter of appeal to the Planning Division Manager. Thereafter, the matter will be scheduled on the next available agenda of the Board, following public notice required by Section 5-3.4.C.2. At such hearing, the Board may affirm, reverse, or modify the decision of the PWD Director, based upon the criteria set forth in this Section 5-3.6.

H. Administrative Amendment

If the Applicant or the Operator proposes changes from the plans approved through the Administrative Use by Special Review, including but not limited to any changes in the source or location of water to be used by the Oil and Gas Facility, the type and size of equipment on the facility or visual mitigation measures, the Applicant is required to submit an amendment to the approved Administrative Use by Special Review plans showing the proposed changes. The PWD Director may approve, conditionally approve, or deny the proposed amendment in accordance with the provisions of this Section 5-3.6. The proposed amendment will be reviewed by PWD staff and, as needed for the review of the application, PWD Staff may require additional information. The amended application will need to meet all requirements of this Section and be approved in writing. If the BOCC approved the original application on appeal, as a USR, or by reason of its otherwise having been elevated to the BOCC for decision under this Section 5-3.6, the proposed amendment shall be referred to the BOCC for consideration and decision following public hearing as provided in Section 5-3.6.G.4 above. The PWD Director may exercise his or her discretion to elevate any proposed amendment to the BOCC for consideration and decision as provided in Section 5-3.6.G.4 above. Upon recommendation of PWD Staff, the PWD Director may waive the need for amendment of the Administrative Use by Special Review or other BOCC approved Oil and Gas Facility permit provided that the proposed change is found to be minor, with no material effect to or departure from the original approval, and without the potential for significant surface impacts to public health, safety, welfare, or the environment at the Facility site.

I. Transfer/Sale of Facilities to a New Operator

The Operator must notify the Planning Division in writing within seven days of the closing of any transfer of an Oil and Gas Facility or Facilities to a different Operator or other successor owner. Prior to commencing any operations at the site of the transferred Oil and Gas Facility, the new Operator or successor owner must first provide the following to the County:

1. Letter(s) authorizing the transfer of the Oil and Gas Facility operation as approved through the original Administrative Use by Special Review or Use by Special Review approval for the Facility to the new Operator and the new Operator's written acceptance of responsibility for the operations at the Oil and Gas Facility and agreement to abide by all terms and conditions of the Administrative Use by Special Review or Use by Special Review approval.
2. The Operator must meet with the LGD to discuss any pertinent issue relative to the new Operator's assumption of operations of the Oil and Gas Facility, including plans for development of pipeline installation to serve the Oil and Gas Facility.
3. An updated Emergency Action Plan (EAP) and Tactical Response Plan (TRP), two weeks prior to the transfer, with contact information for at least two employees of the new Operator.

J. Non-Administrative Approval Process

Use by Special Review approval for an Oil and Gas Facility may also be requested through the process described in Section 5-3.4 of this Code, subject to the following modifications:

1. Plan Format
The site plan shall comply with the requirements of the Development Application Manual, Non-Administrative Use by Special Review for Energy Facilities. In addition, the final document shall be submitted in both paper and electronic forms instead of Mylar, notwithstanding the requirements for a Use by Special Review contained in the Development Application Manual.
2. Criteria and Standards

In addition to the criteria set forth in Section 5-3.4 of the Land Development Code, an application for Use by Special Review for an Oil and Gas Facility will also be evaluated under the criteria specified in Section 5-3.6.D above and shall comply with the Standards specified in Section 5-3.6.F above, and shall be operated in compliance with the requirements of this Section 5-3.6. In addition, the provisions of Section 5-3.6.G.1 through 7 shall apply to an Oil and Gas Facility approved as a Use by Special Review. Also, Section 5-3.6.I shall apply to the transfer of any Oil and Gas Facility approved by a Use by Special Review.

3. Expiration of Approval

An approval of a Use by Special Review shall automatically expire three (3) years after the date of recordation, unless the facility well pad is already substantially commenced by drilling of at least one well. The Operator may request and extensions as described in Section 5-3.6.G.5 above.

K. COGCC and County Approvals Required

Development of an Oil and Gas Facility shall not commence until and unless any required permits from the State or County, and a Use by Special Review (administrative or non-administrative) from the County, have both been approved. Prior to construction, the Operator must submit proof of any insurance and bonding that are required or may be required by these rules.

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5-4 DEFINITIONS

360 Degree Architectural Treatment

Building materials, color schemes and rooftop screening which is identical on all sides of a structure, and which encloses loading docks and other service areas.

Abutting

Having a common property line or district line with an adjacent property.

Access Drive

A street or right-of-way providing ingress and egress to properties adjacent to a regional thoroughfare, arterial street, or major collector street.

Accessible

When used in connection with accommodation for disabled persons refers to a site, facility, work environment, service, or program that is easy to approach, enter, operate, participate in, and/or safely and with dignity by a person with physical disability.

Accessory Dwelling Unit (ADU)

A secondary dwelling unit that is within or adjacent to the primary single-family dwelling unit on a lot/parcel and includes a kitchen, bathroom and sleeping facilities and has a separate entry to the secondary dwelling unit. Colorado Statutory parcels of 35-acres are also under this definition.

Accessory Use or Structure

A use or structure (exceeding 120 square feet) subordinate to the principal structure or use which serves a purpose customarily incidental to the principal use.

Accessory Buildings

Accessory uses and structures are not permitted unless and until the principal permitted use has been established on the property.

- A. Accessory buildings greater than 120 square feet in size and/or 10 feet in height shall observe all yard and height requirements.
- B. Structures constructed for accessory uses shall not be used for dwelling purposes.
- C. Except for agricultural usage only, accessory structures shall not exceed 10 percent of the lot area or a maximum of 1,000 square feet, and a maximum building height of 15 feet.

Accident Potential Zone (APZ) I

An area beginning at the outer edge of the Buckley Air National Guard Base Clear Zone, 3,000 feet wide by 5,000 feet long, in which the potential for aircraft accidents, while being less than the accident potential on the Base environs, is considered measurable enough for the purposes of these Regulations to warrant certain land use restrictions to be placed on lands lying within this Zone.

Accident Potential Zone (APZ) II

An area beginning at the outer edge of the Buckley Air National Guard Base Accident Potential Zone I, 3,000 feet wide by approximately 7,000 feet long together with a triangular-shaped area at the westerly edge of the 7,000 measurement which is 5,500 feet wide at the base by 7,300 feet long, all as depicted in Figure 3-1 of the June 1998 AICUZ, in which the potential for aircraft accidents, while being less than the accident potential of APZ I, is considered measurable enough for the purposes of these Regulations to warrant certain land use restrictions to be placed on lands lying within this Zone.

Acre, Gross

An area in any shape containing 43,560 square feet.

Addition

As used in Section **Error! Reference source not found.**, Floodplain Management, means any activity that expands the enclosed footprint or increases the square footage of an existing structure.

Adjacent Land

See Adjoining Lot or Land.

Adjoining Lot or Land

A lot or parcel of land that shares all or part of a common lot line with another lot or parcel of land.

Administration

Of or pertaining to the performance of executive or managerial functions of an organization complying with the definition of a public facility.

Administrative Site Plan (ASP)

A plan that meets the requirements of Sections **Error! Reference source not found.**, **Error! Reference source not found.**, and **Error! Reference source not found.**, **Error! Reference source not found.**, as applicable. As applied to a Development Plan Approved prior to April 1, 2017 ASP also means the final step in the Master Development Plan process.

Adult Arcade

An establishment where, for any form of consideration, one or more still or motion picture projectors, or similar machines, or other image producing machines, for viewing by five or fewer persons each, are used to show films, motion pictures, video cassettes, slides, or other photographic reproductions which are characterized by the depiction or description of "specified sexual activities" or "specified anatomical area."

[Adult Bookstore \(Also Adult Novelty Store Or Adult Video Store\)](#)

A commercial establishment which devotes a substantial portion of its stock-in-trade or interior floor space to the promotion of or the sale or rental of books, magazines, periodicals, or other printed matter, or photographs, films, motion pictures, video cassettes, CD-ROMS, slides or other visual, digital, or electronic representation, or novelty items, which are characterized by an emphasis on the depiction or description of "specified sexual activities" or "specified anatomical areas". For purposes of this definition, 20 percent or more of an establishment's stock-in-trade or 250 square feet or more of an establishment's interior floor-space are presumptively "substantial or significant."

[Adult Cabaret](#)

A nightclub, bar, restaurant, "pop shop", or similar commercial establishment which features:

- A. persons who appear nude or in a state of nudity
- B. live performances which are characterized by the exposure of "specified anatomical areas" or by "specified sexual activities"; or,
- C. films, motion pictures, video cassettes, slides, or other photographic reproductions which are characterized by the depiction or description of "specified sexual activities" or "specified anatomical areas."

[Adult Day Care Center](#)

See Day Care Center, Adult.

[Adult Day Care Home](#)

See Day Care Home, Adult.

[Adult Motel](#)

A motel, hotel or similar commercial establishment which: a) offers public accommodations, for any form of consideration, and provides patrons with closed-circuit television transmissions, films, motion pictures, video cassettes, slides, or other photographic reproductions which are characterized by the depiction or description of "specified sexual activities" or "specified anatomical areas" and which advertise the availability of this sexually oriented type of material by means of a sign visible from the public right-of way, or by means of any off-premises advertising including but not limited to newspapers, magazines, pamphlets or leaflets, radio or television; or, b) offers a sleeping room for rent for a period of time less than 10 hours, or allows a tenant or occupant to sub-rent a sleeping room for a time period of less than 10 hours.

[Adult Motion Picture Theater](#)

A commercial establishment where films, motion pictures, video cassettes, slides or similar photographic reproductions that are distinguished or characterized by an emphasis on "specified sexual activities" or "specified anatomical areas" are regularly shown for any form of consideration.

[Adult Theater](#)

A theater, concert hall, auditorium, or similar commercial establishment which, for any form of consideration, regularly features persons who appear in a state of nudity or live performances which are characterized by exposure of "specified anatomical area" or by "specified sexual activities."

[Agricultural Animal](#)

Cattle, sheep, llamas, goats, swine, mules, poultry, horses, alternative livestock as defined by Colorado Statutes (e.g. elk) and such domesticated animals as fox, mink, chinchilla, beaver and rabbits, and large birds/poultry such as emu, rhea or ostrich, except dogs and cats that are used for working purposes on

the farm or ranch, and any other animal designated by the State Agricultural Commissioner, which animal is raised for food or fiber production.

Agricultural Animal, Small, Non-Commercial

Chickens, geese, other small poultry, bees, and/or rabbits, kept only for the private use of the residents of the property where the animals are raised and not for commercial purposes.

Agricultural Building

A structure on agricultural land designed, constructed and used to house farm implements, livestock, or agricultural produce or products used by the owner, lessee, or sub- lessee or their immediate families, their employees, and persons engaged in the pick up or delivery of agricultural produce or products grown or raised on the premises. The term shall not include dwellings.

Agricultural And Livestock Products

Plant or animal products in a raw or unprocessed state that are derived from the science and art of agriculture, regardless of the use of the product after its sale and regardless of the entity that purchases the product.

Agriculture

The science and art of production of plants and animals useful to man, including, to a variable extent, the preparation of these products for man's use and their disposal by marketing or otherwise, and includes horticulture, floriculture, viticulture, forestry, dairy, livestock, poultry, bee and any and all forms of farm products and farm production.

Agriculture, Non-Commercial

The production of crops and livestock for consumption entirely on the premises.

Agri-tainment

A for profit business operation, located and operated on A-E or A-1 zoned agricultural property that is specifically approved as a use-by-special review in that zone to provide educational and/or entertainment opportunities to its patrons in an agriculturally oriented environment by way of activities, events, demonstrations, displays, interactive participation, tours, lectures, and/or the sale of agriculturally related products. Characteristic uses permitted in an agri-tainment USR include but are not limited to:

- A. Animal petting zoo and farm animal centers
- B. Bed and breakfast
- C. Camps
- D. Community Event and Conference Center
- E. Country store/craft shop
- F. Cultural, special event, and religious festivals
- G. Educational activities and programs
- H. Farm tours
- I. Farmers market (year round)
- J. Farmhouse restaurant
- K. Farm-life activities and entertainment
- L. Guest ranch/farm house lodging
- M. Thematic vacations or events
- N. Winery operations

Accessory uses to agri-tainment may include: parking associated with an approved use, concession stands, pick your own produce, play grounds and activity fields for guests and visitors to the farm, and signage in compliance with the Signage regulations.

Aircraft-Related Recreational Facility

A public or private facility, including structures and/or takeoff and landing areas designed and intended to provide flight training, ground school, sales, maintenance and/or repair for such uses as hot air balloons, ultralight aircraft, hang gliders, and similar uses as determined by the Zoning Administrator.

Airport Influence Area

An area within the unincorporated portions of Arapahoe County, proximate to an airport, which is recognized by the Board of County Commissioners as containing lands which are expected to be significantly affected by noise and/or safety hazards associated with aircraft operations associated with said airport. For purposes of these regulations, the airport influence area shall be the outside boundary of the 55 Ldn contour for that airport.

Alley

A minor right-of-way, dedicated to public uses, which gives a secondary means of vehicular access to the rear or side of properties otherwise abutting a street, and which may be used for public utility access.

Alter

To change any of the supporting members of a building such as bearing walls, columns, beams or girders.

Amateur Motorsports Facility

A facility with supporting and accessory structures designed and operated primarily for amateur motorsports uses. Motorsports uses include but are not limited to driving motor vehicles, motorcycles or bicycles on defined tracks for practice, education, recreation or amateur competition; storage, maintenance, adjustment or repair of vehicles to be used on racetracks; and similar uses as determined by the Zoning Administrator. Competition is considered amateur if drivers are not remunerated based on performance, but this shall not preclude the occasional offering of reimbursement money which does not exceed total competitor entry fees for events.

Animal Assisted Therapy Activities

Human interaction with animals of species known to be generally typical of farm and ranch environments for an explicit therapeutic purpose.

Animal Day Care Facility

Any facility licensed by the State of Colorado where animals may be groomed, trained, exercised, and socialized, but not kept or boarded overnight, bred, sold or let for hire. The use must be completely enclosed except that outdoor runs or other areas in which dogs will be allowed outside of an enclosed structure off leash (hereinafter "outdoor run") are allowed between the hours of 6:30am and 9:00pm. Outdoor runs that would be less than 300 feet from a residential zoned property are prohibited. The building shall be soundproofed such that no noise generated by the use is perceptible at the property line.

Animal Hospital

Structure for the care and recuperation of ill or injured animals. Animal hospitals shall not be located closer than 100 feet from any residential district or restaurant, hotel or motel in any district. Adequate measures and controls will be required to prevent offensive odor and noise.

[Animated Sign](#)

Any sign, or any part thereof, which changes physical position by means of movement or rotation.

[Antenna](#)

A metallic apparatus used for sending and/or receiving electromagnetic signals.

[Antenna \(CMRS\)](#)

An exterior transmitting or receiving device used in telecommunications that radiates or captures CMRS signals. "Antenna" as used in this section does not include radio or television towers or transmitters.

[Antenna, Attached \(CMRS\)](#)

An antenna mounted on an existing building, silo, smokestack, water tower, utility or power pole or a support structure other than an antenna tower.

[Antenna, Concealed \(CMRS\)](#)

An antenna with a support structure that screens or camouflages the presence of antennas and/or towers from public view in a manner appropriate to the site's context and surrounding environment. Examples of concealed antennas include antennas mounted on manmade trees, clock towers, flag poles, light structures, steeples, buildings, and similar objects.

[Antenna Tower \(CMRS\)](#)

A freestanding structure, including monopole, guyed and lattice towers, designed and constructed primarily to support antennas and transmitting and receiving equipment.

[Antenna Tower Height \(CMRS\)](#)

The distance from the finished grade at the antenna tower base to the highest point of the tower. Overall antenna tower height includes the base pad, mounting structures and panel antennas but excludes lightning rods and whip antennas.

[Antenna Tower, Temporary \(CMRS\)](#)

A CMRS facility designed for use while a permanent CMRS facility or network is being designed or built or for a special event where many people attending are CMRS users.

[Apartment Unit](#)

One or more rooms with private bath and kitchen facilities comprising an independent, self-contained dwelling unit in a building containing three or more dwelling units.

[Approach Zone](#)

An area beginning at the outer edge of the Clear Zone defined by FAA approved Airport Layout Plans; the main purpose being to facilitate the arrival and departure of aircraft utilizing the aviation facility.

[Appurtenant Retail Uses](#)

Retail uses located within office buildings which are intended to provide a service primarily for the occupants of said office building, and which are not allowed exterior advertising. Such uses may include a sandwich shop, barber/beauty shop, snack shop/restaurant, day care, etc.

[Architectural Treatment, 360 Degree](#)

See 360 DEGREE ARCHITECTURAL TREATMENT.

[Area of State Interest](#)

Pursuant to Article 65.1 of Title 24 C.R.S. as amended (House Bill 1041-1974), an area identified by the Board of County Commissioners as warranting State review of land use decisions.

Assisted Living Residence

A residential facility that makes available to three or more persons, not related to the owner of such facility, either directly or indirectly through a resident agreement with the resident, room and board and at least the following services: personal services; protective oversight; social care due to impaired capacity to live independently; and regular supervision that shall be available on a 24-hour basis, but not to the extent that regular 24-hour medical or nursing care is required as defined under CCR 1011-1.

Auto Detailing

A commercial business cleaning the exterior and/ or interior of motor vehicles as a restorative process for the vehicle.

Automobile Service Station

A facility in which the sale of automotive fuel or other petroleum products is the primary and principal activity and constitutes a substantial or significant portion of the goods offered and or services rendered. Minor automobile repair may be performed on premises. A service station may include accessory uses such as a convenience store, a single bay fully-automated vehicle wash, and/or fast-food restaurant subject to compliance with all applicable provisions of the County Land Development Code.

Automobile Wrecking/Salvage Yard

An area where the business of auto wrecking and dismantling and the storage, sale or dumping of dismantled, obsolete, or wrecked vehicles or their parts, which may also include auto shredding and crushing services, is conducted.

Banner

A temporary sign that is not attached to a permanently mounted backing and/or that is allowed to wave, flap or rotate with the wind.

Bar/Tavern

An establishment primarily devoted to the serving of alcoholic beverages by the drink and in which the service of food is only incidental to the consumption of such beverages.

Base Flood

The flood having a one percent chance of being equaled or exceeded in any given year. Also known as the "one-percent chance flood," "100-year flood," or "one-hundred-year flood." These terms do not imply that the flood will necessarily happen once every 100 years.

Base Flood Elevation (BFE)

The elevation shown on a FEMA Flood Insurance Rate Map for Zones AE, AH , AR, AR/A, AR/AE, AR/AH, and AR/AO that indicates the water surface elevation resulting from a flood that has a one percent chance of equaling or exceeding that level in any given year.

Basement

As used in Section **Error! Reference source not found., Error! Reference source not found.**, means any area of a building having its floor subgrade (below ground level) on all sides.

Batch Plant, Temporary

See TEMPORARY BATCH PLANT. Also, for comparison, see TEMPORARY CONCRETE and/or BATCHING PLANT.

Bed And Breakfast

A Bed & Breakfast is a single-family dwelling having a mixed use as a home for the residential owner and as an accessory use for guest lodging including meals. The home is to be the primary and legal residence of the owner.

Bee

Any stage of the common domestic honey bee, *Apis mellifera* species. Does not include Africanized bees and hybrids.

Berm

Mound of earth used for screening, definition of space, noise attenuation and decoration in landscaping.

Best Management Practice (BMP)

Practices that are designed to prevent or reduce impacts caused by oil and gas operations to air, water, soil, or biological resources, and to minimize adverse impacts to public health, safety and welfare, including the environment and wildlife resources.

Block

A parcel of land, intended to be used for urban purposes, which is entirely surrounded by public streets, highways, railroad right-of-way, public walks, parks or green strips, rural or vacant land or drainage channels or a combination thereof.

Board of County Commissioners

Board of Commissioners of Arapahoe County, Colorado.

Boarding House

A building or portion thereof which is used to accommodate, for compensation, three or more boarders, not including members of the occupant's immediate family who might be occupying such building. The word "compensation" is money, services or other things of value.

Broadcast Tower Facility

A facility consisting of antennae, typically for AM and FM radio and/or VHF or UHF transmissions, an equipment building, manned or unmanned, and a guyed or self-support tower(s) and related field facilities. Each facility is intended to provide coverage to a geographic area subject to the limitations of the provider FCC license.

Building Code

The Uniform Building Code of Arapahoe County.

Building Envelope

An area of land within a buildable lot within which all site structures, buildings, and other hardscape elements shall be contained, except driveways. The building envelope also includes any building overhangs, eaves, protruding architectural features (e.g., bay windows, chimneys), and similar features.

Building Front

One exterior wall of the building typically facing a front line of a lot; or in the event that the primary entrance is located on an exterior wall which is not the front line of the lot, the building front shall be the exterior wall containing the primary entrance to the building.



Building Line, Front

A line parallel to the street (front lot line) and the required front setback that is the first vertical wall of the principal building on the property.

Building, Main

A building in which is conducted the principal permitted use of the lot on which it is situated.

Camps

Day camps and overnight camping in a supervised environment licensed by the State of Colorado.

Candela

A unit of measure defining the intensity of a ray of light at a given angle.

Canopy

An accessory roof-type structure which is permanently affixed to the ground and typically not enclosed. As accessory structures these structures would be exempt from the minimum distance requirements between structures. These structures must meet all other minimum yard requirements within the zoning district.

Car Wash

A commercial business using self-service, in-bay automatic or conveyor equipment for cleaning and washing motor vehicles, whether as a part of another business operation or as a stand-alone operation, of any type, on a commercial basis and shall include fleet and municipal in-bay automatic and conveyor vehicle wash facilities.

Caretaker's Residence

A dwelling unit or mobile home accessory to a principal use in any one zone district designed and intended for occupancy by a person(s) owning, employed in, or dealing with and responsible for the security and maintenance of the principal use.

Catering Service

An establishment in which the principal use is the preparation of food and/or meals on the premises, and where such food and meals are delivered or taken to another location for consumption.

Cemetery

Land used or dedicated for the burial of the dead, including such accessory uses as mortuaries, sales of burial plots, mausoleums, columbarium's, crematoriums and maintenance facilities.

Central (Community) Sewer System

A system or facility for treating, neutralizing, stabilizing, or disposing of sewage, which system or facility has a designed capacity to receive more than 2,000 gallons of sewage per day, but not including an on-site wastewater system (individual sewage disposal system). The term "central sewer system" includes appurtenances such as interceptors, collection lines, outfall and the outlet sewers, pumping stations, and related equipment.

Central (Community) Water System

A system for the provision to the public of water for human consumption through pipes or other constructed conveyances, and which serves at least 15 service connections used by year-round residents of the area served by the system; or that regularly serves at least 25 year-round residents.

Channelization

The artificial creation, enlargement or realignment of a drainageway.

Check Cashing Facility

A commercial business that provides personal or business check cashing services and may include personal loans and/or payment services to individuals.

Child Care Center

A facility, by whatever name known, which is maintained for the whole or part of a day for the care of five or more children under the age of 16 years and not related to the owner, operator, or manager thereof, whether such facility is operated with or without compensation for such care and with or without stated educational purposes. The term includes facilities commonly known as day care centers, day nurseries, nursery schools, kindergartens, preschools, play groups, day camps, summer camps, and centers for mentally retarded children and those facilities which give 24-hour care for dependent and neglected children, and includes those facilities for children under the age of six years with stated educational purposes operated in conjunction with a public, private, or parochial college or a private or parochial school; except that the term shall not apply to any kindergarten maintained in connection with a public, private, or parochial elementary school system of at least six grades.

Child Care Home, Large

A dwelling unit used for the purposes of providing care for seven to 12 children.

- A. Child care may be provided to children from 24 months to 13 years of age. This does not prohibit the care of children ages 13 to 18.
- B. Care may be provided to no more than two children under the age of two whether or not other siblings are in care.

Church

A building, together with its accessory buildings and uses, where persons regularly assemble for religious worship, and which building, together with its accessory buildings and uses, is maintained and controlled by a religious body organized to sustain public worship.

Closed-Loop Drilling System:

A system of equipment used to separate drilling cutting solids from the mud stream. The solids are placed in containment located on the drilling site. A closed loop drilling system does not include the use of any conventional reserve drilling pit.

Cluster Development

A type of land use design concentrating development in one or more areas of the project and allowing for a reduction in lot size below minimum requirements when compensating amounts of open space are provided within the proposed project.

CMC

CMC shall mean the Colorado Marijuana Code, C.R.S. Section 44-10-101 *et seq.*, as amended.

CMRS

See COMMERCIAL MOBILE RADIO SERVICE (CMRS).

CMRS Facility

See FACILITY, CMRS.

Co-Development (CMRS)

Two or more CMRS providers working together to develop a single CMRS facility.

Co-Location (CMRS)

Locating wireless communications equipment for more than one CMRS provider on a single structure.

[Code of Federal Regulations \(CFR\)](#)

The codification of the general and permanent Rules published in the Federal Register by the executive departments and agencies of the Federal Government.

[Colony](#)

A bee hive and its equipment and accessories, including bees, comb, honey, pollen, and brood.

[Commercial](#)

For the purposes of Section **Error! Reference source not found., Error! Reference source not found.**, commercial shall mean for purposes of obtaining a profit or remuneration.

[Commercial Feed Lot](#)

Any tract of land, structure, pen or corral where livestock are kept in close quarters for the purpose of feeding such livestock in order to fatten for sale or slaughter.

[Commercial Mineral Deposit](#)

A natural mineral deposit for which extraction by an extractor is or will be commercially feasible and which it can be demonstrated by geologic, mineralogical, or other scientific data that such deposit has significant economic or strategic value to the area, state or nation.

[Commercial Mobile Radio Service \(CMRS\)](#)

Telecommunications services, including cellular telephone, personal communications service (PCS), specialized mobile radio (SMR), enhanced specialized mobile radio (ESMR), paging, wireless Internet access and similar commercial services.

[Commercial Office](#)

A room or group of rooms used for conducting the affairs of a business, profession, service industry or government, and some limited and accessory sales of products, but not including residential uses.

[Commodity](#)

An article of trade or commerce, especially an agricultural or mining product that can be processed and resold.

[Community Garden](#)

Land managed by a group of individuals for the purpose of the cultivation of fruits, vegetables, plants, flowers or herbs.

[Compatible Architectural Treatment](#)

The use of colors, materials and general architecture in the exterior design of structures to ensure that said structures are suitable, harmonious and in keeping with the general appearance and/or style of existing adjacent development.

[Completion Activities](#)

The activities for the process of making a well ready for production or injection. These activities principally include preparing the bottom of the hole to the required specifications, running in the casing, cementing, perforating, as well as hydraulic fracturing, also known as fracking, and flowback.

[Comprehensive Plan](#)

The Comprehensive Plan and amendments thereto for Arapahoe County which has been officially adopted to provide development policies for current and long range development within the County and which may include, but not be limited to, the plan for land use, land subdivision, circulation, and community facilities.

Concession Stands

Selling products at multiple sites within the venue, erected as necessary by property owner and/or by individual vendors.

Concrete and/or Batching Plant, Temporary

See Temporary Concrete and/or Batching Plant. For comparison, also see Batch Plant, Temporary.

Concrete, Mortar and Asphalt Batching Operations

A site, together with its accessory facilities, where sand, gravel, cement and various petroleum derivatives are compounded to manufacture concrete, mortar and asphalt.

Conditional Letter of Map Revision (CLOMR)

FEMA's comment on a proposed project that would, upon construction, affect the hydrologic or hydraulic characteristics of a drainageway or other flooding source and thus result in the modification of the existing FEMA regulatory floodplain, floodway, the effective Base Flood Elevations (BFEs), and/or the Special Flood Hazard Area (SFHA). The letter does not revise an effective Flood Insurance Rate Map (FIRM); it indicates whether the resulting floodplain from the project, if built as proposed would result in a FIRM change.

Condominium

A legal form of ownership whereby an owner gains title to an interior air space dwelling unit, together with interest in the common areas and facilities appurtenant to such units.

Confined Animal Feeding Operation ("CAFO")

A confined animal or poultry growing operation (facility) for meat, milk, or egg production or stabling wherein livestock are fed at the place of confinement for 45 days or longer in any 12 month period and crop or forage growth is not maintained in the area of confinement. For purposes of this LDC, "confined animal feeding operations" includes animal feeding operations consistent with this definition and all related animal waste treatment or collection facilities that are regulated by the Colorado Department of Public Health and Environment pursuant to the Confined Animal Feeding Operations Control Regulations, 5 CCR 1002-81, as amended, or any superseding regulations.

Construction, Start of

See START OF CONSTRUCTION.

Contiguous

Lots are contiguous when at least one boundary line of one lot touches a boundary line or lines of another lot.

Conservancy Lot

A large, privately owned lot constituting part of a conservation area in a rural cluster development. The purpose of the conservancy lot is to provide surrounding residents with visual access to open space land while keeping the land under private ownership and maintenance. Only a limited portion of any such lot shall be developed; the remainder shall be protected through conservation easements or other types of deed restrictions, and may be used only in conformance with this Code's standards for conservation areas. Public access to conservancy lots is not required.

Conservation Area

The land set aside in a rural cluster subdivision and permanently preserved, through a conservation easement or other County-approved mechanism, for conservation, agricultural, or other low-impact uses

as allowed by this Code. The conservation area is typically contained in delineated tracts, as shown on the approved Cluster Subdivision Plat, but may also be contained within conservancy lots, as defined herein.

Conservation Easement

A recorded deed restriction under which a property owner retains title to real property but gives up some or all of the development rights associated with it, the terms and restrictions of which are specified in a conservation easement document for the property. For a conservation easement to be recognized under federal law, the easement document must transfer the rights to enforce property restrictions to a qualified conservation organization or government agency.

Construction, New

See New Construction.

Control

A fully automatic device, which can turn on, off, or dim lights at predetermined times. A control includes, without limitation, an astronomical time clock, photocell, motion detector and dimmer.

Convenience Commercial

A retail or service commercial use which serves the area immediately surrounding the use by providing groceries, sundries and miscellaneous services which do not typically offer comparison shopping opportunities.

Convenience Store

A small commercial establishment selling packaged food and other convenience items, which may include gasoline and/or a single-bay, fully-automated vehicle wash facility as an accessory and clearly secondary or subservient use to the convenience store, and having a gross floor area of less than 3,000 square feet.

Country Clubs, Golf Courses

- A. Buildings shall be set back a minimum of 100 feet from any property line.
- B. Facilities such as restaurants and bars may be permitted when occupying an integral part of a main structure and there is no exterior display or advertising.
- C. Swimming pools, tennis courts, etc., shall be located not less than 25 feet from any property line.
- D. Access to golf "driving ranges" shall be located on arterial or collector streets. Floodlights used to illuminate the premises shall be so directed and shielded so as to not be an annoyance to any developed residential property or constitute a traffic hazard.

Country Store And Craft Shops

Facilities that provide an opportunity for visitors to purchase merchandise and agriculturally related products or items.

CPW

The Colorado Parks and Wildlife Division of the Colorado Natural Resources Department.

Crematorium

A location containing properly installed, certified apparatus intended for the act of cremation of remains.

Cryptocurrency Mining

The operation of specialized computer equipment for the primary purpose of adding, securing, or verifying transactions to a peer-to-peer network, also known as a blockchain, or mining one or more blockchain-based cryptocurrencies (a form of electronic currency). This activity typically involves large networks of decentralized computer servers that work together around the world to perform calculations

and solve algorithms as part of the development and maintenance of a blockchain which is a type of distributed virtual ledger maintained on a peer-to-peer network. Typical physical characteristics of cryptocurrency mining include specialized computer hardware; the use of equipment to cool the hardware and operating space; and high density load electricity use.

Critical Facility or Critical Facilities

A structure or related infrastructure, but not the land on which it is situated, as further defined and specified in Rule 6 of the Rules and Regulations for Regulatory Floodplains in Colorado effective January 14, 2011, adopted by the Department of Natural Resources, Colorado Water Conservation Board, and adopted herein by reference, that if flooded may result in significant hazards to public health and safety or interrupt essential services and operations for the County at any time before, during and after the flood. See Section **Error! Reference source not found., Error! Reference source not found.**

Damage, Substantial

See Substantial Damage.

Day Care Center

An establishment used for the purposes of providing care for eight or more children under the age of 16 years, who are not related to the owner, operator or manager thereof, for less than a 24 hour consecutive period.

Day Care Center, Adult

A non-residential, protective facility specializing in providing activities and socialization for the elderly and/or disabled adults. Care is generally provided during daytime hours, but less than a 24-hour consecutive period, with a variety of planned program activities.

Day Care Home

A dwelling unit used for the purposes of providing care, for compensation, of children under the age of 16 years, who are not related to the owner, operator or manager thereof, for less than a 24-hour consecutive period.

Day Care Home, Adult

A dwelling unit used for the purposes of providing care for, and specializing in the special needs of, elderly and/or disabled adults who are not related to the owner of the dwelling/resident manager of the day care home, for compensation.

De-annexed Land

A land area which had been located within a municipality pursuant to a void annexation ordinance as determined by Final Judgment pursuant to Section 31-12-117, C.R.S., as amended.

Decibel

Logarithmic unit used to measure sound level. The symbol for the unit is dB.

Deed Restriction

Clauses in a deed limiting the future uses or enjoyment of a property. Deed restrictions may impose a vast variety of limitations and conditions; for example, they may limit the density of buildings and dictate the types of structures that can be built.

Density

The average number of families, persons or dwelling units per unit of land. In these Regulations, density is normally expressed as the number of dwelling units per gross acre.

Designated Outside Activity Area

Any existing public outside venue or recreation area, such as a park, playground, improved sports field, improved amphitheater or other facility for outdoor public assembly or recreation. Open space areas and open space buffers created through a PUD approval process are excluded from this definition.

Development

When used in Section **Error! Reference source not found., Error! Reference source not found.**, means any man-made change to improved or unimproved real estate including, but not limited to, buildings or other structures, mining, dredging, filling, grading, paving, excavation, drilling operations, or storage of materials located within the floodplain.

Development, New

See New Development and Redevelopment.

Development Plan

Any plan for new or ongoing development or production of oil or gas resources or production at one or more Oil and Gas pads, consistent with the requirements of COGCC's Rule 303 or Rule 314.

Digital Flood Insurance Rate Map (DFIRM)

A digital version of the Flood Insurance Rate Map (FIRM). The DFIRM is also the regulatory floodplain map for FEMA for insurance and floodplain management purposes, same as the FIRM.

Disconnected Land

A land area which was located within the boundaries of a municipality and has been disconnected from said municipality by Final Court Decree pursuant to Section 31-12-119, or 31-12-603, or 31-12-704, C.R.S., as amended, or by any other legal theory.

Dish-Shaped Antennas

Considered accessory structures in all zoning districts, used for the reception of television, microwave and/or cable TV, shall meet accessory structure setback and maximum height requirements within each zoning district.

Disposition

A contract of sale resulting in the transfer of equitable title to an interest in subdivided land; an option to purchase an interest in subdivided land; a lease or an assignment of an interest in subdivided land; or any other conveyance of an interest in subdivided land which is not made pursuant to one of the foregoing

District Zoning

A portion of the County within which the use of land and structure(s) and the location, height and bulk of structure(s) are governed, i.e., the A-1 classification is a district as is the R-1-A classification.

Downgradient

At lower elevation from that of the reservoir measured at its average water level elevation or that there is intervening natural terrain or topography that prohibits the surface mitigation of liquids to the reservoir and there is no evidence of other hydrological connection from the proposed location to the reservoir.

Drainageway

A natural or artificial channel, swale, arroyo, gully, gulch, ditch, trench, creek, stream, river, slough, wetland, pond, reservoir, or lake that either conveys or receives seasonal or stormwater runoff.

Drive-In or Drive-Through Facility

An establishment that, by design, physical facilities, service, or packaging procedures, encourages or permits customers to receive services or obtain goods while remaining in their motor vehicles.

Drive-In, Take-Out Restaurant

See Restaurant, Drive-In, Take-Out.

Drive-In Theaters

Shall be located on an arterial street, and shall provide ingress and egress designed to minimize traffic congestion. In addition, the viewing screen shall not be visible from arterial roadways.

Drought Tolerant Landscape

A reduced water-usage landscape achieved through the use of good planning and design, limited turf area, soil improvements, efficient irrigation, mulching, low- water-use plants, and appropriate turf materials.

Dry and Abandoned

A well that has never produced and was plugged and abandoned after being determined to be unproductive or insufficiently productive to be economic.

Dumpsters/Trash Containers

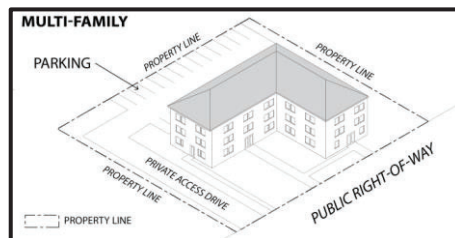
See TRASH CONTAINERS/DUMPSTERS.

Dumpster Enclosure

See TRASH ENCLOSURE.

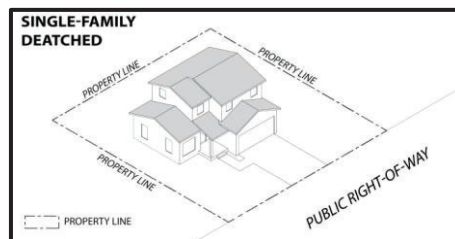
Dwelling, Multi-family

A structure on an individual lot containing three or more dwelling units separated by interior walls and/or floors/ceilings with separate or joint interior or exterior access, and that does not meet the definition of a single-family attached dwelling or a townhome dwelling. Examples include triplex, four-plex, and apartment and condominium complexes.



Dwelling, Single-Family Detached

A dwelling unit located on an individual lot and not attached to any other dwelling unit (other than a mother-in-law apartment, if permitted).



Dwelling, Single-Family Detached Cluster Development

A group of single-family dwelling units organized in a specific area on a larger parcel of land to allow the remaining land to be used for recreation, common open space, or preservation of environmentally sensitive areas, and in which the minimum sizes or dimensions of individual residential lots are permitted to be smaller than otherwise allowed in the zone district where the development is located.

Dwelling, Single-Family Attached

Three or more dwelling units located on a single lot in a single structure designed so that (a) individual units have individual ground-floor access and (b) all floors designed for human occupancy are separated from each other by unpierced vertical common or party walls.

Dwelling, Townhome

An individual dwelling unit that (a) is located on an individual lot, (b) is part of a single structure containing at least three dwelling units, and (c) in which all floors designed for human occupancy are separated from each other by unpierced vertical common or party walls. The owner of a townhome unit may have an undivided interest in common areas and elements appurtenant to such units.

Dwelling, Two-Family

A structure located on a single lot, or on two lots with the lot line coinciding with the common or party wall, containing two dwelling units with separate access that share a common unpierced wall or floor/ceiling, each of which is designed for or occupied by a single family.

Dwelling Unit

Any building or portion thereof designed for human occupancy which contains kitchen, dining, living, sleeping and bath accommodations necessary for service to a single family.

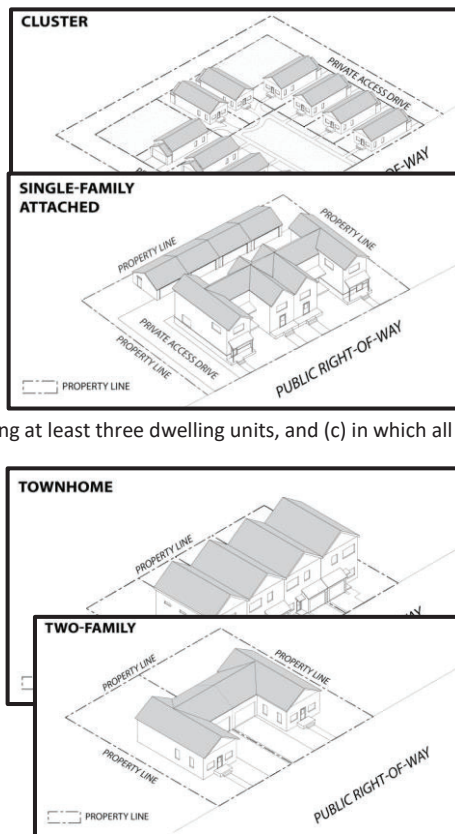
For the purposes of Section **Error! Reference source not found.**, **Error! Reference source not found.**, dwelling unit shall mean any house, apartment unit, condominium unit or other similar secure structure or unit thereof that is primarily used as a residence.

Dwelling Unit, Efficiency

A dwelling unit consisting of not more than one habitable room together with kitchen or kitchenette and sanitary facilities.

Easement

The right of a person, government agency, or public utility company to use public or private land owned by another for a specific purpose.



Educational Activities and Programs

Agricultural and/or culturally related topics discussed, observed, and/or experienced by way of classes, demonstrations, exhibits, lectures, and/or hands-on involvement, organized and conducted for the purposes of teaching participants about agricultural or farm related subjects such as: soil conservation and crop rotation, harvesting, crop varieties and cultivation techniques, historical landmarks, agricultural technology advancements, gardening, crafts, antique farm equipment and vehicle shows, etc.

Effected Land

The area of land from which any amount of overburden has been removed, or upon which any amount of overburden has been deposited, or both. This term also includes the disturbed surface of an area where a mining operation is being or will be conducted, including but not limited to: on-site private ways, roads and railroad lines; land excavations; development drill sites or workings; refuse banks or spoil piles; evaporation or settling ponds; leaching dumps; placer areas; tailings ponds or dumps; work, parking, storage or waste discharge areas; areas in which structures, facilities, equipment, machines, tools or other materials or property which result from or are used in such operations are situated.

Energy Facility or Facilities

- A. OIL and GAS FACILITY or FACILITIES. Includes oil and gas wellsites, flowlines, tank batteries, compressor stations, pits/ponds, below-grade tanks, dehydration units, vapor recovery units (VRUs), and associated roads. Pipelines and gathering systems, other than flowlines, as well as salt water disposal wells and injection wells are excluded. Locations with more than one of the above mentioned types of equipment will be considered to be one facility.
- B. SOLAR FACILITY OR FACILITIES. Is a facility or facilities that use solar energy to generate electricity through the use of solar panels, racking structures, inverters, transformers, overhead or underground wiring, and associated roads intended to generate power for a utility. A solar facility or facilities does not include any facility or facilities that exceed two megawatts (2 MW) in power generation or twenty (20) acres in size.

Event and Conference Center

A location for family, community, public, private, corporate or ticketed events including, but not limited to, events such as: weddings, company outings, picnics, church gatherings, reunions, cultural festivals, shows, company meetings, holiday celebrations, conferences, and other similar events.

Evidence

Any map, table, chart, contract, or any other document or testimony prepared or certified by a qualified person to attest to a specific claim or condition, which evidence must be relevant and competent and must support the position maintained by the subdivider.

Existing Manufactured Home Park or Subdivision

When used in Section **Error! Reference source not found., Error! Reference source not found.**, means a manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including, at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) is completed before the effective date of the Floodplain Management and Flood Damage Prevention Regulations.

Expansion to Existing Manufactured Home Park or Subdivision

When used in Section **Error! Reference source not found., Error! Reference source not found.**, means the preparation of additional sites by the construction of facilities for servicing the lots on which the

manufactured homes are to be affixed (including the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads).

Expansive Soils (shrink/swell soils)

Soil conditions exhibiting a high potential for changes in volume due to varying amounts of moisture and clay content which could severely damage building foundations, roads and other.

Explosive and Highly Flammable or Hazardous Materials

Materials or liquids which, when ignited, exhibit large scale, rapid and spectacular expansion, outbreak or other upheaval. Hazardous materials are as defined by State Statute.

Facade/Fascia

Any face of a building given special architectural treatment, i.e., a false, superficial or artificial appearance or effect.

Facility or Facilities

See Oil and Gas Facility or Facilities

Facility, CMRS

The equipment, physical plant and portion of the property and/or building used to provide CMRS services. This includes but is not limited to cables and wires, conduits, pedestals, antennas, towers, concealed structures, electronic devices, equipment buildings and cabinets, landscaping, fencing and screening, and parking areas.

Family

An individual or two or more persons related by blood, marriage or adoption residing under one head of household, or a group of not more than five persons, who need not be related, living as a single housekeeping unit. The definition of "Family" specifically excludes any group home licensed by the State for the use of four to eight persons.

Family Foster Home

A facility providing care and training for no more than four children not related to the caretaker for regular 24-hour care.

F.A.R. Part 77

Federal Aviation Administration regulations pertaining to height and obstruction criteria within prescribed distances from an airport as these regulations currently exist and as may be amended from time to time. Part 77 Regulations may also affect lands located outside the boundaries of a defined Airport Influence Area.

Farm

An area that is used for the production of farm crops, such as vegetables, cotton or grain and their storage, as well as raising thereon of farm animals, such as poultry or swine, on a limited basis. Farms also include dairy produce. Farming does not include the commercial raising of animals, commercial pen feeding (feed lots), or the commercial feeding of garbage or offal to swine or other animals.

Farm Animal Centers

Displays and presentation in which living animals of species known to be generally typical of farm and ranch environments are kept and exhibited to the public in a setting that allows the public to view or physically interact with the animals.

Farm Museum

A building having public significance by reason of its architecture or former use or occupancy or a building serving as a repository for a collection of farming curiosities or objects of interest, arranged, intended and designed to be used by members of the public for viewing with or without an admission charge and which may include as an accessory use the sale of goods to the public as gifts or for their own use.

Farm Tours

Activity conducted via foot, tractor, ATV, animal, and/or other means of access as appropriate for the introduction of the farm, its environs, and its functions.

Farmers' Market, Outdoor

A publicly or privately operated establishment where primarily agricultural products such as flowers, herbs and uncut, unprocessed fruits and vegetables are sold.

Farmers Market (Year Round)

A public point of sale at which multiple farmers and often other vendors sell unprocessed produce directly to consumers.

Farmhouse Restaurant

A family dining venue designed with a "farmhouse kitchen" style or rural-oriented character, equipped with a full kitchen and operating on scheduled hours.

Farm-Life Activities and Entertainment

Displays, contests, and constructions involving the agricultural products of a farm such as corn mazes, hay tunnels, cooking contests, pumpkin patch, organics, etc. Activities showcased by festivals, contests, events and admissions including, but not limited to, hay rides, community square dances, tractor and horse pulls, sleigh rides etc.

Farming and Gardening Classes

Instruction given by a skilled individual or staff pertaining to the act of, or a specific aspect of farming or gardening and/or a specific aspect of farming.

Fast Food Restaurant

A restaurant operation located either within a retail center or situated on its own freestanding "pad," which primarily 1) serves food that is prepared and/or packaged within five minutes and can be intended for consumption away from the premises, 2) contains a drive-in or drive-through facility, 3) is intended to primarily serve the passerby and/or motoring public. This term does not include a restaurant offering curbside delivery as a secondary and clearly subordinate use.

Fee Simple Ownership

The complete ownership interest in real property, free and clear of any condition, limitation, or restriction on its alienation; the ownership of the entire "bundle" of rights attached to real property.

FEMA

The Federal Emergency Management Agency, the agency responsible for administering the National Flood Insurance Program (NFIP), or successor agency.

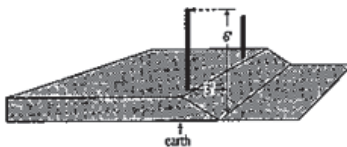
Fence Height

- A. Height means the distance of the vertical fence surface measured from finished grade to the top of the vertical surface. When measuring the height of a fence measure from the lowest point within three feet on either side of the fence.
- B. Pillars or posts between vertical fence surfaces may exceed the maximum permitted fence height by 10 percent.
- C. When a fence is erected on top of a retaining wall, the height of the fence shall be measured from the top of the retaining wall.
- D. The accompanying illustrations pertain to measurement or determination of fence height.

Fences should follow the natural contours of the ground.



Measure from the ground level at the lowest grade level within three feet of either side of the fence.



Fill

A deposit of materials of any kind placed by artificial means.

Final Acceptance

The acknowledgment by the County that the guaranty period has expired and there are no outstanding items to be corrected under the provisions of the guaranty.

Final Development Plan (FDP)

The Final Development Plan was the second step in establishing approval of land uses and siting restrictions for a Planned Unit Development before April 1, 2017, which provided specific information on the uses to be permitted and the manner in which they may be situated on the property. The comparable step in the revised Planned Unit Development regulations is called a Specific Development Plan.

Financial Establishment

The provision of banking and financial services to consumers and clients that may include walk-in and drive-through services such as check cashing, business and consumer lending, private or business savings accounts and similar monetary services.

Five-Hundred Year (500-Year) Flood

A flood having a recurrence interval that has a 0.2- percent chance of being equaled or exceeded during any given year (0.2-percent-annual-chance flood). The term does not imply that the flood will necessarily happen once every 500 years.

Five-Hundred Year (500-Year) Floodplain

The area of land susceptible to being inundated as a result of the occurrence of a 500-year flood.

Flag Banners/Feather Flags

Any sign, banner, valance or advertising display constructed of cloth, canvas, fabric, or other light material, with or without frames.

Flag Lot

A polygonal-shaped lot, with the appearance of a flag and flagpole, that does not front or abut a public roadway and where the narrow "flagpole" part of the lot is used to provide access to the public roadway. Typically, the widest part of a flag lot is located at the rear of another lot or parcel, and the flagpole part of the lot is comprised entirely of a private right-of-way or driveway.



Flaring

The combustion of natural gas during upstream Oil and Gas Operations, excluding gas that is intentionally used for onsite processes.

Flex Industrial

An industrial building that contains no more than 15 percent of the gross building area devoted to offices uses that support the principal industrial use, and no more than five percent of the gross building area is devoted to display and sales of the products produced in the building.

Flex Office/Warehouse

An office and warehouse building on a parcel of land that can adjust the amount of the office and warehouse space ratio in direct proportion to the amount of available on-site parking, but at a ratio not more than 51 percent office and 49 percent warehouse, based on the parking spaces required for each allowed use.

Floatable Materials

Any material that is not secured in place or completely enclosed in a structure, so that it could float off site during the occurrence of a flood and potentially cause harm to downstream property owners, or that could cause blockage of the channel or drainageway, a culvert, bridge or other drainage facility. This includes, without limitation, lumber, vehicles, boats, equipment, trash dumpsters, tires, drums or other containers, pieces of metal, plastic or any other item or material likely to float.

Flood or Flooding

A general and temporary condition of partial or complete inundation of normally dry land areas from the overflow of waters from drainageways or reservoir spillways and/or the unusual and rapid accumulation or runoff of surface waters from any source.

Flood Control Structure

A physical structure designed and built expressly or partially for the purpose of reducing, redirecting, or guiding flood flows along a particular drainageway.

[Flood Fringe](#)

That portion of the 100 year floodplain between the floodway boundary and the limits of the base floodplain. Sheet flow areas with flood depths of less than one foot are not considered part of the flood fringe. Sheet flow areas with flood depths between one and three feet, inclusive, are part of the flood fringe.

[Flood Hazard Area Delineation \(FHAD\)](#)

A Flood Hazard Area Delineation Study prepared by the Urban Drainage and Flood Control District (UDFCD) in cooperation with local governments and adopted by each, UDFCD and the CWCB. Once completed, these studies are incorporated into the FEMA FIRM through the LOMC or PMR process and become the effective flood hazard information for the National Flood Insurance Program.

[Flood Insurance Rate Map \(FIRM\)](#)

The official map on which the Federal Emergency Management Agency has delineated the special flood hazard areas.

[Flood Insurance Study.](#)

The official report provided by the Federal Emergency Management Agency that includes flood profiles and water-surface-elevations of the base flood.

[Flooding](#)

See Flood or Flooding.

[Floodplain](#)

As used in Section 4-3 and 5-3.6 of the County Land Development Code, Floodplain Management, the land area that will be inundated or flooded based on the stormwater runoff produced by the 100-year flood as defined by FEMA, FHADs, or drainage ways with tributary areas that are 130 acres or greater.

[Floodplain Administrator](#)

The County official designated by title, including his or her designee, to administer and enforce the Floodplain Management Regulations.

[Floodplain Development Permit](#)

The permit required before construction or development begins within any floodplain area as defined by the County (see Floodplain). Floodplain Development Permits are required to ensure that all proposed development projects meet the requirements of the NFIP and the County's Floodplain Management Regulations.

[Floodplain Management](#)

The operation of an overall program of corrective and preventive measures for reducing flood damage, including but not limited to emergency preparedness plans, flood control works and floodplain management regulations.

[Floodplain Management Regulations](#)

Zoning ordinances, subdivision regulations, building codes, health regulations, special purpose ordinances (such as a floodplain ordinance, grading ordinance and erosion control ordinance) and other applications of police power. The term describes such state or local regulations, in any combination thereof, which provide standards for the purpose of flood damage prevention.

Floodproofing

Any combination of structural and non-structural additions, changes, or adjustments to structures which reduces or eliminates flood damage to real estate or improved real property, water and sanitary facilities, structures and their contents.

Floodway

The channel of a river or other drainageway and the adjacent land areas that must be reserved to discharge the base flood without cumulatively increasing the water-surface-elevation more than one-half foot.

Floor Area, Gross

All areas located within the outside walls of a building, exclusive of basement area, garage space and porches.

Floor Area Ratio (F.A.R.)

The ratio of building gross square footage to the gross square footage of a parcel. For example, 43,560 square feet of building on one acre of land (43,560 sq. ft.) would equal a 1:1 floor area ratio.

Flowline

A segment of pipe transferring oil, gas, or condensate between a wellhead and processing equipment to the load point or point of delivery to a U.S. Department of Transportation Pipeline and Hazardous Materials Safety Administration or Colorado Public Utilities Commission regulated gathering line or a segment of pipe transferring produced water between a wellhead and the point of disposal, discharge, or loading. This definition of flowline does not include a gathering line as defined by COGCC Rules or any line that would otherwise meet the foregoing description will not be considered a flowline if all of the following are satisfied:

- the operator prospectively marks and tags the line as a support line;
- the line is not integral to production;
- the line is used infrequently to service or maintain production equipment;
- the line does not hold a constant pressure; and
- the line is isolated from a pressure source when not in use.

Flyway

A six (6) foot solid fence, wall, or thick hedge that directs the path of the bee up and out of the property.

Footcandle or F.C.

A unit of illuminance equivalent to one lumen per square foot.

Flower Farms

A farm where the principal source of income is the production of decorative or ornamental plants generally not used as an edible commodity.

Freeboard

The vertical distance in feet above the base flood elevation to which development must be elevated, as set forth in the applicable requirements of Section **Error! Reference source not found., Error! Reference source not found..**

Fuel Dispenser

A mechanical device used to convey or pump automotive fuel or other petroleum products from a storage tank, regardless of whether said storage tank is above or below grade, into a vehicle or other appropriate container.

Full Cutoff Luminaire

A light fixture that has a light distribution pattern that results in no light being permitted at or above a horizontal plane located at the bottom of the luminaire.

Fully Shielded Luminaire

A light fixture that provides internal or external shields and louvers that prevents light emitted by the light fixture from causing glare or light trespass.

Functionally Dependent Use

When used in Section **Error! Reference source not found., Error! Reference source not found.**, means a use which cannot perform its intended purpose unless it is located or carried out in close proximity to water (e.g. docking facility).

Garage, Private

An accessory building or a part of a main building used for storage of the private vehicles or boats of the family(ies) occupying the dwelling unit(s) to which the garage is accessory.

Garage, Public

Any garage other than a private garage available to the public for the storage of vehicles and boats when such vehicles are parked or stored for remuneration, hire or sale.

Gardening

The raising of produce for personal consumption, and not for resale as a commodity.

General Development Plan (GDP)

The document required to be submitted and approved in order to complete the first step of the Three-Step Planned Unit Development process in Section **Error! Reference source not found., Error! Reference source not found.**. This document provides general information regarding the type, scale and layout of proposed land uses, open spaces, and circulation systems.

Geologic Hazard

A geologic phenomenon which is so adverse to past, current or foreseeable construction or land use as to constitute a significant hazard to public health, safety or property. This term includes, but is not limited to, landslide, rock fall, seismic effect, mud flow, ground subsidence, shrink/swell soils and unstable or potentially unstable slopes.

Geologic Hazard Area

An area which contains or is directly affected by geologic hazard.

Glare

The sensation produced by luminance within the visual field that is sufficiently greater than the luminance to which the eyes are adapted to cause annoyance, discomfort, or loss in visual performance or visibility.

Grade

The average elevation of the area immediately adjacent to the sign, excluding berming. GROSS LAND AREA. The land area proposed to be subdivided, including land to be dedicated for streets and other public purposes.

Grocery Store

A general retail establishment that offers for sale primarily food and groceries and may include such accessory services as bakery, delicatessen, butcher/seafood shop, pharmacy, consumer banking, retail prepared food, alcoholic and non-alcoholic beverage sales, and similar goods and services to the public.

Groundwater

Subsurface waters in a zone of saturation which are or can be brought to the surface of the ground or to surface waters through wells, springs, seeps or other discharge areas.

Ground-Based Equipment (CMRS)

The plant and equipment, including but not limited to cables, wires, conduits, ducts, pedestals, electronics and other appurtenances, used to transmit, receive, distribute, provide, or offer CMRS services, but are not mounted to a tower or other structure and are located on the ground or in a structure located on or under the ground.

Group Home

Any residential structure which provides non-institutional housing for a group of four to eight persons acting as a single housekeeping unit and is licensed by the State. A Group Home shall not otherwise be considered a "family" as defined in this section. There are two types of group Homes:

Type A Group Home

Forms of housing which are specifically regulated by either federal or state government:

- A. Group Home, Handicapped – A dwelling unit is shared by handicapped persons living together as a single housekeeping unit.
- B. Group Home, Developmentally Disabled – Per C.R.S. 30-28-115 (2)(a), developmentally disabled is defined as those persons having cerebral palsy, multiple sclerosis, mental retardation, autism or epilepsy; a group home for these persons.
- C. Group Home, Mentally Ill – Per C.R.S 27-10-102 (7) "Mentally ill persons" are those persons with substantial disorder of the cognitive, volitional or emotional process that grossly impairs judgment or capacity to recognize reality or to control behavior (mental retardation and mental illness may or may not be mutually exclusive); a group home for these persons.
- D. Group Home –Elderly – Per C.R.S 30-28-115 (2)(b), elderly persons are considered to be those persons 60 years or older who do not need skilled or intermediate care facilities; a group home for these persons.

Type B Group Home.

All other forms of group housing.

Guest Ranch

Any building or buildings for dwelling purposes where the primary purpose is to rent such unit for limited periods of time in connection with recreation or vacation facilities available on the premises. Such units shall not be rented or leased for permanent occupancy.

Guest Ranch/Farm House Lodging

Overnight accommodations, separate from the landowner's residence, provided for guests wishing to have a "life on the farm" experience. These accommodations are usually offered with one or more designated meals, similar in size and format to a bed and breakfast operation.

Guyed Tower (CMRS)

A non-self-supported tower utilizing a guy wire support framework under tension on a concrete base. The guy wire support system allows for greater tower height but requires a larger land area for installation.

Handicap

Physical or mental impairment which substantially limits one or more of a person's major life activities, and as further defined by the U.S. Department of Housing and Urban Development (24 CFR Ch 1 § 100.201 (4-1-91 Edition), in response to the Fair Housing Act Amendments of 1988.

Health Club

A commercial establishment that provides exercise facilities for activities such as running, jogging, aerobics, weight lifting, court sports, and swimming and may also provide locker rooms, showers, massage services, saunas and related accessory uses.

Health Establishment, Including Nursing Home

Facilities which make medical services and nursing care available for a continuous period of 24 hours or more to three or more persons not related to the operator.

High Priority Habitat

As used herein shall have the same definition as stated in the Colorado Oil and Gas Conservation Commission Rules of Practice and Procedure, 100 Series Definitions (2 CCR 404-1 and as may be duly amended).

Highest Adjacent Grade (HAG)

The highest natural elevation of the ground surface prior to construction next to the proposed walls of a structure.

Historic Structure

When used in Section **Error! Reference source not found., Error! Reference source not found.**, means any structure that is:

- A. Listed individually in the National Register of Historic Places (a listing maintained by the Department of Interior) or preliminarily determined by the Secretary of the Interior as meeting the requirements for individual listing on the National Register;
- B. Certified or preliminarily determined by the Secretary of the Interior as contributing to the historical significance of a registered historic district or a district preliminarily determined by the Secretary to qualify as a registered historic district;
- C. Individually listed on a state inventory of historic places in states with historic preservation programs which have been approved by the Secretary of Interior; or
- D. Individually listed on a local inventory or historic places in communities with historic preservation programs that have been certified either:
 1. By an approved state program as determined by the Secretary of the Interior; or
 2. Directly by the Secretary of the Interior in states without approved programs.

Home Occupation

Any occupation or activity which is clearly incidental to and conducted wholly within a dwelling unit and not in any accessory building or space on the premises by residents of the dwelling unit.

Hospital

A facility which makes available one or more of the following: medical, surgical, psychiatric, chiropractic, maternity and/or nursing services.

Hotel

See Motel.

Hunting Club

Buildings and facilities, owned or operated by a corporation, association, person or persons, for a social, educational or recreational hunting purpose to which membership is required for participation and not primarily operated for profit nor to render a service that is customarily carried on as a business.

IESNA

Illuminating Engineering Society of North America.

Improvement, Substantial

See SUBSTANTIAL IMPROVEMENT.

Initial Acceptance

Acknowledgment by the County, that to the best of the County's knowledge, all work has been completed in accordance with the construction plans and specifications.

Injection Well

A well that injects waste fluids that are generated during the drilling of and production from oil and gas wells or during primary field operations and that are exempt from regulation as hazardous wastes under subtitle c of the federal "Resource Conservation and Recovery Act of 1976", 42 U.S.C. sec. 6901 to 6934, as amended, such as produced water associated with oil and natural gas production into the earth. This definition is limited to Class II wells as defined by the Environmental Protection Agency.

Inoperable Vehicle

Any vehicle lacking a current valid registration that is displayed on the vehicle or trailer and/or whose operation is not currently possible due to the disassembly of vehicle parts preventing vehicle operation. Inoperable vehicles shall not be permitted on residential properties and/or on the public right-of-way immediately adjacent to said residential property.

Institutional Housing

Includes persons under formally authorized, supervised care or custody in institutions at the time of enumeration. Such persons are classified as "patients" or "inmates" of an institution regardless of the availability of nursing or medical care, the length of stay, or the number of persons in the institution. Generally, institutionalized persons are restricted to the institutional buildings and grounds (or must have passes or escorts to leave) and thus have limited interaction with the surrounding community. Also, they are under the care of trained staff having responsibility for their safety and supervision.

Junk Yard

A building, structure or parcel of land, or portion thereof, used for the collecting, storage or sale of wastepaper, rags, scrap metal or discarded material; or, for the collecting, dismantling, storage, salvaging, or demolition of vehicles (whether operable or inoperable) machinery or other materials.

Kennel

Any premises where any combination of dogs, cats or other household pets, totaling four or more animals, six months of age or older, are kept, boarded or bred for the intention of profit.

Laboratory

A building or a portion of a building devoted to basic applied research and the experimental study or science of the testing and analysis of chemicals, drugs, minerals, bacteriological, biological, medical, x-ray, pathological, and similar analytical or diagnostic services to doctors or dentists. No fabrication is conducted on the premises except the custom fabrication of dentures, dental implants, and optical lenses.

Lamp

The component of the light fixture that produces the actual light. A lamp includes, without limitation, the bulbs and tubes that produce the actual light.

Land Disturbance

The term "land disturbance", as used in Chapter 12-200 Grading, Erosion and Sediment Control Regulations, means the permanent or temporary purposeful alteration of existing ground contour by means of excavation, grading, filling, drilling, or removal of ground cover vegetation.

Land Improvements

Physical changes made to land and/or structures placed on or under the land surface in order to change the natural or preexisting conditions of the land in preparation for the construction of improvements related to the use of land for a specific purpose. Typical land improvements would include grading, street pavement, curbs and gutters, sidewalks, drainage facilities, storm and sanitary sewers, and utility facilities.

Landing Strips for Aircraft and Heliports

Shall not be located closer than 1000 feet from any existing dwelling and shall be approved by the Federal Aviation Administration (FAA). All proposals for landing strips for aircraft, ultralights and/or helicopter shall obtain approval as required by these Regulations.

Landing Strip for Private Aircraft

A runway or landing area without general aviation airport functions maintained for the private use of the owner of the property on which it is located (Includes Personal Heliport).

Large Child Care Home

See Child Care Home, Large.

Large Wind Energy Conversion System.

Any mechanism, including blades, rotors, or other moving surfaces, designed for the purpose of converting wind energy into mechanical or electrical power. For the purpose of these Regulations, towers, tower bases, guy wires and any other structures necessary for the installation of a large wind energy conversion system are also included. To be considered a Large Wind Conversion System, the capacity shall be greater than 100 kW for each wind energy conversion system.

Lattice Tower (CMRS).

A multi-legged freestanding framework tower with structural support provided by the framework sections of the tower. Each leg of the lattice tower has a separate concrete foundation.

Ldn

An A- weighted, day/night 24-hour average sound level, in decibels, obtained after the addition of 10 decibels to sound levels occurring during the night time period from 10 p.m. to seven a.m., which can be used to assess the amount of exposure to aircraft noise which can be expected at certain locations approximate to an airport. The Ldn rating is computed pursuant to FAA standards and procedures and arranged in contours on maps maintained for each airport by the Arapahoe County Mapping Division.

- A. 65 Ldn NOISE ZONE. Refers to property located within the outside boundary of the 65 Ldn noise contour in effect at the time of submittal of an application for land use or subdivision approval.
- B. 60 Ldn NOISE ZONE. Refers to property located between the boundary of the 65 Ldn noise contour and the 60 Ldn noise contour.
- C. 55 Ldn NOISE ZONE. Refers to property located between the boundary of the 60 Ldn noise contour and the boundary of the 55 Ldn noise contour.

LED

Light-emitting diode. LED lamp emits an almost monochromatic light of a particular color depending on the material used.

Legal Building Site

A lot that can be developed with the provisions of these Regulations and within other rules and regulations adopted by the County.

Letter of Map Amendment (LOMA)

A letter from FEMA officially amending the effective National Flood Insurance Rate Map, which establishes that a property is not located in a FEMA SFHA.

Letter of Map Change (LOMC)

All letters of SFHA changes from FEMA including LOMR, LOMR-F, LOMAs and Physical Map Revisions (PMR).

Letter of Map Revision (LOMR)

A letter from FEMA officially revising the effective Flood Insurance Rate Map to show changes in zones, delineation and water surface elevation of floodplains and floodways.

Letter of Map Revision Based On Fill (LOMR-F)

A letter from FEMA stating that a structure or parcel of land that has been elevated by fill outside the existing regulatory floodway would not be inundated by the base flood.

Levee

A man-made embankment, usually earthen, designed and constructed in accordance with sound engineering practices to contain, control or divert the flow of water so as to provide protection from temporary flooding. For a levee structure to be reflected on the FEMA FIRMs as providing flood protection, the levee structure must meet the requirements set forth in 44 CFR 65.10.

Light Bulb Strings and Exposed Tubing

External displays, other than temporary decorative holiday lighting, which consist of light bulbs, festoons, or strings, and neon or gaseous light tubing, whether open or enclosed within transparent or translucent cabinets, are prohibited.

Light Fixture

The complete lighting unit consisting of some or all of the following: the lamp, ballast, housing, and the parts designed to distribute the light, to position and protect the lamps, and to connect the lamp to the power supply.

Light industrial

A place of business for light industrial and/or high technology development, including but not limited to any of the following: laboratories (basic and applied research, manufacturing, experimental, testing) manufacturing, fabrication, processing or assembling of products, indoor storage, accessory office, office/showroom/warehouse, bakery, dry cleaning or laundry, wholesale greenhouses or nursery, minor auto repair excluding outdoor storage, quasi-public use, and wholesale sale or indoor storage of any commodity listed herein.

Light Industrial Park Development

A light industrial park is a planned-unit development consisting of non-residential, non-retail commercial uses designed to accommodate a mix of similar and compatible light industrial uses and associated services. Light industrial park development shall consist of high quality architectural and landscaping standards, be designed in a campus setting, and have minimal aesthetic or environmental impacts on surrounding adjacent properties. The development may also contain buildings that have non-light industrial uses when deemed necessary and appropriate by the Board of County Commissioners, (such as office/showroom, hotel and conference facilities health clubs, restaurants or other similar uses) when such uses satisfy the standards of these Regulations. All buildings contained within a Light Industrial Park shall be integrated into the overall development scheme through architecture, site layout, and other development standards.

Light Pollution

Any electric light that is emitted into the atmosphere, either directly or indirectly by reflection against any exterior surface, including, without limitation, the ground, buildings, cars, glass, or windshields, that alters the appearance of the night sky, interferes with astronomical observation, or interferes with the natural functioning of nocturnal native wildlife.

Light Trespass

Light falling where it is not wanted or needed and includes light projected onto a property from a light source not located on that property.

Live-Work Unit

A combination of residential occupancy and a dominant commercial activity located within a dwelling unit that is not a home occupation, with access from the commercial activity provided to the residential unit.

Livestock

Cattle, sheep, goats, swine, mules, poultry, horses, alternative livestock as defined by Colorado statutes (e.g., elk), and such domesticated animals as fox, mink, chinchilla, beaver, and rabbits, and all other animals raised or kept for profit.

Local Governmental Designee (LGD)

As used herein shall have the same definition as stated in the Colorado Oil and Gas Conservation Commission Rules of Practice and Procedure, 100 Series Definitions (2 CCR 404-1 and as may be duly amended).

[Lot](#)

A designated parcel of land established by a recorded subdivision plat, subdivision exemption plat, recorded deed or court order, which is recognized as a separate legal entity for purposes of transfer of title.

[Lot Area](#)

The total square footage or acreage contained within lot lines of any single lot of record.

[Lot, Corner](#)

A site bounded by two or more adjacent street lines which have an angle of intersection of not more than 135 degrees.

[Lot Coverage](#)

That portion of the lot area covered by a building(s), including all overhanging roofs and parking areas (note definition of unobstructed open space).

[Lot, Double Frontage.](#)

A lot having a frontage on two non-intersecting streets as distinguished from a corner lot.

[Lot, Interior](#)

A lot other than a corner lot.

[Lot Line](#)

A property line bounding a lot, excluding any dedicated street or alley.

[Lot Line, Front](#)

The line separating a lot from a street or road upon which the principal building faces.

[Lot Line, Rear](#)

The lot line opposite and most distant from the front line, except for corner lots. The rear lot line may be any lot line not fronting on a street. Triangular lots shall maintain a rear yard of not less than 25 feet from the point of intersection of the side lot lines.

[Lot Line, Side](#)

Any lot line which is neither front nor rear.

[Lot Width](#)

The distance between side lot lines measured along the front setback line.

[Lowest Adjacent Grade \(LAG\)](#)

The lowest elevation of the natural ground surface touching a structure (including attached garages or decks).

[Lowest Floor](#)

The lowest floor of the lowest enclosed area of a structure (including any basement or crawl space). An unfinished or flood resistant enclosure, usable solely for parking of vehicles, building access, or storage in an area other than a basement area, is not considered a structure's lowest floor provided that such enclosure is not built so as to render the structure in violation of the applicable non- elevation design requirements of Section **Error! Reference source not found., Error! Reference source not found.**. The lowest floor elevation is the determinate for the flood insurance premium for a building, home, or business.

[Lumens](#)

The amount of overall light output or quantity of light.

Luminance

Relates to the quantity of light reflected or emitted toward an observer. Luminance is what an observer sees, whether it is the light reflected from a wall or the light coming directly from a luminaire.

Maintained Illuminance

The light level that occurs immediately before lamp burnout. This light level is approximately 50-60 percent of the initial illuminance.

Major Electrical, Natural Gas, and Petroleum-Derivative Facilities of a Private Company

Includes transmission lines, power plants, and transmission substations owned by a private company; refinery, transmission pipelines, transmission pump stations, compressor and processing stations, and storage areas of private companies providing natural gas or other petroleum derivatives; and processing of biofuels.

Major Public Utility Facility

Includes, but is not limited to, power plant, transmission line, transmission substation, natural gas transmission pipeline, and natural gas transmission pump station.

Manufactured Home

- A. When used in Section **Error! Reference source not found., Error! Reference source not found.**, means a structure transportable in one or more sections, which is built on a permanent chassis and is designed for use with or without a permanent foundation when connected to the required utilities. For purposes of Section **Error! Reference source not found., Error! Reference source not found.**, the term "manufactured home" includes "recreational vehicles", such as park trailers, travel trailers, and other similar vehicles, placed on a site for greater than 180 consecutive days.
- B. For all other purposes, a single-family dwelling which is partially or entirely manufactured in a factory; is not less 24 feet in width and 36 feet in length, is installed on an engineered foundation, has brick, wood or cosmetically equivalent exterior siding and a pitched roof, and is certified pursuant to the "National Manufactured Housing Construction and Safety Standards Act of 1974," 42 U.S.C. 5401 et seq., as amended. The term "manufactured home" does not include a "recreational vehicle."

Manufactured Home Park or Subdivision

A parcel (or contiguous parcels) of land divided into two or more manufactured home lots for rent or sale. Or, a parcel of land that is divided into two or more lots for long-term lease or sale, with infrastructure designed for the installation of manufactured homes.

Manufactured Home Park or Subdivision, New

See New Manufactured Home Park or Subdivision.

Manufactured Home Subdivision

See Manufactured Home Park or Subdivision.

Manufacturing, Light

Manufacturing and processing in which no operations are carried on which will be likely to create smoke, fumes, noise, odor, vibration, or dust, measurable at the property line, or which will be detrimental to the health, safety, or general welfare of the community. May involve the storage of raw material, components to be assembled, or the outdoor storage of finished products.

Manufacturing, Heavy

Manufacturing and processing in which operations are carried on which will be likely to create smoke, fumes, noise, odor, vibration, or dust, or which may be detrimental to the health, safety, or general

welfare of the community, but must be within Local, State and Federal environmental standards and regulations. May include materials manufacturing, treatment and assembly, and bulk storage of raw materials and finished products.

Marijuana

All parts of the plant of the genus cannabis whether growing or not, the seeds thereof, the resin extracted from any part of the plant, and every compound, manufacture, salt, derivative, mixture, or preparation of the plant, its seeds, or its resin, including marijuana concentrate. Marijuana shall not mean industrial hemp. Marijuana includes marijuana as defined in Article XVIII, Section 16 of the Colorado Constitution, Article XVIII, Section 14 of the Colorado Constitution, and the CMC.

Marijuana Club

The use of any building, structure or other premises, whether such use is the primary use or an ancillary use, for purposes of allowing persons to consume marijuana or marijuana products, wherein such use is open to the public, or wherein the persons consuming marijuana or marijuana products directly or indirectly pay a fee or charge to compensate in any way for the ability to consume or use marijuana or marijuana products on the premises, including, but not limited to, paying a fee or charge to belong to a club or organization that has or provides access to the premises (examples of a “fee or charge” include, but are not limited to: a membership fee, an entrance fee, a cover charge, a rental fee, a food or beverage charge, etc.), and shall include, but not be limited to, a “marijuana hospitality business” and a “retail marijuana hospitality and sales business” as defined in the CMC; except that the definition of a marijuana club shall not include the rental of a dwelling unit wherein marijuana or marijuana products are being used by the legal occupants of such premises, or their invitees where such invitees are not paying a fee, or other charge or remuneration.

Marijuana Products

Concentrated marijuana products and marijuana products that are comprised of marijuana and other ingredients and are intended for use or consumption other than by smoking, such as, but not limited to, edible products, ointments, and tinctures.

Marquee

A permanent roof structure attached to and entirely supported by a wall of a building, having no connection or relationship with the roof of the building to which it is attached.

Master Development Plan (MDP)

The Master Development Plan (“MDP”) is an alternative Planned Unit Development process available for all or any part of an office park development and other eligible developments that was available before April 1, 2017. The process was intended for developments that are able to contain within the development the impacts of final site design and architecture, due to the size of the development, perimeter screening and landscaping features, topography, or well-defined architectural and site design standards. The MDP set forth one or more proposed development scenarios for the project. It established development parameters that were more refined and more precise than those set forth in Preliminary Development Plans, thereby enabling an expedited staff-level review of final site plans as established in the MDP.

Massage Parlor

All persons and entities which are subject to regulation under C.R.S. 12-48.5-101, et seq., as amended, and regulations adopted pursuant thereto by the Board of County Commissioners.

Mausoleum

A building or structure that is part of a cemetery and contains above-ground tombs.

Maximum Initial Horizontal Illuminance

The maximum initial lighting levels in foot-candles as measured for exterior areas at grade level anywhere within the property including areas under canopies, balconies or other non-enclosed or partially enclosed areas.

Maximum Initial Illumination Level

The maximum lighting level on a property that is produced by a lamp at 100 hours of operation.

Maximum Initial Lamp Lumen Rating

The maximum rated light output per lamp. If a light fixture has multiple lamps, this rating refers to the combined total lumens of all lamps within the light fixture.

Maximum Initial Line-Of-Sight Illuminance.

The maximum initial lighting levels at eye level, on the property line, and looking towards the brightest and closest light fixture.

Median

An area in the appropriate center of a County street or state highway which is used to separate the directional flow of traffic, may contain left-turn lanes, and is demarcated by curb and gutter, having painted or thermally applied stripes or other means of distinguishing it from the portion of the roadway utilized for through traffic.

Medical Marijuana

Marijuana that is grown, sold or otherwise used for a purpose authorized by Article XVIII, Section 14 of the Colorado Constitution as defined in the CMC.

Medical Marijuana Store

A person or entity licensed by a state agency to sell medical marijuana and medical marijuana products to patients or primary caregivers, but is not a primary caregiver as defined by Article XVIII, Section 14 of the Colorado Constitution or the CMC, and includes, but is not limited to, a “medical marijuana store” as defined.

Microbrewery

A facility for the production and packaging of malt beverages for distribution, retail or wholesale, on or off premises. The development may include other such uses such as a standard restaurant, bar or live entertainment as otherwise permitted in the zone district.

Microwave Dish

A receiver for ultrahigh frequency electromagnetic waves.

Mineral

An inanimate constituent of the earth including, but not limited to, coal, oil and natural gas, oil shale, sand, gravel, quarry, aggregate, limestone, in either solid, liquid or gaseous state, which when extracted from the earth is usable in its natural form or is capable of conversion into usable form as a metal, a metallic compound, a chemical, an energy source, a raw material for manufacturing, or construction material. This definition does not include surface or ground water subject to appropriation for domestic, agricultural or industrial purposes.

Mineral Resource Area

An area in which minerals are located in sufficient concentration in veins, deposits, bodies, beds, seams, fields, pools or otherwise, as to be capable of economic recovery. The term includes but is not limited to any area in which there has been significant mining activity in the past, there is significant mining activity in the present, mining development is planned or in progress, or mineral rights are held by mineral patent or valid mining claim with the intention of mining. The term also includes an area of oil, gas or geothermal resource development if such area has been identified by the State Oil and Gas Conservation Commission or the Colorado Geological Survey for designation.

Mineral Resources and Geologic Hazard Areas

Any area or activity which has been identified in the County Comprehensive Plan as being of special interest because it involves development activities or development areas, or both, which might create a condition incongruent with the planned and orderly use of land and/or the protection of the environment and natural resources in a manner consistent with the constitutional rights or protection of the public health, safety and well-being.

Mini-Warehouse/Self Storage

A structure or group of structures containing separate, individual, and private storage spaces of varying sizes leased or rented on individual leases for varying periods of time.

Mining

The process of removing or extracting minerals and building stone from naturally occurring veins, deposits, bodies, beds, seams, fields, pools or other concentrations in the earth's crust. This term also includes the preliminary treatment of such ore or building stone.

Minor Development

A subdivision of land that does not involve any of the following:

- A. The creating of more than four lots;
- B. The extension of municipal facilities; and
- C. The creation of any new streets.

Minor Modification to an Approved Location and Extent Plan

For the purposes of Section **Error! Reference source not found., Error! Reference source not found.**, a modification to an approved Location and Extent Plan shall be considered minor if there are no land use changes proposed and if the changes to approved development standards comply with the limitations and specifications of the Administrative Amendment Regulations found in these Regulations.

Mobile Home

Any structure transportable on its own wheels, on flatbed or other trailers, or on detachable wheels, (excluding recreational vehicles, camping trailers, pickup bed campers, motorhomes, and vehicles licensed for on road use) which is designed and generally and commonly used for occupancy by persons for residential purposes in either temporary or permanent locations.

Mobile Home Park or Subdivision

Any lot or part thereof, or any parcel of land which is used or offered as a location for one or more mobile homes used for any purpose.

Mobile Home Subdivision

See Mobile Home Park or Subdivision.

Monopole (CMRS)

A self-supported freestanding tower with structural support in the one-legged design on a single concrete foundation

Motel

A structure, or portion thereof, or a group of attached or detached structures containing completely furnished individual guest rooms or suites occupied on a transient basis for compensation. Also includes the term Hotel.

Mother-In-Law Apartment/Dwelling Unit

A portion of an existing or proposed principle dwelling unit maintained and used as a separate dwelling unit in which members of the immediate family, not to exceed three persons, reside. For purposes of this definition, the term "immediate family" shall include relatives, by blood or marriage, to include children, parents, grandparents, brothers, sisters of the occupants.

National Cooperative Soil Survey

The soil survey conducted by the U.S. Department of Agriculture in cooperation with the State Agricultural Experiment Stations and other federal and state agencies.

National Flood Hazard Layer (NFHL)

The most updated digital version of the Flood Insurance Rate Map (FIRM). If displayed in accordance with FEMA's requirements, the NFHL is also the regulatory floodplain map for FEMA for insurance and floodplain management purposes, the same as the FIRM and DFIRM.

New Construction

Structures for which the "start of construction" commenced on or after the effective date of the Floodplain Management Regulations in Section **Error! Reference source not found., Error! Reference source not found.**, and includes any subsequent improvements to such structures.

New Development and Redevelopment

When used in Section **Error! Reference source not found., Error! Reference source not found.**, new development and redevelopment shall refer to all projects which are required to submit site construction plans to the County, for review and approval excluding building permit plans, in accordance with the County's Land Development Code requirements.

New Manufactured Home Park or Subdivision.

A manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) is completed on or after the effective date of Section **Error! Reference source not found., Error! Reference source not found.**

Night Club

A commercial establishment dispensing alcoholic beverages for consumption on the premises and in which the service of food is only incidental to the consumption of such beverages. Dancing and entertainment, including but not limited to musicians and comedians, are permitted. This definition does not include sexually-oriented businesses.

No-Rise

A calculated rise in flood depth of 0.00 feet as rounded to the nearest hundredth of a foot.

No-Rise Certification

A record of the results from an engineering analysis conducted to determine whether a project will increase flood heights in a floodway. A No-Rise Certification must be supported by technical data and signed by a registered Colorado Professional Engineer. Also known as No Impact to the Floodplain Certification.

Noise Contour

The line linking together a series of points of equal cumulative noise exposure. Noise contours are developed based upon actual and projected data, including aircraft flight patterns, the number of daily aircraft operations by type of aircraft, noise characteristics of each aircraft, and typical runway usage patterns.

Noise Sensitive Uses

The following uses are considered by the County to be noise sensitive uses:

- A. Residential uses intended for permanent occupancy by owners or renters, but not including transient lodging or institutional uses such as hospitals and detention facilities.
- B. Type B Group homes. Educational uses, including schools, public and private, and non-aviation related training centers, churches, auditoriums, concert halls, day care uses.

Non-commercial

For the purposes of Section **Error! Reference source not found., Error! Reference source not found.**, non-commercial shall mean not for the purpose of obtaining a profit or remuneration.

Nonconforming Structure

A structure legally existing and/or used at the time of adoption of these Regulations, or any amendment thereto, which does not conform to the regulations of the zoning district in which it is located.

Nonconforming Use

A use legally existing and/or used at the time of adoption of these Regulations, or any amendment thereto, which does not conform to the use regulations of the zoning district in which it is located.

Nonstructural Development

Any use of property that does not involve a structure. Nonstructural development may include, but is not limited to, the construction or installation of or use of a property for parking lots, utilities, detention ponds, fences, trails, pathways, outdoor storage, cultivation of vegetation, or placement of fill.

Nursery School

An establishment providing specialized curriculum and group care on a planned, regular basis for more than four children, unrelated by blood or adoption, for less than 24-hours. A nursery school shall maintain a minimum six foot high solid fence, wall, or chain link fence which encloses outdoor play areas.

Nudity or State of Nudity

a) The appearance of human bare buttock, anus, pubic region, male or female genitals, or the areola or nipple of the female breast: or b) a state of dress which fails to opaquely and fully cover a human buttock, anus, male or female genitals, pubic region or areola or nipple of the female breast.

Nude Model Studio

Any place where a person, who appears in a state of nudity or displays "specified anatomical areas" is provided for money or any form of consideration to be sketched, drawn, painted, sculpted, photographed, or similarly depicted by other persons. The term "Nude Model Studio" does not apply to:

- A. A college, junior college, or university supported entirely or partly by taxation; a private college or university which maintains and operates educational programs in which credits are transferable to a college, junior college, or university that are supported entirely or partly by taxation; or
- B. A business located in a structure which has no sign visible from the exterior of the structure and no other advertising that indicates a nude person is available for viewing, and where, in order to participate in a class, a student must enroll at least three days in advance of the class, and where no more than one nude model is on the premises at any one time.

Nursing Home

An establishment, other than a hospital, licensed by the State, which operates and maintains continuous day and night facilities providing room and board, personal service and skilled nursing care.

Occupied Structure

Any building, structure or appurtenance to a building or structure that is intended and suitable for human occupancy, at least part-time, whether or not a person is actually present, including but not limited to: homes, schools, daycares, healthcare facilities, office buildings, businesses and commercial structures. Structures used for storage, such as barns, sheds, and detached garages, and structures intended primarily for sheltering equipment or facilities that experience only incidental and temporary human occupancy as necessary to maintain the equipment or facility, such as utility substations, lift stations or pump houses, are excluded from this definition.

Office Park Development

An office park development is a zone category consisting of an integrated commercial development existing or planned for Professional Office uses and uses that are accessory or appurtenant to Professional Office uses, in a campus setting with mostly internal access points and high-quality architectural and landscaping standards. All buildings shall be integrated into the overall development scheme through architecture, site layout and other development standards.

Office/Showroom

An office building in which no more than 10 percent of the gross floor area of each office suite is devoted to display and sales of products represented by the occupant of the office suite.

Off-Street Parking

A site or portion of a site devoted to the off-street parking of motor vehicles including parking spaces, aisles, access drives and landscaped areas.

Oil and Gas Facility or Facilities

A definable area where an Operator has disturbed or intends to disturb the land surface in order to locate a facility related to the extraction of oil and gas, and includes oil and gas well pads, well sites, production pads, flowlines, tank batteries, pits/ponds, below-grade tanks, dehydration units, vapor recovery units (VRUs), and associated roads. Pipelines and gathering systems, other than flowlines, as well as salt water disposal wells and injection wells are excluded. Sites or locations with more than one of the above mentioned types of equipment will be considered to be one facility.

Oil and Gas Operations

As used herein shall have the same definition as stated in the Colorado Oil and Gas Conservation Commission Rules of Practice and Procedure, 100 Series Definitions (2 CCR 404-1 and as may be duly amended).

Oil and Gas Pad Boundary

Same definition as Pad Boundary.

Oil and Gas Well

A well drilled for the purpose of producing oil or gas, or a well into which fluids are injected, a stratigraphic well, a gas storage well, or a well used for the purpose of monitoring or observing a geologic reservoir.

Onsite Wastewater System ("OWS")

An absorption system of any size or flow or a system or facility for treating, neutralizing, stabilizing, or disposing of sewage that is not part of or connected to a central (community) sewer system. Includes, by way of example only, septic tanks and absorption areas.

Open Mining

The mining of natural mineral deposits by removing any amount of overburden lying above such deposits and mining directly from the deposits thereby exposed. The term includes, but is not limited to, such practices as open cut mining, open pit mining, strip mining, quarrying and dredging.

Open Space/Unobstructed

An area intended to provide light and air and is any parcel of land or water essentially unimproved and set aside, dedicated, designated or reserved for public or private use. Open space may include active recreation with limited pervious surfaces, such as swimming pools, play equipment for youngsters, ball fields, court games and picnic tables. Passive open space may include areas not occupied by any structures and limited pervious surfaces such as parks, and landscape tracts (except parking lot islands). Credit will be considered for courtyards and plazas based upon the Planning Division Manager's review. Open space shall not include driveways, parking lots, parking islands, drive aisles or other surfaces designed or intended for vehicular travel.

Operator

Any person, persons, association, partnership, company, corporation, or other legal entity who exercises the right to control the conduct of oil and gas operations.

Ordinary High-Water Line

As used herein shall have the same definition as stated in the Colorado Oil and Gas Conservation Commission Rules of Practice and Procedure, 100 Series Definitions (2 CCR 404-1 and as may be duly amended).

Outdoor Display/Sales

An outdoor area for the display and/or sale of merchandise or vehicles.

Outdoor Storage

The storage of any material outside of the principal permitted structure on any parcel, which material is either wholly or partially visible.

Overburden

All of the earth and other materials which lie above natural mineral deposits and which are disturbed from their natural state in the process of mining.

Overnight Campground

An area specifically designed to accommodate the parking or placement of truck campers, camping trailers and tents used for human occupancy on a transient basis. No truck camper, camping trailer or

tent shall be maintained continuously on an overnight campground for more than 30 days during a calendar year.

Pad Boundary

The outer limit of the disturbed ground created for the operation of an Oil and Gas Facility.

Parcel

An area of land which is not uniquely defined on a subdivision plat, but which is described by any of the following methods:

- A. An aliquot part of a section;
- B. A metes-and-bounds description;
- C. A book and page or reception number reference;
- D. Any so-called "assessor's tract;" or
- E. Defined by means other than a plat.

Parapet Wall

A low wall or protective railing along the edge of a roof, balcony or terrace.

Park

Any public or private land available for active or passive recreational, educational, cultural or scenic purposes of a size, location and configuration useable as a park and approved by the PWD Department.

Parking Lot, Accessory

An all-weather surfaced parking area or garage designated for the short-term or long-term parking of vehicles associated with the principal or primary use of the property and/or parking of licensed equipment used by the principal or primary use of the property.

Parking Lot, Commercial

A parking lot or parking garage for public parking for a fee, not including parking lots or garages operated as an accessory use in association with a residential development, commercial or industrial business development or public transit station.

Parking Lot, Service

See Service Parking Lot.

Patient

For the purposes of Section **Error! Reference source not found., Error! Reference source not found.**, patient has the meaning set forth in Colorado Constitution Article XVIII, Section 14(1)(d).

Person

An individual, proprietorship, partnership, corporation, limited liability company, association, or other legal entity. For the purposes of Section **Error! Reference source not found., Error! Reference source not found.**, person shall mean a natural person 21 years or age or older.

Pets

Dogs and cats over the age of six months, pot bellied pigs, and reptiles or other small animals of a type typically purchased at local pet stores, which are customarily kept in the home or on the premises for the sole pleasure and enjoyment of the occupants and not raised for commercial purposes. The definition of pets does not include chickens, geese, ducks, turkeys or other poultry or domesticated fowl. Pets that are caged indoors or kept in a terrarium or aquarium or confined in a pond will not be counted in the allowed quantity of pets within a zone district. Keeping of wild or exotic animals as defined by the State of Colorado Division of Wildlife is PROHIBITED. Keeping of any poisonous animal is PROHIBITED. Keeping of

any constrictor snake or any reptile with a length greater than three feet, measured from the tip of the nose to the tip of the tail, is PROHIBITED.

Pharmacy

A place where medicines are compounded or dispensed and other medical accessory merchandise is displayed or sold.

Physical Map Revision (PMR)

A FEMA action where one or more FIRM map panels are physically revised and republished. A PMR is used to change flood risk zones, floodplain and/or floodway delineations, flood elevations and/or planimetric features.

Pick Your Own Produce

A commercial activity wherein the general public is invited onto an agricultural property such as a farm to pick produce grown on the farm, such as apples, strawberries, pumpkins, flowers, etc. The activity may vary with the season and public interest.

Pipeline

A crude oil transfer line or gathering line as defined in the COGCC rules.

Pit

A natural or man-made depression in the ground used for storage or disposal of fluids and solids associated with drilling, completion or production purposes. Pit does not include enclosed steel, fiberglass, concrete or other similar vessels which do not release their contents to surrounding soils.

Planned and Permitted Reservoir

An unconstructed, but planned reservoir that has received all federal, state, and local permit approvals required under applicable law or regulation to locate a public water reservoir of qualifying capacity at a specific and mapped location within unincorporated Arapahoe County.

Planned Unit Development (PUD)

An area of land, controlled by one or more landowners, to be developed under unified control or unified plan of development for a number of dwelling units, commercial, education, recreational, or industrial uses, or any combination of the foregoing, the plan for which does not correspond in lot size, bulk, or type of use, density, lot coverage, open space, or other restriction to the existing land use regulations.

Planning Commission

The Arapahoe County Planning Commission, Arapahoe County, Colorado.

Plants

For the purposes of Section **Error! Reference source not found., Error! Reference source not found.**, plants shall mean marijuana plants, seedlings or any part thereof in a living condition that are lawfully grown or otherwise used for a purpose authorized by Article XVIII, Section 16 of the Colorado Constitution, Article XVIII, Section 14 of the Colorado Constitution, or the CMC.

Plat

A map or plan of property, recorded with the Arapahoe County Clerk and Recorder.

Plat Application

The application form and all accompanying documents required by these Regulations for review of a subdivision plat.

Plat, Final

A map and supporting materials of certain described land prepared in accordance with the county's requirements as an instrument for recording of real estate interests with the County Clerk and Recorder.

Plat, Preliminary

The map or maps of a proposed subdivision and specified supporting materials, drawn and submitted in accordance with the County's requirements to permit the evaluation of the proposal prior to detailed engineering and design.

Playgrounds and Activity Fields

Designed play areas and/or fields to be used for active and passive recreation for all ages including amenities such as swings, slides, sand boxes, water "spray grounds", volleyball sand courts, hard court play surfaces for toy tractors and basketball, open fields appropriate for model airplane or kite flying, etc.

Plugging and Abandonment

As used herein shall have the same definition as stated in the Colorado Oil and Gas Conservation Commission Rules of Practice and Procedure, 100 Series Definitions (2 CCR 404-1 and as may be duly amended).

Pollution

As used herein shall have the same definition as stated in the Colorado Oil and Gas Conservation Commission Rules of Practice and Procedure, 100 Series Definitions (2 CCR 404-1 and as may be duly amended).

Post-Curfew Light Levels

Lighting that is operated after 10:00 p.m. or within one hour after the close of business, whichever is later, until one hour prior to the commencement of business.

Post-Curfew Maximum Initial Horizontal Illuminance Level

The lighting levels after 10:00 p.m. or one hour after the close of business, whichever is later.

Pre-Curfew Light Levels

Lighting that is operated from one hour prior to commencement of business to 10:00 p.m. or within one hour after the close of the facility, whichever is later.

Preliminary Development Plan (PDP)

The Preliminary Development Plan ("PDP") was the first step in establishing land uses and siting restrictions for a parcel of land in a Planned Unit Development approved before April 1, 2017. The uses and siting restrictions permitted by the PDP established the general requirements with which the development had to comply. The uses, minimums and maximums established in the PDP were reviewed at the Final Development Plan stage to further determine appropriateness for the particular site and neighborhood. The comparable step in the revised Planned Unit Development regulations is called a General Development Plan.

Primary Caregiver

Primary caregiver has the meaning set forth in Article XVIII, Section 14(1)(f) of the Colorado Constitution.

Principal Permitted Use

The primary use to be established on a parcel of land provided said use conforms to the provisions of the governing zone district, is architecturally consistent and compatible with surrounding development and

complies with any and all applicable County, state or federal rules, regulations and requirements pertaining to the specific use.

Private Improvement

Any improvement required by these Regulations or as a part of the conditional approval of a subdivision which is provided by the developer and not maintained by the County or a quasi-public entity.

Private Room

A room in a motel, hotel or other similar establishment that has a bed and a bath in the room or an adjacent room, and is used primarily for lodging.

Produce Stand

A temporary structure at which uncut, unprocessed agricultural products primarily grown on site, such as raw fruits, vegetables, plants, flowers or herbs, are sold.

Produced Water

Naturally-occurring water that exists in the formation and is produced at the mouth of the well along with hydrocarbons. This water is generally saline due to formation deposition in marine environments. Produced water is generally disposed in injection wells.

Professional Office

An office used by a profession acceptable to the County, and which profession is either licensed by the State of Colorado to perform the type of work involved, or is accredited by or registered with a professional group and is operating within the scope of such accreditation or registration.

Property Line Adjustment

The relocation of a property line which does not create additional lots, nonconforming lots or structures, changes of use, effects an easement and does not result in any non-buildable lots.

Property Owner

The owner of record of a specific property as shown by the Arapahoe County Assessor's Office records.

Public Facility

Any activity that is primarily funded by, and/or has the capability to levy taxes, and is of significant benefit to the public and the surrounding area, not conducted for profit, and provides a commodity or service that could not be provided within a reasonable distance of the surrounding area. Examples include public airports and related facilities, public hospitals and other emergency medical facilities, public meeting halls, public recreation facilities, schools and major facilities of a public utility.

Public Improvement

Any improvement required by these Regulations for which the County or a quasi-public agency, conditionally agrees to assume responsibility for maintenance and operation, or which may affect an improvement for which the County, or a quasi-public agency, is already responsible. Such facilities include but are not limited to streets, parks, trails, drainage facilities, water and sewer facilities, gas, electricity, telephone, cable television, and other utility facilities.

Public Utility

Every firm, partnership, association, cooperative, company, corporation and governmental agency, and the directors, trustees or receivers thereof, whether elected or appointed, which is engaged in providing railroad, airline, bus, electric, rural electric, telephone, telegraph, communications, gas, gas pipeline

carrier, water, sewerage, pipeline, street transportation, sleeping car, express, or private car line facilities and services.

Public Works and Development Department

Herein referred to as PWD.

PWD Director

The Arapahoe County Director of Department of Public Works and Development.

Qualified Conservation Organization

A non-profit organization, as defined under Section 501.C-3 of the Internal Revenue Code, and usually a conservation organization or land trust, designated to enforce the recorded deed restrictions on the use of property, as typically defined through a conservation easement.

Qualified Professional

A professional acceptable to the County, and who is either licensed by the State of Colorado to perform the type of work involved, or who is accredited by or registered with a professional group and who is operating within the scope of his/her accreditation or registration.

Quasi-Public Agency

An institution constituted with a governing board and obtaining more than 51 percent of its funds from tax revenue

Quasi-Public Use

Charitable, educational, cultural and/or religious organizations or use which, as a primary function of their operation, provide significant benefits to the health, safety and welfare of the citizens of Arapahoe County, as may be determined by the Board of County Commissioners. Examples of such uses are religious organizations, private meeting halls and private schools.

Ranch

A parcel of land used primarily for the breeding of horses; raising of livestock; individual training or training of small groups; practice equestrian courses and arenas not used for scheduled, public or club events; boarding only of horses, mules or ponies directly involved with current breeding or training activities; and ancillary sales and previews of livestock and occasional weekend activities.

Ranch Hand/Agricultural Worker Housing

A separate dwelling unit for the housing of ranch/agricultural workers apart from the permitted single-family dwelling.

Reclamation

The rehabilitation of affected land by means of replanting, soil stabilization, water resource restoration and other measures appropriate to the subsequent beneficial use of such mined and reclaimed lands.

Reconstruction

To rebuild a structure without increasing its footprint, when the structure has been:

- A. Partially or completely destroyed by any cause (i.e., fire, wind, flood), or
- B. Partially or completely torn down.

Reconstruction that also meets the definition of redevelopment shall be regulated as redevelopment.

Recorded Mineral Rights

Those mineral rights which have been officially recorded or registered with the Colorado Secretary of State or the Clerk and Recorder of Arapahoe County.

Recreation, Outdoor

Characterized by moderate impacts on traffic, natural environment and the surrounding neighborhood, including facilities such as athletic fields, miniature golf, skateboard park, swimming pool, tennis, handball, basketball courts, batting cages and soccer fields. Does not include Shooting Range.

Recreation, Private/Commercial

Uses, structures and/or land utilized for the provision of recreational activities and/or open space which may be developed, operated and/or maintained for profit by an entity other than a public entity, such as a swimming pool, tennis court/club, recreation center, etc.

Recreation, Public

Uses, structures and/or land utilized for the provision of recreational activities and/or open space which may be developed, operated and/or maintained by a public entity.

Recreational Facility – Indoor

An establishment providing recreational activities, completely enclosed by a structure, such as bowling alley, gymnasium, roller skating, ice skating, billiards, pool, theatre, swimming pool or related amusement. This does not include adult entertainment establishments.

Recreational Vehicle

A vehicle which is:

- A. Built on a single chassis;
- B. 400 square feet or less when measured at the largest horizontal projections;
- C. Designed to be self-propelled or permanently towable by a light duty truck; and
- D. Designed primarily not for use as a permanent dwelling but as temporary living quarters for recreational, camping, travel, or seasonal use.

Redevelopment

Comprises any of the following:

- A. The complete demolition of a principal building, followed by the construction of a new building which occupies a different footprint than the original principal building; or
- B. The destruction of a principal building to an extent that is equal to or greater than 50 percent of its assessed value, followed by reconstruction and repurposing of the building for a type of use for which the original building was not designed; or
- C. Expansion of a principal building by more than 50 percent of its floor area.

Redevelopment, New

See New Development and Redevelopment.

Refuse

All waste material directly connected with the cleaning, classification, milling, smelting, refining, preparation and otherwise of substances mined.

Regional Facility

An improvement or a part of a network or system of improvements that serve a larger area than a single subdivision and have value to a subdivision based on the nature and use of the improvement for roads, drainage, utilities, bridges, trails and open space, or floodplain requirements that insure the fullest use and development of an individual subdivision.

Regular Meeting

For purposes of section 5-3.6, Oil and Gas Facilities, a meeting attended by the Operator's representative(s) and PWD staff to discuss updates to the Operator's Development Plan and any incidents during the prior months.

Release

Any unauthorized discharge of any exploration and production waste or other pollutant to the environment over time.

Research and Development

The use of resources for the applied and deliberate discovery of new information and ways of doing things as creative work undertaken by one or many on a systematic basis, together with the application of that information in inventing new products and processes.

Research and Development - Business

A business that engages in research or in the research and development of innovative ideas in technology-intensive fields and/or processes, but not in mass production of products.

Residence-Free Zone

All lands within one mile of the Adams County Front Range Airport and in that airport's final approach area where residential construction will not be permitted.

Resource Recovery

The industrial process of obtaining materials or energy from solid waste for recycling or reuse.

Resource Recovery Operation

An industrial processing operation which primarily is conducted for the purpose of recycling and/or reuse of a product or products.

Restaurant

An establishment where food and drink are prepared, served and consumed primarily within the principal building.

Restaurant, Drive-In, Take-Out

An establishment where food and/or beverages are sold in a form ready for consumption, where all or a significant portion of the consumption takes place or is designed to take place outside of the confines of the restaurant building, and where ordering and pick-up of food, and consumption of food, may take place from a motor vehicle.

Restaurant, Fast Food

See Fast Food Restaurant.

Restricted Development Area

A racetrack or rectangular-shaped pattern beginning at the departure end of a Centennial Airport runway and terminating at the arrival end of the same runway, which provides an average flight path for arriving and departing aircraft.

Resubdivision/Replat

The changing of any existing lot or lots of any subdivision plat previously recorded with the County Clerk and Recorder.

Retail

Establishments engaged in selling goods or merchandise to the general public

Retail Marijuana Store

Retail marijuana store shall mean an entity licensed to purchase marijuana from marijuana cultivation facilities and marijuana products from marijuana product manufacturing facilities and to sell marijuana and marijuana products to consumers, as defined by Article XVIII, Section 16 of the Colorado Constitution and the CMC.

Retail, Service

Establishments providing personal services to the general public, such as salons, spas, massage, tailoring, laundry, pet washing, and other, similar uses.

Retaining Wall

A wall designed to resist the lateral displacement of soil or other materials.

Rezoning

For the purpose of these Regulations, a revision to the County Zoning Map.

Riding Stable and/or Academy

Any establishment which rents, boards or leases riding animals and gives lessons to develop horsemanship.

Right-of-Way

A land area, either public or private, on which an irrevocable right-of-passage has been recorded for the use of pedestrian, equestrian or vehicular movement; railroads; public utilities; and water and sewer facilities.

Riparian Area

Riparian areas are the portions of the landscape that border streams and other bodies of surface water. Riparian areas are often characterized by wetland and/or riparian vegetation and are distinguished by having different vegetation types (trees, shrubs, forbs, and/or grasses) than the adjacent uplands vegetation (e.g., shortgrass prairie) due to closer access to the water source. The riparian area begins at the edge of the stream channel (typically measured at the ordinary high water mark) or the edge of a perennial surface water body and continues perpendicularly away from the channel or waterbody to the furthest edge of the riparian vegetation (e.g., willows and cottonwood galleries).

Rodeo

An event comprising of activities for competition, entertainment or display of skills including, but not limited to, horseback riding, bronco riding, steer wrestling, calf roping and/or riding, bulldogging, steer tailing, horse tripping, and barrel racing. Horse racing is not considered a rodeo activity. User fees, dues, admission fees, or other compensation may be paid, but compensation is not a required element to define an event as a rodeo. Food and/or alcohol may be bought or sold on the premises, subject to meeting any State or local health and safety regulations and/or licensing requirements. Steer tailing and/or horse tripping are prohibited within unincorporated Arapahoe County.

Roof Line

The highest point on any building where an exterior wall encloses usable floor area, excluding roof area provided for housing or screening of mechanical equipment.

Runway Protection Zone

An area immediately adjacent to all runway thresholds in which no non-aeronautical structures are normally permitted due to the obstacle clearance requirements of immediately arriving and departing aircraft.

Rural Area

Lands within unincorporated Arapahoe County, which are located outside the boundaries of both “Urban Services area” (as depicted in the Comprehensive Plan) and any “Urban Growth Boundary” for Bennett, Byers, Strasburg, or Watkins (As depicted in an approved sub-area plan).

Rural Engineering Standards

Engineering standards applicable to the rural portion of unincorporated Arapahoe County, specifically A-1 and A-E zoning districts, to address the unique character of rural residential development.

Sanitary Landfill

An area where waste materials are dumped, compacted and covered with a layer of soil in compliance with applicable State and/or local requirements.

School

Any operating Public School as defined in § 22-7-703(4), C.R.S., including any Charter School as defined in § 22-30.5-103(2), C.R.S., or § 22-30.5-502(6), C.R.S., or Private School as defined in § 22-30.5-103(6.5), C.R.S.

School Facility

Any discrete facility or area, whether indoor or outdoor used for School purposes.

Seasonal Farming or Ranching Events

Events related to or occurring in the course of farming and ranching, taking place during, or dependent upon a particular season. Uses may include but not be limited to: rodeos, equestrian events, ancillary sales and previewing of livestock and training of small groups.

Seasonal Farmers Market

A public point of sale, operational only during a pre-determined portion of the year, at which multiple farmers, or representatives of multiple farms, sell unprocessed produce harvested during a particular season directly to consumers.

Seismic Testing

Operations that involve the transmittal of seismic waves into and through the earth to model the geophysical properties of the Earth’s crust. These operations can help determine whether or not oil and natural gas are located in a specific area. The term includes all activities associated with acquisition of seismic data including, but not limited to, surveying, shothole drilling, thumper trucks, recording, shothole plugging and reclamation.

Sensitive Development Area

Those land areas shown as having significant resource value on the Arapahoe County Resource Composite Map, or any of the following features identified by the county and riparian areas, agricultural land use, NREC-designated “prime farm land”, steep slopes, water buffers, ecological resources, historic and archeological sites, viewsheds, ridgelines, and important visual resources.

Service Commercial

Uses that are commercial in operation and primarily sell services to customers on site as a full-time business activity. Such uses include hairdressing and hair cutting, tailoring and dressmaking, laundry services, shoe repair, grooming and similar uses.

Service Parking Lot.

An all-weather surfaced parking area designated for the short or long-term parking of vehicles and equipment used by the principal or accessory use of the property.

Setback

The required minimum horizontal distance between the location of structures or uses and the related front, side, or rear lot line measured perpendicular to such lot line:

- A. Front setback – a setback extending across the full width of the lot measured perpendicular to the front lot line;
- B. Rear setback – a setback extending across the full width of the lot measured perpendicular to the rear lot line;
- C. Side setback – a setback extending the full length of the side lot line measured perpendicular to the side lot line. The side setback typically overlaps with the front or rear setback.

Setback (CMRS)

The distance between a property line and the footprint of the antenna structure, including antennas, reflectors, dishes and other appurtenances.

Sexual Encounter Establishment

A business or commercial establishment, that as one of its primary business purposes, offers, for any form of consideration, a place where two or more persons may congregate, associate, or consort for the purpose of “specified sexual activities” or the exposure of “specified anatomical areas” or activities when one or more of the persons in a state of nudity. A motel, hotel or other similar establishment will not be classified as a sexual encounter establishment merely by virtue of the fact that it offers private rooms for rent.

Sexually-Oriented Business

A business or commercial establishment that is in all or in part an adult arcade, adult cabaret, adult motel, adult motion picture theater, adult theater, sexual encounter establishment, or nude model studio, and does not include a business that is an adult bookstore, adult novelty store or adult video store that is not also at least partially an adult arcade, adult cabaret, adult motel, adult motion picture theater, adult theater, sexual encounter establishment, or nude model studio. The definition of sexually oriented business shall not include an establishment where a medical practitioner, psychologist, psychiatrist, or similar professional person licensed by the State engages in medically approved and recognized sexual therapy.

Shallow Flooding Areas (AO or AH Zones).

Areas designated Zone AO or Zone AH on the Flood Insurance Rate Map (FIRM) with a one percent chance or greater annual chance of flooding to an average depth of one to three feet where a clearly defined channel does not exist, where the path of flooding is unpredictable and where velocity flow may be evident. Such flooding is characterized by ponding or sheet flow.

Shielded

The light emitted from the lighting fixture is projected below a horizontal plain running through the lowest point of the fixture where light is emitted. The lamp is not visible with a shielded light fixture, and no light is emitted from the sides of such a fixture.

Shooting Range, Outdoor

The commercial use of land for archery and/or the discharging of firearms for the purposes of target practice, skeet and trap shooting, advanced firearms training, or temporary competitions, such as turkey

shoots. Excluded from this use type shall be general hunting and unstructured discharging of firearms on private property with the property owner's permission.

Shut-In Well/Facility

A well or oil and gas facility which is capable of production or injection by opening valves, activating existing equipment or supplying a power source, or a facility that has been deactivated.

Sight Triangle

An area of land located at intersections of streets, drives, and other public and/or private ways situated to protect lines of sight for motorists, within which, the height of materials and/or structures is limited. With any parcel containing a sight distance triangle, no obstruction shall be permitted to be erected or grown above three feet in height within such sight triangle area.

Significant Impact

Any material effect on the surrounding area that potentially endangers health, safety, economy or resources. It includes, but is not limited to, the imposition of any obstacle to the extraction of a strategic, commercial mineral deposit, a significant increase in the cost of providing any governmental services, an increase in air and water pollution in excess of federal or state standards, a measurable increase in noise or obnoxious odor around residential or potential residential areas and contribution to or initiation of hazardous traffic patterns.

Sign

Any object or device containing letters, figures and/or other means of communication or part thereof, situated outdoors or indoors, of which the effect produced is to advertise, announce, communicate, identify, declare, demonstrate, direct, display, and/or instruct potential users of a use, product and/or service.

Sign, Animated

Any sign, or any part thereof which changes physical position by means of movement or rotation.

Sign, Banner

A temporary advertising sign which is not attached to a permanently mounted backing and/or which is allowed to wave, flap or rotate with the wind.

Sign, Billboard

Any permanent freestanding sign that is of a dimension exceeding forty-eight (48) square feet per sign face or exceeding six (6) feet in height above ground level. Billboard signs will often, but are not required to, be oriented towards a public street or highway.

Sign, Directional

Any sign on a lot that directs the movement or placement of pedestrian or vehicular traffic with or without reference to, or inclusion of, the name of a product sold or service performed on the lot or in a building, structure or business enterprise occupying the same.

Sign, Directory

A sign utilized on a parcel containing more than one legal use which lists the names and/or other information of the individual businesses located on the parcel.

Sign, Display Surface

The display surface is the area made available by the sign structure for the purpose of displaying the advertising message.

Sign, Electronic Message Board

An Electronic Message Board (EMB), when allowed, is a component or feature of an otherwise permitted sign that is capable of displaying words, symbols, figures or images that can be electronically changed by remote or automatic means.

Sign, Flashing

Any directly or indirectly illuminated sign, either stationary or animated, which exhibits changing natural or artificial light or color effects by any means whatsoever.

Sign, Ground

A sign structure supported by poles, uprights, or braces extending from or anchored into the ground but not attached to any part of the building.

Sign Height

The vertical distance from the average finished grade below the sign (excluding berming) to the highest point on the sign structure.

Sign, Identification

A sign on any lot containing more than one legal use which may be either ground sign or wall mounted, the contents of which is limited to the name, telephone number, location of the use upon the lot, hours of operation, service and/or products offered.

Sign, Illuminated

A sign lighted by or exposed to artificial lighting either by lights on or within the sign or directed towards the sign.

Sign, Logo

A sign exhibiting a distinctive symbol which identifies a business.

Sign, Menu Board

A sign placed adjacent to a "drive-through" lane which advertises products and prices of products intended to be purchased and/or picked up by purchasers while remaining in their vehicle, and which is located adjacent to the use or business selling said products.

Sign Message

The thought or idea conveyed or expressed by the words, letters, insignia, figures, designs, fixtures, colors, motion, illumination, sound or projecting images or any combination thereof.

Sign, Off-Premises

A sign advertising a land use, business, product or service not located or available upon the premises whereon the sign is located.

Sign, Permanent

A sign constructed of durable material and affixed, lettered, attached to or placed upon a fixed, nonmovable, nonportable supporting structure.

Sign, Permanent Freestanding Sign

Any permanent sign that is erected as an individual or stand-alone structure, not attached to a building, wall, or fence.

Sign Permit

A permit issued for the erection, construction, enlargement, alteration, moving, improvement, removal, conversion, or demolition of any sign, issued pursuant to these Regulations.

Sign, Political

A sign advertising or promoting a candidate, political party, ballot issue or political issue to be voted upon at any public election.

Sign, Project Identification

A sign whose only message consists of the name and/or address of the development which is located on the parcel of land containing the project (i.e. Smith's Shopping Center, Smith's Office Park, The Smith Hotel, etc.).

Sign, Projecting

A sign which projects from a wall or roof and is supported by a wall or roof of a building.

Sign, Roof

A sign upon or above the roofline or parapet of the building or structure.

Sign, Special Area/Theme

A sign which identifies a unique, planned area of the County such as a Metro District, residential community, conglomeration of office parks, etc.

Sign Structure

A sign structure shall include, but not be limited to, the supports, uprights, braces, backing, sign board, and framework designed to contain a sign message. Sign structure is not meant to include the message conveyed by the sign.

Sign, Temporary

Temporary signs shall include, but not be limited to, any exterior sign, banner, pennant, valance or advertising display:

- A. Which is constructed of cardboard, paper, cloth, canvas, fabric, plywood, light weight plastic or other light weight material, with or without frame; or
- B. Which is designed for short-term use, or to be moved about from place to place, or not permanently affixed to a nonmovable, non-portable supporting structure.
- B. "Temporary signs" shall not include signs placed in the open bed of a vehicle or printed, affixed, lettered, placed upon or attached to a vehicle.

Sign, Top of Building

A sign located above the top row of windows and below the parapet edge or leading edge of the building roofline.

Sign, Wall

A sign attached to, painted on, or erected against a wall or parapet wall of a building, structure or fence whose display surface is parallel to the face of the building, structure or fence and whose height does not exceed the height of the wall, structure or fence to which said sign is attached, painted upon, or against which said sign is erected.

Sign, Window

A sign which is applied or attached to, or located within one foot of the interior of a window, which sign can be seen through the window from the exterior of the structure.

Sign Without Backing

Any word, letter, emblem, insignia, figure, or similar character or group thereof that is neither backed by, incorporated in, or otherwise made a part of any larger display area.

Site-Specific Development Plan

Pursuant to the Colorado Revised Statutes, as may be amended, a Plan approved by the Board of County Commissioners which grants a vested property right.

Slaughter House

An industrial facility where animals are processed for consumption as food products, and the facility meets all of the air and water quality requirements of the public health agencies.

Slope

The vertical elevation of a land area divided by the horizontal distance, expressed as a percentage. For purposes of this Land Development Code, slopes must cover a total land area of at least 5,000 square feet.

Small Solar System Facility or Facilities

A definable area where an Applicant has disturbed or intends to disturb the land surface in order to locate a solar power generating facility designed to produce electricity with a maximum capacity of 5 Megawatts (MWac) alternating current, or MW capacity whichever is greater. A small solar system does not include battery storage equipment of facilities.

Small Solar System Facility Boundary

A definable perimeter limit around a small solar system facility at the outer edge of the facility fencing.

Small Wind Energy Conversion System (SWECS)

Any mechanism, including blades, rotors, or other moving surfaces, designed for the purpose of converting wind energy into mechanical or electrical power. For the purpose of these Regulations, towers, tower bases, guy wires and any other structures necessary for the installation of a small wind energy conversion system are also included. To be considered a SWECS, the capacity can be up to 100 kW for each wind energy conversion system.

Snow Shadowing

The effect of shadows from buildings, structures and coniferous landscaping located on the south sides of public rights-of-way, reducing the ability of solar radiation to melt ice and snow.

Solid Waste Disposal Facility

A facility designed and licensed under applicable State and local law and regulation for the purpose of storage, treatment, processing, or final disposal of solid wastes.

Solid Waste Disposal Site and Facility

The location and facility at which the deposit and final treatment of solid, liquid or hazardous wastes occurs or a discrete area of land or an excavation where solid wastes are placed for final disposal, which is not a land application unit, waste impoundment, or waste pile. Landfills include, but are not limited to: ash monofills, construction and demolition landfills, industrial landfills, sanitary landfills, tire monofills and similar facilities where final disposal occurs. This definition does not include Injection Wells.

Special Flood Hazard Area (SFHA)

The land in the floodplain subject to one percent or greater chance of flooding in any given year, i.e. the 100-year floodplain. It is the land area covered by the floodwaters of the base flood on the Flood Insurance Rate Maps. The SFHA is the area where the National Flood Insurance Program's floodplain management regulations must be enforced and the area where the mandatory purchase of flood insurance applies. The SFHA includes Zones A, AO, AH, AE, A99, AR, AR/AE, AR/AO, AR/AH, and AR/A.

Specific Development Plan (SDP)

The document required to be submitted and approved in order to complete the first step of the Two-Step Planned Unit Development process, or the second step of the Three-Step Planned Unit Development process, in Section **Error! Reference source not found.** , **Error! Reference source not found.**. This document provides specific information regarding the type, scale, layout, design, and quality of proposed land uses, open spaces, and circulation systems, as well as information required to allow later site design approvals to occur through the Administrative Site Plan process.

Specified Anatomical Areas

As used herein means and includes any of the following: less than completely and opaquely covered human genitals, pubic region, buttock, anus, or female breast below a point immediately above the top of the areola: or human male genitals in a discernible turgid state, even if completely and opaquely covered.

Specified Sexual Activities

Means and includes any of the following:

- A. the fondling or other intentional touching of human genitals, pubic region, buttock, anus or female breast;
- B. Sex acts, normal or perverted, actual or simulated, including intercourse, oral copulation, or sodomy;
- C. Masturbation, actual or simulated;
- D. Human genitals in a state of sexual stimulation, arousal or tumescence; or,
- E. Excretory functions as part of or in connection with any of the activities set forth in subparts (A) through (D) of this definition.

Spill

Any unauthorized sudden discharge of any exploration and production waste or other pollutant to the environment.

Stable, Private

A structure to house riding animals, which shall be limited to the capacity of not more than one riding animal per acre.

Stable, Commercial

A building or shelter to house riding animals on a rent, lease or fee basis.

Stable, Community

A structure or shelter owned and maintained jointly by several property owners to shelter riding animals; provided, however, that no space shall be occupied by animals owned by other than the joint owners of such structure or shelter.

Stables (Private or Community)

Shall be located on the rear half of a lot, not closer than 25 feet from any property line, and not closer than 50 feet from any dwelling.

Start of Construction

- A. The date the building permit was issued, provided the actual start of construction, repair, reconstruction, rehabilitation, addition, placement, or other improvement was within 180 days of the permit date. The actual start means the first placement of permanent construction of a structure on a site, such as the pouring of slab or footings, the installation of piles, the construction of columns, or any work beyond the stage of excavation; or the placement of a

manufactured home or a foundation. Permanent construction does not include land preparation such as clearing, grading and filling; nor does it include excavation for a basement, footings, piers, or foundations, or the erection of temporary forms; nor does it include the installation on the property of accessory buildings such as garages or sheds not occupied as dwelling units or not part of the main structure.

- B. For a substantial improvement, the actual start of construction means the first alteration of any wall, ceiling, floor, or other structural part of a building, whether or not that alteration affects the external dimensions of the building.

Steep Slope

Slopes that are 15 percent or greater.

Storage Capacity, Floodplain

The volume of space above an area of floodplain that can be occupied by floodwater of a given stage at a given time, regardless of whether the water is moving. Storage capacity tends to reduce downstream flood peaks.

Storage Container/Pods

A prefabricated structure, commonly comprised of lightweight metal, which is intended for temporary storage of personal items.

Street

A public or private thoroughfare used, or intended to be used, for passage or travel by motor vehicles. Streets are further classified by the functions they perform.

Street, Arterial

A street designed to carry high volumes of traffic across and through the County and which interconnects with and augments the regional thoroughfare systems to provide service for trips of moderate length and to distribute travel areas smaller than those of regional thoroughfares.

Street, Collector

A street connecting a series of local streets to each other in such a manner that local traffic is collected and distributed to other collector or to arterial streets. Collector streets provide both land access services and local traffic movement within and between residential neighborhoods, commercial areas and industrial areas.

Street Cul-De-Sac

A local street of relatively short length with one open end and the other end terminating in a vehicular turnaround.

Street, Dead-End

A street that is connected to another street at one end, but which is intended to ultimately connect with another street at the closed end.

Street Frontage

The distance along any boundary line of a lot which is also the boundary line of a public street, road or highway right-of-way. A local or collector street parallel and adjacent to a regional thoroughfare or arterial street providing access to adjacent properties at specified points.

Street, Local

A street primarily intended to serve and provide access to properties abutting the street and not connecting with other streets in such a way as to encourage through traffic.

Street, Private

The pavement design and construction of private streets shall be in accordance with criteria contained in the Arapahoe County Roadway Design and Construction Standards. A note so indicating shall be placed on the Final Plat, Replat, Final Development Plan, Subdivision Development Plan, or other official document prior to execution by the Board of County Commissioners.

Street, Regional Thoroughfares

Streets and highways primarily designed to serve major centers of activity within a metropolitan area, having high existing or projected traffic volumes and carrying a high proportion of the total urban travel within a minimum of mileage.

String of Lights

A series of lights attached to a wire, race, or inserted in transparent tubing in such a way that it can be moved about or hung in various ways, and whose bulbs are not luminaires permanently attached to a building or other structure.

Structure

When used in Section **Error! Reference source not found., Error! Reference source not found.**, means a walled and roofed building, including a gas or liquid storage tank that is principally above ground, as well as a manufactured home.

Structure (Non-Floodplain)

Anything constructed or erected that requires location on the ground or attached to something having location on the ground but excluding in-ground swimming pools. Signs, fences, or walls used as fences, as otherwise regulated in this Code and requiring a building permit.

Structure, Temporary

A structure which is not a permanent structure, or one which is constructed for a special purpose in contemplation of eventual removal. For the purpose of these Regulations, the term "temporary" shall mean a period up to six months.

Subdivider or Developer

Any person, firm, partnership, joint venture, association, or corporation who shall participate as owner, promoter, developer, or sales agent in the planning, platting, development, promotion, sales, or lease of a subdivision.

Subdivision Improvements Agreement

One or more security arrangements which the County shall accept to secure the actual cost of construction of such public improvements as may be required by the Board of County Commissioners.

Subdivision and Subdivided Land

Any parcel of land in the State which is divided into two or more parcels, separate interests, or interests in common, unless exempted under subsections (A), (B) or (C).

- A. The terms "subdivision" and "subdivided land" as defined above shall not apply to any division of land which creates parcels of land each of which comprise 35 or more acres of land, none of which is intended for use by multiple owners.

- B. Unless the method of disposition is adopted for the purpose of evading this article, the terms "subdivision" and "subdivided land" as defined above, shall not apply to any division of land:
1. Which creates parcels of land, such that the land area of each of the parcels, when divided by the number of interests in any such parcel, results in 35 or more acres per interests;
 2. Which is created by a lien, mortgage, deed of trust or any other security instrument;
 3. Which could be created by any court in this state pursuant to the law of eminent domain, or by operation of law, or by order of any court in this state if the Board of County Commissioners of Arapahoe County, in which the property is situated, is given timely notice of any such pending action by the court and given opportunity to join as a party in interest in such proceeding for the purpose of raising the issue of evasion of provisions of these Regulations prior to entry of the court order; and, if the Board does not file an appropriate pleading within 20 days after receipt of such notice by the court, then such action may proceed before the court;
 4. Which is created by a security or unit of interest in any investment trust regulated under the laws of this state or any other interest in any investment entity;
 5. Which creates cemetery lots;
 6. Which creates an interest or interests in oil, gas, minerals, or water which are now or hereafter severed from the surface ownership of real property; or
 7. Which is created by the acquisition of an interest in land in the name of a husband and wife or other persons in joint tenancy, or as tenants in common and any such interest shall be deemed for the purposes of this section as only one interest;
 8. Which is created by a contract concerning the sale of land which is contingent upon the purchaser's obtaining approval to subdivide, pursuant to this article and any applicable County regulations, the land which he is to acquire pursuant to the contract;
 9. Which is created by the combination of contiguous parcels of land into one larger parcel. If the resulting parcel is less than 35 acres in land area, only one interest in said land shall be allowed. If the resulting parcel is greater than 35 acres in land area, such land area, divided by the number of interests in the resulting parcel, must result in 35 or more acres per interest. Easements and rights-of-way shall not be considered interests for purposes of this subparagraph.
- C. The Board may exempt from this definition of the terms "subdivision" and "subdivided land," any division of land if the Board determines that such division is not within the purposes of this article.

Subdivision Regulations

The Subdivision Regulations duly adopted by the Board of County Commissioners of Arapahoe County and contained in this Land Development Code in Chapters 4 and 5.

Substantial Damage

Damage of any origin sustained by a structure whereby the cost of restoring the structure to its before-damaged condition would equal or exceed 50 percent of the market value of the structure just prior to when the damage occurred.

Substantial Improvement

Any repair, reconstruction, rehabilitation, addition, or other improvement of a structure, the cost of which equals or exceeds 50 percent of the market value of the structure before the "start of

construction" of the improvement. This term includes structures which have incurred "substantial damage," regardless of the actual repair work performed. The term does not, however, include either:

- A. Any project for improvement of a structure to correct existing violations of state or local health, sanitary, or safety code specifications which have been identified by the local code enforcement official and which are the minimum necessary to assure safe living conditions, or
- B. Any alteration of a "historic structure," provided that the alteration will not preclude the structure's continued designation as a "historic structure."

Surface Water

A perennial or intermittent stream or any perennial surface water body.

Swimming Pools (Private)

Including hot tubs, spas, artificial ponds or other structures capable of containing more than a 24-inch depth of water. Pools shall not be located closer than 10 feet from any property line. Swimming pools shall comply with the Arapahoe County Building Code.

Tank

As used herein shall have the same definition as stated in the Colorado Oil and Gas Conservation Commission Rules of Practice and Procedure, 100 Series Definitions (2 CCR 404-1 and as may be duly amended).

Tavern

An establishment for the sale and on-premises consumption of alcoholic beverages, by the drink, to the general public and where food is sold or served accessory to the primary use.

Technical Review Committee

The committee established to review and evaluate design and engineering issues, and minimum requirements related to subdivision and development. The committee also considers variance and waiver requests of County criteria, regulations, and standards. The committee is comprised of representatives of the Engineering Services Division, Transportation Division, and Road and Bridge Division that have review responsibilities established by County rules and regulations.

Temporary Batch Plant

A plant for the manufacture or mixing of concrete, cement, and concrete and cement products, including any apparatus and uses incident to such manufacturing and mixing.

Temporary Concrete and/or Batching Plant.

A temporary concrete mixing and/or asphalt batching plant used for construction of a road or structure.

Temporary Structure

See Structure, Temporary.

Time and/or Temperature Devices

Signs consisting of devices which provide time and/or temperature information.

Tires, Batteries and Accessories

Retail establishments which perform minor auto repair, as defined in this section.

Thematic Vacations

Social, educational or cultural gatherings, for one or more days, conducted in a farm-like atmosphere including such activities as "visiting farmer" vacations.

Topsoil

The layer at the surface of the earth which has been so modified and acted upon by physical, chemical and biological agents that it will support rooted plants necessary to achieve reclamation goals.

Tract

A parcel platted in a subdivision which is set aside as a restricted tract unsuitable for development, or for a public or community-wide purpose which shall be shown on the face of the plat. A public or community-wide purpose may include a drainage area, stormwater detention or retention areas, areas for signs, parks, open space, utilities, or land areas reserved for other public facilities. Except for restricted tracts, a tract is further defined as having been dedicated to the County or a quasi-public agency, or as being owned by a homeowners association for the subdivision in which the tract is located.

Traffic Pattern Area

A racetrack or rectangular-shaped pattern beginning at the departure end of a runway and terminating at the arrival end of the same runway, which provides an average flight path for arriving and departing aircraft. For Centennial Airport, the Traffic Pattern Area is designated as the "Restricted Development Area."

Trail

A public pathway for the use of pedestrian, non-motorized bicycle, or equestrian uses officially designated on a subdivision plat of record, or the County's Comprehensive Plan.

Transmission Lines

Any electric transmission line and appurtenant facilities which emanate from a power plant or a substation and terminate at a substation, which are designed for or capable of, the transmission of electricity at 115 kilovolts or greater.

Trash Container/Dumpster

A waste receptacle designed to be emptied into garbage trucks.

Trash Enclosure

An enclosure constructed to secure, contain, or visually screen dumpsters/trash containers.

Truck Stop

A facility intended to provide services to the trucking industry, including but not limited to the following activities: dispensing of fuel, repair shops, automated washes, restaurants, motels, accessory entertainment such as video arcades. A truck stop may allow overnight accommodations not otherwise associated with a hotel/motel use.

Turnaround

The circular or T-shaped terminating end of a cul-de-sac which provides sufficient area for the turning of emergency vehicles, sanitation trucks, or other service vehicles and automobiles.

Twenty-Four (24) Hour Use

A land use whose hours of operation exceed 18 consecutive hours in any 24-hour day. A land use seeking hours of operation in excess of 18 hours in any 24 hour period.

Underground Mining

Mining activity which occurs primarily beneath the surface of the ground.

Uniformity Ratio

The ratio between the maximum initial horizontal illuminance level and the minimum initial horizontal illuminance level on the site and within a specific use area such as a parking lot

Unincorporated

Situated outside of cities and towns, so that, when used in connection with "territory", "areas", or the like, it covers, includes, and relates to territory or areas which are not within the boundaries of any city or town.

Upset Condition

As used herein shall have the same definition as stated in the Colorado Oil and Gas Conservation Commission Rules of Practice and Procedure, 100 Series Definitions (2 CCR 404-1 and as may be duly amended).

Urban Growth Boundary

An urban growth boundary (UGB) is a planning strategy used by Denver Regional Council of Governments (DRCOG) and accepted by Arapahoe County by the intergovernmental agreement known as the Mile High Compact. The Urban Growth Boundary/Area defines where future development is intended to occur so infrastructure can be planned and constructed more cost-effectively. An urban growth boundary also encourages a more compact development pattern by directing growth inward, stimulating infill and redevelopment activity, and capitalizing on the use of existing infrastructure.

Urban Drainage And Flood Control District (UDFCD)

A multi-jurisdictional independent service district tasked with assisting local governments with drainage and flood control problems and providing oversight and management of drainage facilities within the boundaries of the district. Within the County, the eastern limit of the UDFCD boundary coincides with County Road 121, Schumaker Road.

Use

The purpose for which land or premises or a building thereon is designed, arranged or intended, or for which it is or may be occupied.

Use By Special Review

Use which must have approval of the Board of County Commissioners before being allowed in a specific District.

Use, Principal

The primary use located on a parcel.

Use, Special Exception

Use which must have approval of the Arapahoe County Board of Adjustment before being allowed in a specific District.

Utility Lines

All utility lines, except major transmission lines, shall be placed underground in all zoning districts, unless the Board of County Commissioners grants an exception.

Variance

A grant of relief to a person from the requirements of this LDC when specific enforcement would result in unnecessary hardship. A variance, therefore, permits construction or development in a manner otherwise prohibited by this Land Development Code.

Vehicle Repair, Major

A commercial business for the general repair, rebuilding, or reconditioning of engines and drive trains, framework, body work, welding and painting performed on motor vehicles and trailers.

Vehicle Repair, Minor

A commercial business for the servicing of passenger and light-truck motor vehicles including the replacement and/or repair of parts, but not requiring the removal of the engine or drive train or pieces of body work larger than minor trim, and including the replacement of tires, batteries, vehicle fluids, exhaust systems and brakes.

Vested Property Right

Pursuant to the Colorado Revised Statutes, as may be amended, a property right granted for three years after approval of a "site specific development plan," as approved by the Board of County Commissioners.

Violation

When used in conjunction with the Floodplain Management Regulations, the failure of a structure or other development to be fully compliant with Section **Error! Reference source not found., Error! Reference source not found..**

Voided Annexation

The result of a court action which has the effect of making the land use regulations created upon an annexing parcel of land voidable. A parcel of land which has had its annexation voided and is required to rezone under these Regulations prior to development of the parcel.

Warehouse

A facility for the storage of merchandise or materials for later shipment, reshipment or processing as a separate industrial or commercial operation that may include heavy truck traffic and categorized organization of the stored materials.

Waste Transfer Station

A fixed facility where non-hazardous solid waste and rubbish from collection vehicles is consolidated for subsequent transfer to disposal sites.

Watercourse

See Drainageway.

Water Source

A surface water body or groundwater that includes streams, ponds or springs and water wells that are registered with the Colorado Division of Water Resources, including household, domestic, livestock, irrigation, municipal/public, and commercial wells, permitted or adjudicated springs, or monitoring wells installed for the purpose of complying with groundwater baseline sampling and monitoring requirements.

Water Surface Elevation (WSE)

Means the height, in relation to the North American Vertical Datum (NAVD) of 1988 (or other datum, where specified), of floods of various magnitudes and frequencies in the floodplains of riverine areas.

Well Pad

As used herein Well Pad shall have the same meaning as Well Site defined in the Colorado Oil and Gas Conservation Commission Rules of Practice and Procedure, 100 Series Definitions (2 CCR 404-1 and as may be duly amended). Also see Pad Boundary.

White Light Source

A light source that falls within the 460 and 580 nanometer wavelight of light.

Wind Energy Conversion System

See Small Wind Energy Conversion System (SWECS) or Large Wind Energy Conversion System.

Winery Operations

The cultivation of plants intended for the production of wine, research of agricultural crop potential, importation of grapes and related products from vineyards, production of wine and/or the sale of related products.

WSE

See Water Surface Elevation (WSE).

Yard, Front

Required unobstructed open space extending from the front lot line into a lot over the full lot width, excepting driveways and walks.

Yard, Rear

Required unobstructed open space extending from the rear lot line into a lot over the full lot width; provided, however, that exterior chimneys, soffits and bay windows may extend into the rear yard a distance of up to 24 inches. Said rear yard shall be measured from the property line to the foundation or the nearest point of projection of the structure.

Yard, Separation

Minimum distance between structures measured from the foundation of one structure to the foundation of an adjoining structure; provided, however, that exterior chimneys, soffits and bay windows may extend into this open area a distance of up to 24 inches for each of the structures.

Yard, Side

Required unobstructed open space extending from the side lot line into a lot over the full lot depth; provided, however, that exterior chimneys, soffits and bay windows may extend into the side yard a distance of up to 24 inches. Said side yard shall be measured from the property line to the foundation or to the nearest point of projection of the structure.

Zero Lot Line

A situation in which either two adjoining structures on adjacent but separate properties share a common wall or a structure is built up to its property line with no easement or setback requirement.

1.

5-5 PERMITTED USE TABLE

See Table 3-2.1 below.

The Airport Influence Area (AIA-O), Centennial Airport Environs Planning Area (CAE –O) and the Mineral Resources and Geologic Hazard Area (MRG-O) Overlay Districts are not included in the Table. These overlay districts impose restrictions and other requirements on uses. Applicants proposing development

in areas affected by these overlay districts will need to consult the applicable subsections of Section 2-5, Overlay Districts, for these restrictions and additional requirements.

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TABLE 3-2.1 PERMITTED USE TABLE

P = Permitted, A = Accessory, SR = Use by Special Review, SE = Use by Special Exception, T= Temporary Use/Temporary Use Permit Required, Blank = Not Permitted

	Agriculture and Residential ^[1]												Non-Residential ^[1]							PUD Districts ^[2]	Overlay	Use Specific Standard	
	A-E	A-1	RR-A	RR-B	RR-C	R-1-A	R-1-B	R-1-C	R-1-D	R-2-A	R-2-B	R-M	B-1	B-3	B-4	B-5	I-1	I-2	F ^[3]	O	PUD	SBC-O	Code Section
Residential Uses																							
Household Living																							
Single family detached dwelling	P	P	P	P	P	P	P	P	P	P	P	P									Per Approved General, Specific, Preliminary or Final Development Plan	P	
Single family cluster, detached dwelling								P	P													P	Error! Reference source not found.
Single family attached dwelling, other than 2-family or townhome										P	P											p ^[4]	Error! Reference source not found., Error! Reference source not found.
2-Family Dwelling										P	P											P	Error! Reference source not found.
Townhome Dwelling											P											p ^[4]	Error! Reference source not found.
Multi-family dwelling																						p ^[4]	Error! Reference

Per Approved General, Specific, Preliminary or Final Development Plan

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	Agriculture and Residential ^[1]												Non-Residential ^[1]					PUD Districts ^[2]	Overlay	Use Specific Standard			
	A-E	A-1	RR-A	RR-B	RR-C	R-1-A	R-1-B	R-1-C	R-1-D	R-2-A	R-2-B	R-M	B-1	B-3	B-4	B-5	I-1	I-2	F ^[3]	O	PUD	SBC-O	Code Section
New Multi-family requires a PUD																							source not found., Error! Reference source not found.
Mother-in-law apartment	SE	SE	SE	SE	SE																		Error! Reference source not found.
Manufactured home	P	P	P									P											Error! Reference source not found.
Mobile home												P											Error! Reference source not found.
Ranch Hand/Agricultural Worker Housing	SE	SE	SE																				Error! Reference source not found.
Home Occupation, General	A	A	A	A	A	A	A	A	A	A		A									A		Error! Reference source not found.

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Code Section
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	Agriculture and Residential ^[1]	Non-Residential ^[1]	PUD Districts ^[2]	Overlay	Use Specific Standard
	A-E A-1 RR-A RR-B RR-C R-1-A R-1-B R-1-C R-1-D R-2-A R-2-B R-M	B-1 B-3 B-4 B-5 I-1 I-2 F ^[3] O	PUD	SBC-O	Code Section
			Per Approved General, Specific,		source not found.
Group Home – Type B	SR SR SR SR SR SR SR SR SR SR SR SR		Preliminary or Final Development Plan	SR	Error! Reference source not found.
Civic, Cultural, and Public Uses					
Art, cultural, educational, or other similar exhibits and displays	T T T	T T T T	Per Approved General, Specific, Preliminary, or Final Development Plan		
Cemetery					
Circus, Fair or Carnival, Temporary	T T T	T T T T			Error! Reference source not found.
Circus, Fair or Carnival, Exceeding TUP limits		SE SE SE SE SE			
Community Event and Conference Center	SR SR	P P P P P P			
Day care, Day Care Centers		P P P P P P	Per Approved General, Specific, Preliminary or Final Development Plan	SR	Error! Reference source not found.
Farm museum	SE SE				

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Use Specific Standard	
Code Section	
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	Agriculture and Residential ^[1]	Non-Residential ^[1]	PUD Districts ^[2]	Overlay	Use Specific Standard
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	A-E	A-1	RR-A	RR-B	RR-C	R-1-A	R-1-B	R-1-C	R-1-D	R-2-A	R-2-B	R-M	B-1	B-3	B-4	B-5	I-1	I-2	F ^[3]	O	PUD	SBC-O	Code Section
Community Garden	See Community Garden Regulations, Section Error! Reference source not found.																			Per Approved General, Specific, Preliminary or Final Development Plan		Error! Reference source not found.	
Animal Assisted Therapy Activities	P	P																					
Animal Day Care Facility													P	P	P	P	P	P					Error! Reference source not found.
Animal hospital and veterinary clinic	SE	SE	SE										P	P	P	P	P	P				P	Error! Reference source not found.
Kennel	SE	SE	SE																				
Commercial Feed Lot	SE																						Error! Reference source not found.
Farm or Ranch Animal Center	P	P	P																				
Flower Farms	P	P																					
Greenhouses, wholesale or retail	P	P												P	P	P					Per Approved General, Specific,		

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	Agriculture and Residential ^[1]												Non-Residential ^[1]						PUD Districts ^[2]	Overlay	Use Specific Standard			
	A-E	A-1	RR-A	RR-B	RR-C	R-1-A	R-1-B	R-1-C	R-1-D	R-2-A	R-2-B	R-M	B-1	B-3	B-4	B-5	I-1	I-2	F ^[3]	O	PUD	SBC-O	Code Section	
Greenhouses, non-commercial, exceeding accessory structure limits	P	P	A	A																	Preliminary, or Final Development Plan		Error! Reference source not found.	
Hunting Club	SR	SR																						
Roadside Sales Stands	A	A	A																					Error! Reference source not found.
Seasonal Farming or Ranching Events	P	P																						
Stable, Riding Academy – Public or Commercial Riding,	P	P	P																p ^[5]	SE				Error! Reference source not found.
Stable – Private Riding	P	P	P	A																			Error! Reference source not found.	
Commercial and Industrial																								
Automotive and Parking																								
Auto sales with or without minor auto repair as an accessory use													P	P	P	P		P			Per Approved General, Specific, Preliminary, or Final Development Plan	p ^[6]		

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Auto service station													P	P	P	P	P								
Car wash and/or auto detailing													P	P	P	P	P						SR		
Parking lot or structure, principal use (public or commercial)													P	P	P				SE						
Parking lot or structure, accessory													A	A	A	A	A	A							
Parking Lot, accessory to park or public facility																			A						
Parking, Temporary	T	T	T										T	T	T	T									
Vehicle Repair, Minor													P	P	P	P	P								
Vehicle Repair, Major														P	SR	P	P								
Vehicle Sales/Leasing/Rental													P	P	P	P	P								
Contractors, Trades and Construction																									
Building/landscape material sales yard														P			P	P			Per Approved General, Specific, Preliminary, or Final Development Plan	P	Error! Reference source not found.		
Contractors including but not limited to plumbing, heating, and electrical (no outdoor storage)													P	P	P	P	P							Error! Reference source not found.	

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Contractors including but not limited to plumbing, heating, and electrical (with outdoor storage)															P		P	P					Error! Reference source not found.	
Specialty Trade Shop, including but not limited to cabinet, electric, plumbing, heating, lithographic and/or printing shops, furniture reupholstering															P	P	P	P				p ^[7]		
Temporary Concrete and/or Batching Plant with materials stockpiling	SE	SE																						
Temporary construction yard and/or office	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T			T	T	Error! Reference source not found.	
Recreation																								
Agri-tainment	SR	SR																			Per Approved General, Specific, Preliminary, or Final Development Plan			
Amateur Motorsports Facility	SR																						Error! Reference source not found.	
Amusement park																				SE				
Ball fields																		P						

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Drive-in theater																				SE				
Go-cart and skateboard tracks																				SE				
Driving range, miniature golf and “par 3” course																				SE				
Golf course and country club																			P	P			Error! Reference source not found.	
Health Club													P	P	P	P	P	A					P	
Nature areas, picnic areas, and trails																			P					
Play courts / Playground equipment																			P					
Recreation – Indoor														P	P	P	P	P					P	
Recreation – Outdoor, including recreational clubs and camps														P	P	P	P	SR	P	p ^[8]				
Rodeo	SE	SE	SE	SE																				
Shooting Range (outdoor)	SR																							
Trails and paths open to the general public																			P					
Wildlife sanctuary																			P					

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Manufacturing, Warehousing, Industrial and Utilities																							
Explosion welding, cladding, or metallurgical bonding of metal or other similar uses	SE																				Per Approved General, Specific, Preliminary, or Final Development Plan		Error! Reference source not found.
Heavy equipment repair and fabrication conducted indoors																						P	
Manufacturing, Light														P		P	P						
Manufacturing, Light – Commercial bakery, creamery, bottling plant																						P	
Manufacturing, Heavy																	P						
Processing, packaging, and selling of an agricultural Commodity, no on-site manufacturing of refined product	P	P																			Per Approved General, Specific, Preliminary, or Final Development Plan		
Processing, packaging, and selling of an agricultural Commodity w/ manufacturing	SR	SR															P	P					
Repair, rental, and servicing of commodities produced or warehoused in zone district																	P	P					

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Wholesale business, storage, or warehousing																P		P	P				P	
Mini-warehouse/self-storage																	P	P	P					
Showroom/Warehouse																P	P	P	P					
Slaughter House																			SR					
Cryptocurrency Mining		AI 10 1	AI 10 1											P	P	P	P	P	P					
Mining																								
Mining, Quarry and Earth Extraction/sand and gravel extraction		SR	SR																SR	SR		Per Approved General, Specific, Preliminary, or Final Development Plan		Error! Reference source not found.
Office																								
Office – General, executive, professional, and business offices; medical and dental clinics														P	P	P	P	P	P			P		
Laboratories														P	P	P	P	P	P			Per Approved General, Specific, Preliminary, or Final Development Plan		
Research & Development w/ indoor use only																P	P	P	P					Error! Reference source not found.

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Research & Development w/ outdoor use															SR		P	P					Error! Reference source not found.
Restaurants, Bars and Hospitality																							
Bar/Tavern														P	P	P	P				Per Approved General, Specific, Preliminary, or Final Development Plan	P	
Bed and Breakfast	SE	SE																					Error! Reference source not found.
Guest Ranch	SE																						
Hotel/Motel														P	P	P	P	SR				P	
Microbrewery														P	P	P	P						
Nightclub														P	P	P						P	
Restaurant – without drive through													A	P	P	P	P	P					
Restaurant – with drive through														P	P	P	P	P					
Retail and Commercial Service																							
Bank (with or without drive- through)													P	P	P	P	P	A				P	

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Convenience store with or without gas pumps													P	P	P						Per Approved General, Specific, Preliminary or Final Development Plan	P	
Convenience store, 24-hour operation, with or without gas pumps													SR	SR	SR	SR	SR					SR	
Farmer's Market (Year-Round)	SE	SE																					Error! Reference source not found.
Farmer's Market (Seasonal)	P	P	T										T	T	T	T						T	Error! Reference source not found.
Firewood, Storage and Sale	SE	SE	SE																				
Marijuana, Commercial uses																							Error! Reference source not found., Error! Reference source not found.
Retail													A	P	P	P	A	A					Error! Reference source not found.

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Retail - Department, hardware, dry good, ranching and farm supply stores																					Per Approved General, Specific, Preliminary or Final Development Plan	P		
Retail - Appliance, furniture, and carpet stores																						P		
Retail -- Specialty retail sales, antique stores and gift shops																						P		
Retail sale of any commodity manufactured, processed, fabricated and/or warehoused only on the premises																	SE	SE					Error! Reference source not found.	
Retail sale of any commodity designed especially for use in agriculture, mining, industry, business, transportation, or construction																		SE						
Retail, Service													P	P	P	P	A	SE					P	
Retail, Service -- Dry cleaning and commercial laundries																							P	
Seasonal sales or events including, but not limited to pumpkin sales lots, corn mazes, hayrides, haunted houses, and other similar events or uses	T	T	T										T	T	T	T								

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Sexually-oriented business															P	P	P	P					Error! Reference source not found.	
Swap meets/flea markets	T	T	T										T	T	T	T								Error! Reference source not found.
Tent/sidewalk sales														T	T	T								Error! Reference source not found.
Telecommunications and Towers																								
Broadcast Tower Facility and Other Commercial antennas and radio towers	SE																			SE	Per Approved General, Specific, Preliminary or Final Development Plan			
Commercial Mobile Radio Facilities (CMRS), Attached (Structure, roof, or building-mounted)	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P			P	Error! Reference source not found.
Commercial Mobile Radio Facilities (CMRS), Freestanding Concealed	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P			P	Error! Reference source not found.

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Commercial Mobile Radio Facilities (CMRS), Freestanding Not Concealed	P	P	P										P	P	P	P	P	P					Error! Reference source not found.	
Commercial Mobile Radio Service Facilities, Temporary	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T			T	Error! Reference source not found.
Over-height Commercial Mobile Radio Service (CMRS) freestanding towers, public and private freestanding communication towers	SE	SE	SE										SE	SE	SE	SE	SE	SE					SE	Error! Reference source not found.
Telephone exchanges and similar buildings housing tele-communication equipment																	P	P						
Small Wind Energy Conversion System	P	P	P	P	P	P	P					SE												Error! Reference source not found.
Transportation																								
Helipad operations													SE	SE	SE	SE	SE	SE		SE	Per Approved General, Specific Preliminary or Final Development Plan		Error! Reference source not found.	

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Airport																				SE			
Landing Strip for Private Aircraft and/or aircraft-related recreational facilities	SE	SE																		SE			
Utilities and Infrastructure																							
Major Electrical, Natural Gas, and Petroleum-Derivative Facilities of a private company	SR	SR																SR					Error! Reference source not found.
Major Public Utility Facility													P	P	P	P	P	P					Error! Reference source not found.
Minor public utility facility (distribution substation, underground distribution lines)													P	P	P	P	P	P			Per Approved General, Specific Preliminary or Final Development Plan		Error! Reference source not found.
Minor public utility facility (including above-ground distribution lines and underground utilities)																	P	P	P ^[9]				
Sewage disposal treatment plant																	P	P					Error! Reference source not found.

Blank =
Use Specific Standard
Code Section
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TABLE 3-2.1 PERMITTED USE TABLE	
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Building and use customarily appurtenant to the permitted use	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	Per Approved General, Specific, Preliminary or Final Development Plan	A	
Residence required for caretaker or night watchman employed by the premises																A	A	A					
Temporary Uses/Structures																							
Temporary residential sales office (Model Homes)						T	T	T	T	T	T										T		Error! Reference source not found.
Fireworks stands													T	T	T	T	T	T					Error! Reference source not found.
Christmas tree lots													T	T	T	T	T	T					Error! Reference source not found.
Storage containers/pods	T	T	T	T	T	T		T	T	T	T	T	T	T	T	T	T	T			T		Error! Reference source not found.

NOTES:

[1] Overlay District Regulations may apply: Airport Influence Area (AIA), Centennial Airport Environs Planning Area (CAEPA) and/or Mineral Resource and Geologic Hazard Areas. See Sections Error! Reference source not found., Error! Reference source not found., and Error! Reference source not found..

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TABLE 3-2.1 PERMITTED USE TABLE	
Use	Permitted
Single-Family Detached	Yes
Single-Family Attached	Yes
Multi-Family	Yes
Commercial	Yes
Industrial	Yes
Public Use	Yes
Government	Yes
Religious	Yes
Education	Yes
Health Care	Yes
Recreation	Yes
Open Space	Yes
Conservation	Yes
Historic Preservation	Yes
Other	Yes

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[2] Prior to April 1, 2017, the Permitted and Special Review uses are established by previously approved PUDs, including R-PSF, R-PM, R-PH, SH, MU and C. All existing PUDs with these zone district designations will continue to be governed by the existing approved PUD Preliminary and Final Development Plans. Temporary Uses listed in the Table may be permitted in non-residential portions of a PUD with an approved Temporary Use Permit. Temporary uses in residential portions of a PUD are allowed as shown in the Table with an approved Temporary Use Permit.

[3] The uses and improvements listed as Permitted or Use by Special Review in the Floodplain District may be considered for approval within a floodplain if it is determined that the proposed use or improvement is in conformance with Section **Error! Reference source not found.**, Floodplain Management, floodplain management goals, and is otherwise consistent with the zoning district standards of the Land Development Code. It must be demonstrated that none of the conditions in subsection **Error! Reference source not found.**, will occur as a result of the proposed use or improvement.

[4] May include stacked multi-family units, including second-story multi-family units above office and retail uses.

[5] Provided that no permanent structure or shelter is located within the floodplain.

[6] Includes truck, farm equipment and implement sales/service and repair, including indoor auto and truck bodywork and painting.

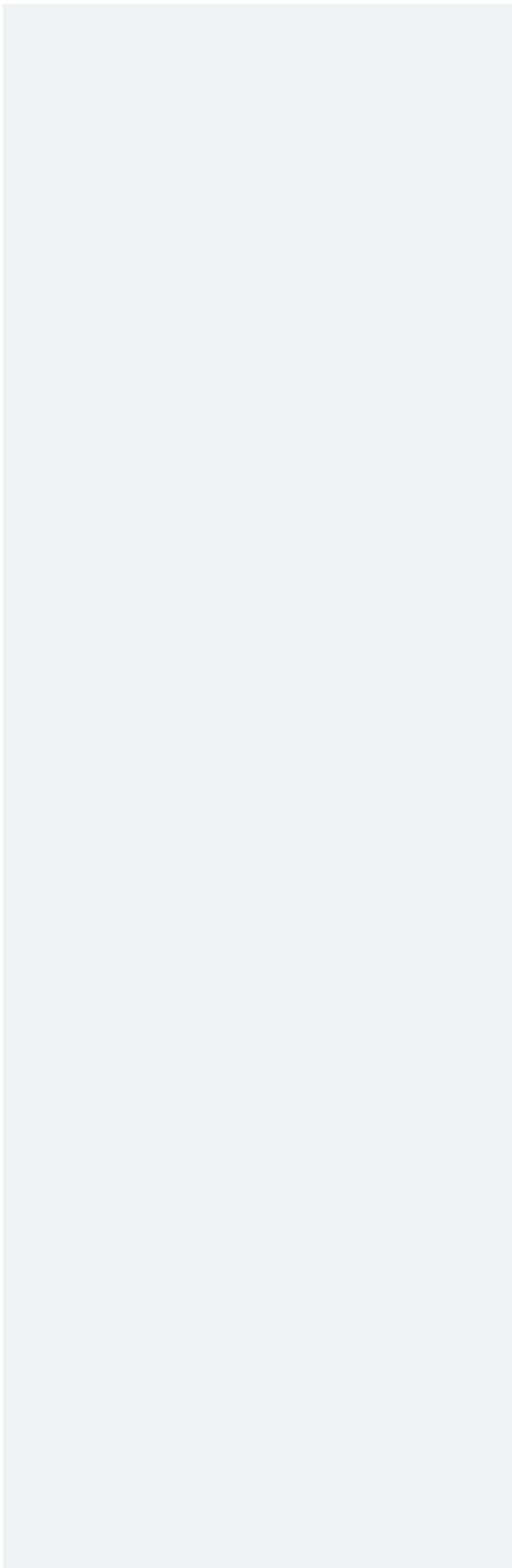
[7] May include equipment yards and company vehicle storage.

[8] Indoor uses are limited to 10% of site.

[9] Underground utilities are permitted so long as adequate cover exists to protect the utilities.

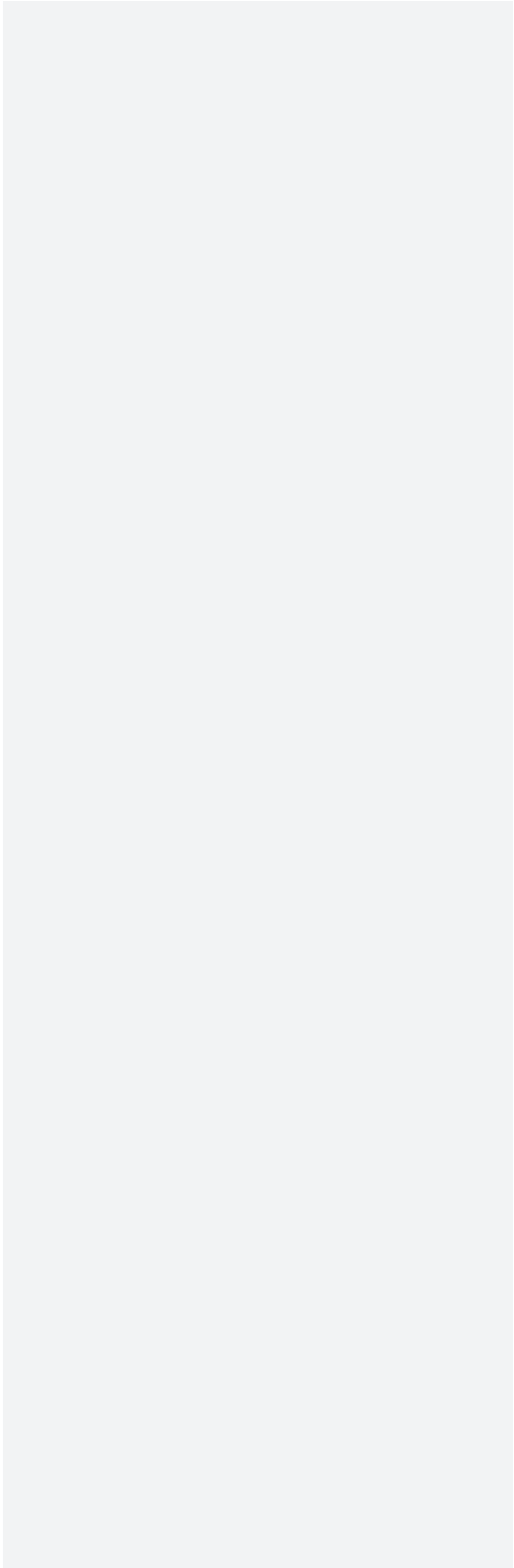
[10] Cryptocurrency mining not connected to an electrical grid and accessory to an oil and gas facility.

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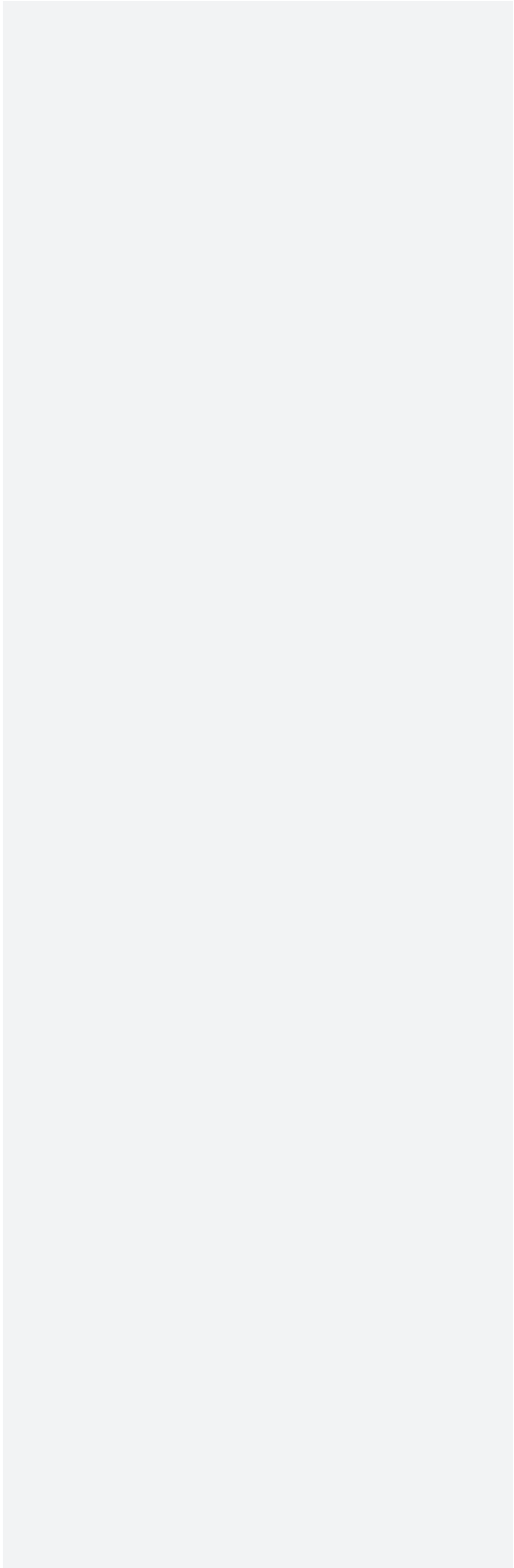
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Attachment 2: Proposed Rules Stakeholder Comments Summary

Comment Provider	Proposed Phase 1 Rule Topic and Criteria	Rule Wording/Stakeholder Comments
Industry		
Colorado Oil & Gas Association (COGA)	One-mile Setback from Existing Water Reservoirs	<p>Not reasonable or necessary to protect public health, safety, welfare, or the environment and wildlife resources.</p> <p>Water Quality Control Division (“WQCD”), amended prior Rule 317B into current Rule 411 and set a conservative setback from surface water supply areas. Under Rule 411.a.(2)i. operators may not conduct any new surface disturbance within an area between 0 and 1,000 feet hydraulically upgradient from the water source. The Statement of Basis, Purpose, and Specific Statutory Authority (“SBP”) to Rule 411 explains the Commission’s finding that even “larger volume spills or releases are highly unlikely” to migrate 1,000 feet.</p> <p>Based on this finding, arrived at after extensive consideration of scientific literature and party testimony on top of consultation with the [CDPHE Water Quality Control Division] WQCD, “[t]he Commission accordingly adopted the 1,000 foot internal buffer to provide a reasonably protective margin of error to protect public health from potential spills and releases.” There is no COGCC setback for oil and gas facilities downgradient of surface waters.</p> <p>... also take issue with the language providing that the Water Reservoir Setback “may be” reduced with approval of the reservoir owner or operator. First, this gives the reservoir owner and operator too much authority. The setback should be based on hydrological science.... Second, should a variation of this language persist in future regulation drafts, there is no reason why approval should not automatically reduce the setback. This draft language states that the setback permissively “may” be reduced, but doesn’t explain under what circumstances it would not be reduced.</p> <p>The County should adopt language to clarify an upgradient setback of 1,000’—as is consistent with COGCC and WQCD findings—and allow downgradient oil and gas operations to proceed within 1,000’ where hydrologic data supports a lesser setback.</p> <p>Recommend the County adopt a 1,000 ft setback from existing water reservoirs and provide for a lesser setback where geologic features support a lesser setback, consistent with COGCC’s Rule 411 and would represent combined wisdom of the COGCC and WQCD.</p>

Comment Provider	Proposed Phase 1 Rule Topic and Criteria	Rule Wording/Stakeholder Comments
	<p>One-mile Setback from Planned Reservoirs</p> <p>Relationship to State of Colorado Rules - Finding Violations under Federal and State Law</p> <p>Alternative Access Roads</p>	<p>Planned water reservoirs should not be included in the Water Reservoir Setback provision. A planned reservoir may never come into being. Or, the reservoir's construction timeline might be such that an oil and gas operator could drill and complete wells before the reservoir is even constructed.</p> <p>Duplicative. This provision allows the County to prosecute violations of state and federal law and ... it could easily lead to duplicative and inconsistent enforcement actions. The County is the proper arbiter of its rules, whereas other state and federal agencies are the appropriate entities to determine whether there has been a violation of their respective schemes and what the outcome should be. The County lacks insight into state or federal agencies' enforcement policies and cannot prosecute violations with the nuance expected of those laws' seasoned experts. Foisting this responsibility on to the County runs a palpable risk that its enforcement actions will not be in keeping with the desires of the state and federal bodies in charge of overseeing the applicable laws' enforcement.</p> <p>... the language uniquely purports to allow the County to enforce state and federal law, whereas in the many other instances where the County's regulations refer to state and federal law, the County never purports to give itself enforcement of the same.</p> <p>Vague and ambiguous. Could lead to unnecessary surface disturbance to construct a secondary access road that is unnecessary to ensure that traffic can circulate in the event of an emergency at an oil and gas facility.</p> <p>... adopt the alternative language it has provided for Section 1-1.1.F.11.b. [Access Road Standards]. This language ... reflect[s] the intent ... which is to ensure an emergency at an oil and gas facility does not impede general traffic circulation.</p>
Civitas Resources	One-mile Setback from Existing Water Reservoirs	<p>No basis in hydrologic and technological realities. When COGCC promulgated Rule 411 they found that spills and releases are "highly unlikely" to migrate 1,000 feet from well pads, even in the case of larger volume spills or releases.</p> <p>One mile is over 5 times the state's conservative analogous setback to protect water quality and public health.</p> <p>... fluids cannot be reasonably expected to travel that distance, especially if the oil and gas facility is downgradient of the reservoir or is otherwise isolated by topography from the reservoir. Moreover, the risk that a spill or release capable of leaving an oil and gas facility and migrating into a water source will occur has been drastically minimized over the past few years because of improved industry best management practices and heightened state</p>

Comment Provider	Proposed Phase 1 Rule Topic and Criteria	Rule Wording/Stakeholder Comments
	<p>One-mile Setback from Planned Reservoirs</p> <p>Relationship to State Rules</p> <p>Alternative Access Roads</p>	<p>requirements. Relevant requirements include, among others, stringent wellbore integrity rules and heightened rules regarding secondary containment.</p> <p>Reservoir permitting and construction is a decades-long process that requires significant capital backing and approvals from numerous agencies. Applying broad setbacks from water bodies that may never be built, and whose construction may lie decades in the future after oil and gas operations are concluded if they are, is over-restrictive and does not fairly balance stakeholders' land use entitlements [i.e. mineral rights].</p> <p>The County does not have authority to enforce state or federal law. Had it the authority, the County attempting to enforce state or federal law may lead to duplicative and inconsistent enforcement actions. Also it's an outlier to other parts of the Code where the County requires applicant to comply with state and federal law.</p> <p>It's unreasonable and unnecessary to treat the oil and gas industry differently from other uses.</p> <p>Unnecessary and unreasonable surface disturbance and damage on private property. A mandatory second access road should not be regularly required. If an Operator evaluation determines that a residential building owner's access may be affected by an emergency at an oil and gas facility, then the Operator should have the ability to address this evaluation during the permitting process with County Staff and in consultation with Emergency Responders.</p>
GMT Exploration	<p>Relationship to State rules</p> <p>One-mile Existing Water Reservoir Setbacks</p> <p>Alternate emergency access</p> <p>Definition of Water</p>	<p>Recommend changing this language. This would place a large burden on the County to begin enforcing Federal and State rules. Do not believe the County has the resources, expertise or desire to.</p> <p>Read COGCC Rule 411. Adequately protects waters in Arapahoe County.</p> <p>Recommend striking the language and using the existing permitting process to work collaboratively with an operator to solve situation that may arise. [i.e. Conditions of Approval]. If the County adopts this language, it would need to be expanded to clarify several issues. The Operator may not have adequate rights to secure an alternative access. Topography and existing land use may make and another access impossible.</p>

Comment Provider	Proposed Phase 1 Rule Topic and Criteria	Rule Wording/Stakeholder Comments
	Handwashing Supplies	<p>A definition ... can be as simple as, “Electric Generation for Online Computing”. This covers cryptocurrency mining, cloud services and other remote computing operations.</p> <p>Oil and gas drilling companies have been providing for the onsite needs of their employees for many decades. Codifying this degree of micromanagement is ridiculous.</p> <p>[Internal Note: Not in the comment letter but Renegade expressed a strong objection to water wells being included in the definition of reservoir infrastructure and pointed out that there are hundreds of private water wells on State Land Board property.]</p>
American Petroleum Institute	<p>Neighborhood Meeting and Application Notice - Requirement to notify property owners and occupants within one mile about neighborhood meetings and filing of applications</p> <p>The County’s Authority</p> <p>Alternative Location Analysis (ALA) required for Facilities on County Owned Property (Staff note: This is an existing rule,</p>	<p>The letter contains several general comments and comments on Arapahoe County’s existing rules adopted in 2021 that are currently not proposed for revisions.</p> <p>Objected to wording that applicants are required to notify tenants of property owners. Requested alternative forms of notification outside of U.S. mail. “It may be difficult to ascertain if someone other than the homeowner occupies a property”.</p> <p>[Staff note; Other operators have notified tenants by addressing letter to “Current Resident” at the specific addresses.]</p> <p>Reminds the County that its authority is limited to surface impacts and must be both necessary and reasonable.</p> <p>Recommend the County rely on COGCC requirements for ALA to prevent unnecessary duplication or work to ensure the County’s ALA requirements align with COGCC’s requirements or work with the COGCC and operators to identify sites that are both technically feasible and minimize adverse impacts.</p>

Comment Provider	Proposed Phase 1 Rule Topic and Criteria	Rule Wording/Stakeholder Comments
	<p>not newly proposed).</p> <p>Setbacks from the nearest boundary of a platted lot on properties smaller than 15 acres (Staff note: This is an existing rule, not newly proposed).</p> <p>Water Reservoir Setbacks</p> <p>Reportable Chemicals</p> <p>Incident Reporting</p>	<p>May limit the county's and operators' ability to identify feasible locations. Suggest the county rely on and participate in COGCC's process.</p> <p>We note it is inherently difficult to determine what reservoirs may be planned. ... we suggest that this provision be limited to existing reservoirs. ... seek justification for the setback distance being set at one mile.</p> <p>Seek further clarification on this provision, specifically the intent of this requirement.</p> <p>API recommends further clarification around what defines an emergency. We recommend the county define an emergency as an incident requiring immediate medical attention.</p>
Bill Donovan, Petroleum Engineer	General comments	<p>... these proposed regulations are not about safety, clean water, or clean air but an attempt to prevent access and beneficial use of property owners to their property. ... the oil and gas industry contributes as much or more to the betterment of Arapahoe County than the gaming, cannabis, and alcohol industries, which have a less stringent and [less] hostile regulatory environment.</p> <p>The proposed regulations should embrace this new paradigm instead of proposing more stringent setback requirements. Please consider setting aside 40 acres zoned for oil and gas development in the center of every five square miles. There are 805 square miles in Arapahoe County. Thirty-two, 40-acre zoned oil and gas sites would be sufficient to exploit every prospective oil and gas reservoir in Arapahoe County. That is a total of two square miles or 0.25% of Arapahoe County's surface zoned for oil and gas development. After the Marshall fire, [we] calculated that the drill pad in the center of five square miles and in the burn scar could generate as much as \$600 million in severance taxes to the local taxing districts, including the County. Of course, oil and gas is a risk industry, and tax revenue is not certain until the wells are depleted. As</p>

Comment Provider	Proposed Phase 1 Rule Topic and Criteria	Rule Wording/Stakeholder Comments
	<p>Access Road Standards and Alternative Access Roads</p> <p>Handwashing Supplies</p> <p>Operation of oil and gas facilities in compliance with Federal, state and local laws and regulations</p> <p>Crypto-Mining</p> <p>Additional application information</p>	<p>the Planning Commission, you would be tasked to determine these zoned areas.</p> <p>Also, surface owners willing to be in these zoned oil and gas areas could be compensated from a percentage of proceeds. This concept is not new; Union Pacific Rail Road gave “phantom overrides” to surface owners with some conditions. I believe the stipulations were the proximity to the well pad, home ownership, and that the home was the owner’s principal residence.</p> <p>The access road standards and alternative access could be better thought out and are cost-prohibitive. It is galling that this proposal reached this level without one whit of risk analysis. Remember, a massive drilling rig that weighs hundreds of tons was moved on the access road. Also, how many Colorado drilling accidents required an alternative road, and was the alternative road built to such load requirements? Let us look to data-driven solutions. If you think you have an orphaned well problem now, try restoring land with a road built to these requirements.</p> <p>All the permanent support staff [on drilling and completion sites] are provided trailers with potable water, bathrooms, and toilets. The drilling crews and the temporary service providers use the porta-potties and have access to hand washing. The roughneck wives would raise hell if their loved ones came home with greasy and dirty hands. This is a regulation in search of a problem. A visit to a drilling rig for your staff might be in order.</p> <p>Leave for lawyers.</p> <p>Yes.</p> <p>Yes.</p>
Agencies		
ECMC (formerly COGCC)		At the time this table is being finalized, we are still waiting for a response. They intend to issue an identical letter for all local governments that are revising their rules.

Comment Provider	Proposed Phase 1 Rule Topic and Criteria	Rule Wording/Stakeholder Comments
Colorado Geologic Survey	Application for a lesser setback	... concerned that this could be construed to mean that approval is mandatory, which I don't think is the intent. I think reviewed would be better here than approved.
Division of Water Resources	Additional application information	The County may also want to consider whether to also request the source of water ... as part of the application process.
CDPHE Air Quality Control Division	All of the proposed rules Crypto-Mining (AQCD Rich Coffin)	We generally do not provide comments on proposed local government regulations, although we do provide assistance during development, as time permits. Crypto-Currency Mining (CCM) produces a list of air contaminants; some are different than flaring and venting emissions. CCM equipment is subject to the same permitting requirements for any O&G facility per AQCC Regs 3 and 7. Upstream oil and gas operators are also subject to GHG reporting and intensity targets pursuant to AQCC Reg 22. “APQD has not evaluated whether the emissions produced [by CCM] are less than, equal to or more than combusting. Both flares and engines produce criteria pollutants (including VOCs and NOX – ozone precursors) and hazardous air pollutants (HAPs) and these emissions should be taken into account”.
CDOT	No reply	
U.S. Army Corps of Engineers	No reply	
Arapahoe County Public Health	Existing Reservoir Setbacks Reservoir Infrastructure Crypto-Mining	Topography limitations, cultural resources constraints and State Land Board constraints (regarding pad locations - should be placed in previously disturbed areas) strongly limit the pad locations on State Land Board [property]. Whoever owns the dams could agree to lesser setbacks. Re a water well setback: OWTS [on-site wastewater treatment systems have a setback of 100 ft between a well and a septic system. 400 – 1,000 ft might be better. There is Title V air permitting (considered to be a Major Source, emitting > 25 tons/year of NOx or VOCs) for data centers [i.e. CCM] using 16 cylinder engines. If the data center has to meet Title V requirements it might not be profitable.

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Aurora Water	Existing Reservoirs, Planned Reservoirs and Infrastructure	<p>1-mile setback from existing and planned reservoirs.</p> <p>500-ft setback from Water Source [explain] or Critical City Infrastructure.</p> <p>Critical Infrastructure includes “all existing or planned critical public utility infrastructure, including all source water pipelines, potable waterlines (16: or greater), storm sewer pipelines (or box culverts) greater than 36”, water tanks, pump stations, lift stations and bridges.</p> <p>A setback of less than 1 mile would be considered for a well that is clearly downgradient from a water reservoir, based on site-specific data.</p> <p>Another important consideration for planned reservoirs is the state of the planning (is it a concept, has permitting been completed, has it been designated, etc.).</p> <p>Established criteria to be protective in all situations and include a variance process to consider smaller setbacks where appropriate.</p> <p>Multiple conditions should be evaluated for any O&G well siting – Hydraulic gradient (surface and subsurface) between the proposed O&G well and the water reservoir is one of the most important considerations.</p>
Rangeview Metro District (has 2 planned Reservoirs on State Land Board property)	<p>One-mile setback from existing Reservoirs or Planned Reservoirs</p> <p>Infrastructure setbacks</p>	<p>Supports: One-mile setback from existing or planned water reservoirs, unless the applicant can clearly demonstrate the facility is downgradient from the reservoir, in which case a 2,000 ft setback may apply.</p> <p>Supports: With approval from the reservoir owner or operator, the setback may be reduced to the 500-ft setback applicable to other perennial surface water bodies</p> <p>In addition to the reservoir setbacks, supports a 500-ft setback from existing and planned Water Infrastructure, defined as water wells, water storage facilities, pump stations, lift stations, treatment facilities, maintenance facilities, water fill stations, diversion structures and data communication infrastructure.</p> <p>Supports a variance process.</p>
Internal Stakeholders		

Comment Provider	Proposed Phase 1 Rule Topic and Criteria	Rule Wording/Stakeholder Comments
Engineering Services Division	Access Roads Standards	Fire department standard may change- should we also add the following “and to meet the emergency response agency such as Fire Department’s minimum requirement for access roads” or similar language?
Office of Emergency Management	Emergency Response Plan (EAP)	<p>No comments on Relationship to State of Colorado Rules, Neighborhood Meetings, Applications that Include a Lesser Setback, Reservoir Setbacks, Handwashing Facilities and Access Road Standard.</p> <p>Regarding Post-Incident Meeting: This appears to be a duplicate requirement</p> <p>Regarding Crypto-Mining: Are these powered by grid or are there large banks of Lion or LiPo type batteries that would provide power if the grid were disconnected? If so, it should be posted so fire [department] is aware.</p>
Transportation	No Reply	
Open Spaces		<p>For Open Spaces the increased setback from reservoirs sounds good.</p> <p>Question – I see it says “Planned Reservoir” – how planned does it have to be? I know PureCycle [Rangeview Metro District] has some planned-on Lowry property but not sure if how far along they are?</p> <p>The lesser setback BoCC approval is also a good addition.</p>
Citizen Stakeholders		
John Granger Aurora Resident	California Public Health Rulemaking	<p>2. What are the air pollutants released from these activities that cause negative health outcomes? How do we know exposure to these is likely from oil and gas extraction wells and associated facilities, as opposed to other sources?</p> <p>The wells, valves, tanks and other equipment used to produce, store, process and transport petroleum products at both unconventional and conventional OGD sites are associated with emissions of toxic air contaminants, hazardous air pollutants and other health-damaging non-methane VOCs (Helmig, 2020; Moore et al., 2014). Diesel engines used to power on-site equipment and trucks at unconventional and conventional OGD sites directly emit health damaging hazardous air pollutants, fine particulate matter (PM2.5), nitrogen oxides and volatile organic compounds (VOCs) (CalEPA OEHH, 2001). Many VOCs and nitrogen oxides are precursors to ground level ozone (O3) formation, another known health harming pollutant. [Emphasis in original] Hazardous air pollutants that are known to be emitted from OGD sites include benzene, toluene, ethylbenzene, xylenes, hexane and formaldehyde--many of which are known, probable or possible carcinogens and/or teratogens and which have other adverse effects for non-cancer health outcomes (CalEPA OEHH, 2008, 2009; Moore et al., 2014)....</p> <p>A recently published study using statewide air quality monitoring data from California investigated whether drilling new wells or increasing production volume at active wells resulted in emissions of PM2.5, nitrogen dioxide (NO2),</p>

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		<p>VOCs, or O3 (Gonzalez et al., 2021). To assess the effect of oil and gas activities on concentrations of air pollutants, the authors used daily variation in wind direction as an instrumental variable and used fixed effects regression to control temporal factors and time-invariant geographic factors. The authors documented higher concentrations of PM2.5, NO2, VOCs, and O3 at air quality monitoring sites within 4 km of preproduction OGD well sites (i.e., wells that were between spudding and completion) and 2 km of production OGD well sites, after adjusting for geographic, meteorological, seasonal, and time trending factors. [Emphasis Supplied.]</p> <p>[Responses from the California Oil and Gas Public Health Rulemaking Scientific Advisory Panel to the written questions sent by the California Geologic Energy Management Division (CalGEM) on August 31, 2021. pp. 10-11]</p>
John Granger Aurora Resident	Reservoir Setbacks [Staff note: Please see Mr. Granger's complete statements in the attached letters.]	<p>Commissioners, Staff, and County Attorney:</p> <p>This letter is written on behalf not only of me, as a concerned citizen and former land use/environmental attorney, but also on behalf of the 30,000 concerned citizens of Ward VI who speak through the non-profit Save-The-Aurora-Reservoir (STAR).</p> <p>This letter will deal with the language of the proposed Reservoir Setback only. The second letter will deal with critical missing regulatory changes that need to be dealt with in Phase I rather than Phase II of the regulatory amendment process.</p> <p>Breach of the Duty to Regulate:</p> <p>SB-19-181, signed in 2019, completely dispelled that notion, and put the emphasis back fully on “protection” not balancing development and protection. As stated in the Legislative Summary of the authorizing legislation for the COGCC, SB-19-181:</p> <p style="padding-left: 40px;">Section 6 states that the public interest is to “regulate” oil and gas development to “protect” those values. [Emphasis supplied]</p> <p>The County of Arapahoe has an express duty to be a steward of the Public Trust and must “carry out their duties for the benefit of the people of Arapahoe County.” [Arapahoe County Code of Ethics, Art. III.1] Therefore, it is inappropriate to compromise the protection of health, safety, welfare, or environmental protection....</p> <p>I make this observation because of the two proposed “carve outs” in subsections i. and ii. of the Proposed Setback. These “carve outs” are convoluted and completely emasculate the one (1) mile setback proposed.¹ They are vague and ambiguous in wording. And subsection ii. is likely illegal in application. They appear to be an obvious effort to cater to CAP applicants</p>

¹ It is noteworthy that the City of Aurora's one (1) mile reservoir setback [Aurora City Code Chap. 135, 4.c.], upon which these provisions are based, contains no such “carve-outs” and remains a clean one (1) mile setback.

Comment Provider	Proposed Phase 1 Rule Topic and Criteria	Rule Wording/Stakeholder Comments
		<p>who believe they can work out a “compromise” in moving certain well pads in exchange for an agreement not to move others.</p> <p>Subsection ii. of the proposed Setback is also inconsistent with statutory duty and must be wholly abandoned for a second reason. It attempts to delegate rather than regulate.</p> <p>This means that either a reservoir owner or an operator, neither of which needs to be a public entity charged with the public trust duties of the County, can on their own initiative, without regard to public health and safety considerations, approve collapse of the setback from one (1) mile to 500 ft. -- an over 90% difference. This is an attempt at delegation rather than regulation and is manifestly improper because it violates the statutes cited above.</p> <p>Vague and Ambiguous Language:</p> <p>The “carve-out” Section i. of the Proposed Setback is so vaguely and ambiguously worded as to be unenforceable. It purports to allow the collapse of the one (1) mile reservoir setback to 2,000 ft. if the Oil and Gas Facility is “downgradient” from the reservoir. It reads:</p> <p style="padding-left: 40px;">i. At least one (1) mile from existing or proposed reservoirs, unless the applicant can demonstrate that the Oil and Gas Facility is downgradient from the reservoir, in which case a 2,000 ft. setback may apply.</p> <p>Does it mean it that approval remains discretionary with the County or is it a substitute for the word “shall”? The carve-out, if it is too be applied at all, needs to be clear and unambiguously protective.</p> <p>Furthermore, berms and gradients alone are insufficient barriers upon which to rely for health and safety protection.</p> <p>The Solutions:</p> <p>For these reasons, the County is urged first to simply consider total elimination of the “carve-out” wording with a return to a simple-straight forward one (1) mile reservoir setback identical to the City of Aurora. That is clearly the most protective and best approach which places public health and safety as the appropriate goal.</p> <p>Absent that approach, if the County insists upon a carve- out based upon topography, we strenuously urge the County to:</p> <ol style="list-style-type: none"> 1. Recognize that, because of both the unreliability of berms and the need to consider air borne pollutants, the distance of the carve-out Setback for section i. must be increased to a distance that recognizes potential sources of reservoir contamination beyond simply well pad spills. We have not suggested what figure that distance should be

Comment Provider	Proposed Phase 1 Rule Topic and Criteria	Rule Wording/Stakeholder Comments
		<p>because we disfavor this approach and believe a clean one (1) mile setback is the proper approach. We note, however, that maintaining just a 2,000 ft. setback is inconsistent with the announced goal of developing the “best oil and gas regulations in Colorado.”</p> <p>2. Use a version of the County’s relief from setbacks approach already found in subsection 2.b.iii. and follow the Use by Special Review process under which the Operator must establish that the lesser setback “will provide substantially equivalent protection...and...will not adversely impact public health, safety, or welfare or the environment.”</p> <p>Summary Conclusion: In summary, the Proposed language, due to the two “carve outs” being included, is fatally flawed. STAR on behalf of the citizens of Ward VI and I therefore implore you to;</p> <ul style="list-style-type: none"> • First, do away with the improper and likely illegal delegation rather than regulation found in sub-paragraph ii. • Show the courage of your convictions and drop the carve-out in section i. altogether, keeping only the one (1) mile setback language. <p>EXHIBIT 2 PROPOSED SUBSTITUTE RESERVOIR SETBACK LANGUAGE</p> <p>ALTERNATIVE ONE: d. Water Reservoir Setbacks: All Oil and Gas Facilities shall be located at least one (1) mile away from all existing or planned (adjudicated) reservoirs.</p> <p>ALTERNATIVE TWO: [Note: Items in red indicate new or revised language outside of the existing language in subsection 2.b.iii.] d. Water Reservoir Setbacks: All Oil and Gas Facilities shall be located: i. At least one (1) mile away from all existing or planned (adjudicated) reservoirs. ii. The 1 mile setback may be reduced to a lesser setback only under the circumstances described below: [Note: the language from this point to the end is drawn directly from the existing regulations for “occupied dwellings and ‘platted lots” setbacks.] (a) If an Oil and Gas Facility application that includes a lesser setback is submitted, it must be approved by the Board of County Commissioners through the Use by Special Review process provided in Section 5-3.4 of the Land Development Code. For approval of any lesser setback under this subparagraph, the Operator must establish that the lesser setback as provided will provide substantially equivalent protection to a one (1) mile setback and that the granting of the lesser setback will not adversely impact public health, safety, or welfare or the environment.</p>

Comment Provider	Proposed Phase 1 Rule Topic and Criteria	Rule Wording/Stakeholder Comments
		<p>(b) In reviewing the proposed lesser setback, the Board of County Commissioners shall consider the extent to which the operator provides an alternative Oil and Gas Facility design, best management practices, control technologies, or proposes conditions of approval that will be effective to avoid, minimize, or mitigate adverse impacts on the affected properties, considering:</p> <ul style="list-style-type: none"> (1) geology, technology, and natural or added features (such as gradients and berms), hazards, or topography; (2) the location and use of occupied structures and areas zoned residential and the proximity to thereto (3) potential leaks from well pad equipment, including but not limited to associated flowlines, tank batteries, spill containment areas, or similar equipment; (4) potential contamination from airborne pollutant chemicals emitted from the Facility; (5) the anticipated size, duration, and intensity of all phases of the proposed oil and gas operations at the proposed oil and gas location. <p>iii. However, in no case may the one (1) mile setback from Reservoirs be reduced below ____2 feet.</p>
John Granger Aurora Resident	Setbacks [Staff Note: Mr. Granger has proposed alternative language for the existing setback rules and the Wildland Urban Interface. These will be discussed for future amendments. Please see his complete statements in	<p>Re: Proposed Arapahoe County Oil and Gas Facilities Regulation Amendments and Additions</p> <p>Commissioners, Staff, and County Attorney:</p> <p>This letter now deals with both an existing setback that requires modification and a critical new missing regulation to protect against fire risk. Because the non-profit Save-The-Aurora-Reservoir (STAR), on behalf of the 30,000 citizens of Ward VI, and I fully agree on the content of this second letter, I am sending it on its behalf as well as my own. Both of these changes are important enough to require implementation now in Phase 1 (rather than later in Phase 2) of the regulatory amendment process.</p> <p>In conclusion, we urge the County to do the following:</p> <ol style="list-style-type: none"> 1. Eliminate the references to “platted lots” in their setback regulations and instead reference “areas zoned residential”; 2. Establish a setback distance from both “occupied structures” and “areas zoned residential” of one (1) mile (consistent with drinking

² A reasonable figure should be inserted here by the County but given the goal of developing the “best oil and gas regulations in Colorado” it should remain well above a 2,000 ft. distance.

Comment Provider	Proposed Phase 1 Rule Topic and Criteria	Rule Wording/Stakeholder Comments
	the attached letters.]	<p>water reservoir protection and current national pollution dispersal studies);</p> <ol style="list-style-type: none"> 3. Adopt language allowing reduction of this one (1) mile setback to some reasonable distance (greater than a minimum of 2,500 ft. used in Boulder) only through the Use by Special Review process upon a showing the “lesser setback will not adversely impact public health, safety or welfare or the environment”; 4. Eliminate provisions that allow further setback distance reductions based upon owner consent agreements as delegations inconsistent with the County’s duty to regulate to “protect the public health, safety, and welfare, and the environment”; and 5. Add a specific protection provision dealing with those Wildland Urban Interface areas designated by OEM to have a “significant risk” of fire spread. <p>Exhibits A and B to this letter contain the necessary language to meet these important goals, and we urge the County to adopt them now.</p> <p>Diane, Jason and Bryan:</p> <p>Enclosed please find my proposed amendments to your latest draft of the Oil and Gas Regulations following the Open House.</p> <p>These are my own suggested amendments (not STARs) since they vary somewhat from the earlier stated position on behalf of STAR;</p> <p>They use your existing draft regulations and show my suggested changes and edits;</p> <p>They apply the same test to reducing water reservoir setbacks as used for occupied dwellings, that is a "substantial equivalency" test rather than a "downgradient test" or "agreement of owners/operators" test.</p> <p>They apply setbacks to areas zoned residential rather than platted lots.</p> <p>They use appropriate setback distances which meet the Commissioner's objective of "creating the best regulations in the state of Colorado" and recognize the impact of the latest national studies on protection of public health and safety, but without going overboard and risking industry litigation.</p>

Comment Provider	Proposed Phase 1 Rule Topic and Criteria	Rule Wording/Stakeholder Comments
		<p>Thanks for your consideration of these amendments and edits.</p> <p>Setbacks</p> <p>a. All Oil and Gas Facilities shall be located at least:</p> <ul style="list-style-type: none"> i. 3,000 feet from any occupied structure as measured from the pad boundary. ii. 3,000 feet from the nearest boundary any area zoned residential as measured from the pad boundary. iii. 500 feet from any adjacent property's boundary line as measured from the pad boundary. iv. 250 feet from public rights-of-way as measured from the pad boundary. v. 3,000 feet from a Designated Outside Activity Area as measured from the pad boundary. vi. 5,000 feet from the nearest property line of an operating or closed landfill as measured from the pad boundary. vii. Outside of a 100-year floodplain and at least 1,000 feet from the edge of any perennial surface water body, the ordinary high water mark of any perennial or intermittent stream or the edge of any riparian area, whichever is the greatest distance, as measured from the pad boundary, unless CPW has waived or modified the setback from the stream, surface water, or the riparian area following in accordance with COGCC Rules 309 and 1202. viii. Water Reservoir Setbacks: All Oil and Gas Facilities shall be located: <ul style="list-style-type: none"> (1) At least 5,000 feet from existing or planned and adjudicated water reservoirs, over 100 acre feet in size or used for drinking water storage. ix. All access roads shall be at least 500 feet from a residential or non-residential property line, excluding light or heavy industrially zoned properties. <p>b. The 3,000 and 5,000 feet setbacks from occupied structures, Designated Outside Activity Areas, areas zoned residential, or water reservoirs referenced in subparagraphs 5-3.6.F.2.a.i, ii, v and viii above may be reduced to a lesser setback:</p> <p>c. Reverse Setbacks: No new occupied structure shall be constructed less than:</p> <ul style="list-style-type: none"> i. 500 feet from and existing Oil and Gas well of any status (permitted but not drilled yet, drilling, completing, producing, active gas storage, injecting, shut-in, temporarily abandoned, dry and abandoned, or plugged and abandoned prior to 2014). ii. 300 feet from a plugged and abandoned oil and gas well or remaining equipment that was plugged and abandoned from 2014 onward.

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Marsha Kamin Aurora resident	Reservoir Setbacks	Should apply to all occupied structures, schools and future housing sites. CA air quality study supports larger setbacks.
	Notifications	Notifications should be for everyone within 1 mile of the extent of the horizontal wellbore.
	Fire Risk [Not included in the proposed amendment. Will be a topic of discussion for future amendments.]	Extreme fire risks due to typically windy conditions.
Kristen Miller Aurora Resident		<ul style="list-style-type: none"> • Especially considering the density of our housing within 2,000 feet of the proposed oil and gas development, the draft regulations have definitive loopholes for less than 2,000 foot setbacks, and this needs to be amended (in 2a): <ul style="list-style-type: none"> ○ If the owner(s) of the occupied structure(s) or all owners of the affected platted lots agree in writing to a lesser setback and the fire district agrees to provide service to the Oil and Gas Facility; however, even with owner consent, in no case may the setback be reduced below 500 feet ○ 2C: No new occupied structure shall be constructed less than 250 feet from an existing Oil and Gas well of any status (permitted but not drilled yet, drilling, completing, producing, active gas storage, injecting, shut-in, temporarily abandoned, dry and abandoned, or plugged and abandoned prior to 2014). ○ 2C: Reverse Setbacks: No new occupied structure shall be constructed less than 150 feet from a plugged and abandoned oil and gas well or remaining equipment that was plugged and abandoned from 2014 onward. ○ 2d: Water Reservoir Setbacks has too many loopholes “All Oil and Gas Facilities shall be located: At least one mile from existing or planned water reservoirs, unless the applicant can demonstrate that the Oil and Gas Facility is downgradient from the reservoir, in which case a 2,000 foot setback may apply. With approval from the reservoir owner or operator, the setback may be reduced to the 500-foot setback applicable to other perennial surface water bodies.” • Visual mitigation requirements only allow for required visual mitigation for those “Well pads within 1,320 feet of a property line of a property containing an occupied structure, a platted lot, or a parcel of 40 acres or smaller”—because our current stance is 2,000 feet, this regulation doesn’t hold the operator

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		<p>responsible for hiding the well pads. And the operator has a year to install visual mitigation—far too long!</p> <ul style="list-style-type: none"> • Traffic mitigation (16a): “shall make best efforts to schedule its traffic to limit heavy truck traffic on County roads during peak commuting hours and during school bus hours”—why is the County not prohibiting this, rather than asking for best efforts? For many neighbors commuting along this route to toward DIA/Buckley, this will definitely affect our commute pattern with additional traffic and damage to our roadways from heavy trucks. • Groundwater Baseline Sampling and Monitoring (9) is limited to within a ½ mile radius and depends upon a request from the owner of such water source or owner of land upon which such water source is located. And the “requirement to test a well upon request does not apply if the water well has already been tested by any Operator and the Operator is able to furnish such results to County”—these regulations do not protect our water. • Noise Mitigation Requirements: Section 10 defines the maximum permissible noise level and then proceeds to allow loopholes around it. This needs to be tightened significantly. <ul style="list-style-type: none"> ○ “Noise emitted from the facility pad shall not exceed 60 dBA or 65dBC, measured at the nearest property line of the property with the nearest occupied structure. These noise levels, as measured, constitute the Maximum Permissible Limit of noise that may be allowed to emanate off site from the Oil and Gas Facility.” Per Centers for Disease Control and Prevention, “Loud Noise Can Cause Hearing Loss,” November 8, 2022, (https://www.cdc.gov/nceh/hearing_loss/what_noises_cause_hearing_loss.html) 60 decibels is comparable to the sounds of normal conversation, air conditioner. Increasing to 70 decibels contributes to annoyance by the noise, and these regulations allow this level for up to an hour per day between 7 a.m. to 7 p.m.: ○ (10b): During the hours between 7:00 AM and 7:00 PM, the maximum permissible noise levels may be increased 10 dB(A) for a period not to exceed 15 minutes in any 1-hour period. The increase is permissible ... for a 1-hour period during any 12 hours. Why would the County allow for this level? • Furthermore, 10c allows for applications for waivers (“to exceed the Maximum Permissible Limit in accordance with and subject to the standards in Section 5-6-3.6.E.5 above where the Oil and Gas Facility is proposed to be located in an area with existing ambient background noise levels that are at or above the Maximum Permissible Limit or if proposed for an area that is sufficiently remote from any property with an occupied structure or any High Priority Habitat, provided that the lack of High Priority Habitat is supported by recommendation of CPW”) without defining what sufficiently remote is.

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		When I reviewed the draft regulations, I saw nothing in them to protect or measure air quality as a result of the proposed oil and gas operations. That appears to be missing entirely.
Robert Graham Aurora Resident		<p>I would hope and expect that you have provided a detailed copy of the Denver Post Article that covers this Oil and Gas Leak and the impact the leak has to families - the key is the time to restitution:</p> <p>"Mark and Julie Nygren didn't set out to be activists, but they are suggesting changes to the oversight of Colorado's oil and gas pipelines based on their experience of losing their home and seeing part of their farm contaminated by a leaking gas line.</p> <p>More than four years after discovery of the leak, the Nygrens are still renting a house in Johnstown, just north of their Weld County property, and remain embroiled in a lawsuit against DCP Midstream Operating Co., which owned the pipeline. As the Colorado Public Utilities Commission considers new pipeline-safety rules, the Nygrens want to share their hard-won insights with regulators.</p>
Seema Rajapurohit Aurora Resident		<p>We bought this beautiful, big dream house just opposite the Aurora Reservoir with the intention to enjoy the nice Lake and the peaceful residential neighborhood.</p> <p>Unfortunately, that is not the case as Civitas is planning to frack near this reservoir and we totally oppose this. The entire neighborhood and area will be smelling of horrible chemicals, the beauty of the reservoir will be lost, and people will get sick with all kinds of cancer, dental problems, skin diseases etc. Moreover, The water will no longer be clean, fresh, and potable. Also, the oil and gas wells will catch fire and burn the entire area (grasslands) and also people's homes. We don't want our dream home to be burned down. We don't want any fracking and oil and gas wells anywhere near us nor the Aurora Reservoir. This proposed fracking project is life-threatening, which is why we are fully against this project. Please make it a rule that any fracking and oil and gas should be 50 miles away from the Aurora Reservoir area. Please stop this project now.</p>
Tisha Foard Aurora Resident		<p>I am writing to you as a concerned citizen and mother. I stand in opposition to any and all fracking within Arapahoe County, especially any located near communities with children, like the proposed Lowry CAP by Civitas. Please consider sticking to a MINIMUM of a mile setback from all rivers, reservoirs, and homes, or better yet, stop the project all together. Here's why:</p> <p>Air Quality/Pollution</p> <p>The EPA has reclassified Colorado's Front range non-attainment as a "severe" violator of federal air quality standards. In 2021 there were 65 ozone action</p>

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		<p>days from May 31 to Aug 31, the highest number recorded since recording started in 2011. The fracking proposed at the Lowry Ranch CAP will produce volatile organic compound (VOC) emissions which form ozone. This can cause lung damage and premature death. The common air pollutants from drilling and fracking chemicals are linked to higher rates of cancers, childhood leukemia, sperm abnormalities, reduced fetal growth, cardiovascular disease, and respiratory dysfunction. (Colorado Fiscal Institute 2023). In light of this, it is little wonder that the Center for Biological Diversity has sued the EPA for its approval of Colorado's State Implementation Plan for air pollution emissions.</p> <p>Additionally (and more importantly for my particular family), the National Library of Medicine has published a study that finds "a significant association between CO concentrations and epileptic seizure risk . . . with an increased seizure risk of 4%" (Zhuying et al. 2022). My nine year old son has epilepsy. Exposing him to such concentrations of air pollution as will be generated by this project is not just unfair. It's unconscionable. My son is certainly not the only child living with epilepsy near this proposed site. In fact, one of the drill pads planned will be less than a mile away from my son's elementary school, exposing ALL of the children at Altitude Elementary AND Woodlands Elementary to unsafe levels of air pollution.</p> <p>Water</p> <p>Colorado is currently a part of a superdrought located in all of the western United States. The EPA estimates that the annual water requirement for horizontal wells is as high as 140 billion gallons of water per year. With the current watering restrictions (2 times/week) for Aurora residents, this seems needlessly wasteful.</p> <p>The Lowry Cap cumulative impacts statement itself states that it intends to use 17,858,400 gallons of water PER WELL, and that the water will come from three sources: 1. "excess surface water" 2. Farmers Reservoir Irrigation Company and 3. Rangeview Metropolitan District water. What excess surface water do we possibly have? Rangeview services the Lowry Range, which is where the Aurora Reservoir is located. This reservoir is currently only at 54% of its capacity (auroragov.org 2023). Drilling so close to the reservoir that serves such a large portion of the Aurora population is untenable.</p> <p>Cancer</p> <p>A peer-reviewed Yale study published in August 2022 found that living within one mile of fracking made small children aged two to seven years 2-3 TIMES more likely to develop leukemia than children not living near wells (Yale News 2022). How can we possibly justify allowing wells to be located so near to five Cherry Creek Schools, my school of employment and my son's elementary school included? In what world is it acceptable to cause such risk to the lives of thousands of children for the monetary gain of an oil and gas conglomerate that will not return any of that profit to our community?</p>

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		<p>Impacts on Families</p> <p>On a personal level, my son has epilepsy. This causes him to be especially susceptible to loud noises and stress. A peer-reviewed study published in both the journal Science of the Total Environment and Berkeley News found that “Fracking creates noise at levels high enough to harm the health of people living nearby” (Isreal 2017). Stressful situations and loud, continuous noises have proven to cause seizures that occur more often and with greater intensity in my son. It has been heartbreaking to watch his struggles, and it continues to be heartbreaking to consider the future noise, stress, and pollution from these proposed wells and the effect they will have on my son. My husband and I provide for our family with modest Department of Defense and public school teacher incomes. We cannot afford to move with the housing market and interest rates the way that they are right now. This situation has caused us severe anxiety and emotional distress that we, of course, must hide from our son so as to not adversely impact his health and neuro activity. We have no other way to protect our only child than to appeal to government entities like you.</p> <p>What is happening to our community is simply put, evil. A large, powerful corporation can come to our idyllic community, use predatory and dishonest tactics to gain mineral rights, hurt our children, use up our precious natural resources, and destroy the environment and wildlife in the area simply because they want more than their already record profits from the last few years. This is just ONE story of how an individual family will be impacted. Can you imagine the impacts on the thousands of other residents near these wells?</p> <p>Please, we are begging you to help us. Stick to the MINIMUM of a mile setback from all homes, reservoirs, rivers and streams. Better, stand in opposition to any and all fracking in our area. It is the right thing to do. Please put the children and elderly of Arapahoe County before monetary gain. Thank you so much for your time.</p>
Hundreds of Aurora Residents [Same message]		<p>Dear Arapahoe County Commissioners and Staff,</p> <p>Thank you for working to strengthen the County’s oil and gas regulations to be in greater alignment with its required duty to protect the public health, safety, welfare, and the environment.</p> <p>I believe the proposed changes to the regulations are not sufficiently protective. I urge the County to make the following changes to strengthen them:</p> <ol style="list-style-type: none"> 1. Add a provision that will not allow oil and gas permits to be permitted in areas that are in violation of federal air quality standards; such areas are already burdened by the effects of poor air quality.

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		<p>2. Establish a setback distance of at least one mile from both occupied structures and residential areas/zones. This is the same setback distance being proposed for reservoirs; protections for the safety of residents should be at least on par with protections for drinking water reservoir safety.</p> <p>3. Eliminate provisions allowing setback distances to be reduced to 500 feet by owner consent agreements. Such provisions simply allow oil and gas applicants to negotiate with developers to reduce setback distances- irrespective of the safety and health impacts to the general public.</p> <p>4. Develop regulations to prevent fires in wildlands adjacent to residential and urban areas. This can be accomplished by authorizing the Office of Emergency Management to identify portions of such wildlands which pose risks of fire spread, and by disallowing oil and gas facilities from being located within them.</p> <p>5. Disallow oil and gas companies from being able to request exemption from conducting neighborhood meetings with residents living within one mile of their proposed plan. Companies must engage with and solicit input from residents most impacted by oil and gas development plans.</p> <p>6. Explicitly prohibit the practice of flaring gas to produce cryptocurrency. Cryptomining is energy intensive, and it produces large amounts of electronic waste, which present environmental risks to air and water. The pollution from this industry will remain local, but jobs and benefits to communities are slim as all work is virtual.</p> <p>Please consider these revisions that will result in greater protections for our health, safety, and natural world.</p>
Save the Aurora Reservoir Group (STAR)		<p>The 3 most important missing setbacks/regulations in order of importance are:</p> <ol style="list-style-type: none"> 1. Effective setbacks from areas zoned residential/urban <ol style="list-style-type: none"> a. The County has been operating under the mistaken belief based upon a single State CDPHE study that air dispersal of pollutants is limited to a 2,000 ft. radius. This is based on monitoring of a single well [not a 12 well pad]. The County therefore relies now on a 2,000 ft. setback. b. Nationally accepted studies now show that even without wind drift the area of dispersal is actually 1.25 -2.5 miles c. We therefore suggest at least a minimum 1 to 1.5 mile setback from residential/urban areas (including schools and other public gathering spots), particularly when you are dealing with a multiple well pad site. 2. Fire setbacks and regulations in the Wildlife Urban Interface <ol style="list-style-type: none"> a. The Marshall fire proved how dangerous fires starting in grasslands

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		<p>adjacent to residential neighborhoods can be.</p> <p>b. The key to fire safety is time to suppress, coupled with resources to suppress</p> <p>1. A 2,000 ft. setback leaves totally insufficient time to suppress – less than 8 minutes in a grassland fire pushed by a 25 mph wind. Even 1 mile is problematic with 18 minutes to suppress but far better when coupled with regulations such as fire hose hook-ups and suppressive foam required on well pads in the WUI.</p> <p>c. We therefore suggest a WUI fire setback of at least 1 mile, coupled with fire hose hook –ups and suppressive foam on any well pads adjacent to the WUI. . [See for example: Broomfield Oil and Gas Code Regs. 17-54-060(T)(8) and (11)]</p> <p>3. Setbacks from drinking water reservoirs</p> <p>a. County has 500 ft. City of Aurora has 1 mile.</p> <p>b. Even with berms or up-slopes to protect against spills entering these reservoirs, the same zone of protection of 1 to 1.5 miles for air pollutant dispersal is needed as is the case for residential /urban neighborhoods.</p> <p>B. Other level 2 tier regulations of particular concern (in no particular order of priority) include:</p> <p>1. Flowline, gathering line, and transfer line regulation:</p> <p>a. A detailed plan of the location of gathering lines, on- and off-location flowlines and crude oil transfer lines should be required.</p> <p>b. Flowline should be defined as all categories of “flowlines” included in the definition of the COGCC rules (including wellhead lines, production lines, dump lines, manifold piping and process piping).</p> <p>c. All flowlines, gathering lines, and transfer lines located within ¼ mile of “ecologically sensitive areas” [such as drinking water resources and sensitive grasslands and wildlife habitats] or residentially/urban zoned neighborhoods should comply with the 2006 Pipeline & Hazardous Material Safety Administration PHMSA regulations as amended.</p> <p>d. Because flowlines are prone to methane leakage, and according to the EPA are “one of the largest sources of emissions” in the oil and gas industry:</p> <p>1. Flowlines, gathering lines and transfer lines should be setback a minimum of 1,000 ft. from drinking water sources, riparian waterways, and residential/urban neighborhoods; and</p> <p>2. Should be monitored for airborne leakage leaks and spills at least every 3 months and, when located in “ecologically sensitive areas” or ¼ mile of residentially zoned areas , at least twice monthly.</p>

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		<p>d. Construction of flowlines should be required to comply with appropriate ASME B31.4 and B31.8 standards, as amended</p> <ol style="list-style-type: none"> 1. Applicants should be required to provide appropriate clearances between flowlines needed for appropriate inspections and hydro testing of flowlines and associated isolation valves. 2. Off-location flowlines, Crude Oil Transfer Lines (COTL) and Produced Water Transfer Systems (PWTS): <ol style="list-style-type: none"> a. Operators are now required in Form 44 to register and provide as-built information to the COGCC of these lines for the purposes of emergency management and planning. Accordingly, this geo-database information should be required to also be provided to the County so that first responders have the necessary information to address potential emergencies. b. Setbacks of COTL and PWTS lines and systems from residential, commercial, or industrial buildings, places of public assembly, any surface water body, or sensitive environmental feature should be determined on a case-by-case basis based upon the consideration of the size and type of line and the features of the proposed siting. [See for example: Broomfield Oil and Gas Code Regs. 17-54-060(Q)(1) thru (3)] 3. Surface and groundwater pollution: <ol style="list-style-type: none"> a. In order to minimize adverse impacts to surface and sub-surface water bodies, use of chemicals dangerous to human health should be prohibited, including: <ol style="list-style-type: none"> i. All chemicals listed in COGCC Table 437-1; ii. Polysorbate 80; and iii. Perfluoroalkyl and polyfluoroalkyl substances or “PFAS chemicals” defined as a class of fluorinated organic chemicals containing at least one fully fluorinated carbon atom. 4. Water source quality, sampling and testing: <ol style="list-style-type: none"> a. Applicants should be required to sample one up-grade and two downgrade available surface and ground water sources located within a radius of one-half mile of a well pad or facility. If no such water sources are available, samples should be collected within one-mile. c. Water source testing should be conducted by a qualified independent professional consultant approved by the County at the operator’s expense, and include: <ol style="list-style-type: none"> i. Major ions, including: bromide, fluoride, sulfate and nitrate; ii. Metals, including: arsenic, barium, boron, chromium, copper, iron, lead, manganese, selenium, strontium; and

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		<p>iii. Dissolved gases and VOCs, including methane, ethane, propane, BTEX as Benzene, Toluene, Ethylbenzene, Xylenes, and Total Petroleum Hydrocarbons (TPH)</p> <p>1. Should a water source test show a concentration increase of methane or other dissolved gas concentration increases of greater than three (3) mg/l (micrograms per liter) between sampling periods or any presence of a listed VOC, BTEX or TPH, immediate notification of both the COGCC and County so that the source can be identified and remedial action taken. [See for example: Broomfield Oil and Gas Code Regs. 17-54-060(T)(1) a. thru n.]</p> <p>5. Air quality, sampling and testing:</p> <p>a. Air emissions from proposed facilities should be required to comply with all federal air quality rules and standards, including EPA's New Source Performance Standards and National Emission Standards for Hazardous Pollutants;</p> <p>i. Air emissions from proposed facilities should be required to comply with all COGCC and CDPHE air quality standards and rules, and any and all County emission regulations.</p> <p>ii. Emissions should be required to be below the currently most protective health-based guidelines, including those used by EPA and CDPHE.</p> <p>iii. Carbon-reduction requirements of Arapahoe County should not be allowed to be offset by purchased credits.</p> <p>iv. An Air Quality Control Plan should be required that requires that the Operator use both most effective management techniques and best management practices to minimize impacts to air quality. This should include the use of electric versus gas powered generators.</p> <p>v. A County approved air monitoring plan to be conducted by a qualified third-party consultant, approved by the County should be required. Baseline monitoring should be required within a 500 ft. radius of all well pads and 2,000 ft. of any well pad located within 2 miles of residentially/urban zoned property, a school, public gathering place or a drinking water source.</p> <p>vi. The air quality monitoring plan should require constant monitoring both prior to construction, and during all phases of development including drilling and production.</p> <p>vii. Monitoring should include: VOCs, Hazardous Air Pollutants (HAPs), BTEX, Hydrogen Sulfide, Oxides of Nitrogen (NOx), Particulate Matter, Fine Particulate Matter, Carbon Monoxide, methane, and carbon dioxide.</p>

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		<p>viii. Any increases in the monitored pollutants should be required to be reported to both the COGCC and County so that the source can be identified and appropriate remedial actions taken, including notification of affected citizens. [See for example: Broomfield Oil and Gas Code Regs. 17-54-060(O) and (P).]</p> <p>6. Wastewater injection wells should be prohibited in Arapahoe County.</p> <p>7. Use of water for oil and gas drilling operations which could otherwise be used for drinking water, should be prohibited during Arapahoe County's Stage D2 and above categorized drought years.</p> <p>8. An effective neighborhood alert process should be developed in the event there is a "significant" contaminant spill; a "significant" spike in airborne toxins; a "significant" drinking water contamination; or a well pad fire. "Significant" should be defined as an incident which exceeds applicable Federal, CDPHE, COGCC, or County standards.</p> <p>9. Special regulations should be developed to monitor any fracking-related hazard which may affect the integrity of areas of particular environmental concern (such as the EPA Superfund site), to include baseline studies to determine special risks. This should include, but not be limited to, seismic risks from fracking and truck traffic. To monitor these risks, regulations should include, but not be limited to, continuous seismic monitoring at these areas and annual studies to check for significant new environmental risks to health and safety.</p> <p>10. Special regulations should be developed to ensure proper containment of wastewater pools, particularly against the risk of overflow caused by the capture of rainwater or excess sediment.</p>
<p>Comments Provided at Open House on June 21, 2023</p>	<p>Reservoir Setbacks Poster</p> <p>[Staff note: These existing setback rules are not proposed for revisions at this time.]</p> <p>Meeting Notifications rather than the</p>	<ul style="list-style-type: none"> • Reservoir owners and operators are not tasked with duty to protect public health, safety, welfare and the environment. Cannot delegate decision to them. 1 mile is minimum start. 500 feet is never acceptable. 3,000-feet is absolute minimum. • What is the scientific basis for a 2,000-foot setback from homes when research shows negative health impacts at much greater than 2,000 feet?

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	<p>Reservoir Setbacks Poster continued</p> <p>General comment</p> <p>[Staff note: the existing regulations address noise and wildlife and operators must have a fire district Will Serve Letter]</p>	<ul style="list-style-type: none"> • Neighborhood meetings should notify homeowners within 5 miles of change that is not 1 mile. • Fracking under homes results in the release of additional radon. Worsening of air quality; increase ozone. <p>[Staff note: The Colorado Geologic Survey stated that fracking at over a mile beneath the surface does not cause any foundation damage/cracks and further stated that foundation cracks/settling are due to irrigation at the surface near foundations, due to clayey soils that alternately expand and contract when wet and when dry].</p> <ul style="list-style-type: none"> • How do the regulations address noise issues? Wildlife? Fire? • What is downgradient? One mile is the bare minimum. No oil and gas should be nearby reservoir. • If a regulation has to be reasonable and justified, what better reason than to protect our population? • Continue to monitor well water/aquifer for rural homeowners • Unless downgradient conditions can be satisfied” as explained to me by Mr. Weimer, this only is determined by surface gradient. For vertical drilling, different gradients may exist at different depths. Gradients must be considered at surface conditions. • The comment “with approval from the reservoir owner or operator, the setback may be reduced to a 500-foot setback” lacks protection from the public, and lacks standards for quasi-judicial review. • What is the basis for reducing setbacks to 2,000 feet? Is there scientific basis that is sufficient? • Downgradient condition” appears to be based solely on the well site location. But oil and gas and wastewater will be transported away from well, leading to possible spills.

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		<ul style="list-style-type: none"> Downgradient allowance must be proven through use of independent scientifically based studies and investigation to be at least as safe as 1 mile or more. How will house settling issues be resolved? <p>[Staff note: The Colorado Geologic Survey stated that fracking at over a mile beneath the surface does not cause any foundation damage/cracks and further stated that foundation cracks/settling are due to irrigation at the surface near foundations. Soils expand and contract due to clay content.]</p> <ul style="list-style-type: none"> Air quality concerns, health concerns, noise issues, wildlife impact, earthquake-stability of reservoir dam, fire potential, water contamination. You can't justify 2,000-ft setback using latest scientific studies. Neutral downgradient study must be done. Follow science. The topography and hydrology of the drill site matter more than setback. Increase setback if drill pad is in same watershed as reservoir.
Comments Provided at Open House on June 21, 2023	Lesser Setbacks Poster	<ul style="list-style-type: none"> Civitas Arena welcome banner was a slap in the community's face. Need a neutral space. This will be heavily abused by the oil/gas industry. No thanks! 2,000 feet is close enough. Let us fundraise to help make up the difference of money made – when the CAP is cancelled. County rule must be no less than 3,000 feet under any circumstances. Must show major independent study to justify less than 1 mile. The provision that lesser setbacks may be approved by BOCC appears to lack standards for the BOCC to make that determination. "Substantially equivalent protection" is too vague – protection from spills? Protection from emissions? Protection from noise? All of the above? There needs to be a presumption that the setback must be followed unless the operator can show a lesser setback is necessary to preserve public health, safety and environment. People want the rule to be the rule. Stop the back and forth. 2,000 feet +. No allowed lesser setbacks. Setbacks are not far enough as proposed. No allowed lesser setbacks. The setback must be 2,000+ feet, not 500 feet. What about Fires? Wildlife? Stricter setbacks for schools. Cancel the CAP. Community to fundraise the \$ to support County programs. Please share with the residents of Arapahoe County the \$ amount of campaign donations from O&G to each Commissioner.

Comment Provider	Proposed Phase 1 Rule Topic and Criteria	Rule Wording/Stakeholder Comments
		<ul style="list-style-type: none"> The rule should be at least one mile, not 2,000 feet. Any justification less than 1 mile must be done through an independent certified 3rd party to be equivalent to 1 mile or more.
Comments Provided at the Open House on June 21, 2023	Cryptocurrency Poster	<ul style="list-style-type: none"> Need to address high frequency noise similar to data farms How are locals protected from the burning/exhaust of the gas used to power the mining? I agree with the letter sent by John Granger re cryptocurrency How will the noise be addressed? Do mineral right owners get a share of the crypto income that the operator gets? What regulations govern infrastructure required for crypto mining sites? These are huge consumers of energy and water. How often are capped pads inspected? How will you regulate and monitor the emissions from the burned gas? Must be highly controlled and scrubbed to not contribute to our already poor air quality? The crypto mining use of gas is just another huge source of local fossil fuel pollution. Why not mandate the oil and gas companies build their own pipeline to move it elsewhere away from populated areas? Will the profits pay for the healthcare of local residents?
Comments Provided at the Open House on June 21, 2023	Additional Information Poster	<ul style="list-style-type: none"> How do the rules address wildlife and other features affected by well pad locations, flowlines, access roads, traffic, noise, etc.? Are impact statements required? <p>[Staff note: the existing rules do address wildlife, traffic and noise. The proposed rules create stricter access road standards].</p>

Comment Provider	Proposed Phase 1 Rule Topic and Criteria	Rule Wording/Stakeholder Comments
Comments Provided at the Open House on June 21, 2023	Post-Incident Meeting Poster	<ul style="list-style-type: none"> • Will an alert be blasted on a loud speaker? How will this be informing all affected? • Citizens should be made aware of all incidents with a timely manner (max 3 days). Transparency is vital to public trust. • Incident reports should be made available to the public on the Arapahoe County website within 3 calendar days of incident. • Where a formal incident report is required, further drilling or operations activity should be stopped until the post-incident meeting with County staff is held and the staff determine it is safe to proceed. • There must be readily accessible public records of all incidents. • Must be immediate notification/alarms to the public when health, safety and welfare is threatened. • Since you have post-incident reporting you already know there will be incidents. One incident is too many. Are you willing to gamble with our lives? Put all incidents on the County website.
Comments Provided at the Open House on June 21, 2023	Facilities Needing to be in Compliance with State and Federal Laws Poster	<ul style="list-style-type: none"> • State and Federal laws are not strict enough. Arapahoe County can and should hold to a higher standard. • Useless amendment. Just for show. Federal and state laws and regulations already apply. • Arapahoe must follow Commissioner Warren-Gully's statement and set our own level of standards and best practices to be a leader (the best) in protecting public health, safety welfare and the environment. Set the example for other local government units in the state and country. Don't rely on others that we know are lacking. • The current standards are not strict enough for this urban dense populated area. • What exactly do the current standards protect? Rules and regulations should protect the health and safety of the environment, communities and wildlife. Fines are not severe enough to deter bad practices. • Greed.

Comment Provider	Proposed Phase 1 Rule Topic and Criteria	Rule Wording/Stakeholder Comments
Comments Provided at the Open House on June 21, 2023	Access Roads Standards Poster	<ul style="list-style-type: none"> • Access roads are critical to prevent runoff and damage from spills. These are not sufficient for all of Arapahoe County oil and gas. • Access road standards should include protection from spills, such as culverts, drainage, etc. to divert spills way from land nearby. • How close will these roads be to the Superfund site? How will the vibrating affect it? • How will the trucks affect the local residents? Noise, traffic, gas, school kids. • How will these protect the potential spills? • Distance from homes and schools – noise, dust are pollution issues. Setbacks from waterways (spills!) and Superfund site. Vibrations from heavy trucks affect site integrity that’s already leaking. • Must have sufficient equipment on-site for immediate reaction to emergencies. Must be approved by emergency management services organization (OEM) and fire department.
Comments Provided at the Open House on June 21, 2023	Handwashing Facilities Poster	<ul style="list-style-type: none"> • Will gas masks/hazmat suits be provided for local children? Will you cover my costs for inhalers so my children don’t die? • This should’ve been hosted at a neutral space. Arriving to see “Civitas Arena” is not a warm welcome to the community. • Can you also provide public health financial assurances for those of us breathing the toxic fumes? • Concerned regarding increased radon infiltrating our homes, increased ozone and negative health impacts. Concern about fracturing and creating issues with my home’s stability. Poison leaking into water supplies. • Yes but there are much more important topics that must be addressed in Phase 1 – air quality, monitoring, financial assurances, superfund site protection, and more! • Visual representation showing red lines to show revisions/updates. • Please load each poster as a PDF with comment option for those who couldn’t attend tonight.

Comment Provider	Proposed Phase 1 Rule Topic and Criteria	Rule Wording/Stakeholder Comments
Comments Provided at the Open House on June 21, 2023	Neighborhood Meetings Poster	<ul style="list-style-type: none"> • Does the County perform air quality modeling? If so, could folks down-wind be included in notifications? • Must notify folks and businesses within at least 10 miles if not the entire County. This will affect everyone's environment as well as public health, safety and welfare. Best science of recent studies shows 5-10 miles and fire issues are more than 1 mile away. • Arapahoe County needs to be the lead on human life – notices to those only 1 mile away is a joke. This needs to be a minimum of 10 miles. • Notification should be sent to all owners and HOA's within entire pooling area and not just drill site. • Notify the entire County of this. Follow the science. • "Homeowner Association" should be expanded to include all metro districts and other neighborhood organizations. • Notice area needs to be much farther – 10 miles. • "One mile of proposed facility" is ambiguous – should include one mile of any portion of the proposed facility, including underground drilling or transportation of oil/gas or wastewater.
Comments Submitted through the Oil & Gas Webpage		<p>1. Section 5-3.6.E.2 Neighborhood meeting: metropolitan districts (e.g., Tollgate Crossing metropolitan district, Beacon Point metropolitan district) and authorities (e.g., Tallyn's Reach Authority, Saddle Rock Authority) today are replacing homeowner associations in many neighborhoods. The metropolitan districts and authorities should be notified as well as homeowners association.</p> <p>2) Section 5-3.6.E.2 notification only of those homeowners, residents and associations "within one mile of the pad boundary" is too limited. Drilling-related activity may affect properties far from the pad boundary for example if the wells are drilled under their property or if roads will necessarily carry fracking fluid, waste fluids, etc. Notice should be given to all property owners, associations, etc. within 1 mile of ANY proposed drilling-related activity.</p> <p>3) Section 5-3.6.F.2.d reservoir setbacks - the term "downgradient" does not appear to be defined. It seems this applies only to the surface topography (i.e., so long as any leaking oil or contaminants AT THE SURFACE flows away from the reservoir it is OK to reduce the setback to 2000 ft). However, this is not appropriate for example if there are subsurface features (rock or clay structures for example) that would direct SEEPING oil in a different direction, or if there are gradients/rock formations that would direct oil spills from defective casing, for example, below the surface toward the reservoir. This exception either needs to be eliminated or much broader. In addition, the downgradient condition should be required for ALL operations associated with the oil and gas operations near the well pad such as oil pipelines, roads that would carry contaminated fluids or oil, etc. as those pipelines and roads may direct oil spills, etc., back toward the reservoir.</p> <p>4) Section 5-3.6.F.2.d the 500 foot alternative setback "with consent of owner" is illogical and does not promote public safety - if the reservoir owner is corrupted in some way such as a ginormous payment from the oil company, it is illogical for the county to allow public safety and precious water supplies to be</p>

Comment Provider	Proposed Phase 1 Rule Topic and Criteria	Rule Wording/Stakeholder Comments
		<p>compromised just because of the consent of the owner. 5) Section 5-3.6.F.3.m incident reporting - the post-incident meeting is a good idea but it should be open to the public and operations related to the incident should cease until the meeting occurs. 6) Section 5-3.6.F.11 access road standards - there should be a requirement that access roads provide appropriate gutters or other facilities to direct any spills or contaminants away from surrounding terrain. 7) Section 5-4 definitions - downgradient needs to be defined.</p> <p>These proposed amendments are grossly insufficient in addressing the documented concerns of Arapahoe County Citizens. Specifically: 1. The setback exceptions undermine the intent of the 1 mile set-back. It creates subjective loop-holes that puts the power in the hands of the oil and gas operators and nullifies the voice of citizens who are directly impacted. 2. The cryptocurrency use is woefully undefined in the amendment. And I believe that is intentional because a use like this only increases concerns regarding pollution. Furthermore, the argument made by oil and gas is that fracking projects are necessary for "our" energy needs as local residents. However this accessory use is definitively NOT for the production of energy used by consumers and the likely beneficiary would be wealthy investors well beyond our county. In summary, this set of amendments feels like lip service to citizens and a wink and a nod to the oil and gas operators. There is nothing substantive to remove the pollution risk to the community let alone anything that improves the benefit to the community.</p> <p>Hello Arapahoe County Officials, I know you have a lot on your minds, and I'm sure you're trying to find balance and keep a lot of people happy. However, your residents should be the #1 priority. Do you agree? Please take my comments below to heart. I know your jobs are not easy, but the decisions you are making will affect the future of Arapahoe County for generations to come. My primary concern is about setbacks. What is the point of a 1-mile setback from reservoirs and proposed reservoirs if you already bake loopholes and exceptions into the proposed amendment? Should we propose laws that say it's ok to speed, as long as you're going uphill? Truth be told, 1-mile setbacks from these fracking operations are nowhere NEAR far enough. But, I understand there's no chance you'd go up from 1 mile. Additionally, reverse setbacks are already a loophole in themselves. When you look at a proposed project like the Lowry Ranch CAP, a residential development is planned immediately to the east of the Blackstone community that will be right next to a proposed drilling site, much lower than your county setbacks. Why is this ok? The order of operations make it ok? Since the drilling site will likely come first, the safety of the community doesn't matter? This makes zero sense... Reverse setbacks should be eliminated altogether. By continuing to entertain O&G projects like the Lowry Ranch CAP, you're opening the door to permanent damage in our county, not to mention making this a far less desirable place to live. Are long-term impacts not considered at all? Doesn't Arapahoe County have more to offer than a bunch of fracking sites? Can't we capitalize on retail, housing, tourism and recreation? Can't we build long-term value for OUR people, not for multi-billion dollar</p>

Comment Provider	Proposed Phase 1 Rule Topic and Criteria	Rule Wording/Stakeholder Comments
		<p>publicly traded companies that are majority owned by foreign investors? Wow, Civitas has a corporate sponsorship for something at the Arapahoe County Fairgrounds... they must really care about the people of our county. Do your research. The Canada Pension Plan owns the most shares of Civitas Resources, followed by about ten other private equity groups. Do you really think they care about the people of Arapahoe County? Are we really that naïve? This is ALL about money, otherwise it would not be happening in our county. And what in the world is this about cryptocurrency mining? There's no way that's beneficial for our "health, safety, wildlife and the environment." PLEASE, do the right thing. Come up with some loophole-free regulations. Stand up for your residents. And please, DON'T cave to billionaires that have promised the world to you. We don't need them. Arapahoe County is great. The Aurora Reservoir is great. The city of Aurora is great. Open space is great. Why must we ruin it? Thank you for your time and consideration of my comments</p> <p>Do not make exceptions to the one mile setback!</p> <p>One-mile setbacks should be increased to something higher in order to reduce the impact on the local populace. Additionally, this would apply to the burning of natural gas in order to power cryptocurrency mining, which should be further than one-mile.</p> <p>Please stick to a minimum of a one mile setback from all homes and bodies of water (current or planned). Better yet, so not allow this project to happen at all. We do not have the water table to support this, they will frack under an unstable (and already leaking) superfund site, and fracking has proven to cause children who live within a mile of fracking to develop cancer at 2-3 times the rate of others. Additionally, our air quality is already horribly rated by the EPA, and fracking releases VOCs and CO at a level harmful to all, but especially children and the elderly. Don't let this company destroy our community!</p>
League of Women Voters	<p>Reservoir Setbacks</p> <p>Cryptocurrency Mining</p> <p>Other Items</p>	<p>The attached letter from the League of Women Voters requests that the one-mile setback not have any waiver allowances. They also recommend a 2,000-foot setback from 100-year floodplains, wells, streams and from the edge of riparian areas.</p> <p>They do not support including cryptocurrency mining as an allowed use.</p> <p>They would like expanded residential setbacks to be included as an additional code amendment at a later date and would like wildland urban interface addressed in a future code update.</p>

Notes:

1. Many of the comments received in the last several weeks relate to the rules adopted in November 2021, rather than the currently proposed rules. They are included in this table. Our focus with the currently proposed rules is to further protect health, safety, welfare and the environment. Specifically water reservoirs public drinking water systems.
2. No internal stakeholder comments were received from Transportation.
3. Staff provided posters for the rules topics at the open house, hence the open house comments are sorted by the poster/rule topics. Comments received at the poster tables don't always relate to the poster topics.



1800 GLENARM PLACE

SUITE 1100

DENVER, CO 80202

Phone 303.861.0362

WWW.COGA.ORG

June 29, 2023

VIA EMAIL – NO ORIGINAL TO FOLLOW

ATTN:

Diane Kocis, Arapahoe County Energy Specialist (DKocis@arapahoegov.com)

RE: Colorado Oil & Gas Association Comment to Draft Arapahoe County Oil and Gas Regulations

Dear Diane Kocis:

The Colorado Oil & Gas Association ("COGA") appreciates the opportunity to provide comments on Arapahoe County's ("County") proposed amendments ("Draft Regulations") to the County's oil and gas regulations. COGA looks forward to providing additional, constructive input as the County moves forward in drafting and ultimately adopting new regulations in accordance with state law. As explained below, COGA is concerned that, among other things, the Draft Regulations are unnecessarily restrictive and create impractical requirements not grounded in scientific need. COGA encourages the County closely to examine our attached redline of the Draft Regulations for additional detail and input beyond what is contained herein, as this letter does not exhaust COGA's concerns.

I. The Proposed 1-Mile Setbacks Requirements Are Overly Restrictive

The Draft Regulations' one mile setback from existing or planned water reservoirs found in Section 1-1.F.2.d. ("Water Reservoir Setback") is not reasonable or necessary to protect public health, safety, welfare, or the environment and wildlife resources. The Water Reservoir Setback requirements go well beyond the extremely rigorous rules already adopted by the state's technical experts in oil and gas, the Colorado Oil and Gas Commission ("COGCC" or "Commission")¹ and may carry unintended consequences. While COGA recognizes that local governments have the

¹ COGA recognizes that COGCC will change its name to the Energy and Carbon Management Commission ("ECMC") effective July 1, 2023. Any future references to ECMC are inclusive of references to COGCC/the Commission herein.

authority to regulate the surface impacts of oil and gas development more stringently than the state, this authority is not unfettered. Local government surface impact regulations must still be reasonable and necessary.²

a. The Water Reservoir Setback Is Not Supported by Science

COGA is concerned by the Water Reservoir Setback because it is unreasonable, unnecessary, and not supported by science. During the COGCC “Mission Change” Rulemaking, the COGCC, in close consultation with the Water Quality Control Division (“WQCD”), amended prior Rule 317B into current Rule 411 and set a conservative setback from surface water supply areas. Under Rule 411.a.(2)i. operators may not conduct any new surface disturbance within an area between 0 and 1,000 feet hydraulically upgradient from the water source. The Statement of Basis, Purpose, and Specific Statutory Authority (“SBP”) to Rule 411 explains the Commission’s finding that even “larger volume spills or releases are highly unlikely” to migrate 1,000 feet. Based on this finding, arrived at after extensive consideration of scientific literature and party testimony on top of consultation with the WQCD, “[t]he Commission accordingly adopted the 1,000 foot internal buffer to provide a reasonably protective margin of error to protect public health from potential spills and releases.” There is no COGCC setback for oil and gas facilities downgradient of surface waters.

COGA also takes issue with the language providing that the Water Reservoir Setback “may be” reduced with approval of the reservoir owner or operator. First, this gives the reservoir owner and operator too much authority. The setback should be based on hydrological science, not the whim of a reservoir owner or operator. Second, should a variation of this language persist in future regulation drafts, there is no reason why approval should not automatically reduce the setback. This draft language states that the setback permissively “may” be reduced, but doesn’t explain under what circumstances it would not be reduced.

A setback of at minimum one mile for an upgradient oil and gas facility is an illegal, unsupported policy choice, and a downgradient oil and gas facility setback is likewise egregious and improper. Instead, the County should adopt language to clarify an upgradient setback of 1,000’—as is consistent with COGCC and WQCD findings—and allow downgradient oil and gas operations to proceed within 1,000’ where hydrologic data supports a lesser setback.

² Local governments have the authority to regulate “the surface impacts of oil and gas operations in a *reasonable manner* to address matters specified in this subsection (1)(h) and to protect and minimize adverse impacts to public health, safety, and welfare and the environment.” C.R.S. § 29-20-104(1)(h) (emphasis added). Local government regulation is limited to that which is “necessary and reasonable” to protect or minimize the previously stated impacts. *Id.*

b. Planned Water Reservoirs Should Not Be Included in the Water Reservoir Setback Provision

COGA is concerned that the Water Reservoir Setback purports to apply to “planned” water reservoirs in addition to existing reservoirs. A planned reservoir may never come into being. Or, the reservoir’s construction timeline might be such that an oil and gas operator could drill and complete wells before the reservoir is even constructed. Including planned reservoirs in the Water Reservoir Setback is an unnecessary provision that is not reasonable to protect future reservoir owners’ and operators’ interests. Once a planned reservoir becomes an existing reservoir, it will qualify for consideration under the Water Reservoir Setback provision. This is reasonable and still serves to protect existing reservoirs as the County intended.

As an alternative to the County’s Draft Regulations, COGA recommends that the County adopt the language it has provided for Section 1-1.1.F.2.d. See Exhibit A. This would create a 1,000’ setback from existing water reservoirs and provides for a lesser setback to be considered where geologic features support that a lesser setback is appropriate. This language is consistent with COGCC’s changes to current Rule 411 and represents the combined wisdom of the COGCC and WQCD. It would provide heightened protections for water reservoirs that are in keeping with scientific evidence without imposing undue burdens on Colorado’s energy sector.

II. The Provision Finding Violations under Federal and State Law Is Duplicative

COGA finds the provision in Section 1-1.1.B. to be unreasonable and unnecessary. This provision allows the County to prosecute violations of state and federal law and is problematic because it could easily lead to duplicative and inconsistent enforcement actions. The County is the proper arbiter of its rules, whereas other state and federal agencies are the appropriate entities to determine whether there has been a violation of their respective schemes and what the outcome should be. The County lacks insight into state or federal agencies’ enforcement policies and cannot prosecute violations with the nuance expected of those laws’ seasoned experts. Foisting this responsibility on to the County runs a palpable risk that its enforcement actions will not be in keeping with the desires of the state and federal bodies in charge of overseeing the applicable laws’ enforcement. COGA also observes that the language uniquely purports to allow the County to enforce state and federal law, whereas in the many other instances where the County’s regulations refer to state and federal law, the County never purports to give itself enforcement of the same.

III. The Access Road Standards Need Common-Sense Exceptions

The criteria for when alternative access roads are required Draft Section 1-1.1.F.11.b. are vague. The criteria’s ambiguity could lead to unnecessary surface disturbance to construct a secondary access road that is unnecessary to ensure that

traffic can circulate in the event of an emergency at an oil and gas facility. COGA encourages the County to adopt the alternative language it has provided for Section 1-1.1.F.11.b. See Exhibit A. This language has been proposed to reflect the intent of this provision, which is to ensure an emergency at an oil and gas facility does not impede general traffic circulation.

Conclusion

COGA is proud the Colorado oil and gas industry leads the technological and safety advancements that make our state a national and global leader in developing the resources we use every day. The state's rules and regulations have set a high bar for our employees and companies to protect public health, safety, welfare, the environment, and wildlife, while also preserving jobs and opportunities for tens of thousands of Coloradans and their families. Going beyond the state's rules without a demonstration of their need and reasonableness flouts the law. COGA encourages the County to revise its Draft Regulations in a manner consistent with state law, that is, to revise the provisions discussed herein and in the attached such that they are reasonable, necessary, and supported by available science.

Thank you for your consideration of our comments and the included redline of the proposed regulations.

Sincerely,



William Groffy
Director of Regulatory and Legislative Affairs
Colorado Oil and Gas Association

cc (via email): Julia Rhine, Outside Counsel to COGA, jrhine@bhfs.com
Mark Mathews, Outside Counsel to COGA, mmathews@bhfs.com

25809269.1



June 29, 2023

VIA EMAIL – NO ORIGINAL TO FOLLOW

Diane Kocis, Arapahoe County Energy Specialist (DKocis@arapahoe.gov)

RE: Civitas Resources, Inc.'s Comments to Draft Arapahoe County Oil and Gas Regulations

Dear Ms. Kocis,

Civitas Resources, Inc. ("Civitas") thanks you for your continued work and welcomes this opportunity to comment on Arapahoe County's ("County") proposed amendments to Chapter 5 of the County's Land Use Development Code ("Code Amendments"). Civitas's constituent companies have years of experience operating in the County and have forged strong community and philanthropic bonds here. As the state's first carbon neutral operator, Civitas looks forward to continuing to operate responsibly and efficiently in the County for years to come and offers its comments to the Code Amendments below with that in mind.

Civitas supports the County's desire to protect water resources. However, the proposed one-mile setback from existing or planned water reservoirs found in Draft Section 1-1.F.2.d. (which should not be revised to include additional types of water sources beyond reservoirs) has no basis in hydrologic and technological realities. Specifically, as the Colorado Oil and Gas Conservation Commission¹ ("COGCC") found when promulgating the setback from surface water supply areas in COGCC Rule 411, spills and releases are "highly unlikely" to migrate 1,000 feet from well locations, even in the case of "larger volumes" of spills or releases.

The proposed one-mile reservoir setback, which is over five times the state's already conservative analogous setback, is unnecessary to protect water quality and public health because, in the unlikely event of a spill escaping pad containment, fluids cannot be reasonably expected to travel that distance, especially if the oil and gas facility is downgradient of the reservoir or is otherwise isolated by topography from the reservoir. Moreover, the risk that a spill or release capable of leaving an oil and gas facility and migrating into a water source will occur has been drastically minimized over the past few years because of improved industry best management practices and heightened state requirements. Relevant requirements include, among others, stringent wellbore integrity rules and heightened rules regarding secondary containment.

Civitas also notes that extending setbacks to reservoirs that are "planned" is problematic. Reservoir permitting and construction is a decades-long process that requires significant capital backing and approvals from numerous agencies. Applying broad setbacks from water

¹ The COGCC will be renamed as the Energy and Carbon Management Commission on July 1, 2023.

bodies that may never be built, and whose construction may lie decades in the future after oil and gas operations are concluded if they are, is over-restrictive and does not fairly balance stakeholders' land use entitlements.

Civitas is also concerned by Draft Section 1-1.1.B., which purports to grant the County authority to prosecute violations of state and federal law. The County does not have authority to enforce state or federal law. Had it the authority, the County attempting to enforce state or federal law may lead to duplicative and inconsistent enforcement actions. Moreover, Civitas notes that Draft Section 1-1.1.B would be an outlier to the rest of the County's Code in that the Code frequently requires operators/applicants of all sorts of uses to comply with state and federal law, yet not in one single instance does the Code provide that the County will enforce state and federal law. It is unreasonable and unnecessary to treat the oil and gas industry differently from other uses.

Civitas recommends modification of Draft Section 1-1.1.F.11.b. to ensure that unnecessary and unreasonable surface disturbance and damage associated with secondary access does not occur on private property. A mandatory second access road should not be regularly required. If an Operator evaluation determines that a residential building owner's access may be affected by an emergency at an oil and gas facility, then the Operator should have the ability to address this evaluation during the permitting process with County Staff and in consultation with Emergency Responders. The Code Amendments language should be clarified to make this distinction.

In addition to our specific comments herein, Civitas also endorses the comments of the Colorado Oil & Gas Association and their associated redline of the Code Amendments.

Civitas looks forward to continuing its participation in the County's regulatory update process and anticipates providing additional comments, either in writing or at public hearing as the process continues. Thank you for your consideration of our comments. Please let us know if you have any questions regarding our positions.

Sincerely,

A handwritten signature in dark ink, appearing to read 'Dan Harrington', is written over a horizontal line.

Dan Harrington
Asset Development Lead
Civitas Resources

cc: Jost Energy Law, P.C. – Jamie Jost



*Maxwell Blair
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GMT Exploration Company LLC
4949 S. Niagara St. Suite 250
Denver, Colorado 80237
720-862-4503
mblair@gmtexploration.com*

June 29, 2023

Re: 2023 Draft Oil and Gas Rules

Dear Arapahoe County,

GMT values the opportunity to provide written comment on the proposed amendments to Arapahoe County Oil and Gas Regulations. As discussed at the industry stakeholder meeting on 6/15/23, GMT would appreciate some clarifications to the proposed text to ensure the adopted regulations are clear to applicants, staff, and the public. I have attached a redlined version of the draft regulations that were published on the County website. I believe these minor changes will help improve the clarity of the proposed changes.

Additionally, I would like to provide comments on the information that was shared at the stakeholder meeting regarding Aurora Water and Pure Cycle Corporation facilities.

Reservoir Setbacks:

We learned that Aurora Water is encouraging the County to adopt new setbacks from reservoir facilities. We believe the existing State setbacks are adequately protective of existing and future reservoirs. Aurora Water has confirmed that these reservoirs are hydraulically isolated from the surrounding lands, which limits the potential for surface contamination from all sources, including oil and gas development. The Colorado Oil and Gas Conservation Commission (COGCC) has numerous rules in place to prevent and limit the potential of surface spills from oil and gas facilities.

Water Facilities definition:

The County has indicated that Aurora Water provided comments that would expand the definition of infrastructure.

“facilities to include Water infrastructure should include water treatment/purification facilities, water mains, wells, and reservoirs.”

We believe the water providers have since clarified their comments, and do not wish for Arapahoe County to adopt a setback from water wells. In any event, Arapahoe County should not adopt this language and should not establish a setback for these types of facilities or infrastructure. There is no risk posed by oil and gas development to these types of facilities. There are currently no State setbacks from any of these facilities, and no known cases of damage

caused by development. If Arapahoe County adopts this proposed definition, it would eliminate large areas of the County from Oil and Gas development.

Setback distances:

The County has received comments suggesting three new categories of setbacks from oil and gas facilities to water infrastructure. However, no party has demonstrated a need for these setbacks. We suggest that Arapahoe County should rely on the existing State rules that are designed to avoid, minimize, and mitigate environmental impacts from oil and gas development, including water resources.

If you have any questions or require additional information, please feel free to contact me for more information. I look forward to continuing to work with the County on these regulations.

Sincerely,

GMT Exploration Company LLC

Maxwell Blair

Maxwell Blair
Regulatory Manager

Encl(1)

Arapahoe County Rule Amendments
Comments of Renegade Oil & Gas Company, LLC
June 29, 2023

General

This rulemaking is completely unnecessary (as will any Phase II rulemaking) as the concerns of the County and interested parties can be addressed through Conditions of Approval attached to an individual application as necessary.

Arapahoe County, in conjunction with the State of Colorado, have regulations that are more than protective of the public interest.

Definition of Water Infrastructure

The attempt by the water providers to expand this definition is a huge overreach and, given the condensed timeframe that this process has adopted, wholly unfair to the stakeholders.

What started out as knee-jerk reactions to oil and gas drilling near some neighborhoods and the Aurora Reservoir has devolved into a power grab. As stated above, current regulation of the industry is more than protective.

And once the Civitas drilling sites are applied for, approved and drilled, we don't believe this situation will ever occur again, as there are no more reservoirs in Arapahoe County.

Crypto-Mining

The definition read at the Industry Stakeholder meeting on June 15, 2023 should be scrapped. The minutiae of how bitcoin is earned is wholly irrelevant to this topic.

A definition of what occurs on an oil and gas location can be as simple as, "Electric Generation for Onsite Computing." This covers cryptocurrency mining, cloud services and other remote computing operations.

Handwashing Supplies

Including this in land use rules and regulations doesn't pass the smell or giggle test and reeks of nannyism. Oil and gas drilling companies have been providing for the onsite needs of their employees for many decades. Codifying this degree of micromanagement is ridiculous.

Comments from Other Industry Stakeholders

While we have not reviewed the specific comments, based upon the discussion at the Industry Stakeholder meeting, Renegade generally supports the comments of other industry stakeholders.



June 29, 2023

Arapahoe County
Board of County Commissioners
5334 S. Prince Street
Littleton, CO 80120

Submitted via: DKocis@arapahoegov.com

RE: Proposed Oil and Gas Amendments

Dear Commissioners,

The American Petroleum Institute Colorado (API Colorado) respectfully submits the following comments on the proposed oil and gas regulations put forth by Arapahoe County (the county). API Colorado appreciates the efforts by the county to consider stakeholder feedback and we look forward to working with county staff and commissioners on this matter.

The American Petroleum Institute (API) represents all segments of America's oil and natural gas industry. API was formed in 1919 as a standards-setting organization and has developed more than 800 standards to enhance operational and environmental safety, efficiency and sustainability. Its nearly 600 members produce, process, and distribute most of the nation's energy. Member companies are producers, refiners, suppliers, marketers, and pipeline operators as well as service and supply companies.

Our state continues to be home to some of the most stringent regulations in the oil and gas industry. API Colorado encourages alignment with the Colorado Oil and Gas Commission's (COGCC) rules including the use of consistent definitions, standards, and practices. Clear guidance and feasible requirements help ensure operators can continue to meet those requirements in an efficient and effective manner. Many of the recommendations currently set forth by the county are duplicative of those put forth by the COGCC. Left in its current form, operators could face unclear and duplicative standards. For these reasons, API Colorado suggests the following revisions.

A. Intent and Applicability

Senate Bill 19-181 provided local government with additional authority over oil and gas operations, and we remind the county that its authority is limited to surface impacts and must be both necessary and reasonable. We want to thank the county for its acknowledgment of this and for including the reasonable and necessary provisions in its draft regulations. API Colorado also appreciates the county's efforts to facilitate business development while protecting public health, the environment, and wildlife.



D. Administrative Approval Criteria

5. Facilities on Arapahoe County Owned Property

The county requests an alternative location analysis (ALA) for operations that take place on county property. We note COGCC permitting rules already require alternative location analyses in many cases including proximity to water sources. To meet these requirements, operators typically evaluate multiple alternative locations. We recommend the county rely on the ALA requirements put in place by the COGCC to prevent unnecessary duplication, or at a minimum, work to ensure the county's ALA requirements align with the COGCC's requirements. Additionally, COGCC's rules provide multiple opportunities for local governments to collaborate with the COGCC on things such as alternative analyses, and we strongly encourage the county to avail itself of those opportunities.

Additionally, the proposed rules note that when an ALA demonstrates non-county-owned land is technically feasible and can meet requirements, the application on county land will be denied. However, a location that is technically feasible may also have negative characteristics. For example, another location may be in proximity to residential building units or high priority habitat. While such a site may be technically feasible, its selection may be less protective of public health and the environment than a site on county property. Instead, API Colorado suggests that the county work with COGCC and operators to identify sites that are both technically feasible and minimize adverse impacts.

E. Administrative Process

2. Neighborhood Meeting and 3. Application Notice Requirements

The proposed provisions require notices to be sent to property owners and occupants within one mile of a proposed site. However, we note that the frequency of tenant turnover may make it difficult for operators to acquire the most recent tenant names and addresses. We ask that the county allow alternative forms of notification outside of U.S. mail to help mitigate these challenges. API Colorado also notes the onus falls on the operator to determine if someone other than the homeowner occupies a property, which may be difficult to ascertain.

F. Standards Required for Oil and Gas Facilities

2. Setbacks

Draft regulations set a 2,000 ft. setback from the nearest boundary of a platted lot on properties smaller than 15 acres. In these cases, this could constitute a setback from a residential building at a much greater distance than 2,000 ft., which may limit the county's and operators' ability to identify feasible locations.

2.b.iii. Variances

While we appreciate the county's efforts to allow variances for setbacks, we note the analysis needed to determine substantial equivalent protections is highly technical and one that is already conducted by the COGCC. Rather than duplicating efforts, we suggest that the county rely on, and participate in, COGCC's process.

2.d. Water Reservoir Setbacks

Currently, the proposed setback requirement extends to existing and planned reservoirs. We note it is inherently difficult to determine what reservoirs may be planned. Therefore, we suggest that this provision be limited to existing reservoirs. API



Colorado also seeks justification for the setback distance being set at one mile. This far exceeds any other setback requirements in the state of which we are aware.

3. Health and Safety Requirements

f. Reportable Chemicals

This provision requires operators to provide the Office of Emergency Management (OEM) and the fire district with a list of all reportable chemicals on site. We seek further clarification on this provision, specifically the extent of this requirement.

m. Incident Reporting

API Colorado recommends further clarification around what defines an emergency. Due to the broad and subjective nature of the current language, "all emergencies" and "all reportable incidents", we recommend the county define an emergency as an incident requiring immediate medical attention.

We ask the county to consider the regulations set forth by the state as it continues its efforts. API Colorado appreciates the opportunity to provide comments on these proposed changes, and we look forward to working with the county and its staff in developing standards for safe and reliable operations.

Sincerely,

A handwritten signature in black ink that reads 'Alejandra Major'. The signature is written in a cursive, flowing style.

Alejandra Major
Associate Director
majora@api.org

Ava Pecherzewski

From: William Donovan <Donovan@petroleum-eng.com>
Sent: Thursday, June 29, 2023 10:34 PM
To: Diane Kocis
Cc: Pritchett, Ron
Subject: RE: Will you have any written comments on our handful of O&G rules to submit before midnight tonight?

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Hello, Oil and Gas Regulators of Arapahoe County,

I have lived in Colorado and Arapahoe County for most of my adult life. Colorado is a great place to live; we want the best for Colorado, specifically Arapahoe County. Your objectives in regulating oil and gas operations are commendable, but your approach is, at best hostile and counter-productive. First, the mineral estate is just as much property as the surface estate. Still, these proposed regulations are not about safety, clean water, or clean air but an attempt to prevent access and beneficial use of property owners to their property. I might posit that the oil and gas industry contributes as much or more to the betterment of Arapahoe County than the gaming, cannabis, and alcohol industries, which have a less stringent and hostile regulatory environment.

There has been a remarkable revolution in oil and gas operations in the last few years. The proposed regulations should embrace this new paradigm instead of proposing more stringent setback requirements. Please consider setting aside 40 acres zoned for oil and gas development in the center of every five square miles. There are 805 square miles in Arapahoe County. Thirty-two, 40-acre zoned oil and gas sites would be sufficient to exploit every prospective oil and gas reservoir in Arapahoe County. That is a total of two square miles or 0.25% of Arapahoe County's surface zoned for oil and gas development. After the Marshall fire, Ron Pritchett and I calculated that the drill pad in the center of five square miles and in the burn scar could generate as much as \$600 million in severance taxes to the local taxing districts, including the County. Of course, oil and gas is a risk industry, and tax revenue is not certain until the wells are depleted. As the Planning Commission, you would be tasked to determine these zoned areas. Also, surface owners willing to be in these zoned oil and gas areas could be compensated from a percentage of proceeds. This concept is not new; Union Pacific Rail Road gave "phantom overrides" to surface owners with some conditions. I believe the stipulations were the proximity to the well pad, home ownership, and that the home was the owner's principal residence.

The access road standards and alternative access could be better thought out and are cost-prohibitive. It is galling that this proposal reached this level without one whit of risk analysis. Remember, a massive drilling rig that weighs hundreds of tons was moved on the access road. Also, how many Colorado drilling accidents required an alternative road, and was the alternative road built to such load requirements? Let us look to data-driven solutions. If you think you have an orphaned well problem now, try restoring land with a road built to these requirements.

Finally, I have lived on a drilling rig as a permanent staff. All the permanent support staff are provided trailers with potable water, bathrooms, and toilets. The drilling crews and the temporary service providers use the porta-potties and have access to hand washing. The roughneck wives would raise hell if their loved ones came home with greasy and dirty hands. This is a regulation in search of a problem. A visit to a drilling rig for your staff might be in order.

I am a licensed Professional Engineer in the State of Colorado. I take my charge, which is “3.1.1 - Primary Obligation of Licensees. Licensees shall at all times recognize that their primary obligation is to protect the safety, health, property, and welfare of the public.” seriously. Please contact me if you have any questions. Thank you for your time and consideration.

- ✓ One-mile setbacks from existing and planned reservoirs (unless downgradient conditions can clearly be demonstrated);
 - ✓ Access road standards to match current fire code standards;
 - ✓ Alternative emergency access roads for pads located in areas with only one way in and one way out;
 - ✓ Handwashing supplies for workers at oil and gas sites;
 - ✓ Allow natural gas-powered cryptocurrency mining as an accessory use to oil and gas facilities; and (property rights)
 - ✓ Additional application information, including a project narrative, photo simulations and documentation of floodplain, wetlands and riparian area boundaries. (zoning)
- Operation of oil and gas facilities in compliance with all applicable federal, state and local laws and regulations. (leave for lawyers)

William (Bill) S. Donovan
8232 S Peninsula Dr
Littleton, CO 80120
(720) 351-7470
donovan@petroleum-eng.com

COLORADO GEOLOGICAL SURVEY

1801 Moly Road
Golden, Colorado 80401



Matthew L. Morgan
State Geologist and
Director

July 3, 2023

Diane Kocis
Energy Specialist
Arapahoe County Planning Division
DKocis@arapahoegov.com

**Subject: Review of Proposed Phase 1 Land Development Code Oil and Gas Amendments
Arapahoe County, CO**

Dear Diane:

The Colorado Geological Survey has reviewed the proposed Phase 1 Land Development Code Oil and Gas Amendments that will be discussed at a stakeholders Teams meeting on Friday, July 14, 2023.

I don't see anything in the redlines that CGS would object to, but I do recommend rethinking the revision to Section F. Standards Required for Oil and Gas Facilities, 2. Setbacks, b. iii.

"If an Oil and Gas Facility application that includes a lesser setback is submitted, it must be approved by the BOCC through the USR process..."

I am concerned that this could be construed to mean that approval is mandatory, which I don't think is the intent. I think reviewed would be better here than approved.

If you have questions or require further review, please call me at (303) 384-2643, or e-mail carlson@mines.edu. See you on the Teams meeting next Friday.

Sincerely,

A handwritten signature in black ink, appearing to read "Jill Carlson".

Jill Carlson, C.E.G.
Engineering Geologist



COLORADO
Division of Water Resources
Department of Natural Resources

July 6, 2023

Diane Kocis
Arapahoe County Public Works and Development
Transmitted via email: DKocis@arapahoe.gov

RE: Phase I Oil and Gas Rules

Dear Diane Kocis:

We have reviewed the information provided by email on July 3, 2023, regarding the proposed Phase I Oil and Gas Rules. To the extent that water is used for oil and gas operations such water must be from a source that can legally be used for that purpose. Therefore the County may want to consider whether to also request the source of water for the Oil and Gas facility as part of the Application process.

Should you have any questions, please contact me at this office at 303-866-3581 x8265 or joanna.williams@state.co.us

Sincerely,

Joanna Williams, P.E.
Chief of Water Supply, Designated Basins



From: Fury - CDPHE, Kate <kate.fury@state.co.us>

Sent: Wednesday, July 5, 2023 2:36 PM

To: Diane Kocis <DKocis@arapahoegov.com>

Cc: cdphe_oghealth@state.co.us

Subject: Re: Can you think of anyone at CDPHE who would review our Phase 1 proposed rules (see below)

Hi Diane,

We generally do not provide comments on proposed local government regulations, although we do provide assistance during development, as time permits.

Sorry I don't have better news for you.

Kate

On Mon, Jul 3, 2023 at 6:34 PM Diane Kocis <DKocis@arapahoegov.com> wrote:

Hi Kate,

I've been asked by my managers to get CDPHE written comments on our proposed Phase I Oil & Gas rules in the form of a letter on CDPHE letterhead. Can you think of anyone at CDPHE (WQ or elsewhere) who would be willing to provide comments? If CDPHE has no comments, that's fine too, as long as that is on letterhead. I've also copied the CDPHE Oil & Gas concerns email address.

Below are the Phase 1 proposed rules topics and I've attached the rule redlines, in case you want to see the text.

Relationship to State of Colorado Rules:

The Operation of a Facility in violation of any applicable federal, state, or other local law or regulation that results in adverse or negative surface impact(s) on or to public facilities and services, water quality and source, noise, vibration, odor, light, dust, air emissions and air quality, land disturbance, reclamation procedures, cultural resources, emergency preparedness and coordination with first responders, security, or traffic and transportation shall constitute a violation of the Land Development Code which may be enforced by law as other violations of the Land Development Code.

Neighborhood Meeting:

The applicant shall send notification of the meeting to the Planning Division and to all property owners of record, all occupied residences if occupants are different from record owner, and all registered homeowners' associations for residential subdivisions where any portion of the platted subdivision's boundary is within one mile of the proposed facility pad boundary.

Additional Application Information:

Applications shall include an application narrative, photosimulations of the view of the well pad from nearby properties and documentation of floodplain, wetlands and riparian area boundaries.

Application that includes a lesser Setback:

If an Oil and Gas Facility application that includes a lesser setback is submitted, it must be and approved by the Board of County Commissioners through the Use by Special Review process.

Reservoir Setbacks: (Don't know if you'd use Aurora Reservoir as a source of water to fight fires).

At least one mile from existing or planned water reservoirs, unless the applicant can demonstrate that the Oil and Gas Facility is downgradient from the reservoir, in which case a 2,000 foot setback may apply. With approval from the reservoir owner or operator, the setback may be reduced to the 500-foot setback applicable to other perennial surface water bodies.

Post-Incident Meeting:

In addition to the formal incident report, a post-incident meeting shall be required with County staff. The date, time and location of the post-incident meeting shall be determined by the Public Works and Development Director.

Access Road Standard:

Prior to commencing construction of the Oil and Gas Facility, the Operator shall connect the site via an access road designed to support an imposed load of 80,000 pounds that will accommodate emergency response vehicles such as, but not limited to, law enforcement, emergency command vehicles (cars/SUVs), ambulances, hazardous materials response vehicles, water tenders, and fire apparatus during construction and operation of new tank batteries, new drilling activity and reworks or recompletions of existing wells, unless a local fire department or fire district agrees in writing to a different or lesser standard for the access road.. Access roads shall be constructed to be at minimum least twenty (20') feet wide with at least six (6") inch road base

Second part:

If an Oil and Gas Facility site incident could prevent emergency access on public or private roads, the Operator shall construct an alternative access road meeting these standards.

Post-Incident Meeting:

In addition to the formal incident report, a post-incident meeting shall be required with County staff. The date, time and location of the post-incident meeting shall be determined by the Public Works and Development Director.

Handwashing Facilities:

Operator shall provide hand washing facilities meeting Arapahoe County Public Health Department requirements at portable restrooms during drilling and completion operations.

And, crypto-mining, or data centers, will be allowed on oil and gas pads, by adding it as an approved use in our Land Use table of the Land Development Code.

Here is our definition of Crypto-Mining:

Cryptocurrency Mining The operation of specialized computer equipment for the primary purpose of adding, securing, or verifying transactions to a peer-to-peer network, also known as a blockchain, or mining one or more blockchain-based cryptocurrencies (a form of electronic currency). This activity typically involves large networks of decentralized computer servers that work together around the world to perform calculations and solve algorithms as part of the development and maintenance of a blockchain which is a type of distributed virtual ledger maintained on a peer-to-peer network. Typical physical characteristics of cryptocurrency mining include specialized computer hardware; the use of equipment to cool the hardware and operating space; and high density load electricity use.

Thanks in advance for whatever CDPHE can provide.

Sincerely,

I am working a hybrid schedule with in-office days and remote work days. Email is the best way to reach me but you can also reach me on my County cell phone at 720-425-0422.

Diane Kocis

Energy Specialist

Arapahoe County Planning Division

dkocis@arapahoegov.com

Notes from Meeting with Lynn Robbio- Wagner 6-29-23. Arapahoe County Public Health re Stakeholder Input

- Shared a quick look at Citizen and Industry comments
- Discussed letters from EPA and CDPHE about drilling under LLSS unlined cells.
- Per Lynn: Civitas could volunteer not to drill under the unlined cells. The might risk being named as a as a responsible party if anything happened.
- RE Civitas already moved pads further from reservoirs, but typography limitations and State Land Board constraints (SLB has a 3-tiered O&G requirements, see below) and SLB has cultural constraints re Indian heritage so it's not possible to move pads further from reservoirs. Whoever owns the dams could agree to a lesser setback- this might be in the current AC regulation.
- SLB's 3 tiers for O & G development: Financial benefit to O & G lease if they choose to develop on land already disturbed. i. e. Cheaper to develop on land that's been disturbed, then land that's somewhat disturbed and (most expensive) land that's not disturbed. SLB has cheaper development fees for disturbed areas. Lynn might have the SLB guidance document and will forward it. As a side note: An Indian burial site was discovered near Powhattan and County Line/Pine (just west of the entrance of Black Stone in 2019. <https://sentinelcolorado.com/Otrending/aurora-construction-workers-discover-remains-of-centuries-old-native-american-man/>
- EPA, CDPHE, WM and Denver Attorneys are discussing liability of drilling and how it may effect superfund site.
- Could there be a new language or a Condition of Approval on the Civitas permit approvals for no drilling under unlined cells? Such as no development under unlined hazardous material pits such as Lowry?
- On the Lowry Bombing range the remedial action has been for unexploded ordinances 20 mm rounds and up. O & G development should have a plan for if they unearth any ordinance and a notification to locals, CDPHE and Feds. This would be good to add a requirement to O & G regulation as well.
- RE a water well setback in the proposed rules, a OWTS has a setback of 100 ft setback well to septic system. It is currently measured from the well head on the surface – there is a large water well protection factor in the measurement since the water is drawn from the depth of the well. i.e. 400 feet, 600 feet or for instance 1000 ft.
- RE crypto-mining: Lynn asked, are they using CO-GEN plants? Are they going to use 16 cylinder engines (used at compressor sites and also at the LLSS Gas to Energy plant) run data center engines? If so, who is going to permit the use of the engine? The data center or the O & G facility? And who applies for the use by special review? If the data center has to permit and meet Title 5 requirements, it might not be profitable. The gas is used to fuel/fire the engines that makes the electricity for the data center is what this sounds like but I could be wrong since this is a new concept. Diane mentioned that Ed from Renegade said that Amazon and Google are interested in using natural gas at well pads to run their data centers.
- Lynn said most data centers have air permits for the backup generators and they are permitted on their potential to emit if ran 365 days for 24 hours. It is unknown how they will be affected by new air quality rules at this time.

15151 E. Alameda Parkway, Ste. 3600
Aurora, Colorado 80012
303.739.7370



Arapahoe County Planning Commission,

Thanks for your interest in Aurora's perspective on setback requirements between Oil and Gas activity and our critical water infrastructure. Aurora has existing setback requirements that we have applied in Operator Agreements and Aurora City Code (Chapter 135 - Oil and Gas Manual).

Aurora requires a 1-mile setback from all existing or planned reservoir sites and a 500 foot setback from a Water Source or Critical City Infrastructure. Critical Infrastructure has been defined to include "all existing or planned critical public utility infrastructure, including all source water pipelines, potable waterlines (16" diameter and greater), sanitary sewer pipelines (24" diameter and greater), storm sewer pipelines (or box culverts) greater than 36", water tanks, pump stations, lift stations, and bridges. Water Sources focuses on floodways, as defined by FEMA, and permanent City underground storage facilities. Water Sources does not currently include large City potable water supply wells, but the City is contemplating making that addition. The Aurora requirements were established to be conservatively protective, and the review process includes the ability for the applicant to apply for variances from the criteria based on providing appropriate data on site-specific conditions.

We understand that there have been some questions regarding the 1-mile setback from existing or planned reservoirs. Aurora established these criteria to be protective in all situations and therefore included a variance process to be able to consider smaller setbacks where they may be appropriate. While there may be multiple conditions that should be evaluated for any Oil and Gas well siting, one of the most important considerations from a water perspective is the hydraulic gradient (both surface and subsurface) between the proposed Oil and Gas well and the water reservoir. Another important consideration for planned reservoirs would be the state of the planning (is it a concept, has permitting been completed, has it been designed, etc.). For a proposed Oil and Gas well that is clearly downgradient from a water reservoir, Aurora Water would consider a setback of less than 1-mile based on site-specific data.

Please let me know if you have any questions.

Thanks.

Marshall Brown,
General Manager of Aurora Water



July 5, 2023

Ms. Diane Kocis
Energy Specialist
Arapahoe County Planning Division
Via email: dkocis@arapahoegov.com

Re: Oil & Gas Regulations

Dear Ms. Kocis;

Rangeview Metropolitan District would like to forward comments on the proposed setback requirements for Oil & Gas activities in unincorporated Arapahoe County:

- Rangeview supports the one-mile setback from existing or Planned water reservoirs, unless the applicant can demonstrate that the Oil & Gas Facility is downgradient from the reservoir, in which case a 2,000 foot setback may apply.
- With approval from the reservoir owner or operator, the setback may be reduced to the 500-foot setback applicable to other perennial surface water bodies.

In addition to the reservoir setback requirements, Rangeview supports a 500-foot setback requirement from existing and planned Water Infrastructure, defined as “water wells, water storage facilities, pump stations, lift stations, treatment facilities, maintenance facilities, water fill stations, diversion structures, and data communication infrastructure”. Rangeview appreciates the County’s review of setback requirements for Water Infrastructure and supports the ability for an applicant to apply for variances to these set back limits with site-specific conditions which may apply in a case-by-case basis.

If you have any questions, please do not hesitate to contact me.

Sincerely,

A handwritten signature in blue ink, appearing to read "Mark Harding", is written over a light blue horizontal line.

Mark Harding
President

5-3.6. Use By Special Review – Oil and Gas Facilities

A. Intent and Applicability

1. The intent of this Section 5-3.6 is to describe the approval process and approval criteria to locate an Oil and Gas Facility in unincorporated Arapahoe County and to regulate the surface impacts of an Oil and Gas Facility's operations to such extent as is reasonable and necessary to protect public health, safety, and welfare and the environment in accordance with the authority provided under SB19-181. Any Oil and Gas Facility and related site preparation or development, including any such Facility that requires a Colorado Oil and Gas Conservation Commission ("COGCC") permit, shall not be located, constructed, or operated within the unincorporated jurisdiction of Arapahoe County without first obtaining Administrative Use by Special Review or Use by Special Review approval in accordance with the Arapahoe County Land Development Code, regardless of the zone district or category in which the operation will be located. If permitted in accordance with the requirements of the Arapahoe County Land Development Code, Oil and Gas Facilities are allowed in all zone districts, including Planned Unit Developments, subject to obtaining all required Federal, State, or other Local permits and approvals, and also subject to continued compliance with the requirements for the Oil and Gas Facility and the operations thereof as set forth in this Land Development Code, unless and to the extent waived or otherwise exempted pursuant to this Land Development Code.
2. The Administrative Use by Special Review process available as provided under this Section 5-3.6 shall apply only to an "Oil and Gas Facility" as defined in Chapter 7-2 of this Land Development Code.
3. Nothing in this Section of the Land Development Code is intended to waive or modify any applicable provision of the Arapahoe County Regulations Governing Areas and Activities of State Interest (1041 Regulations).
4. All Oil and Gas development authorized by this section shall comply with applicable provisions of the Arapahoe County building and engineering standards, including but not limited to, the Floodplain Regulations, the Building Code, the Grading, Erosion, and Sediment Control (GESCC) Manual, the Stormwater Management Manual, the Stormwater Ordinance, and the Infrastructure Design and Construction Standards.

B. Relationship to State of Colorado Rules

To the extent that there are differing standards or any conflict between an Arapahoe County requirement and any State of Colorado law, regulation or rule, the stricter standard or law, regulation or rule shall apply.

C. Relationship to Section 5-3.4 of the Land Development Code

1. This Section provides for an Administrative Use by Special Review process for Oil and Gas Facilities, so that if an applicant meets administrative approval criteria, as set forth in this Section 5-3.6, and obtains approval pursuant to the process set forth herein, then separate approval under Section 5-3.4.B (Use by Special Review) of this Land Development Code is not required.
2. As an alternative to the Administrative Use by Special Review process set forth in this Section for approval to locate a proposed Oil and Gas Facility in unincorporated Arapahoe County, an applicant may submit an application in compliance with Section 5-3.4 (Use by Special Review), except to the extent modified in 5-3.6.J of this Section. Any Oil and Gas Facility approved through the USR process in Section 5-3.4 as modified by Subsection J of this Section 5-3.6 shall be subject to and operate in compliance with the Operational Standards specified in subsection F of this Section 5-3.6.
3. This Section, and Section 5-3.4 for a USR application if applicable, shall govern all applications for a permit to locate, construct or operate an Oil and Gas Facility, including wells, well pads, access roads and other related infrastructure, within the unincorporated jurisdiction of Arapahoe County. These regulations do not apply to pipelines, gathering systems or transmission lines. Pipelines,

gathering systems and transmission lines are governed by the Use by Special Review process outlined in 5-3.4 and by the Arapahoe County 1041 Regulations.

D. Administrative approval criteria

In order to obtain Administrative Use by Special Review approval for an Oil and Gas Facility, an applicant shall first satisfy the following Administrative Review Criteria:

1. Satisfy Submittal Requirements: The application and exhibits for the Administrative Use by Special Review must satisfy all applicable submittal requirements in this Section 5-3.6 and in the Development Application Manual.
2. Compliance with Land Development Code Requirements: The proposed Oil and Gas Facility must comply with all siting and design requirements and standards specified in this Section 5-3.6.
3. Environmental/Public Health and Safety Impacts: The proposed Oil and Gas Facility must be designed to protect against and minimize adverse impacts to public health, safety, and welfare and to the environment. The Oil and Gas Facility must address and mitigate any site-specific conditions that, by reason of oil and gas operations at that location, present a risk of adverse impacts to the public health, safety, or welfare, or to the environment. Approvals may be conditioned in accordance with these regulations to the extent necessary and reasonable to protect the public health, safety, or welfare and the environment.
4. Emergency Service Providers: The Oil and Gas Facility applicant must provide a commitment to serve ("will serve") letter from the authority having jurisdiction for providing emergency services (fire protection and emergency medical services) for that facility, or if no authority has jurisdiction, provide proof of a contract for emergency services from an emergency services provider with the ability to provide such emergency services.
5. Facilities on Arapahoe County Owned Property: For Oil and Gas Facilities proposed on Arapahoe County owned property, including open space property, the applicant shall provide an Alternative Location Analysis (ALA) for the proposed location that meets the requirements of Rule 304(b)(2)(C). as adopted by the Colorado Oil and Gas Conservation Commission in its Rules and Regulations, as amended from time to time. In the event such ALA demonstrates that a location not on County owned property is technically feasible and can meet the requirements of this Land Development Code for approval, the application for location on County owned property may be denied. In the event the ALA demonstrates that no location other than on the County property is technically feasible, the application shall be processed as a USR in accordance with the provisions of Section 5-3.4 and Section 5-3.6.J of the Land Development Code.

E. Administrative process

1. Application Process
 - a. Applications for an Administrative Use by Special Review for proposed Oil and Gas Facilities will follow the application process outlined in Section 5-2.1.B of the Land Development Code, Common Procedures for an Application.
 - b. Once a complete application has been submitted, County staff will refer the application for review to the various divisions of the PWD and other Arapahoe County Departments or Offices, as deemed appropriate. An application may require and will be referred for review to outside agencies such as Colorado Parks and Wildlife (CPW), any life-safety providers, adjacent jurisdictions, local public health department, the U. S. Army Corps of Engineers, and others as may be deemed appropriate.
 - c. The applicant shall provide a written response to all staff and referral agency comments.
 - d. Upon completion of the referral process and acceptance of the final copy of the complete application and exhibits by the PWD, the application materials will be forwarded for final review to the PWD Director.
2. Neighborhood Meeting

Prior to submitting an application to Arapahoe County, the applicant shall conduct a neighborhood meeting to describe and take neighbors' input on the proposed Oil and Gas Facility. The applicant shall send notification of the meeting to the Planning Division and to property

owners and registered homeowners' associations within one mile of the proposed facility pad boundary. Meetings may be conducted in person or utilizing an electronic virtual or remote meeting platform. Notice of the meeting must be sent no less than 15 days prior to the scheduled meeting date. At said meeting, the applicant must provide information concerning the development plans for the specific facility, including the timing and phasing of construction, drilling and completion, the planned access route, and mitigations planned to address noise, light, odor, traffic, and visual impacts. The applicant shall include with its application for the proposed facility a summary of the neighborhood meeting and the list of attendees from the sign-in sheet(s).

3. Application Notice Requirements

- a. The applicant shall provide written notification by U.S. Mail to all property owners of record, all occupied residences if occupants are different from record owner, and all registered homeowners' associations for residential subdivisions where any portion of the platted subdivision's boundary is within one mile of the pad boundary of the proposed Oil and Gas Facility that an application for an Administrative Use by Special Review for an Oil and Gas Facility, will be filed with the County. The Notice of Application shall meet the format prescribed by the County and shall be mailed at the time of filing the application with the County. The property owners of record shall be those identified in the County Assessor's property records. The Planning Division will provide the applicant with the names and addresses of the homeowners' associations. The applicant shall determine whether a residence is occupied by someone other than the owner and shall be responsible for such occupants.
- b. Within five (5) days of filing its application with Arapahoe County, the applicant shall also post a sign listing the case number and type of case (Oil and Gas Facility), the phone number of the Planning Division, and the distance from the sign to the facility. The sign shall meet the format specified in Section 5-2.2.A.3 of the Land Development Code and it shall be posted for a period of at least fourteen (14) consecutive days. The sign shall be posted adjacent to and off the shoulder of the County road or other public highway, and at or near the intersection of the proposed facility's access road and the public road, outside of the right-of-way or at such other location acceptable to and approved by Planning Division staff.

4. Application Submittal Requirements Found in the Development Application Manual (DAM)

Applications for an Administrative Use by Special Review or for a Use by Special Review for an Oil and Gas Facility shall also comply with all relevant submittal requirements as set forth in the Development Application Manual.

5. Waiver Requests

An applicant may apply for a waiver or modification of the following requirements for a proposed Oil and Gas Facility: 1) neighborhood meetings, 2) the burying of temporary water lines at driveway and gravel road intersections, visual mitigation, or 4) any other matter specifically identified as being eligible for a waiver or modification in this Section 5-3.6. A request to waive or modify a regulation shall be made in writing at the time of application and will be evaluated on the merit of the individual request. Requests must be justified by specific and extraordinary conditions of the location that make compliance with the particular standard or requirement not reasonably achievable or unnecessary and a showing that granting the request will not be detrimental to public health, safety, or welfare or the environment and is not otherwise inconsistent with the intent and purpose of the standard or requirement. A request under this Section 5-3.6.E.5 shall be submitted to the Director of Public Works and Development for decision. The applicant may appeal that decision to the Board of County Commissioners as provided in Section 5-3.6.G.7, below. A request for a waiver for a proposed Oil and Gas Facility will be decided in accordance with the provisions of this Section 5-3.6.E.5 and is not processed through the procedures for variances specified in Section 5-5.4 of this Land Development Code or subject to review by the Arapahoe County Board of Adjustment.

F. Standards Required for Oil and Gas Facilities

1. Regular Meetings

The Operator of any Oil and Gas Facility approved under this Section 5-3.6 or as a Use by Special Review as provided herein shall meet with the Director of Public Works and Development or his or her designee annually to monitor and discuss pertinent issues associated with the Operator's Facility or Facilities operating in the unincorporated territory of the County. At such Regular Meetings, the Operator and the Director or his or her designee will discuss the Operator's updated development plans, required reporting and recordkeeping, updates to the field-wide Emergency Response Plan (ERP), the facility-specific Emergency Action Plans (EAP) and Tactical Response Plans (TRP), outstanding training requirements, any health and safety issues, and potential implementation of new technology. An annual meeting may be conducted as a field visit to the Operator's Facility or Facilities and may be conducted more often than annually if desired by the Operator. Additional meetings in any one year may be required as necessary to address incidents, operational issues, or other issues related to the Facility or Facilities.

2. Setbacks

a. All Oil and Gas Facilities shall be located at least:

- i. 2,000 feet from any occupied structure as measured from the pad boundary.
- ii. 2,000 feet from the nearest boundary of a platted lot smaller than 15 acres in area as measured from the pad boundary.
- iii. 200 feet from any adjacent property's boundary line as measured from the pad boundary.
- iv. 100 feet from public rights-of-ways as measured from the pad boundary.
- v. 2,000 feet from a Designated Outside Activity Area as measured from the pad boundary.
- vi. 2,640 feet from the nearest property line of an operating or closed landfill as measured from the pad boundary.
- vii. Outside of a 100-year floodplain or at least 500 feet from the edge of any perennial surface water body, the ordinary highwater mark of any perennial or intermittent stream or the edge of any riparian area, whichever is the greater distance, as measured from the pad boundary, unless CPW has waived or modified the setback from the stream, surface water, or the riparian area following in accordance with COGCC Rules 309 and 1202.
- viii. All access roads shall be at least 250 feet from a residential or non-residential property line, excluding light or heavy industrially zoned properties.

b. The 2000 feet setbacks from occupied structures or platted lots referenced in subparagraphs 5-3.6.F.2.a.i and ii above may also be reduced to a lesser setback:

- i. If the owner(s) of the occupied structure(s) or all owners of the affected platted lots agree in writing to a lesser setback and the fire district agrees to provide service to the Oil and Gas Facility; however, even with owner consent, in no case may the setback be reduced below 500 feet; or
- ii. If, as shown on the Oil and Gas Facility Operations Plan submitted with the application, any and all wells, tanks, separation equipment, compressors and any stored hazardous or explosive materials on the Oil and Gas Facility pad will be located or stored more than 2,000 feet from the nearest occupied structure or all affected platted lots; or
- iii. If an Oil and Gas Facility application that includes a lesser setback is submitted and approved by the Board of County Commissioners through the Use by Special Review process provided in Section 5-3.4 of the Land Development Code. For approval of any lesser setback under this subparagraph, the Operator must

establish that the lesser setback as proposed will provide substantially equivalent protection to a 2,000 foot setback and that granting the lesser setback will not adversely impact public health, safety, or welfare or the environment. In reviewing the proposed lesser setback, the Board of County Commissioners shall consider the extent to which the operator provides an alternative Oil and Gas Facility design, best management practices, control technologies, or proposes conditions of approval that will be effective to avoid, minimize, or mitigate adverse impacts on the affected properties, considering:

- (a) geology, technology, and natural features, hazards or topography; (b). the location and use of occupied structures and proximity to those structures; and
 - (b) the anticipated size, duration, and intensity of all phases of the proposed oil and gas operations at the proposed oil and gas location.
 - (c) the anticipated size, duration, and intensity of all phases of the proposed oil and gas operations at the proposed oil and gas location.
 - iv. However, in no case may the 2000 feet setback from occupied structures or platted lots be reduced below 500 feet.
 - c. Reverse Setbacks: No new occupied structure shall be constructed less than:
 - i. 250 feet from an existing Oil and Gas well of any status (permitted but not drilled yet, drilling, completing, producing, active gas storage, injecting, shut-in, temporarily abandoned, dry and abandoned, or plugged and abandoned prior to 2014).
 - ii. 150 feet from a plugged and abandoned oil and gas well or remaining equipment that was plugged and abandoned from 2014 onward.
 - d. Water Reservoir Setbacks: All Oil and Gas Facilities shall be located:
 - i. At least one mile from existing or planned water reservoirs, unless the applicant can demonstrate that the Oil and Gas Facility is downgradient from the reservoir, in which case a 2,000 foot setback may apply.
 - ii. With approval from the reservoir owner or operator, the setback may be reduced to the 500-foot setback applicable to other perennial surface water bodies.
3. Health and Safety Requirements
- a. The Operator must submit an initial facility-specific Emergency Action Plan (EAP) and an initial facility-specific Tactical Response Plan (TRP) with an application for any new Oil and Gas Facility. The initial EAP and the initial TRP shall be forwarded to the County Office of Emergency Management ("OEM") for approval. Provided that an Administrative Use by Special Review or full USR has been approved for the proposed Oil and Gas Facility and provided that OEM has approved the initial EAP and the initial TRP and further provided that required engineering permits have been obtained from Arapahoe County, the applicant or other Operator may commence construction of the pad and access road for the proposed Oil and Gas Facility. After the pad and access road have been constructed, the Operator shall prepare ArcGIS Shape files for the well pad and access road. The Operator shall prepare and provide to OEM a detailed EAP and a detailed TRP, which incorporate the ArcGIS information for OEM's review and approval prior to commencing any drilling at the site. OEM shall review and approve or deny approval of the detailed EAP and TRP within two weeks of submission by the Operator. The initial and detailed EAP and TRP shall follow the templates as specified in the DAM.
 - b. The EAP and TRP shall be updated annually and whenever there is any change in or need to change any of the content of the EAP or TRP, such as but not limited to, the addition or subtraction of chemicals used or stored on site.

- c. The Operator shall coordinate with the fire district having jurisdiction at the facility in establishing evacuation routes in the event of an emergency at the facility. Evacuation route considerations will include any occupied structures, platted lots, critical infrastructure, public facilities, schools, or other high-occupancy buildings that are within proximity to the oil and gas facility, and routes shall be based on guidance from the fire district and OEM.
- d. The Operator shall provide and maintain 24-hour contact information for the Operator and maintain 24-hour contact information for all contractors and subcontractors working at the facility. Operator shall provide all such contact information to the County upon request.
- e. The Operator shall maintain a Hazardous Materials Inventory Statement for all hazardous materials on site at the facility and shall provide the Statement to the fire district having jurisdiction at the facility and OEM on an annual basis.
- f. The Operator shall provide OEM and the fire district having jurisdiction at the facility with a list of all reportable chemicals used or stored on each site from the time of construction to abandonment of the facility. The list of chemicals will be updated whenever new chemicals are added or removed, and such updated list shall be provided promptly to OEM.
- g. Upon reasonable advance notice, no less than 8 hours, to the Operator, the Operator shall provide access to the fire district having jurisdiction over the facility and to County staff for inspection of the Oil and Gas Facility to determine compliance with applicable provisions of this Land Development Code, fire codes, and public safety standards.
- h. The Operator shall mark all wells and all well pads with directional signage in a conspicuous place at or near the intersection of the access road with the public road, from the time of initial drilling until final abandonment. The Operator shall maintain signs in a good and legible condition and shall replace damaged or vandalized signs within fourteen (14) days. Directional signs shall be placed at locations and shall contain directions sufficient to advise emergency crews where drilling or completion is taking place.
- i. A sign with the Operator's 24/7 contact information, COGCC complaint website, shall be placed at the entrance to the Oil and Gas Facility. All signage content shall follow COGCC regulations for such signage, except to the extent that COGCC regulations are inconsistent with the above stated County signage content requirements.
- j. The Operator shall repair any damages to County infrastructure or property caused by Operator's activities or omissions, or that is caused by any emergencies that occur at the facility, in compliance with the Operator's Road Damage Agreement.
- k. Training
 - i. The Operator shall conduct a coordinated training exercise with OEM and the fire district having jurisdiction at the facility for at least one well pad every year. If the Operator's standard well pad design layout changes, then an additional coordinated training exercise will be conducted that year and every time the standard pad design changes.
 - ii. Key personnel at an Oil and Gas Facility are required to complete the National Incident Management System (NIMS) training courses IS-100.C and IS-700.B prior to commencement of drilling operations at the Oil and Gas Facility. Key personnel shall include those employees of the Operator and any field consultants who are team leads or equivalent having supervisory authority over any of the oil and gas operations conducted at the Facility. OEM may also specify additional specific training requirements pertinent to the proposed Facility that will be required for key personnel prior to the start of drilling. The Operator shall provide to County certificates of completion of the NIMS trainings required in this paragraph at least one week prior to the start of drilling and shall provide certificates of completion for any new or replacement key personnel at a Facility within one month of the person commencing work at the Facility.

I. Fire Prevention and Procedures

- i. The Operator shall work directly with the fire district having jurisdiction over the facility to determine if existing response capabilities are adequate to serve the site. If additional response capabilities are deemed necessary by fire district having jurisdiction over the facility, the operator will work with the fire district having jurisdiction to provide additional fire suppression or emergency response assets needed. The operator will provide the identified assets to the fire district having jurisdiction to maintain and control for emergency response unless otherwise agreed upon in writing by both parties. The need for these additional assets shall be judged on a case by case basis per well pad and may be viewed in terms of the cumulative impact of overall oil & gas development within the fire district having jurisdiction.
- ii. No open burning, except flaring, shall occur on the site of any Oil and Gas Facility.

m. Incident Reporting

- i. All emergencies shall be reported to 911 immediately upon discovery, and as soon as reasonably possible to Office of Emergency Management and the County Local Government Designee (LGD). In the case of an emergency situation where a delay caused by reporting would endanger public health, safety, welfare, or the environment or wildlife, the initial notice may be given orally. Formal incident reports are required for, but not limited to, the following incidents: spills, releases, uncontrolled release of pressure, loss of well control, vandalism, terrorist activity, fires, explosions, detonations, lightning strikes, any accidental or natural event that damages equipment, accidents resulting in fatalities, significant injuries or chemical exposures, or any condition or occurrence that threatens or harms safety on any of the Operator's facilities, including pipelines. Formal written incident reports for all reportable incidents shall be submitted to the Office of Emergency Management, the fire district having jurisdiction at the facility, and the County LGD within three (3) calendar days of the incident. When in doubt as to whether the incident is reportable, the Operator will contact the County LGD.
- ii. The Operator shall submit copies of any initial and supplemental spill report filed with the COGCC to the County LGD, OEM, and the fire district having jurisdiction at the facility, as well as any associated remediation reports, all within three calendar (3) days of filing with the COGCC. Those copies may be submitted electronically, if electronic submission is available.

n. Spill and Release Reporting

- i. The Operator shall provide a copy of the Spill Prevention, Control and Countermeasures (SPCC) Plan for each facility, prepared in compliance with 40 CFR Part 112 (as amended), to the fire district having jurisdiction at the facility and to OEM prior to the start of production. The Operator shall also provide to the fire district and OEM a listing of hazardous chemicals used on site if required by the Emergency Planning and Community Right-to-Know Act (42 USC 11001, *et seq.* as amended) and related regulations. If the holding capacity of any planned on-site equipment or storage tank is changed from what is identified in the SPCC or if the listing of hazardous chemicals is changed from what was identified in the SPCC, the Operator shall update the SPCC and provide the update to the fire district with jurisdiction over the Facility, to OEM and to the LGD.

- ii. The Operator shall make available at each well pad and shall require its field staff or contractors to carry, spill response kits capable of mitigating small to mid-size spills (5 to 50 gallons).
 - iii. Operator shall submit all reports required under COGCC Rule 912.b to OEM, the fire district serving the facility, and to the LGD. Spill containment and treatment does not relieve the Operator of any spill incident reporting obligations required under these or other applicable federal, State, or local law or regulations.
 - iv. The Operator will install automated safety systems on all new facilities. Each system will include a Surface Safety Valve ("SSV") or wellhead master control valve, installed before the commencement of the production phase and connected to the production tubing at the surface. The SSV or wellhead master control valve shall be capable of remotely shutting the well in should upset conditions be detected. The SSV will have documented, quarterly testing to ensure functionality per manufacturer's specifications. The Operator shall maintain and keep the quarterly testing results records for at least three years and said records shall be made available to the County upon request by the PWD Director.
- o. Operator shall provide hand washing facilities meeting Arapahoe County Public Health Department requirements at portable restrooms during drilling and completion operations.
- 4. Lightning Response
 - a. If damage is sustained to any portion of a facility due to a lightning strike, the entire facility shall be shut in immediately and inspected by the Operator prior to restarting operations at the facility.
- 5. Secondary Containment for Onsite Storage Tanks
 - a. Secondary Containment is required around aboveground produced water and crude oil storage tanks and shall be constructed of steel berms with synthetic liners or earthen berms constructed of compacted soil and armored with cobbles. Secondary containment shall be of sufficient capacity and effective to contain at least 1.5 times the volume of the largest tank.
 - b. Secondary containment is required around any other aboveground storage tanks or containers of any liquid substance other than fresh water on well pads, and specifically including but not limited to solvents, methanol, fuels, coolants, antifreezes, or lubricants or lubricating oil, and shall have sufficient capacity and be effective to contain at least 1.5 times the volume of the largest tank.
 - c. All secondary containment shall be inspected for evidence of discharge weekly by the Operator or their contractors and within 48 hours of any precipitation event sufficient to reduce the capacity of the secondary containment to less than 1.5 times the volume of the largest tank. Such accumulated precipitation must be removed within 24 hours of an inspection.
 - d. The Operator shall keep written records of secondary containment inspections and shall maintain such for at least three (3) years; the Operator shall make such records available to the County upon the written request of the PWD Director.
- 6. Disposal of Drill Cuttings
 - a. Drill cuttings must be disposed offsite at least twice weekly, at a State-approved solid waste facility. No onsite disposal is allowed.
- 7. Pad Surface
 - a. The surface of a pad shall be paved with either crushed granite or gravel, in a sufficient amount to eliminate mud-tracking offsite and to comply with the County's Grading Erosion and Sediment Control regulations.
- 8. Number of Tanks and Tank Separation Requirements
 - a. All oil and produced water storage tanks shall be spaced at least 3 feet apart.

- b. No Oil and Gas Facility shall be permitted to have more than a combined total of nine (9) oil, produced water and/or condensate tanks, or a total Facility capacity of no more than 6750 barrels.
- 9. Groundwater Baseline Sampling and Monitoring
 - a. The Operator shall, at its own cost, perform initial baseline sampling and testing of all water sources located within one-half (1/2) mile radius of Oil and Gas Facility if requested by the owner of such water source or owner of land upon which such water source is located. If no water sources are available in a one-half mile radius of the proposed Facility, the Operator shall sample and analyze up to two (2) down-gradient water sources in a one-mile radius of the proposed Facility. The written results of such baseline testing shall be provided to the requesting property owner, COGCC and to the County.
 - b. Water sampling and testing shall be performed in accordance with the standards and requirements specified in COGCC's Rule 615 a. through f. and as amended from time to time, except for 615 b. (2) and 615 c. (1).
 - c. The requirement to test a well upon request does not apply if the water well has already been tested by any Operator and the Operator is able to furnish such results to County or if access is denied.
 - d. The Operator shall sample, on a one-time basis, down-gradient and perennial surface water within a one-half (1/2) mile of a proposed well pad prior to the construction phase.
 - e. The Operator shall provide a letter notice to all owners of properties within a one-half (1/2) mile radius of the proposed pad with a water well listed in the State of Colorado Division of Water Resources database, to inform those water well owners of the opportunity to have their water wells sampled prior to drilling.
 - f. For all water sources for which the Operator has performed initial baseline sampling at the request of the property owner in accordance with these regulations, the Operator shall also perform subsequent sampling and testing of such water sources on the schedule specified in and in accordance with COGCC Rule 615 d. The written results of such subsequent testing shall be provided to the requesting property owner, COGCC and to the County.
- 10. Noise Mitigation Requirements
 - a. Noise emitted from the facility pad shall not exceed 60 dBA or 65dBC, measured at the nearest property line of the property with the nearest occupied structure. These noise levels, as measured, constitute the Maximum Permissible Limit of noise that may be allowed to emanate off site from the Oil and Gas Facility.
 - b. During the hours between 7:00 AM and 7:00 PM, the maximum permissible noise levels may be increased 10 dB(A) for a period not to exceed 15 minutes in any 1-hour period. The increase is permissible only for a 1-hour period during any 12 hours.
 - c. The Operator may apply for a modification or waiver to exceed the Maximum Permissible Limit in accordance with and subject to the standards in Section 5-6-3.6.E.5 above where the Oil and Gas Facility is proposed to be located in an area with existing ambient background noise levels that are at or above the Maximum Permissible Limit or if proposed for an area that is sufficiently remote from any property with an occupied structure or any High Priority Habitat, provided that the lack of High Priority Habitat is supported by recommendation of CPW. The Operator may also apply for a waiver in accordance with and subject to the standards in Section 5-6.3.6.E.5 of the requirements below to prepare a noise survey and noise mitigation plan for a pad site that will not contain any oil and gas wells and will not be drilled or fracked.
 - d. The Operator shall conduct an ambient noise survey for each proposed well pad no more than 90 days prior to application in order to establish baseline noise levels for the site, and the Operator shall also conduct noise modeling for the well pad to simulate noise during drilling and completion.
 - e. The noise surveys and the noise modeling shall be used to create a Noise Mitigation Plan for the site for keeping sound emissions from the site within the Maximum Permissible Limit. The Noise Mitigation Plan shall describe noise mitigation practices, equipment, strategies,

infrastructure, or other strategies to be used and implemented at the Oil and Gas Facility in order to comply with the Maximum Permissible Level of noise emanating from the Facility. The Operator shall update the Noise Mitigation Plan for any changes in equipment that may reasonably be expected to affect the ambient noise levels at the site or if the Facility is not constructed within two (2) years of the date of the County's Administrative Use by Special Review or Use by Special Review approval for the Facility. The Noise Mitigation Plan shall also be updated if any new occupied structure is constructed within 2,000 feet of the pad boundary, between the time of Administrative Use by Special Review or Use by Special Review approval of the Facility and the commencement of drilling. The Operator shall provide the updated Noise Mitigation Plan and implement any strategies identified in the updated plan prior to putting such new equipment into operation or prior to commencing construction of the Facility as applicable.

- f. If the noise modeling indicates that noise levels for either or both A-Scale (dBA) and C-Scale (dBC) noise for drilling and completion will exceed the Maximum Permissible Level at the property line of any property with an occupied structure, where that structure is within 2,000 feet of the pad, additional noise mitigation measures will be required as necessary to achieve the Maximum Permissible Level.
 - g. If the noise modeling indicates that drilling or completion activity or production equipment on a well pad without noise mitigation will exceed the Maximum Permissible Limit, notwithstanding other mitigations that may be proposed in the Noise Mitigation Plan, sound walls shall be constructed prior to both drilling and completion commencing.
 - h. The Noise Mitigation Plan shall address noise/vibration through sound walls and other practices such as, but not limited to, utilizing electric equipment, Tier 4 diesel engines, installing mufflers or covers on noisy equipment or the use of Quiet Fleet™, or similar noise mitigation. If sound walls will be required for mitigation of noise during completion, they shall be erected prior to drilling.
 - i. Additional mitigations, as necessary to achieve the compliance with the Maximum Permissible level, must be described and used by the Operator if C-scale noise levels are increased to the larger of either (i) 5db over ambient or (ii) 65 dBC at the property line of the property upon which the nearest occupied structure exists. The County may require larger setbacks and/or sound walls or other structures on a case-by-case basis for mitigation of C scale noise, based on data from the noise model.
 - j. The Operator shall follow the most recent and most appropriate BMPs to reduce noise related to drilling and completion.
 - k. Tubular goods may not be unloaded from 8 PM to 7 AM unless there are no occupied structures within 2,640 feet
 - l. Engine idling shall be minimized.
 - m. The Operator shall provide a 24-hour contact number for noise complaints on the facility sign required in section 5-3.6.F.3.h, as well as the COGCC's complaint hotline number.
11. Access Road Standards
- a. Prior to commencing construction of the Oil and Gas Facility, the Operator shall connect the site via an access road designed to support an imposed load of 80,000 pounds that will accommodate emergency response vehicles such as, but not limited to, law enforcement, emergency command vehicles (cars/SUVs), ambulances, hazardous materials response vehicles, water tenders, and fire apparatus during construction and operation of new tank batteries, new drilling activity and reworks or recompletions of existing wells, unless a local fire department or fire district agrees in writing to a different or lesser standard for the access road..
 - b. Access roads shall be constructed to be at minimum twenty (20') feet wide with at least six (6") inch road base
 - c. The Operator shall maintain such access roads in good condition and suitable for emergency vehicle use until such time as the Oil and Gas Facility has been plugged and abandoned.

- d. If an Oil and Gas Facility site incident could prevent emergency access on public or private roads, the Operator shall construct an alternative access road meeting these standards.
 - e. Best efforts will be made to improve inadequate access to existing tank battery sites identified by the fire district or County as determined through service calls and demonstrated problems of access to the site.
 - f. The County and/or appropriate emergency response agency may conduct spot inspections of access roads to ensure that emergency access in accordance with this section is maintained.
12. Odor Mitigation
- a. The Operator shall prevent odors migrating offsite during drilling through the use of low-odor Category III drilling fluid, unless a waiver or modification is allowed under 5-3.6.E.5 of these regulations
 - b. The Operator shall use closed-loop systems in place of open pits.
 - c. The Operator shall proactively respond to and address odor complaints.
 - d. The Operator may be required to address odor complaints with additional measures such as wiping down drill pipe, increasing mud additives, using filtration systems, enclosing shale shakers and frequently transporting drill cuttings offsite for disposal.
13. Site Lighting
- a. All site lighting shall be directed downward and inward to prevent light spill outside the pad.
 - b. Wherever possible, lights will be mounted on the inside of the sound wall.
 - c. Any lights not concealed by a sound wall must be IES (Illuminating Engineering Society) full cutoff or shielded/screened to minimize the amount of light leaving the pad
 - d. During the production phase, site lighting shall be turned off between the hours of 10:00 PM and dawn. Motion-sensing lights may remain active during those hours.
 - e. Upon receipt of a lighting complaint and review by the Planning Division, the Operator may be required to address lighting complaints within 24 hours of the Planning Division's review of the complaint, with additional mitigation measures.
14. Visual Mitigation
- a. Well pads within 1,320 feet of a property line of a property containing an occupied structure, a platted lot, or a parcel of 40 acres or smaller, shall be designed with some form of visual mitigation, to include but not be limited to, low-profile production equipment, opaque fencing, berming, or landscaping.
 - b. Landscaping or fencing around the perimeter of the pad shall be installed within one year of the first well's completion. The screening shall be designed to minimize visual impacts from adjacent properties and the nearest streets.
 - c. Production pads shall be maintained free of vegetation, except such vegetation as may be required for interim reclamation or Arapahoe County GESC regulation requirements, and shall be maintained free of rubbish and debris. For the purposes of this Visual Mitigation regulation only, a production pad may exclude the reclaimed area, approved through a County-issued GESC permit.
 - d. Storage of equipment not associated with the on-going oil and gas operations at a specific pad is prohibited on that pad.
 - e. Privacy or solid fencing shall be Class 5 – Solid Fencing as defined in section 4.3 of the Land Development Code, at least 8 feet high and painted or stained with natural wood colors.
 - f. Whenever possible, the Operator shall use existing natural contours and existing vegetation to conceal the site from view.
 - g. Whenever possible, the Operator shall minimize the size and number of tanks and equipment installed or maintained on a production pad. When available, as provided below, use of pipelines to reduce the size and number of tanks and equipment maintained on a production pad is encouraged.
15. Locks/Emergency Access Hardware
- a. The Operator shall provide approved emergency access hardware for any locked facility gates or access points.
16. Traffic Mitigation and Reduction Measures

- a. The Operator shall make best efforts to schedule its traffic to limit heavy truck traffic on County roads during peak commuting hours and during school bus hours and shall comply with any restrictions established in accordance with the Road Damage Agreement.
 - b. The Operator shall use pipelines for the transport of produced water and hydrocarbon liquids from the well pad, wherever available.
 - c. To reduce traffic associated with the Operator's drilling and completion activities, the Operator is allowed to use temporary surface lines for transportation of water needed during drilling and completion or Modular Large Volume Tanks (MLVTs) for storage of water needed during drilling and completion. Provided that the MLVT is located on or contiguous with the Oil and Gas Facility pad, the MLVT may be approved with the Administrative Use by Special Review application or by amendment to an approved Administrative Use by Special Review. The Operator may use County Road Right-of-Way, and County drainage culverts, where practical, for the laying and operation of temporary water lines on the surface, provided that the County's Engineering Services Division approves the locations of the temporary water lines through a street-cut/right-of-way permit issued in accordance with the Arapahoe County Infrastructure Design and Construction Standards. The Operator will bury temporary water lines at existing driveway and gravel road crossings, unless the PWD Director approves an alternative to burying the lines in accordance with section 5-3.6.E.5 above.
 - d. Prior to commencing construction of an Oil and Gas Facility, the Operator shall execute a Road Damage Agreement for the site or shall have executed a field wide Road Damage Agreement for all sites within the County. Such agreement shall be in a form approved by and acceptable to the County.
 - e. Consistent with the Road Damage Agreement, the Operator shall provide the County with a truck access route for evaluation and approval by the County. The County may require a route that minimizes impact on nearby residents and/or a particular County roadway.
17. Wildlife, Wetlands, Riparian Areas and Stream Channel Measures
- a. The Operator shall implement the recommendations of Colorado Parks & Wildlife (CPW) that address any site-specific site conditions. unless a waiver or modification is approved in accordance with Section 5-3.6.E.5 above.
 - b. Wetlands boundaries shall be determined by a Professional Wetland Scientist (PWS) and those boundaries shall be indicated on the Administrative Use by Special Review plan.
 - c. Crossings of defined streambed and banks (stream channels) by flowlines and pipelines must be bored underneath and not trenched.
 - d. All crossings of riparian areas by flowlines and pipelines shall be bored under, starting 500 feet from the edge of the riparian area. All crossings of riparian corridors by access roads will be constructed with culverts, approved by Engineering Services Division.
 - e. The Operator shall avoid constructing in CPW-mapped High Priority Habitats (HPH) to the maximum extent possible. If an operator elects to construct in an HPH polygon, then they will be subject to minimization and/or mitigation measures as specified in COGCC's 1200 Series Rules, as well as any applicable CPW recommendations.
 - f. Fencing that bisects streams is prohibited.
18. Floodplains/Floodways Restrictions
- a. Storage of hazardous or floatable materials in the floodplain is prohibited.
 - b. Oil and Gas facilities shall not be located in a floodplain. Access roads, and underground pipelines and flowlines are permitted to cross floodplains provided that they are designed to meet Arapahoe County Floodplain Regulations and the Infrastructure Design and Construction Standards or other applicable Engineering Standards and those crossings are in accordance with a floodplain Development permit issued by the Arapahoe County Floodplain Administrator in accordance with Section 5-4.3 of the Land Development Code.
19. Notification of Commencement of Geophysical Exploration/Seismic Testing, Construction, Drilling, Completion, and Flaring
- a. The Operator shall provide advance written notice to the Planning Division of the projected commencement of geophysical exploration/seismic testing; the construction phase, drilling

phase, and completion phase of each new well; and each workover one week prior to the start of each phase.

- b. Flaring shall be reported to the County LGD via email or text message prior to flaring whenever possible, or during the flaring event. An updated notice will only be required if the commencement of any phase is delayed more than one week from the original date indicated in the notice.

20. New Technologies

The County may require modifications to equipment for drilling, completion, or production operations to incorporate new technologies for reduction of noise, odor, dust or for mitigating other surface impacts caused by the Oil and Gas Facility or its operations if such new technologies are technologically sound, economically practical, and commercially available to the Operator.

21. Compliance With Laws and Regulations

The Oil and Gas Facility shall be operated in compliance with all applicable federal, state, and local laws and regulations.

G. Approval/Denial/Conditions of Approval of Administrative Use By Special Review/Appeal

1. Action to Approve, Conditionally Approve or Deny

The PWD Director may approve, approve with conditions, or deny an Administrative Use by Special Review application for an Oil and Gas Facility. Written notice of the decision shall promptly be provided to the applicant, and, if denied, the notice shall include a statement of the reason(s) for denial.

2. Revocation of Approval

Approval may be revoked, after notice of the grounds for such proposed revocation and a hearing before the Arapahoe County Board of County Commissioners, if the Operator fails to meet or fails to continue to meet any requirements of this Land Development Code or any Conditions of Approval governing the installation and operation of an Oil and Gas Facility. The hearing will be conducted as a general business item at a regular meeting of the Board of County Commissioners. At said hearing, the Planning Division shall present evidence of the grounds for revocation of the approval and the Operator shall be afforded the opportunity at such hearing to present evidence in response to the proposed revocation. The Operator may appeal the Board of County Commissioners' decision in accordance with Rule 106(a)(IV) of the Colorado Rules of Civil Procedure.

3. Recordation

Arapahoe County Public Works & Development shall record the approved permit for an Administrative Use by Special Review or for a Use by Special Review under Section 5-3.4 of the Land Development Code and the approved site plan in the Office of the Arapahoe County Clerk and Recorder within 30 days of the approval. The applicant shall pay any recordation fees.

4. PWD Director's Discretion to Refer to the Board

In lieu of the PWD Director making a decision on an application, the Director has the discretion to refer any application for Administrative Use by Special Review or amendment thereto to the Board for its consideration and decision at a public hearing. In such event, the Board shall make its determination based upon the requirements of this Section; however, unless waived by the Board, compliance with the notice requirements set forth in Section 5-3.4.C.2. is required prior to the Board hearing. At such public hearing, the Board may approve, approve with conditions, or deny the application.

5. Expiration of Approval

- a. An approval of the Administrative Use by Special Review, as delineated in the application, shall automatically expire three (3) years after the date of recordation, unless the facility is already substantially commenced by the drilling of at least one well on a pad.
- b. For good cause shown, the Planning Division Manager or designee may grant a time extension to the expiration date stated in this Section for up to one year, upon a written request by the applicant. Such request shall be submitted in writing to the Planning Division Manager no less than sixty (60) days before the date of expiration of the approval.

- c. The Board may, for good cause shown, grant an additional extension for an additional one-year period.
 - d. If drilling of a well is not completed within the time allowed under the original permit or any extension granted pursuant to this Section 5-3.6.G.5, the approval shall lapse and a new application is required. After a lapsed approval, the Oil and Gas Facility may be constructed, completed, or produced only in compliance with the Land Development Code in effect at the time of the new application.
- 6. Permits Required Prior to Commencement of Operations
 - a. If applicable under the Land Development Code or other Arapahoe County code or regulation, an Access Permit issued under the Infrastructure Design and Construction Standards, a GESC Permit, a Roadway Damage Agreement and Oversize/Overweight Vehicle Permit shall be required prior to the development of an Oil and Gas Facility. A Floodplain Development Permit shall be required prior to any work within a floodplain. A Building Permit may be required prior to construction of structures or the erection of equipment within the Oil and Gas Facility in accordance with the Arapahoe County Building Code.
- 7. Appeal of Decision on Application for Administrative Use by Special Review
 - a. An applicant may appeal the Public Works and Development Director's denial of an application for an Administrative Use by Special Review for an Oil and Gas Facility, denial of a waiver request, or any conditions of approval, to the Board of County Commissioners for a *de novo* hearing. The Applicant must file the appeal within fourteen (14) calendar days of the date of the PWD Director's decision by submitting a letter of appeal to the Planning Division Manager. Thereafter, the matter will be scheduled on the next available agenda of the Board, following public notice required by Section 5-3.4.C.2. At such hearing, the Board may affirm, reverse, or modify the decision of the PWD Director, based upon the criteria set forth in this Section 5-3.6.

H. Administrative Amendment

If the Applicant or the Operator proposes changes from the plans approved through the Administrative Use by Special Review, including but not limited to any changes in the source or location of water to be used by the Oil and Gas Facility, the type and size of equipment on the facility or visual mitigation measures, the Applicant is required to submit an amendment to the approved Administrative Use by Special Review plans showing the proposed changes. The PWD Director may approve, conditionally approve, or deny the proposed amendment in accordance with the provisions of this Section 5-3.6. The proposed amendment will be reviewed by PWD staff and, as needed for the review of the application, PWD Staff may require additional information. The amended application will need to meet all requirements of this Section and be approved in writing. If the BOCC approved the original application on appeal, as a USR, or by reason of its otherwise having been elevated to the BOCC for decision under this Section 5-3.6, the proposed amendment shall be referred to the BOCC for consideration and decision following public hearing as provided in Section 5-3.6.G.4 above. The PWD Director may exercise his or her discretion to elevate any proposed amendment to the BOCC for consideration and decision as provided in Section 5-3.6.G.4 above. Upon recommendation of PWD Staff, the PWD Director may waive the need for amendment of the Administrative Use by Special Review or other BOCC approved Oil and Gas Facility permit provided that the proposed change is found to be minor, with no material effect to or departure from the original approval, and without the potential for significant surface impacts to public health, safety, welfare, or the environment at the Facility site.

I. Transfer/Sale of Facilities to a New Operator

The Operator must notify the Planning Division in writing within seven days of the closing of any transfer of an Oil and Gas Facility or Facilities to a different Operator or other successor owner. Prior to commencing any operations at the site of the transferred Oil and Gas Facility, the new Operator or successor owner must first provide the following to the County:

1. Letter(s) authorizing the transfer of the Oil and Gas Facility operation as approved through the original Administrative Use by Special Review or Use by Special Review approval for the Facility to the new Operator and the new Operator's written acceptance of responsibility for the operations at the Oil and Gas Facility and agreement to abide by all terms and conditions of the Administrative Use by Special Review or Use by Special Review approval.
2. The Operator must meet with the LGD to discuss any pertinent issue relative to the new Operator's assumption of operations of the Oil and Gas Facility, including plans for development of pipeline installation to serve the Oil and Gas Facility.
3. An updated Emergency Action Plan (EAP) and Tactical Response Plan (TRP), two weeks prior to the transfer, with contact information for at least two employees of the new Operator.

J. Non-Administrative Approval Process

Use by Special Review approval for an Oil and Gas Facility may also be requested through the process described in Section 5-3.4 of this Code, subject to the following modifications:

1. Plan Format
The site plan shall comply with the requirements of the Development Application Manual, Non-Administrative Use by Special Review for Energy Facilities. In addition, the final document shall be submitted in both paper and electronic forms instead of Mylar, notwithstanding the requirements for a Use by Special Review contained in the Development Application Manual.
2. Criteria and Standards
In addition to the criteria set forth in Section 5-3.4 of the Land Development Code, an application for Use by Special Review for an Oil and Gas Facility will also be evaluated under the criteria specified in Section 5-3.6.D above and shall comply with the Standards specified in Section 5-3.6.F above, and shall be operated in compliance with the requirements of this Section 5-3.6. In addition, the provisions of Section 5-3.6.G.1 through 7 shall apply to an Oil and Gas Facility approved as a Use by Special Review. Also, Section 5-3.6.I shall apply to the transfer of any Oil and Gas Facility approved by a Use by Special Review.
3. Expiration of Approval
An approval of a Use by Special Review shall automatically expire three (3) years after the date of recordation, unless the facility well pad is already substantially commenced by drilling of at least one well. The Operator may request and extensions as described in Section 5-3.6.G.5 above.

K. COGCC and County Approvals Required

Development of an Oil and Gas Facility shall not commence until and unless any required permits from the State or County, and a Use by Special Review (administrative or non-administrative) from the County, have both been approved. Prior to construction, the Operator must submit proof of any insurance and bonding that are required or may be required by these rules.

From: [Nathan Fogg](#)
To: [Diane Kocis](#)
Subject: RE: was asked to reach out to you again, for any comments (or a No Comments reply) to our Phase 1 proposed amendments to our O&G rules adopted in 2021
Date: Tuesday, July 11, 2023 12:39:41 PM

Diane: Here some thoughts in the indented bullets

- Relationship to State of Colorado Rules:
The Operation of a Facility in violation of any applicable federal, state, or other local law or regulation that results in adverse or negative surface impact(s) on or to public facilities and services, water quality and source, noise, vibration, odor, light, dust, air emissions and air quality, land disturbance, reclamation procedures, cultural resources, emergency preparedness and coordination with first responders, security, or traffic and transportation shall constitute a violation of the Land Development Code which may be enforced by law as other violations of the Land Development Code.
 - No comments
- Neighborhood Meeting:
The applicant shall send notification of the meeting to the Planning Division and to all property owners of record, all occupied residences if occupants are different from record owner, and all registered homeowners' associations for residential subdivisions where any portion of the platted subdivision's boundary is within one mile of the proposed facility pad boundary.
 - No Comments
- Additional Application Information:
Applications shall include an application narrative, photosimulations of the view of the well pad from nearby properties and documentation of floodplain, wetlands and riparian area boundaries.
 - Can we add WUI boundaries to the list?
- Application that includes a lesser Setback:
If an Oil and Gas Facility application that includes a lesser setback is submitted, it must be and approved by the Board of County Commissioners through the Use by Special Review process.
 - No comments
- Reservoir Setbacks:
At least one mile from existing or planned water reservoirs, unless the applicant can demonstrate that the Oil and Gas Facility is downgradient from the reservoir, in which case a 2,000 foot setback may apply. With approval from the reservoir owner or operator, the setback may be reduced to the 500-foot setback applicable to other perennial surface water bodies.
 - No Comments

- Post-Incident Meeting:

In addition to the formal incident report, a post-incident meeting shall be required with County staff. The date, time and location of the post-incident meeting shall be determined by the Public Works and Development Director.

- No Comments

- Access Road Standard:

Prior to commencing construction of the Oil and Gas Facility, the Operator shall connect the site via an access road designed to support an imposed load of 80,000 pounds that will accommodate emergency response vehicles such as, but not limited to, law enforcement, emergency command vehicles (cars/SUVs), ambulances, hazardous materials response vehicles, water tenders, and fire apparatus during construction and operation of new tank batteries, new drilling activity and reworks or recompletions of existing wells, unless a local fire department or fire district agrees in writing to a different or lesser standard for the access road.. Access roads shall be constructed to be at minimum least twenty (20') feet wide with at least six (6") inch road base

- No Comments

Second part for Alternative Access Roads for one-way-in, one-way-out neighborhoods:
If an Oil and Gas Facility site incident could prevent emergency access on public or private roads, the Operator shall construct an alternative access road meeting these standards.

- No Comments

- Post-Incident Meeting:

In addition to the formal incident report, a post-incident meeting shall be required with County staff. The date, time and location of the post-incident meeting shall be determined by the Public Works and Development Director.

- This appears to be a duplicate requirement

- Handwashing Facilities:

Operator shall provide hand washing facilities meeting Arapahoe County Public Health Department requirements at portable restrooms during drilling and completion operations.

- No Comments

And, crypto-mining, or data centers, will be allowed on oil and gas pads, by adding it as an approved use in our Land Use table of the Land Development Code.

Here is our definition of Crypto-Mining:

Cryptocurrency Mining The operation of specialized computer equipment for the primary purpose of adding, securing, or verifying transactions to a peer-to-peer network, also known

as a blockchain, or mining one or more blockchain-based cryptocurrencies (a form of electronic currency). This activity typically involves large networks of decentralized computer servers that work together around the world to perform calculations and solve algorithms as part of the development and maintenance of a blockchain which is a type of distributed virtual ledger maintained on a peer-to-peer network. Typical physical characteristics of cryptocurrency mining include specialized computer hardware; the use of equipment to cool the hardware and operating space; and high density load electricity use.

- Are these powered by grid or are there large banks of Lion or LiPo type batteries that would provide power if the grid were disconnected? If so, it should be posted so fire is aware.

From: Diane Kocis <DKocis@arapahoegov.com>

Sent: Thursday, July 6, 2023 2:30 PM

To: Nathan Fogg <NFogg@arapahoegov.com>

Subject: RE: was asked to reach out to you again, for any comments (or a No Comments reply) to our Phase 1 proposed amendments to our O&G rules adopted in 2021

Nate,

Sorry to hear that you are extra busy/stressed. I know you are *always* very busy.

I'll look for your message on Monday.

Thanks,

I am working a hybrid schedule with in-office days and remote work days. Email is the best way to reach me but you can also reach me on my County cell phone at 720-425-0422.

Diane Kocis

Energy Specialist

Arapahoe County Planning Division

dkocis@arapahoegov.com

From: Nathan Fogg <NFogg@arapahoegov.com>

Sent: Thursday, July 6, 2023 2:26 PM

To: Diane Kocis <DKocis@arapahoegov.com>

Subject: RE: was asked to reach out to you again, for any comments (or a No Comments reply) to our Phase 1 proposed amendments to our O&G rules adopted in 2021

We are activated again in the EOC, the 13th time this year...I will try to get to this before Monday. I am sorry. We are just getting wrecked every few days.

From: Diane Kocis <DKocis@arapahoegov.com>

Open Spaces review of our proposed phase 1 O&G rules amendment

Comments – questions:

For Open Spaces the increased setback from reservoirs sounds good.

Question – I see it says “Planned Reservoir” – how planned does it have to be? I know Purecycle has some planned-on Lowry property but not sure if how far along they are?

The lesser setback BoCC approval is also a good addition.

Thanks

Roger Harvey

Planning Manager- Open Spaces

June 2, 2023

John A. Granger, J.D. ret.
6391 S. Patsburg Ct.
Aurora, CO 80016

Carrie Warren-Gully, Chair, Arapahoe County Commissioners

Jeff Baker, Arapahoe County Commissioner

Jessica Campbell-Swanson, Arapahoe County Commissioner

Leslie Summey, Arapahoe County Commissioner

Bill Holen, Arapahoe County Commissioner

Bryan D. Weimer, Director, Public Works and Development

Jason Reynolds, Planning Division Manager

Diane Kocis, Arapahoe County Energy Specialist

Ron Carl, Arapahoe County Attorney

Re: Proposed Arapahoe County Oil and Gas Facilities Regulation 1-1.1.F.2.d. Water Reservoir Setbacks

Commissioners, Staff, and County Attorney:

This letter is written on behalf not only of me, as a concerned citizen and former land use/environmental attorney, but also on behalf of the 30,000 concerned citizens of Ward VI who speak through the non-profit Save-The-Aurora-Reservoir (STAR).

This is the first of two letters. This letter will deal with the language of the proposed Reservoir Setback only. The second letter will deal with critical missing regulatory changes that need to be dealt with in Phase I rather than Phase II of the regulatory amendment process.

Breach of the Duty to Regulate:

To begin with, I find it necessary to remind all of you once again of your duties under the authorizing legislation regarding this rule making process. Before SB-19-181 was enacted in 2019, there was a common belief that the State COGCC, and other State, County and City Oil and Gas departments that worked with it, were intended to **balance** oil and gas development with health and safety and environmental protection. SB-19-181, signed in 2019, completely dispelled that notion, and put the emphasis back fully on “**protection**” not balancing development and protection. As stated in the Legislative Summary of the authorizing legislation for the COGCC, SB-19-181:

Section 6 states that the public interest is to “**regulate**” oil and gas development to “**protect**” those values. [Emphasis supplied]

The County of Arapahoe has an express duty to be a steward of the Public Trust and must “carry out their duties for the benefit of the people of Arapahoe County.” [*Arapahoe County Code of Ethics*, Art. III.1] Therefore, it is inappropriate to compromise the protection of health, safety, welfare, or environmental protection in any way for political expediency or negotiation with oil and gas applicants.

I make this observation because of the two proposed “carve outs” in subsections i. and ii. of the Proposed Setback. These “carve outs” are convoluted and completely emasculate the one (1) mile setback proposed.¹ They are vague and ambiguous in wording. And subsection ii. is likely illegal in application. They appear to be an obvious effort to cater to CAP applicants who believe they can work out a “compromise” in moving certain well pads in exchange for an agreement not to move others. Such political “horse-trading” is not only totally inconsistent with the intent of the authorizing legislation directing regulation for the public benefit, it is also a clear breach of the duty to uphold the public trust.

Subsection ii. of the proposed Setback is also inconsistent with statutory duty and must be wholly abandoned for a second reason. It attempts to delegate rather than regulate. Worse yet, it attempts to delegate to persons or entities who are not charged with the same duties to uphold the Public Trust and “regulate to protect public health and safety” that the County, itself, is required to follow. It reads:

ii. With approval from the reservoir owner or operator, the setback may be reduced to the 500 ft. setback applicable to other perennial surface water bodies.

¹ It is noteworthy that the City of Aurora’s one (1) mile reservoir setback [Aurora City Code Chap. 135, 4.c.], upon which these provisions are based, contains no such “carve-outs” and remains a clean one (1) mile setback.

This means that either a reservoir owner or an operator², neither of which needs to be a public entity³ charged with the public trust duties of the County, can on their own initiative, without regard to public health and safety considerations, approve collapse of the setback from one (1) mile to 500 ft. -- an over 90% difference. This is an attempt at delegation rather than regulation and is manifestly improper because it violates the statutes cited above.

If a one (1) mile setback is considered appropriate by City staff to protect public health and safety for existing drinking water reservoirs, how is it believable that a collapse to 500 ft. is also protective of public health and safety for proposed future drinking water reservoirs! This is like saying, we will try and protect you now but woe to new residents, including your children and grandchildren, who drink the water from the proposed reservoirs in the future, that is someone else's problem! Such delegation rather than the required regulation MUST be redacted from the Proposed Setback as arbitrary and capricious. All subsections of every oil and gas regulation standing alone must meet the public interest test.

Vague and Ambiguous Language:

The "carve-out" Section i. of the Proposed Setback is so vaguely and ambiguously worded as to be unenforceable. It purports to allow the collapse of the one (1) mile reservoir setback to 2,000 ft. if the Oil and Gas Facility is "downgradient" from the reservoir. It reads:

i. At least one (1) mile from existing or proposed reservoirs, unless the applicant can demonstrate that the Oil and Gas Facility is downgradient from the reservoir, in which case a 2,000 ft. setback may apply.

Ambiguity and vagueness issues abound. For instance, what constitutes a "downgradient"? Is a 1% downgradient sufficient? At what distance is the gradient measured? Is it simply at the distance that the Applicant itself selects arbitrarily in order to comply? There is not even any requirement that the "downgradient" be sufficient to demonstrate there is no remaining substantial risk that a spill at either the well pad or associated flow lines running to and from the well pad could reach and contaminate the reservoir. In addition, what does "may apply" mean? Does it mean it that approval remains discretionary with the County or is it a substitute for the word "shall"? The carve-out, if it is too be applied at all, needs to be clear and unambiguously protective.

² The wording doesn't indicate what happens should the two entities be different and have differing views of a proper setback.

³ For example, within the Lowry Ranch property the Rangeview Metropolitan District owns two adjudicated Proposed Reservoirs on the ranch property. It is a Title 32 Special Metropolitan District but has not been given the power and duty to "regulate oil and gas development to protect public health safety and welfare" under SB-19-181. Indeed, there is no requirement in Subsection ii. of the Proposed Setback wording that the owner and operator granted the authority to collapse the Setback be even a public entity at all.

Furthermore, berms and gradients alone are insufficient barriers upon which to rely for health and safety protection. This is graphically demonstrated by the recent washout of two sections of the road surrounding the Cherry Creek Reservoir by two days of heavy rainfall (2 to 3 inches per day) which caused a 10 ft. reservoir rise, and a flooding event. [See: **Exhibit 1** attached **Photo of Cherry Creek Washout.**] One can only imagine the risk to reservoir berms in a 100 year flood event. This environmental risk is exacerbated to truly frightening levels if extracted fracking water is stored on site and overflows.

In order to cure this vague and ambiguous language **Exhibit 2** to this letter [**Proposed Substitute Setback**] contains needed specific language that includes needed protections and assures enforceability.

Failure To Consider Impacts Other Than Well Pad Spills:

Use of a “downgradient” test for collapsing the proposed one (1) mile setback to 2,000 ft. or even 500 ft. makes it obvious that potential spills from the well pad are the only risk being considered as relevant to setback distance needed. This is inappropriately short sighted.

First, my letter of March 13th to the Commissioners and Staff enclosed a Study from the California Oil and Gas Public Health Rulemaking Advisory Panel demonstrating dispersal of airborne cancer-causing pollutants over a range of up to 2.5 miles. The analysis of the CDPHE apparently presently relied upon by the County for only a 0.2 mile dispersal is clearly inadequate and inappropriate. It is based upon a dispersal study from a well pad of a single well. The well pads currently being proposed will contain as many as 25 individual wells spewing pollutants. Setbacks of 500 or even 2,000 ft. from reservoirs entirely fail to recognize the substantial risk of water pollution from airborne drift of pollutants across a large reservoir surface over 30 years.

Furthermore, use of the wording “Oil and Gas *Facility*” in the Proposed Setback suggests only well pad leaks are being considered. COGCC and industry data, however, indicate it is the network of flowlines associated with the well pads, with their numerous connections and valves, which are much more likely to suffer leaks. Even if the well pad is located between 500 and 2,000 ft. from a reservoir, there can be no assurance that a leaky flowline connection will be located the same or greater distance away. Nowhere does the language of the Proposed Setback address this issue.

The Solutions:

For these reasons, the County is urged first to simply consider total elimination of the “carve-out” wording with a return to a simple-straight forward one (1) mile reservoir setback identical

to the City of Aurora. That is clearly the most protective and best approach which places public health and safety as the appropriate goal.

Absent that approach, if the County insists upon a carve- out based upon topography, we strenuously urge the County to:

1. Recognize that, because of both the unreliability of berms and the need to consider air borne pollutants, the distance of the carve-out Setback for section i. must be increased to a distance that recognizes potential sources of reservoir contamination beyond simply well pad spills. We have not suggested what figure that distance should be because we disfavor this approach and believe a clean one (1) mile setback is the proper approach. We note, however, that maintaining just a 2,000 ft. setback is inconsistent with the announced goal of developing the “best oil and gas regulations in Colorado.”
2. Use a version of the County’s relief from setbacks approach already found in subsection 2.b.iii. and follow the Use by Special Review process under which the Operator must establish that the lesser setback “will provide substantially equivalent protection...and...will not adversely impact public health, safety, or welfare or the environment.”
3. Modify the “shall consider” language to provide clarity about factors to be dealt with to include air borne dispersal of pollutants and leaks and spills from other sources.

Again, in order to cure these language omissions **Exhibit 3** to this letter [**Proposed Substitute Setback**] contains needed specific language that will allow needed protections and assure enforceability.

Summary Conclusion:

In summary, the Proposed language, due to the two “carve outs” being included, is fatally flawed. STAR on behalf of the citizens of Ward VI and I therefore implore you to;

- First, do away with the improper and likely illegal delegation rather than regulation found in sub-paragraph ii.
- Show the courage of your convictions and drop the carve-out in section i. all together, keeping only the one (1) mile setback language.

If, and only if, the County decides that some “carve-out” from full application is required:

- Adopt a new lesser setback carve-out only if it will not adversely impact public health, safety, or welfare, or the environment” distance that is adequately protective; and

- Replace the language of subparagraph i. with language like the attached as **Exhibit 3** to this letter to achieve these purposes [**Proposed Substitute Setback**].

Sincerely,

/s/

John A. Granger, J.D. ret.

EXHIBITS:

EX. 1: Photo of Cherry Creek Washout

EX. 2: Proposed Substitute Setback language

June 5, 2023

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Aurora, CO 80016

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Jeff Baker, Arapahoe County Commissioner

Jessica Campbell-Swanson, Arapahoe County Commissioner

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Bill Holen, Arapahoe County Commissioner

Bryan D. Weimer, Director, Public Works and Development

Jason Reynolds, Planning Division Manager

Diane Kocis, Arapahoe County Energy Specialist

Ron Carl, Arapahoe County Attorney

Re: Proposed Arapahoe County Oil and Gas Facilities Regulation Amendments and Additions

Commissioners, Staff, and County Attorney:

This is the second of the two letters promised in our earlier letter of June 2, 2023 dealing with the County of Arapahoe's effort to produce what Commission Chairperson Warren Gully trusts will be the "best oil and gas regulations in the State of Colorado." The first letter dealt with the newly proposed Reservoir Setback language which fell short of that standard. This letter now deals with both an existing setback that requires modification and a critical new missing regulation to protect against fire risk. Because the non-profit Save-The-Aurora-Reservoir (STAR), on behalf of the 30,000 citizens of Ward VI, and I fully agree on the content of this second letter, I am sending it on its behalf as well as my own. Both of these changes are

important enough to require implementation now in Phase 1 (rather than later in Phase 2) of the regulatory amendment process.

Modification of The Existing Neighborhood Setbacks:

Oil and Gas Regulation 1-1.1.F.2.a, as it presently reads, provides for setbacks of :

- 2,000 ft. from “occupied structures” [subsection 2.a.i.];
- 2,000 ft. from the nearest boundary of a “platted lot” smaller than 15 acres in area as measured from the pad boundary; [subsection 2.a.ii] and
- Reduction to a lesser setback with a minimum distance of 500 ft. if certain conditions are shown, such as “equivalent protection” and a setback distance which “will not adversely impact public health, safety, or welfare or the environment.” [subsection 2.b.iii]

We believe these setbacks, given the present state of public health and safety regulatory knowledge, are insufficiently protective and require modification.

Zoning is an act performed by the County to allow purchasers and end-users needed certainty in future land use decisions. Thoughtful zoning naturally clusters compatible uses and rationally takes into account the designation of adjoining uses, in an effort to minimize incompatibility. Residential zoning boundaries and zoning which deals with oil and gas facility locations carry a high risk of incompatibility. Therefore they (and regulations concerning them) must be carefully drawn, particularly when the adjoin each other.

We believe as follows:

1. When setting setbacks from occupied structures, platted areas, and residential zones (hereinafter referred to collectively as “neighborhood setbacks”), a 2,000 ft. setback is insufficient, particularly now given the air pollution dispersal studies referred to in our letter of March 13 referencing the California Oil and Gas public Rulemaking Scientific Advisory Panels, indicating a 2.5 mile dispersal zone.
2. There is no basis for discriminating between a setback distance for drinking water reservoir safety and the safety of citizens (particularly children and infants) in neighborhoods which are positioned adjacent to oil and gas facilities. For this reason, we believe the neighborhood setbacks should begin with a setback distance of one (1) mile like the reservoir setback.
3. Furthermore, it is irrational to limit any oil and gas facility setback solely to “platted lots” and “occupied structures” when, during the 30 year life of any oil and gas project, areas zoned residential will naturally become filled with residences, parks, sidewalks and open

spaces used by recreating children and adults. To limit the setback to either “occupied structures” or “platted lots” does not reasonably separate these uses from the Oil and Gas Facility. As the as yet undeveloped residential area becomes fully developed, even with the application of reverse setbacks in the residential area, these later open space residential areas will be equally subjected to air borne pollution, and noise, light, sound, vibration and visual pollution as are occupied structures.

4. In addition, when residential zoning pre-exists the development of the oil and gas facilities, it is patently unfair to require residential developers to race against the Oil and Gas Applicant permit in order to protect their residential plats from being subject to reverse setbacks¹.
5. Finally, it is not protective of public health and safety to allow these neighborhood setbacks to be arbitrarily reduced (such as under provision 2.b.) to a lesser setback (to a minimum of 500 ft.) just because the owners of occupied structures and platted lots agree. This is a flawed provision under the current provisions of SB-19-181 because once again, it is an attempt to delegate rather than regulate in the public interest. Public health and safety is not paramount when a developer of unsold plats can negotiate with an Oil and Gas Applicant to reduce a setback from 2,000 ft. to 500 ft. irrespective of the safety and health benefits to the public that maintaining a minimum 2,000 setback would retain. This is even more apparent when larger multi-well pads are involved.
6. Even, the addition of the language of subsection b. iii. which provides for a Use by Special Review process and proof of “substantially equivalent” protection fails to effectively rescue these flawed setback provisions. It could never cogently be argued that a well pad as close as 500 ft. would produce no more airborne pollutant dispersal or noise, light, vibration and visual pollution than a pad kept a minimum of 2,000 ft. away. Such setback collapse provisions simply invite compromises and trade-offs rather than public protection.

Notably, other jurisdictions have drawn the same conclusion, that is, that a clear (non-collapsible) setback from areas zoned residential is the proper way to approach this issue. For example, the City of Boulder has adopted Ordinance 8514 which requires a “setback buffer” specifying that:

“[A] well pad...for any multi-well oil and gas operation...shall be located **no closer than 2500 feet from any...existing residential use, RESIDENTIAL ZONE**,...public park and recreation [sic] use,...including City of Boulder open space. [Emphasis supplied].

¹ Indeed this practice of forcing owners of as yet un-platted residentially zoned land to move back their development due to being too close to a Oil and Gas Facility has the appearance of a taking without due compensation.

A further example is the City of Broomfield which on April 12, 2022, adopted an Ordinance requiring any Oil and Gas setback be from **residential areas “planned” within a development plan**. Ord. 2178(2) iii and iv. [Emphasis supplied.]

Therefore, we urge adoption of modified language which cures these deficiencies. The language shown in **Exhibit A** to this letter shows a modified neighborhood setback which provides:

- For a one (1) mile neighborhood setback;
- That the setback be from areas zoned residential rather than “platted lots”; and
- That reduction of the one (1) mile setback be allowed under the same circumstances now described in the regulations but only to a distance of some County-selected minimum well above the current 2,000 ft. [and certainly not 500 ft.].²

These changes to the language shown in **EXHIBIT A** are needed to upgrade this provision to one that adequately protect the public. STAR and I strenuously urge its substitution for the currently flawed neighborhood setback language, along with increasing the setback distance to one (1) mile.

Addition of a Fire Protection Provision for Oil and Gas Facilities Located in the WUI

The devastating Marshall fire, as noted in our earlier letter of March 13, 2023, began in identical Piedmont Grassland to those grasses found in a large portion of wildland properties in unincorporated Arapahoe County, such as the Lowry Ranch property. It is therefore incumbent upon the County to develop regulations now that will prevent repeat of such a devastating fire in wildlands adjacent to residential and urban area – areas known as the Wildland Urban Interface or (WUI).

The Office of Emergency Management, under the leadership of its Director Nathan Fogg, is currently analyzing and modeling the risk of similar fire spread on the southwest corner of the Lowry Ranch property where a large expanse of such grasslands lie. He is working in concert with the fire authorities with jurisdiction in that area, Bennett Fire and Rescue and Aurora Fire and Rescue. This work shows the importance of such fire protection measures.

Eliminating any significant fire risk is such an important part of the County’s obligation to “protect the public health, safety and welfare and the environment” when regulating oil and gas facilities. We contend, therefore, that a special WUI fire protection provision is a critical part of what the County should be addressing now during its 6 month regulatory review. It is not appropriate for protection to rely solely upon the verbiage of the current setback 2.b. i. and

² This minimum distance based on the stated goal of developing the “best oil and gas regulations in Colorado” should be increased at least above the 2,500 ft. distance in the Boulder regulation.

ii. which requires a 2,000 ft. buffer between “storage of hazardous or explosive materials” and “occupied structures” or “platted lots”, even when a fire district “agrees to provide service” to the facility.

We therefore strenuously urge the County to adopt a new strongly protective provision to accomplish the following:

- Define the Wildland Urban Interface between residential/urban areas and wildlands such as grasslands;
- Authorize the OEM to determine which portion, if any, of the WUI represents a significant risk of fire spread; and
- Provide that no oil and gas facility should be located in areas so designated without the specific authorization in advance of the OEM and any fire authorities with jurisdiction over the area so designated.

EXHIBIT B to this letter contains the specific language needed for this purpose.

In conclusion, we urge the County to do the following:

1. Eliminate the references to “platted lots” in their setback regulations and instead reference “areas zoned residential”;
2. Establish a setback distance from both “occupied structures” and “areas zoned residential” of one (1) mile (consistent with drinking water reservoir protection and current national pollution dispersal studies);
3. Adopt language allowing reduction of this one (1) mile setback to some reasonable distance (greater than a minimum of 2,500 ft. used in Boulder) only through the Use by Special Review process upon a showing the “lesser setback will not adversely impact public health, safety or welfare or the environment”;
4. Eliminate provisions that allow further setback distance reductions based upon owner consent agreements as delegations inconsistent with the County’s duty to regulate to “protect the public health, safety, and welfare, and the environment”; and
5. Add a specific protection provision dealing with those Wildland Urban Interface areas designated by OEM to have a “significant risk” of fire spread.

Exhibits A and B to this letter contain the necessary language to meet these important goals, and we urge the County to adopt them now.

Sincerely,

/s/

John A. Granger, J.D. ret.

EXHIBITS:

EX A: PROPOSED AMENDMENT TO OIL AND GAS SETBACK FOR OCCUPIED STRUCTURES AND PLATTED LOTS

EX B: Proposed New Oil and Gas Regulation Dealing With Fire Protection In the Wildland Urban Interface

EXHIBIT 1

PROPOSED AMENDMENT TO OIL AND GAS SETBACK FOR OCCUPIED STRUCTURES AND PLATTED LOTS

1-1.1.F Standards Required for Oil and Gas Facilities

2. Setbacks

a. All oil and gas Facilities shall be located at least:

i. ~~One (1) mile 2,000 ft.~~ from any occupied structure as measured from the pad boundary.

ii. ~~2,000 ft. One (1) mile~~ from the nearest boundary of any ~~platted lot smaller than 15 acres area zoned residential~~ as measured from the well pad boundary.

b. The ~~2,000-foot one (1) mile~~ setbacks from ~~occuoied structures and any area zoned residential occupied structures or platted lots~~ referenced in subparagraphs ~~5-3.6.F.a.i and ii 1-1.1.F.2.a~~ above may be reduced to a lesser setback:

~~i. If the owner(s) of the occupied structure(s) or all owners of the affected platted lots agree in writing to a lesser setback and the fire district agrees to provide service to the Oil and Gas Facility; however, even with owner consent, in no case may the setback be reduced below 500 feet; or~~

~~ii. If, as shown on the Oil and Gas Facility Operations Plan submitted with the application, any and all well tanks, tanks, separation equipment, compressors and any stored hazardous or explosive materials on the Oil and Gas Facility pad will be located or stored more than 2,000 feet from the nearest occupied structure or all affected platted lots; or~~

~~iii. Only if~~ an Oil and Gas Facility application that includes a lesser setback is submitted, ~~it must be and~~ approved by the Board of County Commissioners through the Use by Special Review process provided in Section 5-3.4 of the Land Development. For approval of any lesser setback under this subparagraph, the Operator must establish that the lesser setback as provided will provide substantially equivalent protection to a ~~2,000-foot setback one (1) mile setback~~ and that the granting of the lesser setback will not adversely impact public health, safety, or welfare or the environment.

In reviewing the proposed lesser setback, the Board of County Commissioners shall consider the extent to which the operator provides an alternative Oil and Gas Facility design,

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best management practices, control technologies, or proposes conditions of approval that will be effective to avoid, minimize, or mitigate adverse impacts on the affected properties, considering:

(a) geology, technology, and natural or added features (such as gradients or berms), hazards, or topography;

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(b) the location and use of occupied structures and areas zoned residential and proximity to those structures and areas;

(c) the anticipated size, duration, and intensity of all phases of the proposed oil and gas operations at the proposed oil and gas location, and

iv. However, in no case may the 2,000-foot-the one (1) mile setback from occupied structures and platted lots be reduced below 500-¹ feet.

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¹ As stated in the explanatory letter this distance should be something in excess of 2,500 feet as found in the City of Boulder residential setback regulations.

EXHIBIT 2

PROPOSED NEW OIL AND GAS REGULATION DEALING WITH FIRE PROTECTION IN THE WILDLAND URBAN INTERFACE

1-1.1.F.3. Health and Safety Requirements

d. Wildland Areas Designated as Having Significant Risk of Fire Spread: No Oil and Gas Facility shall be located within any portion of the Wildland Urban Interface (WUI) designated by the Office of Emergency Management (OEM) as having a significant risk of fire spread unless written consent has been first granted by both the OEM and any Fire Marshall or Fire Chief with jurisdiction over the WUI area so designated. Consent shall require proof of the satisfaction of both the OEM and fire authority with jurisdiction of the presence of needed time and distance to respond; precautionary measures to be taken; adequate training to be performed; and adequate fire prevention and suppression equipment available.

For the purposes of this regulation, Wildland Urban Interface (WUI) shall be defined as that one (1) mile wide wildland area where the boundaries of wildland areas and urban/residential areas adjoin.

Ava Pecherzewski

From: Diane Kocis
Sent: Wednesday, July 12, 2023 1:20 PM
To: Ava Pecherzewski
Subject: FW: Proposed Amendment to Land Development Code Re. Crypto-Mining as an Adjunct to Oil and Gas Facilities
Attachments: Ltr re. objection to allowing crypto-currency mining as an accessory to oil and gas facilities (1).docx

Here's John Granger's letter re crypto-mining.

From: John Granger <1jagranger@gmail.com>
Sent: Monday, June 19, 2023 7:24 AM
To: Carrie Warren-Gully <CWarrenGully@arapahoegov.com>; Jeff Baker <JBaker@arapahoegov.com>; Jessica Campbell-Swanson <JCampbell-Swanson@arapahoegov.com>; Leslie Summey <LSummey@arapahoegov.com>; Bill L. Holen <BHolen@arapahoegov.com>; Bryan Weimer <BWeimer@arapahoegov.com>; Jason Reynolds <JReynolds@arapahoegov.com>; Diane Kocis <DKocis@arapahoegov.com>
Cc: Kevin Chan <kevchan85@icloud.com>
Subject: Proposed Amendment to Land Development Code Re. Crypto-Mining as an Adjunct to Oil and Gas Facilities

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Commissioners and Staff: Please see the attached letter and exhibits making objections to the draft Code change re crypto-mining.

Thank you. John Granger.

EX 1: [Colorado oil and gas companies pair with cryptocurrency miners \(coloradosun.com\)](https://coloradosun.com)

EX 2: [Exposing Climate Threats From an Empire of Dying Gas Wells \(bloomberg.com\)](https://bloomberg.com)

EX 3: [Crypto Mining at Gas Wells Sparks Regulatory Headaches, Outcry in Northwestern Pennsylvania \(capitalandmain.com\)](https://capitalandmain.com)

EX 4: [Cryptocurrency mines found at Colorado oil and gas sites | 9news.com](https://9news.com)

EX 5: [Technology: UNM researchers find Bitcoin mining is environmentally unsustainable: UNM Newsroom](#)

June 16, 2023

John A. Granger, J.D. ret.
6391 S. Patsburg Ct.
Aurora, CO 80016

Carrie Warren-Gully, Chair, Arapahoe County Commissioners

Jeff Baker, Arapahoe County Commissioner

Jessica Campbell-Swanson, Arapahoe County Commissioner

Leslie Summey, Arapahoe County Commissioner

Bill Holen, Arapahoe County Commissioner

Bryan D. Weimer, Director, Public Works and Development

Jason Reynolds, Planning Division Manager

Diane Kocis, Arapahoe County Energy Specialist

Re: Proposed Arapahoe County Oil and Gas Facilities Regulation Amendments and Additions Re
Cryptocurrency “Mining” as “an accessory to oil and gas facilities”

Commissioners and Staff:

This is the third of the letters dealing with the County of Arapahoe’s effort to produce what Commission Chairperson Warren Gully trusts will be the “best oil and gas regulations in the State of Colorado.” This third letter deals with what at first glance may appear to be an innocuous, editorial clean-up of the County’s Land Development Code. It is described by Diane Kocis in her published list of County regulatory amendment topics as simply to: “allow natural gas-powered crypto-currency mining as an accessory to oil and gas facilities.” [Emphasis supplied.] Both the non-profit Save-The-Aurora-Reservoir (STAR) and I find such a change anything but innocuous and editorial, and seriously object to such a change, especially during Phase 1 of the amendment consideration process.

What Crypto-Currency “Mining” Really Is:

Crypto-“mining” is of course not really mining at all. When coupled with oil and gas facilities, it describes a marriage of bitcoin-style data processing computers (usually housed in trailers) being coupled with gas wells which have modest levels of natural gas left over after extraction is complete. Generators are attached to the nearly spent gas well heads to cheaply power the energy-hungry crypto-currency transaction computers. This marriage results in crypto-“mining.”

The COGCC Reports That Arapahoe County Originally Said No:

In July of 2022, the COGCC surveyed local governments to see if they had any crypto-mining rules and whether they wished to be notified if the Commission found crypto-mining occurring within their jurisdiction. Reportedly, Arapahoe County was one of four counties that said such oil and gas powered crypto-mining would not be permitted in their county without further regulation. [See pp. 2 of **EXHIBIT 1 --The Colorado Sun Article of August 29, 2022.**] Why make a change in position now without careful investigation and further debate?

There Remain Good Reasons Not to Permit Crypto-Mining As an Adjunct to Oil and Gas Facilities:

Very good reasons remain for not allowing the marriage between nearly spent oil and gas facilities and crypto-mining. These reasons include the following:

- Crypto-Mining entities look for nearly spent wells that they can purchase the rights to and often extend the lives of by 10 years or more to use for crypto-mining. The problem is that these older nearly spent wells are the very place where most leaks occur, leaks which would never occur were the wells and piping properly shut down and capped when they were no longer economically viable to the original extractor. [See: **EXHIBIT 2: An Empire of Dying Wells** and **EXHIBIT 3: Crypto Mining at Gas Wells Sparks Regulatory Headaches, Outcry in Northwestern Pennsylvania**]
 - Adams County remains concerned about fumes, noise and fire hazards from the generators used to capture the remaining natural gas. [**EXHIBIT 4: High-powered computers at Adams County oil and gas sites are mining cryptocurrency**]
 - In Jackson County where D90 Energy has teamed up with Denver-based Crusoe Energy to use stranded natural gas from oil and gas facilities to power crypto mining, Earthworks Colorado’s field advocate Andrew Klooster, who has actively been monitoring emissions complains:

“This is some of the most inefficient [flaring] combustion I’ve seen in the State...We’re seeing flaring even with the Crusoe units operating.” [See: pp. 6 of **EXHIBIT 1**]

- Researchers at the University of New Mexico in a paper dated September 2022 assessed crypto-mining’s sustainability and concluded it is not environmentally sustainable:

“Globally, the mining, or production of Bitcoin is using tremendous amounts of electricity, mostly from fossil fuels, such as coal and natural gas. This is causing huge amounts of air pollution and carbon emissions, which is negatively impacting our global climate and health.” [**EXHIBIT 5: Technology: UNM researchers find Bitcoin mining is environmentally unsustainable**]

Conclusion:

Each of these points clearly lead to the conclusion that allowing crypto-mining simply as a so-called “adjunct” to oil and gas facilities, particularly without careful study and further regulation, is irresponsible. For that reason both STAR and I strenuously object to allowing crypto-mining as a Permitted Use in the Land Use Table of Chapter 3 of the County’s Land Development Code as part of Phase 1 of the County’s consideration of regulatory amendments.

Sincerely,

/s/

John A. Granger, J.D. ret.

EXHIBITS:

EXHIBIT 1 --The Colorado Sun, Article of August 29, 2022.]

EXHIBIT 2: An Empire of Dying Wells

EXHIBIT 3: Crypto Mining at Gas Wells Sparks Regulatory Headaches, Outcry in Northwestern Pennsylvania

EXHIBIT 4: High-powered computers at Adams County oil and gas sites are mining cryptocurrency

EXHIBIT 5: Technology: UNM researchers find Bitcoin mining is environmentally unsustainable

Ava Pecherzewski

From: Diane Kocis
Sent: Wednesday, July 12, 2023 1:04 PM
To: Ava Pecherzewski
Subject: FW: Oil and Gas regulation amendments
Attachments: PROPOSED MODIFICATIONS TO COUNTY OF ARAPAHOE SETBACKS.docx

Here's a Granger letter from June 23rd. I will also send his exhibits (the Word docs) for his earlier in June letters.

From: John Granger <1jagranger@gmail.com>
Sent: Friday, June 23, 2023 2:17 PM
To: Diane Kocis <DKocis@arapahoegov.com>; Jason Reynolds <JReynolds@arapahoegov.com>; Bryan Weimer <BWeimer@arapahoegov.com>
Cc: Jessica Campbell-Swanson <JCampbell-Swanson@arapahoegov.com>; Jeff Baker <JBaker@arapahoegov.com>
Subject: Oil and Gas regulation amendments

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Diane, Jason and Bryan:

Enclosed please find my proposed amendments to your latest draft of the Oil and Gas Regulations following the Open House. Please note the following:

1. These are my own suggested amendments (not STARs) since they vary somewhat from the earlier stated position on behalf of STAR;
2. They use your existing draft regulations and show my suggested changes and edits;
3. They apply the same test to reducing water reservoir setbacks as used for occupied dwellings, that is a "substantial equivalency" test rather than a "downgradient test" or "agreement of owners/operators" test.
4. They apply setbacks to areas zoned residential rather than platted lots.
5. They use appropriate setback distances which meet the Commissioner's objective of "creating the best regulations in the state of Colorado" and recognize the impact of the latest national studies on protection of public health and safety, but without going overboard and risking industry litigation.
6. They deal with Farmer Joe who wants to allow an oil well near his small farm pond.
7. They recognize the need to deal with entities like Prosper Development which have existing recorded Surface Use Agreements and wish to allow reduced setbacks.

I would be happy to meet with you at any time to discuss these suggested amendments. I am copying Commissioners Campbell-Swanson and Baker since I have either already met with or am planning to meet with each of them to discuss my suggested amendments.

Thanks for your consideration of these amendments and edits.

**PROPOSED MODIFICATIONS TO COUNTY OF ARAPAHOE'S OIL AND GAS
SETBACKS NEEDED TO BOTH MEET THE COMMISSIONERS CHALLENGE TO HAVE
"THE BEST OIL AND GAS REGULATIONS IN COLORADO" AND TO REGULATE NOT
DELEGATE THE RESPONSIBILITY TO PROTECT PUBLIC HEALTH, SAFETY AND THE
ENVIRONMENT**

JOHN A. GRANGER, J.D. RET.

2. Setbacks

a. All Oil and Gas Facilities shall be located at least:

- i. ~~2,000~~ 3,000 feet from any occupied structure as measured from the pad boundary.
- ii. ~~2,000~~ 3,000 feet from the nearest boundary ~~of a platted lot smaller than 15 acres in area~~ any area zoned residential as measured from the pad boundary.
- iii. ~~200~~ 500 feet from any adjacent property's boundary line as measured from the pad boundary.
- iv. ~~100~~ 250 feet from public rights-of-way as measured from the pad boundary.
- v. ~~2,000~~ 3,000 feet from a Designated Outside Activity Area as measured from the pad boundary.
- vi. ~~2,620~~ 5,000 feet from the nearest property line of an operating or closed landfill as measured from the pad boundary.
- vii. Outside of a 100-year floodplain ~~or~~ and at least ~~500~~ 1,000 feet from the edge of any perennial surface water body, the ordinary high water mark of any perennial or intermittent stream or the edge of any riparian area, whichever is the greatest distance, as measured from the pad boundary, unless CPW has waived or modified the setback from the stream, surface

water, or the riparian area following in accordance with COGCC Rules 309 and 1202.

viii. ~~d.~~ Water Reservoir Setbacks: All Oil and Gas Facilities shall be located:

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(1) ~~i.~~ At least ~~one-mile~~ 5,000 feet from existing or planned and adjudicated water reservoirs, over 100 acre feet in size or used for drinking water storage. ~~unless the applicant can demonstrate that the Oil and Gas Facility is downgradient from the reservoir, in which case a 2,000-foot setback shall apply.~~

ii. ~~With approval from the reservoir owner or operator, the setback may be reduced to the 500-foot setback applicable to other perennial surface water bodies.~~

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~~ix~~ ~~viii.~~ All access roads shall be at least ~~250~~ 500 feet from a residential or non-residential property line, excluding light or heavy industrially zoned properties.

b. The ~~2,000-3,000 and 5,000~~ feet setbacks from occupied structures, Designated Outside Activity Areas, areas zoned residential, or platted lots water reservoirs referenced in subparagraphs 5-3.6.F.2.a.i., ~~and ii,~~ v and viii above may be ~~also~~ reduced to a lesser setback:

~~i. If the owner(s) of the occupied structure(s) or all owners of the affected platted lots agree in writing to a lesser setback and the fire district agrees to provide service to the Oil and Gas Facility; however, even with owner consent, in no case may the setback be reduced below 500 feet; or~~

~~ii. If, as shown on the Oil and Gas Facilities Plan submitted with the application, any and all wells, tanks, separation equipment, compressors and any stored hazardous or explosive materials on the Oil and Gas Facility pad will be located or stored more than 2,000 feet from the nearest occupied structure or all affected platted lots; or~~

iii. If, and only if, an Oil and Gas Facility application that includes a lesser setback is submitted, it must be and approved by the Board of County Commissioners through the Use by Special Review process provided in Section 5-3.4 of the Land Development Code. For approval of any lesser setback under ~~the~~ this subparagraph, the Operator must establish that the lesser setback as proposed will provide substantially equivalent protection to a ~~2,000~~ 3,000 foot (or in the case of Water Reservoirs 5,000 foot) setback and that by granting the lesser setback will not adversely impact public health, safety, or welfare, or the environment. In reviewing the proposed lesser setback, the Board of County Commissioners shall consider the extent to which the operator provides an alternative Oil and Gas Facility location, design, best management practices, control technologies, ~~or~~ and proposes conditions of approval that will be effective to avoid, minimize, ~~or~~ and mitigate adverse impacts on the affected properties, considering:

- (a) geology, hydrology, technology, and natural features (such as downgradients), hazards or topography (such as berms);
- (b) the location and use of any occupied structures and proximity to those structures; and
- (c) the anticipated size, duration, and intensity of all phases of the proposed oil and gas operations, at the proposed oil and gas location.

(d) the likelihood and expected dispersal of and nature of airborne pollutants from the Oil and Gas Facility;

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(e) The likelihood and expected dispersal and nature of spills and leaks from equipment used by the Oil and Gas Facility;

(d) whether, as shown on the Oil and Gas Facilities Plan submitted with the application, any and all wells, tanks, separation equipment, **flowlines, tank batteries, valves**, compressors, and any stored hazardous or explosive materials on the Oil and Gas Facility pad will be located or stored more than **3,000 feet** from the nearest occupied structure or area zoned residential; and

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(e) whether an existing Surface Use Agreement is in place and properly recorded for the property in question.

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iv. However, in no case may the ~~2,000~~3,000-foot setback from occupied structures, ~~reservoirs, Designated Outside Activity Areas,~~ or ~~platted lots areas zoned residential~~ be reduced below ~~500~~ 1,500 feet.

c. Reverse Setbacks: No new occupied structure shall be constructed less than:

i. ~~250~~ 500 feet from and existing Oil and Gas well of any status (permitted but not drilled yet, drilling, completing, producing, active gas storage, injecting, shut-in, temporarily abandoned, dry and abandoned, or plugged and abandoned prior to 2014).

ii. ~~150-300~~ feet from a plugged and abandoned oil and gas well or remaining equipment that was plugged and abandoned from 2014 onward.

~~d. Water Reservoir Setbacks: All Oil and Gas Facilities shall be located:~~

~~i. At least one mile from existing or planned water reservoirs, unless the applicant can demonstrate that the Oil and Gas Facility is downgradient from the reservoir, in which case a 2,000 foot setback shall apply.~~

~~ii. With approval from the reservoir owner or operator, the setback may be reduced to the 500-foot setback applicable to other perennial surface water bodies.~~

Ava Pecherzewski

From: Diane Kocis
Sent: Wednesday, July 12, 2023 1:16 PM
To: Ava Pecherzewski
Subject: FW: Suggested edits to proposed regulations following discussion with Commissioner Baker
Attachments: PROPOSED MODIFICATIONS TO COUNTY OF ARAPAHOE SETBACKS Discussed with Commissioner Baker.docx

This is John Granger's most recent letter, after talking to Jeff Baker – he backed off some of his original demands for setbacks.

From: John Granger <1jagranger@gmail.com>
Sent: Thursday, July 6, 2023 1:23 PM
To: Jeff Baker <JBaker@arapahoegov.com>; Jason Reynolds <JReynolds@arapahoegov.com>; Diane Kocis <DKocis@arapahoegov.com>
Cc: Jessica Campbell-Swanson <JCampbell-Swanson@arapahoegov.com>; Carrie Warren-Gully <CWarrenGully@arapahoegov.com>
Subject: Suggested edits to proposed regulations following discussion with Commissioner Baker

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All: Commissioner Baker and I had a very productive discussion in which we discussed simple, straight forward, and pragmatic edits to the proposed regulations. At the completion of the discussion, he asked that I forward the proposed changes to staff. I am also copying Commissioner Campbell-Swanson and Commissioner Warren-Gully because of our similar and/or planned discussions.

Please note these represent give-and-take changes that have not been discussed with or approved by STAR, Colorado Rising or the Sierra Club but represent only my own thoughts and my discussions with Commissioner Baker. Let me know if you have any questions. Regards, John

**PROPOSED MODIFICATIONS TO COUNTY OF ARAPAHOE'S OIL AND GAS
SETBACKS NEEDED TO REGULATE NOT DELEGATE THE RESPONSIBILITY TO
PROTECT PUBLIC HEALTH, SAFETY AND THE ENVIRONMENT**

JOHN A. GRANGER, J.D. RET. 7/6/23

2. Setbacks

a. All Oil and Gas Facilities shall be located at least:

i. ~~2,000~~3,000 feet from any occupied structure as measured from the pad boundary.

ii. ~~2,000~~3,000 feet from the nearest boundary ~~of a platted lot smaller than 15 acres in area~~any area zoned residential as measured from the pad boundary.

iii. 200 feet from any adjacent property's boundary line as measured from the pad boundary.

iv. 100 feet from public rights-of-way as measured from the pad boundary.

v. ~~2,000~~3,000 feet from a Designated Outside Activity Area as measured from the pad boundary.

vi. ~~2,620~~3,000 feet from the nearest property line of an operating or closed landfill as measured from the pad boundary.

vii. Outside of a 100-year floodplain ~~or~~and at least 500 feet from the edge of any perennial surface water body, the ordinary high water mark of any perennial or intermittent stream or the edge of any riparian area, whichever is the greatest distance, as measured from the pad boundary, unless CPW has waived or modified the setback from the stream, surface water, or the riparian area following in accordance with COGCC Rules 309 and 1202.

viii. ~~4-Water Reservoir Setbacks: All Oil and Gas Facilities shall be located:~~

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(1) i. At least ~~one-mile~~ 3,000 feet from existing or planned and adjudicated water reservoirs, over 100 acre feet in size or used for drinking water storage. ~~unless the applicant can demonstrate that the Oil and Gas Facility is downgradient from the reservoir, in which case a 2,000-foot setback shall apply.~~

ii. With approval from the reservoir owner or operator, the setback may be reduced to the 500-foot setback applicable to other perennial surface water bodies.

~~ix~~ viii. All access roads shall be at least 250 feet from a residential or non-residential property line, excluding light or heavy industrially zoned properties.

b. The ~~2,000-3,000~~ feet setbacks from occupied structures, Designated Outside Activity Areas, areas zoned residential, or platted lots water reservoirs referenced in subparagraphs 5-3.6.F.2.a.i, ~~and ii~~, v and viii above may be ~~also~~ reduced to a lesser setback:

~~i. If the owner(s) of the occupied structure(s) or all owners of the affected platted lots agree in writing to a lesser setback and the fire district agrees to provide service to the Oil and Gas Facility; however, even with owner consent, in no case may the setback be reduced below 500 feet; or~~

~~ii. If, as shown on the Oil and Gas Facilities Plan submitted with the application, any and all wells, tanks, separation equipment, compressors and any stored hazardous or explosive materials on the Oil and Gas Facility pad will be located or stored more than 2,000 feet from the nearest occupied structure or all affected platted lots; or~~

~~iii i.~~ i. If, ~~and only if~~ -an Oil and Gas Facility application that includes a lesser setback is submitted, ~~it must be~~ and approved by the Board of County Commissioners through the Use by Special Review process provided in Section 5-3.4 of the Land Development Code. For approval of any lesser

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setback under ~~the~~this subparagraph, the Operator must establish that the lesser setback as proposed will provide substantially equivalent protection to a ~~2,000~~3,000 foot setback and that by granting the lesser setback will not adversely impact public health, safety, or welfare, or the environment. In reviewing the proposed lesser setback, the Board of County Commissioners shall consider the extent to which the operator provides an alternative Oil and Gas Facility location, design, best management practices, control technologies, ~~or~~and proposes conditions of approval that will be effective to avoid, minimize, ~~or~~and mitigate adverse impacts on the affected properties, considering:

(a) geology, hydrology, technology, and natural features (such as downgradients), hazards or topography (such as berms);

(b) the location and use of any occupied structures and proximity to those structures; and

(c) the anticipated size, duration, and intensity of all phases of the proposed oil and gas operations, at the proposed oil and gas location.

(d) the likelihood and expected dispersal of and nature of airborne pollutants from the Oil and Gas Facility;

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(e) The likelihood and expected dispersal and nature of spills and leaks from equipment used by the Oil and Gas Facility;

(f) whether, as shown on the Oil and Gas Facilities Plan submitted with the application, any and all wells, tanks, separation equipment, ***flowlines, tank batteries, valves***, compressors, and any stored hazardous or explosive materials on the Oil and Gas Facility pad will be located or stored more than ***3,000 feet*** from the nearest occupied structure or area zoned residential; and

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(g) whether an existing Surface Use Agreement is in place and properly recorded for the property in question.

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[Note language above which is bolded and italicized is new.]

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iv. However, in no case may the 2,0003,000-foot setback from occupied structures, reservoirs, Designated Outside Activity Areas, -or platted lots areas zoned residential be reduced below 500 1,500 feet.

c. Reverse Setbacks: No new occupied structure shall be constructed less than:

i. 250 500 feet from and existing Oil and Gas well of any status (permitted but not drilled yet, drilling, completing, producing, active gas storage, injecting, shut-in, temporarily abandoned, dry and abandoned, or plugged and abandoned prior to 2014).

ii. 150 300 feet from a plugged and abandoned oil and gas well or remaining equipment that was plugged and abandoned from 2014 onward.

~~d. Water Reservoir Setbacks: All Oil and Gas Facilities shall be located:~~

~~i. At least one-mile from existing or planned water reservoirs, unless the applicant can demonstrate that the Oil and Gas Facility is downgradient from the reservoir, in which case a 2,000-foot setback shall apply.~~

~~ii. With approval from the reservoir owner or operator, the setback may be reduced to the 500-foot setback applicable to other perennial surface water bodies.~~

d. **Wildland Areas Designated as Having Significant Risk of Fire Spread:** No Oil and Gas Facility shall be located within any portion of the Wildland Urban Interface (WUI) designated by the Office of Emergency Management (OEM) as having a significant risk of fire spread unless written consent has been first granted by both the OEM and any Fire Marshall or Fire Chief with jurisdiction over the WUI area so designated. Consent shall require proof of the satisfaction of both the OEM and fire authority with jurisdiction of the presence of needed time and distance to respond; precautionary measures to be taken; adequate training to be performed; and adequate fire prevention and suppression equipment available.

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For the purposes of this regulation, Wildland Urban Interface (WUI) shall be defined as that one (1) mile wide wildland area where the boundaries of wildland areas and urban/residential areas adjoin.

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Ava Pecherzewski

From: Marsha Kamin <marshagkamin@comcast.net>
Sent: Thursday, June 29, 2023 5:51 PM
To: Diane Kocis
Subject: Public Comments regarding the Arapahoe County Oil and Gas revised regulations

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Dear Ms. Kocis,

I, like many other residents in Arapahoe County, moved here specifically to be away from oil and gas development. Now, many of my neighbors are talking about listing their homes and getting away from Arapahoe County. The angst in our area is growing. I chose to live in a densely populated residential area, along side open conservation land, to enjoy the benefits of wide open spaces, trails, parks and bike paths. People come from all over to recreate at the Aurora Reservoir, where power boats are not even allowed to pollute the water, air or noise. It attracts tourists from everywhere.

I have carefully read the proposed oil and gas regulation revisions and would like to address setbacks. Knowing that developers can drill horizontally up to 6 miles from the well, I feel that the County must notify everyone affected by this intended drilling, at least 1 mile from the end of the horizontal drilling, the actual OGD footprint, about this intended OGD nearby their homes. Public notification is essential and this would cover a wide radius surrounding oil and gas operations.

In fact, setbacks from all well pads must be a minimum of 1 mile from all occupied and unoccupied (future housing sites) dwellings, schools, Reservoirs (including planned Reservoirs) in all of Arapahoe County.

Another essential reason for this setback is explained in a recently published study using statewide air quality monitoring data from California, which investigated whether drilling new wells or increasing production volume at active wells resulted in emissions of fine particulate matter. The authors documented higher concentrations of air pollution at air quality monitoring sites within 2.5 miles of pre-production OGD well sites and 1.25 miles of production OGD well sites. These multiple stressors, along with other physical factors such as noise and vibration, are consistently found in exposure studies to be measurably higher near oil and gas extraction wells and other ancillary infrastructure. The Panel concluded, with a high level of certainty, that concentrations of health-damaging air pollutants, including criteria air pollutants and toxic air contaminants, are more concentrated near OGD activities compared to further away.

It is very windy in Arapahoe County open spaces and the extreme fire risks associated with oil and gas operations is also a concern. We are in a Stage One Drought and it is quite dry in the grasslands.

We need to protect the health and safety of our residents and set an example for the State and the nation by raising our standards for oil and gas regulations. The power to regulate oil and gas in Arapahoe County is in your hands.

Marsha Goldsmith Kamin

Ava Pecherzewski

From: Kirsten Miller <fosskirsten@yahoo.com>
Sent: Wednesday, June 7, 2023 12:49 PM
To: Diane Kocis
Subject: Re: Comments on Draft Regulations for Oil and Gas Facility in unincorporated Arapahoe County—air quality

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Thanks for that background. It seemed like a big miss to not include it. When do phases 1 and 2 start?

Kirsten

On Jun 7, 2023, at 12:37 PM, Diane Kocis <DKocis@arapahoegov.com> wrote:

Hello Kristen,

Air quality will be addressed in Phase 2 of our amendments. We are going to revise many of the existing rules and add a lot more in Phase 2.

When we wrote the original rules (drafted in 2020 and 2021, adopted Nov 21) we were directed by the former Board of County Commissioners to not include anything about air, other than odor and dust control.

Hope that helps.

From: Kirsten Miller <fosskirsten@yahoo.com>
Sent: Wednesday, June 7, 2023 12:34 PM
To: Diane Kocis <DKocis@arapahoegov.com>
Cc: Greg Miller <gmiller.umcp@gmail.com>
Subject: Re: Comments on Draft Regulations for Oil and Gas Facility in unincorporated Arapahoe County—air quality

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Thank you, Diane. When I reviewed the draft regulations, I saw nothing in them to protect or measure air quality as a result of the proposed oil and gas operations. That appears to be missing entirely.

Thanks,

Kirsten Miller

On Jun 6, 2023, at 10:21 PM, Diane Kocis <DKocis@arapahoegov.com> wrote:

Hello Kristen,

Thank you very much for your detailed review of our oil and gas regulations and comments. I have passed your comments on to my managers and filed them where they will be seen by everyone working on the Phase 1 and Phase 2 rules.

I wanted to email tonight to let you know that I will send you a detailed response in the next day or so. Your comment about the reservoir setback will apply to the new rules we plan to adopt in the next 3-4 months (Phase 1) and the other comments relate to our complete review of our existing rules later this year (Phase 2).

Please stay tuned.

Thank you,

I am working a hybrid schedule with in-office days and remote work days. Email is the best way to reach me but you can also reach me on my County cell phone at 720-425-0422.

Diane Kocis

Energy Specialist
Arapahoe County Planning Division
dkocis@arapahoegov.com

From: Kirsten Miller <fosskirsten@yahoo.com>

Sent: Sunday, June 4, 2023 7:59 AM

To: Diane Kocis <DKocis@arapahoegov.com>

Cc: Greg Miller <gmliller.umcp@gmail.com>

Subject: Comments on Draft Regulations for Oil and Gas Facility in unincorporated Arapahoe County

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Hi, Diane:

Here are my comments on Draft Regulations for Oil and Gas Facility in unincorporated Arapahoe County.

Thanks,
Kirsten Miller

- Especially considering the density of our housing within 2,000 feet of the proposed oil and gas development, the draft regulations have definitive loopholes for less than 2,000 foot setbacks, and this needs to be amended (in 2a):
 - If the owner(s) of the occupied structure(s) or all owners of the affected platted lots agree in writing to a lesser setback and the fire district agrees to provide service to the Oil and Gas Facility; however, even with owner consent, in no case may the setback be reduced below **500 feet**
 - 2C: No new occupied structure shall be constructed less than **250 feet** from an existing Oil and Gas well of any status (permitted but not drilled yet, drilling, completing, producing, active gas storage, injecting, shut-in, temporarily abandoned, dry and abandoned, or plugged and abandoned prior to 2014).
 - 2C: Reverse Setbacks: No new occupied structure shall be constructed less than **150 feet** from a plugged and abandoned oil and gas well or remaining equipment that was plugged and abandoned from 2014 onward.
 - 2d: Water Reservoir Setbacks has too many loopholes “All Oil and Gas Facilities shall be located: At least one mile from existing or planned water reservoirs, unless the applicant can demonstrate that the Oil and Gas Facility is downgradient from the reservoir, in which case a 2,000 foot setback may apply. With **approval from the reservoir owner or operator, the setback may be reduced to the 500-foot setback applicable to other perennial surface water bodies.**”
- Visual mitigation requirements only allow for required visual mitigation for those “Well pads within 1,320 feet of a property line of a property containing an occupied structure, a platted lot, or a parcel of 40 acres or smaller”—**because our current stance is 2,000 feet, this regulation doesn’t hold the operator responsible for hiding the well pads.** And the operator has **a year** to install visual mitigation—far too long!
- Traffic mitigation (16a): “shall make **best efforts** to schedule its traffic to limit heavy truck traffic on County roads during peak commuting hours and during school bus hours”—why is the County not prohibiting this, rather than asking for best efforts? For many neighbors commuting along this route to toward DIA/Buckley, this will definitely affect our commute pattern with additional traffic and damage to our roadways from heavy trucks.
- Groundwater Baseline Sampling and Monitoring (9) is limited to within a ½ mile radius and **depends upon a request from the owner** of such water source or owner of land upon which such water source is located. And the **“requirement to test a well upon request does not apply if the water well has already been tested** by any Operator and the Operator is able to furnish such results to County”—these regulations do not protect our water.
- Noise Mitigation Requirements: Section 10 defines the maximum permissible noise level and then proceeds to allow loopholes around it. This needs to be tightened significantly.
 - “Noise emitted from the facility pad shall not exceed **60 dBA or 65dBC**, measured at the nearest property line of the property with the

nearest occupied structure. These noise levels, as measured, constitute the Maximum Permissible Limit of noise that may be allowed to emanate off site from the Oil and Gas Facility.” Per Centers for Disease Control and Prevention, “Loud Noise Can Cause Hearing Loss,” November 8, 2022, (https://www.cdc.gov/nceh/hearing_loss/what_noises_cause_hearing_loss.html) 60 decibels is comparable to the sounds of normal conversation, air conditioner. Increasing to 70 decibels contributes to annoyance by the noise, and these regulations allow this level for up to an hour per day between 7 a.m. to 7 p.m.:

- (10b): During the hours between 7:00 AM and 7:00 PM, the maximum permissible noise levels may be increased 10 dB(A) for a period not to exceed 15 minutes in any 1-hour period. The increase is permissible ... for a 1-hour period during any 12 hours. **Why would the County allow for this level?**

- **Furthermore, 10c allows for applications for waivers** (“to exceed the Maximum Permissible Limit in accordance with and subject to the standards in Section 5-6-3.6.E.5 above where the Oil and Gas Facility is proposed to be located in an area with existing ambient background noise levels that are at or above the Maximum Permissible Limit or if proposed for an area that is sufficiently remote from any property with an occupied structure or any High Priority Habitat, provided that the lack of High Priority Habitat is supported by recommendation of CPW”) without defining what **sufficiently remote** is.

Ava Pecherzewski

From: Robert Graham <bgraham5874@gmail.com>
Sent: Thursday, June 29, 2023 12:11 PM
To: Diane Kocis
Subject: Re: Arapahoe County draft oil and gas rules posters are now on our website

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Hello Diane

I would hope and expect that you have provided a detailed copy of the Denver Post Article that covers this Oil and Gas Leak and the impact the leak has to families - the key is the time to restitution:

"Mark and Julie Nygren didn't set out to be activists, but they are suggesting changes to the oversight of Colorado's oil and gas pipelines based on their experience of losing their home and seeing part of their farm contaminated by a leaking gas line.

More than four years after discovery of the leak, the Nygrens are still renting a house in Johnstown, just north of their Weld County property, and remain embroiled in a lawsuit against DCP Midstream Operating Co., which owned the pipeline. As the Colorado Public Utilities Commission considers new pipeline-safety rules, the Nygrens want to share their hard-won insights with regulators."

I would not rely on those in authority to read the article - copies placed in front is the only way to ensure awareness.

This is a common problem nationwide not just in Colorado.

Thanks

Bob

Robert L. Graham

310 504 4807

On Mon, Jun 26, 2023 at 5:21 PM Diane Kocis <DKocis@arapahoe.gov> wrote:

Hello Stakeholders,

It was suggested at the Open House on Wednesday June 21st that we include a link on the Arapahoe County Oil & Gas webpage for the posters we displayed that evening, so the [Oil and Gas webpage](#) has been modified to include a link to the posters. The website has also been modified to include a link to the redlined oil and gas regulations (changes) and I've attached [the redlines here](#).

You can also access the posters [here](#).

We want to encourage you to attend the Planning Commission hearing on July 18th, 2023, where these 10 proposed oil and gas rules will be presented to the Planning Commissioners. Each person wishing to provide comments will be allowed 3 minutes to speak; However, if you have more than 3 minutes of comments to read, you can pass your remaining comments to another stakeholder attendee who can finish your statements. There will also be a remote participation option for the hearing.

We will send out another email to notify you of the venue for the July 18th Planning Commission hearing venue and how to participate remotely. Normally, the Planning Commission meets in the Arapahoe Room in Lima Plaza, 6954 S. Lima St. Because we anticipate high public participation for the hearing, we are seeking a larger venue. The location of the Planning Commission hearing will also be posted on our [Oil & Gas webpage](#) in the next couple of weeks.

Thank you for your comments and participation on our process.

You have been bcc'd on this email message to protect your privacy. Please forward this message to others who may be interested in providing comments or attending the Planning Commission hearing on July 18th.

Sincerely,

I am working a hybrid schedule with in-office days and remote work days. Email is the best way to reach me but you can also reach me on my County cell phone at 720-425-0422.

Diane Kocis

Energy Specialist

Ava Pecherzewski

From: Seema Rajapurohit <seema_suni@yahoo.com>
Sent: Thursday, June 29, 2023 8:25 PM
To: Diane Kocis
Subject: Stop Fracking Near Aurora Reservoir

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Hi,

Seema Kulkarni here. We bought this beautiful, big dream house just opposite the Aurora Reservoir with the intention to enjoy the nice Lake and the peaceful residential neighborhood.

Unfortunately, that is not the case as Civitas is planning to frack near this reservoir and we totally oppose this. The entire neighborhood and area will be smelling of horrible chemicals, the beauty of the reservoir will be lost, and people will get sick with all kinds of cancer, dental problems, skin diseases etc. Moreover, The water will no longer be clean, fresh, and potable. Also, the oil and gas wells will catch fire and burn the entire area (grasslands) and also people's homes. We don't want our dream home to be burned down. We don't want any fracking and oil and gas wells anywhere near us nor the Aurora Reservoir. This proposed fracking project is life-threatening, which is why we are fully against this project. Please make it a rule that any fracking and oil and gas should be 50 miles away from the Aurora Reservoir area. Please stop this project now.

Seema

From: [Tisha Foard](#)
To: [Diane Kocis](#)
Subject: Lowry CAP
Date: Thursday, June 29, 2023 10:42:43 PM

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Hello!

I am writing to you as a concerned citizen and mother. I stand in opposition to any and all fracking within Arapahoe County, especially any located near communities with children, like the proposed Lowry CAP by Civitas. Please consider sticking to a MINIMUM of a mile setback from all rivers, reservoirs, and homes, or better yet, stop the project all together. Here's why:

Air Quality/Pollution

The EPA has reclassified Colorado's Front range non attainment as a "severe" violator of federal air quality standards. In 2021 there were 65 ozone action days from May 31 to Aug 31, the highest number recorded since recording started in 2011. The fracking proposed at the Lowry Ranch CAP will produce volatile organic compound (VOC) emissions which form ozone. This can cause lung damage and premature death. The common air pollutants from drilling and fracking chemicals are linked to higher rates of cancers, childhood leukemia, sperm abnormalities, reduced fetal growth, cardiovascular disease, and respiratory dysfunction. (Colorado Fiscal Institute 2023). In light of this, it is little wonder that the Center for Biological Diversity has sued the EPA for its approval of Colorado's State Implementation Plan for air pollution emissions.

Additionally (and more importantly for my particular family), the National Library of Medicine has published a study that finds "a significant association between CO concentrations and epileptic seizure risk . . . with an increased seizure risk of 4%" (Zhuying et al. 2022). My nine year old son has epilepsy. Exposing him to such concentrations of air pollution as will be generated by this project is not just unfair. It's unconscionable. My son is certainly not the only child living with epilepsy near this proposed site. In fact, one of the drill pads planned will be less than a mile away from my son's elementary school, exposing ALL of the children at Altitude Elementary AND Woodlands Elementary to unsafe levels of air pollution.

Water

Colorado is currently a part of a superdrought located in all of the western United States. The EPA estimates that the annual water requirement for horizontal wells is as high as 140 billion gallons of water per year. With the current watering restrictions (2 times/week) for Aurora residents, this seems needlessly wasteful.

The Lowry Cap cumulative impacts statement itself states that it intends to use 17,858,400 gallons of water PER WELL, and that the water will come from three sources: 1. “excess surface water” 2. Farmers Reservoir Irrigation Company and 3. Rangeview Metropolitan District water. What excess surface water do we possibly have? Rangeview services the Lowry Range, which is where the Aurora Reservoir is located. This reservoir is currently only at 54% of its capacity (auroragov.org 2023). Drilling so close to the reservoir that serves such a large portion of the Aurora population is untenable.

Cancer

A peer-reviewed Yale study published in August 2022 found that living within one mile of fracking made small children aged two to seven years 2-3 TIMES more likely to develop leukemia than children not living near wells (Yale News 2022). How can we possibly justify allowing wells to be located so near to five Cherry Creek Schools, my school of employment and my son’s elementary school included? In what world is it acceptable to cause such risk to the lives of thousands of children for the monetary gain of an oil and gas conglomerate that will not return any of that profit to our community?

Impacts on Families

On a personal level, my son has epilepsy. This causes him to be especially susceptible to loud noises and stress. A peer-reviewed study published in both the journal *Science of the Total Environment* and Berkeley News found that “Fracking creates noise at levels high enough to harm the health of people living nearby” (Isreal 2017). Stressful situations and loud, continuous noises have proven to cause seizures that occur more often and with greater intensity in my son. It has been heartbreaking to watch his struggles, and it continues to be heartbreaking to consider the future noise, stress, and pollution from these proposed wells and the effect they will have on my son. My husband and I provide for our family with modest Department of Defense and public school teacher incomes. We cannot afford to move with the housing market and interest rates the way that they are right now. This situation has caused us severe anxiety and emotional distress that we, of course, must hide from our son so as to not adversely impact his health and neuro activity. We have no other way to protect our only child than to appeal to government entities like you.

What is happening to our community is simply put, evil. A large, powerful corporation can come to our idyllic community, use predatory and dishonest tactics to gain mineral rights, hurt our children, use up our precious natural resources, and destroy the environment and wildlife in the area simply because they want more than their already record profits from the last few years. This is just ONE story of how an individual family will be impacted. Can you imagine the impacts on the thousands of other residents near these wells?

Please, we are begging you to help us. Stick to the MINIMUM of a mile setback from all

homes, reservoirs, rivers and streams. Better, stand in opposition to any and all fracking in our area. It is the right thing to do. Please put the children and elderly of Arapahoe County before monetary gain. Thank you so much for your time.

Sincerely,

Tisha Foard

Arapahoe County resident (80016)

STAR Groups Priority Additional Setbacks/Regulations for Arapahoe County as of 4/30/23

A. The 3 most important missing setbacks/regulations in order of importance are:

1. Effective setbacks from areas zoned residential/urban
 - a. The County has been operating under the mistaken belief based upon a single State CDPHE study that air dispersal of pollutants is limited to a 2,000 ft. radius. This is based on monitoring of a single well [not a 12 well pad]. The County therefore relies now on a 2,000 ft. setback.
 - b. Nationally accepted studies now show that even without wind drift the area of dispersal is actually 1.25 -2.5 miles
 - c. We therefore suggest at least a minimum 1 to 1.5 mile setback from residential/urban areas (including schools and other public gathering spots), particularly when you are dealing with a multiple well pad site.
2. Fire setbacks and regulations in the Wildlife Urban Interface
 - a. The Marshall fire proved how dangerous fires starting in grasslands adjacent to residential neighborhoods can be.
 - b. The key to fire safety is time to suppress, coupled with resources to suppress
 1. A 2,000 ft. setback leaves totally insufficient time to suppress – less than 8 minutes in a grassland fire pushed by a 25 mph wind. Even 1 mile is problematic with 18 minutes to suppress but far better when coupled with regulations such as fire hose hook-ups and suppressive foam required on well pads in the WUI
 - c. We therefore suggest a WUI fire setback of at least 1 mile, coupled with fire hose hook –ups and suppressive foam on any well pads adjacent to the WUI. . [See for example: Broomfield Oil and Gas Code Regs. 17-54-060(T)(8) and (11)]
3. Setbacks from drinking water reservoirs
 - a. County has 500 ft. City of Aurora has 1 mile.
 - b. Even with berms or up-slopes to protect against spills entering these reservoirs, the same zone of protection of 1 to 1.5 miles for air

pollutant dispersal is needed as is the case for residential /urban neighborhoods.

B. Other level 2 tier regulations of particular concern (in no particular order of priority) include:

1. Flowline, gathering line, and transfer line regulation:

- a. A detailed plan of the location of gathering lines, on- and off-location flowlines and crude oil transfer lines should be required.
- b. Flowline should be defined as all categories of “flowlines” included in the definition of the COGCC rules (including wellhead lines, production lines, dump lines, manifold piping and process piping).
- c. All flowlines, gathering lines, and transfer lines located within ¼ mile of “ecologically sensitive areas” [such as drinking water resources and sensitive grasslands and wildlife habitats] or residentially/urban zoned neighborhoods should comply with the 2006 Pipeline & Hazardous Material Safety Administration PHMSA regulations as amended.
- d. Because flowlines are prone to methane leakage, and according to the EPA are “one of the largest sources of emissions” in the oil and gas industry:
 1. Flowlines, gathering lines and transfer lines should be setback a minimum of 1,000 ft. from drinking water sources, riparian waterways, and residential/urban neighborhoods; and
 2. Should be monitored for airborne leakage leaks and spills at least every 3 months and, when located in “ecologically sensitive areas” or ¼ mile of residentially zoned areas , at least twice monthly.

d. Construction of flowlines should be required to comply with appropriate ASME B31.4 and B31.8 standards, as amended

1. Applicants should be required to provide appropriate clearances between flowlines needed for appropriate inspections and hydrotesting of flowlines and associated isolation valves.

2. Off-location flowlines, Crude Oil Transfer Lines (COTL) and Produced Water Transfer Systems (PWTS):

a. Operators are now required in Form 44 to register and provide as-built information to the COGCC of these lines for the purposes of emergency management and planning. Accordingly, this geo-database information should be required to also be provided to the County so that first responders have the necessary information to address potential emergencies.

b. Setbacks of COTL and PWTS lines and systems from residential, commercial, or industrial buildings, places of public assembly, any surface water body, or sensitive environmental feature should be determined on a case-by-case basis based upon the consideration of the size and type of line and the features of the proposed siting. [See for example: Broomfield Oil and Gas Code Regs. 17-54-060(Q)(1) thru (3)]

3. Surface and groundwater pollution:

a. In order to minimize adverse impacts to surface and sub-surface water bodies, use of chemicals dangerous to human health should be prohibited, including:

i. All chemicals listed in COGCC Table 437-1;

ii. Polysorbate 80; and

iii. Perfluoroalkyl and polyfluoroalkyl substances or “PFAS chemicals” defined as a class of fluorinated organic chemicals containing at least one fully fluorinated carbon atom.

4. Water source quality, sampling and testing:

a. Applicants should be required to sample one up-grade and two downgrade available surface and ground water sources located within a radius of one-half mile of a well pad or facility. If no such water sources are available, samples should be collected within one-mile.

c. Water source testing should be conducted by a qualified independent professional consultant approved by the County at the operator’s expense, and include:

i. Major ions, including: bromide, fluoride, sulfate and nitrate;

ii. Metals, including: arsenic, barium, boron, chromium, copper, iron, lead, manganese, selenium, strontium; and

iii. Dissolved gases and VOCs, including methane, ethane, propane, BTEX as Benzene, Toluene, Ethylbenzene, Xylenes, and Total Petroleum Hydrocarbons (TPH)

1. Should a water source test show a concentration increase of methane or other dissolved gas concentration increases of greater than three (3) mg/l (micrograms per liter) between sampling periods or any presence of a listed VOC, BTEX or TPH, immediate notification of both the COGCC and County so that the source can be identified and remedial action taken.

[See for example: Broomfield Oil and Gas Code Regs. 17-54-060(T)(1) a. thru n.]

5. Air quality, sampling and testing:

- a. Air emissions from proposed facilities should be required to comply with all federal air quality rules and standards, including EPA's New Source Performance Standards and National Emission Standards for Hazardous Pollutants;
 - i. Air emissions from proposed facilities should be required to comply with all COGCC and CDPHE air quality standards and rules, and any and all County emission regulations.
 - ii. Emissions should be required to be below the currently most protective health-based guidelines, including those used by EPA and CDPHE.
 - iii. Carbon-reduction requirements of Arapahoe County should not be allowed to be offset by purchased credits.
 - iv. An Air Quality Control Plan should be required that requires that the Operator use both most effective management techniques and best management practices to minimize impacts to air quality. This should include the use of electric versus gas powered generators.
 - v. A County approved air monitoring plan to be conducted by a qualified third-party consultant, approved by the County should be required. Baseline monitoring should be required within a 500 ft. radius of all well pads and 2,000 ft. of any well pad located within 2 miles of residentially/urban zoned property, a school, public gathering place or a drinking water source.

- vi. The air quality monitoring plan should require constant monitoring both prior to construction, and during all phases of development including drilling and production.
- vii. Monitoring should include: VOCs, Hazardous Air Pollutants (HAPs), BTEX, Hydrogen Sulfide, Oxides of Nitrogen (NOx), Particulate Matter, Fine Particulate Matter, Carbon Monoxide, methane, and carbon dioxide.
- viii. Any increases in the monitored pollutants should be required to be reported to both the COGCC and County so that the source can be identified and appropriate remedial actions taken, including notification of affected citizens.

[See for example: Broomfield Oil and Gas Code Regs. 17-54-060(O) and (P).]

- 6. Wastewater injection wells should be prohibited in Arapahoe County.
- 7. Use of water for oil and gas drilling operations which could otherwise be used for drinking water, should be prohibited during Arapahoe County's Stage D2 and above categorized drought years.
- 8. An effective neighborhood alert process should be developed in the event there is a "significant" contaminant spill; a "significant" spike in airborne toxins; a "significant" drinking water contamination; or a well pad fire. "Significant" should be defined as an incident which exceeds applicable Federal, CDPHE, COGCC, or County standards.
- 9. Special regulations should be developed to monitor any fracking-related hazard which may affect the integrity of areas of particular environmental concern (such as the EPA Superfund site), to include baseline studies to determine special risks. This should include, but not be limited to, seismic risks from fracking and truck traffic. To monitor these risks, regulations should include, but not be limited to, continuous seismic monitoring at these areas and annual studies to check for significant new environmental risks to health and safety.
- 10. Special regulations should be developed to ensure proper containment of wastewater pools, particularly against the risk of overflow caused by the capture of rainwater or excess sediment.

Comments (Sticky Notes) from the Open House:

Poster Regarding Reservoir Setbacks

- Reservoir owners and operators are not tasked with duty to protect public health, safety, welfare and the environment. Cannot delegate decision to them. 1 mile is minimum start. 500 feet is never acceptable. 3,000-feet is absolute minimum.
- What is the scientific basis for a 2,000-foot setback from homes when research shows negative health impacts at much greater than 2,000-feet.
- Neighborhood meetings should notify homeowners within 5 miles of change that is not 1 mile.
- Fracking under homes results in the release of additional radon. Worsening of air quality; increase ozone.
- How do the regulations address noise issues? Wildlife? Fire?
- What is downgradient? One mile is the bare minimum. No oil and gas should be nearby reservoir.
- If a regulation has to be reasonable and justified, what better reason than to protect our population?
- Continue to monitor well water/aquifer for rural homeowners.
- “Unless downgradient conditions can be satisfied” as explained to me by Mr. Weimer, this only is determined by surface gradient. For vertical drilling, different gradients may exist at different depths. Gradients must be considered at surface conditions.
- The comment “with approval from the reservoir owner or operator, the setback may be reduced to a 500-foot setback” lacks protection from the public, and lacks standards for quasi-judicial review.
- What is the basis for reducing setbacks to 2,000 feet? Is there scientific basis that is sufficient?
- “Downgradient condition” appears to be based solely on the well site location. But oil and gas and wastewater will be transported away from well, leading to possible spills.
- Downgradient allowance must be proven through use of independent scientifically based studies and investigation to be at least as safe as 1 mile or more.
- How will house settling issues be resolved?
- Air quality concerns, health concerns, noise issues, wildlife impact, earthquake-stability of reservoir dam, fire potential, water contamination.
- You can’t justify 2,000-ft setback using latest scientific studies.
- Neutral downgradient study must be done. Follow science.
- The topography and hydrology of the drill site matter more than setback. Increase setback if drill pad is in same watershed as reservoir.

Poster Regarding Process to Request Lesser Setbacks

- Civitas Arena welcome banner was a slap in the community's face. Need a neutral space.
- This will be heavily abused by the oil/gas industry.
- No thanks! 2,000 feet is close enough.
- Let us fundraise to help make up the difference of money made – when the CAP is cancelled.
- County rule must be no less than 3,000 feet under any circumstances. Must show major independent study to justify less than 1 mile.
- The provision that lesser setbacks may be approved by BOCC appears to lack standards for the BOCC to make that determination. “Substantially equivalent protection” is too vague – protection from spills? Protection from emissions? Protection from noise? All of the above?
- There needs to be a presumption that the setback must be followed unless the operator can show a lesser setback is necessary to preserve public health, safety and environment.
- People want the rule to be the rule. Stop the back and forth. 2,000 feet +.
- No allowed lesser setbacks. Setbacks are not far enough as proposed.
- No allowed lesser setbacks.
- The setback must be 2,000+ feet, not 500 feet. What about Fires? Wildlife? Stricter setbacks for schools.
- Cancel the CAP. Community to fundraise the \$ to support County programs.
- Please share with the residents of Arapahoe County the \$ amount of campaign donations from O&G to each Commissioner.
- The rule should be at least one mile, not 2,000 feet. Any justification less than 1 mile must be done through an independent certified 3rd party to be equivalent to 1 mile or more.

Poster Regarding Cryptocurrency

- Need to address high frequency noise similar to data farms
- How are locals protected from the burning/exhaust of the gas used to power the mining?
- I agree with the letter sent by John Granger re cryptocurrency
- How will the noise be addressed?
- Do mineral right owners get a share of the crypto income that the operator gets?
- What regulations govern infrastructure required for crypto mining sites? These are huge consumers of energy and water.
- How often are capped pads inspected?
- How will you regulate and monitor the emissions from the burned gas? Must be highly controlled and scrubbed to not contribute to our already poor air quality?

- The crypto mining use of gas is just another huge source of local fossil fuel pollution. Why not mandate the oil and gas companies build their own pipeline to move it elsewhere away from populated areas?
- Will the profits pay for the healthcare of local residents?

Poster Regarding Additional Application Information

- How do the rules address wildlife and other features affected by well pad locations, flowlines, access roads, traffic, noise, etc. Are impact statements required?

Poster Regarding Post-Incident Meetings

- Will an alert be blasted on a loud speaker? How will this be informing all affected?
- Citizens should be made aware of all incidents with a timely manner (max 3 days). Transparency is vital to public trust.
- Incident reports should be made available to the public on the Arapahoe County website within 3 calendar days of incident.
- Where a formal incident report is required, further drilling or operations activity should be stopped until the post-incident meeting with County staff is held and the staff determine it is safe to proceed.
- There must be readily accessible public records of all incidents.
- Must be immediate notification/alarms to the public when health, safety and welfare is threatened.
- Since you have post-incident reporting you already know there will be incidents. One incident is too many. Are you willing to gamble with our lives? Put all incidents on the County website.

Poster Regarding Facilities Needing to be in Compliance with State and Federal Laws

- State and Federal laws are not strict enough. Arapahoe County can and should hold to a higher standard.
- Useless amendment. Just for show. Federal and state laws and regulations already apply.
- Arapahoe must follow Commissioner Warren-Gully's statement and set our own level of standards and best practices to be a leader (the best) in protecting public health, safety welfare and the environment. Set the example for other local government units in the state and country. Don't rely on others that we know are lacking.
- The current standards are not strict enough for this urban dense populated area.
- What exactly do the current standards protect? Rules and regulations should protect the health and safety of the environment, communities and wildlife. Fines are not severe enough to deter bad practices.
- Greed.

Poster Regarding Access Road Standards

- Access roads are critical to prevent runoff and damage from spills. These are not sufficient for all of Arapahoe County oil and gas.
- Access road standards should include protection from spills, such as culverts, drainage, etc to divert spills way from land nearby.
- How close will these roads be to the Superfund site? How will the vibrating affect it?
- How will the trucks affect the local residents? Noise, traffic, gas, school kids.
- How will these protect the potential spills?
- Distance from homes and schools – noise, dust are pollution issues. Setbacks from waterways (spills!) and Superfund site. Vibrations from heavy trucks affect site integrity that's already leaking.
- Must have sufficient equipment on-site for immediate reaction to emergencies. Must be approved by emergency management services organization (OEM) and fire department.

Poster Regarding Handwashing Facilities

- Will gas masks/hazmats suits be provided for local children? Will you cover my costs for inhalers so my children don't die?
- This should've been hosted at a neutral space. Arriving to see "Civitas Arena" is not a warm welcome to the community.
- Can you also provide public health financial assurances for those of us breathing the toxic fumes?
- Concerned regarding increased radon infiltrating our homes, Increased ozone and negative health impacts. Concern about fracturing and creating issues with my home's stability. Poison leaking into water supplies.
- Yes but there are much more important topics that must be addressed in Phase 1 – air quality, monitoring, financial assurances, superfund site protection, and more!
- Visual representation showing red lines to show revisions/updates.
- Please load each poster as a PDF with comment option for those who couldn't attend tonight.

Poster regarding Neighborhood Meetings

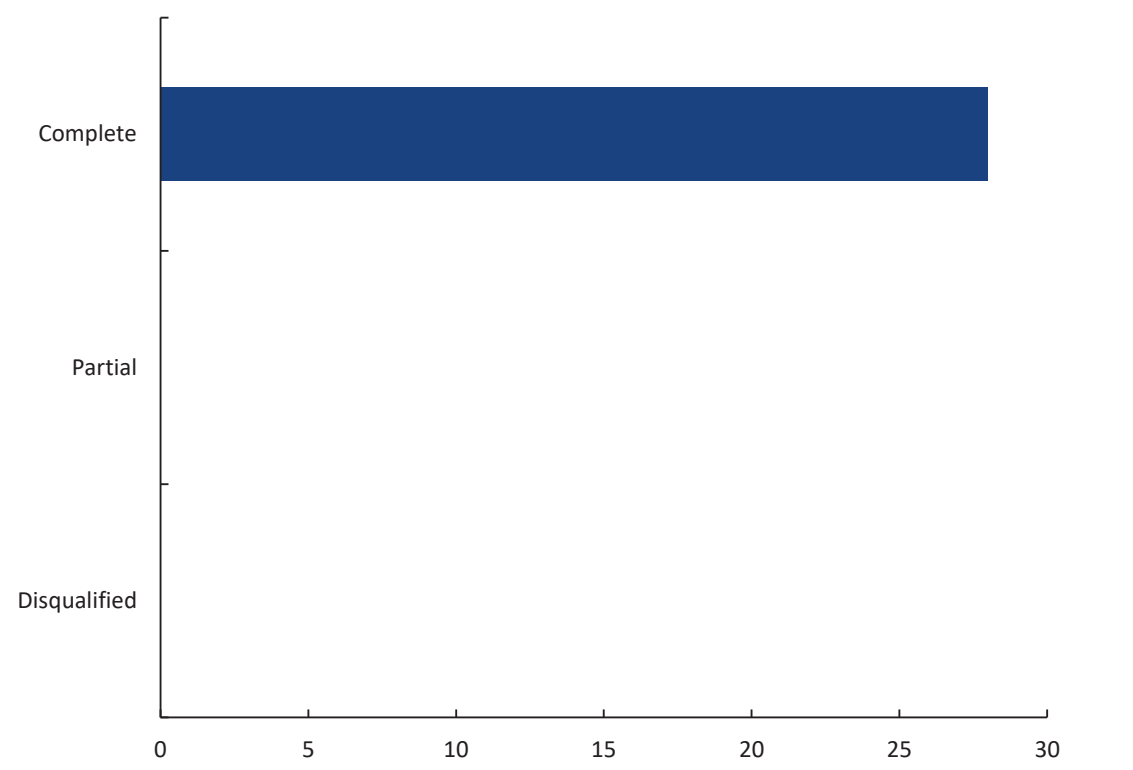
- Does the County perform air quality modeling? If so, could folks down-wind be included in notifications?
- Must notify folks and businesses within at least 10 miles if not the entire County. This will affect everyone's environment as well as public health, safety and welfare. Best science of recent studies shows 5-10 miles and fire issues are more than 1 mile away.
- Arapahoe County needs to be the lead on human life – notices to those only 1 mile away is a joke. This needs to be a minimum of 10 miles.

- Notification should be sent to all owners and HOA's within entire pooling area and not just drill site.
- Notify the entire County of this. Follow the science.
- "Homeowner Association" should be expanded to include all metro districts and other neighborhood organizations.
- Notice area needs to be much farther – 10 miles.
- "One mile of proposed facility" is ambiguous – should include one mile of any portion of the proposed facility, including underground drilling or transportation of oil/gas or wastewater.

Report for Oil and Gas Comment Form

Oil and Gas Comment Form

Response Statistics



	Count	Percent
Complete	28	100
Partial	0	0
Disqualified	0	0
Totals	28	

1.Please provide your suggestions or comments as it regards the proposed Oil and Gas amendments.

ResponseID	Response
1	xxx
2	<p>1. There should be no exception for one mile setback from drill site to reservoir. 2. Hand washing facilities are already required per OSHA 29 CFR 1910.1030. 3. There should be no exception to 2,000' minimum setback for residential areas. 4. The amendment that the drill sites have to obey state and federal law is theater- state and federal law has supremacy and already applies. 5. Overall the proposed amendments seem to accommodate the oil industry stakeholders, and do not have any positive bearing on public safety or homeowner rights.</p>
3	<p>As a resident of Aurora and Arapahoe County living in a community next to the aurora reservoir, I oppose drilling for gas and oil near the Aurora Reservoir and impacting our rights as citizens and homeowners with mineral rights below our properties, and the right to safe and clean drinking water and an environment free from hazardous drilling operations and gas emissions from these operations. Including toxic chemicals used for fracking purposes that destroy our beautiful land and communities. And I ask that if any such operations do occur that they be set back as far as possible (one mile) to ensure no impact to the Aurora reservoir and to the health and safety of all of the residents. Again, I oppose any and all oil and gas drilling in this area and reservoir ecosystem and would ask that Arapahoe county not allow any drilling for oil and gas near the reservoir of any kind, and impacting the rights of the residence of the city of Aurora and Arapahoe county. I know I speak for my family and many of the residents of Arapahoe county who live near the Aurora Reservoir that we all oppose allowing drilling near our homes, schools, and open spaces and will continue to voice our opposition and use our voting power when possible to ensure protection of our environment and homes.</p>
4	<p>I appreciate attempts to strengthen protection for people and the environment. However this attempt is EXTREMELY weak and misleading.</p>

	<p>The "unless" clause is a wide open and obvious loop hole. Dangerous industrial operations with deadly track records do not belong near communities. Dangerous industrial operations cannot be located anywhere near water sources or prime environmental area. Oil and gas should be no less that one mile away. We cannot compromise or negotiate our health away for the sake of greed.</p>
5	<p>There should be no exceptions for health and safety of our water sources. This is beyond stupid and clearly all about money. I will vote accordingly.</p>
6	<p>I don't think we should make exceptions to our 1 mile set back.</p>
7	<p>I don't think we should make exceptions to our one mile set back</p>
8	<p>I don't believe fracking under the Aurora Reservoir/Dam is safe. There are geological faults in the area.</p>
9	<p>The one-mile setback is definitely what we need. What we don't need is an obvious loophole that will just allow the energy extractors to come as close as possible to homes and the reservoir. Also...cryptocurrency mining? Really? Come on. Are we trying to create a dystopian future? Both fracking and crypto mining create lots of noise. Clearly, Arapahoe County does not care about the quality of life for residents if the Commissioners approve crypto. This is ridiculous. I thought I was moving to a beautiful suburb that was thoughtfully planned for residents to raise families. Instead, an energy company is now going to frack under my house without my consent. This is such a violation.</p>
10	<p>Change the first bullet to 5 miles back from reservoirs, with no conditions following.</p>
12	<p>In general I do not feel that the amendments nor the current rules and regulations when it comes to Oil and gas meet the county's goal- "The County is committed to upholding quality of life, health and safety issues and the environment." And these amendments don't do much to support that goal. There should be no</p>

	<p>exceptions to the 1 mile from Reservoir rule (and even then 1 mile is not far enough) And who benefits from the crypto mining? Seems like another way for OG to make more \$\$ I would like to see amendments that are truly pro environment, pro quality of life and less about profits.</p>
14	<p>I generally approve of the proposed amendments with two exceptions. First, gas-powered cryptocurrency mining should be prohibited as allowing it would amount to corporate welfare of the worst kind at the expense of residential safety. Second, the impacts of fracking on migratory birds should be added as a distinct consideration under paragraph F.17 and the Migratory Bird Treaty Act should be incorporated by reference as it the supreme law of the land under Article VI of the U.S. Constitution and cannot be ignored.</p>
15	<p>I don't think we should make exceptions to our one mile set back! We must protect communities, and be thinking about health and safety of people and the earth.</p>
16	<p>No exceptions to one mile rule near bodies of water and residential development</p>
17	<p>I don't think we should make exceptions to our one mile set back.</p>
18	<p>Absolutely no exceptions to set backs.</p>
19	<p>I do not think exceptions should be allowed to the 1 mile setback. Allowing a "grey" area allows poor decisions to be made overall and different interpretations of the rules. This needs to be clear and "black and white" for the Oil and Gas Companies for the health and safety of the Public.</p>
20	<p>One mile setbacks should be held at *minimim* with no exceptions. Allowing language where they don't need to be followed will basically make the regulation moot.</p>
21	<p>Please keep the 1-mile setback for our community as was stated in the rules! Do not</p>

	make any exceptions! Thank you, Ruby Frederick
22	No carve outs, respect the one mile set back limits as is.
23	<p>1) Section 5-3.6.E.2 Neighborhood meeting: metropolitan districts (e.g., Tollgate Crossing metropolitan district, Beacon Point metropolitan district) and authorities (e.g., Tallyn's Reach Authority, Saddle Rock Authority) today are replacing homeowner associations in many neighborhoods. The metropolitan districts and authorities should be notified as well as homeowners association. 2) Section 5-3.6.E.2 notification only of those homeowners, residents and associations "within one mile of the pad boundary" is too limited. Drilling-related activity may affect properties far from the pad boundary for example if the wells are drilled under their property or if roads will necessarily carry fracking fluid, waste fluids, etc. Notice should be given to all property owners, associations, etc. within 1 mile of ANY proposed drilling-related activity. 3) Section 5-3.6.F.2.d reservoir setbacks - the term "downgradient" does not appear to be defined. It seems this applies only to the surface topography (i.e., so long as any leaking oil or contaminants AT THE SURFACE flows away from the reservoir it is OK to reduce the setback to 2000 ft). However, this is not appropriate for example if there are subsurface features (rock or clay structures for example) that would direct SEEPING oil in a different direction, or if there are gradients/rock formations that would direct oil spills from defective casing, for example, below the surface toward the reservoir. This exception either needs to be eliminated or much broader. In addition, the downgradient condition should be required for ALL operations associated with the oil and gas operations near the well pad such as oil pipelines, roads that would carry contaminated fluids or oil, etc. as those pipelines and roads may direct oil spills, etc., back toward the reservoir. 4) Section 5-3.6.F.2.d the 500 foot alternative setback "with consent of owner" is illogical and does not promote public safety - if the reservoir owner is corrupted in some way such as a ginormous payment from the oil company, it is illogical for the county to allow public safety and precious water supplies to be compromised just because of the consent of the owner. 5) Section 5-3.6.F.3.m incident reporting</p>

	<p>- the post-incident meeting is a good idea but it should be open to the public and operations related to the incident should cease until the meeting occurs. 6) Section 5-3.6.F.11 access road standards - there should be a requirement that access roads provide appropriate gutters or other facilities to direct any spills or contaminants away from surrounding terrain. 7) Section 5-4 definitions - downgradient needs to be defined.</p>
24	<p>These proposed amendments are grossly insufficient in addressing the documented concerns of Arapahoe County Citizens. Specifically: 1. The set back exceptions undermine the intent of the 1 mile set-back. It creates subjective loop-holes that puts the power in the hands of the oil and gas operators and nullifies the voice of citizens who are directly impacted. 2. The cryptocurrency use is woefully undefined in the amendment. And I believe that is intentional because a use like this only increases concerns regarding pollution. Furthermore, the argument made by oil and gas is that fracking projects are necessary for "our" energy needs as local residents. However this accessory use is definitively NOT for the production of energy used by consumers and the likely beneficiary would be wealthy investors well beyond our county. In summary, this set of amendments feels like lip service to citizens and a wink and a nod to the oil and gas operators. There is nothing substantive to remove the pollution risk to the community let alone anything that improves the benefit to the community.</p>
25	<p>Hello Arapahoe County Officials, I know you have a lot on your minds, and I'm sure you're trying to find balance and keep a lot of people happy. However, your residents should be the #1 priority. Do you agree? Please take my comments below to heart. I know your jobs are not easy, but the decisions you are making will affect the future of Arapahoe County for generations to come. My primary concern is about setbacks. What is the point of a 1-mile setback from reservoirs and proposed reservoirs if you already bake loopholes and exceptions into the proposed amendment? Should we propose laws that say it's ok to speed, as long as you're going uphill? Truth be told, 1-mile setbacks from these fracking operations are nowhere NEAR far enough. But, I understand there's no chance you'd go up from 1 mile.</p>

	<p>Additionally, reverse setbacks are already a loophole in themselves. When you look at a proposed project like the Lowry Ranch CAP, a residential development is planned immediately to the east of the Blackstone community that will be right next to a proposed drilling site, much lower than your county setbacks. Why is this ok? The order of operations make it ok? Since the drilling site will likely come first, the safety of the community doesn't matter? This makes zero sense... Reverse setbacks should be eliminated altogether. By continuing to entertain O&G projects like the Lowry Ranch CAP, you're opening the door to permanent damage in our county, not to mention making this a far less desirable place to live. Are long-term impacts not considered at all? Doesn't Arapahoe County have more to offer than a bunch of fracking sites? Can't we capitalize on retail, housing, tourism and recreation? Can't we build long-term value for OUR people, not for multi-billion dollar publicly traded companies that are majority owned by foreign investors? Wow, Civitas has a corporate sponsorship for something at the Arapahoe County Fairgrounds... they must really care about the people of our county. Do your research. The Canada Pension Plan owns the most shares of Civitas Resources, followed by about ten other private equity groups. Do you really think they care about the people of Arapahoe County? Are we really that naïve? This is ALL about money, otherwise it would not be happening in our county. And what in the world is this about cryptocurrency mining? There's no way that's beneficial for our "health, safety, wildlife and the environment." PLEASE, do the right thing. Come up with some loophole-free regulations. Stand up for your residents. And please, DON'T cave to billionaires that have promised the world to you. We don't need them. Arapahoe County is great. The Aurora Reservoir is great. The city of Aurora is great. Open space is great. Why must we ruin it? Thank you for your time and consideration of my comments.</p>
26	Do not make exceptions to the one mile setback!
27	One-mile setbacks should be increased to something higher in order to reduce the impact on the local populace. Additionally, this would apply to the burning of natural gas in order to power cryptocurrency mining, which should be further than one-mile.

Please stick to a minimum of a one mile setback from all homes and bodies of water (current or planned). Better yet, so not allow this project to happen at all. We do not have the water table to support this, they will frack under an unstable (and already leaking) superfund site, and fracking has proven to cause children who live within a mile of fracking to develop cancer at 2-3 times the rate of others. Additionally, our air quality is already horribly rated by the EPA, and fracking releases VOCs and CO at a level harmful to all, but especially children and the elderly. Don't let this company destroy our community!!

2.What is your name?

ResponseID	Response
1	sss
2	Lars Rockholm
3	James Guajardo
4	Susan McClain
5	Ameli abernathy
6	Stephanie Blum
7	Katherine Velasco
8	Linda Kiefer
9	Kris Sutton
10	Jordan Cassell
11	Matt Mendez-Vanacore
12	Anne Fiala
14	Conrad Huygen
15	Brenda
16	Carmen Hanagriff
17	Elizabeth Pheteplace
18	Elisa Dahlberg
19	Tim Mills
20	Kate Schmeisser
21	Ruby Frederick

22	Melissa Davidson
23	Brian Matise
24	Shannon McCorison
25	Nathan Lyon
26	Corey Hopper
27	Shawn Bockstahler
28	Tisha Foard

3.Where do you reside?

ResponseID	Response
1	Blackstone
2	26714 E Phillips Pl, Aurora 80016
3	5935 S Kellerman Ct Aurora CO 80016
4	Aurora CO
5	Auora
6	Southshore
7	Aurora 80016
8	Arapahoe County
9	Aurora 80016
10	Beacon Point, Aurora
11	The Wheatlands, Aurora 80016
12	80016
14	25280 E Ottawa Dr
15	Aurora
16	Aurora, CO 80016
17	Southshore - Arapahoe County - 80016
18	Beacon Point
19	Beacon Point, Aurora, CO
20	Blackstone Community
21	Aurora, CO

22	80013
23	Tollgate Crossing subdivision, Aurora, CO
24	Arapahoe County, Aurora, 80016
25	Southshore Community in SE Aurora, Arapahoe County
26	36945 E Costilla Dr, Aurora, CO 80016
27	6655 S Quantock Way, Aurora, CO 80016
28	Aurora - Southshore 80016

TO: Arapahoe County Commissioners
Diane Kocis, Energy Specialist, DKocis@arapahoegov.com
FROM: League of Women Voters of Arapahoe and Douglas Counties
Julie J.R. Huygen, 25280 E Ottawa Dr, Tallyn's Reach, Aurora
DATE: June 29, 2023
SUBJECT: Phase 1 Proposed Oil and Gas Amendments

Colorado Senate Bill 19-181 directs Arapahoe County as a local government to regulate the surface impacts of oil and gas operations "to protect and minimize adverse impacts to public health, safety, and welfare and the environment." (SB 19-181, Sec. 4, amending Colorado Revised Statutes, 29-20-104, (1)(h).) With that direction as context, I provide the comments below on the County's Phase 1 proposed oil and gas amendments on behalf of the League of Women Voters of Arapahoe and Douglas Counties (LWVADC) and as a resident, homeowner, and taxpayer of Arapahoe County. The members of LWVADC are residents of Arapahoe and Douglas Counties who are committed to empowering voters and defending democracy. Furthermore, we endorse the comments submitted by John Granger on behalf of the Save The Aurora Reservoir (STAR) community organization, composed of over 1,400 residents of the City of Aurora and Arapahoe County.

PROPOSED AMENDMENTS

In the regulatory provisions below, the existing language is black, the proposed amendments are red, and our recommended changes are blue and use strikethrough for deletions and underline for additions. (Arapahoe County, Oil and Gas Regulations 2023 Changes_Final Draft 5.25.2023 with redlines_202306231937018600.pdf, arapahoegov.com/oilandgas.)

ONE-MILE SETBACKS FROM EXISTING AND PLANNED RESERVOIRS

2. Setbacks

- d. **Water Reservoir Setbacks: All Oil and Gas Facilities shall be located:**
- i. ~~At least one (1) mile from the edge of any existing or planned (adjudicated) water reservoirs~~ or the setback distance established by the governmental authority responsible for the particular water reservoir, whichever is greater, as measured from the pad boundary, unless the applicant can demonstrate that the Oil and Gas Facility is downgradient from the reservoir, in which case a 2,000 foot setback may apply.
 - ii. ~~With approval from the reservoir owner or operator, the setback may be reduced to the 500 foot setback applicable to other perennial surface water bodies.~~

Regarding water protection, we also recommend the following amendment:

2. Setbacks

- a. All Oil and Gas Facilities shall be located at least:
- vii. ~~Outside of a 2,000 feet from the edge of any 100-year floodplain, domestic water well, and or at least 500 feet from~~ the edge of any perennial surface water body, the ordinary highwater mark of any perennial or intermittent stream or the edge of any riparian area, whichever is the greater distance, as measured from the pad boundary; unless CPW has waived or modified the setback from the stream, surface water, or the riparian area following in accordance with COGCC Rules 309 and 1202.

In Colorado and the western United States, there is no more important natural resource than water. The Aurora Reservoir is the water source for hundreds of thousands of Arapahoe County residents; it must be clean, secure, and protected. The City of Aurora has established a one-mile reservoir setback. (Aurora City Code, Sec. 135-4(b)(4)c.) With the Aurora Reservoir at issue, Arapahoe County should do the same. For further explanation of the necessity for a one-mile reservoir setback, we incorporate the comment provided by letter dated June 2, 2023 from John Granger on behalf of STAR.

NATURAL GAS-POWERED CRYPTOCURRENCY MINING

TABLE 3-2.1 PERMITTED USE TABLE

Cryptocurrency Mining

~~(10) Cryptocurrency mining not connected to an electrical grid and accessory to an oil and gas facility.~~

To explain the recommendation not to add cryptocurrency mining as a “permitted use”, we incorporate the comment provided by letter dated June 16, 2023 from John Granger on behalf of STAR. Additionally, we point to the mounting evidence that Arapahoe County should not get in or even close to the business of cryptocurrency mining, which benefits a very small number of individuals and companies scattered around the world, carries immense energy costs for the communities that house cryptocurrency infrastructure, and creates no tangible product or service of use to local residents. (Ariana Baio, The Independent, “Texas paid Bitcoin company \$175k an hour to stop using energy during fatal 2021 winter blackout,” Apr. 12, 2023 (explaining that cryptocurrency mining “requires massive amounts of electricity, which has led to large quantities of carbon emissions,” and that, where mines exist, “energy bills have risen 9 per cent”).)

ADDITIONAL AMENDMENTS

SETBACKS

2. Setbacks

- a. All Oil and Gas Facilities shall be located at least:
 - i. ~~One (1) mile 2,000 feet~~ from the edge of any lot with any occupied structure as measured from the pad boundary.
 - ii. ~~One (1) mile 2,000 feet~~ from the nearest boundary of any area zoned for residential use a platted lot smaller than 15 acres in area as measured from the pad boundary.
- b. The ~~one (1) mile 2,000 feet~~ setbacks from a lot with an occupied structures or an area zoned for residential use platted lots referenced in subparagraphs 5-3.6.F.2.a.i or and ii above may ~~also~~ be reduced to a lesser setback:
 - i. ~~If the owner(s) of the occupied structure(s) or all owners of the affected platted lots agree in writing to a lesser setback and the fire district agrees to provide service to the Oil and Gas Facility; however, even with owner consent, in no case may the setback be reduced below 500 feet; or~~
 - ii. ~~If, as shown on the Oil and Gas Facility Operations Plan submitted with the application, any and all wells, tanks, separation equipment, compressors and any stored hazardous or explosive materials on the Oil and Gas Facility pad will be~~

- ~~located or stored more than 2,000 feet from the nearest occupied structure or all affected platted lots; or~~
- iii. If an Oil and Gas Facility application that includes a lesser setback is submitted ~~and, it must be and~~ approved by the Board of County Commissioners through the Use by Special Review process provided in Section 5-3.4 of the Land Development Code. For approval of any lesser setback under this subparagraph, the Operator must establish that the lesser setback as proposed will provide substantially equivalent protection to a ~~one (1) mile 2,000-foot~~ setback and that granting the lesser setback will not adversely impact public health, safety, or welfare or the environment. In reviewing the proposed lesser setback, the Board of County Commissioners shall consider the extent to which the operator provides an alternative Oil and Gas Facility design, best management practices, control technologies, or proposes conditions of approval that will be effective to avoid, minimize, or mitigate adverse impacts on the affected properties, considering:
 - (a) geology, technology, and natural ~~or added man-made~~ features, hazards or topography;
 - (b) ~~(b)-~~ the location and use of occupied structures ~~and residential areas~~ and proximity to those structures ~~and areas; and and~~
 - (c) the anticipated size, duration, and intensity of all phases of the proposed oil and gas operations at the proposed oil and gas location; ~~and~~
 - ~~(d) the anticipated size, duration, and intensity of all phases of the proposed oil and gas operations at the proposed oil and gas location.~~
 - iv. However, in no case may the ~~one (1) mile 2000-foot~~ setback from occupied structures or ~~areas zoned for residential use platted lots~~ be reduced below ~~3,280 500 feet, or 1 kilometer.~~
- c. Reverse Setbacks: No new occupied structure shall be constructed ~~or new area zoned for residential use~~ less than:
- i. ~~3,280 250 feet, or 1 kilometer,~~ from an existing Oil and Gas well of any status (permitted but not drilled yet, drilling, completing, producing, active gas storage, injecting, shut-in, temporarily abandoned, dry and abandoned, or plugged and abandoned prior to 2014); ~~or~~
 - ii. ~~3,280 150 feet, or 1 kilometer,~~ from a plugged and abandoned oil and gas well or remaining equipment ~~from an oil and gas well~~ that was plugged and abandoned ~~in from~~ 2014 ~~or later onward.~~

To explain these setback recommendations, we incorporate the comment provided by letter dated June 5, 2023 from John Granger on behalf of STAR. In particular, we highlight the findings and conclusions provided by the California Oil and Gas Public Health Rulemaking Scientific Advisory Panel to the California Geologic Energy Management Division by letter dated October 1, 2021. (California Department of Conservation, Geologic Energy Management Division, conservation.ca.gov/calgem/Documents/public-health/Public%20Health%20Responses_FINAL%20ADA.pdf.)

We have focused our review on epidemiological studies carried out in multiple oil and gas regions, including Colorado, which has a similar regulatory context as California... Our Panel concludes with a high level of certainty that the epidemiologic evidence indicates that close residential proximity to OGD [oil and gas development] is associated with adverse perinatal and respiratory outcomes... [T]he totality of the epidemiological evidence provides

a high level of certainty that exposure to OGD (and associated exposures) cause a significant increased risk of poor birth outcomes...

Noise pollution, odors, and landscape disruption are inherent to OGD. Investigations in other oil and gas states have noted radioactivity on particles downwind from unconventional oil and gas wells and in sediment downstream of water treatment plants that treat waste from conventional as well as unconventional oil and gas operations... The wells, valves, tanks and other equipment used to produce, store, process and transport petroleum products at both unconventional and conventional OGD sites are associated with emissions of toxic air contaminants, hazardous air pollutants and other health-damaging non-methane VOCs. Diesel engines used to power on-site equipment and trucks at unconventional and conventional OGD sites directly emit health-damaging hazardous air pollutants, fine particulate matter (PM_{2.5}), nitrogen oxides and volatile organic compounds (VOCs). Many VOCs and nitrogen oxides are precursors to ground level ozone (O₃) formation, another known health harming pollutant. Hazardous air pollutants that are known to be emitted from OGD sites include benzene, toluene, ethylbenzene, xylenes, hexane and formaldehyde—many of which are known, probable or possible carcinogens and/or teratogens and which have other adverse effects for non-cancer health outcomes...

Existing epidemiologic studies were not designed to test and establish a specific “safe” buffer distance between OGD sites and sensitive receptors, such as homes and schools. Nevertheless, studies consistently demonstrate evidence of harm at distances less than 1 km, and some studies also show evidence of harm linked to OGD activity at distances greater than 1 km... Because air pollutant concentrations and noise levels decrease with increasing distance from a source, adequate setbacks can reduce harm to local populations by reducing exposures to air pollutants and noise directly emitted from the OGD activities. However, setbacks do not reduce harms from OGD contributions to regional air pollutant levels, such as secondary particulate matter and ozone, or greenhouse gases, such as methane, which are nearly always co-mingled with health-damaging air pollutants... (Citations omitted.)

We also bring to your attention the public comment provided by a Cherry Creek School District official at the Commission’s meeting of April 11, 2023. The comment has direct relevance to the recommended setbacks from occupied structures, including schools. The official explained that the Cherry Creek School District declined Civitas’ offer to lease the School District’s mineral rights because of the dangers posed to students and their health, welfare, and learning by the Lowry Ranch fracking project. He further explained that, contrary to the assertions of a commenter at the Commission’s meeting of March 28, 2023, the Cherry Creek School District would see no direct economic benefit from Lowry Ranch or any future O&G development approved by Arapahoe County because of how education and school district funding is managed at the state level.

WILDLAND URBAN INTERFACE

3. Health and Safety Requirements

p. Wildland Areas With Significant Risk of Fire Spread

- i. No Oil and Gas Facility shall be located within any portion of the Wildland Urban Interface (WUI) designated by the OEM as having a significant risk of fire spread without the prior written consent of both the OEM and any Fire Marshall(s) or Fire

- Chief(s) with jurisdiction over the particular portion of the WUI where the Oil and Gas Facility will be located. Consent shall require documentation that satisfies both the OEM and fire authority(ies) with jurisdiction of the time and distance for first responders to arrive at the Oil and Gas Facility; fire prevention and suppression measures to be taken by employees at the Oil and Gas Facility; training programs for employees at the Oil and Gas Facility and first responders to prevent and suppress fire at the Oil and Gas Facility; and fire prevention and suppression equipment available at the Oil and Gas Facility.
- ii. For the purposes of this subparagraph p, Wildland Urban Interface (WUI) is defined as that one (1) mile-wide wildland area that is a transition zone between a wildland area, or undeveloped land not occupied or regularly used, and an urban or suburban area, or developed land with occupied structures or areas zoned for residential, commercial, or agricultural use.

To explain the WUI recommendation, we incorporate the comment provided by letter dated June 5, 2023 from John Granger on behalf of STAR. We also highlight the fire risks that materialized in the 2021 Marshall fire, Colorado's most destructive wildfire that killed two people, destroyed more than 1,000 homes, and caused \$513 million in direct damages. (Joe Wertz, Colorado Public Radio, "Authorities say power lines, earlier trash fire combined to cause Colorado's massive Marshall blaze," June 8, 2023.)

NEIGHBORHOOD MEETINGS

2. Neighborhood meeting

- a. Prior to submitting an application to Arapahoe County, the applicant shall conduct a neighborhood meeting to describe and take neighbors' input on the proposed Oil and Gas Facility and include the input with the application. The applicant shall send written notification by U.S. Mail of the meeting to the Planning Division and to all property owners of record, all occupied residences if occupants are different from record owners, and all registered homeowners' associations and metropolitan districts for residential subdivisions where any portion of the owner's, occupant's, or subdivision's property or lot platted subdivision's boundary is inside or within one mile of the proposed Oil and Gas comprehensive area plan (CAP), or project, boundary or facility pad boundary. Meetings may be conducted in person or utilizing an electronic virtual or remote meeting platform or both. Notice of the meeting must be sent no less than 15 days prior to the scheduled meeting date. The property owners of record shall be those identified in the County Assessor's property records. The Planning Division will provide the applicant with the names and addresses of the homeowners' associations and metropolitan districts. The applicant shall determine whether a residence is occupied by someone other than the owner and shall be responsible for notifying such occupants.
- b. At said meeting, the applicant must provide information concerning the development plans for the specific CAP and facility, including the timing and phasing of construction, drilling and completion, the planned access route(s), and mitigations planned to address air, water, noise, light, odor, traffic, and visual impacts. The applicant shall include with its application for the proposed facility a summary of the neighborhood meeting, a copy of the written notification of the meeting, an audio-visual or audio recording of the meeting or transcription of the meeting, any materials presented or provided at the

meeting by the applicant, and the list of attendees, including names and addresses from the sign-in sheet(s), meeting agenda, and any other document.

3. Application Notice Requirements

- a. The applicant shall provide written notification by U.S. Mail to all property owners of record, all occupied residences if occupants are different from record owner~~s~~, and all registered homeowners' associations and metropolitan districts for residential subdivisions where any portion of the owner's, occupant's, or subdivision's property or lot platted subdivision's boundary is inside or within one mile of the proposed Oil and Gas CAP boundary or pad boundary of the proposed Oil and Gas Facility that an application for an Administrative Use by Special Review for an Oil and Gas Facility, ~~will be is being~~ filed with the County. The Notice of Application shall meet the format prescribed by the County; must include information about the proposed Oil and Gas CAP, or project, and all Oil and Gas Facilities within the project, instructions on how to obtain further information, and information about providing public comment(s) to and attending public meeting(s) held by the County; and shall be mailed at the time of filing the application with the County. The property owners of record shall be those identified in the County Assessor's property records. The Planning Division will provide the applicant with the names and addresses of the homeowners' associations and metropolitan districts. The applicant shall determine whether a residence is occupied by someone other than the owner and shall be responsible for notifying such occupants.

Our recommended additions to the existing Neighborhood Meeting requirement are necessary and appropriate in order to fulfill the requirement's intent. Limiting the notifications to neighbors living within one mile of a specific O&G facility pad in unincorporated Arapahoe County renders the notifications ineffective when the facility is part of a larger O&G CAP, or project, especially if the CAP extends to already developed areas of the County. Our additions would make the Neighborhood Meeting requirement a more substantive and effective requirement for citizen due process through public notice and hearing.

CONTEXT

On a personal note, I provide these comments having considered the proposed amendments in the context of the proposed Lowry Ranch fracking project, which will pose serious dangers to the health, safety, and welfare and the environment of the tens of thousands of Arapahoe County residents who live and work within or near the project's boundaries; whose homes, schools, businesses, and houses of worship rest on the land to be fracked; and whose water, air, and quality of life are threatened by the project. My concerns are for the larger community as well as for my family and myself. I am a retired Air Force judge advocate (military lawyer), county election judge, city commissioner, metro district board member, and volunteer with civic organizations, and I will be directly harmed should the Lowry Ranch fracking project go forward. Civitas plans to build 174 fracking wells, each over 10 stories tall, on at least 10 facility pads in an area of 33,440 acres of unincorporated Arapahoe County. (Civitas, Lowry Ranch CAP, civitascommunityrelations.com/lowry-ranch-cap.) From those wellheads, Civitas will then frack an even larger area that encompasses already developed, densely populated "incorporated" Arapahoe County and the Aurora Reservoir, Lowry Landfill Superfund site, Lowry Range environmental area, and thousands of homes, schools, businesses, and houses of worship, including my home and my mother's senior-living residence and church.

The Lowry Ranch fracking project will generate air pollution that further degrades the air quality already downgraded from “serious” to “severe” by the U.S. Environmental Protection Agency. (Sam Brasch, Colorado Public Radio, “The EPA moves to declare the Front Range a ‘severe’ air quality violator. Here’s why that matters.”, Apr. 12, 2022.) It will threaten the vital water resource of the Aurora Reservoir; use millions of gallons of freshwater; generate millions of gallons of toxic wastewater that cannot be cleaned, reused, recycled, or stored safely on-site or underground; and drive up the cost of water for local residents – all during a period of historic drought. And it will create levels of noise and light pollution that will harm the environment and degrade the quality of life for the thousands of citizens in the affected area. The list of dangers continues: water and air contamination from spills and releases, elevated threat of grassfire, increased mortality risks, measurable dollar costs for public infrastructure and first-responder capacity as well as medical emergencies and healthcare, potential geological instability, and – last but not least – reduced home property values for Arapahoe County residents and thus a reduced tax base for Arapahoe County. At a time when the County is already losing residents and facing fiscal constraints and cannot even take advantage of any future, potential oil and gas (O&G) revenues because of TABOR restrictions (John Aguilar, Denver Post, “For two Colorado counties that haven’t “de-Bruce,” the fiscal alarm is growing louder,” June 12, 2023), the County should be working on how to “de-Bruce” rather than how to facilitate a fracking project that will benefit only a private-equity company and cost the County much more than it will ever gain. (Chris Stiffler and Pegah Jalali, Colorado Fiscal Institute, “Clearing the Air: The Real Costs and Benefits of Oil and Gas for Colorado,” January 2023 (reporting data that demonstrates the costs of the O&G industry outweigh the benefits to Colorado and Coloradoans).)

Moreover, the Lowry Ranch fracking project is especially illustrative of the problems caused by locating O&G facilities in unincorporated Arapahoe County, or the “use by special review” that is the subject of the County’s O&G regulations. That the entire 5-3.6 is specific to facilities in “unincorporated” parts of the County at best ignores, at worst hides the fact that an O&G facility on unincorporated land may well be an O&G project with direct and detrimental impacts on densely populated areas of the County where tens of thousands of residents live, work, play, go to school, attend church, and enjoy every day. In the case of Lowry Ranch, “use by special review” would mean not only 174 fracking wells in unincorporated Arapahoe County but also hundreds of miles of fracking lines under tens of thousands of acres of already developed County land plus a multitude of immediate dangers to the health, safety, welfare, and environment of hundreds of thousands of Arapahoe County residents.

CONCLUSION

The LWVADC concludes our comments on the Phase 1 proposed oil and gas amendments with our thanks for your service as well as for your time, attention, and consideration of our recommendations. We urge you to incorporate them in the Arapahoe County oil and gas regulations, as they will help you do the vital work of protecting our health, safety, welfare, and environment. You may contact me at julierimhuygen@gmail.com or (720) 261-3218 with any notes or questions.