

Note: This will be a new Section in the Larimer County Land Use Code. This is a preliminary outline of draft oil and gas regulations and is not all inclusive.

To keep the Task Force Committee discussion on track, please focus comments to the intent and purpose of the standards and avoid refrain from making small edits.

17.0. – OIL AND GAS FACILITIES

17.1. – Intent and Purpose.

- A. **Intent and Purpose:** The Intent and purpose of this section is to establish and administer necessary and reasonable regulations for oil and gas drilling and production in a manner that protects and promotes the health, safety, and general welfare of the residents and environment of the County. To the extent practicable these regulations will require applications for oil and gas operations to demonstrate how adverse impacts will be mitigated to achieve a minimal negative impact on the environment, wildlife and residents of the County.
- B. **Authority:** Pursuant to the authority granted to the County in C.R.S. 29-20-104(1) the review of such applications may include, without limitation:
1. Land Use,
 2. Location and siting of oil and gas facilities,
 3. Impacts to public facilities and services,
 4. 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 and traffic and transportation impacts,
 5. Financial securities, indemnification and insurance as appropriate to ensure compliance with the requirements of Larimer County, and
 6. All other nuisance-type effects of oil and gas development.
- C. **Applicability:** These regulations shall be applicable to all oil and gas drilling and production activity commenced on any property in Larimer County, after the date of _____, regardless of what zoning district the property is situated in.
- D. **Severability:** If any sections, clause, provision, or portion of these regulations should be found to be unconstitutional or otherwise invalid by a court of competent jurisdiction, the remainder of the regulations in the section shall not be affected thereby and is hereby declared to be necessary for the public health, safety and welfare.

17.2. – Required Process and Permits

- A. Required Process:
- a. Oil and gas drilling and production activities in Larimer County shall require Special Review approval (Section 4.5). **Should we state when the approval must be obtained, i.e. prior to submittal to Colorado Oil and Gas Commission (COGCC)???**
- B. Supplemental Review Criteria for Oil and Gas Facilities:
- a. In addition to the Special Review criteria found in Section 4.5.3 of this Code, each oil and gas facility shall be approved only if it meets the following criteria:
 - i. It complies all the requirements of this Section 17.
 - ii. Reasonable and necessary mitigation steps have been taken to protect the public health, safety, and welfare and environment

- C. Permits required:
- a. Access permits
 - b. Building permits as required for structures
 - c. Development Construction permit
 - d. All federal, state and local permits for oil and gas operations

17.3. – Standards Required for all Oil and Gas Facilities

A. General:

1. All applicants are responsible for compliance with applicable federal, state and local laws and regulations for the operation of Oil & Gas facilities.
2. Oil and Gas facilities should be located to minimize impacts on agricultural operations.

B. Air Quality:

1. The use? shall comply with existing federal and state laws and regulations applicable to its operations and emission sources as well as any future laws and regulations adopted by the Colorado Air Quality Control Commission (AQCC).
2. Air contaminant emission sources shall apply for and comply with the permit and control provisions prescribed by the Colorado APCD C.R.S. tit.25, Art. 7 (C.R.S. § 25- 7-101 et seq.) and the rules and regulations promulgated by the AQCC all applicable emission sources.
3. Environmental Protection Agency (EPA) Reduced Emission Completions shall be used for all completions and well workovers following hydraulic fracturing, unless the application demonstrates that it is economically infeasible or impractical to utilize such a system.
4. Closed loop, pitless drilling, completion systems without permanent on-site storage tanks must be utilized for containment and/or recycling of all drilling, completion, and flowback fluids, unless the application demonstrates that it is economically infeasible or impractical to utilize such a system. All emissions shall be routed to and controlled by a flare or combustor operated with at least 98% destruction removal efficiency.
5. Oil and Gas facilities shall be equipped with electric-powered engines for motors, compressors, drilling and production equipment, and pumping systems, unless it is demonstrated by the application materials the utilization of such equipment is not economically feasible or practical.
6. During construction and exploration, the applicant shall demonstrate that the site, including traffic and construction equipment, complies with all AQCC standards.
7. Oil and gas operators shall respond to air quality action day advisories posted by the CDPHE for the front range area by implementing air reduction measures, which should include:
 - a. Minimizing vehicle traffic and engine idling;
 - b. Reduced truck and worker traffic;
 - c. Delay vehicle refueling;
 - d. Suspend or delay use of fossil fuel powered ancillary equipment;
 - e. Postpone construction or maintenance activities; and
 - f. Postpone well maintenance and liquid unloading activities that would result in emission to the atmosphere.

C. Leak Detection and Repair:

1. Oil and gas facilities shall at a minimum conduct semi-annual leak detection and repair (LDAR) inspections using modern leak detection technologies and equipment. One of the Semi-annual LDAR inspections shall include a five-day notice to the County Local Government Designee (LGD) and County Health Department inviting them to observe, at their discretion, the inspection.
2. Verified leaks to an oil and gas facility shall be reported to the County LGD and County Health Department within 24 hours of the discovered leak.
3. All verified leaks shall be repaired within 72 hours, unless technically or operationally infeasible.
4. Equipment leaks that pose an imminent hazard to persons, property, wildlife or the environment shall be shut down and not allowed to operate until the operator has provided evidence that the leak has been repaired.

D. Spills and Releases:

1. Any spill or release at an oil and gas facility, including those reportable to the COGCC, shall be immediately reported, **no later than 24 hours** after the event, to the following local emergency response authorities in Larimer County:
 - a. Larimer County Sheriff
 - b. Larimer County Department of Health and Environment
 - c. Larimer County Local emergency Planning Committee
 - d. Larimer County Oil and Gas LGD
 - e. Local Municipal Police Department if within one mile of a city or town
 - f. Local Fire Department
2. All spills or releases shall be cleaned up to the satisfaction of the local emergency response authorities, listed in item 1 above. Remediation of spills or releases reportable to the COGCC may be deferred to the COGCC and CDPHE.

E. Well Liquids Unloading:

1. Best management practices, including artificial lift, automated plunger lifts and at least 90% emissions when utilizing combustion to control venting shall be employed at all facilities.
2. Approved manual unloading shall require on-site supervision of the unloading process.

F. Noise:

1. A three-day (one day being a weekend day) baseline noise analysis from all receptors within 350 feet of the proposed use, or the property line, whichever is closest to the proposed oil and gas facility, shall be provided.
2. Predicted decibel levels shall be provided for various phases of development, as measured 350 feet from the site of operation/noise source (per COGCC) or at the property line of the adjacent land use, whichever is greatest. The type of land use of the surrounding area shall be determined by the County taking into consideration any applicable zoning of other local land use designation.
3. Proposed mitigation measures demonstrating that the oil and gas operations at any well site, production facility, or gas facility shall comply with the following maximum permissible noise levels appropriate for the zoning designation by the County:
4. Decibel levels shall meet the identified level for the appropriate activity and adjacent land use. Decibels shall be measured at 350 feet from the site of operation/noise source (per COGCC) or at the property line of the adjacent land use, whichever is greatest. The type

of land use of the surrounding area shall be determined by the County taking into consideration any applicable zoning or other local land use designation.

5. Oil and gas operations at any well site, production facility, or gas facility shall comply with the following maximum permissible noise levels appropriate for the zoning designation by the County:

<u>ZONE</u>	<u>7:00 am to next 7:00 pm</u>	<u>7:00 pm to next 7:00 am</u>
Residential/Agricultural/Rural	55 db(A)	50 db(A)
Commercial	60 db(A)	55 db(A)
Light Industrial	70 db(A)	65 db(A)
Industrial	80 db(A)	75 db(A)

In the hours between 7:00 a.m. and the next 7:00 p.m., the noise levels permitted above may be increased by ten db(A) for a period of not to exceed fifteen minutes in any one-hour period.

Construction projects (pipeline or facility construction/installation) shall be subject to the maximum permissible noise levels specified for industrial zones for the period within which construction is to be completed pursuant to any applicable construction permit issued by proper authority or, if no time limitation is imposed, for a reasonable period of time for completion of project.

G. Odors:

1. Oil and gas operations shall be in compliance with the Department of Public Health and Environment, Air Quality Control Commission, Regulation No. 2 Odor Emission, 5 C.C.R. 1001-4, Regulation No. 3 (5 C.C.R. 1001-5), and Regulation No. 7 Section XVII.B.1 (a-c) and Section XII.
2. Operations shall prevent odors from oil and gas facilities from affecting the health and welfare of the public during development activities including drilling, fracking, and flowback to the extent reasonably possible.
3. A system shall be established for immediate response to odor complaints that includes options for ceasing operations, notification of affected residents, and temporary relocation of residents until the source of the odor is identified and resolved.
4. We encourage the Operator to communicate the schedule/timing of well completions activities to residents, which could allow for voluntary shutting of windows and air intakes or temporary relocation.

H. Dust:

1. Best management practices for the mitigation of dust associated with on-site and traffic activities shall be employed at the facility.
2. Produced water and other process fluids shall not be used for dust suppression.
3. Safety Data Sheets (SDS) shall be provided with the application for any proposed chemical based dust suppressants.
4. Water only, unless otherwise approved by the County Health and Engineering Department, will be used for dust suppression activities within 300 feet of the ordinary high-water mark of any body of water.

I. Access:

1. Private access drives shall conform to the Local Low Volume cross section found in the Larimer County Rural Area Road Standards, and shall include the following:
 - a. The first 50 feet of access drive from the edge of pavement of the adjacent road will be paved and the remaining portions of the access drive shall be composed of a minimum of 6 inches of compacted Class 5 road base.
 - b. The access drive entrance shall include returns with a 30-foot radius.
 - c. The access drive shall be treated with Magnesium Chloride during the entire construction phase, and any time there after when the level of use exceeds 200 vehicle trips per day.
 - d. A mud and debris tracking pad shall be located at the end of the paved portion of the access drive.

J. Chemical Handling:

1. Prior to any hydraulic fracturing activity, the operator shall provide the County with a copy on the chemical disclosure registry form provided to the COGCC pursuant to the COGCC's "Hydraulic Fracturing Chemical Disclosure".
2. Drilling and completion chemicals shall be removed from the site within sixty days of the drilling completion.
3. The following toxic chemicals shall not be utilized in the hydraulic fracturing fluid:
 - a. Benzene
 - b. Lead
 - c. Mercury
 - d. Arsenic
 - e. Cadmium
 - f. Chromium
 - g. Ethylbenzene
 - h. Xylene
 - i. 1,3,5-trimethylbenzene
 - j. 1,4-dioxane
 - k. 1-butanol
 - l. 2-butoxyethanol
 - m. N,N-dimethylformamide
 - n. 2-ethylhexanol
 - o. 2-mercaptoethanol
 - p. Benzene, 1, 1'-oxybis-, tetrapropylene derivatives, sulfonated, sodium salts
 - q. Butyl glycidyl ether
 - r. Polysorbate 80
 - s. Quaternary ammonium compounds, dicoco alkyldimethyl, chlorides
 - t. Bis hexamethylene triamine penta methylene phosphonic acid
 - u. Diethylenetriamine penta
 - v. FD&C blue no 1.
 - w. Tetrakis (triethanolaminate) zirconium (IV) (TTZ)

K. Recycle, Reuse and Disposal of Fluids:

1. Drilling, completion flowback and produced fluids shall be recycled, unless technically infeasible.

2. Exploration and production waste may be temporarily stored, not to exceed two weeks, in tanks while awaiting transport to licensed disposal or recycling sites.
3. Produced water shall be transported by pipeline unless economically or technically infeasible.

L. Water Bodies:

1. The applicant shall provide documentation to the County, as required by the COGCC, demonstrating how the COGCC water quality protection standards are being complied with.
2. The Larimer County Health Department shall be provided with all water source tests that are typically submitted to the COGCC or CDPHE.
3. Proposed oil and gas operations proposed within a floodplain shall require review and approval of the Floodplain Permit prior to the Board of County Commissioners hearing for an oil and gas special review application.
4. Produced water disposal via wastewater injection wells shall not be allowed.

M. Visual:

1. The application shall demonstrate compliance with the visual and aesthetic rules of COGCC and the Larimer County regulations for landscaping, fencing and lighting for all phase of the development of the site.
2. All oil and gas facilities shall be painted with colors that are matched to or slightly darker than the surrounding landscape, and shall utilize paint with uniform, noncontracting, nonreflective color tones based upon the Munsell Soil Color Coding System.
3. The location of all outdoor lighting shall be designed to minimize off-site light spillage and glare.
4. Fencing shall be required for all the phases of an Oil and Gas facility development to ensure the security and visual aesthetics of the use.
5. Landscaping for screening and visual quality from off-site shall be required within 6 months from the time of well completion.
6. Oil and Gas facility applications, including access roads serving the facility, shall demonstrate how compliance with weed control requirements of the County Weed District and Forestry Services Department will be met.

N. Well Plugging and Abandonment:

1. Well abandonment and reclamation shall comply with the COGCC rules and shall include the following:
 - a. Removal of all equipment from the well site,
 - b. Restoration of the site surface to the conditions of the site reclamation plan,
 - c. Notice to the County LGD of the commencement and completion of such activity, and
 - d. Coordinates for the location of the decommissioned well(s), and any associated gathering or flow lines, shall be provided with the notice of the completion of well abandonment.

O. Flammable Material:

1. The location of flammable materials on site shall conform to all COGCC safety standards and local fire codes.

2. A minimum 25-foot buffer, free of weeds and dried grasses, shall be required around anything flammable.

P. Waste Disposal:

1. Oil and gas facilities shall remain free of debris and excess materials during all phases of operation.
2. Burning of debris, trash or other flammable material is not allowed.

Q. Removal of Equipment:

1. There shall be no permanent storage of equipment on the site of an oil and gas facility.
2. When not in use, or no longer needed for on-site operations all equipment not being used on the site shall be removed.

R. Maintenance of Machinery:

1. There shall be no maintenance of field equipment involving hazardous material within 300 feet of a water body.
2. Any fueling on-site shall occur over an impervious surface and shall not occur during storm events.

S. Flow Lines, Transfer Lines and Gathering Lines:

1. All off-site lines transporting process materials, production wastes, product and any other items used or generated by the facility shall be located to avoid existing or proposed residential, commercial, and industrial buildings; places of assembly, surface waterbodies and designated open spaces.
2. The location of pipelines shall be evaluated on a case by case basis, with determine locational factor being the size and type of pipeline being proposed.
3. Coordinates of all flow lines, gathering lines, and transfer lines shall be provided.

T. Temporary Water Lines:

1. Temporary waterlines shall be used, unless technically infeasible.
2. Temporary waterlines shall be buried at all existing driveway and road crossing, or utilize existing culverts, if available.

U. Financial Assurance:

1. The Applicant must demonstrate the financial capability to reclaim all disturbed areas during each phase of the site development and following termination of the oil and gas operation on the site.
2. The Applicant must, for the life of the use, carry environmental liability insurance for all potential pollution events.

17.4.- Guidelines for Oil and Gas Developments

- A. Applications for oil and gas facilities are strongly encouraged to incorporate the following guidelines (best management practices). Where reasonably necessary, the County may require some or all of the following guidelines depending on the location and characteristics of the proposed facility.

1. To mitigate the adverse impacts of air emissions generated by oil and gas facilities, Applicants are encouraged to:

- a. use tankless production techniques,
 - b. use zero emission dehydrators,
 - c. use pressure-suitable separator and vapor recovery units,
 - d. use no-bleed continuous and intermittent pneumatic devices, or alternatives such as replacing natural gas with electric or instrument air, or by routing discharged emissions to closed loop-systems of processes,
 - e. use automated tank gauging, and
 - f. eliminate all flaring except during emergencies or upset conditions, which shall be reported to the County (see std ____).
2. To mitigate the adverse impacts of odor generated by oil and gas facilities, Applicants are encouraged to:
- a. Add odorants that are not a masking agent, to adding chillers to the mud systems,
 - b. Using filtration systems or additives to minimize odors from drilling and fracturing fluids except that the Applicant shall not mask odors by using masking fragrances,
 - c. Enclose shale shaker to contain fumes from exposed mud where safe and feasible,
 - d. Wipe down drill pipe each time drilling operation “trips” out of hole,
 - e. Increasing additive concentration during peak hours provided additive does not create a separate odor. Additive must be used per manufacturer’s recommended level,
 - f. Use minimum low odor Category III drilling fluid. This could include non-diesel-based drilling muds including drilling muds that are low odor and do not contain benzene, toluene, ethylbenzene or xylene (BTEX),
 - g. Apply 'green frac' methods, utilizing only sand and water as fracking materials or other 'green frac' materials agreed upon between the community and industry, and
 - h. The Applicant is encouraged to communicate the schedule/timing of well completions activities to residents, which could allow for voluntary shutting of windows and air intakes or temporary relocation.
3. To mitigate the impacts of multiple pipeline corridors, Applicants are encouraged to consolidate and share pipeline easements and corridors, unless it is technically infeasible.

17.5. - Application Requirements

- A. In addition to the submittal requirements necessary to demonstrate compliance with the applicable Sections of the Land Use Code, applications for oil and gas facilities shall also include, when relevant, the following:
- a. A Site Inventory Map.
 - b. A Safety Management Plan.
 - c. A Containment and Spill Prevention Plan.
 - d. A Noise Mitigation Plan.
 - e. An Emergency Preparedness Plan.
 - f. An Odor Mitigation Plan.
 - g. A Hazardous Material Plan.
 - h. A Dust Mitigation Plan.
 - i. A Site Security Plan.
 - j. A Production Water Supply Plan.

- k. A Containment and Spill Plan.
- l. A Waste Management Plan.
- m. A Reclamation Plan.
- n. A Surface Use Agreement.
- o. A statement verifying the legal right to extract the mineral resources.

17.6. - Appeals

- A. Any decision made pursuant to this section may be appealed pursuant to Section 22 of the Larimer County Code.

17.7. - Enforcement and Inspection

- A. Applicants shall demonstrate compliance with the Larimer County Land Use Code, and with this Section. Failure to maintain compliance with the County approval of an oil and gas facility may result in the revocation of the approval pursuant to the procedures in Section 12 of the Land Use Code. The County retains the right to seek whatever remedy or redress is legally allowable.
- B. The County reserves the right to inspect the property for compliance.

17.8. - Fees and Security for Reclamation

- A. The following fees are applicable to oil and gas facilities.
 - a. TBD
- B. An impact fee will be assessed as follows:
 - a. Capital Transportation Impact Fees
- C. Each application shall include financial security for the purpose of ensuring maintenance and reclamation may be accomplished if the applicant is unable or unwilling to perform its obligations.

17.9. - Termination of Use or Modification.

- A. No modification to an approved oil and gas facility shall be made without obtaining appropriate land use approval from the county.
- B. Upon termination of use, the oil and gas facility must be reclaimed pursuant to the reclamation plan provided.

17.10. - Definitions.

- A. Unless otherwise listed herein, the definitions found within the Colorado Revised Statutes and COGCC regulations shall control.