



---

**SUBJECT: CASE NO. LDC23-004 – OIL AND GAS LAND DEVELOPMENT CODE AMENDMENT**

Diane Kocis, Energy Specialist, Public Works and Development Department **October 19, 2023**  
Jason Reynolds, Planning Division Manager, Public Works and Development Department

---

**PURPOSE AND REQUEST**

This County-initiated application proposes amendments to the Oil and Gas regulations in Section 5-3.6 of the Land Development Code (LDC). The Planning Commission is requested, in accordance with CRS 30-28-116, to make recommendations on the amendments as proposed for setbacks and reduction options, air and water quality regulations, Wildland Urban Interface (WUI) measures, and other related language revisions as described in this Report and the amendments. On the proposed setback amendments, Planning Commission is requested to provide separate recommendations on different options for setback distances as well as for the proposed options for reductions from those setbacks. Attachment 1 is a matrix of the various setback and setback reduction options for reservoirs, occupied structures, platted lots, designated outside activity areas (DOAAs), other surface waters and riparian areas, and landfills. Attachment 2 is the proposed amendments with separate recommendation request stated and highlighted.

The proposed amendments for which the Planning Commission is asked to make its recommendations, including each separate setback distance option and the proposed variance procedures and criteria, are set forth in Attachment 2 and as follows:

- Increase setbacks from occupied structures, platted lots, landfills, Designated Outside Activity Areas (DOAAs) and riparian areas, streams, and perennial surface waters to the distances specified in the Attachment 1 feet, while providing the potential for setback reductions through an administrative process for most if the request meets criteria and interested parties (CPW, DOAA owner, nearby owners) have no objections.
- Increase the downgradient reservoir setback to 3,000 feet (set at 2,000 feet at the October 10, 2023, BOCC hearing) and add an ability to request a reduction in setback distances for the downgradient 3,000 feet and the ‘upgradient’ one-mile reservoir setbacks through a Use by Special Review (“USR”) process. The USR would be decided by the Board of County Commissioners after a noticed public hearing and require meeting the specified criteria for approval.
- Add language for wildfire mitigation in the Wildland Urban Interface (WUI).
- Add language for air monitoring and sampling and increased water quality monitoring, to be performed by independent third-party consultants and paid for by industry.
- Add continuous surface water monitoring for surface waters downgradient of well pads.
- Add new requirements for Spill and Release Measures and Reporting.
- Increase the radius of notifications of neighborhood meetings and application submittals to 1.5 miles; and,

- Correct some language adopted in October 2023, such as changing existing references from COGCC (Colorado Oil and Gas Conservation Commission) to ECMC, to reflect the agency's new name (Energy and Carbon Management Commission) and eliminate a separate requirement for a Tactical Response Plan because the TRP information is provided in the Emergency Action Plan.

## **BACKGROUND**

The proposed new regulations, shown as redlines to the existing Oil and Gas regulations in Attachment 2, reflect recent direction received from the Board of County Commissioners and staff-recommended changes to the Oil and Gas regulations adopted on October 10, 2023. Stakeholder comments provided prior to and during the Planning Commission and Board of County Commissioners (BOCC) public hearings included requests for increased setbacks, air/water quality measures, additional public notice, and wildland-urban interface protections.

Among the many health studies and analyses cited by the public, two were published recently: *Evaluating potential human health risks from modeled inhalation exposures to volatile organic compounds emitted from oil and gas operations* (Journal of the Air & Waste Management Association - 2019) and the California Oil and Gas Public Health Rulemaking Scientific Advisory Panel response to the California Geologic Energy Management Division (CalGEM letter - 2021) – see Attachment 5. The Journal of the Air & Waste Management Association article specifically modeled Colorado well sites and found that many risks – though not all risks – were reduced with setbacks of 2,000 feet from well sites. The CalGEM letter recommended 1 km (~3,280 feet) setbacks from occupied structures. Both of those documents predate Colorado's post Senate Bill 181 air quality rulemaking, which further strengthened protections in Colorado. The third document (Colorado Lawyer July 2019) provides some background on Senate Bill 181, including clarifications on the bill's intent regarding “necessary and reasonable” from Senator Foote, one of its sponsors. Senator Foote's comments encourage a broad interpretation of “necessary and reasonable,” considering that the context of the bill is a “...clear desire to prioritize health and safety when it comes to oil and gas operations, permitting, and supervision...” In light of the developing nature of the science around safe setback distances from an oil and gas pad and the many factors that affect the making of such determinations, including varying geography, technology and advancements, differences in sensitivities of individuals, differences in uses around a pad, climate, and many other factors, it is the intent of these proposed regulations to adopt setback distances that lean to a larger and more protective distance, but provide options to reduce the setbacks if the operator can demonstrate that the circumstances of a particular location and/or engineered protections can provide substantially the same protections as the setback distance.

The amendments are being considered in phases to address concerns about how the existing regulations address new and potentially increased Oil and Gas development and to correct certain omissions discovered after the adoption of the regulations in November of 2021 and that were not

then included in those regulations. This Phase 2 addresses the matters identified above and otherwise in this Staff Report and Attachments, and the text of the proposed amendments, including the various options requested for separate recommendations from the Planning Commission, and are shown in the Attachment 2. These Phase 2 amendments and options for amendments were discussed with the BOCC study sessions in September and October of 2023.

Recent stakeholder comments included requests that the County adopt its own financial assurance regulations and a County oil and gas inspection program. There have also been requests to increase reverse setbacks (setbacks from new homes to existing oil & gas sites) and to consider prohibiting commercial injection wells. These topics will be part of a later phase of the Oil and Gas regulation amendments, planned for early next year.

### **PROPOSED REGULATION SUMMARY AND ANALYSIS**

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

- Correct references to the Colorado Oil and Gas Conservation Commission (COGCC) throughout, to update the agency's new name, Energy and Carbon Management Commission (ECMC).
- Amend Section E.2, **Neighborhood Meetings** to increase the neighborhood meetings notification radius to 1.5 miles.
- **Increases in Setbacks**: Amend Section F.2. **Setbacks and Setback Reductions**. The Phase 2 amendments propose increases the setbacks for reservoirs and planned reservoirs, occupied structures, platted lots, to designated outside activity areas (DOAAs), other surface waters and riparian areas, and landfills. The Phase 2 further proposes procedures, both administrative and through public hearing before the BOCC, for allowance of reductions for a proposed Oil and Gas Facility at a particular location based on meeting the specified criteria, which include showing that facility design and mitigation measures will provide substantially the same protection as the full setback. The setbacks being proposed for amendment are:

Increase the existing 2,000-foot setback from any **Occupied Structure** as measured from the pad boundary to either 2,500 feet or 3,000 feet.

Increase the existing 2,000-foot setbacks from the nearest boundary of a **Platted Lot smaller than 15 acres** to either 2,500 feet or 3,000 feet.

Increase the existing 2,640-foot setback from an **Operating or Closed Landfill** to 3,000 feet.

Increase the current 2,000 downgradient setback from any **Public Water Reservoir or Planned Public Water Reservoir** to 3,000 feet.

Increase the current 2,000-foot setback from a **Designated Outside Activity Area (DOAA)** as measured from the pad boundary to either 2,500 or 3,000 feet).

Increase the current 500-foot setback from a **Riparian Area, Perennial Surface Water, not a public water reservoir, and Stream** provided the site is outside any 100 year floodplain to 1,000 feet.

- **Reductions from Setbacks:** In order provide “off-ramps” for situations where application of the full setback distance may not be reasonable or necessary, the amendments propose various options for reductions for setbacks upon which the Planning Commission is requested to make separate recommendations as indicted in Attachment 2.

These set back “off-ramps” are:

For **Occupied Structures and Platted Lots**, the setback can be reduced through an administrative process, if all occupied structures or platted owners within that lesser setback agree to it. The current minimum setback in this situation is 500 feet and staff is including an option to increase the minimum setback to 1,000 feet. A larger “floor” would create a larger firefighting buffer around the pad site.

If the affected **Occupied Structure/Platte Lot** owners do not consent to a lesser setback, an operator could request a setback reduction through a Use by Special Review with a public hearing. Currently the “floor” for the setback reduction is 500 feet. Staff offers options to increase that minimum setback to 1,000 feet or 1,500 feet.

For **Public Water Reservoirs and Planned Public Water Reservoirs**, the base setback is one mile. If an operator can demonstrate that their facility is downgradient from the reservoir, they would be eligible for administrative approval of a 3,000-foot setback. Currently, the downgradient setback requirement is 2,000 feet, with no option for a reduction. The proposed regulations provide a Use by Special review with public hearings process and additional standards for downgradient or non-downgradient setback reductions. Options for a “floor” on downgradient setbacks are 1,500 or 2,000 feet. The proposed non-downgradient setback minimum is 3,000 feet.

For **Designated Outdoor Activity Areas**, the 3,000-foot setback may be reduced administratively with the consent of the owner or manager of the Area (See Attachments 1 and 2). Options for a minimum required separation include 1,000, 1,500, or 2,000 feet.

For **Riparian areas, Perennial Surface Waters and Streams**, provided that the facility remains outside any 100-year floodplain, the 1,000-foot setback may be administratively reduced to no less than 500 feet if supported by an independent third-party environmental analysis and recommended by CPW. Note, the existing setback is 500 feet. As such, if the increased 1,000 feet is not adopted this option for reduction would be removed and not apply.

- Amend **Reservoir terminology and definition of Planned and Permitted Reservoir.**

The amendments change the terminology for referencing water reservoirs and planned reservoirs, and revises the definition of planned reservoirs. Such are now referred to as Public Water Reservoirs and Planned Public Water Reservoirs. This is primarily to distinguish other perennial surface waters that are not used for public water supplies, which have separate setback requirements. The requirements for the reservoir being a public water supply, under public ownership, and of a minimum size remain unchanged.

Additionally, the amendments proposed to change the definition of a planned reservoir, which under the amendments is referred to as “**Planned Public Water Reservoir,**” and is now defined as:

An unconstructed, but planned public water reservoir of qualifying capacity for which the location of such planned reservoir is established in the public record at a specific and mapped location within unincorporated Arapahoe County and that:

- i.* has received or applied for approval through a water court adjudication; *or*
- ii.* has received federal, state, or local permit approval required under applicable law for construction of a reservoir.

- Amend Section F.3.a. **Emergency Response Plan** to eliminate references to a Tactical Response Plan (TRP), because the TRP information is already provided in the required Emergency Action Plan (EAP).

- Amend Section F.3.i. **Fire Prevention and Procedures** to add mitigation measures for the Wildland Urban Interface. The amendment clarifies that the Fire Protection District will factor WUI into its review and may require additional protections for WUI areas.

- Amend Section F.3.n **Spill and Release Reporting** to add a new requirement for reporting of spills and to add continuous testing requirements for surface waters downgradient of and within a one-half mile of the well pad and testing, remediation and mitigation plans for any spill that leaves a pad.

- Amend Section F. 9. **Groundwater Sampling and Monitoring** to clarify language requiring testing of water wells if allowed by the property owner and to add additional documentation requirements for wells so tested. The amendments also add additional requirements for continuous surface water testing of surface waters that are downgradient of and within one-half mile of a well pad

- Add a new section for **Air Quality Monitoring:**

The state requires air quality monitoring today. The proposed regulations would require monitoring from additional locations and require reporting to the county.

- Add requirement for Operators to provide continuous noise monitoring in Section F. 11 **Noise Mitigation.**
- Add new wording to Section F. 21. **New Technologies:**

Clarifies that emissions monitoring is included in the list of potential new technologies.

### **DISCUSSION**

At their October 16, 2023, study sessions, the Board directed staff to develop appropriate amendments to further protect public health, safety, and welfare and the environment, to include:

- New wording for reservoir setbacks to change the downgradient reservoir setback from 2,000 feet to 3,000 feet and allow for a setback reduction process for both the one-mile reservoir setback and the downgradient setback;
- Increased well pad setbacks from 2,000 feet to 3,000 feet for occupied structures, platted lots, landfills and DOAAs and to allow for a setback reduction process;
- Seek recommendations from Colorado Parks and Wildlife on a potentially greater setback for riparian areas;
- Air quality monitoring and testing by third party consultants, to be paid by operators;
- Increased water quality monitoring for both domestic water wells and surface water, conducted by a third party, to be paid for by operators;
- Investigate a potentially larger radius in some cases for neighborhood notifications of proposed well pads, which is currently set at one mile.

The items listed above, while not included in the Phase 1 amendments topics, were brought forward during BOCC study sessions prior to hearings and during the public comment period at the July 18, 2023, Planning Commission hearings and were then considered by the Board at subsequent Board study sessions on September 12, and October 16, 2023. Based on the stakeholder comments and Planning Commission recommendations, the Board directed staff to draft new rules or revise existing rules and proceed to a Planning Commission public hearing on November 8<sup>th</sup>.

The Board direction concerning air and water quality monitoring was to add new air quality monitoring and testing rules, to be conducted by a third party, paid for by industry and to enhance the existing domestic well testing requirements and add continuous surface water testing.

Staff is seeking Planning Commission's recommendations on specific increased setback distance options and on proposed procedures for reduction of the increase setback distances as set forth in this Staff Report and shown on the proposed amendments in Section 5-3.6.F.2 and called out for separate recommendations (see Attachment 2). Staff is also seeking Planning Commission's recommendation on the potential variance type options for reductions to the proposed increased

distances set forth in this Section of the proposed draft regulation. The specific text of all the amendments and the separate setback distances and potential reduction options for which separate recommendations are requested is contained in Attachment 2.

### **NOTICES AND REFERRALS**

No referrals were sent to industry, residents or other stakeholders for these Phase 2a amendments of the Land Development Code Section 5-3.6, as the BOCC directed staff on October 10, 2023, to conduct a November 8, 2023, Planning Commission hearing for draft rule recommendations and a November 14<sup>th</sup> BoCC hearing for adoption of the Phase 2a rules. This tight timeline does not allow sufficient time for referrals or stakeholder meetings; however, staff is accepting comments sent to either Public Works and Development staff or the BOCC via email or letters. Furthermore, the proposed changes are a direct result of testimony received at both the Planning Commission and Board hearings. Public comments made at the November 8<sup>th</sup> Planning Commission hearing will become part of the record for the BOCC to review prior to the November 14<sup>th</sup> BOCC hearing.

It is important to note that a redlined version of these draft rules will be posted to both Legistar and the County's Oil & Gas website by November 3<sup>rd</sup>. Notifications of the Legistar and County website postings will be sent to over 500 people who have emailed Public Works and Development staff or the commissioners.

Notices of the November 8, 2023, Planning Commission public hearing and the November 14, 2023, BOCC public hearing were published in the Colorado Community Media and I-70 Scout newspapers on October 26<sup>th</sup> and October 24<sup>th</sup>, respectively.

### **STAKEHOLDER COMMENTS**

Stakeholder comments were accepted, compiled for this hearing and summarized in Attachment 3. Any additional comments received after posting this staff report on the County's website will be presented to the Planning Commission at the hearing.

### **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-caused 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 other uses such as outside activity areas, water reservoirs, and residents.

**FISCAL IMPACT**

The fiscal impact to the County of adoption of these amendments to the Oil and Gas Regulations is expected to be minor for the Planning Division to review more application materials, waiver requests, monitoring and testing data and additional recordkeeping.

**RECOMMENDATION**

Staff recommends approval of the Land Development Code amendments as proposed, including the various setback and setback reduction options as outlined in the proposed amendments with the following stipulation:

1. That Planning Commission make specific recommendations on separate amendment options presented in the proposed amendments, described in this Staff Report and outlined in the Staff proposed Motion to Recommend Approval; and
2. That 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 LDC23-004, 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 stipulations and specific recommendations:

1. That the setback from occupied structures be established at 2,000/2,500/3,000 feet (*pick one*).
2. That the setback from platted lots less than 15 acres be established at 2,000/2,500/3,000 feet (*pick one*).
3. That the minimum setback reduction that may be allowed for Occupied Structures and Platted Lots less than 15 acres be established at 500/1,000 feet with property owner permission through an administrative reduction (*pick one*).
4. That the minimum setback reduction that may be allowed for Occupied Structures and Platted Lots less than 15 acres be established at 500/1,000/1,500 feet through a Use by Special Review (*pick one*).
5. That the setback from Designated Outside Activity Areas be established at 2,000/3,000 feet (*pick one*).
6. That the minimum setback from Designated Outside Activity Areas may be administratively reduced with consent of the owner or manager of the area but in no case may the setback be reduced below 1,000/1,500/2,000 feet (*pick one*).
7. That the minimum setback from operating or closed landfills as measured from the pad boundary be established at 2,640 feet/3,000 feet (*pick one*).
8. That the setback from riparian areas, perennial surface water (not a public water reservoir) and streams be established at 500 feet/1,000 feet with a procedure to administratively reduce the setback to no less than 500 if allowed by CPW (*pick one, 500 without an off-ramp or 1,000 with an off ramp*).
9. That the setback reduction procedures for the 3,000 feet downgradient reservoir setback as proposed in the amendments be adopted/not adopted (*pick one*) and that the Use by Special review option for reduction to no less than 1,500/2,000 feet (*pick one*) as proposed in the amendments be adopted/not adopted (*pick one*).
10. That the setback reduction procedures for the one-mile reservoir setback that does not qualify as downgradient as proposed in the amendments be adopted/not adopted (*pick one*) and that the Use by Special Review option for reduction to no less than 3,000 feet as proposed in the amendments be adopted/not adopted (*pick one*).
11. That all other and additional amendments as proposed in the amendments be adopted as proposed.
12. That 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 LDC23-004, 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 LDC23-004, 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. Matrix of Potential Setback Variances
2. Oil and Gas Regulations Amendments, redlined draft
3. Stakeholder Comments Summary Table
4. Stakeholder Comments Received
5. Recent Publications