

TRUSTEE DRAFT REVISIONS TO OIL AND GAS REGULATIONS

DRAFT

10.12.1 GENERAL PROVISIONS

A. Title and Citation

These Regulations are entitled and may be cited as the "Regulations for Oil and Gas Operations."

B. Purpose

The purpose of these Regulations is to:

1. Regulate the surface impacts of oil and gas operations in a reasonable manner to address matters specified in C.R.S. § 29-20-104(1)(h) *et seq.* and to protect and minimize adverse impacts to public health, safety, welfare, and the environment.
2. To implement such requirements that are reasonable and necessary to avoid adverse impacts from oil and gas operations and to minimize and mitigate the extent and severity of those impacts that cannot be avoided.

C. Authority

This section is adopted pursuant to C.R.S. §§ 29-20-101 *et seq.*, 31-15-401, and 34-60-101 *et seq.*

D. Oil and Gas Permit Required

No person shall engage in, cause, allow, or conduct any Oil and Gas Operation prior to obtaining an Oil and Gas Permit under these Regulations unless the Operation falls within one of the exemptions in Section 10.12.1.F.

E. Applicability

1. Oil and Gas Operations existing at the effective date of these Regulations are subject to the requirements in Section 10.12.4 of these Regulations..
2. New or expanded Oil and Gas Operations within the Town are subject to the Permit requirements of these Regulations. These Regulations take the place of the existing special review use process. In the event that the provisions of these Regulations conflict with any other applicable provisions of the UDC, this section shall control.
3. Expansion of existing Oil and Gas Operations is subject to the Permit requirements of these Regulations. "Expansion" includes:
 1. Installation of new wells on existing well pad sites.
 2. Expansion of the areas of existing well pad sites.
4. Oil and Gas Permits issued pursuant to these Regulations shall encompass within its authorization the right of the Operator, its agents, employees, subcontractors, independent contractors, or any other person to perform that work reasonably necessary to conduct the activities authorized by the Permit, subject to all other applicable Town regulations and requirements.
5. The issuance of a Permit under these Regulations shall satisfy the requirement of Section 34-60-106(f)(I)(A) of the Colorado Oil and Gas Conservation Act.

F. Exemption from these Regulations

1. Operator Agreement

An Operator Agreement with terms and conditions at least as stringent as these Regulations approved by the Town Board of Trustees may, by its terms, exempt the proposed Oil and Gas Operation from these Regulations.

2. Continuation of Existing Operations

Oil and Gas Operations that are being conducted pursuant to approved permits as of the

effective date of these Regulations or that are located within territory which thereafter is annexed to the Town may continue operating without the issuance of an Oil and Gas Permit under these Regulations, but shall comply with the requirements of Section 10.12.4 of these Regulations.

G. Severability

If any section, 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 these Regulations shall not be affected thereby and is hereby declared to be necessary for the public health, safety and welfare.

H. Definitions

Best Management Practices (BMPs)

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.

Building Unit

Building or structure designed for use as a place of residency by a person, a family, or families. The term includes manufactured, mobile, and modular homes, except to the extent that any such manufactured, mobile, or modular home is intended for temporary occupancy or for business purposes.

Closed Loop Drilling Process or System

A closed loop mud drilling system typically consists of steel tanks for mud mixing and storage and the use of solids removal equipment which normally includes some combination of shale shakers, mud cleaners and centrifuges sitting on top of the mud tanks. This equipment separates drill cutting solids from the mud stream coming out of the wellbore while retaining the water or fluid portion to be reused to continue drilling the well bore. The solids are placed in containment, either a shallow lined pit or an above ground container, provided on location. The system differs from conventional drilling where a reserve pit is used to allow gravitational settling of the solids from the mud which can then be reused. A Closed Loop Drilling System does not include use of a Conventional Reserve Drilling Pit.

Completion

An oil well shall be considered completed when the first new oil is produced through wellhead equipment into lease tanks from the ultimate producing interval after the production string has been run. A gas well shall be considered completed when the well is capable of producing gas through wellhead equipment from the ultimate producing zone after the production string has been run. A dry hole shall be considered completed when all provisions of plugging are complied with as set out in these rules. Any well not previously defined as an oil or gas well, shall be considered completed ninety (90) days after reaching total depth. If approved by COGCC, a well that requires extensive testing shall be considered completed when the drilling rig is released or six months after reaching total depth, whichever is later.

Degradation

Lowering in grade or desirability; lessening in quality. The act or process of degrading.

Director

Community Development Director or the Director's representative.

Exploration and Production Waste

Those wastes associated with Oil and Gas Operations to locate or remove oil or gas from the ground or to remove impurities from such substances and which are uniquely associated with and intrinsic

to oil and gas exploration, development or production activities that are exempt from regulation under the Resource Conservation and Recovery Act (RCRA).

Flowlines

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. The different types of flowlines are:

1. **Wellhead Line** means a flowline that transfers well production fluids from an oil or gas well to process equipment (e.g., separator, production separator, tank, heater treater), not including pre-conditioning equipment such as sand traps and line heaters, which do not materially reduce line pressure.
2. **Production Piping** means a segment of pipe that transfers well production fluids from a wellhead line or production equipment to a gathering line or storage vessel and includes the following:
3. **Production Line** means a flowline connecting a separator to a meter, LACT, or gathering line;
4. **Dump Line** means a flowline that transfers produced water, crude oil, or condensate to a storage tank, pit, or process vessel and operates at or near atmospheric pressure at the flowline's outlet;
5. **Manifold Piping** means a flowline that transfers fluids into a piece of production facility equipment from lines that have been joined together to comeingle fluids; and
6. **Process Piping** means all other piping that is integral to oil and gas exploration and production related to an individual piece or a set of production facility equipment pieces.
7. **Off-Location Flowline** means a flowline transferring produced fluids (crude oil, natural gas, condensate, or produced water) from an oil and gas location to a production facility, injection facility, pit, or discharge point that is not on the same oil and gas location. This definition also includes flowlines connecting to gas compressors or gas plants.

Gathering Line

A pipeline and equipment that transports gas from a production facility (ordinarily commencing downstream of the final production separator at the inlet flange of the custody transfer meter) to a natural gas processing plant or transmission line or main. The term "gathering line" includes valves, metering equipment, communication equipment, cathodic protection facilities, and pig launchers and receivers, but does not include dehydrators, treaters, tanks, separators, or compressors located downstream of the final production facilities and upstream of the natural gas processing plants, transmission lines, or main lines.

Geologic Hazards

Terrain and geological traits that pose a risk of causing damage to property or human life, including subsurface features such as fault lines, aquifers and other geothermic and geologic phenomena.

Groundwater

Subsurface waters in a zone of saturation.

Hydraulic Fracturing or Hydraulic Fracturing Treatment

All stages of the treatment of a well by the application of hydraulic fracturing fluid under pressure that are expressly designed to initiate or propagate fractures in a target geologic formation to enhance production of oil and natural gas.

Hydraulic Fracturing Fluid

The fluid, including the applicable base fluid and all hydraulic fracturing additives, used to perform a hydraulic fracturing treatment.

Linear Feature

A road, gathering line, or pipeline that is necessary to cross a water body or connect or access a well or gathering line. A linear feature is not considered necessary simply because it is the most proximate or least expensive method for crossing a water body or connecting or accessing a well or gathering line.

LGD (Local Government Designee)

The office designated to receive, on behalf of the local government, copies of all documents required to be filed with the local governmental designee pursuant to COGCC Rules.

Mitigation

The following actions, in order of preference:

1. Avoiding impacts: avoiding an impact by not taking a certain action or parts of an action; or
2. Minimizing impacts: limiting the degree or magnitude of the action or its implementation, or by changing its location; or
3. Rectifying impacts: repairing, rehabilitating, or restoring the impact area, facility or service; or
4. Reducing or eliminating impacts: reducing or eliminating the impact over time by preservation and maintenance operations; and
5. Other provisions for addressing impacts: replacing or providing equivalent biological, social, environmental and physical conditions, or a combination thereof.

Oil and Gas Operations

Exploration for oil or gas, including but not limited to conventional oil and gas and coalbed methane gas; the siting, drilling, redrilling, deepening, completion, recompletion, reworking, fracturing, refracturing, closure or abandonment, shutting-in oil or gas wells and returning wells to production; ; pumping stations; production facilities and operations including the installation of flow lines and gathering lines; accessory equipment; construction, site preparation, reclamation and related activities associated with the development of oil and gas resources, including their impacts on or construction of access roads and easements.

Operator Agreement

An agreement between the Town and an Operator describing how proposed Oil and Gas Operations are to be conducted within the municipal boundaries.

Operation(s)

Oil and Gas Operation(s).

Operator

The individual, company, trust, or foundation responsible for the exploration, development, and production of an oil or gas well or lease. Generally, it is the oil company by whom the drilling contractor is engaged.

Permit

Town of Erie Oil and Gas Permit issued pursuant to the provisions of this Chapter 12.

Pipelines

Flowlines and gathering lines for oil and gas wells.

Pit

Any natural or man-made depression in the ground used for oil or gas exploration or production purposes. A pit does not include steel, fiberglass, concrete or other similar vessels which do not release their contents to surrounding soils.

Pitless

Pitless with respect to drilling means there is no pit regardless of size or function. This includes conventional reserve drilling pits and drilling cutting pits, but does not include flare pits which may be utilized to contain necessary flaring during the drilling, completion, or up-set conditions

Production Facilities

All storage, separation, treating, dehydration, artificial lift, power supply, compression, pumping, metering, monitoring, flowline, and other equipment directly associated with oil wells, gas wells, or injection wells.

Regulation(s)

The Town of Erie Oil and Gas Regulations set forth in Chapter 12 of the UDC.

Reference Area

An area either (1) on a portion of the site that will not be disturbed by oil and gas operations, if that is the desired final reclamation; or (2) another location that is undisturbed by oil and gas operations and proximate and similar to a proposed oil and gas location in terms of vegetative potential and management, owned by a person who agrees to allow periodic access to it for the purpose of providing baseline information for reclamation standards, and intended to reflect the desired final reclamation.

Shut-In Well

A well which is capable of production or injection by opening valves, activating existing equipment or supplying a power source.

Significant

Noteworthy.

Significantly Degrade

To lower in grade or desirability to a significant as opposed to trifling degree.

Subsurface Facility

Flowlines and all other subsurface facilities of Oil and Gas Operations.

Temporarily Abandoned Well

A well that has all downhole completed intervals isolated with a plug set above the highest perforation such that the well cannot produce without removing a plug or a well which is incapable of production or injection without the addition of one or more pieces of wellhead or other equipment, including valves, tubing, rods, pumps, heater-treaters, separators, dehydrators, compressors, piping or tanks.

UDC

Town of Erie Unified Development Code.

VOC Emissions

Volatile organic compounds in oil and gas operations that have the potential to be released into the atmosphere and/or ground.

Water Body

Any surface waters which are contained in or flow in or through the Town, including: Coal Creek, Boulder Creek, Erie Lake, Erie Reuse Reservoir, Thomas Reservoir, Prince Lake #2, and any irrigation ditches.

Well (Oil and Gas)

An oil or gas well, a hole drilled for the purpose of producing oil or gas, 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 reservoir.

Wildlife Habitat

A natural or man-made environment that contains the elements of food, shelter, water, and space in a combination and quantity necessary to sustain one or more wildlife or plant species at stable population levels in historically-used habitats. Sensitive wildlife habitat areas include, but are not limited to, nesting, brood rearing areas, rookeries, leas, migration corridors, calving and fawning grounds for big game.

10.12.2 PERMIT APPLICATION PROCESS FOR NEW OR MODIFIED OIL AND GAS OPERATIONS

A. Rezoning Application

No Oil and Gas Permit application will be scheduled for a hearing under these Regulations until the property where the Operation will be located is zoned as Heavy Industrial (HI) under Section 10.7.5 of the UDC. The Town will coordinate public notices and hearings for rezoning with the requirements of these Regulations to the extent practicable.

B. Permit Application Submittal

The applicant shall submit the Permit application materials to the Director. The Permit application materials are set forth in Section 10.12.2.E.

C. Waiver of Permit Application Material Requirements

The Director may waive any part of the Permit application material requirements when the information would not be relevant to determining whether the proposed Oil and Gas Operation complies with the approval standards in Section 10.12.3.

D. Permit Application Fee

The applicant is responsible for the costs of reviewing and processing the Permit application, including the costs of counsel, consultant and referral agency review of the Permit application and reviews associated with the pre-application conference, completeness determination, and all hearings and meetings on the Permit application.

1. Fee Requirement

The Permit application shall be accompanied by the application fees set forth in Section 2-10-5 of the Municipal Code.

2. Payment of Additional Costs

Costs for reviewing and processing the Permit application, including but not limited to the costs of outside consultants and legal review, are in addition to the application fees paid pursuant to D.1 above, shall be billed to the applicant. Additional costs billed to the applicant must be paid within thirty (30) days of the billing date, and must be paid in full prior to final action by the Town on the Permit application.

E. Permit Application Materials for Oil and Gas Operations

The applicant shall submit the application materials to the Community Development Department.

1. Application Form

Completed Land Use application form.¹

2. Financial Qualifications and Technical Expertise

Documentation of the applicant's financial qualifications and technical expertise and capability to construct and operate the proposed Oil and Gas Operation.

3. Summary of Proposed Oil and Gas Operation

Summary of proposed Oil and Gas Operation, including: a list of all proposed oil and gas facilities to be installed and estimated timeline; hours of operation; number of employees on site on a daily basis; types of vehicles and equipment.

4. Topographic Map

a. Location of Proposed Oil and Gas Operation

The location of the proposed Oil and Gas Operation including well pads, tanks, roads, pipelines and gathering systems, and related features on a United States Geological Survey quadrangle map or on a recorded plat if the proposed Oil and Gas Operation is within an approved subdivision, with the location highlighted so that it is easy to see.

b. Topography

Existing and proposed topography at intervals established by the Director as necessary to portray the direction and slope of the area affected by the proposed Oil and Gas Operation.

c. Transportation and Roads

All public and private roads that traverse and/or provide access to the proposed Oil and Gas Operation.

d. Easements

Easements recorded or historically used that provide access to or across, or other use of, the property.

e. Municipal and Subdivision Boundaries

Municipal or subdivision boundaries within one mile of the well pad, tanks, gathering lines, storage areas or any other ancillary feature of the proposed Oil and Gas Operation.

f. Other Operations

Location of other Oil and Gas Operations within one mile of the site.

g. Distances Between Well or Surface Equipment and Nearest Building Unit

Shortest distance between any proposed well or surface equipment on the well pad and the nearest exterior wall of an existing Building Unit.

5. Current Aerial Photo

¹ **REVIEW NOTE:** Information to include Operator's name and address and, if a type of entity, the name and address of the registered agent of the Operator; any other person that the Operator designates to receive notice, and a person designated by the Operator to serve as an on-site contact.

Current aerial photo that shows the location of the proposed Oil and Gas Operation and the shortest distance between any proposed well or surface equipment on the well pad and the nearest exterior wall of an existing Building Unit, displayed at the same scale as the topographic map to facilitate use as an overlay.

6. Site Preparation Plan

Site plan for site preparation, mobilization, and demobilization.

7. Property Rights, Permits and Other Approvals

- a. Description and documentation of property rights, easements, and rights-of-way agreements that are necessary for or that will be affected by the proposed development.
- b. List of all federal, state, and county permits and approvals that have been or will be required for the proposed development.
- c. Description of all mitigation and financial security required by federal, state, and local authorities; and copies of any draft or final environmental assessments or impact statements prepared for the proposed development.

8. Reports/Studies/Plans

The following reports, studies and plans shall be prepared to adequately portray the physical characteristics of the property.

a. Alternative Site Analysis

An analysis of alternative sites from which the minerals can be accessed that includes for each site:

- i. Location;
- ii. Zoning;
- iii. Natural and manmade features;
- iv. Distance of proposed pad to residences, occupied buildings, parks and open space; water bodies; floodplains; and roadways.
- v. Justification of a preferred alternative site and/or reason why a site is not proposed as a viable alternative.
- vi. Materials submitted to the COGCC to satisfy the alternative location analysis requirement.

b. Air Quality Survey

i. Air Quality Impact Assessment and Mitigation Plan

An assessment of air quality impacts of the proposed Oil and Gas Operation and a plan to maintain air quality, including a plan to minimize VOC emission in compliance with approval standards in Section 10.12.3.

ii. Ambient Air Quality Sampling Plan

A plan that includes:

- (A) Pre-construction baseline air quality testing, completed 15-90 days for areas located within 500 feet of the well sites if approval from surrounding surface owners can be obtained.
- (B) Monitoring program conducted by a consultant mutually agreed to by both the Operator and the Town and paid for by Operator.

- (C) Town may require Operator to conduct additional monitoring as needed to respond to emergency events such as spills, process upsets, or accidental releases. Operator will provide access to the well sites to the Town's third-party inspector as needed to allow air sampling to occur.

c. Chemicals and Hydraulic Fracturing Fluids Disposal and Reporting Plan

A plan for disposal and reporting of chemicals and hydraulic fracturing fluids, that includes:

- i. Material safety data sheets (MSDS) for the chemicals used in the proposed Oil and Gas Operation.
- ii. Chemical Abstract Service Registry Numbers for every chemical used in the proposed Oil and Gas Operation, if available, other than those protected as Trade Secrets.
- iii. Provision for reporting to the Town the chemicals, other than those protected as a Trade Secret, that will be stored and used during any hydraulic fracturing event along with the maximum quantity that will be present on-site at any one time.

d. Cultural, Historical, and Archeological Survey

A survey that includes:

- i. Assessment of cultural, historical and archaeological resources in and around the site of the proposed Oil and Gas Operation, and proposed mitigation measures.
- ii. Approval from the State Historic Preservation Office regarding any historical or cultural resources potentially affected by the Oil and Gas Operation. Operator Shall provide a copy of such approval to the Director, in consultation with the surface owner and subject to any confidentiality requirements.

e. Dust Suppression Plan

A plan that demonstrates compliance with the requirements for dust suppression in 10.12.5.J.

f. Electrification Plan

A plan identifying all sources of electricity that will be supplied and used during all phases of development including drilling, completions, and operations.

g. Emergency Response Plan

A plan that addresses events such as explosions, fires, gas or water pipeline leaks or ruptures, leaks from well casings and pits, tank leaks or ruptures, hydrogen sulfide or other toxic gas emissions, transportation of hazardous material and vehicle accidents or spills. The plan must include proof of adequate personnel, supplies, and funding to immediately implement the emergency response plan at all times during construction and operations.

h. Flowline Management Plan

A plan that includes:

- i. A copy of COGCC approved continuous monitoring program providing for pressure data monitoring 24 hours a day 7 days a week and a provision for

reporting results to the LGD; or description of COGCC Rule 1101.e pressure testing practices and provision for reporting results to the LGD.

- ii. A map at a scale designated by the Town showing the location, including GPS location, of all existing and proposed flowlines and other subsurface facilities associated with the Oil and Gas Operation. For each existing and proposed flowline or other subsurface facility, the map shall denote its size and the maximum pressure at which it is or will be operated; its depth from the surface; and, if existing, whether it was constructed or installed before October 31, 2017 and whether it is in use, abandoned, or shut-in.

i. Geological Report

A report detailing the geological characteristics of the site, prepared by a registered engineer or geologist. The report shall include an assessment of the geologic hazards within one mile of the site and a plan for mitigating impacts from geologic hazards to the proposed Oil and Gas Operation and impacts of the proposed Operation on geologic hazards.

j. Grading, Drainage, and Erosion Control Plan

A plan that identifies existing (dashed lines) and proposed (solid lines) contours, at two-foot intervals, and the methods for controlling and minimizing erosion during construction and operational phases of the proposed Oil and Gas Operation.

k. Land Disturbance Mitigation Plan

A plan demonstrating compliance with the approval standards in Section 10.12.3 that includes:

- i. Description of areas of land disturbance.
- ii. Analysis of the species, character and density of existing vegetation on the site.
- iii. Summary of the potential impacts to vegetation as a result of the proposed Operation.
- iv. Proposed landscaping, revegetation, temporary fencing, and other mitigation measures.

l. Leak Detection and Repair Program

A hydrocarbon emissions leak detection and repair program using modern leak detection technologies, such as infra-red cameras, for equipment used on the well site that demonstrates compliance with the requirements of 10.12.5.G.2.

m. Lighting Study

A plan that demonstrates compliance with the approval standards in Section 10.12.3.

n. Noise Mitigation and Monitoring Plan

A plan that ensures compliance with the noise mitigation requirements set forth in Section 10.12.3. The plan will provide for continuous monitoring from four (4) sides of the facility at least 350 feet from the sound wall where possible, provided that approval from surrounding surface owners can be obtained. The plan should identify site-specific noise mitigation techniques to attenuate noise, and source-based noise mitigation.

o. Odor Management Plan

A plan to mitigate the emission of detectable odors by the Oil and Gas Operation and to ensure that the Operation will not create a public nuisance as set forth in

Section 5-1-6.H of the Municipal Code and that demonstrates compliance with the standards in Section 10.12.3.

p. Operations Plan

A plan including the method and schedule for drilling, completion, transporting, production and post-operation, and a description of future Oil and Gas Operations.

q. Public Services and Facilities Impact Assessment

A description of existing levels, demand for, adequacy of, and the operational costs of public services affected by the proposed Oil and Gas Operation; a description of the increase in demand on those services and a plan for mitigating the impacts to public services and facilities.

r. Reclamation Plan

A plan for interim reclamation and revegetation of the site and final reclamation of the site. The plan shall include the locations of any proposed Reference Areas to be used as guides for interim and final reclamation.

s. Spill Release Response and Reporting Plan

A plan that demonstrates compliance with the approval standards in Section 10.12.3 and includes:

- i. Location of storage areas for equipment, fuel, lubricants, chemicals and waste during both construction and operation of the proposed use.
- ii. Measures, procedures, and protocols for spill prevention, storage and containment.
- iii. An electronic monitoring program to aide in discovery of spills and releases.
- iv. Measures, procedures, and protocols for clean-up and description of the financial security for these provisions.
- v. Measures, procedures, and protocols for reporting spills and storage to Town, county, state and federal officials in compliance with the approval standards in Section 10.12.3.
- vi. Provisions establishing that the Town, or its designee, may undertake prevention, control, countermeasure, containment, and clean-up measures if the permittee fails to comply with its obligations under the *Spill Release and Reporting Plan* and that the permittee will pay all costs incurred by the Town for any such measures.
- vii. Maintenance of material safety data sheets (MSDS).

t. Stormwater Management Plan

A site-specific stormwater plan to minimize impacts to surface waters from erosion, sediment, and other sources of nonpoint pollution that demonstrates compliance with the approval standards in Section 10.12.3. The stormwater management plan required by CDPHE may be provided to establish compliance with this provision.

u. Traffic Management and Access

i. Traffic Management Plan

A plan showing the estimated number of round trip vehicle trips per day for each type of vehicle by phases (i.e. drilling, completions, production), proposed access routes to and from the site, haul roads, and measures to

mitigate adverse impacts to traffic patterns and safety caused by the proposed operation.

ii. Access Road Plan

A plan sufficient to demonstrate compliance with the approval standards in Section 10.12.3.

v. Vegetation and Weed Management Plan

A written description of the species, character and density of existing vegetation on the site, a summary of the potential impacts to vegetation as a result of the proposed Oil and Gas Operation, and proposed mitigation to address these impacts. The plan shall include any COGCC required interim and final reclamation procedures.

w. Waste Water and Waste Management Plan

A plan that identifies the amount of waste water produced by the Oil and Gas Operation, and disposal plans for waste water that demonstrates compliance with the approval standards in Section 10.12.3.

x. Water Quality Impact Assessment, Monitoring and Mitigation Plan

An assessment and plan that includes:

i. Identification of All Surface and Subsurface Water Bodies

An inventory and location of all water bodies, as well as domestic and commercial water wells within one mile of the proposed Oil and Gas Operation.

ii. Identification of Intakes

Identification of intake(s) for public drinking water supply.

iii. Water Quality Monitoring and Mitigation Plan

For surface and groundwater, a Water Quality Monitoring Plan that establishes a baseline and a process for monitoring changes to water quality and the aquatic environment to demonstrate the effectiveness of mitigation. The plan shall demonstrate compliance with the water quality approval standards in Section 10.12.3 and include:

- (A)** Key stream segments, other water bodies, and groundwater to monitor.
- (B)** Locations for and frequency of sampling and monitoring to establish baseline of existing conditions prior to the proposed Oil and Gas Operation including existing water quality, aquatic life and macro-invertebrates, and groundwater data.
- (C)** Key indicators of water quality and stream health, and threshold levels that will be monitored to detect changes in water quality and health of the aquatic environment.
- (D)** Locations for and frequency of sampling and monitoring for key indicators of water quality and stream health, including but not limited to constituents regulated by the Colorado Water Quality Control Commission, and constituents associated with the proposed Oil and Gas Operation.
- (E)** Locations for and frequency of sampling and monitoring to measure effectiveness of water quality mitigation during the life of the proposed Oil and Gas Operation.

(F) Mitigation steps that will be implemented to avoid degradation of water bodies if monitoring of key indicators reveals degradation.

y. Water Supply Plan

A plan that includes:

- i. Estimated amount of water needed for all phases of the Oil and Gas Operation;
- ii. List of all available physical sources of water for the Operation, and if multiple sources are available, analysis of which source is least detrimental to the environment;
- iii. Description of the physical source of water that the Operator proposes to use to serve the Oil and Gas Operation;
- iv. Water conservation measures, if any, that may be implemented within the Oil and Gas Operation; and
- v. An estimate of the amount of water that will be used at the site, where and how the water will be consumed, the amount of waste water produced, and disposal plans for waste water.
- vi. Use of nearby water sources other than Erie municipal water for drilling and hydraulic fracturing whenever such water sources are available and use of municipal "grey water" for other purposes..

z. Wildlife and Wildlife Habitat Assessment

An assessment of existing wildlife and wildlife habitat, an evaluation of the impacts of the proposed Oil and Gas Operation on wildlife and wildlife habitat, and proposed mitigation to address these impacts.

aa. Additional information requested by the Director.

F. Pre-Application Conference

1. Pre-Application Conference

Prior to submitting an application for an oil and gas permit, an applicant shall meet with the Director to discuss the proposed Oil and Gas Operation. The purpose of the pre-application conference includes, without limitation:

- a. To discuss the location and nature of the proposed Oil and Gas Operations;
- b. To explain the application submittal requirements, the nature of materials that will be responsive to those requirements, and waivers of any materials that would not be necessary in determining whether the application complies with Town requirements;
- c. To discuss state terms and conditions imposed on the proposed Oil and Gas Operation;
- d. To identify site-specific concerns and issues that bear on the proposed Oil and Gas Operation;
- e. To discuss projected impacts and potential mitigation;
- f. To discuss the Town Oil and Gas Operations Standards that must be satisfied for Permit approval;

2. Pre-Application Materials

At or before the pre-application conference, the applicant shall provide the Director with information that is sufficient for determining the location and nature of the proposed Oil and

Gas Operation, the degree of impacts associated with the Operation, and mitigation proposed to offset such impacts.

G. Determination of Completeness

1. Application Is Not Complete

If the Director determines that the application is not complete, the Director shall inform the applicant in writing of the deficiencies and shall take no further action on the application until the deficiencies are remedied. If the applicant fails to correct the deficiencies within thirty (30) calendar days after the notice that the application is incomplete, the application shall be considered withdrawn unless the applicant requests more time to ensure that the materials are as complete as possible.

2. Application Is Complete

If the Director determines that the application is complete, the Director shall date the application and notify the applicant in writing.

3. Completeness Is Not a Determination of Compliance

A determination that an application is complete shall not constitute a determination that it complies with the approval standards of these Regulations.

H. Permit Review and Decision

1. Neighborhood Meeting

The applicant will convene a neighborhood meeting as soon as the application is deemed complete at a location mutually agreed to by the applicant and the Director. The purpose of a neighborhood meeting is to provide an informal opportunity to inform the residents and landowners of the surrounding neighborhood(s) of the details of the proposed Oil and Gas Operation, how the applicant intends to meet the standards contained in these Regulations, and to receive public comment and encourage dialogue at an early time in the review process.

a. Notice of Neighborhood Meeting

i. Mailed Notice

Fifteen (15) days prior to the neighborhood meeting, the applicant shall mail notice of the neighborhood meeting to those properties located within 1000 feet of the site of the proposed Oil and Gas Operation. The notice shall include the location and description of the proposed Oil and Gas Operation, contact information for the Operator, and the date, time and location of the neighborhood meeting.

ii. Posted Notice

Ten (10) days prior to the neighborhood meeting, the applicant shall post a sign at the site of the proposed Oil and Gas Operation giving notice to the general public of the proposed Operation, the date, time and location of the neighborhood meeting, and contact information for the Operator. The Town will provide the signs for posting. The applicant is responsible for filling out the signs. For parcels of land exceeding ten (10) acres in size, two (2) signs shall be posted. Such signs shall be posted on the subject property in a manner and at a location or locations reasonably calculated by the Town to afford the best notice to the public.

iii. List of Property Owners

The list of property owners shall be compiled by the applicant using the most current list of property owners on file with the County Assessor. The

applicant is responsible for the accuracy of lists of property owners to whom written notice is provided.

iv. Notification

The applicant shall submit a notarized affidavit to the Town stating that the public notice requirement has been met.

b. Attendance at Neighborhood Meeting

The applicant or applicant's representative shall attend the neighborhood meeting. The applicant shall be responsible for scheduling the meeting, coordinating the meeting, and for retaining an independent facilitator if needed. The Town will assist the applicant on the logistics of convening the meeting.

c. Summary of Neighborhood Meeting

The applicant shall prepare a written draft summary of the neighborhood meeting. The written summary shall be provided to the Director who will post a final version of the summary on the Town's website.

2. Planning Commission Hearing and Recommendation

a. Public Notice

i. Published Notice

Not less than fifteen (15) calendar days prior to the date of the public hearing, the Director shall publish a notice of public hearing on the Permit application. The notice shall be published once in a newspaper having general circulation in the area. The notice shall include contact information for the Operator, including phone number and office hours. The applicant shall be responsible for the cost of publication.

ii. Written Notice of Planning Commission Hearing to Adjacent Property Owners

Not less than fifteen (15) calendar days prior to the date of the public hearing, the Director shall mail written notice of the public hearing to property owners in subsection 2.a.v, below. The applicant shall provide a stamped and addressed envelope for each party to be notified.

iii. Posted Notice

The applicant is required to post on the property a notice of the Planning Commission hearing. The Town will provide the signs for posting. The applicant is responsible for filling out the signs, posting the signs, checking on the signs to make sure they remain in place, and to remove the signs within two days after the final decision on the Permit application. Prior to the hearing the applicant shall submit to the Director a notarized affidavit, on the Town form, stating that the notice was posted and maintained.

iv. Notice

The applicant is responsible for composing the written notice of Public Hearing. The notice shall include:

- (A) Date, time, and place of the hearing;
- (B) Description of the property involved in the application by street address or by legal description and nearest cross street;
- (C) Description of the purpose of the hearing and that interested parties can come to the meeting and speak on the matter;

(D) Information on how to obtain additional information on the proposed Oil and Gas Operation and to comment on the proposed Operation; and

(E) Contact information for the Operator, including phone number and office hours.

v. Extent of Notice

The list of property owners to be notified shall include the following persons and shall be compiled by the applicant using the most current list of property owners on file with the County Assessor.

(A) Owners of record of property within one half (1/2) mile of the site of the proposed Operation and any homeowners associations representing owners in the area.

(B) The LGD of the Municipal or County Governments within 1000 feet of the site of the proposed Operation.

(C) The Director of the Colorado Oil and Gas Conservation Commission.

(D) Additional persons or geographic areas that the Director may designate.

vi. Validity of Notice

The applicant is responsible for the accuracy of lists of property owners to whom written notice is provided. If the applicant makes reasonable good faith efforts to accomplish the notice responsibilities identified above, then the failure of any property owner to receive notice shall not affect the validity of the decision.

3. Referral of Application

The Director may send a copy of the complete application to technical and legal consultants retained by the Town, and any local, state or federal agency that may have expertise or an interest in impacts that may be associated with the proposed Oil and Gas Operation. The applicant shall be responsible for the costs of any consultant and referral agency review.

4. Application Review and Staff Report

a. Director Review and Staff Report

The Director shall prepare a report taking into account the application, review comments, issues raised by referral agencies and consultants, terms and conditions imposed by state agencies, probability of compliance with the approval standards, and any other available information on the record.

b. Distribution of Staff Report

The Director shall submit the staff report to the applicant and to the Planning Commission. A copy of the staff report shall also be available for public review prior to the hearing.

5. Planning Commission Hearing and Recommendations

The Planning Commission shall consider the Permit application at a public hearing following proper public notice. The role of the Planning Commission is to formulate a recommendation for the Board of Trustees.

a. Recommend Approval of Permit Application

If the proposed Oil and Gas Operation satisfies the approval standards, the Planning Commission shall recommend the Permit application be approved.

b. Recommend Denial of Permit Application

If the proposed Oil and Gas Operation fails to satisfy one or more approval standards, the Planning Commission may recommend that the Permit application be denied; or

c. Recommend Conditional Approval of Permit Application

The Planning Commission may recommend approval with conditions determined necessary for compliance with the approval standards.

6. Public Hearing and Decision by Board of Trustees

a. Public Notice of Board of Trustees' Hearing

i. Published Notice

Not less than fifteen (15) calendar days prior to the date of the public hearing, the Director shall publish a notice of public hearing on the Permit application. The notice shall be published once in a newspaper having general circulation in the area. The notice shall include contact information for the Operator, including phone number and office hours. The applicant shall be responsible for the cost of publication.

ii. Written Notice of Board of Trustees' Hearing to Adjacent Property Owners

Not less than fifteen (15) calendar days prior to the date of the public hearing, the Director shall mail written notice of the public hearing to property owners in subsection 6.a.v, below. The applicant shall provide a stamped and addressed envelope for each party to be notified.

iii. Posted Notice

The applicant is required to post on the property a notice of the Board's hearing. The Town will provide the signs for posting. The applicant is responsible for filling out the signs, posting the signs, checking on the signs to make sure they remain in place, and to remove the signs within two days after the final decision on the Permit application. Prior to the hearing the applicant shall submit to the Director a notarized affidavit, on the Town form, stating that the notice was posted and maintained.

iv. Notice of Hearing

The applicant is responsible for composing the written notice of public hearing. The notice shall include:

- (A) Date, time, and place of the hearing;
- (B) Description of the property involved in the application by street address or by legal description and nearest cross street;
- (C) Description of the purpose of the hearing and that interested parties can come to the meeting and speak on the matter;
- (D) Information on how to obtain additional information on the proposed Oil and Gas Operation and to comment on the proposed Operation; and
- (E) Contact information for the Operator, including phone number and office hours.

v. Extent of Notice

The list of property owners to be notified shall include the following persons and shall be compiled by the applicant using the most current list of property owners on file with the County Assessor.

- (A) Owners of record of property within one half (1/2) mile of the site of the proposed Operation and any homeowners associations representing owners in the area.
- (B) The LGD of the Municipal or County Governments within 1000 feet of the site of the proposed Operation
- (C) The Director of the Colorado Oil and Gas Conservation Commission
- (D) Additional persons or geographic areas that the Director may designate.

vi. Validity of Notice

The applicant is responsible for the accuracy of lists of property owners to whom written notice is provided. If the applicant makes reasonable good faith efforts to accomplish the notice responsibilities identified above, then the failure of any property owner to receive notice shall not affect the validity of the decision.

b. Application Review and Staff Report

i. Director Review and Staff Report

The Director shall prepare a report taking into account the application, Planning Commission recommendation, review comments, issues raised by referral agencies and consultants, terms and conditions imposed by state agencies, probability of compliance with the approval standards, and any other available information on the record.

ii. Distribution of Staff Report

No less than seven (7) calendar days prior to the date of the public hearing, the Director shall submit the staff report to the applicant and to the Board of Trustees. A copy of the staff report shall also be available for public review prior to the hearing.

c. Permit Decision by Board of Trustees

The Board of Trustees shall approve, approve with conditions, or deny the Permit application based upon compliance with the approval standards in Section 10.12.3 of these Regulations. The Board's decision shall include the following:

i. Description of Project

Brief discussion of the proposed Oil and Gas Operation;

ii. Issues

Description of issues raised by the Planning Commission, affected property owners, referral agencies and consultants;

iii. Conditions Imposed by the State

Description of terms, conditions and requirements imposed on proposed Oil and Gas Operation by state agencies;

iv. Impacts and Mitigation

Description of impacts of the proposed Oil and Gas Operation, proposed mitigation, and whether each approval standard has been satisfied; and

v. Conditions of Approval

Conditions of approval, if any, necessary to ensure compliance with approval standards.

vi. Basis for Denial

If the Trustees determine that the permit application must be denied, a statement explaining the standards that the application failed to satisfy.

10.12.3 OIL AND GAS OPERATIONS STANDARDS

The following standards are the minimum standards that will apply to all proposed Oil and Gas Operations, and shall be in addition to any additional state or federal standards that may apply. In the event of a conflict between these standards and another applicable standard, the more stringent standard shall apply.

A. Expertise and Financial Capability

The applicant has the necessary expertise and financial capability to complete and operate the proposed Oil and Gas Development in compliance with the requirements and conditions of these Regulations.

B. Property Rights and Easements

The applicant will obtain all property rights and easements necessary for the Oil and Gas Operation prior to site disturbance.

C. No Impairment of Property Rights

The Operation will not impair property rights held by others.

D. Location Standards

1. The Operation is located within a zone district that allows heavy industrial uses.
2. Any type of well pad and above-ground production facility shall be located at least 1000 feet from occupied buildings, or a proposed building that has applied for a building permit that requires a certificate of occupancy pursuant to the UDC. Measurement shall be taken from disturbed area of the production facility to the nearest wall or corner of any such buildings. The Town may decide that a different setback is more appropriate based on the Alternative Site Analysis.
3. Any type of well pad and above-ground production facility shall be located at least 1000 feet from the boundary line of platted residential lots or parks, sports fields and playgrounds, or other outside activity areas. Measurement shall be taken from the disturbed area of the production facility to the boundary line of the platted residential lots or any outdoor activity area.² The Town may decide that a different setback is more appropriate based on the Alternative Site Analysis.
4. The Operation shall be at least 500 feet from any surface water body.
5. The Operation shall be at least 500 feet from any domestic or commercial water wells or irrigation wells.
6. The Operation is not located within a floodway district as defined in Section 10.2.7.C.4 of the UDC.

² COGCC setbacks that are more stringent than these setbacks will control the location of facilities.

E. Air Quality

1. Minimization of Emissions

To minimize emissions, the Operator shall:

- a. Use closed loop, pitless drilling, completions and productions systems without permanent on-site storage tanks for containment and/or recycling of all drilling, completion, flowback and produced fluids.
- b. Use Tier 2 and liquefied natural gas dual fuel hydraulic fracturing pumps. When Tier 4 fracturing pumps become technologically feasible, and readily available using Liberty Quiet Fleet or comparable technology, then Operator will begin using such Tier 4 fracturing pumps. Operator will use diesel and natural gas co-fired Tier 2 or Tier 3 engines and natural gas fired spark ignition engines.
- c. Utilize pipelines for all transportation of gas and fluids from production facilities whenever available.
- d. Demonstrate hydrocarbon destruction or control efficiency by using an enclosed combustion device that complies with a design destruction efficiency of 98% or better.
- e. Reduce emissions of the natural gas byproduct associated with oil and gas well production. Emission reduction includes prohibiting uncontrolled venting in compliance with AQCC Regulation 7 Section XII.C.1.
- f. Implement best management practices during liquids unloading (*i.e.*, maintenance activities to remove liquids from existing wells that are inhibiting production), including at least 95% emissions reduction when utilizing combustion and the installation of artificial lift or unloading through the separator where feasible.
- g. Implement “tankless” production techniques.
- h. All equipment with engines or motors that can be electrified will be electrified from the power grid or from renewable sources. All equipment that is not electrically operated should use quiet design mufflers (also referred to as hospital grade or dual dissipative) or equivalent; or acoustically insulated housing or covers to enclose the motor or engine.
- i. Install, calibrate, operate, and maintain any flare, auto ignition system, recorder, vapor recovery device or other equipment used to meet the hydrocarbon destruction or control efficiency requirement in accordance with the manufacturer's recommendations, instructions, and operating manuals. Use telemetric control and monitoring systems, including surveillance monitors to detect when pilot lights on control devices are extinguished.
- j. Use zero emission desiccant gas processing dehydrators.
- k. Reduce or eliminate emissions from oil and gas pipeline maintenance activities such as pigging or blowdowns. If any maintenance activity will involve the intentional venting of gas from a well tank, compressor or pipeline, beyond routine pipeline maintenance activity and pigging, Operator shall provide forty-eight (48) hour advance written notice of the proposed venting to the LGD. Such notice will identify the duration and nature of the venting event, a description as to why venting is necessary, a description of what vapors will likely be vented, what steps will be taken to limit the duration of venting, and what steps the operator proposes to undertake to minimize similar events in the future. If emergency venting is required, or if accidental venting occurs, Operator shall provide notice to LGD as soon as possible, but no longer than twenty-four (24) hours from the time of the event, with the information listed above and with an explanation as to the cause and how the event

will be avoided in the future.

- l. Centralize compression facilities within a well site.
- m. Vent exhaust from all stationary engines, motors, chillers and other mechanized equipment up or in a direction away from the closest occupied structures to such equipment.
- n. Use a pressure-suitable separator and/or vapor recovery unit (VRU) when appropriate.
- o. Construct flowline infrastructure prior to beginning production.

2. Leak Detection and Repair (LDAR)

- a. The Applicant shall develop and maintain a leak detection and repair program approved by the LGD using CDPHE approved instrument monitoring methods (A IMM), for equipment used on the well site. Inspection frequency will be determined by the LGD based on site-specific factors. Operators must repair any leaks as quickly as practicable.
- b. Operator shall provide to the LGD a monthly LDAR report organized by facility detailing the inspection results, any associated repairs, and any outstanding leaks. Operator will also provide a copy of all reports submitted to the AQCC, including monthly downtime reports and semi-annual control equipment status reports for production facilities located within Town limits. The Town will make this information available on its website, or may provide a link for such information from Town's website to Operator's website.

3. Well Completion

For each well completion operation with hydraulic fracturing, the Operator shall control emissions by the following procedures.

- a. For the duration of flowback, route the recovered liquids into one or more storage vessels or re-inject the recovered liquids into the well or another well, and route the recovered gas into a gas flowline or collection system, re-inject the recovered gas into the well or another well, use the recovered gas as an onsite fuel source, or use the recovered gas for another useful purpose that a purchased fuel or raw material would serve, with no direct release to the atmosphere.
- b. If compliance with paragraph E.3.a above is infeasible, the Operator must capture and direct flowback emissions to a completion combustion device equipped with a reliable continuous ignition source over the duration of flowback, except in conditions that may result in a fire hazard or explosion, or where high heat emissions from a completion combustion device may negatively impact waterways or nearby structures. Non-flammable gas may be vented temporarily until flammable gas is encountered where capture or combustion is not feasible.

4. Ambient Air Sampling and Monitoring

Operator shall conduct ambient air quality testing and monitoring in conformance with the Ambient Air Sampling and Monitoring Plan.

5. Air Quality Action Days

Operator will respond to air quality Action Day advisories posted by the CDPHE for the Front Range Area by implementing their suggested air emission reduction measures as feasible. Emission reduction measures will be implemented for the duration of an air quality Action Day advisory and may include measures such as:

- a. Minimize vehicle and engine idling;
- b. Reduce truck traffic and worker traffic;
- c. Delay vehicle refueling;
- d. Suspend or delay use of fossil fuel powered ancillary equipment; and
- e. Postpone construction activities, to the maximum extent practicable.

6. Compliance

Operator will submit annual reports to the LGD certifying (1) compliance with these air quality requirements and documenting any periods of material non-compliance, including the date and duration of each such deviation and a compliance plan and schedule to achieve compliance, and (2) that the equipment at the well sites continues to operate within its design parameters, and if not, what steps will be taken to modify the equipment to enable the equipment to operate within its design parameters. The annual report must contain a certification as to the truth, accuracy and completeness of the reports, signed by a responsible corporate official

F. Water Quality

The Oil and Gas Operation shall not cause significant degradation of water quality of affected water bodies. The Operator will implement the required Water Quality Monitoring and Mitigation Plan to achieve the standard. Determination of whether the Operation will cause significant degradation to water quality may include, but is not limited to the following considerations:

1. Applicable narrative and numeric water quality standards.
2. Changes in point and nonpoint source pollution loads.
3. Increase in erosion and sediment loads.
4. Changes in stream channel or shoreline stability.
5. Changes in stormwater runoff flows.
6. Changes in quality of ground water.
7. Certification. The Operator shall submit annual reports to the LGD certifying compliance with water quality standards, documenting any non-compliance, including its date and duration. A compliance plan is required for all instances of non-compliance.

G. Stormwater

1. Operation shall be conducted in conformance with the Stormwater Management Plan.
2. Best Management Practices (BMPs) shall be maintained in effective operating condition and any additional BMPs recommended by a stormwater inspector must be implemented by the Operator as soon as possible.
3. Results of stormwater inspections required by CDPHE-WQCD shall be provided to the LGD.
4. Final stabilization measures must be implemented as soon as construction activities cease.
5. Once the well pad or production facility has reached final stabilization as defined by CDPHE, the well pad or production facility must develop and implement a post construction stormwater program as defined by COGCC Rule 1002.f.

H. Water Wells

The Oil and Gas Operation shall not cause water quality or water pressure of any public or private water wells to go below pre-project levels. The Operator shall submit annual reports to the LGD certifying that the Operation has not caused water quality or pressure of public and private wells to

go below pre-project levels, documenting non-compliance, including its date and duration. A compliance plan is required for all instances of non-compliance.

I. Floodplain, Wetlands and Riparian Areas

The Oil and Gas Operation shall not have a significant adverse effect on the floodplain and shall not significantly degrade wetlands and riparian areas. Oil and Gas Operations conducted within the Floodplain Overlay District shall comply with Section 10.2.7.C of the UDC.

J. Groundwater Baseline Sampling and Monitoring, Greater Wattenberg Area Wells

Operator shall provide the LGD copies of the results of tests performed by Operator on Greater Wattenberg Area wells within the Town limits under COGCC Rule 318A.f,

K. Noise

Noise levels shall be controlled as follows.

1. For db(A) scale noise, daytime sound level shall not exceed 60 db(A) at 500 feet from the source and 50 db(A) at 1000 feet from the source. The sound level shall be less than or equal to 45 db(A) during the hours of 7pm to 7am.
2. For db(C) scale noise, sound level shall not exceed 60 db(C) at 500 feet from the source during drilling or hydraulic fracturing. Operator shall address db(C) scale noise through best management practices. During drilling and completion phases, a minimum 32' high soundwall and hay bales may be required to mitigate noise as appropriate on a case by case basis.
3. Sound controlled fracking equipment, including quiet fleets that reduce the noise of the pumps and motors associated with hydraulic fracturing, shall be utilized.
4. An ambient noise survey for each well site at baseline and during drilling, hydraulic fracturing, flowback and operations shall be submitted to the LGD.

L. Vibration

1. No vibration shall be transmitted thru the ground that is discernible without the aid of instruments measured at five hundred (500) feet from the abutting residential or commercial development.
2. No vibration shall exceed 0.002g peak at up to fifty (50) cps frequency measured at five hundred (500) feet from the abutting residential or commercial development. Vibrations recurring at higher than 50 cps frequency or a periodic vibrator shall not induce accelerations exceeding 0.001g.
3. Single impulse period vibrations occurring at an average interval greater than five (5) minutes shall not induce accelerations exceeding .01g.

M. Odor Management

1. Use of D-822 is prohibited.
2. The operator shall notify the LGD no later than 24-hours after receiving an odor complaint.
3. Operator shall conduct drive-by inspections through neighborhoods at various times to hear, smell and see what is going on during each phase of Operations.
4. No emission of odorous gases or other odorous matter shall be permitted in such quantities as to be readily detectable when diluted in the ratio of one volume of odorous air to four volumes of clean air, measured:
 - a. Five hundred (500) feet from the abutting development; or
 - b. At the point of greatest concentration.

5. Any process which may involve the creation or emission of any odors shall be provided with a secondary safeguard system, so that control will be maintained if the primary safeguard system should fail.
6. Filtration systems or additives to minimize odors from drilling and fracturing fluids may be used except that operators shall not mask odors by using masking fragrances.

N Dust Suppression

1. Dust associated with on-site activities and traffic on access roads shall be minimized throughout construction, drilling and operational activities such that there are no visible dust emissions from access roads or the site to the extent practical given wind conditions.
2. Untreated produced water and process fluids will not be used for dust suppression.
3. Operator shall not conduct dust suppression activities within 300 feet of surface water unless the dust suppressant is water.
4. Safety data sheets shall be submitted for any chemical based suppressant.

O. Visual Quality

The Oil and Gas Operation shall not cause significant degradation to the scenic attributes and character of the Town.

1. Facilities shall be painted in a uniform, non-contrasting, non-reflective color, to blend with the surrounding landscape and with colors that match the land rather than the sky. The color should be slightly darker than the surrounding landscape.
2. The Oil and Gas Operation shall be buffered from sensitive visual areas by providing landscaping along the perimeter of the site between the surface equipment and the sensitive visual area.
3. The Oil and Gas Operation shall be constructed in a manner to minimize the removal of and damage to existing trees and vegetation. If the Operation requires clearing trees or vegetation, the edges of the cleared vegetation should be feathered and thinned and the vegetation should be mowed or brushhogged while leaving root structure intact, instead of scraping the surface.
4. The Oil and Gas Operation shall be sited away from prominent natural features and visual, scenic and environmental resources such as distinctive rock and land forms, rivers and streams, and distinctive vegetative patterns.
5. To the maximum extent practicable, the Oil and Gas Operation shall use low profile tanks or less visually intrusive equipment.

P. Natural Resource Areas

The Oil and Gas Operation shall not cause significant degradation of natural landmarks, rare plant species, riparian corridors, or other sensitive areas.

Q. Wildlife

The Oil and Gas Operation shall not cause significant degradation of wildlife or wildlife habitat.

R. Spill Release Response and Reporting

The Operator shall demonstrate the ability to control and contain all spills and releases of exploration and production waste, including produced fluids, immediately upon discovery in conformance with the Spill Release Response and Reporting Plan.

1. Spills and releases shall be contained, investigated, and cleaned up as soon as possible or immediately in emergency situations.
2. All employees performing spill clean-up shall be qualified in accordance with applicable

state and federal requirements.

3. Copies of Form 19 Spill Release Report (both initial and Supplemental Report) and Form 23 Loss of Well Control Report shall be submitted to the LGD at the same time they are submitted to the COGCC, including the topographic map showing location of the spill and any information relating to initial mitigation, site investigation, and remediation that accompany the report.
4. Spills and releases outside of containment which exceed one barrel of E&P Waste or produced fluids shall be reported to the LGD within 24 hours.
5. Spills and releases of any size which impact or threaten to impact any waters of the state, residences or occupied structures, livestock, or public byways shall be verbally reported to the LGD within twenty-four (24) hours, with a follow-up written notice within 48 hours.
6. Spills and releases of any size which impact or threaten to impact any water supply area shall be verbally reported to the Colorado Environmental Spill Reporting Hotline at 1-877-518-5608, and to the LGD immediately after discovery.
7. Spills and releases that impact or threaten to impact a water supply intake shall be reported immediately to the LGD, and to the owner of the intake if the Town is not the owner of the intake.
8. Spills, chemical spills and releases shall be reported in compliance with applicable state and federal laws. Applicant will provide the LGD with a copy of any self-reporting submissions that applicant provides to any agency.

S. Use of Steel-Rim Berms

The Oil and Gas Operation shall use steel rim berms or some other state of the art technology that has the capacity to contain 150% of the largest storage tank.

T. Fuel Storage Areas

The Oil and Gas Operation includes measures to contain fuel in fuel storage areas to prevent release to any water body. Inventory management or leak detection plans may be required.

U. Waste Water Management

Operation will be conducted in conformance with the Waste Water Management Plan.

1. All fluids will be contained and there will be no discharge of fluids.
2. Waste will be stored in tanks, transported by tanker trucks and/or pipelines, and disposed of at licensed disposal or recycling sites.
3. Land treatment of oil impacted or contaminated drill cuttings within the Town limits is prohibited.
4. Disposal of waste water within the Town limits is prohibited.

V. Disposal of Hydraulic Fracturing Fluid

The Operator shall demonstrate the ability to and shall dispose of all hydraulic fracturing fluids in accordance with the Chemicals and Hydraulic Fracturing Fluids Disposal and Reporting Plan..

W. Hazardous Materials

1. The Oil and Gas Operation includes measures to contain all hazardous materials in storage areas to prevent release to any water body. Inventory management and leak detection systems are required.
2. Full disclosure, consistent with COGCC requirements, including material safety data sheets of all hazardous materials that will be transported on any public or private roadway within the Town for the Oil and Gas Operation, shall be provided to the LGD. This information will be

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treated as confidential and will be shared with other emergency response personnel only on an as needed basis.

3. Flammable Material. The area twenty-five (25) feet around anything flammable shall be kept free of dry grass or weeds, conform to COGCC safety standards and applicable fire code.

X. Chemical Disclosure and Storage

Prior to bringing hydraulic fracturing chemicals onto the property, the Operator shall make available to the Town, in table format, the name, Chemical Abstracts Service (CAS) number, storage, containment and disposal method for such chemicals to be used on the well site, which the Town may make available to the public as public records. Fracturing chemicals shall be uploaded onto the FracFocus website within sixty (60) days of the completion of fracturing operations. The Operator shall not permanently store fracturing chemicals, flowback from hydraulic fracturing, or produced water in the Town limits. Operator shall remove all hydraulic fracturing chemicals at a well site within thirty (30) days following the completing of hydraulic fracturing at that well site.

The following chemicals will not be added to the hydraulic fracturing fluids used at the well sites:

Ingredient Name	CAS#
Benzene	71-43-2
Lead	7439-92-1
Mercury	7439-97-6
Arsenic	740-38-2
Cadmium	7440-43-9
Chromium	7440-47-3
Ethyl benzene	100-41-4
Xylenesf	1330-20-7
1,3 ,5-trimethylbenzene	108-67-8
1 ,4-dioxane	123-91-1
1-butanol	71 -36-3
2-butoxyethanol	111-76-2
N ,N -dimethylfonnamide	68-12-2
2-ethylhexanol	104-76-7
2-mercaptoethanol	60-24-2
benzene, 1, 1'-oxybis-, tetrapropylene derivatives,sulfonated, sodium salts (BOTS)	119345-04-9
butyl glycidyl ether	8/6/2426
polysorbate 80	9005-65-6
quatemary ammonium compounds, dicoco alkylidimethyl, chlorides (QAC)	61789-77-3
bis hexamethylene triamine penta methylene phosphonic acid (BMPA)	35657-77-3
diethylenetriamine penta (methylene-phosphonic acid)(DMPA)	15827-60-8
FD&C blue no. 1	3844-45-9
Tetrakis(triethanolaminato) zirconium(IV) (TTZ)	101033-44-7

Y. Emergency Response

The Oil and Gas Operation shall be conducted in accordance with the Emergency Response Plan.

Z. General Operations and Maintenance Requirements

1. The Operator shall at all times keep the well sites, roads, rights-of-way, facility locations, and other Oil and Gas Operation areas safe and in good order, free of noxious weeds, litter and debris.
 - a. The Operator shall be responsible for ongoing weed control at all locations disturbed by the Operation and along access roads during construction and operation, until abandonment and final reclamation is completed.

- b. The Operator shall utilize vehicle tracking control practices to control potential sediment discharges from unpaved surfaces. Such practices may include road and pad design and maintenance to minimize rutting and tracking, controlling site access, street sweeping or scraping, tracking pads, and wash racks. Traction chains from heavy equipment shall be removed before entering a public roadway.
2. The Operator shall dispose of all water, unused equipment, litter, sewage, waste, chemicals and debris from the site at an approved disposal site.
 - a. All equipment used for drilling, re-drilling and maintenance shall be removed from the well pad site within thirty (30) days after completion of the work, unless otherwise agreed to by the surface owner. Permanent storage of equipment on well pad sites shall not be allowed.
 - b. Materials and trash shall not be buried on-site.
 - c. Trash burning is prohibited.
3. The Operator shall promptly reclaim and reseed all disturbed sites in conformance with the reclamation plan.
4. All mechanized equipment associated with the Operation shall be anchored to minimize transmission of vibrations through the ground.
5. Open-ended discharge valves on all storage tanks, pipelines and other containers shall be secured where the Operation site is unattended or is accessible to the general public. Open-ended discharge valves shall be placed within the interior of the tank secondary containment.
6. Above ground oil and gas well facilities shall be fenced with wrought iron fencing or Ameristar Impasse or Stronghold fencing or approved equivalent, as determined by the Director. The fencing color shall be bronze unless the Director approves black fencing. Black fencing will only be approved by the Director if fencing or site furnishings in the adjacent developments have approved black elements.
7. The Operator will install down cast lighting or some other form of lighting that mitigates light pollution and spill-over onto adjacent properties; provided, however, that Operator may still use lighting that is necessary for public and occupational safety.
8. The Town shall have access to the well pads to conduct inspections. Town personnel will be equipped with all appropriate personal protection equipment (PPE) and will comply with the Operator's customary safety rules and shall be accompanied by an Operator's representative.

AA. Vehicle and Equipment Fueling and Maintenance

Routine field maintenance of vehicles or mobile machinery shall not be performed within five hundred (500) feet of any water body. All fueling must occur over impervious material.

BB. Minimal Site Disturbance

The Oil and Gas Operation shall be located and constructed in a manner so that there is no unnecessary or excessive site disturbance and that minimizes the amount of cut and fill:

1. Multi-well drill pads and consolidated facilities shall be used to minimize surface disturbance.
2. Pad dimensions shall be the minimum size necessary to accommodate operational needs while minimizing surface disturbance.
3. Structures and surface equipment shall be the minimum size necessary to satisfy present and future operational needs.
4. The Operation shall be located in a manner to minimize impacts on surrounding uses, and achieve compatibility with the natural topography and existing vegetation.

CC. Use of Existing Roads

Unless traffic safety, visual or noise concerns, or other adverse surface impacts clearly dictate otherwise, existing roads on or near the site of the Oil and Gas Operation shall be used in order to minimize land disturbance.

DD. Grading, Drainage, and Erosion Control

The Oil and Gas Operation shall be conducted in accordance with the Grading, Drainage, and Erosion Control Plan.

EE. Transportation, Roads, and Access Standards

1. Compliance with Town Standards

All public roads shall be constructed and maintained in compliance with Town standards as necessary to accommodate the traffic and equipment related to Oil and Gas Operations and emergency vehicles.

2. Access to Public Roads

- a. Access points to public roads shall be located, improved and maintained to assure adequate capacity for efficient movement of existing and projected traffic volumes and to minimize traffic hazards.
- b. Access roads shall be improved a minimum distance of 200 feet on the access road from the point of connection to a public road. The access road shall be improved as a hard surface (concrete or asphalt) for the first 100 feet from the public road and then improved as a crushed surface (concrete or asphalt) for 100 feet past the hard surface in the appropriate depth to support the weight load requirements of the vehicles accessing the well and production facilities.
- c. If an access road intersects with a pedestrian trail or walk, the Operator shall pave the access road as a hard surface (concrete or asphalt) a distance of 100 feet either side of the trail or walk and if necessary, replace the trail or walk to address the weight load requirements of the vehicles accessing the well and production facilities.
- d. Temporary access roads associated with the Oil and Gas Operation shall be reclaimed and revegetated to the original state within sixty (60) days after discontinued use of the temporary access roads.

3. Implementation of Traffic Management Plan

The Operator shall implement the approved Traffic Management Plan.

4. Road Repairs

- a. The Operator shall arrange for a qualified outside consultant to perform a road impact study for all public roads that are used to access the Oil and Gas Operation. The consultant shall conduct the first part of the study prior to operations and the second part of the study after the Operator completes all drilling and hydraulic fracturing. The Operator and the Town shall use these studies to determine the extent of any damage accruing to the road during the study period. The Operator shall either promptly pay the Town to repair such damage or arrange for and pay the cost of such repairs itself, whichever the Town prefers.
- b. The Operator shall maintain financial assurance to secure its road repair obligations. The amount of such financial assurance shall equal the Town's annual road maintenance budget as of the date of permit approval multiplied by the percentage yielded by dividing the total number of Town road miles as of the date of permit approval into the number of such road miles that the Operator will use to access the Oil and Gas Operation. The Operator shall select the form of such financial

assurance and shall maintain such assurance.

- c. If the projected use of public roads as a result of the Oil and Gas Operation will result in a need for an increase in roadway maintenance, the Operator shall enter into an agreement with the Town whereby the Operator provides for private maintenance or reimburses the Town for such increased costs and/or provides a bond or other financial assurance in an amount acceptable to the Town to cover the costs of mitigating impacts to public roads.

FF. Water Supply

The Operation shall be conducted in conformance with the Water Supply Plan.

GG. Use of Underground Waste Water Injection Wells Prohibited

Class II underground waste water injection wells within the Town limits are prohibited.

HH. Historical and Cultural Resources

The Oil and Gas Operation shall not cause significant degradation to resources of historic, cultural, paleontological, or archeological importance.

II. Public Services and Facilities

The Oil and Gas Operation shall not have a significant adverse effect on the capability of the Town to provide municipal services or the capacity of the service delivery systems.

JJ. Compliance with Plans

Operation will comply with all plans required by Section 10.12.2.E.8.

10.12.4 EXISTING OIL AND GAS OPERATIONS

A. Registration of Existing Oil and Gas Operations

Oil and Gas Operations existing at the effective date of these Regulations, including wells that are out of production and wells that are temporarily abandoned or abandoned, must be registered with the Town within thirty (30) days of the effective date of these Regulations.

1. Submit Registration Materials

Operator shall submit the registration materials described in subsection A.2, below, and all applicable fees³ to the LGD.

2. Registration Materials

The following materials are required for registration of Oil and Gas Operations:

- a. Completed Oil and Gas Operation Registration form.⁴
- b. Copy of maps and flowline records submitted to COGCC.
- c. Copy of the Emergency Response Plan.
- d. Copy of current SPCC Plan.
- e. Emissions record from previous calendar year.
- f. Copy of most recent Operator's Monthly Report of Operations submitted to COGCC.

³ REVIEW NOTE: in determining the fee for registration of Oil and Gas Operations the Town should consider both the cost of review and the potential cost of inspections by the Town staff or outside consultant hired by the Town.

⁴ REVIEW NOTE: Form provided by the Town and shall include the following information: contact information for Operator, location information, brief site history, location status (PR, SI, TA), equipment list, quantity of oil and produced water on-site, AIRS ID and Permit Numbers.

g. For shut-in wells:

- i. A map at a scale designated by the Town showing the location, including GPS location, of each shut-in well and denoting the age; size, and the maximum pressure at which it is operated; and its depth from the surface.
- ii. Copy of the most recent mechanical integrity test report submitted to COGCC for each shut-in well.

h. For abandoned and temporarily abandoned wells:

- i. A map at a scale designated by the Town showing the location, including GPS location, of abandoned and temporarily abandoned wells.
- ii. Copy of the most recent mechanical integrity test report submitted to COGCC for each temporarily abandoned well.
- iii. Copy of Notice of Intent to Abandon submitted to COGCC for abandoned wells.

B. Oil and Gas Wells Not in Production

1. Any oil and gas wells that have been taken out of production for more than six (6) months at the effective date of these Regulations shall be removed within six (6) months after the effective date of these Regulations unless the Operator provides the plan for returning the well to production. If the well cannot be removed in conformance with the requirements of this section the well shall be abandoned. Within six (6) months after the effective date of these Regulations, the Operator shall:
 - a. Provide the Town with the plan for returning the well to production; or
 - b. Provide documentation that the well has been removed or that removal in conformance with the requirements of this section is not practicable and the well has been abandoned.
2. Any oil and gas wells taken out of production after the effective date of these Regulations and that remain out of production for more than ten (10) months shall be removed within forty-five (45) days thereafter unless the Operator provides the plan for returning the well to production. If the well cannot be removed in conformance with the requirements of this section the well shall be abandoned. The Operator shall:
 - a. Provide the Town with the plan for returning the well to production; or
 - b. Provide documentation that the well has been removed or that removal in conformance with the requirements of this section is not practicable and the well has been abandoned.

C. Temporarily Abandoned Wells

1. Any oil and gas wells that have been temporarily abandoned for more than six (6) months at the effective date of these Regulations shall be removed within six (6) months after the effective date of these Regulations unless the Operator provides the plan for returning the well to production. Within six (6) months of the effective date of these Regulations the Operator shall:
 - a. Provide the Town with the plan for returning the well to production; or
 - b. Provide documentation that the well has been removed or that removal in conformance with the requirements of this section is not practicable and the well has been abandoned.
2. Any oil and gas wells temporarily abandoned after the effective date of these Regulations and that remain out of production for more than ten (10) months shall be removed within

forty-five (45) days thereafter unless the Operator provides the plan for returning the well to production. Operator shall:

- a. Provide the Town with the plan for returning the well to production; or
- b. Provide documentation that the well has been removed or that removal in conformance with the requirements of this section is not practicable and the well has been abandoned.
- b. Operator shall provide the LGD with:
 - i. Copies of notices for intent to abandon a well, notices and reports relative to mechanical integrity testing for temporarily abandoned wells, and notices of intent to remove equipment from a well so as to render it temporarily abandoned at the same time such notices and reports are submitted to the COGCC.
 - ii. Surveyed coordinates of abandoned and temporarily abandoned wells. Operator shall leave a permanent physical marker at the location of the abandoned well.

D. Returning Wells to Production

An Operator seeking to return a well to production shall comply with the Oil and Gas Permit requirements of these Regulations.

10.12.5 ENFORCEMENT

These Regulations for Oil and Gas Operations shall be enforced pursuant to Section 10.10.1 of the UDC.