Land Use

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BOULDER COUNTY BOARD OF COUNTY COMMISSIONERS

March 1, 2012, 4:00 P.M.

Commissioners' Hearing Room, Third Floor
Boulder County Courthouse
Boulder, Colorado

PUBLIC HEARING: For The Board of County Commissioners To Consider Terminating, Renewing, or Otherwise Amending the Temporary Moratorium on Boulder County's Processing of Land Use Code Applications for Oil and Gas Development in the Unincorporated County (Resolution 2012-16, enacted 2/2/12), Including Staff Presentations and Public Testimony on The Adequacy of County Regulation and County Public Land Management of Oil and Gas Development, The Role of the State and Federal Governments in Regulating Oil and Gas Activities, and The Need for Amendments to The County's Comprehensive Plan and Land Use Code Relating to Oil and Gas Operations

Coordinating Staff Planner: Dale Case, AICP, County Land Use Director

SUGGESTED AGENDA:

1. WELCOME – Board of County Commissioners' Chair
2. COUNTY STAFF PRESENTATIONS (15 min. each)
    a. Land Use Department – Dale Case
    b. Parks and Open Space Department – Ron Stewart
    c. Transportation Department – George Gerstle
    d. Public Health- Mark Williams
3. PUBLIC COMMENT (3-min. individual speaker limit)
4. BOCC DISCUSSION/ACTION/DIRECTION TO STAFF

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ACTION/DIRECTION REQUESTED FROM BOARD OF COUNTY COMMISSONERS ("BOCC") FOLLOWING PUBLIC HEARING:

1. To determine, based on County staff presentations and public testimony, whether staff should (a) continue to acquire information on current and anticipated oil and gas activities and impacts, and (b) review the County Comprehensive Plan and Land Use Code's oil and gas (Development Plan Review) regulations for their adequacy in addressing oil and gas development impacts, and (c) draft and process proposed amendments to the Comprehensive Plan and Land Use Code to address the identified inadequacies.
2. To consider whether to direct staff to investigate and possibly retain outside consultants (geological/technical; economic; environmental; legal; other) to assist in the foregoing efforts, and/or to convene a public task force of interested groups and citizens for further study and recommendations to the County Planning Commission and BOCC.
3. To consider whether to schedule a joint, public study session between BOCC and the Planning Commission regarding this effort, and whether to invite involved government agencies and major interest groups to present information at such a session.
4. In light of the foregoing decisions, to decide whether to continue, amend, or terminate the temporary moratorium in Resolution 2012-16 (both as to the moratorium's current end date of August 2, 2012, and other substantive aspects of the moratorium).

BACKGROUND AND PURPOSE OF PUBLIC HEARING

On and effective February 2, 2012 the BOCC, at a duly convened public business meeting, considered and imposed a temporary moratorium on the County's processing of applications under Article 4-900 ("Development Plan Review for Oil and Gas Operations") of the Boulder County Land Use Code ("Land Use Code"). The temporary moratorium was set for a period of six months, to end on August 2, 2012. The Board adopted the temporary moratorium for a variety of substantial reasons related to the public health, safety, and welfare of the citizens of unincorporated Boulder County, all as further set out in the Board's moratorium resolution (Resolution 2012-16: see Attachment "A"). Predominantly, those reasons included the recently rapid pace of development of the oil and gas industry; potentially major changes in drilling and resource recovery methods and technology; growing public concern, County-wide, statewide and nationwide, over hydraulic fracturing operations including possible adverse water quality impacts and ineffective waste disposal methods; the impacts associated with evolving industry technologies in such areas as truck traffic and road usage, land surface disturbance and reclamation, location and extent of structures (well pads, tank batteries, fencing, and the like), noise and odor, and wildlife, soil, air and water resources; major amendments over the past five or so years to the Colorado Oil and Gas Conservation Commission's (and related state agencies') regulations, as well as the growing involvement of federal agencies such as the U.S. Environmental Protection Agency; the apparently outdated nature of the County's oil and gas Development Plan Review regulations which were enacted effective October 1, 1993 and never substantively amended thereafter; and the outpouring of letters, e-mails, and other expressions of concern by residents of the eastern portion of the unincorporated County over the past several months, worried about existing and future, oil and gas development plans and questioning the ability of state and local regulation to deal with associated impacts. The purpose of the moratorium is to allow the County's staff a reasonable amount of time to explore the adequacy of, and the need for processing amendments to, the County's Comprehensive Plan and Development Plan Review regulations, based upon a more informed

assessment of industry activities and trends, anticipated associated land use impacts, and an appropriate regulatory response at the County level.

In Resolution 2012-16, the BOCC directed that a public hearing be set for March 1, 2012, at 4:00 p.m., to allow the Board to "take testimony on the merits of the temporary moratorium imposed by the Resolution and to determine whether the moratorium should be terminated, extended, or otherwise amended." Centrally related to the Board's action on the temporary moratorium is the work that BOCC anticipates County staff will need to accomplish in order for staff to sufficiently carry out Resolution 2012-16's further directive that the staff "continue analyzing whether the existing County Comprehensive Plan and existing County regulations pertaining to oil and gas activities are sufficient to protect the public health, safety, and welfare, or whether an amended Comprehensive Plan and amended regulations will be necessary to mitigate impacts."

To assist the BOCC in reviewing the temporary moratorium and in making any additional direction to staff on forthcoming planning and regulatory efforts, the involved County departments have developed background memoranda, with supporting materials, for the Board to consider, along with the public and interest group testimony received at the March 1 public hearing. The remainder of this memorandum presents a summary of background information from the County Land Use Department, which is charged with administering the Land Use Code including the County's oil and gas Development Plan Review regulations. Background memoranda will also be presented by the County Parks and Open Space Department (which manages surface development, including oil and gas activities, on County open space lands); the County Transportation Department (which administers the County's Multimodal Transportation Standards, provides transportation input to County Land Use Code reviews of development proposals, implements the County's floodplain protection program, maintains County roads, and administers road access permits and oversize/overweight vehicle permits), and Boulder County Public Health (which assists in the administration of state air and water quality protection programs, responds to odor complaints, issues onsite wastewater system permits, and handles other matters affecting the health of County residents).

SUMMARY OF LAND USE PLANNING AND REGULATORY ISSUES RELATED TO OIL AND GAS DEVELOPMENT

County Authority to Regulate: *This portion of the Land Use staff memorandum is a general description of Colorado preemption law in the oil and gas regulatory area, and is not intended to be a legal analysis or opinion, or to necessarily limit particular subject areas which the BOCC may direct staff to investigate for possible future land use planning or Land Use Code amendment purposes.* For a more detailed public analysis by a recognized legal expert in this field, Barbara Green, Esq. (dated November 16, 2011), the BOCC may refer to Attachment B of this memorandum. By way of some contrast, recent State Attorney General's critiques of El Paso County's proposed oil and gas regulations (dated January 10, 2012), and of Elbert County's proposed regulations (dated January 24, 2012), which take a narrower view of the law, are provided as Attachment C.

It is critical to understand county authority in the oil and gas regulatory area in the broader context of the limits and scope of county authority generally in Colorado. Counties are subordinate governmental units of the state that have circumscribed authority, determined by what the state constitution and statutes provide. As the Colorado Supreme Court described this authority in its key oil and gas preemption decision, Board of County Commissioners of La Plata County v. Bowen Edwards Associates, Inc., 830 P.2d 1045, 1055 (1992): *"In contrast to a home-rule municipality,*

which has certain inherent powers, '[a] county is not an independent governmental entity existing by reason of any inherent sovereign authority of its residents; rather, it is a political subdivision of the state, existing only for the convenient administration of the state government, created to carry out the will of the state.' . . . As an agency of state government, a county possesses only the regulatory authority 'expressly conferred upon [it] by the constitution and statutes, and such incidental implied powers as are reasonably necessary to carry out such express powers.' Although a county is prohibited by statute from adopting an ordinance that 'is in conflict with any state statute,' Section 30-15-411, 12A C.R.S. (1986), an ordinance and a statute may both remain effective and enforceable as long as they do not contain express or implied conditions that are irreconcilably in conflict with each other. [Citations omitted.]" Note that even "home rule" counties (which Boulder County is not) have their authority delegated by statute (Article 35 of Title 30, C.R.S.), and do not have greater zoning powers by virtue of home rule status (C.R.S. 30-35-201(40)).

Under this established legal framework, the Colorado courts (including the Supreme Court's seminal 1992 Bowen/Edwards decision, cited above, and several Court of Appeals opinions issued between 1988 and 2006), have consistently ruled that counties' land use authority coexists with the Colorado Oil and Gas Conservation Commission's ("COGCC") authority to regulate oil and gas operations under the Colorado Oil and Gas Conservation Act ("the State Act"). Local government regulations are considered valid as long as they do not create an "operational conflict" with the state's regulatory scheme, by "materially impeding or destroying" the state's interest which resides both in developing oil and gas resources, and in protecting the public health, safety, and welfare and the environment in the course of oil and gas operations.

Not surprisingly, the devil is in the details regarding exactly what constitutes a material impediment caused by a local regulation. Whether such an impediment occurs will in many instances need to be determined on a case-specific basis, taking into account the facts of the local regulation, the local regulation's impact on the particular oil and gas operation at issue, and the nature of the COGCC's pertinent or overlapping regulations, if any. A further difficulty is that the operational conflict analysis can vary with legislative changes to the State Act (several bills have already been introduced into the legislature this year), and with the COGCC's continuing promulgation of state rules under the State Act.

The courts and governing state statutes identify certain areas where local governments have or may have little if any regulatory power, including: (1) banning oil and gas operations entirely from the local jurisdiction (see the Colorado Supreme Court's companion case to Bowen/Edwards, cited above, Voss v. Lundvall Bros., 830 P.2d 1061 (Colo. 1992), invalidating the City of Greeley's ban on oil and gas operations within its borders); (2) imposing "technical conditions" (not a defined term) on the drilling and pumping of wells (commonly thought of as the regulation of well construction and operation below the ground, and the regulation of waste disposal from operations); (3) imposing financial security requirements or fines/penalties on operators inconsistent with or in addition to the state's rules (at least as related to the satisfaction of state requirements); (4) imposing taxes or fees to conduct local government inspections of matters under state rules; (5) requiring operators to keep records and make them available for local government inspection (at least as related to state requirements); and (6) regulating noise from oil and gas operations. The 1992 Voss case's "impermissible ban" logic can be extended to a local prohibition on hydraulic fracturing, which is a resource recovery method used pervasively throughout the industry and permitted (subject to compliance with applicable state rules) by the COGCC.

It could be argued that while the 1992 Colorado Supreme Court's Voss case invalidated a total ban on oil and gas development within the local jurisdiction, it did not go so far as to preempt local

governments from prohibiting targeted forms of resource extraction, such as the hydraulic fracturing process ("fracking") process. One problem with this argument is that because fracking is used pervasively in the oil and gas industry, and is both authorized and regulated by the COGCC, a fracking ban can be the equivalent of a total impermissible mining ban. Moreover, in a 2009 "hard rock" mining preemption case out of Summit County, the Colorado Supreme Court held that Summit County's ban of a form of mining - cyanide vat or heap leaching (the use of toxic/acidic chemicals to extract precious metals, such as gold, from mined material) - was indeed preempted as an operational conflict with state law. The Court stated: "A patchwork of county-level bans on certain mining extraction methods would inhibit what the General Assembly has recognized as a necessary activity and would impede the orderly development of Colorado's mineral resources. . . . The General Assembly did not contemplate that statutory counties could entirely prohibit a broad category of mining operations by ordinance." Colorado Mining Association v. Board of County Commissioners of Summit County, 199 P.3d 718, 731 (Colo. 2009). A very recent court decision out of New York State, decided at the trial court level and thus with no precedential value, upheld a local jurisdiction's oil and gas ban imposed there due to concerns with fracking. However, this opinion in no way changes the established law in Colorado, and the New York trial court expressly recognized that, under the Voss case, the law in Colorado is different. Anschutz Exploration Corporation v. Town of Dryden and Town of Dryden Town Board, Decision, Order and Judgment dated February 21, 2012, Index No. 2011-0902, State of New York Supreme Court, County of Tompkins, p. 23.

In addition to the preempted areas discussed above, past Colorado court decisions have held local regulations preempted in these other oil and gas regulatory areas, *under the facts presented in those decisions*: (1) more restrictive well setbacks than the COGCC requires (well setbacks and location/spacing is another area where the courts may give great deference to state authority, but it is not clear that local governments are totally preempted in this area, at least where legitimate local land use concerns are involved); (2) conflicting visual impact standards; (3) sediment pond berming requirements; (4) mandated reclamation immediately after drilling; (5) surface and groundwater pollution control; (5) fire protection; (6) well cement casing; and (7) mandated independent monitoring of well drilling and plugging.

The most recent state judicial appellate decision on local preemption, Board of County Commissioners of Gunnison County v. BDS International, LLC, 159 P.3d 773 (Colo. App. 2006), cert. denied, 2007, gave a boost to local authority in ruling that county regulations in the same subject area as the COGCC regulates, are not per se ("on their face") preempted: rather, an evidentiary inquiry must be conducted to see if the local regulation operationally conflicts with a state regulation. The subject areas where the BDS court determined counties may have room to regulate, subject to possible invalidation on a demonstrated "operational conflict" basis, are: water quality, soil erosion and reclamation, wildlife and vegetation protection, livestock protection, geological hazard avoidance, cultural and historic resources protection, wildfire protection, recreational opportunity/experience preservation, and local permit duration periods. The BDS decision clearly stated that local duplication of state requirements is not in and of itself an operational conflict, at least where such overlap promotes, rather than impedes, the state's interest. However, a county regulation in the same area that is contrary to state requirements, may be preempted. Note that the COGCC, following legislative mandates passed in 2007, expanded its rules (effective in 2009) in the areas of water quality and wildlife habitat protection, thus arguably broadening the basis for a local conflict analysis in these areas. However, these rules were issued under amendments to the State Act that expressly preserved local land use authority.

Beyond the land use-related subject areas which overlap with COGCC regulations and are not judged to be operationally preempted under the BDS case, the courts have recognized areas where local governments clearly can regulate. These areas include: (1) imposing local land use (zoning special use, etc.), building code, fire code, and road access/construction permitting processes, and attaching legitimate conditions to issued permits (even if undergoing such processes and complying with such permits causes a delay in the ability to drill/operate); (2) charging reasonable application fees for local permit processes, and fees to monitor compliance with local conditions under issued permits; (3) requiring a local emergency response plan including paying for emergency response costs; and (4) providing a local appeals-type procedure whereby operators can challenge local conditions as being inconsistent with COGCC mandates. Local governments can also seek injunctive relief through the courts to enforce their authorized regulations.

Boulder County Comprehensive Plan Provisions: The current Boulder County Comprehensive Plan ("BCCP"), first adopted in 1978 (see pertinent contents included with Attachment D), contains general provisions expressly addressing oil and gas development, primarily in the Geology Element and Agricultural Element. There provisions call for County regulation of oil and gas exploration and development to the extent authorized by law; emphasize the need to minimize the land use impacts of oil and gas activities; require that agricultural lands and water resource systems be protected; and mandate agricultural land reclamation/restoration plans, as well as the furnishing of financial security where legally permitted. The Environmental Resources Element and Open Space Element of the BCCP also establish longstanding goals and policies aimed at protecting valued County open and rural lands, scenic vistas, and natural resources, all of which may be adversely affected by individual oil and gas sites, and by oil and gas development within the eastern unincorporated County more generally. In 2007, the BCCP was amended to add a Sustainability Element which speaks to sustaining County character and natural resources, promoting waste diversion and recycling, and County government taking a leadership role in diminishing the County's contribution to total greenhouse gas emissions. Finally, in 2009, a substantially amended Transportation Element was added to the BCCP, envisioning increased integration between transportation and land use planning, encouraging alternate modes of travel, calling for reduced single-occupant vehicle travel and total vehicle miles traveled, and advocating the expanded use of renewable energy sources.

With the renewed interest and activity surrounding oil and gas development - spurred not only by an improved economic environment for resource development, but by the promotion of natural gas as a "clean," more "environmentally friendly" fossil fuel - and considering the ever-changing oil and gas regulatory environment, staff believes that the existing oil and gas provisions of the BCCP require review and updating. Such a comprehensive planning analysis may result in the BCCP's provisions being revised to better reflect current County regulatory authority, as well as possible intergovernmental partnerships which the County might seek in areas deemed outside of the County's direct regulatory purview. BCCP revisions also bear considering in light of the County's recent sustainability initiatives, multimodal transportation planning efforts, evolving designations of environmentally significant areas (such as Environmental Conservation Areas and sensitive species' habitat), and expanded open space acquisition program, among other possible County master planning interests.

Boulder County Land Use Code's Development Plan Review Regulations: The BOCC first enacted a Development Plan Review ("DPR") process for oil and gas operations at the height of a prior oil and gas development spurt, in Resolution 93-184 effective October 1, 1993 (see Attachment E). The County's current DPR Regulations (codified mainly in Article

4-900 of the Land Use Code (the "DPR Regulations"), are substantively unchanged, nearly two decades later.

The DPR Regulations are akin to a Site Plan Review ("SPR")-type of administrative process (see Article 4-800 of the Land Use Code), requiring a Land Use Department staff-level review and approval prior to oil and gas operations commencing. The Land Use Director's decision can be called up before, or appealed to, the BOCC in disputed situations, though BOCC review has hardly, if ever, occurred. Appeals include the applicant's ability to challenge a condition of approval before the BOCC if alleged to be a material impediment to (operational conflict with) the COGCC's rules. Significantly under the DPR Regulations, the Director's decision is limited to approving or conditionally approving a proposed development plan: unlike SPR, administrative denial of a proposed plan is not an option. Also unlike SPR approvals, which expire within three years if not acted upon, DPR approvals do not expire and arguably last indefinitely.

The DPR Regulations' criteria, essentially unchanged from 1993, address the following areas: (1) setbacks from buildings (350 feet) and public rights-of-way (150 feet), to "be complied with to the maximum extent possible"; (2) compliance with specified noise requirements (these are expressly preempted by statute); (3) location of operations to minimize visual impact and surface land disturbance (including siting away from hills/ridges and significant environmental features; painting with colors that blend with the natural environment; location of facilities in existing disturbed areas, with specified exceptions; the requirement for buried pipelines/electrical lines; and landscaping/screening requirements); (4) construction of access roads per County Transportation Department requirements, preference for use of existing roads, and the requirements to obtain oversize/overweight vehicle permits and utilize transportation routes to minimize traffic hazards and public roadway impacts; (5) signs consistent with COGCC requirements; (6) consultation with state and County wildlife authorities where significant wildlife habitat is affected, including a prohibition against threatening an endangered species;
(7) air emissions compliant with state and County public health requirements; (8) operations compliant with state water quality control and drinking water standards; (9) waste disposal/treatment consistent with COGCC requirements and any applicable County Public Health and emergency response authorities; (10) location of production tanks within containment berms; (11) land reclamation plan approval; (12) compliance with all COGCC requirements (including the ability to appeal permit conditions to BOCC which the operator asserts conflict with COGCC rules); and (13) consistency with the BCCP, applicable intergovernmental land use agreements, and the Land Use Code.

Recent and Anticipated Boulder County-Regulated Oil and Gas Activity/Impacts, including The "Fracking" Controversy: Likely reflecting the national economic downturn starting in 2008, oil and gas DPR applications to the County over the past 2-1/2 years have not been numerous. In 2010, 11 DPR applications were submitted and approved, representing 11 new gas wells, five of which were on County-owned land. In 2011, three DPR applications were submitted and approved, one of which involved five wells, resulting in a total of eight new gas wells, three of which were on County-owned land. No applications have been filed to date in 2012, and none were pending at the time the BOCC's application processing moratorium (see Attachment A) went into effect, on 2/2/12. At the same time, overall oil and gas production figures for Boulder County have gone steadily up since 1999 (see COGCC figures in Attachment G), reaching their highest levels (for gas) in 2008 (declining relatively slightly between 2009-2011), and (for oil) in 2010 (declining relatively slightly in 2011).

A relatively crude attempt by the Land Use Department to project possible future production in Boulder County, based on spacing requirements in the COGCC rules, is presented in Attachment H. Supplementing this graphic are some recent newspaper articles indicating future activity in the Wattenberg field (part of the Niobrara formation in Colorado), most of which lies in Weld County, but a portion of which falls within Boulder County and comprises the vast majority of the developable oil and gas reserves within our unincorporated territory. The Anadarko Petroleum website – representing the activity of just one company – projects 1,200 to 2,700 future drilling locations in this part of Colorado overall, with acceleration of its Wattenberg program in 2012 to include seven operating rigs by the end of the year, including 160 horizontal wells in 2012 (up from 40 in 2011). The Boulder County Parks and Open Space Department (see their memorandum for further details) has a record of 47 new wells that have been identified as intended for development on County open space ("OS") lands, by both EnCana and Noble Energy: five wells on the Alcorn OS; one well on the Autrey OS; six wells on the Doniphan OS; 15 wells on the Ertl OS; six wells on the Haley OS; one well on the Mountain View Egg Farm OS; three wells on the Ross OS; five wells on the Vicklund OS; and five wells on the Wambsganss OS.

Changing land use impact concerns revolve around numerous factors involved in this anticipated upswing in oil and gas activity, such as: (1) the attendant transformation in technology from vertical and directional to horizontal drilling, involving more concentrated and intensively developed operations sites; (2) the nature and extent of the resources used in, and waste disposal necessitated by, the hydraulic fracturing ("fracking") process, as used in both standard vertical wells and, of some greater concern, in the more increasingly popular horizontal wells; (3) the number, type, and location of facilities necessary to properly recover and distribute the currently available gas reserves, which may have a different composition (for example, a much higher liquid content) than supplies previously exploited; and (4) the overall infrastructure, both public and private, necessary to support evolving and expanded operations. Significant truck traffic and heavy equipment are required to move drilling rigs in and out of drill sites, to transport the materials and supplies needed to support operations, and to pump and transport oil from on-site tanks. The additional facilities, equipment, traffic, and access roads involved in pumping, storing, and transporting the recovered fuels and accompanying waste pose the prospect of aggravating visual degradation, land disturbance, and public road usage. Water quality concerns revolve around the adequacy of isolating wells from groundwater sources and making sure that well waste products stored on the surface do not penetrate to groundwater or pollute surface water bodies and drinking water supplies. Dust creation, air and odor pollution, and noise are other public nuisance-type byproducts of concern. More detail on existing and anticipated impacts is included in the ensuing memoranda from the other involved County departments.

The "fracking" process basically utilizes a high-pressured, down-hole mixture of water, sand (to hold open fractures), and chemical additives (to clean out the fractures and increase flow). Fracking has been commonly employed by the oil and gas industry for decades, to increase flows into the well and maximize available resource recovery. Renewed concern over the fracking process has arisen, however, in part due to the industry's increasing use of horizontal, as opposed to vertical or directional, drilling. While one horizontal well may replace several vertical wells, fracking a horizontal well may require larger amounts of water and other fracking components, which must be transported to the site if not available on it, and must be properly treated as waste once used (if not recycled). Closed-loop treatment systems, as opposed to open waste pits, are considered far preferable environmentally, since they isolate waste products, separate the water from the other materials exiting the well, and allow for the reuse of treated fracking fluid in subsequent operations. As existing reserves become more difficult to exploit, fracking may become more common, to assure that the maximum production is achieved from each hole drilled. Fracking may also increasingly be

undertaken at previously drilled wells, even those many years old from which production has reduced over time.

Public criticism and concerns around the fracking process abound. For their part the industry, along with the COGCC, are insistent that existing state regulations, including well construction and waste disposal requirements, and the recently passed rules requiring disclosure of fracking components (see Attachment M for pertinent COGCC materials), offer sufficient protection to the public and the environment, and adequately address any overuse of water and other resources. According to the COGCC and the Colorado Oil and Gas Association, there have been no verified instances of fracking contaminating groundwater in Colorado.

Recent Regulations from Other Jurisdictions: Like Boulder County, numerous other local jurisdictions in Colorado have been active in the oil and gas regulatory area of late, in response to both public concerns about fracking, and the anticipated uptick in industry drilling operations. The County Attorney's Office has collected a cornucopia of local regulations which are available for BOCC perusal, as well as for staff reference in drafting forthcoming regulatory amendments. We understand that the counties of Arapahoe, Douglas, El Paso, Elbert, Routt, and Boulder are considering (or have recently passed) new regulations, in addition to the cities of Colorado Springs, Commerce City, Aurora, Castle Rock, Longmont, and Erie. No doubt there are others.

Several jurisdictions, as an adjunct to proposing or amending regulations, have also passed moratoria on oil and gas operations while regulations are studied and processed. Examples include the City of Longmont (regulations being considered with moratorium set to expire on 4/17/12 if not extended); El Paso County (moratorium, imposed while regulations processed, expired when regulations were adopted on 1/31/12); the City of Colorado Springs (moratorium imposed and still in place so public task force convened to study the situation can develop recommendations to City Council, expected in early May, 2012); Commerce City (Council voted on 1/23/12 to continue existing temporary moratorium on drilling operations until 2/27/12, when it may be extended for six months, to allow the City's oil and gas land use review committee, made up of residents, industry representatives, interest groups and council members, to work on a consensus recommendation on proposed regulatory amendments, and to explore possibility of entering into a memorandum of understanding with the COGCC); and Saguache County which, less recently (in 2007-08), imposed a six-month moratorium while it developed oil and gas regulations. In contrast, the Town of Erie has declined to impose a moratorium, and
is in the process of considering a set of rules generally described as "voluntary local controls" ("Study: Dirty air tied to drilling," Boulder Daily Camera, 2/22/12, Pp. 1A &13A).

A summary of selected, proposed or just-enacted regulations that may be of interest to BOCC - one municipal (Longmont: regulations in process), and one county (El Paso County: regulations approved 1/31/12 and then revised per resolution adopted 2/21/12 to address COGCC and industry objections to local water quality requirements) - follows below. Taking a different approach Arapahoe County's Commissioners, at the beginning of this year (on 1/3/12), declined to enact more comprehensive regulations, believing they were too duplicative of the COGCC's rules. A few other jurisdictions, such as Gunnison County, and El Paso County, have pursued or plan to pursue another regulatory alternative: entering into a memorandum of understanding ("MOU") or an intergovernmental agreement ("IGA") with the COGCC. MOUs and IGAs provide an option for counties that wish to avoid preemption challenge, and seek to locally enforce or monitor COGCC requirements, and/or obtain the COGCC's blessing for local requirements which the state finds acceptable under its regulatory scheme. If the BOCC here directs staff to continue studying revised County rules, staff

will conduct a much more in-depth analysis of other Colorado local jurisdictions' regulations, and MOUs/IGAs with the COGCC.

City of Longmont (see Attachment I): The Longmont Planning Commission voted on 2/15/12 to recommend approval of new oil and gas rules and the extension of an existing moratorium, with City Council scheduled to hold a public study session on 2/21/12, and formal public hearings on 3/13/12 and 3/27/12 (see Attachment J). Of note, the proposed rules include the following requirements: certain facilities within the City are prohibited (waste disposal injection wells, centralized E&P waste facilities, and temporary worker housing); City can approve operations complying with both specified minimum and recommended standards through site plan review, while applications not so complying require a public hearing approval; City can require third-part technical review at applicant's expense; operator must locate and design well facilities and operations to minimize impacts on surrounding uses; utilized water sources must be identified and evidence of legal entitlement provided; city drainage requirements must be complied with; hazard areas and floodplains should be avoided; emergency response plan is necessary; operator must disclose hazardous materials to be transported on public or private roads; COGCC safety requirements must be observed; financial guarantees and liability insurance are required; general impact fee may be levied to address City infrastructure impacts and mitigation measures taken; "minimum standard" and high density area setbacks are imposed (from occupied buildings, platted lots, designated outside activity areas, and institutional structures); visual impact analysis with appropriate mitigation measures are mandated; COGCC noise, vibration, and lighting standards are incorporated; adverse impacts on water quantity and quality and pressure are prohibited and water quality monitoring required, with some incorporation of COGCC rules; water body setbacks are specified, with some incorporation of COGCC rules; on-site waste disposal is not allowed, in favor of "closed loop" systems with sealed storage tanks; compliance with COGCC fracking fluids disclosure rule is mandated; production site containment, and best management practices to avoid spills and releases, are required; storm water from site must be managed per state and City rules; pipeline and gathering systems are subject to COGCC rules; state air quality control measures must be observed, and methane emissions minimized per COGCC rules; odors and dust must may not become a nuisance and both COGCC and City rules here must adhered to; wildlife and habitat shall be protected per City, state and federal requirements; baseline site vegetation study must be completed and COGCC reclamation procedures followed, in consultation with City; applications must include traffic control plan, as well as transportation impact study with financial assurance able to be required; demonstration of right to use private access ways must be provided; signs must be consistent with COGCC rules; City permits are valid for one year; variances may be granted if compliance impractical, and special exceptions permitted where operational conflicts with state law demonstrated.

El Paso County (see Attachment J): These very recently enacted regulations (1/31/12) are in many respects similar to Longmont's. The County Commissioners may grant operational conflict waivers where local regulations are challenged as preempted under state law, as well as waivers where compliance is financially impracticable or technically infeasible; special use review and site development plan are required for minor oil and/or gas facilities (an administrative review, which may be "bumped up" for more formal review), and for major facilities (a Planning Commission review followed by Commissioners' approval); development and performance standards cover: water supply (evidence of source and right to use), hazard mitigation (encouragement for location outside hazard areas), site security (follow COGCC requirements), operations plan (one is required), transportation analysis and impact mitigation and traffic control plan (including financial assurance if mitigation necessary), setbacks (specified for minor facilities, and determined upon site circumstances for major facilities) with the ability to seek setback waivers based on

impossibility/technical impracticability, excavation storage pits (allowed only by Commissioners' waiver which can impose additional safety measures based on site-specific circumstances), pipeline and gathering systems (subject to COGCC requirements and must include grading and erosion control plan), drainage and grading/erosion control, including storm water management (regulated per County requirements), visual mitigation (may be mandated), emergency response plan (required), noise and lighting (must at a minimum comply with COGCC regulations but County may require special mitigation measures), groundwater quality monitoring (plan is required if drilling proposed and baseline sampling must be done), air quality (must receive necessary state and local health permits and on-going air quality monitoring may be required), waste disposal plan (is required, and if fracking to be used a fluids management plan is necessary), trash and debris (sites must be kept clean at all times), noxious weeds (must be controlled per state regulations and County's weed plan), financial assurance (requirement may be triggered to ensure damage to County roads repaired, erosion control accomplished, and groundwater monitoring done), and general zoning (standard special use criteria must be satisfied).

After enacting its regulations, El Paso County experienced a threat of litigation from the COGCC and the industry, particularly over the county's pre-drilling and post-drilling water quality sampling requirements. In response, on 2/21/12, the El Paso Commissioners passed a resolution, following negotiations with the interested parties, that provided for the county to "bump up" its water testing provisions to the state level if the COGCC would agree to implement them, and to pursue an IGA with the COGCC to address the county's water quality regulatory concerns. (See Attachment J.)

Arapahoe County (see Attachment K): As indicated above, on 1/3/12 Arapahoe County rejected proposed regulations addressing a broad range of issues and impacts similar to those encompassed by El Paso County's and Longmont's proposed rules. The Arapahoe Commissioners decided that their staff-drafted rules were overly duplicative of COGCC regulatory authority, and decided instead to work with the COGCC on a County-state MOU, as well as participate more intensively in the state's permitting process as a COGCC "Local Government Designee". The Commissioners also advised their staff to focus on more traditional County land use areas of concern (transportation/roadway infrastructure, grading/erosion/sediment control, building and access permits, and notification requirements), and to meet monthly in public with industry experts to fashion appropriate County solutions and responses.

Gunnison County (see Attachment L): As noted above, Gunnison County successfully sustained a facial challenge against its broad, performance-based oil and gas land use regulations, in the court case Board of County Commissioners of Gunnison County v. BDS International, LLC, 159 P.3d 773 (Colo. App. 2006), cert. denied, 2007, which established that counties can regulate in the same subject area as the COGCC provided their regulations are not shown, as applied in specific situations, to create an operational conflict with (materially impede) the state's regulatory interest. Gunnison County's regulations were remanded to the trial court for an operational conflict factual hearing and analysis, the results of which our staff will be further analyzing if the BOCC directs staff to draft appropriate amendments to Boulder County's regulations. However, Gunnison County has also taken the alternative tack of proposing an MOU with the COGCC (see Attachment L), which sets out the parties' expectations for the County's participation in the COGCC's permitting process as a Local Government Designee. The MOU also assigns to the County certain inspection and monitoring functions to oversee operators' compliance with state rules within the County. The MOU does not allow the County to impose any fee on operators for this service, though preserves the County's ability to assess fees related to inspections of the County's own land use permitting conditions. In return, the COGCC agrees to approve and train the County official who will perform the state-delegated monitoring function, and retains all enforcement authority of its rules. The MOU

contemplates the parties entering into a formal intergovernmental agreement to implement the MOU.

Snapshot of Recent State and Federal Regulatory Efforts: The Colorado legislature passed major legislation in 2007 requiring the COGCC to promulgate additional rules to protect the environment, and better defining surface owner rights (House Bill 07-1298, the "Colorado Habitat Stewardship Act of 2007"; House Bill 07-1341, directing the COGCC "to foster oil and gas development consistent with the protection of the environment, wildlife resources, and public health, safety, and welfare"; and House Bill 07-1252, specifying the relationship between surface owners and oil and gas operators, codifying that "reasonable accommodation" of surface owner interests by operators includes "minimizing intrusion upon and damage to the surface of the land," and specifying a surface owner cause of action for violation of this standard). To implement this legislation the COGCC in 2009 promulgated revised rules to expand protection of the environment from the adverse effects of oil and gas drilling, primarily in the areas of water quality (in cooperation with the Colorado Department of Public Health and Environment ("CDPHE") which administers the State's water quality control programs), and wildlife and habitat protection (in cooperation with the Colorado Division of Wildlife ("CDOW")). The 2009 rules also created a process for state approval of "Geographic Area Plans," allowing the COGCC, in consultation with the CDPHE, CDOW, and affected local governments, to adopt basin-specific rules that promote the purposes of the State Act.

The 2007-08 rulemaking that produced the 2009 rule revisions deferred certain issues, including action on well setback requirements. The COGCC has recently announced formation of a stakeholder process, which it anticipates will extend over several months in 2012, to review the actual setbacks between wells and buildings, variations in setbacks in different areas or under other dissimilar circumstances, and reasons why more or less restrictive well-building setbacks should be adopted. The first COGCC public meeting for this purpose is scheduled for February 23, 2012.

In other recent, pertinent rulemaking efforts, the COGCC, in August, 2011 approved amended rules in the Wattenberg Field (affecting Rule 318A, the "Greater Wattenberg Area rule"), a portion of which lies in Boulder County, in order to allow greater well spacing flexibility, better accommodate horizontal drilling techniques, and add water sampling and waste management plan submission requirements. Shortly thereafter, on December 13, 2011, in response to intense public concern over contamination from the fracking process, the COGCC passed an order detailing state requirements for the disclosure of fracking fluid components/chemicals. Copies of pertinent materials from these rulemaking efforts, and including a COGCC analysis of its current rules pertinent to the regulation of fracking, are presented as Attachment M (note: materials from the 2009 rulemaking under the 2007 legislation are not included).

The 2012 state legislative session has been an active one with respect to the submission of bills addressing oil and gas operations. Four of these bills so far have been killed: *SB 088*, which would have made oil and gas regulation the exclusive domain of the State (see Denver Post commentary dated 2/17/12 in Attachment N); *HB 1173*, which would have generally required closed-loop systems for fracking fluid storage/containment; *HB 1176*, which would have mandated increased setbacks from fracked wells, COGCC enactment of "best practices" rules prior to implementation of new technologies, and an expanded definition of "surface owner" to include owners of land over horizontally fracked areas; and *HB 1277*, which would have provided that oil and gas regulation is subject to both local and COGCC authority, with local authority being the same as established for other mineral extractions. At least one major bill is still alive: *SB 107*, entitled the "Water Rights Protection Act" (assigned to the Senate Judiciary Committee on 1/31/12 – see Attachment N). This

bill would expand COGCC's regulatory authority over water quantity and quality impacts related to fracking (requiring reports, analysis, environmental bonds, and the like), would prohibit the use of cancer-causing compounds in fracking fluids, and would outlaw fracking within a certain distance of surface water without a closed-loop system. Regardless of whether any state legislation is enacted this year to address fracking at the state level, or to alter or clarify the regulatory relationships between the state and local governments in this area, clearly the state legislative and regulatory parameters surrounding oil and gas operations in Colorado are a subject of great public concern, are in considerable flux, and could lead to additional or amended state regulations in the relatively near future.

At the federal level, the fracking controversy is under focused investigation: the U.S. Environmental Protection Agency ("EPA") has undertaken a study on the relationship between fracking and drinking water and groundwater quality, with a final analysis reportedly due by 2014. The EPA is also heavily involved in evolving regulations over the air quality aspects of drilling, primarily around the release of volatile organic compounds (VOCs). In addition, the U.S. Interior Department is proposing standards on land drilling on federal public lands to ensure the safety of water sources and drinking supplies from fracking operations.

Staff will continue to research the changing regulatory scene at both the state and federal levels. Many agencies are involved including the EPA, the U.S. Department of Energy, the CDPHE, the CDOW, the State Engineer, and, most prominently, the COGCC. How local land use authority fits into this regulatory patchwork will be an ongoing challenge.

SUGGESTED BOULDER COUNTY REGULATORY AMENDMENT AREAS

The Land Use staff, with the assistance of the County Attorney's Office, discussed and prepared amendments to the County's oil and gas DPR Regulations in 2005-06 (Docket DC-05-002e). The amendments attempted to address points of administrative uncertainty under the DPR Regulations, to add areas not regulated which staff believed the County could regulate, and to delete certain areas then thought to be preempted. These draft amendments were put on hold, however, and never publicly released, as it appeared that the Gunnison County BDS case might significantly clarify the extent of county authority in this area – which, as discussed above, it did. This work still can provide a starting point for staff in pursuing its planning and regulatory work during the current moratorium period.

The public's, and especially nearby residents', angst over the impacts of oil and gas operations is understandable and real. There has been much expressed concern over the sufficiency of state and federal rules, and the ability of the COGCC to enforce in those areas where it currently has authority. At the same time, there are limits to what the County can do in response (see earlier discussion in this memorandum regarding County regulatory authority in this area, and the recent Denver Post commentaries submitted as Attachment O).

The Land Use staff believes that the following, guiding considerations - which are both legal and policy-oriented in nature - are appropriate to keep in mind as the department prepares updated amendments to the DPR Regulations (which are part of the Land Use Code and primarily incident to the County's planning and zoning authority):

1. Do the amendments address an area where the County has planning and zoning authority, as well as monitoring and enforcement expertise?

2. If the amendments provide local requirements addressing same subject areas as the COGCC's, are they expressly preempted by statute, and, if not, are they in an area that will be likely to invite "operational conflict" challenges? On the other hand, are they in an area that the County has traditionally regulated and is central to the County's implementation of its Comprehensive Plan, Land Use Code, and related regulations?
3. If the local requirements are in an area traditionally administered and enforced by state and/or federal agencies, what is the purpose of the County entering such area, where it has not before, and what can the County realistically accomplish by regulating in this extended fashion? Legal questions aside, does the County have the qualified staff to do so, or the funds to bring on qualified staff?
4. To what extent should the County incorporate into its regulations mandated compliance with the COGCC's and related agencies' requirements, particularly as it appears the COGCC has comprehensive enforcement authority over its own regulations?
5. In areas of overlapping jurisdictional concern, does it make more sense for the County to enact its own regulations, or to pursue some type of MOU or intergovernmental agreement with the COGCC?

Our department welcomes the BOCC's further guidance on the scope of the County's role, following testimony at today's public hearing. In advance of that hearing, and without restricting the scope of the forthcoming effort, we suggest that the County focus on the following amendments to the Land Use Code's DPR Regulations, based on interdepartmental staff discussions over the past several years (note that the other departments' presentations and public testimony at the BOCC's public hearing may suggest other or different amendments):

1. Allow for denial of a DPR application (like SPR applications can be denied), if substantially justified under the criteria.
2. Limit the term of a DPR approval (to one year, consistent with COGCC rules, or to three years, consistent with the County's SPR regulations).
3. Add the ability for Land Use to put a complete DPR application on hold (as in the SPR regulations).
4. Clarify how the DPR Regulations apply to refracking or recompleting an existing well.
5. Expand the DPR application referral agencies.
6. Consider who must sign a DPR application (amend to require it to be the same operator submitting for the COGCC permit?), and possibly better address the sequencing of the County and COGCC permitting processes.
7. Add required compliance with Article 4-400 of the Land Use Code (Floodplain Overlay District), which would make clear that floodplain development permits are necessary and development in the floodway may be denied.
8. Review the sufficiency of the existing DPR Regulations' criteria, and add criteria, as indicated, in the following traditional "land use" areas: wildlife and plants and associated habitat protection; preservation of other significant County environmental resources (wetlands, riparian areas, Environmental Conservation Areas, Natural Areas and Landmarks, etc.); geologic hazard mitigation; historic and archaeological/cultural protection; storm water and drainage control; grading, erosion, and land reclamation/land disturbance minimization (particularly of agricultural lands); visual impact mitigation and preservation of scenic views.
9. Review sufficiency of the existing DPR criteria related to transportation-related impacts, including updating in light of the County's recently adopted Multimodal Transportation Standards; implementing statutory authority to assess fees or require financial guarantees for road/bridge construction or damage; assuring acquisition of all required Transportation

permits (for access, right-of-way use, oversize/overweight vehicles, etc.); addressing roadway impact issues such as extent of land disturbance, use of existing access ways, mud tracking on roads, traffic safety and control, and proper road maintenance.

10. Clarify how the regulations address fencing around well sites and related facilities.
11. Consider including an obligation to remove roads or facilities when wells are abandoned or closed, including requiring associated land restoration.
12. Specify that all ancillary County permits following DPR approval are required, including building/demolition and grading permits under the County Building Code; Transportation Department permits (see #9, above) including floodplain development permits (see #7, above), and Public Health permits (such as for fugitive dust control, etc.).
13. Require an emergency response plan.
14. Require a noxious weed control plan.
15. Consider eliminating the existing zoning use distinction between oil and gas development on subdivided, and unsubdivided, land.
16. Make clear that County "1041" review under the Land Use Code is required if oil and gas operations fall within a designated "area of state interest" (while COGCC consent is required to designate oil and gas "mineral interest areas," the County's 1041 regulations designate other "state interest areas" in which the County could apply its regulations to oil and gas development occurring in those).
17. Delete the current noise regulation DPR standard, as preempted by CRS Section 30-15-401(1)(m)(II)(B).
18. Consider whether to delete, or continue incorporating, the existing DPR Regulations' provisions requiring compliance with applicable state law (including related to air quality, water quality, waste disposal, signage, and COGCC rules generally).
19. Review the existing DPR Regulations (and propose appropriate amendments) for updating per recent COGCC rulemaking (Greater Wattenberg Area amendments; 2009 amendments under State Act to expand wildlife habitat and environmental protection purview, etc.).
20. Perform a general preemption review of the existing DPR Regulations, with particular regard to the existing setback requirements (and clarify whether existing zoning/Land Use Code setbacks and supplemental setbacks apply), oil and gas development site design (e.g., production tank containment berm and line undergrounding requirements), and land reclamation standards; keep in mind the prospect for as-applied "operational conflict" challenges in proposing new amendments, and consider whether to adopt performance-based standards to enhance local regulatory flexibility and lessen the likelihood of successful preemption challenges.

Boulder County

Parks and Open Space

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MEMORANDUM

To: Boulder County Commissioners

From: Ron Stewart, Director
Boulder County Parks and Open Space

Date: March 1, 2012

RE: Impacts of Oil and Gas Development Upon Boulder County Parks and Open Space Land

As the manager of a large amount of land in the oil and gas producing portions of the county, Boulder County Parks and Open Space has been closely monitoring the impacts of oil and gas operations upon the land and offers the following observations:

Why are there wells on open space?
POS has heard complaints from the public indicating that they are disturbed that any oil and gas development is occurring on open space. While POS agrees that oil and gas development is not consistent with the open space mission (either as set forth in the Boulder County Comprehensive Plan or in the sales tax resolutions which generate the revenue used to purchase open space land), there is oil and gas development on open space because we do not have the legal ability to prevent it. The portion of Boulder County that has oil and gas development is the easternmost township of the county, which is the western edge of what is known as the Greater Wattenberg Area, the 7th largest oil and gas field in the United States. Almost all of the land in this area was leased to oil and gas companies in the 1970s and 1980s and Boulder County did not begin purchasing agricultural lands in this area until the mid-1990s. Because Boulder County purchased this land subject to existing oil and gas leases, it cannot stop the oil and gas companies from exercising their legal rights to drill for oil and gas.

How many existing wells are there in Boulder County?
There are currently approximately 345 active oil and gas wells in Boulder County. Approximately one-third are located on open space owned by Boulder County in fee simple, approximately one-third are located on privately held lands that are covered by Boulder County conservation easements, and approximately one-third are located on privately held land that is not protected by conservation easements.

How much oil and gas are produced in Boulder County?
For each of the past few years, oil and gas wells in Boulder County have produced between 200,000 and 250,000 barrels of oil and between 3,000,000 and 3,500,000 million cubic feet of natural gas. We have seen substantial impacts to our lands and roads due to this development, but to put this in perspective, this represents about 1% of Weld County's oil production and 1.5% of Weld County's gas production.

What control does POS have with regard to oil and gas development on open space?
If open space was acquired subject to an oil and gas lease, and that lease has been kept current by production, oil and gas operators are required to contact Boulder County, as the surface owner, before drilling any wells. POS staff initially requires the oil and gas operator to assure that it has a right to drill and that it has legal access to use the surface of open space to drill and access the well. POS staff then negotiates with the operator regarding siting of the wellhead and use of access roads. Because POS cannot deny requests to drill if the operator has a legal right and has complied with state and county permitting processes, we try to negotiate locations that involve the disturbance of the least environmentally sensitive area, the least new road construction, and the least disturbance of productive agricultural land. POS will generally negotiate surface use agreements which establish siting of the well pad and all associated infrastructure, timing, access, clean up, and reclamation issues. Surface use agreements also establish that the operator is liable for damage to infrastructure on the property, such as drain tiles or fences that are damaged, and any damage to the land that is the result of the operator's negligence.

While POS attempts to protect its interests as the long-term steward of the land, because oil and gas lessees have extensive rights under Colorado law, there are limitations to what Boulder County can require of operators. However, in one instance a few years ago, when an oil and gas operator sought to drill in close proximity to a bald eagle nest, POS refused to agree to a surface use agreement for a well in that location and filed an objection with the COGCC against the state issuing a permit. Eventually we were able to negotiate a better location for the well pad with the operator to protect the eagles.

What does Boulder County get in compensation for drilling on open space?
As the owner of the surface of land that is drilled, Boulder County receives between $7,000 and $25,000 for each surface use agreement. With its acquisition of the open space, Boulder County also received royalty interests of 12-18% in most instances. Over the past several years, Boulder County has received approximately $1,000,000 per year in royalties, which represents about two-thirds of its annual agricultural lease revenue for open space property. These payments are deposited into Boulder County's general fund and are used for staff and projects in the Open Space program.

What are the impacts to open space related to oil and gas operations?
POS has experienced many different impacts from oil and gas operations; both short term and long term impacts.

In the short term, there is a large amount of heavy truck traffic, noise, dust, and other surface disturbance. Oil and gas drilling and hydraulic fracturing interfere with agricultural production, damage roads (both public highways and internal roads on open space properties), and affect natural resources and wildlife.

Due to the oil and gas operators' negligence, we have experienced other problems as well, including spills of up to 7 barrels of oil, disturbance of prairie dog fencing that allowed prairie dogs on lands where they had not been previously, destruction of drain tiles which resulted in a high water table and unproductive soils, damage to ditches, and poor grading.

Long term impacts, even when there has not been negligence by the operator include disturbed and increased incidence of noxious weeds. Compaction of soil, loss of soil

structure, and mixing of the soil horizons which lead to alteration of historic drainage patterns and a loss of agronomic productivity of up to 50% for many years, especially when the soils have been impacted during wet periods. POS tenants and Boulder County each lose money on the diminished production and the additional inputs and labor required to rehabilitate the soil.

Has POS noticed a difference in the scale of impacts and volume of activity recently?
With new technologies that allow for directional and/or horizontal drilling, POS has been able to work with oil and gas operators to negotiate better locations for new well pads. Oil and gas operators are more willing to drill new wells in areas that have previously been disturbed and cluster them in closer proximity. However, horizontal well drill sites have a larger footprint and longer period of active disturbance due to the increased length of the bore hole and the increased amount of hydraulic fracturing fluid used.

POS has not noticed a great increase in volume of new wells being drilled, but we know that the COGCC has recently issued permits for 16 new wells on Boulder County Open Space. POS has also recently received 47 notices of intent to drill, and we have seen the dramatic increase in new wells being drilled in Weld County. In addition, we have had inquiries from oil and gas companies about drilling in areas outside (west of) the Greater Wattenberg Area. Based upon this increased activity in preparation for future drilling, it is reasonable to believe that the volume of oil and gas activity in Boulder County is primed for an increase.

Boulder County

Transportation Department

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TO: Board of County Commissioners

FROM: Boulder County Transportation Department/George Gerstle

DATE: February 23, 2012

SUBJECT: Potential Transportation Impacts from Oil and Gas Development

Summary
One of Colorado's largest oil and gas producing shale formations is the Niobrara, which extends into the eastern portion of Boulder County. The Niobrara basin has been a highly productive source of oil and gas in Colorado's northern Front Range, most notably in Weld County. While to date there has been relatively little oil and gas drilling activity in Boulder County compared to other front range counties, a recent surge in oil and gas drilling in Weld County, has made it important that the County understand the potential impacts of to the roadway and transportation system that could result from oil and gas development and production.

Douglas County has completed some initial analysis to understand the potential transportation impacts associated with oil and gas in Douglas County and which serves as a starting point for understanding potential impacts to Boulder County. The Executive Summary of the Douglas County report is attached for additional information.

Over 1,800 wells can legally be drilled in unincorporated Boulder County. Additional wells will also likely be placed within incorporated towns and cities in the county and may also be serviced using unincorporated county roads. Truck traffic from this activity would increase by many orders of magnitude over current volumes on county roads which are not presently designed to safely accommodate the weight and volume of vehicles associated with oil and gas development. The impacts of the heavy trucks necessary to serve potential oil and gas development on Boulder County roads could be equivalent to the wear and tear of hundreds of millions of passenger vehicles, would increase conflicts with other vehicles and bicyclists, and would place significant new demands for road infrastructure and safety investments on the County, without additional revenue to address the potential needs.

Potential Demand
Relatively little information is currently available regarding forecast demand or plans for drilling in unincorporated Boulder County; however Land Use has completed an initial analysis that indicates over 1,800 wells could be drilled within existing regulatory limits under current state regulations.

The consultant team for Douglas County estimated trip generation rates based on an analysis completed by MIT and subsequent adjustments based on local industry interviews. Based on the MIT study, the Douglas County study forecast truck traffic to average 11,040 vehicle trips to develop each pad site (with each pad accommodating six wells) for pad construction, drilling, well installation, and well completion. Once a well is fully operational, trip generation is substantially reduced to approximately 730 vehicle-trips per year (two trips per day). The time period for development of a pad/well site is 45-60 days, with production lasting for up to 15 – 20 years. The timeframe over which these wells could be developed is unknown, and would be largely a function of global oil/natural gas demand.

Based on the assumptions from the Douglas County study and the Land Use Dept. forecast of potential wells (1,800 wells, 6 wells per pad site and 11,040 trips per pad site) over 3,300,000 vehicles trips could use east Boulder County roads to install and service potential oil and gas development. It should also be noted, that this analysis only reflect potential wells in unincorporated Boulder County. Trucks serving wells in the incorporated cities and towns in the County would also likely used Boulder County roads.

Most of the vehicles servicing these wells would be heavy trucks. Heavy trucks have a much greater impact on roads than do lighter weight passenger vehicles, and therefore cause more wear and damage than do passenger vehicles. According to the Douglas County study, the load impact of oil and gas trucks on roads can be in the range of 5,000 to 30,000 times (depending on the weight and number of axles on each vehicle) greater than a passenger car. In sum, the impacts of oil and gas development on Boulder County roads could be equivalent to the wear and tear of many millions of passenger vehicles.

Potential Implications to Boulder County Transportation System

The impacts to specific county roads will not be known until the truck routes used to access each well pad are known; however, potentially significant road reconstruction and maintenance costs and safety concerns exist based on the potential number of associated heavy truck trips.

Road Reconstruction and Maintenance: The potential impact of increased truck traffic on both paved and unpaved roads would be significant. Roadway segments experiencing oil and gas traffic will decrease the overall pavement service life, resulting in the need for more frequent, and thicker, overlays and reconstruction sooner than would be expected under current use. For unpaved roads, the improvements needed to offset the impacts of oil and gas trucks include more frequent dust suppressant application, grading, graveling, and paving where the truck volume is expected to significantly increase over an extended period of time.

The County conducts a pavement quality survey every three years, with the last one completed in 2009/10. Based on this survey, 36% of unincorporated, non-subdivision, paved roads were in fair or poor condition. Particularly in eastern Boulder County, many of the lower volume roads do not have a significant (or any) road base since they were developed informally over time, and cannot withstand heavy truck traffic. The impact of thousands of heavy trucks on these roads would be substantial.

Roadway Safety: Increased truck traffic would have significant safety impacts to both drivers and bicyclists using Boulder County roads. Many roads in the eastern portion of the County do not have shoulders or safe passing areas that would be necessitated by the increased demand by cars to pass slow moving heavy trucks, or trucks entering or leaving the roads to access the well sites. Additional turn lanes, shoulders, or other improvements may be needed to ensure the safety of the traveling public. In addition, eastern Boulder County experiences high volumes of bicycle usage. Conflicts between bicyclists and heavy trucks, especially on roads without shoulders, would likely increase with increased heavy truck traffic.

Potential Financial Impacts

The potential financial impacts of the oil and gas development on the County transportation system are unknown without further detailed analysis, but have potential to be significant. The Douglas County study estimated the range of costs to their County roads from $13.8 million and $135.9 million between 2015 and 2030, depending on different oil and gas development scenarios. To put

this in perspective, the current Boulder County Road and Bridge Fund revenue that can be used for road maintenance and resurfacing is approximately $11-12 million annually.

Road costs associated with oil and gas drilling occur largely in the early well development period when truck traffic is greatest. The development of oil and gas has the potential to require substantial front-end, capital investments in order to maintain, expand and improve affected road infrastructure in advance of, or at least concurrent with, drilling activity.

The Transportation Element of the Comprehensive Plan provides guidance on how to fund County transportation needs, and may be useful in evaluating approaches to addressing the costs of oil and gas development in the county. This direction includes:

> TR7.01: "Allow for special assessments to fund transportation improvements that specially benefit from such improvements,… and that funding mechanisms may include special assessments or other appropriate revenue-generating programs."
>
> TR7.03: "Explore appropriate user fee programs that take into account the full costs of travel, including immediate and long-term impacts to facilities and the environment, to help fund transportation enhancements."
>
> TR7.04: "Require property owners or developers to provide appropriate off-site transportation improvements that are necessitated by or reasonably related to the impacts of new development."

Options that may be available to consider offsetting the projected transportation funding shortfall include:

- Public improvement district(s);
- Impact/permit fees;
- Direct contributions from oil and gas producers; and
- Property tax reallocation.

Conclusion

Significant additional analysis is necessary to understand the potential roadway, safety, and financial impacts (and appropriate mitigation strategies) of increased oil and gas development in Boulder County to the transportation system. The Land Use Code, County Transportation Standards, and other permit programs should be reviewed for sufficiency related to transportation-related impacts from oil and gas development,; implementing statutory authority to assess fees or require financial guarantees for road/bridge construction or damage; assuring acquisition of all required Transportation permits (for access, right-of-way use, oversize/overweight vehicles, etc.); and addressing other transportation related issues and concerns.

Boulder County

Public Health

Environmental Health Division

Boulder County Public Health (BCPH) has identified several areas of potential health impacts that may result from increased oil and gas development in the Wattenberg Field. Although oil and gas development in Boulder County is not new, a renewed interest in those resources may impact our community. Areas of potential health impacts include the following: Air pollution; water and soil contamination; and traffic.

Air Impacts

Overview

Oil and gas development and production, as well as the transportation associated with it, have the potential to release contaminants into the air, including known human carcinogens. The primary emission sources of these contaminants include the extracted natural gas and oil resources, wastewater, production wells, oil and condensate tank vents, and exhaust from diesel trucks.[1]

Potential Health Risks

Air pollution is a known hazard to the public's health, and evidence indicates that oil and gas drilling is a large source of many air contaminants. In fact, the industry is the largest industrial source of volatile organic compounds (VOCs) emissions, a group of chemicals that contribute to the formation of ground-level ozone.[2] In addition, oil and gas drilling results in the release of methane, a potent greenhouse gas that traps between 20-25 times more heat in the atmosphere than carbon dioxide, and it is a significant contributor to ozone formation. Recent studies show that hydraulic fracturing wells emit 40-60times more methane than conventional natural gas wells.[3] Thirdly, oil and gas operations emit air toxics, such as benzene, ethlybenzene, and n-hexane, which are pollutants known or suspected of causing cancer and other serious health effects.[4] Finally, particulate matter (PM) emitted from diesel trucks transporting fracking materials is a toxic air contaminant may cause cancer, premature death, and other health problems.[5]

Boulder County Public Health's primary health concern from increased oil and gas production is the potential increase in exposure to ground-level ozone. Exposure to ozone can trigger a variety of health problems, including chest pain, coughing, throat irritation, and increased mortality for high-risk populations (i.e. the elderly, children, and individuals with pre-existing conditions).[6] Currently, Boulder County is in non-attainment for ozone, which is our most significant air quality problem.

We've also learned that the areas of the Pinedale Anticline in Wyoming and the Uintah Basin in Utah have had anomalously high ozone readings where previously it had been minimal. Both are areas of relatively new and significant oil and gas development.

[1] Battlement Mesa HIA, http://www.garfield-county.com/public-health/battlement-mesa-health-impact-assessment-draft2.aspx
[2] http://www.epa.gov/airquality/oilandgas/basic.html
[3] http://www.scientificamerican.com/article.cfm?id=fracking-would-emit-methane
[4] http://www.epa.gov/airquality/oilandgas/basic.html
[5] http://www.arb.ca.gov/research/diesel/diesel-health.htm
[6] 2008 Ozone Action Plan, Environmental Health web site

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In Garfield County, air toxics (e.g. benzene) in ambient air are at levels higher than levels measured in a neighboring county with no gas development.[7] In addition there is evidence of ground-level ozone formation, which once surpassed the U.S. Environmental Protection Agency (EPA) Region 8 hour standard of 75parts per billion (ppb) in 2008.[8]

There is groundwater containing thermogenic methane in natural gas development and production areas[9]; and there are trends in health impacts consistent with potential exposures (via a county-wide health assessment).

In Weld County, a new study conducted by National Oceanic and Atmospheric Administration (NOAA) researchers found that a Weld County gas field is leaking methane at a higher rate than estimates suggested. Researchers must determine if the field is an anomaly or part of a bigger problem.[10]

BCPH staff generally feels that current Colorado Oil and Gas Conservation Commission (COGCC) regulations provide good safeguards that are relatively protective of air-related issues with oil and gas development; however, with the increase in oil and gas exploration, there is relatively new information emerging that indicates the level of safeguarding warrants more attention. Staff's primary concern with increasing oil and gas production is the potential increase in ground-level ozone formation, which is our most significant air quality problem to date, along with the impacts from air toxics.

Current Public Health Involvement

Under a contract with the Colorado Department of Public Health and Environment (CDPHE), BCPH staff inspects permitted storage tank batteries that emit less than 10 tons of a single hazardous air pollutant (HAP) per year, or less than 25 tons of a combination of HAPs per year. Inspections occur once every 4-5 years for each facility. Though emissions from individual area sources are often relatively small, collectively, their emissions can be of concern, particularly where large numbers of sources are located in heavily populated areas.[11]

Observations

Currently, an emissions permit from CDPHE is required for each well pad production tank within the county, per COGCC rules. The COGCC rules require permitting for production tanks within ¼ mile of an occupied structure with the capacity for 2 tons per year of VOC emissions.

The implementation of cost-effective control strategies seem to be readily available and can substantially reduce emissions. Some examples include:

- Use of "green completions" to capture methane and VOC compounds during well completions.
- Phasing in of electric motors as an alternative to internal-combustion engines to drive compressors.
- The control of VOC emissions from condensate tanks with vapor recovery units.

Water and Soil Impacts

Overview

The impacts to water and soil quality, as well as domestic water supplies, are major concerns for Boulder County Public Health. Stormwater run-off, well installation errors, well development accidents (e.g. fires, blowouts, and kick-

[7] Garfield County Public Health Department - GCPH, Colorado Department of Public Health and Environment (CDPHE). Garfield County Ambient Air Quality Monitoring Study. In: Health P, ed.; 2007:63.
[8] Colorado Department of Public Health and Environment (CDPHE) - Air Pollution Control Division. Colorado Air Quality Data Report. In: Denver, CO: CDPHE; 2008:89.
[9] Thyne G. Summary of PI and PII Hydrogeologic Characterization Studies - Mamm Creek Area, Garfield County, Colorado. In: Science Based Solutions; 2008. Also: URS. Phase I Hydrogeologic Characterization of the Mamm Creek Field Area in Garfield County. In. Denver, CO; 2006:149. Also: S.S. Papadopulos & Associates I. Phase II Hydrogeologic Characterization of the Mamm Creek Field Area, Garfield County, Colorado. In. Boulder, CO; 2008:58.
[10] http://www.csmonitor.com/USA/2012/0213/Fracking-study-sends-alert-about-leakage-of-potent-greenhouse-gas (and upcoming issue of *Journal of Geophysical Research*)
[11] http://www.cdphe.state.co.us/ap/mact.html

backs), infiltration from produced water stores in open pits, and drill cuttings (i.e. the solid products removed from the well while drilling) are all potential sources of groundwater, soil, and surface water contamination.[12] Fracturing fluid surface spills, natural gas condensate, and leaks and spills associated with transportation are additional sources of potential soil and water contamination.[13] In addition, an EPA preliminary investigation in the Wyoming's Wind River Range detected the presence of methane and dissolved hydrocarbons in several domestic wells located near hydraulic fracturing wells.[14] Sampling in deep domestic wells and two deep monitoring wells showed elevated contaminate levels as well. (That study is in the process of being peer reviewed, and it is understood that the geologic setting is much different in Wyoming than it is in Boulder County.)

Potential Health Risks

Baseline water quality sampling of groundwater is critical information for determining impacts. Staff is concerned that this doesn't occur with enough frequency to be helpful, and it may be exempted in the Greater Wattenberg Area.

Surface water protections for some of Boulder County's main drinking water supplies may have inadequate buffers. There is concern that buffer zones in 317(B) of the COGCC regulations may only apply to surface water intakes and not conveyances like the Boulder Feeder Canal and some irrigation structures.

Current Public Health Involvement

The current water quality role is very limited, although BCPH has a part-time intern helping with research and defining that prospective role in more detail.

Observations

- Groundwater monitoring efforts similar to those required under 318(A) of the COGCC regulations for Broomfield County may not apply to Boulder County, and they appear not to include more sites within a section than just the infill wells and boundary wells.
- Surface water buffers applied under 317(B) of the COGCC regulations may not apply to the Boulder Feeder Canal and other pertinent surface water conveyances for drinking water supplies.
- Of interest is the potential for local public health involvement in regulatory oversight via Memorandum of Understanding (MOU). Examples/precedent may exist in Garfield and Gunnison Counties.

Traffic

Overview

Natural gas development requires the use of many heavy trucks and will increase vehicle traffic on many Boulder County roads. Increases in vehicle traffic are associated with increased risk of motor vehicle injury and death.[15] Injuries and deaths may occur via vehicle-vehicle, vehicle-pedestrian, and vehicle-bicycle accidents.

Public Health Risks

BCPH is currently in the midst of developing a strategic plan with the goal of improving healthy eating and active living in Boulder County. One strategy being considered is to increase alternative transportation use with the goal of increasing physical activity. This may increase bicycle and pedestrian traffic on county roads. Increased truck traffic from oil and gas development may expose the public participating in these activities to increased motor vehicle injuries.

[12] Battlement Mesa HIA
[13] http://energy.utexas.edu/images/ei_shale_gas_reg_summary1202.pdf
[14] http://www.epa.gov/region8/superfund/wy/pavillion/EPA_ReportOnPavillion_Dec-8-2011.pdf
[15] http://www.paho.org/english/dd/ais/be_v25n1-acctransito.htm

REFERENCES

1. Garfield County Public Health Department - GCPH, Colorado Department of Public Health and Environment (CDPHE). Garfield County Ambient Air Quality Monitoring Study. In: Health P, ed.; 2007:63.
2. Colorado Department of Public Health and Environment (CDPHE) - Air Pollution Control Division. Colorado Air Quality Data Report. In: Denver, CO: CDPHE; 2008:89.
3. Thyne G. Summary of PI and PII Hydrogeologic Characterization Studies - Mamm Creek Area, Garfield County, Colorado. In: Science Based Solutions; 2008.
4. URS. Phase I Hydrogeologic Characterization of the Mamm Creek Field Area in Garfield County. In: Denver, CO; 2006:149.
5. S.S. Papadopulos & Associates I. Phase II Hydrogeologic Characterization of the Mamm Creek Field Area, Garfield County, Colorado. In: Boulder, CO; 2008:58.
6. Coons T, Walker R. Community Health Risk Assessment: An Assessment of Risk Related to the Natural Gas Industry in Garfield County. In: Saccommano Institute; 2008.
7. http://www.csmonitor.com/USA/2012/0213/Fracking-study-sends-alert-about-leakage-of-potent-greenhouse-gas (and upcoming issue of *Journal of Geophysical Research*).

ATTACHMENT A

ATTACHMENT A

RESOLUTION 2012-16

A RESOLUTION IMPOSING A TEMPORARY MORATORIUM ON BOULDER COUNTY'S PROCESSING OF APPLICATIONS FOR PROPOSED OIL AND GAS DEVELOPMENT IN ALL OF THE UNINCORPORATED COUNTY PENDING CONSIDERATION OF AMENDMENTS TO COUNTY REGULATIONS

A. **WHEREAS**, oil and gas exploration and production is a rapidly developing and evolving industry nationwide, across Colorado, and within Boulder County, with both substantial advances in technology and significant modifications to the laws governing the industry occurring during the past few years; and

B. **WHEREAS**, the western edge of one of the most actively drilled oil and gas producing formations along the Front Range underlies the eastern portion of Boulder County; and

C. **WHEREAS**, oil and gas operations have the potential for significant and immediate impacts on the health, safety, and welfare of the citizens of Boulder County ("the County") through increased noise, odor, dust, traffic, noxious weeds, and other disturbance, as well as the potential to significantly impact the County's air, water, soil, biological quality, geology, topography, plant ecosystems, wildlife habitat, wetlands, floodplains, water, stormwater and wastewater infrastructure, drainage and erosion control, parks and open space lands, transportation infrastructure, emergency response plans, and other aesthetic values and community resources; and

D. **WHEREAS**, in its capacity as surface owner of lands managed as open space where oil and gas drilling development has occurred and continues to occur, the County Parks and Open Space Department has recently witnessed new areas not previously developed being developed by oil and gas companies, an increase in notices of intent to drill from oil and gas companies, technological changes in drilling operations that in some cases result in more land disturbance per well pad, differences in hours of operation, and associated increased impacts on plant ecosystems, wildlife habitat and migration corridors, among other environmental and natural resources; and

E. **WHEREAS**, in its role administering County floodplain regulations, the County Transportation Department is concerned about increased interest in developing oil and gas in mapped floodplain areas, posing potentially serious risks to public health and safety; and

F. **WHEREAS**, in its role managing the County transportation system under the duly adopted Boulder County Multimodal Transportation Standards, through issuance of access permits to ensure safe ingress and egress to the system, issuance of oversize/overweight vehicle permits, and other methods for managing the public rights-of-way, the County Transportation Department is concerned about a potential increase in impacts due to oil and gas development, including increased wear and tear on roads from heavy truck traffic resulting in greater need for road and bridge improvements and maintenance; and

G. **WHEREAS**, the Colorado Oil and Gas Conservation Act, C.R.S. §§ 37-60-101 et seq., declares that it is in the public interest to foster the responsible, balanced development, production, and utilization of the natural resources of oil and gas in the state of Colorado in a

manner consistent with protection of public health, safety, and welfare, including protection of the environment and wildlife resources; and

H. **WHEREAS**, the Colorado Oil and Gas Conservation Act grants the Colorado Oil and Gas Conservation Commission ("COGCC") authority to adopt statewide rules and regulations concerning the development and production of oil and gas resources and the COGCC has done so; and

I. **WHEREAS**, the Colorado Oil and Gas Conservation Act provides that it is not intended to establish, alter, impair, or negate the authority of local and county governments to regulate land use related to oil and gas operations; and

J. **WHEREAS**, Colorado courts have recognized on several occasions that the Colorado Oil and Gas Conservation Act does not expressly or impliedly preempt all aspects of a county's authority to enact land use regulations applicable to oil and gas development and operational activities within the county, and thus the County's regulations pertaining to matters mentioned in the Colorado Oil and Gas Conservation Act are legal and valid as long as their express or implied conditions do not irreconcilably conflict with state law on the basis of operational conflicts that materially impede or destroy the state's interest; and

K. **WHEREAS**, the County Planning Act, C.R.S. § 30-28-106, gives the County the authority to process and adopt a master plan for the physical development of the unincorporated territory of the County, and the duly adopted Boulder County Comprehensive Plan recognizes the potential impacts of oil and gas exploration, development, and production and all accessory activities and encourages such activities to be located and performed to minimize disturbance to land and water resource systems, with affected areas reclaimed and restored once the activities are completed and all other impacts minimized via all appropriate regulatory measures to the extent authorized by law; and

L. **WHEREAS**, the current Boulder County Comprehensive Plan sections addressing oil and gas activities have not been updated in many years and merit a review to determine whether amendments are necessary to reflect today's industry, its practices, and impacts on land use, transportation, public health, parks and open space areas, and other environmental and natural resources across the County; and

M. **WHEREAS**, the Local Government Land Use Control Enabling Act, C.R.S. §§ 29-20-101 et seq., provides the County with the broad authority to plan for and regulate the use of land in order to provide for orderly development and a balancing of basic human needs of a changing population with legitimate environmental concerns, all in a manner consistent with constitutional rights; and

N. **WHEREAS**, the Local Government Land Use Control Enabling Act authorizes each local government within its respective jurisdiction to plan for and regulate the use of land by, among other actions, regulating development and activities in hazardous areas; protecting lands from activities which would cause immediate or foreseeable material danger to significant wildlife habitat and would endanger a wildlife species; preserving areas of historical and archaeological importance; regulating the use of land on the basis of the impact thereof on the community or surrounding areas; and otherwise planning for and regulating the use of land so as to provide planned and orderly use of land and protection of the environment in a manner consistent with constitutional rights; and

O. **WHEREAS**, the Board believes it has not only the right but the responsibility to plan for and regulate the use of land for the purposes laid out in the Local Government Land Use Control Enabling Act as well as those purposes specified in other applicable state and federal statutes and common law grants of authority, to best protect and promote the health, safety, and general welfare of the present and future inhabitants of Boulder County and to guide future growth, development, and distribution of land uses within Boulder County; and

P. **WHEREAS**, to that end, and pursuant to the Local Government Land Use Control Enabling Act, the County Planning Act, and various other state and federal statutory and common law grants of land use authority, the Board has from time to time adopted planning, zoning, and other regulations governing land use in the unincorporated territory of the County; and

Q. **WHEREAS,** the current regulations concerning oil and gas development in §§ 4-900 to 4-913 of the Boulder County Land Use Code were last updated years ago, prior to various changes in oil and gas production practices, prior to changes to state statutes and regulations, and prior to several relevant Colorado court decisions concerning local regulation of oil and gas activities, and therefore are ripe for review for potential amendments in light of the current significant concerns over the impacts of continuing oil and gas development activities within the County; and

R. **WHEREAS,** Boulder County staff have begun to analyze whether the existing zoning and other land use regulations pertaining to oil and gas activities are sufficient to protect the public health, safety, and welfare; and

S. **WHEREAS**, the Board estimates that the time needed to perform the prerequisite studies and planning and analyze regulatory amendments that may be necessary to mitigate the impacts of oil and gas exploration, development, and production activities, may take approximately six months to complete; and

T. **WHEREAS**, the Board reasonably anticipates that applications for additional oil and gas development may be filed in the coming months while the study is undertaken and before the County has had the opportunity to consider the outcome of the study and adopt appropriate regulatory changes; and

U. **WHEREAS**, the Board finds that it is inconsistent with its responsibilities to protect the local environment and population of the County to continue to process and review applications for oil and gas development in piecemeal fashion without thoroughly examining the current County regulations to reflect changes in state law and oil and gas production practices; and

V. **WHEREAS**, the Board is aware of the potential for further changes in state law during the 2012 legislative session, and that legislative proposals in the oil and gas regulatory area, if enacted this session, may further clarify the bounds of County regulatory jurisdiction; and

W. **WHEREAS**, if applications requesting approval to conduct oil and gas exploration, development, and production activities within the unincorporated County are submitted prior to the County having adequate time to conduct the appropriate studies, make necessary revisions to its Comprehensive Plan, be aware of any forthcoming 2012 legislative changes, and consider and process any indicated regulatory amendments, the Board believes irreparable harm may be done to the public health, safety and welfare; and

X. **WHEREAS**, the U.S. Supreme Court and the Colorado Supreme Court recognize that in the field of land use regulation, temporary moratoria of reasonable duration are often employed to preserve the status quo in a particular area while developing a long-term plan for development; indeed, in countering the incentive of property owners to develop their property quickly to avoid the consequences of an impending land use plan for the jurisdiction, moratoria are a crucial tool for local governments and, therefore, pursuant to express and implied authority granted by the Colorado Revised Statutes and multiple Colorado and federal appellate decisions upholding temporary moratoria on land use applications while amendments are considered, the Board has the legal authority to adopt a temporary moratorium in this situation; and

Y. **WHEREAS**, in light of the foregoing recitals and findings, circumstances warrant the immediate enactment of this Resolution establishing a temporary moratorium to protect the public health, safety, and welfare, and to avoid development which, during the County's planning and land use regulation amendment process, may contravene the results of this study and process put the public at risk; and

Z. **WHEREAS**, the Board further determines that it will schedule and hold a public hearing on this temporary moratorium and related matters as soon as practicable after this Resolution's adoption, for the purposes of receiving public comment on the moratorium and considering whether to terminate, extend, or otherwise amend the moratorium.

NOW THEREFORE, BE IT RESOLVED by the Board of County Commissioners of Boulder County:

1. The submittal of notices of intent to drill and land use applications requesting approval to conduct oil and gas development activities within the unincorporated territory of the County limits is imminent. The County may not have updated regulations in place that adequately mitigate impacts of this activity or that incorporate the County's full ability to regulate in this area under evolving state statutes, regulations, and case law to protect and preserve the public health, safety and welfare. Therefore, a temporary moratorium on accepting applications is reasonable and necessary.
2. This temporary moratorium shall take effect immediately. The County Land Use Department is directed not to accept, process, or approve any applications under Article 4-900 of the Land Use Code after the effective date of this Resolution.
3. This temporary moratorium shall remain in place until August 2, 2012, unless earlier terminated or extended.
4. County staff is hereby directed to continue analyzing whether the existing County Comprehensive Plan and existing County regulations pertaining to oil and gas activities are sufficient to protect the public health, safety, and welfare, or whether an amended Comprehensive Plan and amended regulations will be necessary to adequately mitigate impacts.
5. The Board intends to hold a public hearing to take testimony on the merits of the temporary moratorium imposed by this Resolution and to determine whether the moratorium should be terminated, extended, or otherwise amended on Thursday, March 1, 2012, at 4:00 p.m., in the Board's public hearing room on the third floor of the Boulder County Courthouse, 1325 Pearl Street, Boulder, Colorado. Notice of this hearing shall be published in a newspaper of general circulation in Boulder County at

least 14 days prior to the hearing date. Should this hearing be rescheduled for any reason, the Board will publish notice of the new time, date, and location of the hearing in a newspaper of general circulation in Boulder County at least 14 days prior to the hearing date. If necessary, at the Board's discretion, this hearing may be continued one or more times.

6. The Board reaffirms that any oil and gas operations conducted without all necessary County approvals may be in violation of the Boulder County Land Use Code or other applicable County regulations.

7. This Resolution does not apply to the following:

   a. Any complete application for oil or gas exploration, development, or production currently being processed by the Land Use Department, which may continue to be processed and reviewed as provided in the Land Use Code.

   b. Any application for oil or gas exploration, development, or production already approved by the Land Use Department prior to the effective date of this Resolution where such approval is validly maintained thereafter.

   c. Development which possesses either a statutory or common law vested right.

   d. Minor modifications to existing permits.

A motion to approve the foregoing Resolution imposing a temporary moratorium was made at the duly noticed public business meeting held on February 2, 2012 by Commissioner Toor, seconded by Commissioner Gardner, and passed by a 3-0 vote of the Board.

ADOPTED on this 2 day of February, 2012, effective immediately.

BOARD OF COUNTY COMMISSIONERS
OF BOULDER COUNTY:

Cindy Domenico

Cindy Domenico, Chair

Will Toor, Vice Chair

Deb Gardner, Commissioner

SEAL OF BOULDER COUNTY, COLORADO

ATTEST:

Cecilia G. Lacey

Clerk to the Board

ATTACHMENT B

SULLIVAN GREEN SEAVY LLC

Barbara J.B. Green
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lawgreen@earthlink.net

MEMORANDUM

TO: Andy Karsian, Legislative Coordinator
Colorado Counties, Inc.

FROM: Barbara J.B. Green

DATE: November 16, 2011

RE: COUNTY AUTHORITY AND OPPORTUNITIES TO ADDRESS IMPACTS OF OIL AND GAS DEVELOPMENT

Following is a summary of the scope of county regulatory authority over oil and gas development and an assessment of the validity of different types of regulations. The different types of county regulations assessed in this memorandum are color-coded: **green** indicates types of local land use regulations that are not per se preempted by state law; **orange** indicates types of local land use regulations that may or may not be enforceable; and **red** indicates types of local land use regulations that would be preempted by state law and therefore, not enforceable. The oil and gas industry has a history of challenging local regulations. Generally, local land use regulations are presumed to be valid, and the party challenging the regulations bears the burden of proof to show that they are not valid.

CAN COUNTIES REGULATE OIL AND GAS DEVELOPMENT?

Yes, counties can regulate oil and gas development through land use permits, assuming that the regulations are within the scope of their ordinary land use authority delegated by the General

Assembly, and the operational effect of those regulations does not result in an *operational conflict* with the application of state requirements. *Bd. of County Comm'rs of La Plata County* v. *Bowen/ Edwards Associates, Inc.,* 830 P.2d 1045, 1055-58. (Colo. 1992). Local governments have a legally protected interest in enacting and enforcing their land use regulations governing the surface effects of oil and gas operations. *Bd. of County Comm'rs of La Plata County* v. *Colorado Oil and Gas Conservation Commission,* 81 P.3d 1119, 1124 (Colo.App. 2003).

WHAT IS THE SOURCE OF COUNTY AUTHORITY TO REGULATE OIL AND GAS DEVELOPMENT?

The authority to regulate oil and gas development is derived from county land use authority delegated by the Colorado General Assembly. Colorado law delegates broad authority to counties to regulate the use of land within their jurisdiction. The Local Government Land Use Control Enabling Act, C.R.S. §§ 29-20-101 to 107, gives local governments the authority to regulate development and activities in hazardous areas, to protect land from activities that would cause immediate or foreseeable material damage to wildlife habitat, to preserve areas of historical and archaeological importance, to regulate the location of activities and development which may result in significant changes in population density, to provide for the phased development of services and facilities, to regulate land use on the basis of its impact on the community or surrounding areas, and to otherwise plan for and regulate land use so as to provide for the orderly use of land and the protection of the environment consistent with constitutional rights. C.R.S. § 29-20-104(1). *See also Bowen/Edwards*, 830 P.2d at 1056.

Another source of county regulatory authority over land use is the County Planning Code, C.R.S. §§ 30-28-101 to 137, which grants counties the power to "provide for the physical development of the unincorporated territory within the county and for the zoning of all or any part of such unincorporated territory." C.R.S. § 30-28-102. Under this statute, county authority includes the power to address the distribution of land development and utilization. C.R.S. § 30-28-115(1). A county also has the authority to adopt a zoning plan that regulates, among other things, "the uses of land for trade, industry, recreation, or other purposes." C.R.S. § 30-28-111(1).

Because county authority derives from its land use authority, all county oil and gas regulations have to be based on protecting legitimate land use and environmental concerns articulated in the land use statutes.

WHEN DOES A COUNTY REGULATION IMPREMISSIBLY CONFLICT WITH STATE LAW UNDER THE "OPERATIONAL CONFLICT" TEST?

The Colorado Supreme Court has held that local regulation of oil and gas development is valid unless "the operational effect of the county regulation conflicts with the state statute or regulation." *Bowen/Edwards,* 830 P.2d 1045, 1059 (Colo. 1992). "State preemption by reason of operational conflict can arise where the effectuation of a local interest would materially impede or destroy the state interest [citing *National Advertising Company v. Department of Highways,* 751 P.2d 632, 636 (Colo. 1988)]." *Id.* Whether there is an operational conflict is determined on a case-by-case basis, and requires a fully-developed evidentiary record. *Id*. *See also Bd. of County Comm'rs of Gunnison County v. BDS International*, 159 P.3d 773 (Colo.App. 2006). County regulations are presumed to be valid, and the person challenging them on the basis of operational conflict has the burden of proof.

CAN COUNTIES BAN ALL OIL AND GAS OPERATIONS?

Probably not. **A ban on all oil and gas development within the county would be problematic because the state's interest in efficient development and production of oil and gas preempts a local government from completely excluding oil and gas operations**. *Voss v. Lundvall Bros.,* 830 P.2d 1061, 1069 (Colo. 1992). *See also Colorado Mining Association* v. *Bd. of County Comm'rs of Summit*, 199 P.3d 718 (Colo. 2009). Note, however, that the Supreme Court does not say that bans are per se preempted. The Supreme Court found that "local land use ordinances banning an activity that a statute authorizes an agency to permit are subject to heightened scrutiny in preemption analysis." *Colorado Mining Association* at 725.

CAN COUNTIES BAN OIL AND GAS OPERATIONS FROM CERTAIN ZONING CLASSIFICATIONS OR AREAS OF THE COUNTY?

Maybe. **There are no cases that answer this question.** Counties have broad land use authority, and courts presume that zoning ordinances are valid. *Colorado Mining Association* at 730. The court has left the door open for the possibility that activities could be prohibited in some, but not all, zoning districts: The Supreme Court noted that county planning authority "probably does not include the right to ban uses from *all* zoning districts." *Id* at 731.

A problem would arise, however, if the zoning prevented an oil and gas operator from accessing his oil and gas reserves. This would be challenged as a regulatory taking and/or as a *per se* operational conflict. A safer approach than banning oil and gas operations in certain zoning classifications would be to allow oil and gas operations anywhere in the county under a special use permit, subject to regulatory standards and requirements.

CAN COUNTIES REQUIRE SPECIAL USE PERMITS THAT TAKE INTO ACCOUNT CONSISTENCY WITH THE COMPREHENSIVE PLAN, COMPATIBILITY WITH ADJACENT USES, IMPACT ON PUBLIC SERVICES, TRAFFIC, POLLUTION, LANDSCAPING, AND SIMILAR FACTORS WHEN REVIEWING AN OIL AND GAS OPERATION?

Yes. **Courts have upheld county special use permit requirements setting out standards for granting or denying special use permits that address consistency with the comprehensive plan, compatibility with adjacent uses, impact on county services, traffic, environmental impacts, and related standards for mining activities. Because state oil and gas regulations do not displace local authority over oil and gas impacts, special use permits applied to oil and gas also are not pre-empted, assuming that the county standards do not create an operational conflict with state oil and gas requirements.** *C & M Sand and Gravel v. Bd. of County Comm'rs of Boulder County*, 673 P.2d 1013 (Colo.App, 1983); *Town of Frederick* v. *North American Resources Company*, 60 P.3d 758, 766 (Colo.App. 2002).

Note that in *Town of Frederick v. North American Resources Co*, 60 P.3d 758, 765 (Colo.App. 2002), the court of appeals stated that the Town's setback, noise abatement, and visual impact provisions were in operational conflict with (i.e. "contrary to") state requirements. However, the court did NOT rule that all regulation of those subjects is preempted. The determination must be based on a case-by-case analysis.

CAN COUNTIES REGULATE OIL AND GAS ACTIVITIES OCCURRING ON STATE LAND BOARD LANDS?

Yes. **Counties have the authority to regulate oil and gas activities on state land board lands.** The Colorado Supreme Court has upheld county zoning authority over state lands. *See Colorado State Bd. of Land Comm'rs v. Colorado Mined Land Reclamation Bd.,* 809 P.2d 974, 982-85 (Colo. 1991) (under Local Government Land Use Control Enabling Act and County Planning Code, counties retained zoning authority over school lands leased by State Land Board

for mining operation where statutory schemes bearing on state and county authority did not clearly express legislative intent to override county authority). There is no reason that the analysis would be different for oil and gas operations. *See* also *Bowen/Edwards* at 1058.

CAN COUNTIES REGULATE THE SAME SUBJECT MATTER AS THE COLORADO OIL AND GAS CONSERVATION COMMISSION (COGCC)?

Yes, **regulations that address the same subject matter as state regulations are not automatically preempted.** Unless the local regulation would result in an operational conflict with the statutes and rules, county regulations and the state rules addressing the same subject matter may co-exist. *See Colorado Mining Association* at 725; *Gunnison County v. BDS,* 159 P.3d 773, 779 (Colo.App. 2006).

CAN COUNTIES REGULATE THE "TECHNICAL ASPECTS" OF OIL AND GAS OPERATIONS?

There is a widely held belief among state officials and the industry that local governments cannot regulate the "technical aspects" of oil and gas drilling, pumping, plugging, waste, safety, and environmental restoration of wells. This belief is based on some dicta in *Bowen/Edwards*.[1] The industry's concept of what is "technical" is extremely expansive. However, *there is no case* that defines "technical aspects" or that states that all local regulation of the "technical aspects" of oil and gas drilling is preempted. **Whether local regulations addressing technical aspects of oil and gas regulations are valid should be based on the "operational conflicts" test, determined after an evidentiary hearing.**

Note that if a county tries to regulate the drill casing, fluids injected, process, etc., arguably it may be regulating in an arena where it has no authority. Regulation of these technical aspects of oil and gas are not really land use regulations.

[1] The Court stated that "there may be instances where the county's regulatory scheme conflicts in operation with the state regulatory scheme. For example, the operational effect of the county regulations might be to impose technical conditions on the drilling or pumping of wells under circumstances where no such conditions are imposed under the state statutory or regulatory scheme, or to impose safety regulations or land restoration requirements contrary to state law. To the extent that such operational conflicts might exist, the county regulations must yield to the state interest. Any determination that there exists an operational conflict between the county regulations and the state. . .scheme, however, must be resolved on an ad-hoc basis under a fully developed evidentiary record." *Bowen/Edwards* at 1060.

CAN COUNTIES REGULATE THE WATER QUALITY IMPACTS OF OIL AND GAS OPERATIONS?

1. Surface Water Supplies. **Counties have authority to protect water quality of surface water supplies.** The industry takes the position that the Colorado Water Quality Control Act, § 25-8-101, et seq. ["CWQCA"] preempts county regulation of water quality because the Water Quality Control Commission ["WQCC"] is "solely responsible for adoption of water quality standards and classifications" for waters of the State. CWQCA, §202(7)(a).

However, courts disagree with this position. "Protection of water supplies is a matter of both state and local concern and may be regulated by local governments. *Town of Carbondale v. GSS Props., LLC,* 144 P.3d 53 (Colo.App. 2005) [reversed on other grounds, 169 P.3d 675].

A county regulation concerned with the water quality impacts of oil and gas development would not be completely preempted unless the county attempted to establish stream classifications and standards, or regulate the discharge of point sources.

Otherwise, the county regulation would not be preempted unless it created an "operational conflict." In the case of water quality regulation, the state's interest and the county's interest in water quality protection are in harmony.

Following is an assessment of different types of surface water quality regulations.

- County adoption of numeric water quality standards or use classifications different from those of the WQCC would be preempted.

- **County regulation to prevent significant degradation to surface water quality that is complementary to, and not in conflict with, state regulation for water quality control is unlikely, on its face, to "materially impede or destroy" state interests in balancing the protection of public health and safety with orderly development of oil and gas.**

- **Regulation requiring an entity to provide information that it must also provide to other regulators, to disclose the results of monitoring it is doing for other**

regulators, or to explain the extent of mitigation it is proposing to perform as a result of other permitting should not create an operational conflict.

2. Drinking Water Supplies. **County regulation of impacts of oil and gas regulations to drinking water supplies should be valid unless they are in operational conflict with state requirements.** County-specific concerns include:

- Water bodies classified for water supply use by the Water Quality Control Commission.
- Areas with site-specific ground water quality protection regulations pursuant to 5 CCR 1002-42.
- Surface waters designated as a public water supply by the Colorado Oil and Gas Conservation Commission.

The industry argues that regulation of surface water drinking water supply is preempted by CWQCA, 5 CCR 1002-31 and -38; ground water drinking water supply protection is preempted by CWQCA, 5 CCR 1002-42; and that protection of designated public water supply segments is preempted by COGCC Rules.

There are many strong arguments, however, that support a role for local regulations to protect drinking water. For example:

- Water Quality Control Division has a Source Water Assessment and Protection (SWAP) program, approved by EPA, that specifically envisions a shared regulatory approach for source water protection. *See*, http://www.cdphe.state.co.us/wq/sw/pdfs/-toc-sum.pdf. The intent of this program is for local governments to create source water protection plans.
- The Water Quality Control Division has entered into at least one Memorandum of Agreement with a land use agency (the US Forest Service) to protect public sources of water supply. *See*, http://www.cdphe.state.co.us/wq/sw/pdfs/-CDPHE_USFS_pdfs/USFS_CDPHE_MOU_Final_1009.pdf. Again, this is evidence that the Division intends to share responsibility for protecting drinking

water sources. The county could consider entering into a similar agreement with the Land Board.

- Regardless of how specific the state agency regulations are, given that the courts have found, repeatedly, that local and state government share an interest in and authority for protecting water quality, it is unlikely that a court would find preemption of any **county ordinance that seeks information about where an activity that may affect water resources or public health is occurring, the nature of the water resources that may be affected, and the protections (i.e., mitigation) that the developer is proposing to protect the resource.**

3. Water Body Setbacks. **Because the 2008 COGCC regulations include a 300 foot setback requirement only for designated public water supply segments, the county may be preempted from imposing additional requirements, either for water bodies that are not public water supply segments, or for more than 300 feet.**

4. Point Source Discharges of pollutants. Because the Water Quality Control Division is "solely responsible for the issuance and enforcement of permits authorizing point source discharges into surface waters of the state affected by such discharges," CWQCA, § 202(7)(b)(I), **a county ordinance requiring a *point source discharge permit* for an oil and gas development activity would be preempted.**

5. Stormwater Discharge regulations. Many stormwater discharges require permits under the WQCA, and the COGCC has its own stormwater rule. *See* COGCC, Rule 1002.f.

However, stormwater protection remains a matter of both local and state concern. **Additional county provisions to protect county resources, public health and safety through this existing program are probably valid, so long as such requirements do not create an operational conflict with state regulations.**

6. Non point source discharges. The industry argues that the CWQCA requires the WQCC and Water Quality Control Division to recognize the water quality responsibilities of the COGCC to apply water quality standards through its own program. This requirement is found C.R.S. § 25-8-202(7)("SB 181").

However, SB 181 makes no mention of and does not apply to local government regulation. It involves communication and clarification of lines of authority among state agencies. In addition, non-point source pollution is not directly addressed by the CWQCA because non-point pollution is associated with land use activities, an area typically regulated by local governments. **County imposition of conditions or requirements such as erosion control and sediment control requirements to prevent or minimize non point source discharges are not per se preempted.** *See Gunnison County v. BDS,* 159 P.3d 773, 780 (Colo.App. 2006) (county drainage and erosion regulations promote the state's interest in protecting the land and topsoil without imposing conflicting requirements; evidentiary hearing required to determine whether there is operational conflict).

7. Dredged and fill material. The industry has argued that county regulations that address the disposal of dredged or fill material in water bodies is preempted by Clean Water Act Section 404 and regulations under the CWQCA found at 5 CCR 1002-85.

However, nothing in the state or local regulations preempts local authority. **County imposition of conditions on the discharge of dredged and fill materials may occur provided the conditions do not impose an operational conflict with the 404 Permit program.**

8. Injection of fracking fluids. Protection of underground drinking water supplies is preempted by the Safe Drinking Water Act and regulation of injection of fracking fluids beyond benzene, in particular, is preempted by federal Energy Policy Act of 2005. **Thus, Federal law would preempt the county regulating injection of contaminants into aquifers during fracking.**

CAN COUNTIES REGULATE IMPACTS OF OIL AND GAS DEVELOPMENT ON WILDLIFE HABITAT?

Yes. **County regulation of impacts to wildlife habitat of oil and gas operations should be valid so long as they do not create an operational conflict with State requirements.** Counties have express statutory authority to control the impacts of development on wildlife habitat. *See* Local Government Land Use Control Enabling Act, C.R.S. §§ 29-20-101 to 107 and Areas and Activities of State Interest ("1041"), C.R.S. 24-65.1-101 *et seq*.

The industry argues that the amended COGCC Rules that establish wildlife habitat protection standards preempt all local regulation of oil and gas wildlife impacts. However, before the rules were amended, the court upheld Gunnison County's authority to regulate impacts to wildlife habitat against a facial challenge. The court ruled that it is not clear that these regulations would operationally conflict with state regulations, and that an evidentiary hearing would be required to make that determination.

Further, the amendments to the Colorado Oil and Gas Conservation Act and the COGCC Rules included "savings provisions." The Act states that "[n]othing in this section shall establish, alter, impair, or regulate the authority of local and county governments to regulate land use related to oil and gas operations." C.R.S. § 34-60-128 (4). COGCC Rule 201 states: "Nothing in these rules shall establish, alter, impair, or negate the authority of local and county governments to regulate land use related to oil and gas operations, so long as such local regulation is not in operational conflict with the Act or regulations promulgated thereunder."

CAN COUNTIES REQUIRE FINANCIAL GUARANTEES?

According to the Court of Appeals, counties cannot require financial guarantees that duplicate or conflict with the state regulations' financial cap. See *BDS* at 779. **Counties may be able to require financial requirements to ensure compliance with county permit conditions.**

CAN COUNTIES REQUIRE THAT AN OIL AND GAS OPERATOR GIVE THE COUNTY ACCESS TO RECORDS?

According to the Court of Appeals, counties cannot require access to records because "the state statute and rule exclude the county by omission as an entity authorized to inspect the records" that the COGCC requires to be kept. *BDS* at 779. (Note that we disagree with the court's conclusions in that county's do not get their authority over anything from the COGCC. That authority comes from the General Assembly.

ATTACHMENT C

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January 10, 2012

George N. Monsson, Esq.
Sr. Asst. County Attorney, El Paso County
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RE: *El Paso County's proposed oil and gas regulations*

Dear Mr. Monsson:

I am writing to express the Colorado Oil and Gas Conservation Commission's ("COGCC") concerns regarding El Paso County's proposed oil and gas regulations. In its correspondence dated November 14, 2011, the COGCC noted some of its general concerns with the proposed regulations and also expressed its interest in working collaboratively with El Paso County to address local oil and gas issues through the COGCC's state program. This letter supplements the general comments and concerns raised in the COGCC's prior letter, and also reiterates the COGCC's desire for El Paso County to work with the COGCC to address local concerns through the COGCC's existing state program.

I. The COGCC's Statutory Charge

Under the Colorado Oil and Gas Conservation Act ("Act"), the General Assembly charged the COGCC with fostering the responsible development of Colorado's oil and gas resources in a manner consistent with the protection of public health, safety and welfare, including protection of the environment and wildlife. C.R.S. § 34-60-102. The COGCC has broad powers to further the state's interest in oil and gas development, including the power to pass regulations governing all aspects of development. The Commission Rules of Practice and Procedure, 2 CCR 404-1, are available at http://cogcc.state.co.us/. Any person can petition the Commission at any time to modify its regulations. *See* Commission Rule 529.a.

II. Local Land Use Regulations Affecting Oil and Gas Operations

A. State Preemption Under *County Comm'rs v. Bowen/Edwards Assocs., Inc.*, 830 P.2d 1045 (Colo. 1992) and *Voss v. Lundvall Bros., Inc.*, 830 P.2d 1061 (Colo. 1992).

In 1992, the Colorado Supreme Court issued two decisions on the same day addressing state preemption of local oil and gas regulations.

In *County Comm'rs v. Bowen/Edwards Assocs., Inc.*, 830 P.2d 1045 (Colo. 1992), the Colorado Supreme Court explained that "[t]he purpose of the preemption doctrine is to establish a priority between potentially conflicting laws enacted by various levels of government." *Id.* at 1055. The court further explained that local regulation may be expressly or impliedly preempted by state law, and that local regulations may also be preempted by virtue of being in operational conflict with state regulations. The court held that operational conflicts arise where a local rule, if enforced, "would materially impede or destroy a state interest." *Id.* at 1059. The court further held that the state's interest in responsible resource development supports the uniform regulation of all technical aspects of oil and gas operations and that conflicting county regulations create operational conflicts and must yield to the state's interest:

> There is no question that the efficient and equitable development and production of oil and gas resources within the state requires uniform regulation of the technical aspects of drilling, pumping, plugging, waste prevention, safety precautions, and environmental restoration. Oil and gas production is closely tied to well location, with the result that the need for uniform regulation extends also to the location and spacing of wells.
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> ...
>
> [T]here may be instances where the county's regulatory scheme conflicts in operation with the state statutory or regulatory scheme. For example, the operational effect of the county regulations might be to impose technical conditions on the drilling or pumping of wells under circumstances where no such conditions are imposed under the state statutory or regulatory scheme, or to impose safety regulations or land restoration requirements contrary to those required by state law or regulation. To the extent that such operational conflicts might exist, the county regulations must yield to the state interest.

Bowen/Edwards Assocs., at 1059-1060.

In the companion case of *Voss v. Lundvall Bros., Inc.*, 830 P.2d 1061 (Colo. 1992), the Colorado Supreme Court applied the analysis set forth in *Bowen/Edwards* and invalidated a city ordinance imposing a total ban on drilling of any oil or gas wells within the City of Greeley. In doing so, the court analyzed the COGCC's powers and obligations under the 1992 version of the Act and noted that "the regulation of oil and gas development and production has traditionally been a matter of state rather than local control." *Id.* at 1068.

In 2002, the Colorado Court of Appeals applied *Bowen/Edwards* and invalidated various local ordinances geared toward oil and gas development. In *Town of Frederick v. North Amer. Res. Co.*, 60 P.3d 758 (Colo. App. 2002), the Court of Appeals held, as a matter of law, that the Town of Frederick's attempt to pass more stringent setback, noise abatement and visual impact rules conflicted, on their face, with the COGCC's regulatory regime and were therefore preempted. The Court of Appeals rejected the town's argument that it was entitled to "go farther" than the rules and regulations passed by the COGCC because "the local imposition of technical conditions on well drilling where no such conditions are imposed under state regulations, as well as the imposition of safety regulations or land restoration requirements contrary to those required by state law, gives rise to operational conflicts and requires that the local regulations yield to the state interest." *Id.* at 766. Further, the Court of Appeals observed that operational conflict preemption can occur where state and local governments attempt to regulate the "same subject" irrespective of whether the activity concerns purely technical aspects of development:

> Certain provisions of the Town's ordinance do regulate technical aspects of drilling and related activities and thus could not be enforced. However, other provisions of the ordinance, such as those governing access roads and fire protection plans, do not purport to regulate technical aspects of oil and gas operations, even though they may give rise to operational conflicts with a state regulation addressing the same subject and thus be preempted for that reason.

Id. at 764.

In 2006, the Court of Appeals again applied *Bowen/Edwards* and invalidated various local ordinances geared toward oil and gas development. In *Bd. of County Comm'rs of Gunnison County v. BDS Int'l LLC*, 159 P.3d 773 (Colo. App. 2006), the Court of Appeals held, as a matter of law, that Gunnison County's regulations concerning financial assurance, fines and examination of records conflicted, on their face, with the COGCC's regulatory regime and were therefore preempted. The Court of Appeals also ordered that an evidentiary hearing was necessary to determine whether numerous other county rules, which touched on the same subjects as COGCC regulations, were preempted. *Id.* at 779. The evidentiary hearing contemplated by the Court of Appeals' opinion never occurred and the case was dismissed.

B. Post 1992 Statutory Amendments Expanding the COGCC's Jurisdiction

The Supreme Court has not addressed state preemption of local oil and gas regulations since the *Bowen/Edwards* and *Voss* decisions in 1992. In the intervening years, the General Assembly has dramatically increased the scope of COGCC's statutory mandate. After each statutory change, the COGCC promulgated extensive regulations dealing with oil and gas operations.

i. 1994 Amendments to the Act

In 1992, in *Bowen/Edwards,* the Supreme Court held that § 34-60-106(4) and (11) of the Act did not manifest a legislative intent to regulate all phases of oil and gas activity. Section 34-60-106(11), in its then-existing version, directed the COGCC to "promulgate rules and regulations to protect the health, safety, and welfare of the general public in the drilling, completion, and operation of oil and gas wells and production facilities."

In 1994, the General Assembly amended § 34-60-106(11) via Senate Bill 94-177. The final phrase of § 34-60-106(11) now reads "in the conduct of oil and gas operations," rather than "in the drilling, completion, and operation of oil and gas wells and production facilities." In addition, a broad definition of "oil and gas operations" was added to the Act:

> 'Oil and gas operations' means exploration for oil and gas, including the conduct of seismic operations and the drilling of test bores; the siting, drilling, deepening, recompletion, reworking, or abandonment of an oil and gas well, underground injection well, or gas storage well; production operations related to any such well including the installation of flow lines and gathering systems; the generation, transportation, storage, treatment, or disposal of exploration and production wastes; and any construction, site preparation, or reclamation activities associated with such operations.

C.R.S. § 34-60-103(6.5).

The 1994 amendments to the Act broadened the state's interest and authority beyond what they were when *Bowen/Edwards* and *Voss* were decided. Additionally, following the passage of Senate Bill 94-177, the COGCC promulgated extensive regulations dealing with oil and gas operations.[1]

[1] The 1994 amendments to the Act, as well as the 1996 and 2007 amendments discussed below, contain statements to the effect that the amendments should not be construed to affect the existing land use authority of local governmental entities. Nonetheless, the Court of Appeals has recognized that the "expanded regulations" resulting from these statutory amendments "may give rise to additional areas of operational conflict with analogous local regulations." *Town of Frederick,* at 763.

ii. 1996 Amendments to the Act

In 1996, the General Assembly amended C.R.S. § 34-60-106(15), which addresses the powers of the COGCC, by adding the following language:

> No local government may charge a tax or fee to conduct inspections or monitoring of oil and gas operations with regard to matters that are subject to rule, regulation, order, or permit condition administered by the commission. Nothing in this sub-section (15) shall affect the ability of a local government to charge a reasonable and nondiscriminatory fee for inspection and monitoring for road damage and compliance with local fire codes, land use permit conditions, and local building codes.

In doing so, the General Assembly drew a distinction between local government land use permits and Commission rules, orders, and permit conditions, allowing local governments to assess a fee for inspections and monitoring associated with the former, but not the latter.

iii. 2007 Amendments to the Act

In 2007, the General Assembly passed House Bills 07-1298 and 07-1341, codified at C.R.S. §§ 34-60-106 and 34-60-128 (collectively, the "2007 Amendments"). The 2007 Amendments required the COGCC to pass new regulations to establish a timely and efficient procedure for reviewing drilling permit and spacing order applications, to protect public health, safety, and welfare and to minimize adverse impacts to wildlife resources. A major reason the General Assembly required such a rulemaking was to address concerns created by the recent increase in the permitting and production of oil and gas in Colorado. The 2007 Amendments also require the COGCC to consult with the Colorado Department of Health and Environment and the Colorado Division of Parks and Wildlife during the permitting process in appropriate cases.

Following the passage of the 2007 Amendments, the COGCC comprehensively updated its regulations. In adopting the new rules and amendments, the Commission conducted a lengthy rulemaking proceeding. The rulemaking record included thousands of pages of public comment, written testimony, and exhibits and 12 days of public and party testimony. The Commission spent another 12 days deliberating on the rules before taking final action. The resulting regulations have been heralded as a national model, balancing both conservation and responsible development. As with prior COGCC regulations promulgated in response to new statutory directives, "these expanded regulations may give rise to additional areas of operational conflict with analogous local regulations." *Town of Frederick*, at 763.

III. El Paso County's Proposed Regulations

The COGCC has no objection to many of El Paso County's proposed regulations, such as those dealing with transportation, transportation impact studies, maintenance, site access, fire protection and emergency management. However, other aspects of El Paso County's proposed oil and gas regulations create operational conflicts with the COGCC's regulations. The most significant conflicts are summarized below.

A. The County's Proposed Setback Rules

The County's proposed setback rules conflict with state law. Proposed County Rule 5.2.37(E)(2), if adopted, would require a minimum setback of 500 feet for minor facilities, such as a single well pad built and operated for the purpose of exploratory drilling, and 500 feet or more, on a "case by case basis," for major facilities, such as a single well pad built for production purposes. In contrast, COGCC Rule 603.a. provides that "the wellhead shall be located a distance of one hundred fifty (150) feet or one and one-half (1-1/2) times the height of the derrick, whichever is greater, from any building unit, public road, major above ground utility line, or railroad." In high density areas, COGCC Rule 603.e. extends setbacks to 350 feet. Proposed County Rule 5.2.37(E)(2) gives rise to operational conflicts under *Town of Frederick.*

B. The County's Ban on Excavated Pits

The County's ban on excavated pits conflicts with state law. Proposed County Rule 5.2.37(E)(3) would categorically ban the use of excavated storage pits. However, the COGCC authorizes such pits in appropriate circumstances and subject to stringent requirements. An outright ban gives rise to an unavoidable operational conflict because "the local imposition of technical conditions on well drilling where no such conditions are imposed under state regulations ... gives rise to operational conflicts and requires that the local regulations yield to the state interest." *Town of Frederick,* 60 P.3d at 766. *See also Colo. Mining Assoc. v. Bd. of County Comm'rs of Summit County,* 1999 P.3d 718 (Colo. 2009) (state's regulation of mining chemicals prohibited county from banning their use).

C. The County's Proposed Water Quality Regulations

Proposed Rule 5.2.37(D)(12) imposes numerous technical requirements on operators in order to "ensure the preservation and protection of those groundwater resources that could be affected by oil and gas operations."

The technical matters El Paso County seeks to regulate through proposed Rule 5.2.37(D)(12) are comprehensively regulated by the COGCC. By statute, the COGCC is required to regulate "oil and gas operations so as to prevent and mitigate significant adverse environmental impacts on any air, water, soil, or biological resource resulting from oil and gas operations to the extent necessary to protect public health, safety, and welfare, including protection of the environment and wildlife resources." C.R.S. § 34-60-106(2)(d). In order to carry out its statutory responsibility, the COGCC has passed numerous regulations for the

protection of water. In addition to technical regulations meant to ensure wellbore integrity and proper waste management, COGCC Rule 317B provides extensive regulations concerning "Public Water System Protection" and COGCC Rule 324A requires that any operation shall not degrade air, water, soil or biological resources.

The COGCC also has an extensive ground and surface water monitoring program. Various COGCC regulations (e.g., COGCC Rules 317B, 318, and 608) and orders (e.g., Causes 112-138, 112-156, and 112-157) require operators to collect baseline water samples in certain areas and for certain types of wells; the COGCC can and does add special permit conditions to require such sampling on a well-by-well basis; and the COGCC collects such data itself in response to landowner requests and where oil and gas development moves into new areas. In addition, the COGCC has worked with the oil and gas industry on a new initiative, through which oil and gas operators who drill new wells will collect groundwater samples before and after drilling and hydraulic fracturing. The data will be provided to the COGCC, who will manage it in a central database.

Under the circumstances, El Paso County's attempt to regulate the technical aspects of water quality protection incident to oil and gas operations is preempted. *Oborne v. Board of County Comm'rs of Douglas County,* 764 P.2d 397, 401 (Colo.App. 1988) ("The Act grants to the Commission specific jurisdiction to prevent pollution of water supplies.... To the extent that plaintiffs' drilling operations may present problems in these areas, the General Assembly has determined that it is the Commission, and not the counties, that should address those problems."); *Bowen/Edwards Assocs.,* at 1060 n7 (reaffirming *Oborne*).

Although the "[p]rotection of public water supplies is a matter of both state and local concern and may be regulated by local governments," *Bd. of County Comm'rs of Gunnison County v. B.D.S. Int'l, LLC,* 159 P.3d 773, 780 (Colo. App. 2006), proposed Rule 5.2.37(D)(12) nonetheless gives rise to operational conflicts under *Oborne* and *Bowen/Edwards Assocs.*

D. The County's Proposed Wildlife Impact Rules

Proposed Rule 5.2.37(D)(2) requires applicants to consult with the Colorado Division of Parks and Wildlife ("CDPW") in order to "ensure" that impacts to wildlife and wildlife habitat are avoided or mitigated to the "maximum extent practicable." The proposed rules prohibit the issuance of a county permit absent "documented consultation" with CDPW.

The County's proposed rules conflict with or are redundant of state law. The 2007 Amendments required the COGCC to pass comprehensive regulations to minimize adverse impacts to wildlife resources. In response, the COGCC developed five pages of new regulations in collaboration with CDPW. These regulations impose special operating requirements in all areas (Rule 1204), apply additional operating requirements in sensitive wildlife habitat and restricted surface occupancy areas (Rule 1203), mandate consultation with the CDPW in sensitive wildlife habitat (Rule 1202), and require operators to avoid restricted surface occupancy areas where feasible (Rule 1205). As a result of these new regulations, the COGCC consults with the CDPW where appropriate, but not in every single circumstance. *See* COGCC Rule 306.c. (Consultation with CDPW). The County's attempt

to impose additional requirements for the protection of wildlife is unnecessary and the proposed rules conflict with COGCC requirements.

Proposed Rule 5.2.37(D)(2) gives rise to operational conflicts under *Town of Frederick* and *Bowen/Edwards Assocs.*

E. The County's Proposed Visual Impact, Noise Emission and Lighting Rules

Proposed Rules 5.2.37(D)(7), (10) and (11) address visual impact, noise emission and lighting. These rules have the potential to give rise to operational conflicts with the COGCC's 800-Series Rules, which regulate noise abatement, lighting, visual impact mitigation, and odors and dust.

In order to avoid or minimize some of these conflicts, El Paso County could avail itself of COGCC Rule 801. By doing so, El Paso County could pass its own aesthetic regulations so long as such regulations could be harmonized with the COGCC's regulatory regime. However, El Paso County could not adopt its own noise regulations without violating C.R.S. § 30-15-401(1)(m)(II)(B) ("Ordinances enacted to regulate noise on public and private property pursuant to subparagraph (I) of this paragraph (m) shall not apply to … oil and gas production subject to the provisions of article 60 of title 34, C.R.S.").

For example, assuming El Paso County availed itself of COGCC Rule 801, proposed Rule 5.2.37(D)(7) would nonetheless give rise to operational conflicts. Proposed Rule 5.2.37(D)(7) addresses visual impacts and authorizes County officials to require "specific visual mitigation measures," including a "minor relocation of the facility.". Proposed Rule 5.2.37(D)(7) gives rise to operational conflicts because "oil and gas production is closely tied to well location, with the result that the need for uniform regulation extends also to the location and spacing of wells." *Bowen/Edwards Assocs.*, at 1059. County officials have no authority to relocate a facility permitted by the COGCC.

F. The County's Proposed 14-Step Permitting Process

Some aspects of the County's proposed permitting process conflict with state law. Under the Act, the General Assembly charged the COGCC with the responsibility to implement timely and efficient procedures for the review of applications for permits to drill. C.R.S. § 34-60-106(11)(a)(I)(A). El Paso County's proposed regulations will materially impair the state's interest in the timely and efficient approval of drilling permits because the process requires compliance with the problematic provisions discussed above.

CONCLUSION

The County should reject the proposed rules discussed above as being in operational conflict with the COGCC's regulatory regime. The County should reject the proposed rules discussed above for the additional reason that exhaustive local regulations are unnecessary. El Paso County can accomplish its objectives through the Local Governmental Designee program, through which the COGCC can impose permit-specific conditions of approval. *See* COGCC 305.d. ("[T]he Director may attach technically feasible and economically practicable conditions of approval to the Form 2 or Form 2A as the Director deems necessary to implement the provisions of the Act or these rules pursuant to Commission staff analysis or to respond to legitimate concerns expressed during the comment period.").

Additionally, the COGCC encourages El Paso County to consider whether a Memorandum of Understanding would be beneficial. Gunnison County and the COGCC recently entered into a MOU. As specified in the MOU, the COGCC and Gunnison County intend to enter into an intergovernmental agreement pursuant to C.R.S. §34-60-106(15) whereby the COGCC will assign its facilities inspection function to Gunnison County. Gunnison County believes such an assignment will promote public confidence and increase transparency concerning oil and gas development in the county. The COGCC can also address local concerns through area specific orders under COGCC Rule 503 and geographic area plans under COGCC Rule 513.

Sincerely,

FOR THE ATTORNEY GENERAL

Jake Matter

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Assistant Attorney General
Natural Resources & Environment
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cc: David Neslin, Director COGCC

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January 24, 2012

Richard L. Miller, AICP
Director – Community & Development Services
County of Elbert
215 Comanche St.
VIA EMAIL: Richard.Miller@elbert.co.gov

RE: *Elbert County's proposed oil and gas regulations*

Dear Mr. Miller:

I am writing to express the Colorado Oil and Gas Conservation Commission's ("COGCC") concerns regarding Elbert County's proposed oil and gas regulations. The COGCC believes many aspects of the County's proposed regulations are in operational conflict with the COGCC's regulatory regime and are therefore preempted by the Colorado Oil and Gas Conservation Act. The COGCC encourages the County to reject conflicting and redundant regulations and requests the County work cooperatively with the COGCC to address local issues through the COGCC's existing state program.

I. The COGCC's Statutory Charge

Under the Colorado Oil and Gas Conservation Act ("Act"), the General Assembly charged the COGCC with fostering the responsible development of Colorado's oil and gas resources in a manner consistent with the protection of public health, safety and welfare, including protection of the environment and wildlife. C.R.S. § 34-60-102. The COGCC has broad powers to further the state's interest in oil and gas development, including the power to pass regulations governing all aspects of development. The Commission Rules of Practice and Procedure, 2 CCR 404-1, are available at http://cogcc.state.co.us/. Any person can petition the Commission at any time to modify its regulations. *See* Commission Rule 529.a.

II. Local Land Use Regulations Affecting Oil and Gas Operations

A. State Preemption Under *County Comm'rs v. Bowen/Edwards Assocs., Inc.*, 830 P.2d 1045 (Colo. 1992) and *Voss v. Lundvall Bros., Inc.*, 830 P.2d 1061 (Colo. 1992).

In 1992, the Colorado Supreme Court issued two decisions on the same day addressing state preemption of local oil and gas regulations.

In *County Comm'rs v. Bowen/Edwards Assocs., Inc.*, 830 P.2d 1045 (Colo. 1992), the Colorado Supreme Court explained that "[t]he purpose of the preemption doctrine is to establish a priority between potentially conflicting laws enacted by various levels of government." *Id.* at 1055. The court further explained that local regulation may be expressly or impliedly preempted by state law, and that local regulations may also be preempted by virtue of being in operational conflict with state regulations. The court held that operational conflicts arise where a local rule, if enforced, "would materially impede or destroy a state interest." *Id.* at 1059. The court further held that the state's interest in responsible resource development supports the uniform regulation of all technical aspects of oil and gas operations and that conflicting county regulations create operational conflicts and must yield to the state's interest:

> There is no question that the efficient and equitable development and production of oil and gas resources within the state requires uniform regulation of the technical aspects of drilling, pumping, plugging, waste prevention, safety precautions, and environmental restoration. Oil and gas production is closely tied to well location, with the result that the need for uniform regulation extends also to the location and spacing of wells....
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> [T]here may be instances where the county's regulatory scheme conflicts in operation with the state statutory or regulatory scheme. For example, the operational effect of the county regulations might be to impose technical conditions on the drilling or pumping of wells under circumstances where no such conditions are imposed under the state statutory or regulatory scheme, or to impose safety regulations or land restoration requirements contrary to those required by state law or regulation. To the extent that such operational conflicts might exist, the county regulations must yield to the state interest.

Bowen/Edwards Assocs., at 1059-1060.

In the companion case of *Voss v. Lundvall Bros., Inc.*, 830 P.2d 1061 (Colo. 1992), the Colorado Supreme Court applied the analysis set forth in *Bowen/Edwards* and invalidated a city ordinance imposing a total ban on drilling of any oil or gas wells within the City of Greeley. In doing so, the court analyzed the COGCC's powers and obligations under the 1992 version of the Oil and Gas Conservation Act and noted that "the regulation of oil and gas development and production has traditionally been a matter of state rather than local control." *Id.* at 1068.

In 2002, the Colorado Court of Appeals applied *Bowen/Edwards* and invalidated various local ordinances geared toward oil and gas development. In *Town of Frederick v. North Amer. Res. Co.*, 60 P.3d 758 (Colo. App. 2002), the Court of Appeals held, as a matter of law, that the Town of Frederick's attempt to pass more stringent setback, noise abatement and visual impact rules conflicted, on their face, with the COGCC's regulatory regime and were therefore preempted. The Court of Appeals rejected the town's argument that it was entitled to "go farther" than the rules and regulations passed by the COGCC because "the local imposition of technical

conditions on well drilling where no such conditions are imposed under state regulations, as well as the imposition of safety regulations or land restoration requirements contrary to those required by state law, gives rise to operational conflicts and requires that the local regulations yield to the state interest." *Id.* at 766. Further, the Court of Appeals observed that operational conflict preemption can occur where state and local governments attempt to regulate the "same subject" irrespective of whether the activity concerns purely technical aspects of development:

> Certain provisions of the Town's ordinance do regulate technical aspects of drilling and related activities and thus could not be enforced. However, other provisions of the ordinance, such as those governing access roads and fire protection plans, do not purport to regulate technical aspects of oil and gas operations, even though they may give rise to operational conflicts with a state regulation addressing the same subject and thus be preempted for that reason.

Id. at 764.

In 2006, the Court of Appeals again applied *Bowen/Edwards* and invalidated various local ordinances geared toward oil and gas development. In *Board of County Comm'rs of Gunnison County v. BDS Int'l LLC,* 159 P.3d 773 (Colo. App. 2006), the Court of Appeals held, as a matter of law, that Gunnison County's regulations concerning financial assurance, fines and examination of records conflicted, on their face, with the COGCC's regulatory regime and were therefore preempted. The Court of Appeals also ordered that an evidentiary hearing was necessary to determine whether numerous other county rules, which touched on the same subjects as COGCC regulations, were preempted. *Id.* at 779. The evidentiary hearing contemplated by the Court of Appeals' opinion never occurred and the case was dismissed.

In 2009, the Colorado Supreme Court again applied *Bowen/Edwards* and invalidated a local ordinance geared toward mining. In *Colorado Mining Assoc. v. Bd. of County Comm'rs of Summit County,* 199 P.3d 718 (Colo. 2009), the Supreme Court held, as a matter of law, that a Summit County ordinance banning the use toxic or acidic chemicals in mining conflicted with the Mined Land Reclamation Act ("MLRA"). In *Colorado Mining,* the Supreme Court observed that "a local regulation and a state regulatory statute impermissibly conflict if they contain either express or implied conditions which are inconsistent and irreconcilable with each other." *Id.* at 725. The Supreme Court further stated that "courts examine with particular scrutiny those zoning ordinances that ban certain land uses or activities instead of delineating appropriate areas for those uses or activities." *Id.* at 730.

B. Post 1992 Statutory Amendments Expanding the COGCC's Jurisdiction

The Supreme Court has not addressed state preemption of local oil and gas regulations since the *Bowen/Edwards* and *Voss* decisions in 1992. In the intervening years, the General Assembly has dramatically increased the scope of COGCC's statutory mandate. After each statutory change, the COGCC promulgated extensive regulations dealing with oil and gas operations.

i. 1994 Amendments to the Act

In 1992, in *Bowen/Edwards,* the Supreme Court held that § 34-60-106(4) and (11) of the Act did not manifest a legislative intent to regulate all phases of oil and gas activity. Section 34-60-106(11), in its then-existing version, directed the COGCC to "promulgate rules and regulations to protect the health, safety, and welfare of the general public in the drilling, completion, and operation of oil and gas wells and production facilities."

In 1994, the General Assembly amended § 34-60-106(11) via Senate Bill 94-177. The final phrase of § 34-60-106(11) now reads "in the conduct of oil and gas operations," rather than "in the drilling, completion, and operation of oil and gas wells and production facilities." In addition, a broad definition of "oil and gas operations" was added to the Act:

> 'Oil and gas operations' means exploration for oil and gas, including the conduct of seismic operations and the drilling of test bores; the siting, drilling, deepening, recompletion, reworking, or abandonment of an oil and gas well, underground injection well, or gas storage well; production operations related to any such well including the installation of flow lines and gathering systems; the generation, transportation, storage, treatment, or disposal of exploration and production wastes; and any construction, site preparation, or reclamation activities associated with such operations.

C.R.S. § 34-60-103(6.5).

The 1994 amendments to the Act broadened the state's interest and authority beyond what they were when *Bowen/Edwards* and *Voss* were decided. Additionally, following the passage of Senate Bill 94-177, the COGCC promulgated extensive regulations dealing with oil and gas operations.[1]

ii. 1996 Amendments to the Act

In 1996, the General Assembly amended C.R.S. § 34-60-106(15), which addresses the powers of the COGCC, by adding the following language:

> No local government may charge a tax or fee to conduct inspections or monitoring of oil and gas operations with regard to matters that are subject to rule, regulation, order, or permit condition administered by the commission. Nothing in this sub-section (15) shall affect the ability of a local government to charge a reasonable and nondiscriminatory fee for

[1] The 1994 amendments to the Act, as well as the 1996 and 2007 amendments discussed below, contain statements to the effect that the amendments should not be construed to affect the existing land use authority of local governmental entities. Nonetheless, the Court of Appeals has recognized that the "expanded regulations" resulting from these statutory amendments "may give rise to additional areas of operational conflict with analogous local regulations." *Town of Frederick,* at 763.

> inspection and monitoring for road damage and compliance with local fire codes, land use permit conditions, and local building codes.

In doing so, the General Assembly drew a distinction between local government land use permits and Commission rules, orders, and permit conditions, allowing local governments to assess a fee for inspections and monitoring associated with the former, but not the latter.

iii. 2007 Amendments to the Act

In 2007, the General Assembly passed House Bills 07-1298 and 07-1341, codified at C.R.S. §§ 34-60-106 and 34-60-128 (collectively, the "2007 Amendments"). The 2007 Amendments required the COGCC to pass new regulations to establish a timely and efficient procedure for reviewing drilling permit and spacing order applications, to protect public health, safety, and welfare and to minimize adverse impacts to wildlife resources. A major reason the General Assembly required such a rulemaking was to address concerns created by the recent increase in the permitting and production of oil and gas in Colorado. The 2007 Amendments also require the COGCC to consult with the Colorado Department of Health and Environment and the Colorado Division of Parks and Wildlife during the permitting process in appropriate cases.

Following the passage of the 2007 Amendments, the COGCC comprehensively updated its regulations. In adopting the new rules and amendments, the Commission conducted a lengthy rulemaking proceeding. The rulemaking record included thousands of pages of public comment, written testimony, and exhibits and 12 days of public and party testimony. The Commission spent another 12 days deliberating on the rules before taking final action. The resulting regulations have been heralded as a national model, balancing both conservation and responsible development. As with prior COGCC regulations promulgated in response to new statutory directives, "these expanded regulations may give rise to additional areas of operational conflict with analogous local regulations." *Town of Frederick*, at 763.

III. Elbert County's Proposed Regulations

The COGCC has no objection to many of Elbert County's proposed regulations. However, other aspects of Elbert County's proposed oil and gas regulations create operational conflicts with the COGCC's regulations. The most significant conflicts are discussed below.

A. The County's Proposed Setback Rules

The County's proposed setback rules conflict with state law. Proposed County Rules 26.4(N) and 26.4(F), if adopted, would require 600-foot setbacks between a wellhead and the nearest residential structure or platted building envelope. "Setbacks between a Major Oil & Gas Facility structure boundary and the closest existing residential, commercial or industrial building or property lot line shall be determined on a site specific basis." Rule 26.4(F) provides that the "entire pad site with the Oil and Gas Facility shall be located a minimum of one-thousand feet (1,000) feet from the normal high-water mark of any water body...."

In contrast, COGCC Rule 603.a. provides that "the wellhead shall be located a distance of one hundred fifty (150) feet or one and one-half (1-1/2) times the height of the derrick, whichever is

greater, from any building unit, public road, major above ground utility line, or railroad." In high density areas, COGCC Rule 603.e. extends setbacks to 350 feet. Proposed County Rules 26.4(N) and 26.4(F), on their face, give rise to operational conflicts under *Town of Frederick*.

B. The County's Ban on Excavated Pits

The County's ban on excavated pits conflicts with state law. Proposed County Rule 26.4(F)(10) categorically bans the use of excavated storage pits in favor of closed-loop drilling systems. However, the COGCC authorizes such pits in appropriate circumstances and subject to stringent requirements. An outright ban gives rise to an operational conflict because "the local imposition of technical conditions on well drilling where no such conditions are imposed under state regulations ... gives rise to operational conflicts and requires that the local regulations yield to the state interest." *Town of Frederick*, 60 P.3d at 766. *See also Colo. Mining Assoc. v. Bd. of County Comm'rs of Summit County*, 199 P.3d 718 (Colo. 2009) (holding state's regulation of mining chemicals prohibited county from banning their use and observing that "courts examine with particular scrutiny those zoning ordinances that ban certain land uses or activities instead of delineating appropriate areas for those uses or activities."). *Id.* at 730.

C. The County's Chemical Disclosure Rule

The County's proposed chemical disclosure rule conflicts with state law. Proposed County Rule 26.4(H)(13) states "Full disclosure, including Material Safety Data Sheets, of all hazardous materials that will be transported on any public or private roadway within the County for the Oil & Gas Facility / Operation must be provided to the Elbert County Office of Emergency Management. This information will be held in strictest confidence and shared with other emergency response personnel only on a 'need to know' basis."

Proposed County Rule 26.4(H)(13) conflicts with C.R.S. § 34-60-106(1)(e) and COGCC Rules 205 and 205A. Under C.R.S. § 34-60-106(1)(e), the COGCC has the sole and exclusive statutory authority to require operators to maintain certain books and records, has the sole authority to inspect those records and has the sole authority to require operators to make "reasonable reports" to the COGCC concerning oil and gas operations. Under COGCC Rules 205 and 205A, operators are required to compile MSDS sheets and chemical inventories for any chemical products brought to a well site for use downhole during drilling, completion, and workover operations and are required to report chemicals used in hydraulic fracturing operations. COGCC Rules 205 and 205A also authorize the COGCC to immediately obtain any information from vendors, suppliers and operators necessary to respond to a spill, release or complaint. COGCC Rules 205 and 205A also provide protections for trade secrets.

In *BDS Int'l*, the Court of Appeals invalidated county regulations requiring operators "to keep appropriate books and records and keep those records available for inspection by the County." 159 P.3d at 780. The Court of Appeals held C.R.S. § 34-60-106(1)(e) and COGCC Rule 205 "exclude the County by omission as an entity authorized to inspect the records."

Proposed County Rule 26.4(H)(13)'s reporting requirement, like the inspection requirement invalidated in *BDS Int'l*, is preempted because C.R.S. § 34-60-106(1)(e) excludes the County by omission as an entity authorized to require such reports. As a result, the County's effort to

impose data reporting requirements on operators is in operational conflict with the COGCC's comprehensive record-keeping, inspection and reporting regime.

Moreover, new COGCC Rule 205A (Hydraulic Fracturing Chemical Disclosure) was not in existence when *BDS Int'l* was decided and provides an additional basis for finding that Proposed Rule 26.4(H)(13) is preempted. *See Town of Frederick,* at 763 ("expanded regulations" from the COGCC "may give rise to additional areas of operational conflict with analogous local regulations."). COGCC Rule 205A provides appropriate protections for information claimed to be a trade secret, but the proposed County rule does not.

D. Proposed Water Quality and Water Testing Regulations

Proposed Rule 26.4(F) imposes numerous technical requirements on operators in order to ensure that an approved facility will "not pose any significant risk nor cause any degradation in quality or quantity" of Elbert County's freshwater sources. Proposed Rule 26.4(F) states that the six-pages of COGCC Rules 324 and 325 shall, "at a minimum," apply to any approved facility, yet goes on to impose 10 additional technical rules. Elbert County's attempt to impose more stringent or conflicting water quality and water testing regulations on operators is untenable under *Town of Frederick:*

> The Town argues that, in striking down certain provisions of its ordinance, the trial court ignored the requirement of *Bowen/Edwards* and *Voss* that courts should attempt to harmonize and give effect to local regulations if possible. Citing *Ray v. City & County of Denver,* 109 Colo. 74, 121 P.2d 886 (1942), for the proposition that there is no conflict between an ordinance and a statute where the ordinance simply goes further in its prohibition than the statute, the Town contends that the fact that its ordinance goes further than the state regulations in some areas did not give rise to an irreconcilable operational conflict. Similarly, the Town relies on *National Advertising Co. v. Department of Highways,* 751 P.2d 632 (Colo.1988), for the proposition that there is no operational conflict here because its ordinance does not authorize any act that the state prohibits.
>
> The Town's reliance on *Ray* and *National Advertising* for these propositions is misplaced. The operational conflicts test announced in *Bowen/Edwards* and *Voss* controls here. Under that test, the local imposition of technical conditions on well drilling where no such conditions are imposed under state regulations, as well as the imposition of safety regulations or land restoration requirements contrary to those required by state law, gives rise to operational conflicts and requires that the local regulations yield to the state interest. *Bowen/Edwards, supra,* 830 P.2d at 1060.
>
> Such is the case with the setback, noise abatement, and visual impact provisions invalidated by the trial court here. Thus, the ordinance

> sections that the trial court invalidated are preempted on the basis of operational conflict.

Town of Frederick, 60 P.3d 765.

The technical matters Elbert County seeks to regulate through proposed Rule 26.4(F) are comprehensively regulated by the COGCC. By statute, the COGCC is required to regulate "oil and gas operations so as to prevent and mitigate significant adverse environmental impacts on any air, water, soil, or biological resource resulting from oil and gas operations to the extent necessary to protect public health, safety, and welfare, including protection of the environment and wildlife resources." C.R.S. § 34-60-106(2)(d). In order to carry out its statutory responsibility, the COGCC has passed numerous regulations for the protection of water. In addition to technical regulations meant to ensure wellbore integrity and proper waste management, COGCC Rule 317B provides six pages of additional regulations concerning "Public Water System Protection" and COGCC Rule 324A requires that any operation shall not degrade air, water, soil or biological resources.

The COGCC also has an extensive ground and surface water monitoring program. Various COGCC regulations (*e.g.*, COGCC Rules 317B, 318, and 608) and orders (*e.g.*, Causes 112-138, 112-156, and 112-157) require operators to collect baseline water samples in certain areas and for certain types of wells; the COGCC can and does add special permit conditions to require such sampling on a well-by-well basis; and the COGCC itself has sampled dozens of water wells in Elbert County. In addition, the COGCC has worked with the oil and gas industry on a new initiative, through which oil and gas operators who drill new wells will collect groundwater samples before and after drilling and hydraulic fracturing. The data will be provided to the COGCC, who will manage it in a central database.

Under the circumstances, Elbert County's attempt to regulate the technical aspects of water quality protection incident to oil and gas operations is preempted. *Oborne v. Board of County Comm'rs of Douglas County*, 764 P.2d 397, 401 (Colo.App. 1988) ("The Act grants to the Commission specific jurisdiction to prevent pollution of water supplies.... To the extent that plaintiffs' drilling operations may present problems in these areas, the General Assembly has determined that it is the Commission, and not the counties, that should address those problems."); *Bowen/Edwards Assocs.*, at 1060 n7 (reaffirming *Oborne*). Although the "[p]rotection of public water supplies is a matter of both state and local concern and may be regulated by local governments," *Bd. of County Comm'rs of Gunnison County v. B.D.S. Int'l, LLC*, 159 P.3d 773, 780 (Colo. App. 2006), proposed Rule 26.4(F) nonetheless gives rise to operational conflicts under *Oborne* and *Bowen/Edwards*.

E. The County's Proposed Wildlife Management Rules

Proposed Rule 26.4(E) requires applicants to conduct wildlife surveys and forward completed surveys to the Colorado Department of Wildlife and Colorado Natural Heritage Program. The County "may consider the comments of Colorado Department of Wildlife and shall rely on any of the standard operating procedures in the creation of conditions of approval to address site-specific wildlife mitigation for an Oil and Gas Facility."

The County's proposed rules conflict with or are redundant of state law. The 2007 Amendments required the COGCC to pass comprehensive regulations to minimize adverse impacts to wildlife resources. In response, the COGCC developed five pages of new regulations in collaboration with Colorado Division of Parks and Wildlife ("CDPW"). These regulations impose special operating requirements in all areas (Rule 1204), apply additional operating requirements in sensitive wildlife habitat and restricted surface occupancy areas (Rule 1203), mandate consultation with the CDPW in sensitive wildlife habitat (Rule 1202), and require operators to avoid restricted surface occupancy areas where feasible (Rule 1205). As a result of these new regulations, the COGCC consults with the CDPW where appropriate. *See* COGCC Rule 306.c. (Consultation with CDPW). The County's attempt to impose additional requirements for the protection of wildlife is unnecessary and the proposed rules conflict with COGCC requirements.

F. The County's Proposed Noise Emission Rules

Proposed Rule 26.4(A) addresses noise emission and, in particular, Rule 26.4(A)(5) states that "sound emissions shall *at a minimum* be in accordance with the standards, as adopted, and amended from time to time by Colorado Oil and Gas Commission." As stated above, *Town of Frederick* prevents the County from passing more stringent noise emission regulations than those passed by the COGCC. Likewise, C.R.S. § 30-15-401(1)(m)(II)(B) prevents Elbert County from passing such regulations. *See id.* ("Ordinances enacted to regulate noise on public and private property pursuant to subparagraph (I) of this paragraph (m) shall not apply to ... oil and gas production subject to the provisions of article 60 of title 34, C.R.S."). Thus, the noise levels permitted under proposed Rule 26.4(8) conflict with COGCC Rule 802.c. and are void. Other provisions of Rule 26.4(A) are either redundant of or in potential conflict with COGCC Rule 802 (Noise Abatement).

In order to avoid or minimize some of these conflicts, Elbert County could avail itself of COGCC Rule 801. By doing so, Elbert County could pass its own aesthetic and noise control regulations so long as such regulations could be harmonized with the COGCC's regulatory regime and C.R.S. § 30-15-401(1)(m)(II)(B).

G. The County's Proposed Financial Assurance Requirements

Proposed Rule 26.3(I) (Performance Security) requires operators to provide security "to ensure compliance with mitigation requirements set forth in" the proposed rules. The rule states, among other things, that "[i]f the installation of plant and landscape materials is required as mitigation measures under this section, the performance security shall remain in place for two (2) years after installation or until the site meets all County requirements."

Proposed Rule 26.3(I) gives rise to operational conflicts with the COGCC's 700-Series Financial Assurance Rules pertaining to performance bonds for the protection of surface owners. Although Rule 26.3(I)(3) recites that the County's financial assurance requirements are not meant to conflict with state law, such a recital is unavailing under *BDS Int'l:*

> County Regulations §§ 1–107L, Impact Mitigation Costs, and 1–1070, Financial Guarantees, impose financial requirements upon operators and allow the County to set the amount required by a security agreement that

> is 'no less than 125 percent of the estimated cost of the conditions to be performed, and payable on demand to the County.'
>
> We conclude these County Regulations impose financial requirements on the oil and gas operator that are inconsistent with the state regulation's financial caps. Furthermore, the County cannot reserve the right to determine financial requirements where the COGCC has reserved for itself the sole authority to impose fines on oil and gas operations. Thus, the trial court properly concluded these County Regulations are preempted.

BDS, Int'l, 159 P.3d at 779.

Proposed Rule 26.3(I) gives rise to operational conflicts under *BDS, Int'l* and *Bowen/Edwards.*

H. The County's Proposed Waste Management and Produced Water Rules

Proposed Rule 26.4(I) (Waste Management Plan) requires operators to provide "a written management plan for waste minimization through the beneficial reuse and recycling of exploration and production waste." "The plan shall describe the proposed use of the waste and the methodology for recycling the majority of the exploration and production waste for reuse in the fracking process at the original well site and / or at other well sites within the County, method of waste treatment, method of storing drilling fluids, fracking fluids, and salt water in battery tanks or other acceptable containers." Proposed Rule 26.4(I)(5).

Proposed Rule 26.4(J) (Control and Disposal of Produced Water) requires, among other things, operators "incorporate on-site treatment of" "produced and back-flow waters to reduce the volume of water used in the drilling process." The rule also requires operators to "use reasonable efforts to transport produced water by pipeline, to a central water purification site or transport to an Environmental Protection Agency approved facility." "[T]he disposal method [for produced water] will be determined in consultation with" the COGCC and Colorado Department of Health and Environment "in accordance with relevant regulatory agency requirements and industry best management practices." Although it is unclear from the proposed rule, it appears the County will determine how produced water is disposed.

Proposed Rules 26.4(I) and 26.4(J) are redundant of or preempted by the COGCC's comprehensive regulatory regime, including 22 pages of COGCC rules governing E & P waste (COGCC 900-Series, E & P Waste Management) and 3 pages of additional COGCC rules governing storage tanks and on-site containment (COGCC Rule 604, Oil and Gas Facilities). Moreover, the County has no authority to regulate these technical aspects of oil and gas operations. Although "there are 'non-technical aspects' that may be subject to local regulation, *Town of Frederick,* 60 P.3d at 764, Proposed Rules 26.4(I) and 26.4(J) purport to regulate numerous, highly technical matters presently regulated by the COGCC and are therefore beyond the County's ability to regulate.

I. The County's Operational Conflict Waiver is Ineffective

At least one Colorado trial court has invalidated an operational conflict waiver mechanism such as the one set forth in Elbert County's proposed Rule 26.2(I). In *BDS Int'l*, the trial court held that such a waiver mechanism was ineffective and ruled:

> The framework in the County's [operational conflict waiver mechanism] vests ultimate determination in the county as to whether a conflict exists and, further, places additional requirements on the applicant where an operational conflict exists instead of simply precluding County regulation. [The waiver mechanism] 'off ramp' does not avoid the operation conflicts which otherwise exist.

The "off ramp" provision of the county rules at issue in *BDS Int'l* was not subsequently addressed by the Court of Appeals and the trial court's decision is persuasive authority that Elbert County's waiver mechanism is invalid.

J. The County's Proposed Permitting Process

Some aspects of the County's proposed permitting process conflict with state law. Under the Act, the General Assembly charged the COGCC with the responsibility to implement timely and efficient procedures for the review of applications for permits to drill. C.R.S. § 34-60-106(11)(a)(I)(A). Elbert County's proposed regulations will materially impair the state's interest in the timely and efficient approval of drilling permits because the process requires compliance with the problematic provisions discussed above.

IV. A Patchwork of County-Level Regulation Will Inhibit what the General Assembly has Recognized as a Necessary Activity and Would Impede the Orderly Development Of Colorado's Mineral Resources

The COGCC is cognizant of Elbert County's general powers under the Local Government Land Use Control Enabling Act and similar legislation. However, the regulations of concern must yield to the statewide public interest codified in the COGCC's specific statutory charge to "[f]oster the responsible, balanced development, production, and utilization of the natural resources of oil and gas in the state of Colorado in a manner consistent with protection of public health, safety, and welfare, including protection of the environment and wildlife resources." 34-60-102(1)(a)(I).

The COGCC's charge to promote the development of Colorado's oil and gas resources in a responsible manner is similar to the Mined Land Reclamation Board's ("MLRB") charge under the Mined Land Reclamation Act, which requires the MLRB to promote the orderly development of mineral resources in Colorado. Given the MLRB's statutory charge, the Colorado Supreme Court held that conflicting local regulations bearing on mineral development must yield to state interest and held:

> We recognize common themes in *Bowen/Edwards* and *Voss*: (1) the state has a significant interest in both mineral development and in human health and environmental protection, and (2) the exercise of local land

> use authority complements the exercise of state authority but cannot negate a more specifically drawn statutory provision the General Assembly has enacted. ...
>
> A patchwork of county-level bans on certain mining extraction methods would inhibit what the General Assembly has recognized as a necessary activity and would impede the orderly development of Colorado's mineral resources.

Colorado Mining Assoc. v. Bd. of County Comm'rs, 199 P.3d 718, 730-31 (Colo. 2009).

Colorado Mining provides strong support for the conclusion that the regulations of concern are preempted, particularly the County's outright ban on excavated pits. *See id.* at 730 ("Courts examine with particular scrutiny those zoning ordinances that ban certain activities instead of delineating appropriate areas for those uses or activities.").

CONCLUSION

The County should reject the regulations of concern as being in operational conflict with the COGCC's regulatory regime. The County should reject the regulations of concern for the additional reason that exhaustive local regulations are unnecessary. Elbert County can accomplish its objectives through the COGCC's Local Governmental Designee program, through which the COGCC can impose permit-specific conditions of approval. *See* COGCC 305.d. ("[T]he Director may attach technically feasible and economically practicable conditions of approval to the Form 2 or Form 2A as the Director deems necessary to implement the provisions of the Act or these rules pursuant to Commission staff analysis or to respond to legitimate concerns expressed during the comment period.").

Additionally, the COGCC encourages Elbert County to consider whether a Memorandum of Understanding would be beneficial. Gunnison County and the COGCC recently entered into a MOU. As specified in the MOU, the COGCC and Gunnison County intend to enter into an intergovernmental agreement pursuant to C.R.S. §34-60-106(15) whereby the COGCC will assign its facilities inspection function to Gunnison County. Gunnison County believes that such an assignment will promote public confidence and increase transparency concerning oil and gas development in the county. The COGCC can also address local concerns through area specific orders under COGCC Rule 503 and geographic area plans under COGCC Rule 513. In addition, the COGCC has recently announced that it will be conducting a public stakeholder process to review the setback issue.

Sincerely,

FOR THE ATTORNEY GENERAL

JAKE MATTER

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Assistant Attorney General
Natural Resources & Environment

cc: David Neslin, Director COGCC
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ATTACHMENT D

Boulder County Comprehensive Plan

GEOLOGY

Goals, Policies, & Maps Element

In view of the geologic diversity of Boulder County as described in the Geology Element and the multiplicity of existing and foreseeable land uses, it is intended that the land use policies presented here shall provide clear direction in the formulation and implementation of the county Land Use decisions so far as geological factors are concerned. To these ends, it is necessary that reference be made to certain geographic areas. Accordingly, reference will be made, as appropriate, within the text of the definitions and policies to areas on the Mineral Resource Areas Map and the Geologic Hazards and Constraint Areas Map. Furthermore, it is the intent of the policies to 1) move toward the attainment of the adopted goals for the Boulder County Comprehensive Plan as directed in Goal Statements B.1 and B.2, and 2) fulfill the county's obligation to implement a Master Plan for Extraction of Commercial Mineral Deposits pursuant to 30-28-106(c), CRS.

AMENDMENT STATUS

Goals & Policies	Associated Map	Background Element
Amended 12/3/80	Amended 9/6/84	Amended 9/6/84

Definitions

In the interest of clarity in interpreting the land use policies, it is necessary to define certain terms. For these purposes, the terms, titles, and phrases, shall be defined as follows:

- **Land Uses**

Intensive uses shall mean those land uses which include: any structures used for supporting or sheltering any human use or occupancy; and/or, facilities or improvements which tend to attract congregations of people.

- **Geologic Hazards and Constraints**

Geologic hazard shall mean a geologic condition or geologic process which poses a significant threat to health, life, limb, or property.

Geologic constraint shall mean a geologic condition which does not pose a significant threat to life or limb, but which can cause intolerable damage to structures.

Major Hazard Area shall mean that area, or those areas, as shown on the Geologic Hazards and Constraint Areas Map where geologic conditions are such that extensive geotechnical problems exist and there is high risk related to intensive land uses.

Moderate Hazard Area shall mean that area, or those areas, as shown on the Geologic Hazards and Constraint Areas Map where geologic conditions are such that significant geotechnical problems exist and there is provisional risk related to intensive land uses.

Moderate Constraint Area shall mean that area, or those areas, as shown on the Geologic Hazards and Constraint Areas Map, where geologic conditions are such that moderate geotechnical problems exist and there is provisional risk related to intensive land uses.

The Mineral Resources Areas Map & the Geologic Hazards & Constraint Areas Map are both associated with the Geology Element.

Minor Constraint Area shall mean that area, or those areas, as shown on the Geologic Hazards and Constraint Areas Map where geologic conditions are such that few geotechnical problems exist and there is no risk or nominal risk related to intensive land uses.

- **Aggregate Resource Area**
That area, or those areas, as shown on the Mineral Resource Areas Map, which are considered to be underlain by "commercial mineral deposits" as defined by 34-1-102(1) CRS and which are intended under the provisions of Colorado House Bill 1529 of 1973, to serve as resource preservation areas as part of *Boulder County's Master Plan for Extraction.* Aggregate Resource Areas are further defined by way of statements which are part of Policies GE 1.06 -GE 1.08 below.

Swelling soils, flood ways, & steep slopes are examples of geologic hazards and constraints.

- **Lode Mineral Area**
That area, or those areas, as shown on the Mineral Resource Areas Map where mineral ores occur in veins or zones of enrichment in the basement complex rocks.

Policies

Geologic Hazards and Constraints

GE 1.01 The county shall strongly discourage intensive uses in Major Hazard Areas.

GE 1.02 The county shall discourage intensive uses in Moderate Hazard Areas.

GE 1.03 Where in the public interest it may be desirable to permit intensive uses, the county shall direct such uses toward Geologic Constraint Areas rather than toward Geologic Hazard Areas.

GE 1.04 The county shall cooperate fully with the municipalities of the county with respect to the evaluation and mitigation of geologic hazards and constraints located within the unincorporated areas of the mutually-adopted city and county comprehensive plans.

GE 1.05 The county shall require the evaluation of all geologic hazards and constraints where such hazards or constraints may exist in unincorporated areas of the county as related to new intensive uses. Such evaluations shall be conducted by a professional practitioner having expertise in the subject matter. Such evaluations should incorporate analytical methods representing current, generally accepted, professional principles and practice.

Mineral Resources

GE 2.01 The county shall consider the following deposits, as mapped by Schwochow et. al., (Special Publication 5B, *Colorado Geological Survey*, 1974) to be "commercial mineral deposits" as defined by 34-1-102(1) CRS.
(a) "...fine-grained igneous rock..." in
(1) Township 2 North, Range 71 West; and,
(2) Township 3 North, Range 71 West.
a. "Site-specific information which became available subsequent to the adoption of the *Boulder County Comprehensive Plan* and the *Master Plan for Mineral Extraction* indicates that the Geer Canyon

area (Sections 12, 13, 14, Township 2 North, Range 71 West) is extremely sensitive in terms of potential blasting effects and impacts upon surrounding residential areas and environmental quality." (Approved by Planning Commission 12/3/80, not approved by Board of County Commissioners)

(b) "F1" deposits in Ranges 69 and 70 West.

GE 2.02 Aggregate Resource Areas shall be delineated utilizing certain portions of areas which are underlain by "commercial mineral deposits" as those deposits are defined in Policy GE 2.01.

GE 2.03 Pursuant to Policy GE 2.02 and the provisions of 34-1-304(1)(a-g) CRS, the county shall not include in its Aggregate Resource Areas, the following lands:

(a) those areas defined and mapped in the Environmental Resources and Agricultural Elements as:
  (1) "Critical Wildlife Habitat"
  (2) "Agricultural Lands of National and Statewide Importance".
  (3) "Designated Natural Landmarks and Natural Areas".

(b) those areas defined and mapped in the Geology Element where:
  (1) existing development effectively precludes extraction; or,
  (2) extraction has been completed.

(c) those unincorporated areas in the county lying within adopted community service areas where existing or previous capital improvement commitments effectively preclude mineral resource designation.

(d) those areas remaining after the exclusions contained in Items a-c, above, where the contiguous surface area underlain by a commercial mineral deposit is 20 acres or less.

(e) those parcels remaining after the exclusions contained in Items a-d, above, where the surface area underlain by a commercial mineral deposit is 20 acres or less.

(f) any specific site the mineral extraction from which would not be appropriate in light of the countervailing factors listed in 34-1-304(1), CRS.

GE 2.04 The county shall strongly discourage intensive uses in Aggregate Resource Areas.

GE 2.05 Whether within or without a designated aggregate or other resource area, the county shall prohibit or regulate, including by Special Use Review and the like, the open mining of any mineral or earthen material including, but not limited to, limestone, coal, peat, quarry aggregate, sand and gravel, sandstone, building stone, topsoil, common borrow, clay, shale, gold, lead, silver, zinc, copper, uranium, tungsten, and fluorspar as well as all accessory activi-

In Boulder County, open mining requires Special Use Review.

ties related thereto.

It is emphasized that the extraction plan is fundamentally and primarily a preservation plan and that these portions of the county's commercial aggregate deposits shall be protected from the encroachment of land uses which tend to inhibit or preclude extraction so that the options of future decision-makers will remain open in considering the demand for aggregate. Conversely, it is not intended that an applicant for the extractive land use in an Aggregate Resource Area shall automatically be assured of success in lieu of addressing all environmental concerns. Nor is it intended that extractive land uses shall be denied outside the Aggregate Resource Areas. Rather, it is reemphasized that the extraction master plan shall insure the availability of and adequate supply of quality aggregate over the next 30 years so far as can be reasonably estimated.(Approved by Planning Commission 12/3/80, not approved by Board of County Commissioners)

The requirement for reclamation of mined land is usually a cooperative effort between the county & the Mined Land Reclamation Board.

GE 2.06 The county shall regulate the exploration for, development of, and production of petroleum, natural gas, and geothermal resources as well as all accessory activities related thereto, to the extent permitted by state statutes.

GE 2.07 The county shall regulate the subsurface mining, gasification, liquification, and methane desorption of coal as well as all accessory activities related thereto.

GE 2.08 The county shall regulate the mining of any mineral by means of in situ leaching as well as all accessory activities related thereto.

GE 2.09 Whereas subsurface mining in the Lode Mineral Areas in the recent past has been, and in the foreseeable future will probably remain, of limited scope and impact, it shall presently be county policy to consider subsurface mining in the Montane and Alpine Subprovinces (as defined in the Geology Element background information) and its accessory activities, to be a permitted land use subject to the procurement of an appropriate administrative permit in compliance with attendant criteria.

However, whereas the lode mineral deposits of Boulder County are of such magnitude and diversity that it is conceivable that subsurface mining of major scope and impact may be initiated, the county shall continuously monitor and evaluate the scope of subsurface mining in said Subprovinces and, on recommendation from the county Planning Staff or by petition from the citizens of the county, the county Planning Commission may recommend to the Board of County Commissioners that such subsurface mining be regulated and that the county land use regulations be so amended.

GE 2.10 In cooperation with the Colorado Mined Land Reclamation Board and its staff, the county shall require that all "affected land" as defined by Colorado Statute, be reclaimed whether the subject mining activity shall

have been open mining or subsurface mining.

Groundwater

GE 3.01 The county shall render land use decisions consistent with the preservation or improvement of groundwater quality as well as the conservation of groundwater supplies.

GE 3.02 Whereas (1) geological conditions in some areas of the county, as described in the Geology Element, are such that dependable or potable groundwater supplies may not be available for intensive land uses; and (2) applicants for intensive land uses may specify that groundwater shall be partially or solely utilized as a water source, the county's land use regulations shall require that said applicants furnish hydrogeological or other acceptable evidence to establish that definite provision has been made for a water supply that is sufficient in terms of quantity, dependability, and quality for the intensive use proposed.

Geologic conditions in some areas of the county are such that dependable or potable groundwater supplies may not be available for intensive land uses.

Boulder County Comprehensive Plan

AGRICULTURAL

Goals, Policies, & Maps Element

Agricultural land is a nonrenewable resource. Once public and private decisions are made that result in the conversion of agricultural land and/or water to nonagricultural uses, this vital resource is almost always irretrievably lost.

Since 1959, the Front Range has been consuming agricultural lands for other purposes at an average of 60,000 acres per year. Between 1959 and 1974, Boulder County led the State of Colorado in this category, a fact that formed one of the core reasons for the eventual development of the original edition of the Boulder County Comprehensive Plan. Trends and forces prompting the agricultural land conversion, including the influence of the state subdivision law known as Senate Bill 35, are amply documented in the 1978 Plan.

AMENDMENT STATUS

Goals & Policies	Associated Maps	Background Element
Amended 7/16/97	Amended 7/16/97	Created 7/16/97

A 1985 Colorado State University - Boulder County Agricultural Survey revealed that the number one factor discouraging continued agriculture was not market economics but the stresses and impacts created from urban influences. Since 1978, over 18,000 acres or 28 square miles of agricultural lands have been annexed into the eight Boulder County municipalities located on the Plains. In combination with other land use activities, farm acreage in the county decreased from 287,466 in 1959 to 155,488 in 1987 and then slightly increased to 157,493 in 1992.

Another survey, conducted by the county Land Use Department in 1991, suggested that commodity prices and land speculation affecting property taxes had moved ahead of urbanization as the "...major hindrances to farming in Boulder County", although urban impacts and the loss of nearby agricultural support services remained high on the list of deterrents to continued agricultural activity. In combination, these pressures led to larger farms being carved up into 35 acre tracts, which by state statute are exempt from any subdivision review and design requirements, and sold to nonagricultural interests. This fragmentation has further complicated the viability of continuing traditional agriculture.

Since 1978, 18,000 acres of agricultural land has been annexed into Boulder County's municipalities.

In spite of this discouraging array of statistics and pressures, Boulder County has pursued a number of methods to stem the loss of agricultural lands with varying degrees of success. Working with representatives of the agricultural community and following the policy direction established in the 1978 Comprehensive Plan, the county adopted a non-urban planned unit development process (NUPUD) in 1979. In simple terms, this form of subdivision offered landowners a development density of two dwellings per 35 acres and an additional dwelling for each 17.5 acre increment above that figure. In return, at least 75% of the total acreage had to be

deeded to the county in the form of a conservation easement which restricted activity on the easement to agriculturally-related or other rural land uses. Title remained with the landowner to do with as he or she saw fit consistent with the terms of the easement, although the easement was attached to the property and not the owner. The landowner could sell the lots for residential purposes and use the proceeds to augment agricultural income or keep them for family use. By September 1996, this process led to the creation of 146 NUPUDs and the conservation of 11,160 acres of land, some although not all of which remained in agricultural production or use. In 1995, the county supplemented the NUPUD with a transferable development rights program (TDR), allowing landowners to sell some or all of their development rights to another party based on essentially the same dwelling unit formula as used with the NUPUD. The purchaser then exercises the use of the purchased development rights in locations more appropriate for development, while the seller continues to own the land with a conservation easement attached to it. The TDR PUD process was authorized in 1994 through the adoption of the Plains Planning Area Element, a new addition to the county's *Comprehensive Plan.* That Element refocused the county's policies and intentions for managing unincorporated Plains lands by emphasizing that land uses "...should continue to be related to agricultural activities...and other activities consistent with the rural character of the county."

The key to preserving agricultural lands in the county is maintaining a healthy agricultural economy.

Another tool given a major boost by Boulder County voters in 1993 has been the funding of an aggressive open space program. One method employed for open space preservation has been the purchase of development rights, or PDRs. This methodology enables a landowner to sell the potential development rights while retaining title to the land for continued farming either by the owner or through leasing to others. The advantages of PDRs include effective land and water preservation at a cost below full purchase of title for the property, continued land management being in the hands of the owner or farmer or rancher vs. being a responsibility for the county, and keeping the property on the tax rolls. To date, the county has preserved 5,018 acres of agricultural land through PDRs. Conservation easements and fee purchases are also important contributions to the preservation of agriculture. Although they may not share the same benefits listed for PDRs, they offer their own unique values to the county's residents. Our intergovernmental agreement with the City of Boulder also promotes agricultural land preservation within the Boulder Valley Comprehensive Planning area of the county and is one of the stated Open Space Department purposes as defined in the City of Boulder's Charter. Other intergovernmental agreements around the county promote similar objectives.

Agricultural Objectives

The objective of the subsequent policies is the preservation of the agricultural lands in the county, and their related uses, by whatever means are available to the county and effective in achieving this end. The county recognizes that agricultural lands do not exist in a vacuum. Without the ability to conduct economically viable agricultural activities upon them, agricultural lands become merely vacant lands. The key to preserving agricultural lands in the county is maintaining a healthy agricultural economy in the county. Therefore, a corollary objective of the subsequent policies is the encouragement, promotion, and fostering of agricultural enterprises and activities in the county.

In 1978, the state and county classified, identified and mapped the lands in the Plains portion of the county as to their potential agricultural productivity and significance. In order of significance, those mapped designations are "Lands of

National, Statewide and Local Importance," as well as "Other Agricultural Lands." The new Agricultural Element includes an updated Agricultural Lands Map of the *Boulder County Comprehensive Plan* which was last approved in 1978 which was prepared by the Natural Resources Conservation Service, formerly the Soil Conservation Service. The methodology employed in the updating involved using 1995 aerial photography (color slides) on a scale of eight inches to the mile. The data from the slides was transferred to the Boulder County Zoning Maps and then overlayed on the Soil Conservation Service original Prime Farmland Map. The same basic criteria was used as when the map was originally prepared [described in the Environmental Resources Element approved in 1986]. There was, however, a change in some of the soils information that brought some additional lands into the 'prime' classification. This change was not drastic. Irrigation is one of the main criteria in determining if the soils are considered 'prime' and this was the principal area looked at in revising the map. Areas that have had a major change in land use or are no longer being irrigated were excluded from the 'prime' classification. The Environmental Resources Element of the *Boulder County Comprehensive Plan* provides more information on the methodology and criteria used in the mapping of the Significant Agricultural Lands.

It remains the intent of the *Comprehensive Plan* and attendant land use codes to promote and assist in the preservation of agricultural lands for agricultural and other rural purposes. This stance is predicated on several decisions and conclusions reached by the county in the formulation of the original 1978 Comprehensive Plan which remain well-founded today. They include the recognition of agricultural lands as an important nonrenewable resource, the lack of services and infrastructure capabilities in the rural area to support other than a rural and agrarian level of land use, the long standing position that an adequate range of urban services and related urban development can best be provided and maintained through municipal governments, the belief that compact urban development is the most efficient and appropriate way to retain agricultural lands and rural character, the maintenance of economic support for the agricultural community, and the county's commitment to the plains municipalities through intergovernmental agreements and other understandings to not compete with those municipalities for the provision of urban development or services in the unincorporated areas of the county.

It is important to note that, notwithstanding the county's continued backing of agricultural preservation and activity, there are intensities and kinds of agricultural uses that can have detrimental impacts on land, water and other components of the environment if not held accountable to some level of management and regulation. A commercial feed lot, for example, is a far different form of legitimate agricultural enterprise than is an alfalfa field in terms of its potential impacts. The *Comprehensive Plan* recognizes these differences and the carefully exercised responsibility the county must assume in balancing an earnest support for agriculture with necessary degrees of regulation to protect the health, safety and welfare of residents and the environment of Boulder County.

The county shall foster & promote a diverse and sustainable agricultural economy.

Agricultural Goals

A.1 Future urban development should be located within or adjacent to existing urban areas in order to eliminate sprawl and strip development, to assure the provision of adequate urban services, to preserve agriculture, forestry and open space land uses, and to maximize the utility of funds invested in public facilities and services.

M.1 Agricultural enterprises and activities are an important sector of the Boulder

County economy and the county shall foster and promote a diverse and sustainable agricultural economy as an integral part of its activities to conserve and preserve agricultural lands in the county.

B.7 Productive agricultural land is a limited resource of both environmental and economic value and should be conserved and preserved.

E.1 Preservation and utilization of water for agricultural purposes within the county shall be encouraged.

Agricultural Policies

Agricultural lands are depicted in the Agricultural Resources Map.

AG 1.01 It is the policy of Boulder County to promote and support the preservation of agricultural lands and activities within the unincorporated areas of the county, and to make that position known to all citizens currently living in or intending to move into this area.

AG 1.02 The county shall foster and encourage varied activities and strategies which encourage a diverse and sustainable agricultural economy and utilization of agricultural resources.

AG 1.02.01 In instances where the county desires to purchase an interest as a means of protecting lands which have agriculture as their primary value, the purchase of development rights shall be preferred over fee simple purchase; however, the county should be willing to pursue other types of purchase arrangements when preferred by the landowner.

AG 1.03 It is the policy of Boulder County to encourage the preservation and utilization of those lands identified in the Agricultural Element as Agricultural Lands of National, Statewide, or Local Importance and other agricultural lands for agricultural or rural uses. The *Boulder County Comprehensive Plan* Agricultural Element Map shall include such lands located outside of the boundaries of any municipality or the Niwot Community Service Area.

AG1.04 In reviewing applications for new development, Boulder County shall consider potential impacts on existing adjacent agricultural uses and shall use its regulatory authority to mitigate those impacts which would be detrimental to the continuation of existing agricultural operations and activities and the establishment of new agricultural operations and activities. New development should be sited in such a way so as to minimize and/or prevent future conflicts.

AG1.05 It shall be the policy of Boulder County to keep the regulatory burden on various agricultural activities to the minimum necessary for identifying, addressing, and mitigating potential impacts in the areas of health, safety, and welfare.

AG1.05.01 It shall be the policy of Boulder County to allow the operation of existing nonconforming agricultural uses consistent with protection of the public health, safety, and welfare.

AG1.06 The county shall continue to support appropriate state and federal legislation designed to preserve agricultural resources.

AG1.07 The county shall continue to actively participate in state, federal, and local programs directed toward the identification and preservation of agricultural land.

AG1.08 The county shall encourage the development of resource management plans for significant native grassland ecosystems.

AG1.09 The county shall provide technical assistance to farmers and ranchers to help avoid conflicts over wetland and riparian management and the management of other sensitive or diminishing environmental resources as listed and periodically updated in the Environmental Resources Element. In doing so, the county shall seek the advice and expertise of other land, resource, and wildlife agencies and institutions to the extent the resources are available.

AG1.10 The county shall encourage the development of soil and water conservation plans to help assure sound resource stewardship and, where appropriate, may require such plans in land use applications subject to the county's discretionary review processes as defined in the county *Land Use Code.*

AG1.11 The county shall encourage that water rights historically used for agricultural production remain attached to irrigable lands and shall encourage the preservation of historic ditch systems.

AG1.12 The county shall continue to discourage the fragmentation of large parcels of agricultural land and to encourage the assemblage of smaller parcels into larger, more manageable and productive tracts.

AG1.13 The county shall continue to monitor the application of these policies and attendant Boulder County land use codes, as to their effectiveness in preserving agricultural land and perpetuating agricultural uses in Boulder County while maintaining a reasonable use to the individual owner.

- **Infrastructure Development & Oil and Gas Operations on Agricultural Land**

AG 2.01 The county shall discourage the placement of new utility infrastructure upon agricultural lands. The county supports using existing easements or other public rights-of-way to minimize the impacts to agriculturally productive land.

AG 2.01.01 If a thorough analysis of alternatives concludes that routing/siting of facilities is necessary on or across agricultural lands, all construction activities will be located and performed so as to minimize disturbance to agricultural resources.

AG 2.01.02 If the infrastructure location is determined necessary, infrastructure construction activities across agricultural lands should not occur during

The county encourages water rights historically used for agricultural production to remain with the land.

the growing season.

AG 2.01.03 Any agricultural lands and water resource systems disturbed by infrastructure construction shall be restored to their former productivity.

The following policies apply only to oil and gas operations.

AG 2.02 Oil and gas exploration, development, and production activities which affect agricultural operations shall be designed to minimize impacts to agricultural lands and water resource systems.

AG 2.03 Reclamation and restoration plans shall be required upon permitting and be implemented upon plugging and/or removal of all oil and gas well and production facilities, or upon abandonment, and shall include all appropriate measures to return the land to productive agriculture.

AG 2.04 The county shall use its regulatory authority to minimize the impacts of oil and gas operations on agricultural lands and ensure complete restoration of the area through the use of financial bonds, other forms of financial security or other appropriate regulatory measures to the extent authorized by law.

Staff from the Parks & Open Space Department are knowledgeable about weed & pest management issues & may be able to provide guidance.

- **Weed and Pest Management**

State statutes (Article 5.5 of Title 35, C.R.S. 1973, and as amended by House Bill 96-1008) require counties to develop and enforce weed and pest management plans on all unincorporated lands under county jurisdiction. While the Agricultural Element is considered the most appropriate portion of the *Comprehensive Plan* in which to codify the following policies, they apply across the county and are also cross referenced in the Plan's section entitled "Additional County-wide Policies."

AG 3.01 The county shall support state and federal legislation which encourages management of noxious weeds.

AG 3.02 The county shall actively participate in state, federal, and local programs directed toward Integrated Pest Management programs for noxious weeds, and vertebrate and insect pests.

AG 3.03 The county shall use, and encourage all land owners to use, Best Management Practices, which may include chemical, fire, mechanical, biological, cultural control for weeds; chemical, physical, and cultural control for vertebrate pests; and chemical, biological and cultural control for insects.

AG 3.04 The county shall use and encourage the use of certified weed free products such as hay, mulch, gravel, bedding material, and general construction material.

AG 3.05 The county shall make available to all landowners educational materials and assistance in developing and implementing management plans to control pests.

Boulder County Comprehensive Plan

ENVIRONMENTAL RESOURCES

Goals, Policies, & Maps Element

Extending from the Great Plains on the east to the crest of the Continental Divide on the west, Boulder County contains a unique combination of prairie, forest, and tundra environments. Rolling plains of 5,000-5,500 foot (1,524-1,676 meters) elevation which cover the eastern third of the county abruptly give way to tree-covered slopes which reach up to 11,000 feet (3,353 meters) in elevation. The western border of the county is formed by the Continental Divide where the mountain range towers over 12,000 feet (3,658 meters). Within Boulder County, the Divide reaches its most eastern point of anywhere on the continent. Long's Peak, which is located in Rocky Mountain National Park, is the highest point in the county (14,255 feet - 4,345 meters).

AMENDMENT STATUS

Goals & Policies	Associated Maps	Background Element
Amended 3/22/95	Amended 3/22/95	Amended 3/22/95

The environmental uniqueness of Boulder County is due in large measure to the abrupt altitudinal variation within a 20-mile east-west gradient. The dramatic landform changes sharply define the native ecosystems and their associations of plant and animal species. The same topographic features also had a great influence on the settlement of the county, from the prehistoric peoples to modern man.

The county's environmental heritage includes non-renewable resources such as natural areas, historic/archaeological sites and natural landmarks. As irreplaceable resources, they warrant preservation from destruction or harmful alteration. To move toward the accomplishment of Environmental Management Goal B.1, policies ER 1.01 through ER 1.10 and ER 2.01 through ER 2.11 have been set forth.

It is the intent of policies ER 3.01 through ER 3.03 to minimize or prevent emissions or discharges potentially harmful to life or health to achieve a maximum practical degree of air and water purity. These policies have been set forth to achieve the goal of reducing or eliminating air and water pollution and to insure that Boulder County meets and maintains EPA and State air and water quality standards. Policy ER 3.04 concerns water quality and is also related to Goal B.2 and the quality maintenance of the county water supplies. The intent of policy ER 3.05 is to reduce or eliminate the adverse impact of noise to prevent potential harm to the health and welfare of the citizens of Boulder County, consistent with the stated Environmental Management Goal B.2.

The loss of wildlife and plant habitats leads to the inevitable disappearance of wildlife and plant species themselves. This resultant loss of environmental diversity weakens the system as a whole, since diversity is an indication of the health of our environment. Thus, the intent of policies ER 4.01 through ER 4.08 is to achieve the stated Environmental Manage-

The Environmental Resources Map & the Environmental Conservation Areas Map both relate to the goals & policies of the Environmental Resources Element.

ment Goals B.3 and B.4 of avoiding depletion through the preservation and conservation of critical habitats and to recognize the importance of an ecosystem approach in protecting all species and habitat types currently found in Boulder County in order to balance natural systems and human use.

Wetlands are a critical environmental resource that function as wildlife habitat, aquifer recharge areas, linkages in the overall county wildlife system, and aid in smog control. The intent of policies ER 6.01 through ER 6.05 is to achieve the Environmental Management Goal B.5 of significant wetland conservation while recognizing the constantly changing nature of wetland communities.

Goal B.6 and Policy ER 7.01 pertain to implementation of several of the Environmental Resources Goals.

The single criterion for consideration of an area for Natural Landmark status will be its visual & scenic prominence as a landscape feature.

Natural Landmarks

Boulder County contains a unique combination of prairie, forest and tundra environments. This environmental heritage includes non-renewable, irreplaceable resources such as natural areas and natural landmarks which warrant preservation from destruction or harmful alteration.

Natural Landmarks are defined as prominent landscape features that distinguish a specific locality in Boulder County and are important because of the views they afford, their value as scenic vistas and backdrops, and the intrinsic value they hold as wildlife or plant habitats, natural areas, park and open space preserves, and open land areas.

Natural Landmarks are designated for scenic, visual and aesthetic values, providing a record of the natural heritage of Boulder County. Natural Landmarks may have additional cultural, ecological, or geological attributes, becoming higher priorities for designation and protection with an assemblage of values. However, the single criterion for consideration of an area for Natural Landmark status will be its visual and scenic prominence as a landscape feature:

- **Landmarks Objectives**

The chief objective of the goals and policies is to protect and conserve unique or critical environmental resources through the encouragement of compatibility between proposed development and designated Natural Landmarks. Additional objectives include:

- To mitigate negative impacts to Landmarks and insure proposed development does not harm, degrade, or impair the purposes or values for which the Natural Landmark was designated;
- To provide assistance, incentives and regulations for land owners to maintain Natural Landmarks.

- **Natural Landmarks of Boulder County**

- Big Elk Park, Sec.4, NW4 of 9, 3N72W
- Bighorn Mountain, W2 of Sec.7, 1N71W
- Boulder Falls, NW4 of Sec.36, 1N72W
- Buckingham Park Hogback, SE4 of Sec. 23, NE4 of Sec.26, 2N71W
- Coffintop Mountain, NW4 of Sec. 28, NE4 of Sec.29, 3N71W
- Continental Divide, W of Peak-to-Peak Highway
- Deer Ridge, Sec. 17 & 18,3Sec. 12 & Sec. 13, 373W
- Eagle Rock, NW4 of Sec. 6, 1S71W
- Flatirons, SE4of Sec. 1, Sec. 12, 1S71W
- Grassy Top, SE4 of Sec. 12, 1N73W
- Haystack Mountain, NW4 of Sec. 27 E2 of Sec.28, 2N70W
- Hygiene Hogback, SE4 of Sec.4,NE4 of Sec. 9, 2N70W

(refer to Plan for mining section)

Boulder County Comprehensive Plan

OPEN SPACE

Goals, Policies, & Maps Element

The idea of a county open space program was initiated in the mid-1960s by Boulder County citizens who were interested in parks and recreation needs of the unincorporated area and in "preserving open space land in the face of rapid county development" (Boulder County Comprehensive Plan, 1978, History of Open Space Program). In 1968 the Board of County Commissioners appointed an "official" citizens group—the Parks and Open Space Advisory Committee (POSAC) —to help formulate a plan for preserving open space. This was at a time when Boulder County's 750 square miles were home to a population of fewer than 130,000 people. The 1995 population was almost 260,000.

AMENDMENT STATUS

Goals & Policies	Associated Maps	Background Element
Amended 7/17/96	Amended 7/17/96	Amended 7/17/96

Through POSAC's neighborhood meetings and citizen surveys, by 1974 "approximately 10,000 citizens of Boulder County had expressed an interest and concern for open space" (BCCP, 1978). As a result of this interest, the committee recommended that the County Commissioners create a department of parks and open space to refine and implement this citizens' open space program. In January 1975 the Parks and Open Space Department became a reality, with the additional charge of conducting nature programs on county open space and park land. Parks, dedicated to the county as part of subdivisions, and Bald Mountain Scenic Area, which the county began leasing from the State Board of Land Commissioners in 1973, were transferred to the new department for management and maintenance.

The mid-1970s brought the first major county open space purchases, both the result of the landowner's desire to have the land preserved in a single parcel: in 1975, Ernie Betasso's ranch (now called Betasso Preserve)—773 acres approximately six miles west of Boulder off Sugarloaf Road; two years later the 2,566-acre Walker Ranch on Flagstaff Road.

In 1978 the *Boulder County Comprehensive Plan* was adopted, and it included goals and policies for preserving open space, protecting environmental resources (including both natural and cultural resources) and developing a county-wide trail system. Areas that citizens thought were most important to be preserved as open space for future generations were shown on a map, which together with the goals and policies formed the open space plan. The designation of "proposed open space" on that map (and subsequent maps) is not a zoning category, and development of any designated area is determined by the applicable zoning. The implementation of the open space plan has been based both on private cooperation and on the county's financial ability to acquire an interest in these lands.

Boulder County's Parks & Open Space Advisory Board was formed in 1968 - a time when open space planning was just in its infancy.

By the beginning of 1998 the county open space program comprised more than 52,000 acres of preserved land scattered throughout the county, along with 70 miles of trails. The majority of this land is open for public use; the remainder is under agricultural lease or conservation easements which do not include public access. Most of the properties are well-suited to passive recreation (recreation development is limited to trails, parking areas/trailheads, picnic areas/shelters, outhouses, and simple boat docks or fishing piers where necessary).

Definition and Functions of Open Space

Open space provides buffers between communities and helps protect natural resources.

Within the context of the *Boulder County Comprehensive Plan*, open space is defined as:

- Those lands referred to in the *Boulder County Comprehensive Plan*, as being intentionally left free from future development, and in which it has been determined that it is, or may in the future be, within the public interest to acquire an interest in order to assure their protection.

Passive Recreation, referred to in the Open Space Element policies, is defined as:

- Outdoor activities that create opportunities for independence, closeness to nature, and a high degree of interaction with the natural environment and which require no organization, rules of play, facilities, or the installation of equipment, other than those which may be necessary to protect the natural environment.

The setting for passive recreation is a predominantly natural appearing environment of moderate to large size. There is a moderate probability of experiencing isolation from the sights and sounds of other humans. Interaction between visitors is low, and evidence of others ranges from minimal to common. Motorized use is prohibited.

The functions of open space remain much as they were envisioned by the citizens whose efforts fostered the program:

- Urban shaping between or around municipalities or community service areas, and buffer zones between residential and non-residential development;

- Preservation of: critical ecosystems; natural areas; scenic vistas and areas; fish and wildlife habitats; natural resources and landmarks; outdoor recreation areas; cultural, historic and archaeological areas; linkages and trails; access to public lakes, streams and other useable open space lands; and scenic and stream or highway corridors;

- Conservation of natural resources, including but not limited to forest lands, range lands, agricultural lands, aquifer recharge areas and surface water;

- Protection of designated areas of environmental concern, generally in multiple ownership, where several different preservation methods (including other governmental bodies' participation or private ownership) may need to be utilized; these lands will not be considered for control by the county open space program provided sufficient evidence exists that these lands are to be preserved in a natural state.

Methods of Open Space Preservation/Acquisition

Boulder County has used a variety of mechanisms to preserve open space and prime agricultural land. These include:

(see Plan for existing provisions)

Boulder County Comprehensive Plan

SUSTAINABILITY ELEMENT

Introduction, Definition, Goals & Policies

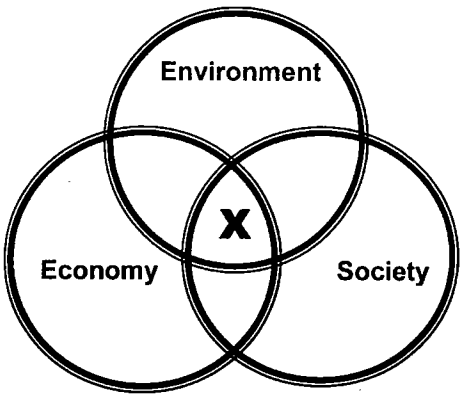
The Meaning of Sustainability
The concept of "sustainability" has been the subject of debate and discussion, particularly over the past 20 years, as concern has grown from the global to the local level about whether the social, economic and physical resources we have come to depend on will be sufficient or available to future generations to meet their needs and aspirations...and what we in the present intend to do about it.

Introduction

The verb "sustain" is defined in Webster's Third International Dictionary as meaning "to cause to continue...to keep up especially without interruption, diminution or flagging". As a standard bearer, the most widely acknowledged definition came from the Brundtland Commission Report in 1987,[1] which described sustainability it as "...development that meets the needs of the present without compromising the ability of future generations to meet their own needs".

Many institutions and organizations have worked at refining this description since that time, trying to perfect a universally acceptable definition or at least one that meets their particular agendas. But as Denise Lach, a sociology professor at Oregon State University, has argued, spending time and energy trying to find a common definition for "sustainability" may not gain us anything of real value "Sustainability is like love and democracy – multiple meanings, not always perfectly realized, but always struggled for, at least by most of us. I think we do agree, basically, on what it is. We disagree when we must make specific choices in our lives".[2] We believe the crux of the issue is captured in her last sentence. How to go about reaching some broader consensus or acceptance of what to do and how to do it is the primary challenge that confronts us.

Sustainability links the issues of environment, economy and social equity together. An action or decision in any one of these areas will have consequences on the others whether anticipated or not. A sustainable community is one where an agreement has been reached on the design and implementation of plans that replace competition between issues with collaboration and forethought about achieving desired outcomes in the present while preserving options for those that will follow.



The X position is a simple illustration of where a sustainable community would be functioning in a balanced system.

Sustainability and the Boulder County Comprehensive Plan

Developing a sustainability plan requires taking a long view that goes well beyond the time-frames comprehensive plans have traditionally addressed. However, comprehensive plans are intended to be adaptable and dynamic documents that provide a central home for expressing the goals and desires of a community. It is therefore quite appropriate for the subject of sustainability to be included, particularly since in its fullest expression sustainability should influence and connect all of the other Elements in the Plan.

The original Boulder County Comprehensive Plan was adopted in 1978 in response to a growing alarm about the spread of development types and patterns that were having adverse, undesirable or irreversible negative impacts on the land At its core, the Plan's intent was to provide guidance for (a) preserving the agricultural, forested and open lands environments and ecosystems found throughout the county by channeling urban development into and adjacent to urban areas; and (b) establishing and retaining diverse, compatible and functional land uses to prevent urban and rural decay.[3] Subsequent amendments and actions across the years have been developed with these goals in mind, and the county, with the persistent participation and support of its residents, has been quite successful in meeting them.

Refining the Plan to move beyond its roots in preservation to sustainability is an appropriate and important evolutionary step to take. As a specific example, the Boulder County Commissioners set the stage for this next step by adopting two resolutions directing the county's own operations to prepare and implement plans for achieving a Zero Waste Program and Sustainability Energy Path.[4] Over 146 universities and colleges in 40 states, including six campuses in Colorado, have signed the American College and University Presidents Climate Commitment to making their campuses climate-neutral.[5] On a broader front, the American Planning Association ratified a Policy Guide on Planning for Sustainability on April 17, 2000. In it, the Association identified several dimensions to the sustainability issue:

1. We want to sustain communities as good places to live, and that offer economic and other opportunities to their inhabitants.

2. We want to sustain the values of our society – things like individual liberty and democracy.

3. We want to sustain the biodiversity of the natural environment, both for the contribution that it makes to the quality of human life and for its own inherent value.

4. We want to sustain the ability of natural systems to provide the life-supporting 'services' that are rarely counted by economists, but which have recently been estimated to be worth nearly as much as total gross human economic product".

To move from these statements of intent into actions, sustainability requires a commitment to the following principles:

(1) living within limits;

(2) understanding the interconnections and interdependence of economic, societal and environmental decisions and actions;

(3) sharing the distribution and stewardship of resources and opportunities equitably throughout the public and private sectors; and

(4) fostering and activating the will to make necessary changes.

The goals of this Element have been written with these principles in mind and to provide guidance for subsequent amendments and additions to the Comprehensive Plan that address sustainability.

Scope of the Sustainability Element

What is generically called a systems-wide sustainability plan takes a careful accounting of the numerous and diverse components that provide the foundations for the quality of our environmental, economic and societal condition. The list is large – agricultural viability, forest health, energy production and use, resource consumption and preservation, decent housing, transportation, air and water quality, equitable educational and employment opportunities, meaningful public participation, and so on. At the time of adoption into the county's Comprehensive Plan on May 16, 2007, the Element does not presume to cover all these factors. It is, however, to provide a place keeper in the Plan for the continuing inclusion of specific topics, policies and action plans relating to sustainability as they are identified, agreed to, and developed through a public process.

On October 30, 2006 the Planning Commission and County Commissioners held a joint study session with the Land Use Department on sustainability and directed staff to focus first on (a) an expanded transferable development rights (TDR) program; (b) assessing possible structure size limitations and mitigating measures that would be appropriate for exceeding them; and (c) developing green building policies to shape the drafting of new codes and regulations. The formal authorization to proceed with these tasks was given with the adoption of Docket BCCP-06-001: Boulder County Comprehensive Plan Revision by the Planning Commission on November 15, 2006. What follows is a brief explanation of how these three themes relate to sustainability.

TDRs and Sustainability

The county has had a voluntary TDR program and regulations in place for the Plains area since 1995. In simple terms, TDRs permit the moving of development rights from lands identified as valuable or important for preservation to other sites that are more suitable for development. Since 1995 approximately 293 TDR certificates have been issued and more than 5,000 acres of agricultural and other important lands have been preserved from development. These lands will remain available for agricultural uses, wildlife habitat, wetlands/riparian corridor protection, open space and other functions that are complementary to the principles and goals of sustainability. Its voluntary nature also means that landowners who own property eligible for the removal of the development rights have a choice in deciding how their lands will be used.

Expanding a TDR program to include a larger geographical area of the county and a greater range of TDR options can promote additional sustainability decisions and outcomes being taken in a region and for a population that has not had those choices before.

Structure Size and Sustainability

The national average for single-family home sizes has increased from 983 square feet in 1950 to 2,434 square feet in 2005.[6] In unincorporated Boulder County new single-family home sizes have gone from an average of 3,881 square feet in 1990 to 5,929 square feet in 2005, far exceeding the comparable national figures. Yet the average household size population in the county has declined during that same period.

The residential sector accounts for 22% of the energy and 74% of the water consumed in the United States while contributing 21% of the county's carbon dioxide emissions.[7] An "average" size home contains 892 million Btu's of embedded energy (equal to 7,800+ gallons of gasoline) in its materials' manufacturing, transportation and assembly.

Not only has the growth in home sizes increased the use of energy and other natural resources, the impacts of these larger structures can negatively affect the rural character of Boulder County. In some areas, smaller cabins and dwellings are being replaced by permanent homes of a substantially larger size. Many residents of the county have an interest in the sustainability of their rural communities' character but find it difficult to do so faced with the high cost of property and the pressure to develop larger homes.

A set of policies that encourage smaller structure sizes, promotes the development of mitigation measures to offset the consumptive impacts of larger homes, discourages the demolition of otherwise habitable dwellings, and promotes the preservation of rural communities with their typically smaller homes, will enable the county to meet many sustainability objectives.

Green Building (Boulder County BuildSmart) and Sustainability

Buildings use over 25% of the world's wood harvest and consume two-fifths of all energy and materials. In addition, 54% of the energy consumption in the United States is directly or indirectly related to buildings and their construction.[8] The average American family produces about 100,000 pounds of carbon dioxide emissions per year and spends about $1,500 on home energy bills. However, average green building consumes 30% less energy than its peers, which means lower costs, lower emissions and better air quality.[9]

Policies promoting the use of green building principles and practices including the preservation of existing structures where feasible, the reuse and recycling of materials from deconstructed buildings that have outlived their habitability, water and energy conservation, and the use of sustainable materials can reduce overall initial consumption of resources as well as introduce significant resource/financial efficiencies and savings into the operation, maintenance and lifetime usability of structures.

Future Sustainability Measures

The Boulder County Comprehensive Plan has served its residents and environment well in providing checks and balances to the relentless consumption of land and the loss of the many types of sustaining resources that those lands provide. There is now new and important work to do, new steps to take. Mahatma Gandhi said, "You must be the change you want to see in the world". This Element is intended to stimulate and accommodate the expansion of sustainability planning throughout the county in partnership with other public institutions and private sector interests willing to bring their talent, expertise and ideas to the table. The county should take a leadership role in promoting these efforts.

Definition, Goals, & Policies

Boulder County Comprehensive Plan Definition of Sustainability

"Sustainability" means the use, development and protection of all our resources in a manner that does not deplete them while enabling the residents of Boulder County to meet their current needs and maintain a fulfilling quality of life without compromising or foregoing the ability of and opportunity for future residents to do the same.

In this context, "resources" includes the land, air, and water along with the inherent value of the natural resources, biodiversity, and life-supporting functions associated with them; energy and materials for development and habitation; the essential rural, low-density character of the unincorporated county; the special historic, cultural and geographic composition of distinct rural communities within the county; the diversity of economic activities and opportunities available to individuals; and the people who live within and continue to shape our developed and natural environment.

Sustainability Action Statement

Sustainable actions are those that support, maintain, conserve and enhance the environmental, economic and social systems on which we depend. Achieving sustainability may demand substantial departures from past and present actions as well as a fundamental commitment to conserving finite resources. Sustainability thus requires a coordinated approach to planning and public policy that involves public participation. Success depends on the widespread understanding of the critical relationship between people and their environment, an appreciation of the interrelationships between the systems that sustain human existence, and the will to make necessary changes.

Sustainability Element Goals

(1) The county recognizes and accepts that weighing individual wants and needs with those of the larger public and society is a complex but essential responsibility of government. Implementing the Comprehensive Plan involves the need to balance competing goals and policies in cases where they cannot be harmonized. With that understanding in mind, Boulder County's land use management tools and practices should be designed to promote decisions and actions supporting outcomes that are consistent with the principles of sustainability.

(2) Boulder County contains a highly diverse and complex mixture of ecosystems, landforms, development patterns, human activities, cultural and economic characteristics and jurisdictions. While the principles of sustainability bind them all together, the county recognizes that the development of programs and initiatives specifically designed to meet needs within different areas of the county may be warranted and appropriate.

(3) Sustainability actions or programs undertaken by the county should address the following factors:

- the origins or causes of wasteful resource practices as well as the harmful effects of such practices;
- the interrelationship of systems and forces that dictate how resources are used, and;
- the social constituencies and partners that should be involved in and served by sustainability efforts.

(4) The county considers global climate change to be a matter of paramount concern. and a potential threat to any sustainability efforts that may be undertaken. In recognition of this concern and to implement the Board of County Commissioners' Resolution 2005-137 regarding a Sustainable Energy Path for Boulder County, the county should take a leadership role in identifying and implementing actions that will lead to a diminishment in the county's contribution to total greenhouse gas emissions from both stationary and mobile activities or sources through an increase in energy efficiency, a reduction in vehicle miles traveled a reduction in waste generation, and other measures.

(5) The preservation of the built and contextual character of Boulder County's diverse rural landscapes, neighborhoods and communities should be fostered and promoted through encouraging participation by the residents and property owners in those areas to identify the characteristics that are of importance to them and assist in development of land use strategies and tools for maintaining those characteristics.

(6) The preservation and viability of the increasingly precious resources of open and rural lands, whether devoted to agriculture, forestry, open space, or plant and wildlife habitat, as well as the sustainability of uses that provide for the long-term preservation of such lands, should be fostered and promoted through innovative regulatory and acquisition programs, public-private partnerships, and public education, outreach and participation.

(7) Conversion and recycling of waste materials into useful products, as well as reductions in the generation of waste streams, are recognized as sustainability actions providing benefits to society and the environment. With the adoption of Resolution 2005-138 by the Board of County Commissioners, the county has committed itself to a Zero Waste program as a guiding principle for all county operations and for outreach and actions on a countywide scale. The policies of the Boulder County Comprehensive Plan should therefore be applied in a manner that furthers achieving a Zero Waste outcome.

(8) Efficient use of renewable resources and the reduction in consumption of non-renewable resources used in construction and its associated infrastructure should be promoted through policy and education, and implemented as appropriate through regulations.

(9) Opportunities for individuals and institutions to design, develop, and apply sustainability practices and techniques should be provided and promoted.

(10) The county's rich and varied natural features, scenic vistas, ecosystems, and biodiversity should be protected from further intrusion, disruption, consumption and fragmentation

(11) To assess progress in meeting the goals and policies for sustainability, the county should develop benchmarks or indicators that will measure successes or shortcomings in these efforts and report them to the public.

(12) The county should continue to engage in conversations and development of partnerships with the public and private sectors through intergovernmental agreements, memoranda of understanding, public outreach and information programs, and other initiatives or relationships to advance the principles and practices of sustainability across the county.

(13) The county should promote and support the use of local products, technologies, expertise, and other locally available resources that contribute to the advancement of these goals.

(14) The county should continue to analyze all county activities and responsibilities for areas where this Element could incorporate policies to implement the sustainability goals, and to add those policies through a public process as appropriate.

Policies

A. Transfer of Development Rights Program

(1) A new voluntary transferable development rights (TDR) program for unincorporated properties, including those located in the unincorporated mountainous (Forestry zoned) portion of the county, may be developed and included into the Boulder County Land Use Code. The program may consider the use of fractions of TDRs to achieve the goals of the BCCP.

(2) This TDR program should consider facilitating the attainment of any or all of the following objectives:

- preserving vacant lands identified in the Comprehensive Plan as having significant environmental, agricultural, visual or cultural values;
- maintaining the character of established rural communities;
- avoiding or reducing the fragmentation and disturbance of important ecological and environmental areas including but not limited to significant plant and wildlife habitats, wetlands and riparian areas, and Environmental Conservation Areas;
- avoiding development in hazardous areas;

- providing incentives for the promotion and retention of a diverse housing stock;
- protecting and securing scenic corridors and vistas;
- promoting the county's goals of achieving sustainable land uses and reducing the impacts of the built environment; and
- encouraging the voluntary participation of landowners.

(3) The TDR regulations should be crafted with a focus on preserving vacant, rural, and environmentally sensitive lands, mitigating the impacts of the built environment, and providing incentives to property owners to participate in the program.

(4) The TDR regulations should also be crafted with a focus on preserving the existing stock of moderately sized, seasonal, and older residences that reflect the diversity and rural character of both mountain and plains homes and communities. Incentives should be provided to owners of these kinds of properties to participate in the program.

(5) A further understanding of how any program that transfers the ability to develop property may affect land values, assessments and taxation will be undertaken in consultation with the County Assessor's Office. This information will be taken into consideration when preparing regulations and implementation tools.

(6) TDR incentives for landowners to voluntarily build smaller, lightly impacting homes or structures on vacant lands should be considered as part of the countywide TDR program.

(7) To assist parties interested in participating in the TDR program the county may consider establishing a bank or information clearing house in order to provide a central location through which the acquisition and sale of development rights may be facilitated or conducted.

(8) Any county bank/clearing house may be authorized to both buy and sell development rights. Transaction revenues received by the bank should be dedicated to furthering the goals of the BCCP through the acquisition of development rights to preserve other appropriate open lands and reduce density in order to mitigate the impacts of future development from the built environment within the county.

(9) In establishing this new TDR program, the county, through an open public process, will develop criteria for establishing sending and receiving sites. Criteria for making such determinations may be incorporated into the Land Use Code and should take into consideration the following attributes:

- Status as a legal building parcel
- Physical characteristics and constraints of the property
- Status as a platted subdivision lot
- The presence of resources, values or features designated through the Boulder County Comprehensive Plan on the property

- Location as an enclave within or adjacent to BCCP-designated Environmental Conservation Areas, United States Forest Service or other publicly held lands, or lands with a conservation easement protecting them from further development
- Legal access to the property
- Location of the property with respect to existing development, including location in an existing rural community or platted subdivision

(10) The county should continue to engage in conversations with its municipalities about their continuing and expanded participation in the county's TDR programs through consideration of options such as a) designating additional potential receiving sites; b) requiring a TDR component for new residential or other development within existing corporate limits or on lands proposed for annexation; c) providing additional county TDR bonuses to landowners who sell their TDRs to developments within municipalities or on municipally-designated receiving sites; or d) in other ways that further both the county's and municipalities' interests in maintaining a distinct difference between municipal and rural areas.

B. Structure Size Limitations

(1) In accordance with the mission statement of the county's Sustainability Initiative and definition of "sustainability" contained in this Element of the BCCP, the county should develop options and tools to promote more sustainable development. Sustainable development would include smaller scale development; development which includes the conservation of lands, materials, energy and other resources in its design, construction and infrastructure; and that preserves the rural character of the county as well as the distinctive character of the community in which development may be located.

(2) An analysis should be conducted to determine whether the regulation of structure size is appropriate to meet the stated goals of the Comprehensive Plan. As a part of this analysis the county may consider:

- the level of regulation that would be appropriate for different communities, regions or locations within the unincorporated areas relative to existing development patterns, established rural character, scenic/natural/resource values, visual impacts, presence of significant physical constraints or natural hazards, availability of services and facilities, proximity to adopted Municipal Influence Areas, and other factors;
- the appropriate mitigation methods or actions which could be taken by a property owner in order to mitigate any impacts associated with development; and
- the consumption of energy and materials associated with larger structures and what caps or requirements may be applied to offset, constrain or reduce that usage.

(3) In conducting a structure size limitation analysis, special attention should be paid to the built, historic and contextual character of existing established rural communities and neighborhoods. Where appropriate or requested by residents of these communities and neighborhoods, a designation of "Special Community Character Area," a Rural Conservation District overlay zoning, or other appropriate categorization may be applied for purposes of preparing tailored guidelines, policies and regulations to address proposed changes to the scope and scale of development in the designated area.

C. Green Building

(1) Green building techniques and practices that conserve energy, water, materials, land area and other resources and divert construction materials from land disposal through recycling and reuse should be incorporated into the county's regulations and codes. A points system or other quantifiable/graphic system should be developed to provide those applying for permits a clear and easy to understand guide to the requirements for meeting green building standards.

(2) Any program developed by the county should strike an effective balance between incentives and mandates to work towards an ultimate goal of "zero energy" construction throughout the county.

(3) The county may link any green building program it adopts to regulations addressing structure size, Transfer of Development Rights, or other sustainability measures, as deemed appropriate through further study of these concerns and as developed through the public regulatory amendments process.

(4) In developing a green building program the county should consider and identify minimum requirements that need to be met as well as incentives for exceeding those requirements. The program will offer property owners flexibility and options in determining which materials and techniques meet their needs and desires for complying with the standards set by regulations and codes.

(5) Information and resources about green building requirements and incentives contained in the county's codes and regulations should be distributed to all county departments that have some review or approval authority over land use proposals requiring permits from the county's Land Use Department.

(6) Renovation of existing structures, as opposed to replacement of that structure with a new one, should be encouraged in order to limit use of new primary and secondary resources and to conserve, reuse and recycle materials otherwise destined for disposal. Remodeling and retrofitting otherwise structurally sound buildings with more sustainable materials, techniques, and systems should be promoted.

(7) If renovation of an existing structure is not practicable or possible, that existing structure should be deconstructed such that the maximum amount of material is either reused in the new structure, resold or donated for reuse, or recycled, with the goal of diverting material from being sent to the landfill. Demolition of existing structures should only occur in extreme circumstances.

(8) The county shall provide information to the public and technical assistance regarding green building techniques to persons applying for a land use activity that requires issuance of a building permit. The county shall take a leadership role in making this information broadly available to the public for their use in promoting the values and principles of sustainable development and green building.

(9) Any green building program adopted by the County will include a method for applicants to propose alternative techniques, systems, materials and construction methods that can meet or exceed the required standards.

(10) In order for Boulder County's green building program to be successful, the county will have to stay informed and knowledgeable about changes in green building practices and principles and must make that information available to both applicants and the public.

(11) While the county's green building program will be appropriate to the type of development seen in the unincorporated area of Boulder County, it will strive to be consistent with green building programs adopted by the municipalities within the county to insure ease of use by the public. Boulder County will in turn provide assistance to any municipality intending to develop a green building program with consistency and compatibility being the desired outcome.

Footnotes:

1 World Commission on Environment and Development. United Nations. Convened in 1983.

2 "The Definition of Sustainability Depends On Who Is Speaking". Andy Duncan. Pg. 3. Oregon State University Extension Service Publication EM 8784. November 2001.

3 Goals A. 1 and A. 3, "Design of the Region", *Boulder County Comprehensive Plan*. March 22, 1978.

4 Resolutions 2005-137 and 138. November 22, 2005.

5 http://www.presidentsclimatecommitment.org May, 2007.

6 Data from the National Association of Homebuilders.

7 US Green Building Council, LEED for Homes Pilot Rating System. January, 2007.

8 Telluride Green Building Resources Guide.

9 Center for ReSource Conservation (http://www.conservationcenter.org)

As the county has experienced significant changes in demographics and travel patterns since the 1995 update to the Boulder County Comprehensive Plan (BCCP) Transportation Element, the world has likewise experienced changes. Boulder County, along with many others, has developed a greater awareness of the impacts individual and collective actions have on the world and local environments. Safe and efficient travel is necessary to participate in life's activities. Yet, from an economic, social, and environmental perspective, peoples' travel needs can no longer be met by roads and cars alone. New ways of providing safe, reliable, and convenient travel options that will be available to both current and future generations are necessary.

Implementation of the Boulder County transportation system must be consistent not only with this element of the Comprehensive Plan, but also with the goals and policies of the entire BCCP. Drawing upon the principles and definitions identified in the BCCP Sustainability Element, the 2009 BCCP Transportation Element recognizes the need to develop policies and practices that create a sustainable transportation system. It centers itself on the three "pillars" of sustainability: environment, social equity, and economy. The goals, objectives, and policies included in the BCCP Transportation Element translate these three components of sustainability into action and help the County achieve its *vision* to provide high quality, safe, sustainable, and environmentally responsible transportation to meet the mobility and access needs of all users.

Goal 1 - Ensure Effective and Efficient Management of the Existing Transportation System. Manage and maintain existing transportation infrastructure and services in a cost-effective manner.

Goal 2 - Minimize Environmental Impacts. Minimize the negative environmental impacts of the transportation system such as air pollution, green house gas (GHG) emissions, noise pollution, water pollution, land and wildlife habitat fragmentation, land disturbance, and resource consumption.

Goal 3 - Ensure Safety for All Modes. Provide for transportation system development and operations that result in safe and secure travel by all modes and that enable prompt and effective emergency response.

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Goal 4 – Support a Healthy and Sustainable Economy. Develop a transportation system that supports a robust economy and increased resiliency to economic fluctuations.

Goal 5 – Ensure Equitable Access to the Transportation System. Ensure that adequate transportation exists for all users regardless of age, income, or ability.

Goal 6 – Enhance County Identity and Community Character. Promote a transportation system that preserves, highlights, and enhances the County's diverse rural character and the history and culture of its unique communities.

Objectives and Policies

A. Provide a Multimodal Transportation System. Plan, design, construct, manage, and maintain the Boulder County transportation system to be efficient, safe, convenient, and appealing for pedestrians, bicyclists, transit riders, motorists, and other users. Provide convenient and affordable mobility options for all users irrespective of ability, income, or personal vehicle ownership.

i. Identify Transportation Corridors. Identify and classify transportation corridors based on the function and role they serve in the County transportation system.

ii. Design Complete Corridors. Develop County transportation standards that assign specific design treatments for transit, pedestrian, bicycle, and motor vehicle facilities for each transportation corridor classification. Develop standards for new transportation technologies as they become available and anticipated for common use.

iii. Enhance the Bicycle and Pedestrian Network. Expand the bicycle and pedestrian network to provide safe, appealing, and convenient connections throughout the County for travel and recreation.

iv. Develop a Regional Trails Network. Implement a Countywide Regional Trails Plan to provide off-road travel and recreational opportunities for pedestrian, bicycle, equestrian, and other non-motorized uses, where feasible and warranted.

v. Establish Connections to Development. Provide transit, pedestrian, bicycle, trail, and motor vehicle connections in developments to residential and employment areas, commercial centers, recreational [illegible] and facilities.

[illegible]

vii. Accommodate Freight. Identify primary travel corridors for freight vehicles. Ensure that County transportation standards accommodate freight or other long wheelbase vehicles in transportation facility design.

B. Facilitate Regional Collaboration and Coordination. Work closely and proactively with the communities within the County and other local, state, and regional agencies to develop a sustainable land use and transportation system.

i. Integrate Transportation and Land Use Planning. Coordinate land use and transportation planning so that urban development is located in urban areas and near appropriate transportation corridors and services.

ii. Facilitate Project Collaboration. Promote efforts to collaborate on the design and implementation of local and regional projects. Initiate activities that bring together different communities, agencies, and other stakeholders to develop creative ways to meet County goals and those of others.

iii. Encourage Alternative Transportation. Support efforts by local communities that decrease single-occupant vehicle travel on the Countywide transportation system.

iv. Connect Communities. Focus County services and resources on enabling seamless multimodal travel between urban areas within the County and region.

C. Optimize County Facility Management and Maintenance. Maintain and operate County transportation facilities at the highest level of quality, commensurate with available resources and consistent with the goals of the Comprehensive Plan. The County's investment in the existing transportation system shall be protected by emphasizing maintenance of existing facilities.

i. Prioritize Travel Corridors. In order to benefit the most people, and connect all parts of the County, give priority to improving mobility in, and the maintenance and rehabilitation of, the County's arterial and collector transportation corridors.

ii. Prioritize Operations Over Construction. Implement operational improvements to improve mobility in a corridor before initiating construction-based solutions. Reduce the need for new capital improvements through investments in operations, demand management strategies, and system management activities that improve the efficiency of the current system.

iii. Ensure Sustainable Design. Design all new County facilities to minimize future maintenance costs and environmental impacts, and to encourage the use alternative modes to the degree feasible.

... Maintain Bicycle and Pedestrian Facilities. Maintain bicycle and pedestrian facilities on County owned or controlled right-of-way in a safe condition.

... Monitor Gravel Roads. Consider the paving of County owned roads when the minimum level of 500 vehicles per day, average daily traffic, is attained. In making paving decisions, evaluate factors such as safety, costs, residential density, traffic volume, traffic composition, air quality levels and mitigation, and compliance with applicable regulations. In addition, consider the impact of paving on health, the rural character of the County, the nature of the surrounding community, potential effects on growth, public input, and other goals of the Comprehensive Plan.

vi. Require Appropriate Right Of Way Dedications. Require new development and redevelopment to dedicate their fair share of right-of-way for any County transportation facility shown on an adopted transportation plan on which the development abuts, consistent with the right of-way widths specified on the transportation plan.

vii. Encourage Right of Way Annexation. Encourage local communities to annex the full right-of-way when the adjacent land is annexed.

D. Move People. Implement a transportation system that moves people safely and effectively independent of an assumed mode of travel.

i. Reduce Single-Occupant-Vehicle Travel. Reduce single-occupant-vehicle (SOV) travel and shift SOV travel to off-peak periods through a variety of programs and techniques, including Transportation Demand Management (TDM).

ii. Increase Person Capacity. Increase the overall person-carrying capacity of the transportation network through the efficient use of existing rights-of-way.

iii. Make Balanced Multimodal Decisions. When considering proposed improvements, use a person-based, rather than vehicle-based, evaluation to balance transit, pedestrian, bicycle, and vehicle mobility.

iv. Facilitate Active Living. Create a transportation system that enables active and healthy lifestyles by providing safe and attractive opportunities to walk and bike as part of everyday living.

E. Minimize Reliance on Fossil Fuels. Foster a transportation system that reduces demand for and reliance upon petroleum.

i. Reduce Vehicle Miles Traveled. Set goals for vehicle miles traveled (VMT) per capita reductions for 2015, 2020 and 2030. Encourage incorporated areas inside the County to adopt similar goals.

ii. Use Energy Efficient Transportation Technologies and Fuels. Encourage public use of renewable energy and energy-efficient vehicle technologies and plan for related infrastructure needs. Participate in efforts to decrease use of GHG-intensive fuels and increase vehicle fuel efficiency.

iii. Use Sustainable Practices. Use resource-efficient materials and equipment to the greatest extent feasible in the construction, maintenance, and operation of County transportation facilities.
iv. Manage Parking. Develop parking management policies for public and private facilities that encourage the use of alternative modes.

F. Provide Safe and Environmentally Compatible Transportation Improvements. Require all transportation improvements to uphold the goals of the Comprehensive Plan.

i. Manage Rural Roads to Preserve Rural Character. Explore reasonable means to retain necessary existing, unimproved or unmaintained public roads in a relatively undeveloped state to:

- prevent the over-intensive use of sensitive or remote lands,
- preserve the County's valued rural character,
- minimize adverse scenic and environmental impacts,
- avoid inappropriate and costly road maintenance activities in environmentally fragile areas, and
- discourage development in natural hazard areas or other dangerous locations where unsafe conditions may be exacerbated or emergency services not practically or safely available.

Methods to address these concerns may include revising *Boulder County Road Standards and Specifications*, limiting public funding or authorization for maintenance of unimproved roads, and adopting zoning provisions to balance remote rural land uses with the absence of developed vehicular access in such areas.

ii. Minimize and Mitigate Impacts. Ensure that transportation system facilities and access improvements, which may include sections on public and/or private lands, are designed, constructed, and maintained to minimize impacts to the natural environment, including scenic views and rural character, and to the surrounding community. All improvements shall reasonably mitigate the adverse impacts resulting from them.

iii. Prohibit Improvements with Unacceptable Impacts. After considering reasonable mitigation, transportation system facilities and access improvements may be prohibited. This may include improvements on public and/or private lands that cause unacceptable impacts to the natural environment, including scenic views and rural character, or to the surrounding community; that unreasonably compromise public safety or emergency response; or that facilitate development incompatible with the goals of the Comprehensive Plan.

iv. Promote Public Safety. Promote the safety of transportation system users and the public as a core parameter when designing, constructing, or approving transportation facilities. Coordinate with local fire districts, emergency responders, and other agencies to implement appropriate transportation public safety measures.

v. Manage Access to the Transportation Network. Implement an access management program that systematically manages the number, location, spacing, design and operation of driveways, median openings and road connections to ensure the safety and mobility of all road users, and to minimize environmental impacts.

vi. Provide Implementation through the Transportation Standards. The *Boulder County Road Standards and Specifications* shall reflect the goals of the Comprehensive Plan. All transportation improvements shall be designed and constructed consistent with the *Boulder County Road Standards and Specifications* and the *Boulder County Land Use Code*.

G. Secure Funding in an Equitable Manner. Explore multiple funding sources to serve citizens and meet Countywide transportation needs in a fair and equitable manner.

i. Allow for Special Assessments. Allow for special assessments to fund transportation improvements to the properties that specially benefit from such improvements such as subdivisions or commercial, institutional, private recreational, or other benefited development. Funding mechanisms may include special assessments or other appropriate revenue-generating programs.

ii. Create Funding Partnerships. To improve, maintain, and insure the integrity of the transportation system, pursue to the extent possible funding partnerships and creative funding sources.

iii. Explore User Fees. Explore appropriate user fee programs that take into account the full costs of travel, including immediate and long-term impacts to facilities and the environment, to help fund transportation enhancements.

iv. Require Appropriate Off-site Improvements. Require property owners or developers to provide appropriate off-site transportation improvements that are necessitated by or reasonably related to the impacts of new development.

H. Foster a Community Connection. Preserve, highlight, and enhance the County's rural character, environment and rich history.

i. Context Sensitive Design. Consider the surrounding natural environment, local community, scenic vistas, and landscape features, through aesthetic treatments and the context-sensitive design of transportation facilities.

ii. Encourage Community Involvement. Recognize that public feedback is an important source of information for decisions about the development of transportation facilities and services. Work collaboratively with the public by providing meaningful opportunities to be involved in decision making processes. Make decision-making transparent by sharing information and encouraging discussion.

iii. Preserve View Corridors. Prevent the disruption of scenic views by transportation improvements. Promote overlooks, trails, and turnouts on recreational routes and in unique scenic areas.
iv. Ensure Natural Preservation. Make every effort to preserve mature trees, landscape plantings, and other elements of the natural environment during the design, construction, and maintenance of transportation improvements.
v. Preserve Cultural and Historic Resources. Consider the cultural and historical context of the surrounding area when planning and designing transportation improvements. Work with residents of townsites, such as Eldorado Springs, Allenspark, Raymond/Riverside, Gold Hill, and Eldora and other distinct communities, to identify important aspects of community character that should be preserved and enhanced by transportation improvements.
vi. Manage Public Rights-of- Way. Manage and preserve existing public rights-of-way for current and future community benefit. Vacate public rights-of-way only when it no longer plays a role in the present or planned transportation network nor serves any other public interest.

I. Ensure Transportation System Access for Low-Income, Elderly, and Mobility-Impaired Populations. Work to create a transportation system that provides affordable and convenient transportation options for all income levels and special mobility populations.

i. Promote Affordable Transportation. Support programs that reduce the financial burden on and increase affordable transportation options for low-income populations.
ii. Serve the Mobility-Impaired. Support coordinated programs that provide safe, accessible, and affordable transportation options for people with limited mobility, including older adults and people with disabilities.

Glossary

Maintenance: Snow removal, sweeping, asphalt patching, crack filling, road grading, cleaning of culverts and roadside drainage, and repair or replacement of traffic signs and pavement markings.

Rehabilitation: Reconstruction, asphalt overlay, and surface treatments.

ATTACHMENT E

RESOLUTION 93-184

A RESOLUTION APPROVING BOULDER COUNTY LAND USE DOCKET #DC-93-5: TEXT AMENDMENTS TO THE BOULDER COUNTY ZONING RESOLUTION TO ADD ARTICLE 18D: DEVELOPMENT PLAN REVIEW FOR OIL AND GAS OPERATIONS

WHEREAS, pursuant to Article 27 of the Boulder County Zoning Resolution, and C.R.S. §§ 30-28-112 and -116, as amended, the Board of County Commissioners of Boulder County ("the Board") is authorized to amend the text of the Boulder County Zoning Resolution ("the Zoning Resolution") in accordance with the procedures set forth in those provisions; and

WHEREAS, the purpose of the amendments which are the subject of the above-referenced Docket ("the Docket"), a copy of the approved text of which is attached to and incorporated into this Resolution as "Exhibit A" ("the Subject Amendments"), is to enact regulations establishing an administrative development plan review process for oil and gas operations occurring in unincorporated Boulder County, so that proposed oil and gas operations can proceed while minimizing their adverse impacts on affected and adjacent properties, public roadways, plant and wildlife habitats, public health and safety, and the other legitimate concerns of county zoning addressed in the Subject Regulations, all as further described in the Boulder County Land Use Department Planning Staff's Memorandum and written recommendation to the Board dated September 28, 1993, with its attachments ("the Staff Recommendation"); and

WHEREAS, on August 18, 1993, the Boulder County Planning Commission ("the Planning Commission") held a duly-noticed public hearing on the Docket, and recommended approval of the Docket, with certain modifications as specified on the record of the Planning Commission's hearing, and certified the Docket for action to the Board; and

WHEREAS, on September 28, 1993, the Board held a duly-noticed public hearing on the Docket ("the Public Hearing"), at which time the Board considered the Staff Recommendation and the recommendation of the Planning Commission, and also considered the documents and testimony presented by the Land Use Department Planning Staff and County Attorney's Office, as well as by approximately 10 members of the public, including County property owners, representatives of the oil and gas industry, and others; and

WHEREAS, based on the Public Hearing the Board finds that the Docket, with the specified changes which it determines to have been accurately incorporated into Exhibit A, and which it further determines do not constitute a substantial change in or departure from the text certified by the Planning Commission, meets the criteria for text amendments set forth in § 27-201 of the Boulder County Zoning Resolution, and, therefore, should be approved, as further set forth below.

NOW, THEREFORE, BE IT RESOLVED that the Subject Amendments (Exhibit A hereto), which are the text amendments accurately redrafted from the Staff Recommendation to include the modifications specified by the Board at the Public Hearing, **are hereby approved** for incorporation into the Boulder County Zoning Resolution, all as set forth in Exhibit A, to be **effective beginning on October 1, 1993.**

BE IT FURTHER RESOLVED that the County Land Use Department shall charge a fee of $400.00 for each development plan review application filed pursuant to the Subject Amendments, which is a reasonable amount reflecting the anticipated costs of reviewing and approving development plan applications, and which shall be a flat fee administered according to the Board's Resolution 92-155 governing Land Use Department application fees.

A motion to approve the Subject Amendments (Exhibit A hereto) at the Public Hearing, as set forth above, was made by Commissioner Stewart, seconded by Commissioner Hume, and passed by a 3-0 vote of the Board.

ADOPTED at a duly convened and noticed public business meeting of the Board on this 30th day of September, 1993, nunc pro tunc the 28th day of September, 1993.

BOARD OF COUNTY COMMISSIONERS OF BOULDER COUNTY:

Homer Page, Chair

Ronald K. Stewart, Vice Chair

Sandy Hume

ATTEST:

Clerk to the Board

ATTACHMENT F

4-900 Development Plan Review for Oil and Gas Operations

4-901 Purpose

A. This development plan review is an administrative review procedure for oil and gas operations considered likely to significantly impact surrounding land uses and infrastructure needs and demands.

B. Development plan review should occur before a full set of working drawings has been completed for submission as part of an application for a building permit. As part of the review procedure, the applicant may be required to submit a development plan indicating building siting and layout, buffering, landscaping, access, lighting, and other specific data.

C. Development plan review is not intended to mandate aesthetics of design, nor is it intended to alter basic development standards such as floor area, density, height, and setbacks.

D. Site Plan Review is not required for projects undergoing a Development Plan Review.

4-902 Development Plan Review Requirements

A. A development plan must be submitted for the site of any oil and gas operation proposed to be located in the unincorporated area of Boulder County. Development plan approval is required prior to the issuance of any County building permits, or associated grading, access, or floodplain development permits, for the oil and gas operation. However, oil and gas operations which may not require a building or other associated County permit must still obtain development plan approval under this Article.

4-903 Application

A. The application for development plan review shall be made on application forms available at the County Land Use Department. Such forms shall have all spaces completed, designate all agents, exhibit all owner or operator signatures, and be accompanied by required fees and all materials required within these regulations.

4-905 Referral and Review by Director

A. The Director will coordinate the review of the development plan application. Upon the filing of a complete application for development plan review, the Director shall promptly forward one copy to the County Transportation, Public Health, and Parks and Open Space Departments; the appropriate fire district or County Sheriff; the surface owners of the site; and any adjacent municipality for comment.

1. Referral comments on the proposed development shall be returned to the Director no later than 18 days from the date of application.
2. In addition, the Director shall notify the adjacent property owners within 1,500 feet and post a sign on the site within seven days after receiving the application for development plan review. Both the notice and the sign shall indicate that a development plan review application has been made, and the phone number of the Land Use Department where information regarding the application may be obtained.
3. Any determination by the Director to approve or conditionally approve a development plan application must be in writing and mailed or otherwise provided to the applicant no later than 28 days after the date on which the development plan application is filed. Failure to make a determination on the application within this time period shall result in the application being considered approved and the applicant's building permit or associated grading, access, or floodplain development permit being processed.

4-906 Development Plan Review Standards and Criteria for Approval

A. A development plan shall be approved or conditionally approved in accordance with the following standards and criteria.

1. Wells and any associated oil and gas operation facility or structure requiring a building permit shall be set back a minimum of 350 feet from any occupied building or occupied building permitted for construction, and a minimum of 150 feet from any public right-of-way.
   a. A smaller set back may be granted by the Director if the surface owner agrees and if there is no adverse impact on adjacent properties created by the reduced setback. No reduction in setback, however, shall violate the setbacks of the applicable zoning district in which the operation is located, or the major road setbacks of Section 7-1403.
   b. If the OGCC spacing rules require location of wells at a distance less than these minimum requirements, the applicant shall apply for a variance with the OGCC to meet the County's setback requirements. If such a variance is not granted, the setbacks specified in these regulations shall be complied with to the maximum extent possible. The Director may impose additional mitigation measures as necessary to protect the public health, safety, and welfare where these setbacks cannot be met.
2. Any equipment used in drilling, completion, or production of a well must comply with Section 25-12-103, C.R.S., Maximum Permissible Noise Levels.
   a. For any well which does not comply with the required setback or where noise from the site will have a substantial impact in adjacent areas, additional noise mitigation may be required. One or more of the following additional noise mitigation measures may be required:
      (i) acoustically insulated housing or covers enclosing any motor or engine;
      (ii) screening of the site or noise emitting equipment by fence or landscaping;
      (iii) a noise management plan specifying the hours of maximum noise and the type, frequency, and level of noise to be emitted; and
      (iv) any other noise mitigation measures required by the OGCC.
   b. All power sources used in pumping and production operations shall have electric motors or muffled internal combustion engines.

4-907 Conditions of Approval

A. If the Director finds in reviewing a development plan application that the application meets the applicable standards set forth above, the Director shall approve the site plan, and the applicant may continue the processing of the building or other associated County permit application, or otherwise engage in the proposed oil and gas operation.

B. If the Director finds that the application does not meet an applicable standard or standards, the application shall be approved with appropriate reasonable conditions imposed to avoid or minimize the significant adverse impacts of the development. Such conditions may include, but are not necessarily limited to, the relocation or modification of proposed access roads, facilities, or structures; landscaping, buffering, or screening; posting of adequate financial guarantees; compliance with specified surface reclamation measures; or any other measures necessary to mitigate any significant impact on surrounding properties and public infrastructure.

C. Once the Director issues a determination on the development plan, the determination shall not be final, and no permit based upon the determination shall be issued, for 14 calendar days after the date of the determination, in order to allow time for the applicant to appeal, or for the Board of County Commissioners to call up the determination for further review, pursuant to Sections 4-908 and 4-909 of this Article. The Director's determination shall become final, and permits applied for in accordance with the determination may be issued, only after the expiration of this 14-day period, and only if the determination is not reviewed and acted upon by the Board of County Commissioners at a subsequent appeal or call-up hearing.

4-908 Applicant's Right of Appeal of Conditional Approval

A. In the event that the Director conditionally approves a development plan application, the applicant shall be entitled to appeal the approval to the Board of County Commissioners. The applicant must file an appeal for this purpose with the Director in writing no later than seven calendar days after the date of the Director's determination. If the determination is mailed to the applicant, three additional days for mailing shall be added to the time for filing an appeal.

B. The Board shall review the Director's determination at a public hearing held as soon as practical after the date of the determination. Prior written notice of this hearing shall be provided to the applicant and to property owners within 1,500 feet, and shall be published as part of the Board's agenda in a newspaper of general circulation in Boulder County.

C. At the public hearing the Board shall consider evidence related to the Director's determination which may be presented by County staff, the applicant, or interested members of the public. The Board shall not be limited in their review to the subject of the appeal, but may review any aspect of the development plan application. Based upon this evidence the Board may affirm the Director's determination, or may approve the development plan with modified, altered, deleted, or added conditions in accordance with Section 4-906 of this Article. No County building, grading, access, or floodplain development permit shall be issued, or the applicant otherwise allowed to proceed with the operation, until the Board acts on the Director's determination at the public hearing, and approves the development plan with or without the addition or modification of conditions.

4-912 Enforcement

A. In addition to any other remedy authorized under this Resolution to enforce the provisions of this Article, the Director shall be entitled to draw on any financial guarantee provided by an applicant pursuant to this Article, if the applicant violates any term or condition of an approved development plan. If the Director has reason to believe that a violation of an approved development plan for which a financial guarantee has been provided has occurred, the Director shall provide written notice to the applicant describing the violation, and stating a reasonable time within which the violation must be corrected. If, within that time period, the applicant has not either corrected the violation or filed a written appeal with the Board of County Commissioners, the Director shall be entitled to enter upon the site to take any reasonable measures to correct the violation, and may draw on the financial guarantee to cover the costs of corrective measures.

B. If the applicant files a timely appeal with the Board of County Commissioners, the Board shall schedule a hearing on the appeal at the soonest possible time of which the applicant shall receive reasonable prior notice. If the Board confirms at the hearing that the violation has occurred and has not been corrected, the Board in its discretion may give the applicant additional time to correct the violation, or may specify the time at which the Director may take appropriate action to have the violation corrected and draw on the financial guarantee to cover the costs of corrective measures.

C. To insure the Director's ability to enforce the provisions of any approved development plan, the Director shall not release any financial guarantee provided under this Article for an individual development plan, until the Director confirms that all operations have been completed and all provisions of the plan complied with. The Director shall not release any blanket bond or other blanket financial guarantee provided under this Article unless he is satisfied that the person providing the bond has adequately declared its intention to conduct no further oil and gas operations in Boulder County in the foreseeable future. The Director shall also be empowered to release a financial guarantee if a successor to an operator provides satisfactory guarantees in accordance with this Article.

4-913 Amendments to a Development Plan

A. Any proposal to change a development plan approved under this Article shall require an application to the Land Use Department to determine whether the proposed change constitutes a substantial modification to the approved plan. If the Director determines that the change constitutes a substantial modification, no such change shall be allowed to proceed until an application to amend the approved development plan is filed with the Director and approval granted in accordance with this Article. The applicant or its successor may appeal the Director's decision to require an amended development plan to the Board of County Commissioners, provided that any such appeal shall be in writing and shall be filed with the Land Use Director no later than 30 days following the date of the Director's decision to require a development plan amendment.

4-508 Mining Uses

A. Limited Impact Open Mining

1. Definition: The extraction of earth materials by mining directly from the exposed deposits or other materials where mining operations affect less than ten acres of land within a parcel and extract less than 70,000 tons of earth materials, and which (a) proposes to export material in excess of 500 cubic yards off the parcel on which the mining occurs, (b) has operations that exceed five consecutive days or 14 days total, and/or (c) utilizes blasting.
2. Districts Permitted: By limited impact special review in all districts
3. Parking Requirements: To be decided through special review
4. Loading Requirements: To be decided through special review
5. Additional Provisions:
   a. Exceptions to this use include:
      (i) The removal of decorative building materials naturally exposed at the surface of the earth.
      (ii) The extraction of sandstone where such extraction does not exceed a total of 3600 tons in any 12 month period. For the purposes of this provision, sandstone is defined to be a hard, well-bedded sedimentary rock known locally as the Lyons sandstone. This material is principally used as a building stone; however, included in the definition of sandstone are waste materials, removed in the process of exposing/extracting usable building stone.
      (iii) Excavations below finished grade for basements and footings of a building, retaining wall or other structures authorized by a valid building permit, or authorized by a grading permit.
   b. The term limited impact open mining includes, but is not limited to, such processes as open cut mining, open pit mining, strip mining, quarrying and dredging.
   c. This use shall also be granted and maintain all applicable local, state, and federal permits.

B. Oil and Gas Drilling or Production, on subdivided land

1. Definition: Any operation utilizing equipment which advances a bore hole into substrata for the purpose of discovery, development, and/or production of oil or gas.
2. Districts Permitted: By development plan review for oil and gas operations in all districts (4-900)
3. Parking Requirements: None
4. Loading Requirements: None
5. Additional Provisions: None

C. Oil and Gas Drilling or Production, on unsubdivided land

1. Definition: Any operation utilizing equipment which advances a bore hole into substrata for the purpose of discovery, development, and/or production of oil or gas.
2. Districts Permitted: By development plan review for oil and gas operations in all districts (4-900)
3. Parking Requirements: None
4. Loading Requirements: None
5. Additional Provisions: None

D. Open Mining

1. Definition: The extraction of earth materials by mining directly from the exposed deposits or other materials. Exceptions to this use include those operations which fit the definition of limited impact open mining and excavations below finished grade for basements and footings of a building, retaining wall or other structures authorized by a valid building permit. The term open mining includes, but is not limited to, such processes as open cut mining, open pit mining, strip mining, quarrying and dredging.
2. Districts Permitted: By special review in F, A, GI, and MI
3. Parking Requirements: To be determined through special review
4. Loading Requirements: To be determined through special review
5. Additional Provisions:
   a. This use is not required to be located on a building lot, or comply with the minimum lot size requirement for the district in which it is located.
   b. This use shall also be granted and maintain all applicable local, state, and federal permits.
   c. Processing of the mined material (to the extent approved through the special use process) may occur on the parcel where the mining is situated, or on a parcel owned or leased by the mining parcel owner, lessee, or operator provided the parcel is located within 1,000 feet of the mining parcel.

18-177 Manufactured Home Park

A parcel upon which two or more manufactured homes, occupied or intended to be occupied for dwelling purp are located. *also see — Manufactured Home Park — Article 4-507 Lodging Uses*

18-178 Manufactured Home Space

A portion of ground within a manufactured home park designated for the permanent location of one manufactu home.

18-178A Minor Modification

A change which does not result in increased impacts or a greater intensity of either the uses of the development the activity under consideration.

18-178A Mountainous Areas

The area west of Colorado Highway 93 from its intersection with the south county line to the City of Boulder, west City of Boulder city limits, west of US 36 from City of Boulder to Colorado Highway 66, and west of the St. Vrain Su Canal from Colorado Highway 66 to its intersection with the north county line.

18-179 Moveable Objects

Items not anchored to the ground that are subject to being transported by water, including trailers, automobiles, manufactured homes, tanks, trash dumpsters, lumber, or other materials.

18-179A Municipal Separate Storm Sewer System (MS4)

Publicly-owned facilities by which storm water is collected and/or conveyed, including but not limited to any road drainage systems, municipal streets, gutters, curbs, catch basins, inlets, piped storm drains, pumping facilities, rete and detention basins, natural and human-made or altered drainage ditches/channels, reservoirs, and other draina structures.

18-180 OGCC

Oil and Gas Conservation Commission of the State of Colorado.

18-181 Oil and Gas Operation

Any structure, facility, or activity which is constructed on or disturbs land in association with oil or gas drilling, production, or waste treatment and disposal, including but not necessarily limited to wells, tanks or tank batteries, access roads for ingress and egress, and pipelines.

18-181A Opaque

Opaque means that a material does not transmit light from an internal illumination source. Applied to sign backgrounds, means that the area surrounding any letters or symbols on the sign either is not lighted from within, allows no light from an internal source to shine though it.

Article 18D
Development Plan Review
for Oil and Gas Operations

18D-101 PURPOSES The Board of County Commissioners recognizes that the State of Colorado has an interest in fostering the efficient and fair development and production of oil and gas resources pursuant to the authority provided in the Oil and Gas Conservation Act. Boulder County has an interest in protecting the health, safety, and welfare of the citizens, wildlife and natural ecosystems of the County through the use of the County's zoning powers to regulate land uses and their impacts on surrounding properties, the community at large, and the resources and values identified in the *Boulder County Comprehensive Plan*.

The Colorado Supreme Court has recognized that oil and gas development is a matter of mixed state and local concern, and that counties have the authority under their land use powers to regulate in this area so long as local regulation does not materially impede or destroy the State's interest. It is the purpose of these regulations to strike this balance, and impose reasonable zoning regulations on oil and gas operations which may supplement or enhance, but do not materially impede, the State's interest under the Oil and Gas Conservation Act.

The development plan review process and requirements under this Article are intended to allow oil and gas development to occur in Boulder County, while protecting the health, safety, and general welfare of the public within the scope of the County's zoning powers. This protection is accomplished through an administrative review procedure for oil and gas operations to evaluate the land use impacts of that operation on the development site, surrounding land uses, resources and values identified in the Comprehensive Plan, and infrastructure needs and demands. Development plan review should occur before the operator has obtained an Oil and Gas Conservation Commission permit.

18D-102 DEFINITIONS Where technical terms related to oil and gas drilling or production are not otherwise defined in this Resolution, they shall have the meanings given to them in the Oil and Gas Conservation Act (Article 60 of Title 34, C.R.S.) or Oil and Gas Conservation Commission rules.

(1) "OGCC" means the Oil and Gas Conservation Commission of the State of Colorado.

(2) "Oil and gas operation" means any structure, facility, or activity which is constructed on or disturbs land in association with oil or gas drilling, production, or waste treatment and disposal, including but not necessarily limited to wells, tanks or tank batteries, pits, access roads for ingress and egress, and pipelines.

(3) The "site" is that area surrounding an oil and gas operation.

18D-200 DEVELOPMENT PLAN REVIEW REQUIREMENTS A development plan must be submitted for the site of any oil and gas operation proposed to be located in the unincorporated area of Boulder County. Development plan approval is required prior to the issuance of any County building permits, or associated grading, access, or floodplain development permits, for the oil and gas operation. However, oil and gas operations which may not require a building or other associated County permit must still obtain development plan approval under this Article.

18D-201 APPLICATION The application for development plan review shall be made on application forms available at the County Land Use Department. Such forms shall have all spaces completed, designate all agents, exhibit all owner or operator signatures, and be accompanied by required fees and all materials required within these regulations.

18D-202 DEVELOPMENT PLAN SUBMISSION The applicant shall submit eight copies of the proposed development plan with the completed application form to the Land Use Department.

The following information must be submitted with a development plan application:

(1) A vicinity map indicating the section, township, and range of the site, and its relation to surrounding public roads and municipal boundaries.
(2) A detailed drawing of the site at a scale of 1 inch to 100 feet, including the following:
   (a) the dimensions of the site, indicating area in square feet and acres, and the area of the site to be disturbed;
   (b) the location of all structures, flowlines or pipelines, tanks, wells, pits, and any other oil and gas operation facilities or equipment;
   (c) existing and proposed roads within the site as well as ingress and egress from public or private roads;
   (d) lease lines, if applicable;
   (e) on-site features such as floodplain designations, water courses, drainage, utility lines and easements, ditches, wetlands or aquatic habitat, significant plant ecosystems, wildlife habitat and migration routes, geologic features, vegetative cover, dams, reservoirs, mines, and known cultural resources;
   (f) existing and proposed topography of the site at intervals of five feet; and
   (g) existing and proposed vegetation, buffers, berms, fences, and other screening devices.
(3) Diagram showing adjacent properties and the approximate location of buildings and their uses within a distance of 350 feet of any proposed structure, facility, or area to be disturbed. This may be drawn at a smaller scale than the site plan.
(4) Copies of application forms for all applicable local, state, or federal permits, including OGCC Forms 1 and 2.
(5) Evidence of surface owner notification, of mineral lease agreements, and of surface agreements where the surface owner is not a party to the mineral lease.
(6) Copies of financial guarantees in the form of bonds, letters of credit, cash, certificates of deposit, or other guarantees acceptable to the County, if the Director determines that financial guarantees are necessary to assure the performance of specific conditions of approval of the development plan. This requirement may be waived by the Director if the Director is satisfied that individual bonds posted with the OGCC for the proposed operation cover the conditions of the development plan approval granted under this Article, or if the operator posts a blanket bond with the Director covering all operations conducted in Boulder County in an amount of $500,000 or more.
(7) An operation plan including the method of and schedule for the drilling, completion, production, abandonment, and reclamation phases of the operation.
(8) An emergency response plan, including a fire protection and hazardous materials spills plan, which specifies planned actions for possible emergency events, a listing of persons to be notified of an emergency event, proposed signage, and provisions for access by emergency response teams. The emergency plan must be acceptable to the appropriate fire district or the County Sheriff, as appropriate. The plan shall include a provision for the operator to

reimburse the appropriate emergency service provider for costs incurred in connection with emergency response for the operator's activities at the site.

(9) A reclamation plan, including proposed recontouring, revegetation or other appropriate measures to restore the surface while operations proceed or after they cease.

(10) A noise, odor, and dust abatement plan to control impacts on adjacent properties.

(11) Any proposed measures necessary to mitigate anticipated adverse impacts on the aesthetic features of the site, views from surrounding properties or public rights-of-way, or on significant environmental resources such as wetlands or plant and wildlife habitats.

(12) An access and transportation route plan.

(13) A waste disposal plan.

(14) A drainage and erosion control plan for both on-site and off-site drainage.

(15) An undesirable plant management plan for the site.

18D-203 REFERRAL AND REVIEW BY DIRECTOR The Director will coordinate the review of the development plan application. Upon the filing of a complete application for development plan review, the Director shall promptly forward one copy to the County Transportation, Health, and Parks and Open Space Departments; the appropriate fire district or County Sheriff; the surface owners of the site; and any adjacent municipality for comment. Referral comments on the proposed development shall be returned to the Director no later than 18 days from the date of application.

In addition, the Director shall notify the adjacent property owners and post a sign on the site within seven days after receiving the application for development plan review. Both the notice and the sign shall indicate that a development plan review application has been made, and the phone number of the Land Use Department where information regarding the application may be obtained.

Any determination by the Director to approve or conditionally approve a development plan application must be in writing and mailed or otherwise provided to the applicant no later than 21 days after the date on which the development plan application is filed. Failure to make a determination on the application within this time period shall result in the application being considered approved and the applicant's building permit or associated grading, access, or floodplain development permit being processed.

18D-204 DEVELOPMENT PLAN REVIEW STANDARDS AND CRITERIA FOR APPROVAL
A development plan shall be approved or conditionally approved in accordance with the following standards and criteria.

(1) Wells and any associated oil and gas operation facility or structure requiring a building permit shall be set back a minimum of 350 feet from any occupied building or occupied building permitted for construction, and a minimum of 150 feet from any public right-of-way.

(a) A smaller set back may be granted by the Director if the surface owner agrees and if there is no adverse impact on adjacent properties created by the reduced setback. No reduction in setvack, however, shall violate teh setbacks of the applicable zoning district in which the operation is located, or the major road setbacks of Section 22-203.

(b) If the OGCC spacing rules require location of wells at a distance less than these minimum requirements, the applicant shall apply for a variance with the OGCC to meet the County's setback requirements. If such a variance is not granted, the setbacks specified in these regulations shall be complied with to the maximum extent

possible. The Director may impose additional mitigation measures as necessary to protect the public health, safety, and welfare where these setbacks cannot be met.

(2) Any equipment used in drilling, completion, or production of a well must comply with Section 25-12-103, C.R.S., Maximum Permissible Noise Levels.

(a) For any well which does not comply with the required setback or where noise from the site will have a substantial impact in adjacent areas, additional noise mitigation may be required. One or more of the following additional noise mitigation measures may be required:

(i) acoustically insulated housing or covers enclosing any motor or engine;

(ii) screening of the site or noise emitting equipment by fence or landscaping;

(iii) a noise management plan specifying the hours of maximum noise and the type, frequency, and level of noise to be emitted; and

(iv) any other noise mitigation measures required by the OGCC.

(b) All power sources used in pumping and production operations shall have electric motors or muffled internal combustion engines.

(3) Oil and gas operations shall be located in a manner to minimize their visual impact and disturbance of the land surface.

(a) The location of operations shall be away from prominent natural features, designated environmental resources, trails, or distinctive vegetative patterns.

(b) Oil and gas operations shall be located to avoid crossing hills and ridges, and wherever possible, shall be located at the base of slopes.

(c) All equipment shall be located within the tank battery wherever possible.

(d) Facilities shall be painted in a uniform, noncontrasting, nonreflective color, to blend with the adjacent landscape. Pipelines or flowlines shall be located in existing disturbed areas unless safety or visual concerns or other adverse surface impacts clearly dictate otherwise.

(e) All produced oil or gas shall be transported from the well to the production facilities by buried pipeline. Likewise, all electrical lines servicing pumping and accessory equipment shall be installed below ground.

(f) In areas where the facilities will have a substantial visual impact on the surrounding area, landscaping or screening of the site, or the use of low profile tanks or less intrusive equipment, may be required. Specific landscaping or screening requirements may include, but are not necessarily limited to, establishing and properly maintaining ground cover, shrubs, and trees; shaping cuts and fills to appear as natural forms; designing the operation to utilize natural screens; or constructing fences for use with or instead of landscaping.

(4) Access roads on the site and access points to public roads shall be reviewed by the County Transportation Department and shall be built and maintained in accordance with the *Boulder County Road Specifications*. All access and oversize or overweight vehicle permits must be obtained from the County Transportation Department prior to beginning operation. All proposed transportation routes to the site shall also be reviewed and approved by the County Transportation Department to minimize traffic hazards and adverse impacts on public roadways. Existing roads shall be used to minimize land disturbance unless traffic safety, visual or noise concerns, or other adverse surface impacts clearly dictate otherwise.

(5) Each site shall have signs consistent with OGCC regulations.

(6) For any oil and gas operation located in a significant wildlife habitat as defined by the Colorado Division of Wildlife or environmental resource as designated in the *Boulder County Comprehensive Plan*, the operator shall consult with the Division or the County as

applicable to determine appropriate mitigation procedures. In no case shall an operator engage in activities which threaten an endangered species.

(7) Air contaminant emissions shall be in compliance with the permit and control provisions of the Colorado Air Quality Control Program, Title 25, Article 7, C.R.S., and the fugitive dust regulations administered by the County Health Department.

(8) All operations shall comply with all applicable State Water Quality Control and drinking water standards.

(9) All waste disposal or treatment facilities shall comply with all requirements of the OGCC as well as the State or County Health Department and responsible emergency response authorities, as applicable.

(10) All production tanks shall be located within a containment berm which is designed to be capable of impounding 100% of the fluid capacity of the largest production tank.

(11) The proposed reclamation plan shall provide for a reasonable reclamation schedule in light of the specific surface use and surrounding land uses, and may require recontouring and revegetation of the surface to pre-disturbance conditions. The Director may also approve a plan for an alternative post-disturbance reclamation, provided the surface owner and the applicant agree, and the plan is in harmony with the surrounding land uses and the Comprehensive Plan.

(12) Oil and gas operations shall comply with all OGCC requirements. However, to the extent that an OGCC requirement falls within a land use regulatory area addressed by this Article, and conflicts with any conditions of a development plan approved under this Article, the development plan conditions shall be enforceable provided they do not materially impede the State's interest under the Oil and Gas Conservation Act. The applicant may appeal the development plan approval to the Board of County Commissioners under Section 18D-301, below (or within thirty days after written notification to the Director of an alleged material conflict if the conflict is discovered after the appeal deadline in Section 18D-301 has expired and could not reasonably have been discovered earlier), or any argument as to material conflict shall be deemed waived. If it is possible for the applicant to appeal to the OGCC for a variance to comply with a conflicting development plan condition, there shall be a presumption in any appeal before the Board of County Commissioners that a material conflict does not exist, unless the applicant has pursued an appeal with the OGCC.

18D-300 CONDITIONS OF APPROVAL If the Director finds in reviewing a development plan application that the application meets the applicable standards set forth above, the Director shall approve the site plan, and the applicant may continue the processing of the building or other associated County permit application, or otherwise engage in the proposed oil and gas operation.

If the Director finds that the application does not meet an applicable standard or standards, the application shall be approved with appropriate reasonable conditions imposed to avoid or minimize the significant adverse impacts of the development. Such conditions may include, but are not necessarily limited to, the relocation or modification of proposed access roads, facilities, or structures; landscaping, buffering, or screening; posting of adequate financial guarantees; compliance with specified surface reclamation measures; or any other measures necessary to mitigate any significant impact on surrounding properties and public infrastructure.

18D-301 APPLICANT'S RIGHT OF APPEAL OF CONDITIONAL APPROVAL In the event that the Director conditionally approves a development plan application, the applicant shall be entitled to appeal the approval to the Board of County Commissioners. The applicant must file an appeal for

this purpose with the Director in writing no later than seven days after the date of the Director's determination. If the determination is mailed to the applicant, three additional days for mailing shall be added to the time for filing an appeal.

The Board shall review the Director's determination at a public hearing held no later than 30 days after the date of the determination. Prior written notice of this meeting shall be provided to the applicant and shall be published as part of the Board's agenda in a newspaper of general circulation in Boulder County. At the public meeting the Board shall consider evidence related to the Director's determination which may be presented by County staff, the applicant, or interested members of the public. Based upon this evidence the Board may affirm the Director's determination, or may approve the development plan with modified, altered, deleted, or added conditions in accordance with Section 18D-204 of this Article.

18D-302 BOARD OF COUNTY COMMISSIONERS' REVIEW OF A DETERMINATION TO APPROVE OR CONDITIONALLY APPROVE A DEVELOPMENT PLAN No County building, grading, access, or floodplain development permit may be issued to the applicant, nor shall the applicant be authorized to proceed with any proposed oil or gas operation not requiring one of these County permits, for 14 days after the date of the Director's approval, in order for the Board of County Commissioners to review the approval. At the same time written approval of the development plan is provided to the applicant, the Director shall forward to the Board a written statement which shall include the location of the site, a description of the proposed oil and gas operation, and, if the development plan is conditionally approved, the conditions of approval.

Upon receiving the Director's statement, and no later than 14 days after the date of the approval, the Board may call the Director's determination up for their review at a public meeting. Such public meeting shall be scheduled by the Clerk to the Board, and shall be held no later than 30 days after the Director's determination. The applicant may request an extension of time for the Board's meeting for an additional 30 days after the date of the Director's determination. Prior written notice of the meeting shall be provided to the applicant and published as part of the Commissioners' agenda in a newspaper of general circulation in Boulder County.

At the public hearing, the Board shall consider evidence related to the Director's determination which may be presented by County staff, the applicant, or interested members of the public. Based upon the consideration, the Board may affirm the determination, or alter, delete, or add conditions of approval, in accordance with Section 18D-204 of this Article. No County building, grading, access, or floodplain development permit shall be issued, or the applicant otherwise allowed to proceed with the operation, until the Board acts on the Director's determination at the public meeting, and approves the development plan with or without the addition or modification of conditions.

18D-400 EFFECT OF THE APPROVED DEVELOPMENT PLAN After approval of a development plan for an oil and gas operation, the applicant shall be entitled to have processed any necessary building, grading, access, or floodplain development permits or to otherwise proceed with the proposed operation. The approval of a development plan by the Director does not result in the vesting of development rights, nor does it permit the violation of any County or state regulations or preclude the County building official or Transportation Department from refusing to issue a permit if the plans and specifications do not comply with applicable County regulations.

18D-401 INSPECTIONS The applicant shall provide the telephone number of a contact person who

may be reached 24 hours a day for purposes of being notified of any proposed County inspection under this Section. Any site under an approved development plan may be inspected by the County at any time, to ensure compliance with the requirements of the approved development plan, provided that one hour's prior notice is given to the contact person at the telephone number supplied by the applicant. Calling the number (or leaving a message on an available answering machine or voice mail service at the number) at least one hour in advance of the proposed inspection shall constitute sufficient prior notice if the contact person does not answer. The approved development plan shall be considered to grant the applicant's implied consent to such inspections.

18D-402 ENFORCEMENT In addition to any other remedy authorized under this Resolution to enforce the provisions of this Article, the Director shall be entitled to draw on any financial guarantee provided by an applicant pursuant to this Article, if the applicant violates any term or condition of an approved development plan. If the Director has reason to believe that a violation of an approved development plan for which a financial guarantee has been provided has occurred, the Director shall provide written notice to the applicant describing the violation, and stating a reasonable time within which the violation must be corrected. If, within that time period, the applicant has not either corrected the violation or filed a written appeal with the Board of County Commissioners, the Director shall be entitled to enter upon the site to take any reasonable measures to correct the violation, and may draw on the financial guarantee to cover the costs of corrective measures.

If the applicant files a timely appeal with the Board of County Commissioners, the Board shall schedule a hearing on the appeal at the soonest possible time of which the applicant shall receive reasonable prior notice. If the Board confirms at the hearing that the violation has occurred and has not been corrected, the Board in its discretion may give the applicant additional time to correct the violation, or may specify the time at which the Director may take appropriate action to have the violation corrected and draw on the financial guarantee to cover the costs of corrective measures.

To insure the Director's ability to enforce the provisions of any approved development plan, the Director shall not release any financial guarantee provided under this Article for an individual development plan, until the Director confirms that all operations have been completed and all provisions of the plan complied with. The Director shall not release any blanket bond or other blanket financial guarantee provided under this Article unless he is satisfied that the person providing the bond has adequately declared its intention to conduct no further oil and gas operations in Boulder County in the forseeable future. The Director shall also be empowered to release a financial guarantee if a successor to an operator provides satisfactory guarantees in accordance with this Article.

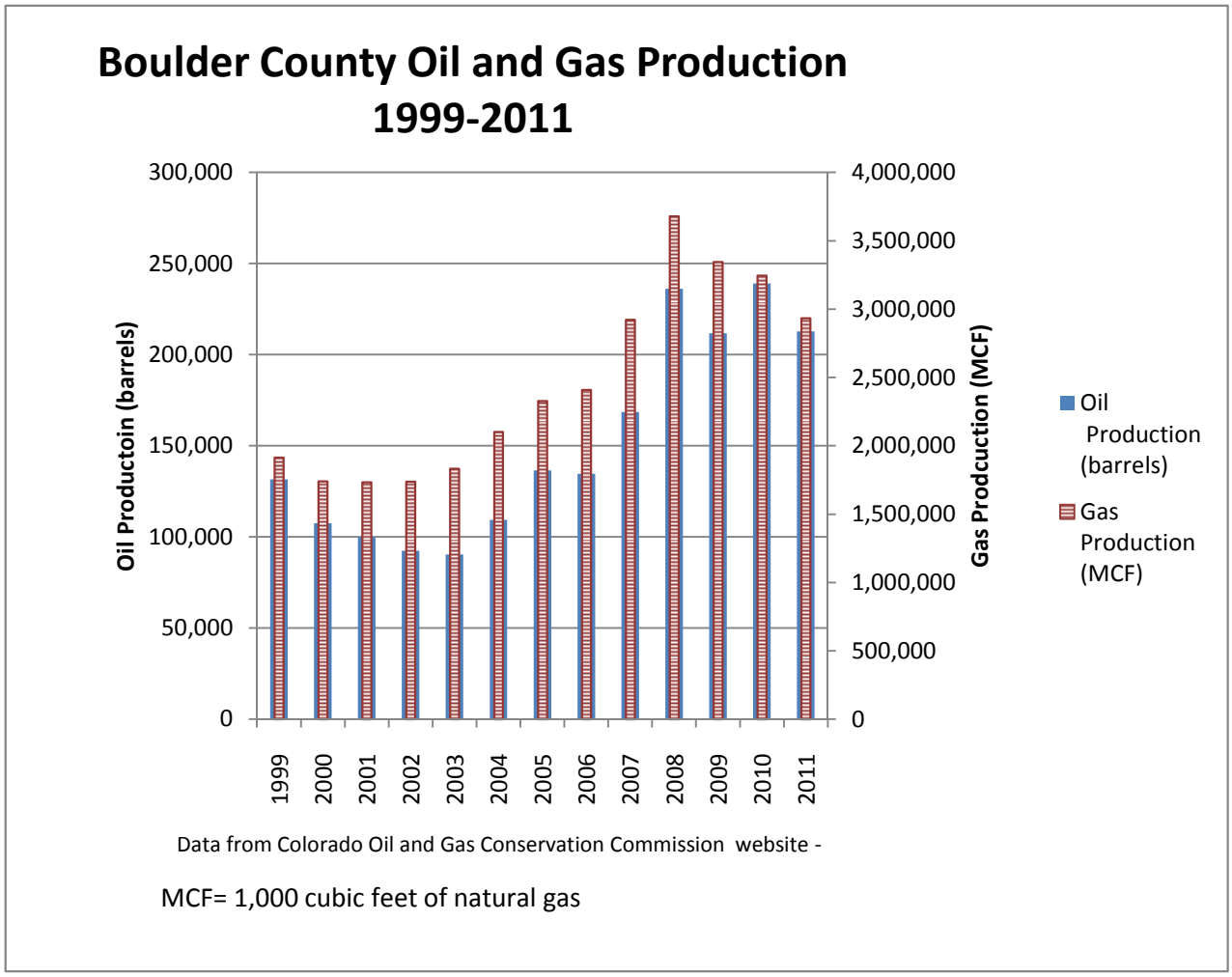
18D-500 AMENDMENTS TO A DEVELOPMENT PLAN Any proposal to amend or change an oil and gas development plan approved under this Article shall require an application to the Land Use Department to determine whether the proposed amendment or change may have a significant adverse impact on either the site or adjacent properties. If the Director determines that a development plan review of the proposed amendment or change is required due to a significant adverse impact, then no such amendment or change shall be allowed to proceed until an application for development plan review of the amendment or change is filed and approval granted in accordance with this Article. The applicant or its successor may appeal the Director's decision to require an amended development plan application to the Board of County Commissioners, within the time and following the procedures required in Section 18D-301 of this Article.

ATTACHMENT G

Annual Production by County - 13 record(s) returned.						
County	Year	Oil Production (barrels)	Oil Sales (barrels)	Gas Production (MCF)	Gas Sales (MCF)	Water Production (barrels)
BOULDER	1999	131,602	132,189	1,915,693	1,896,468	34,996
BOULDER	2000	107,539	106,605	1,740,885	1,732,479	27,158
BOULDER	2001	99,954	99,600	1,734,523	1,730,916	29,091
BOULDER	2002	92,498	91,401	1,739,814	1,733,811	29,582
BOULDER	2003	90,342	90,747	1,833,656	1,825,227	34,629
BOULDER	2004	109,471	108,259	2,101,776	2,078,745	48,548
BOULDER	2005	136,444	134,417	2,329,358	2,317,020	58,066
BOULDER	2006	134,677	132,165	2,410,801	2,397,517	63,987
BOULDER	2007	168,586	160,053	2,922,595	2,885,489	63,045
BOULDER	2008	236,085	242,047	3,680,683	3,650,503	109,078
BOULDER	2009	211,672	212,226	3,345,408	3,337,807	68,144
BOULDER	2010	238,950	236,944	3,245,606	3,239,672	66,224
BOULDER	2011	212,813	212,730	2,933,896	2,928,649	48,283

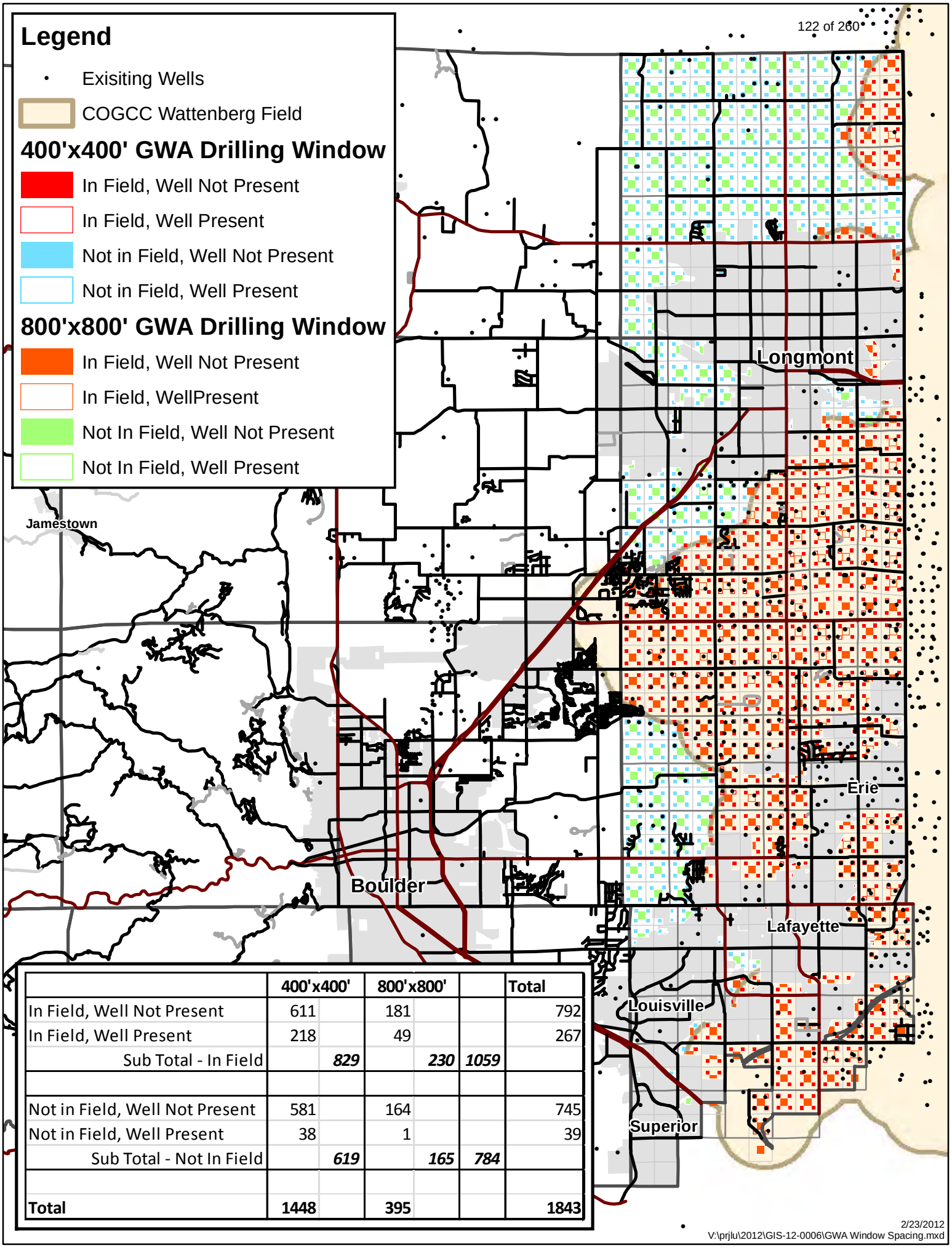
COGIS - Production Data Inquiry

MCF = 1,000 cubic ft of natural gas



Data from Colorado Oil and Gas Conservation Commission website - http://cogcc.state.co.us/

ATTACHMENT H



	400'x400'		800'x800'			Total
In Field, Well Not Present	611		181			792
In Field, Well Present	218		49			267
Sub Total - In Field		*829*		*230*	*1059*	
Not in Field, Well Not Present	581		164			745
Not in Field, Well Present	38		1			39
Sub Total - Not In Field		*619*		*165*	*784*	
Total	**1448**		**395**			**1843**

From Anadarko's web site (11/14/11). Anadarko plans to quadruple the wells it drills in 2012 from 2011.

Anadarko Petroleum Updates Horizontal Niobrara Program In Wattenberg Field

Anadarko Petroleum (APC) updated investors on the company's horizontal development of the Niobrara formation in Colorado. The company is focused on the Wattenberg field in Colorado.

Anadarko Petroleum has eleven producing wells in the Niobrara or Codell formations and has disclosed the following operational data on its acreage:

Future drilling locations - 1,200 to 2,700
Estimated ultimate recoveries - 300,000 to 600,000 barrels of oil equivalent (BOE) per well
Net resources - 500 million to 1.5 billion BOE
Well cost range - $4.0 to $5.0 million initially
Liquids content – 70%

Anadarko Petroleum said that the eleven wells had initial production rates averaging 800 BOE per day. The best well was the Dolph 27-1HZ, which produced 1,100 barrels of oil and 2.4 million cubic feet of natural gas per day, and had an estimated EUR of 600,000 BOE.

Anadarko Petroleum said that the company will accelerate drilling in the Wattenberg program in 2012 and operate seven rigs by the end of year. The company estimates that it will drill 160 horizontal Niobrara wells in 2012, up from 40 in 2011.

These figures are just for Anadarko's operations and Anadarko is not very active in the Boulder County portion of the GWA, so these numbers do not include operations by Encana, Noble, or others.

WEEKLY

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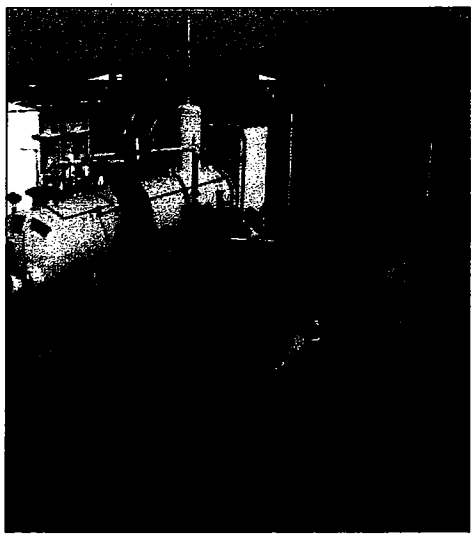
Thursday, February 9,2012

Why fracking is here to stay

By Paul Danish



If you want to know why fracking is here to stay, consider what's been going on in Weld County.

The Wattenberg gas and oil field, which sprawls across 1.9 million acres of Weld County, is a pin cushion of more than 20,000 wells, more than 12,000 of which are still producing.

It was discovered in 1970 and covers a swath of land from about 12 miles northwest of Greeley to the north side of Broomfield. It is the seventh largest gas field in the United States.

Through 2008, the field had produced the equivalent of more than 4.2 trillion cubic feet of natural gas. (More about why the word "equivalent" appears in the previous sentence in a moment.)

Until relatively recently, the oil industry regarded fields like Wattenberg as mature, meaning their production had peaked and that while there was still gas and oil to be wrung out of them, their annual output could be expected to decline year by year.

Then along came horizontal drilling and fracking.

Starting in about 2009, oil companies started buying acreage in the Wattenberg field, including parts that had been producing for decades. Several billion dollars were spent — and now its becoming clear why.

Although only a few dozen new horizontal wells had started producing, in the third quarter of 2011 the Wattenberg field set a record for quarterly sales volumes of 72,400 barrels of oil equivalent per day, a 22 percent increase from the same quarter in 2010. Not all of the new production came from horizontal wells; several hundred vertical wells

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were also drilled. But it is the horizontal wells and multi-stage fracking that are the game changers.

Last November, one of the companies with substantial acreage in the field reported what it's finding, and it's pretty jaw-dropping.

Anadarko petroleum, which holds 350,000 acres in the Wattenberg field, estimates its holdings contain 500 million to 1.5 billion barrels of oil equivalent.

When oil companies report the output of wells that produce both oil and gas, they often conflate the combined production as "barrels of oil equivalent" or "cubic feet of gas equivalent," by which they mean their field is producing oil and gas with the energy equivalent of so many barrels of oil or so many cubic feet of gas.

(Roughly speaking, 5,800 cubic feet of natural gas contain the energy equivalent of a barrel of oil.)

Crude oil and natural gas aren't the only hydrocarbons in the "equivalent" equation, however. Natural gas is often found in combination with a light liquid hydrocarbon called "condensate." Condensate is sometimes called "natural gasoline."

In the Wattenberg field, condensate makes up a big part of the "equivalent." Gas, oil and condensate can be conflated in terms of the amount of energy they contain, but they differ spectacularly in value. Crude oil and condensate are currently selling for about $100 a barrel.

Natural gas is currently selling for about $2.50 a thousand cubic feet; 5,800 cubic feet would cost under $15.

Anadarko said that it has identified 1,200 to 2,700 future horizontal well sites with estimated ultimate recoveries of 300,000 to 600,000 barrels of oil equivalent per well — with 70 percent of that liquids (condensate and crude).

In other words, the condensate and oil on Anadarko's share of the Wattenberg alone could be worth more than $100 billion — a windfall that would be unobtainable without horizontal drilling and fracking.

Any technology that can conjure up $100 billion of new wealth from 18 percent of a 42-year-old, over-the-hill oil field and do it without breaking a sweat — and in a stagnant economy at that — is here to stay.

The Wattenberg field is locally interesting because it's on Boulder's doorstep — a bit of it actually extends into Boulder County — but it is just the tip of the iceberg. The Niobrara shale formation and the low-permeability Codell sandstone directly below it, which will be the source of most of the new production, underlies the entire Denver-Julesburg Basin, i.e, most of northeastern Colorado, and extends into parts of Kansas, Nebraska and Wyoming. Drilling is ramping up throughout the region. The Niobrara extends under the mountains into northwestern Colorado as well.

And the Niobrara shale is just one of more than a dozen shale formations in the U.S. that are delivering a petroleum bonanza; two of the better known in the West are the Bracken shale in North Dakota and Montana and the Eagle Ford Shale in Texas.

It doesn't take a genius to see where this is headed.

Horizontal drilling and fracking are revolutionizing the oil industry, and maybe the balance of economic and political power in the world. The U.S. would be insane to forego it.

But what of the environment? Consider Weld County. The Wattenberg Field covers about three quarters of it, but after 20,000 oil wells and 40 years of drilling and oil production, it is the fourth richest agricultural county in the United States.

Subdivisions are a far greater threat to its agriculture and environment than oil wells.

Respond: letters@boulderweekly.com

This opinion column does not necessarily reflect the views of Boulder Weekly.

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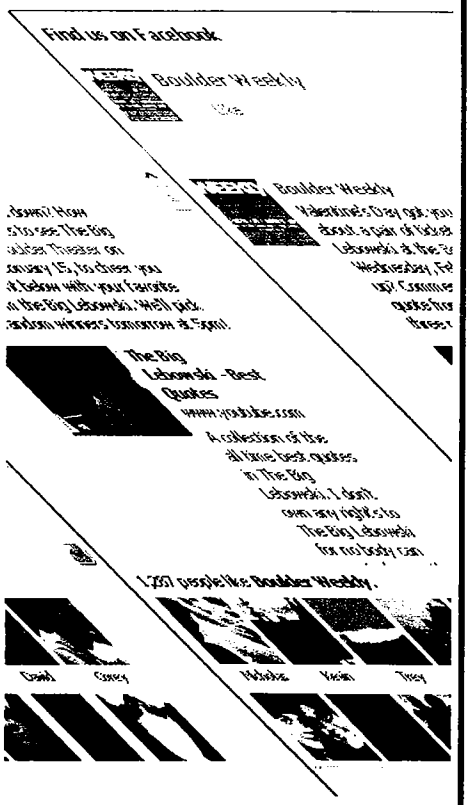

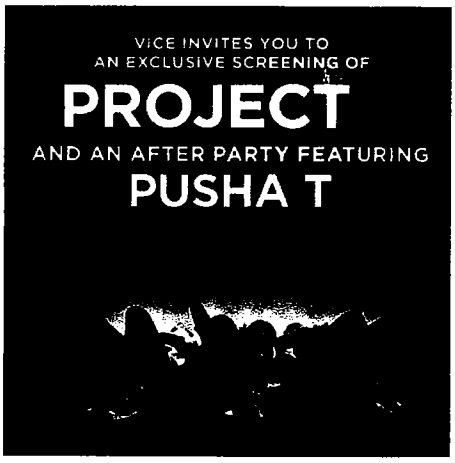

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Business

Halliburton to build $20 million terminal in Windsor to support hydraulic fracturing activity

Posted: 01/19/2012 03:09:58 PM MST
Updated: 01/19/2012 03:38:49 PM MST**By Mark Jaffe**
The Denver Post

Posted: 01/19/2012 03:09:58 PM MST
Updated: 01/19/2012 03:38:49 PM MST

Houston-based Halliburton will build a $20 million sand terminal in Windsor to support its hydraulic fracturing activity in the Denver-Julesburg Basin, the company said.

Halliburton will use 54 acres in the Great Western Industrial Park, which is being developed by the Denver-based Broe Group.

Sand is a key component in fracking fluid, which is pumped into wells under pressure to fracture rock and release more oil and gas. The sand props open the tiny fissures.

There has been an increase in hydrofracturing the in the basin as companies search the Niobrara formation, which is more than 6,000 feet below the surface, for oil deposits using horizontally drilled wells.

"With the increasing interest in horizontal well development in the DJ Basin, we have seen an increase in exploration and production by some of our key customers," Halliburton senior region vice president Rick Grisinger said in a statement.

The company said the new terminal will support more than 500 employees working in the basin. Halliburton has 1,600 employees in Colorado.

Halliburton said it anticipates hiring for a variety of positions and that information can be found at www.gohalliburton.com.

Construction of the sand terminal will begin in the first quarter of 2012, with operations expected to begin in the second quarter of the year.

Mark Jaffe: 303-954-1912 or mjaffe@denverpost.com

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ATTACHMENT I

Boulder Daily Camera - 2/17/12 P. 9A

Colo. Senate drops GOP drill bill

Four oil and gas bills have been defeated this year

By Kristen Wyatt
Associated Press

DENVER — A simmering conflict between energy companies and local governments in Colorado is proving tricky for lawmakers to settle.

A Democratic Senate committee rejected a GOP bill Thursday that would have banned local governments from regulating oil and gas drilling.

Republican Sen. Ted Harvey's measure was at least the fourth bill related to drilling that has been defeated this year. Both Democratic and Republican proposals have been rejected.

Harvey's bill would have made clear that cities and counties can't go against the Colorado Oil & Gas Conservation Commission. The proposal came after some Front Range communities have proposed moratoriums or new limits on where drilling could occur, instead of deferring to state regulations.

"Oil and gas is one of the most important industries in Colorado. We cannot make it more expensive for them to do business," Harvey said.

Some Democrats, including Gov. John Hickenlooper, have said the state needs to take precedence when it comes to oil and gas drilling. Hickenlooper said in his State of the State address that the state can't have a patchwork of drilling regulation.

"We intend to work with counties and municipalities to make sure we have appropriate regulation on oil and gas development, but recognize the state can't have 64 or even more different sets of rules," Hickenlooper said, referring to the number of Colorado counties.

But Harvey's bill ran into strong opposition from citizens who said the Colorado Oil & Gas Conservation Commission shouldn't have undisputed authority over land use for drilling operations. Dozens of environmental activists turned out to oppose the bill Thursday, along with groups representing city and county governments.

"This bill gives all the power to the (oil and gas commission)," said Randee Webb of Aurora. "That's un-American. It's not right."

Webb's home county was among those that retreated after a warning from Attorney General John Suthers.

Other defeated drilling proposals this year include a Democratic measure to limit open-pit storage of drilling fluids and a Democratic measure increasing the distance of drilling wells from schools. A Republican proposal to give landowners more notice about mineral rights was also defeated.

Longmont panel OKs new oil and gas rules

Times-Call staff

LONGMONT — The city of Longmont's planning commission has recommended approving new rules for the oil and natural gas industry.

The Times-Call reports the commission voted 4-3 Wednesday to recommend the new rules, plus an extended moratorium on drilling permits.

The rules would allow companies that agree to follow city standards that are tougher than what the state requires to shortcut the city's approval process for oil and gas activity.

The City Council probably won't take a final vote on the commission's recommendations until March.

The moratorium is due to expire after April 17 if it isn't extended.

The Colorado Oil and Gas Conservation Commission enforces statewide rules on oil and gas development and has expressed concerns that some of Longmont's proposed rules appear to step on the commission's authority.

Longmont Oil and Gas Regulations Draft

Purpose Statement

1. The purpose of this section is to facilitate the exploration and production of oil and gas resources within the City in a responsible manner. The City has a recognized, traditional authority and responsibility to regulate land use within its jurisdiction, including oil and gas drilling. These regulations are intended as an exercise of this land use authority and the police power.

2. The City's goal is to work cooperatively with oil and gas applicants and operators, affected individuals, groups or institutions, the Colorado Oil and Gas Conservation Commission, and other municipal, county, state and federal agencies and interested parties to ensure that potential land use and environmental conflicts are adequately addressed and mitigated. These regulations are enacted to preserve the rights and privileges of surface and mineral estate owners and lessors, while ensuring the health, safety, and general welfare of the present and future residents of Longmont and surrounding areas and the preservation and protection of wildlife and the environment.

Authority

This section is adopted pursuant to C.R.S.A § 31-15-401, Colorado Constitution Article XX, § 6 and C.R.S. §§ 29-20-11 et seq., 34-60-101 et seq., and 30-28-101 et seq. These standards are not intended to supersede state laws, regulations, and rules pertaining to oil and gas development, but rather are meant to supplement those requirements where appropriate.

Applicability

1. All oil and gas well operations and facilities within the City both on the surface and below the surface are subject to the requirements of this section. In the event that the provision of this section conflict with any other provisions of the code, this section shall supercede as it applies to oil and gas well operations and facilities.

2. In instances of directional and horizontal drilling where surface operations associated with a well occur outside of the City limits but subsurface operations occur within the City limits, the operator shall be required to comply with the applicable process and standards contained in this section and the City will provide comments to the COGCC through the LGD consultation process in conjunction with the COGCC permit application.

3. City oil and gas well permits issued pursuant to this section 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 City regulations and requirements.

4. City oil and gas well permits may be issued for sites within the City excluding oil and gas well surface operations and facilities in residential zoning districts. For purposes of this section, residential zoning shall include residential and mixed use planned unit development (PUD) districts and mixed use (MU) zoning districts that included existing or planned residential uses. Any proposed oil and gas well location not complying with the requirements of this subsection, may apply for an operational conflict special exception according to the procedures in this section.

Exceptions

1. Oil and gas well facilities that are in existence on the effective date of this subsection or that are located within territory which thereafter is annexed to the City may continue operating without the issuance of a City oil and gas well permit until any of the following are proposed: oil and gas well location expansion, new wells on the well site, and operations including completing, recompleting, hydraulic fracturing, reworking, sidetracking, or trimming of a well. The right to operate oil and gas well

facilities terminates if the use thereof is discontinued for six months or more, other than by temporary abandonment or shut-in which is in conformance with COGCC rules.

2. Accessory equipment and pumping systems that are in existence on the effective date of this subsection or are located within territory which thereafter is annexed to the City may continue operating without the issuance of a City oil and gas well permit. Any renovation or repair of nonconforming accessory equipment or pumping systems shall be permitted without a City oil and gas well permit, provided the work does not increase the degree of nonconformity. Any replacement of existing accessory equipment or any addition of accessory equipment shall conform to this section subject to the applicable review process in this section. The replacement or addition of individual tanks, treaters, or separators shall not require the remaining accessory equipment in an oil and gas well location to conform to the development standards in this section.

Prohibitions

The following oil and gas facilities are prohibited within the City of Longmont:

1. Injection wells for disposal of oil and gas exploration and production wastes;
2. Commercial disposal facilities;
3. Centralized E&P waste management facility;
4. Subsurface disposal facility;
5. Temporary housing at an oil and gas well location, including trailers, recreational vehicles, etc.

Definitions

For the purposes of these oil and gas well regulations only, term definitions are included at the end of this section.

General Provisions

Application Process

Applications subject to administrative review

The following are subject to administrative limited use review:

1. Oil and gas wells operations and facilities that comply with all minimum and recommended standards in this section are subject to limited use site plan review.

2. Seismic survey operations are subject to administrative review.

3. Pipelines that cross public property are subject to a work in right-of-way permit review.

Applications subject to public hearing review

The following are subject to public hearing review:

1. Oil and gas well operations and facilities that meet minimum standard requirements and some or none of the recommended standards listed in this section are subject to conditional use site plan review.

2. Variances and operational conflicts special exceptions.

3. Planning and Zoning Commission determination of designated outside activity areas.

DRAFT

Determination of designated outside activity areas

The Planning and Zoning Commission, upon application and hearing, shall determine the appropriate boundary and setbacks for designated outside activity areas as defined in this section.

Submittal Requirements

1. Applications for a limited use or conditional use permit for oil and gas facilities under this subsection shall contain all relevant information required for limited and conditional use permits contained in Appendix B of this development code and the specific information for oil and gas facilities contained in Table 15.04-B of this development code.

2. Applications for designation of an outside activity area shall include a written narrative requesting the designation and describing the proposed area and compliance with the definition/criteria for a designated outside activity area, along with a map and aerial image of the proposed outside activity area showing the proposed boundaries and setback requirements.

Issuance of oil and gas well permit for unsubdivided property.

A City oil and gas well permit for may be granted on unsubdivided property without requiring the property to be subdivided.

Notice and procedures

Limited use review

Applications for limited use review of oil and gas well operations and facilities are subject to the notice requirements of Section 15.02.040(H) and the minor application procedures requirements of Section 15.02.080.

Conditional use review

Applications for conditional use review of oil and gas well operations and facilities are subject to the notice requirements of Section 15.02.040(H) and the major application procedure requirements of Section 15.02.050

Other notices

1. Operators shall provide the City with notice 30 days prior to the commencement of oil and gas well drilling, completion, recompletion, hydraulic fracturing, reworking, sidetracking, or trimming, plugging and abandoning and reclamation

2. Operators shall also provide the City with notice of spills within 24 hours after an occurrence and remediation efforts prior to commencement.

Review Criteria

Limited use review

Applications for limited use review are subject to the limited use and site plan review criteria in Sections 15.02.090(E)(3) and 15.02.090(F)(5) respectively, in addition to the development standard compliance criteria listed below.

Conditional use review

Applications for conditional use review are subject to the conditional use and site plan review criteria in Sections 15.02.060(D)(2) and 15.02.090(F)(5), respectively, in addition to the development standard compliance criteria listed below.

Compliance with development standards

1. Applications for limited use review shall comply with all standards, including recommended standards in this section.

2. Applications for conditional use review shall comply with the minimum standards in this section, unless a variance or special exception is granted by the decision making body, as well as conditions of approval specified in the conditional use agreement.

Variances and Operational Conflicts Special Exceptions

Variance requests.

1. Variance requests to the standards of this section may be requested by the applicant. All applications where a variance is requested shall be processed in accordance with the standards and procedures outlined in section 15.02.060(F)(6) for variances.

2. Requests for variances may include, but not be limited to, one or more of the following factors:

a. Topographic characteristics of the site;
b. Duration of use of the facility;
c. Proximity of occupied structures to the facility;
d. Ownership status of adjacent and/or affected land;
e. Construction of adequate infrastructure to serve the project; and
f. Planned replacement and/or upgrading of facility equipment.

3. If the decision making body finds, based upon competent evidence in the record, that compliance with the regulations of this division is impractical, a variance may be granted by the decision making body permanently or for a period of defined duration.

Operational conflicts special exception.

1. Special exceptions to the standards of this section may be granted where the actual application of requirements of this section conflicts in operation with the requirements of the Oil and Gas Conservation Act or implementing regulations.

2. All applications where a special exception due to operational conflicts is requested shall be processed as a public hearing and reviewed in a noticed public hearing by the decision making body acting in a quasijudicial capacity.

3. The applicant shall have the burden of pleading and proving an actual, material, irreconcilable operational conflict between the requirements of this division and those of the COGCC in the context of a specific application.

4. For purposes of this section, an operational conflict exists where actual application of a City condition of approval or regulation conflicts in operation with the state statutory or regulatory scheme, and such conflict would materially impede or destroy the COGCC's goals of fostering the responsible, balanced development and production and utilization of the natural resources of oil and gas in the State of Colorado in a manner consistent with protection of public health, safety, and welfare, including protection of the environment and wildlife resources, and no possible construction of the regulation in question could be found that would harmonize it with the state regulatory scheme.

5. Additional City requirements in areas regulated by the COGCC, which fall within City land use powers and which are necessary to protect the public health, safety and welfare under the facts of the specific application presented, and which do not impose unreasonable burdens on the applicant and which do not materially impede the state's goals, shall be presumed not to present an operational conflict.

6. If the decision making body finds, based upon competent evidence in the record, that compliance with the requirements of this section shall result in an operational conflict with the state statutory and regulatory scheme, a special exception to this section may be granted, in whole or in part, but only to the extent necessary to remedy the operational conflict.

7. The decision making body may condition the approval of a special exception as necessary to protect the public health, safety and welfare by mitigating any adverse impacts arising from the grant of approval. Any such condition shall be designed and enforced so that the condition itself does not conflict with the requirements of the COGCC.

8. If the applicant or any interested party wishes to seek judicial review of a final decision by the City on the exception request, appeal to the district court shall be pursuant to C.R.C.P. Rule 106(a)4.

Third Party Technical Review

Upon determination that the application is complete, the City may require that the application materials, including requests for minor modifications, variances, and operational conflicts special exceptions, be submitted to a technical consultant deemed by the City to be appropriate and necessary to complete the review. Reasonable costs associated with such review shall be paid by the applicant.

Sales and Use Tax License Requirement

Operators shall obtain and maintain a City sales and use tax license prior to commencing operations. Operators must conform to applicable provisions of Chapter 6.04 of the Longmont Municipal Code related to licensing.

Building Permit Requirement

The operator shall obtain building permits prior to the construction of any above ground structures to the extent required by the City building and fire codes then in effect.

Approval Period

Approval of limited use or conditional use applications for oil and gas well operations and facilities are valid for one year from the date of approval until the start of the operation, unless the decision making body grants a longer approval period.

Extensions

Requests for extensions to the approval period for oil and gas well operations and facilities shall be reviewed according to the procedures outlined in Section 15.02.050(O)

Issuance of Oil and Gas Well Permit

The following items are required by the City prior to issuance of an oil and gas well permit:

1. Approval of a limited use site plan or conditional use site plan, as applicable.

2. Satisfaction of any conditions of approval of the above applications prior to commencement of operations.

3. Copies of:

a. Applicable executed agreements,

b. Applicable transportation related permits,

c. A City sales and use tax license,

d. Required liability insurance, and

e. All necessary state or federal permits issued for the oil and gas well operation and facilities.

4. Financial securities, or payment of fees, as applicable.

Right to Enter / Inspections

1. Right to Enter - For the purpose of implementing and enforcing this section, duly authorized City personnel or contractors may enter onto subject property upon notification of the permitee, lessee or other party holding a legal interest in the property. If entry is denied, the City shall have the authority to discontinue application processing, revoke approved permits and applications, or to obtain an order from a court of competent jurisdiction to obtain entry.

2. Operator contact - The applicant shall provide the telephone number of a contact person who may be reached 24 hours a day for purposes of being notified of any proposed City inspection under this Section or in case of emergency. Any permitted oil and gas operations and facilities may be inspected by the City at any time, to ensure compliance with the requirements of the approved permit, provided that at least one hour's prior notice is given to the contact person at the telephone number supplied by the applicant. Calling the number (or leaving a message on an available answering machine or voice mail service at the number) at least one hour in advance of the proposed inspection shall constitute sufficient prior notice if the contact person does not answer. By accepting an approved City oil and gas well permit, the applicant grants consent to such inspections. The cost of any City inspection deemed reasonable and necessary to implement or enforce the regulations for the applicant shall be borne by the applicant, provided such inspections and fees are not in conflict with COGCC inspections and rules.

Enforcement and Penalties

Oil and gas operations and facilities in violation of these regulations.

1. Oil and gas operators that have not obtained a City oil and gas well permit in compliance with these regulations or do not comply with oil and gas well permit requirements.

Any operator engaging in oil and gas well operations who does not obtain a City oil and gas well permit pursuant to these regulations, who does not comply with oil and gas well permit requirements, or who acts outside the jurisdiction of the oil and gas well permit may be enjoined by the City from engaging in such oil and gas well operations and may be subject to such other criminal or civil liability as may be prescribed by law. In addition, if the City prevails in whole or part in any action, the operator shall pay all reasonable attorney fees and expert costs incurred by the City.

2. Suspension of oil and gas permit.

If the City determines at any time that there is a violation of the conditions of the City oil and gas well permit or that there are material changes in an oil and gas operation or facility as approved by the permit, the development services manager or designee may, for good cause temporarily suspend the oil and gas well permit. In such case, upon oral or written notification by the development services manager or designee, the operator shall cease operations immediately. The development services manager or designee shall forthwith provide the operator with written notice of the violation or identification of the changed condition(s). The operator shall have a

maximum of fifteen (15) days to correct the violation. If the violation is not timely corrected, the permit may be further suspended pending a revocation hearing. The operator may request an immediate hearing before the Planning and Zoning Commission regarding the suspension. The Planning and Zoning Commission shall hold the hearing within ten (10) days of the operator's written request.

3. Revocation of oil and gas permit.

The Planning and Zoning Commission may, following notice and hearing, revoke a City oil and gas well permit granted pursuant to these regulations if any of the activities conducted by the operator violate the conditions of the oil and gas well permit or these regulations, or constitute material changes in the oil and gas operation approved by the City. The City shall provide written notice to the operator of the violation or the material changes, and the time and date of the hearing. No less than thirty (30) days prior to the revocation hearing, the City shall provide written notice to the permit holder setting forth the violation and the time and date for the revocation hearing. Public notice of the revocation hearing shall be published in a newspaper of general circulation not less than thirty (30) days prior to the hearing. Following the hearing, the City may revoke the oil and gas permit or may specify a time by which action shall be taken to correct any violations of the oil and gas permit to avoid revocation.

4. Transfer of permits.

A City oil and gas well permit may be transferred only with the written consent of the City. The City shall ensure, in approving any transfer, that the proposed transferee can and will comply with all the requirements, terms, and conditions contained in the oil and gas permit and these regulations, and appropriate state and federal regulations and conditions, that such requirements, terms, and conditions remain sufficient to protect the health, welfare, and safety of the public, and the environment; and that an adequate guaranty of financial security can be timely made.

5. Judicial review.

Any action seeking judicial review of a final decision of the City shall be initiated within thirty (30) days after the decision is made, in the district court in and for the City of Longmont, pursuant to rule 106 of the Colorado rules of civil procedure.

6. No review or approval for persons subject to enforcement action.

No permit application shall be processed or approved pursuant to these regulations for an operator, or for property that is subject to an ongoing enforcement action.

General Development Standards

The following sections provide minimum and/or recommended standards for review of the surface impacts and natural resource protection requirements for oil & gas well and production operations, that also consider applicable state and federal standards. Use of well consolidation and directional and horizontal drilling when and where appropriate, closed loop ("pitless") systems and non-toxic or "green" drilling and fracturing fluids, appropriate water quality monitoring systems, and other techniques, including current and available best management practices, are intended to protect the integrity of the surface estate and subsurface resources and ensure the health, safety, and general welfare of the present and future residents of Longmont and surrounding areas and the preservation and protection of wildlife and the environment.

Multi Well Sites and Directional/Horizontal Drilling

Oil and gas well operations and facilities will be consolidated on multi well sites and directional and horizontal drilling techniques will be used whenever possible and appropriate. In determining appropriateness, the benefits of consolidation and directional and horizontal drilling, such as drilling from outside of a prohibited zoning district, minimizing surface disturbance and traffic impacts and increasing setbacks, will be weighed against the potential impacts of

consolidated drilling and production activities on surrounding properties, wildlife and the environment.

Well Facilities Siting

Oil and gas well facilities and operations shall be located and designed to minimize impacts on surrounding uses, including residential areas, schools, medical facilities, churches, day care and retirement centers, and other places of public assembly, and natural features such as distinctive land forms, vegetation, river or stream crossings, ridgelines and vistas, City-owned and City-designated open space areas, and other designated landmarks to the maximum extent practical without adversely impacting the well spacing requirements of the COGCC or the ability of the oil and gas well operator to develop the resource. Facilities should be located at the base of slopes where possible and access roads should be aligned to follow existing grades and minimize cuts and fills.

Water Supply

The operator of any oil and gas well facility that is proposed to use water during exploration, completion, or production shall identify the proposed source of water to be used. The operator shall also provide an estimate for the amount of any water to be used, when it will be used, and evidence of legal entitlement to use such water. On-site containment, pre-treatment, and disposal of water associated with oil and gas well facilities and operations shall be in accordance with any applicable federal, state, or City requirements. The operator shall protect all water sources from any significant degradation relating to its operations.

Cultural Resources

Applications for all oil and gas well facilities and operations may require a cultural resources report, as determined by the City. The report, if required, will be prepared by a qualified professional, and meet state of Colorado requirements, including a complete written description and identification of the cultural resources on the site and within the surrounding area of the proposed oil and gas well facility and will include mitigation measures, if necessary, to ensure that appropriate actions are taken to avoid or minimize negative impacts to the maximum extent practical.

Drainage

Oil and gas well operations and facilities shall comply with applicable City drainage requirements and standards.

Hazard Areas

Oil and gas well operations and facilities in hazard areas, including floodplains and man-made (e.g., airport) conditions which constitute a hazard to public health and safety or to property should be avoided. Land should not be developed for oil and gas well facilities and operations until hazards have been identified and avoided, removed, or until the applicant can show that the impact of the hazard(s) can be mitigated to the maximum extent practical. All well facilities and operations conducted within a floodplain shall comply with title 20 of the Longmont Municipal Code pertaining to floodplain regulations.

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Emergency Preparedness

Oil and gas well operations and facilities shall provide the City with an acceptable written emergency response plan for the potential emergencies that may be associated with the operation of the facilities. This shall include, but not be limited to, any or all of the following:

1. Explosions, fires, gas or water pipeline leaks or ruptures, hydrogen sulfide or other toxic gas emissions, and hazardous material vehicle accidents or spills.

2. Operation-specific emergency preparedness plans are required for any oil and gas operation that involves drilling or penetrating through known zones of hydrogen sulfide gas.

3. The plan shall include a provision for the operator to reimburse the appropriate emergency response service provider for costs incurred in connection with the emergency.

Hazardous Materials

Full disclosure, including material safety data sheets, of all hazardous materials that will be transported on any public or private roadway within the City for the oil and gas operation shall be provided to the Longmont hazards prevention officer. This information will be treated as confidential and will be shared with other emergency response personnel only on an as needed basis.

Safety/Security

The operator of oil and gas facilities shall demonstrate compliance with COGCC requirements for initial and ongoing site security and safety measures. Such requirements shall adequately address security fencing, the control of fire hazards, equipment specifications, structural stabilization and anchoring, and other relevant safety precautions.

Maintenance and General Operation

1. The operator shall at all times keep the wellsites, roads, rights-of-way, facility locations, and other oil and gas operations areas safe and in good order, free of noxious weeds, litter and debris.

2. The operator shall dispose of all water, unused equipment, litter, sewage, waste, chemicals and debris off of the site at an approved disposal site.

3. The operator shall promptly reclaim and reseed all disturbed sites and shall not permit the release or discharge of any water, toxic or hazardous chemicals or wastes on the site or into the atmosphere.

Indemnification

Each City oil and gas well permit issued by the City shall include the following language: "Operator does hereby expressly release and discharge all claims, demands, actions, judgments, and executions which it ever had, or now has or may have, or its successors or assigns may have, or claim to have, against the City and/or its departments, its agents, officers, servants, successors, assigns, sponsors, volunteers, or employees, created by, or arising out of personal injuries, known or unknown, and injuries to property, real or personal, or in any way incidental to or in connection with the actions or inactions of the Operator or its agents, or caused by or arising out of, that sequence of events which occur from the Operator's or its agents actions or inactions. The Operator shall fully defend, protect, indemnify, and hold harmless the City and/or its departments, agents, officers, servants, successors, assigns, sponsors, or volunteers, or employees from and against each and every claim, demand, or cause of action and any and all liability, damages, obligations, judgments, losses, fines, penalties, costs, fees, and expenses incurred in

defense of the City and/or its departments, its agents, officers, servants, successors, assigns, sponsors, volunteers, or employees, including, without limitation, personal injuries and death in connection therewith which may be made or asserted by Operator, its agents, assigns, or any third parties on account of, arising out of, or in any way incidental to or in connection with the performance of the work performed by the Operator under any permit, and the Operator agrees to indemnify and hold harmless the City and/or its departments, its agents, officers, servants, successors, assigns, sponsors, volunteers, or employees from any liabilities or damages suffered as a result of claims, demands, costs, or judgments against the City and/or, its departments, its agents, officers, servants, successors, assigns, sponsors, volunteers, or employees, created by, or arising out of their acts or omissions occurring on the drill site or operation site or in the course and scope of inspecting, permitting or monitoring the oil/gas wells including, but not limited to, claims and damages arising in whole or in part from their sole negligence occurring on the drill site or operation site or in the course and scope of inspecting, permitting and monitoring the oil/gas wells. It is understood and agreed that the indemnity provided for in this section is an indemnity extended by the Operator to indemnify and protect the City and/or its departments, agents, officers, servants, successors, assigns, sponsors, volunteers, or employees from the consequences of the negligence of the City, its departments, agents, officers, servants, successors, assigns, sponsors, volunteers, or employees, whether that negligence is the sole or contributing cause of the resultant injury, death, and/or damage. Liability for any action or inaction of the City is limited to the maximum amount of recovery under the Tort Claims Act."

Financial Securities/Liability Insurance

Minimum standard

1. Performance guarantees. The applicant may be required to provide reasonable performance guarantee to the City through a minor improvement security agreement as outlined in Section 15.02.120(A)(1)(b), in an amount to be determined by the City and in a form acceptable to the City as outline in 15.05.210(B) to ensure compliance with mitigation requirements set forth in this section and specific conditions of approval for the facility. Conditions of approval covered by this performance guarantee shall consist of mitigation measures addressing specific impacts affecting the general public and any damage to public infrastructure. Reclamation and other activities which fall under COGCC jurisdiction are exempted from this performance guarantee coverage.

2. Liability insurance. For any oil or gas well facility permitted under this section, the applicant shall submit a certificate of insurance to the economic development department, showing that a policy of comprehensive general liability insurance or a self-insurance program approved by the Colorado Insurance Commission, in the amount of no less than one million dollars ($1,000,000) per occurrence, insuring the applicant against all claims or causes of action made against the applicant for damages arising out of the oil or gas well operations. The policy shall be written by a company authorized to do business in the state, unless the applicant is self-insured. The certificate shall require at least thirty (30) days' notice to the city prior to termination of coverages for any reason.

Recommended standard

Performance security. The applicant may be required to provide reasonable performance security to the City through a minor improvement security agreement as outlined in Section 15.02.012(A)(1)(b), in an amount to be determined by the City and in a form acceptable to the City to ensure compliance with mitigation requirements set forth in this section and specific conditions of approval for the facility. Conditions of approval covered by this performance

security shall consist of mitigation measures addressing specific impacts affecting the general public and any damage to public infrastructure.

Impact fees

Every permit issued by the City under this section shall require the applicant or operator to pay a fee that is sufficient to pay for all impacts which the proposed operation will cause to facilities owned or operated by the City or used by the general public, including, but not limited to: repair and maintenance of roads, bridges and other transportation infrastructure; improvements made or to be made by the City to accommodate the operations and to protect public health, safety and welfare; costs incurred to process and analyze the application, including the reasonable expenses paid to independent experts or consultants; and impact fees comparable to those charged to other businesses or industries who operate within the City which are not specifically mentioned herein, and other impacts. The City shall establish a mechanism to assess and obtain payment of such fees, subject to the right of the City to request additional funds if the fees prove to be insufficient, or to refund surplus funds to the operator if the fees paid exceed the true cost of the impacts.

Operation Plan

Applications for all oil and gas well facilities and operations will include an operation plan, which should, at a minimum, include the operator's method and schedule for drilling, well completion, transportation, resource production, and post-operation activities.

Specific Development Standards

Setbacks to Buildings, Public Roads, Major Above Ground Utility Lines, Railroads, and Designated Outside Activity Areas

Minimum standard

1. Wells and production equipment shall be a minimum of 350 feet from any occupied building or occupied building permitted for construction, platted residential lot, or designated outside activity area, except that in high density areas production equipment shall be a minimum of 500 feet from an educational facility, assembly building, hospital, nursing home, board and care facility, jail or designated outside activity area.

2. Wells and production equipment shall comply with COGCC rules in Section 603, as amended, regarding setbacks from public roads, major above ground utility lines, or railroads.

High density area determination

1. High density areas for building units. A high density area shall be determined by calculating the number of building units within the seventy-two (72) acre area defined by a one thousand (1000) foot radius from the wellhead or production facility. If thirty-six (36) or more actual or platted building units as defined in this section are within the one thousand (1000) foot radius or eighteen (18) or more building units are within any semi-circle of the one thousand (1000) foot radius (i.e., an average density of one (1) building unit per two (2) acres, it shall be deemed a high density area. If platted building units are used to determine density, then fifty percent (50%) of said platted units shall have building units under construction or constructed.

2. High density areas for other facilities. If an education facility, assembly building, hospital, nursing home, board and care facility, or jail is located within one thousand (1000) feet of a wellhead or production facility, high density area rules shall apply.

Recommended standard

Wells and production equipment shall be a minimum of 750 feet from any occupied building or occupied building permitted for construction, platted residential lots, or designated outside activity area.

Visual Mitigation

1. Analysis

Applications for all oil and gas facilities may be required to include a visual impact analysis. The analysis, if required, shall include photographic simulations of the site from nearby public rights-of-way and land use(s) as determined by the development services manager or designee and proposed impact mitigation measures as indicated below. The development services manager or designee will determine the appropriate land use(s) from which a photographic simulation of the site shall be provided based upon topography, existing vegetative and/or structural screening, and the linear distance from the proposed oil and gas facility to the respective land use(s).

2. Mitigation

a. Methods for appropriate visual impact mitigation include, but are not limited to, use of low profile tanks, facility painting, vegetative or structural screening, berming, or minor relocation of the facility to a less visible location on the respective site.

b. On-site relocation may be necessary where the proposed facility would cause visual impacts to natural ridgelines, rock outcroppings, or other distinct geologic formations, provided relocation does not adversely impact the well spacing requirements of the COGCC or the ability of the oil and gas well operator to develop the resource.

c. Where the painting of a facility or any structural screening (i.e., fence or wall) is required as a method of impact mitigation, such facility and screening shall be painted a uniform, non-contrasting, non-reflective color tone. The facility or structural screening paint color shall be matched to the land, not the sky, and shall be slightly darker than the adjacent landscape.

Noise

Minimum standard

Sound emission levels and mitigation, at a minimum shall be in accordance with the standards as adopted and amended by COGCC.

Recommended standard

1. Sound emission levels shall be in accordance with the standards as adopted and amended by COGCC.

2. The operator shall provide additional noise mitigation that may be required by the City. In determining such additional noise mitigation, specific site characteristics shall be considered, including, but not limited to, the following:

a. Nature and proximity of adjacent development (design, location, type);
b. Prevailing weather patterns, including wind directions;
c. Vegetative cover on or adjacent to the site or topography.

3. Further, based upon the specific site characteristics, the nature of the proposed activity, and its proximity to surrounding development, and type and intensity of the noise emitted, additional noise abatement measures above and beyond those required by the COGCC may be

required by the City. The level of required mitigation may increase with the proximity of the facility to existing residences and platted subdivision lots and/or the level of noise emitted by the facility. One of more of the following additional noise abatement measures shall be provided by the operator if requested by the City:

a. Acoustically insulated housing or covers enclosing any motor or engine;

b. Screening of the site or noise-emitting equipment by a wall or landscaping;

c. Solid wall of acoustically insulating material surrounding all or part of the facility;

d. A noise management plan specifying the hours of maximum noise and the type frequency, and level of noise emitted;

e. Use of electric-power engines and motors, and pumping systems; and/or

f. Construction of buildings or other enclosures may be required where facilities create noise and visual impacts that cannot otherwise be mitigated because of proximity, density, and/or intensity of adjacent land use.

Vibration

All mechanized equipment associated with oil and gas wells and production facilities shall be anchored so as to minimize transmission of vibration through the ground according to COGCC rules.

Lighting

All on-site lighting used in the construction of the well and its appurtenances shall comply with the State of Colorado Oil and Gas Rule 803. All permanent lighting fixtures installed on the site shall comply with the City of Longmont lighting standards found in Section 15.05.140, Outdoor Lighting.

Water Protection

Rivers, streams, reservoirs, irrigation ditches, groundwater, wetlands and other water bodies are considered important water systems for the City. The value of both surface and ground water are significant and the City finds that protection of water resources is of primary importance, and must be adequately addressed by any applicant for an oil and gas facility permit.

1. Oil and gas well operations shall not adversely affect the quality or quantity of surface or subsurface waters. Water bodies classified as part of a public water system, oil and gas well operations shall be consistent with COGCC Rule 317.B Public Water System Protection.

2. Oil and gas well operations shall not adversely affect the water quality, quantity or water pressure of any public or private water wells.

Setbacks to Water Bodies

Minimum standard

Oil and gas well operations and facilities and operations shall comply with setback requirements for river/stream corridors and riparian areas, and wetlands under Section 15.05.020(E). If the water body is associated with a designated outside activity area, the minimum setback from the water body shall be consistent with the setback for the outside activity area. If the water body is classified as part of a public water system, oil and gas well operations shall be consistent with COGCC Rule 317.B Public Water System Protection.

Recommended standard

Oil and gas well operations and facilities shall be located a minimum of 300 feet from the normal high water mark of any water body. If the water body is associated with a designated outside activity area, the minimum setback from the water body shall be consistent with the setback for the outside activity area. If the water body is classified as part of a public water system, oil and gas well operations shall be consistent with COGCC Rule 317.B Public Water System Protection.

Water Quality Monitoring

1. The applicant shall comply with COGCC water well testing and water-bearing formation protection procedures and requirements.

2. If the City determines that additional water quality monitoring is required, the applicant shall submit a water quality monitoring plan to the City for review and approval.

3. The plan will outline a monitoring program to monitor water quality conditions and pollutants in surface or groundwater that could be impacted by production of oil or natural gas from any well in an adjacent single or consolidated well site. The plan, at a minimum, will include the following:

a. The type and number of wells needed to establish baseline groundwater quality upgradient and downgradient of the proposed oil and gas operations, including depth, materials of construction and location of wells on and around the site;

b. The constituents to be sampled for, taking into account State of Colorado groundwater standards and any materials used in the oil and gas operations that could affect groundwater;

c. The type and frequency of samples to be collected and analyzed before operations start, during operations and after operations have been completed;

d. The analytical methods and reporting levels to be used;

e. The proposed frequency of reporting results to the City and COGCC.

4. The plan shall be based on hydrologic studies or equivalent information showing the subsurface conditions and mobility of the groundwater aquifer(s) that will be affected by the oil and gas operations. The plan shall be prepared by an engineer registered in the State of Colorado with experience in groundwater monitoring and subsurface condition investigations.

5. The procedures and provisions in the approved plan shall be implemented by the oil and gas well operators prior to any construction or operations on the site. Oil and gas well operators shall fund the development and implementation of the water quality monitoring plan and program for the duration of operations on the site and for a minimum of five (5) years following completion of operations and abandonment of the well(s). All monitoring records related to the program shall be provided to the City as soon as they are available to the operator.

Waste and Wastewater Disposal & Closed Loop/Pitless System

1. All water, waste, chemicals, fluids, solutions or other solid materials or liquid substances produced or discharged by the operation of the oil and gas well's facilities shall be treated and disposed of in accordance with all applicable rules and regulations of the governmental authorities having jurisdiction over such matters; provided however, there shall be no pits, production, reserve, waste, or otherwise, constructed or maintained on the site and any produced water or waste and chemicals, fluids, hydrocarbons, fracturing solutions or other solid materials or liquid substances of any kind shall not be discharged on the site and shall be discharged and held only in a "closed loop system" comprised of sealed storage tanks, commonly used for such purposes in the industry, which contents shall be promptly removed from the site

and disposed of off of the site at a licensed disposal site, in accordance with COGCC or other applicable rules and regulations.

2. Drilling or operation of any waste water or other injection or disposal wells is prohibited. Except to the extent that materials are injected into a well as part of normal and ordinary drilling, completion and production operations, an operator shall not inject or re-inject any fluid, water, waste, fracking material, chemical or toxic product into any well.

Drilling and Hydraulic Fracturing Fluids

Minimum standard

1. Oil and gas operators shall comply with COGCC rules regarding the use and disclosure of all drilling and fracturing fluids.

2. The use of biodegradable, non-toxic neutral PH, residue free, non-corrosive, non-polluting and non-hazardous fluids is recommended, as is the use of a tracer in the fracturing solution to allow the City to trace and determine migration of the solution.

Recommended standard

1. Oil and gas operators shall assure that any water, fluid, solid or chemical used in the fracturing process ("fracturing solution") will be biodegradable, non-toxic neutral pH, residue free, non-corrosive, non-polluting and non-hazardous in the volumes, forms and concentrations being used, and will maintain and provide the City with a current list of the volumes, composition and concentrations of any fracturing solution used.

2. Operators shall use a "tracer" in the fracturing solution which will allow the City to trace and determine the migration of the solution, and shall provide the City with evidence of any information about the tracer.

3. The operator shall provide representative samples of the fracturing solution used during any well drilling or completion operation, the City shall have the right to have the samples analyzed by a third party at the operator's cost.

Production Site Containment

Berms or other containment devices shall be constructed around crude oil condensate, or produced water and waste storage tanks and shall enclose an area sufficient to contain and provide secondary containment for 150 percent of the largest single tank. Berms or other secondary containment devices shall be sufficiently impervious to contain all spilled or released material. No more than two storage tanks shall be located within a single berm. All berms and containment devices shall be inspected at least every six months and maintained in good condition. No potential ignition sources shall be allowed inside the secondary containment area.

Spill, Release, Discharge

The operator shall implement best management practices to prevent the spill, release or discharge of any pollutants, contaminants, chemicals, solid wastes, or industrial, toxic or hazardous substances or wastes at, on, in, under, or near the site. Any such spill, release or discharge, including without limitation, of oil, gas, grease, solvents, or hydrocarbons that occurs at, on, in, under, or near the site shall be remediated immediately in compliance with applicable laws. Any such spill, release or discharge that is reportable to regulatory authorities under applicable laws shall be reported to the City and owners of the site within 24 hours by telephone, fax, or e-mail, to be followed by copies of written notices that the operator has filed with regulatory authorities within five business days after such filing.

Stormwater Management

The construction and operation of oil and gas wells and production equipment, including access roads and storage areas for equipment and materials, shall meet all stormwater management and pollution prevention requirements of the Colorado Department of Public Health and Environment and any applicable requirements of Chapter 14.26 of the City of Longmont Municipal Code.

Pipeline and Gathering Systems

The design, construction, cover, and reclamation of all pipelines and gathering lines for oil and gas operations shall be subject to the COGCC rules. The alignment location of any approved pipeline or gathering system shall be recorded against the respective property in the records of the County Clerk and Recorder. The location of any pipelines and gathering lines which are proposed for abandonment shall also be recorded against the respective property in the records of the County Clerk and Recorder upon abandonment.

Air Quality

1. Air emissions from the operation shall be, at a minimum, in compliance with the permit and control provisions of the Colorado Air Quality Control Program, Title 25, Section 7, C.R.S.

2. Oil and gas well operations are prohibited from causing airborne emissions in concentrations that are known to cause negative health impacts.

3. The operator shall make reasonable efforts to minimize methane emissions by using all feasible "green completion" techniques, pursuant to COGCC Rules Section 805(3) and the installation of "low bleed" pneumatic instrumentation.

4. To the maximum extent practicable, all fossil fuel powered engines used on site shall employ the latest emission-reduction technologies.

5. The use of electric-power engines and motors, and pumping systems are recommended to reduce airborne emissions wherever practical given an oil and gas well facility's proximity to available electric transmission lines.

Odor/Dust Containment

Oil and gas facilities and equipment shall be operated in such a manner that odors and dust to do not constitute a nuisance or hazard to public health, safety, welfare, and the environment, including compliance with COGCC Rules section 805.b.(1) and LMC Section 15.05.150(D) regarding use of best available technologies to control odor.

Wildlife and Habitat

Oil and gas facilities shall comply with federal and state requirements regarding the protection of wildlife and habitat, including the COGCC wildlife resource protection rules, and the provisions of LMC section 15.03.030, "Habitat and Species Protection,". The applicant shall implement such procedures as recommended by the Colorado Division of Wildlife after consultation with the City Natural Resources staff. The applicant shall not engage in activities that the Colorado Division of Wildlife determines threaten endangered species.

Reclamation and Re-vegetation

1. Site Vegetation Analysis

Applications for oil and gas well facilities shall include an analysis of the existing vegetation on the site to establish a baseline for re-vegetation upon abandonment of the facility or upon final reclamation of the site. The analysis shall include a written description of the species, character, and density of existing vegetation on the site and a summary of the potential impacts to vegetation as a result of the proposed operation.

2. Re-vegetation

Applications for oil and gas facilities shall include a copy of any COGCC accepted interim and final reclamation procedures and consultation with City Natural Resources staff regarding site specific re-vegetation plan recommendations.

Transportation Impacts, Road and Access

1. Transportation Impact Study

a. Applications for all oil and gas well facilities may be required to include a transportation impact study, which shall clearly identify and distinguish the impacts to City roads and bridges related to facility construction, operations, and ongoing new traffic generation. Transportation impact studies shall be prepared in accordance with the City standards requirements or other guidelines as provided by the City engineer. The process for mitigation of transportation impacts typically includes a plan for traffic control, the receipt of all necessary permits, ongoing roadway maintenance, and improving or reconstructing City roads, including providing financial assurance.

b. A traffic control plan shall be prepared for each phase of construction where City roads will be utilized for transportation of materials in support of site construction and/or operations.

c. In the event that public road improvements are required to accommodate an oil and gas well facility, engineered drawings prepared by a Colorado licensed civil engineer shall be approved prior to permitting work in the right-of-way. Such drawing shall be in substantial conformance with City standards. Financial assurance shall be required for the construction or reconstruction of all public roads.

2. Maintenance

In the event that the activities of a facility operator cause any City roadway to become substandard, the City may require the operator to provide ongoing maintenance of the applicable substandard City roadway. Such maintenance may include dust control measures and roadway improvements such as graveling, shouldering, and/or paving as determined in the Transportation Impact Study.

3. Site Access

Any access to a property from a City street requires a City-issued access permit. Permits are revocable upon issuance of a stop work order or if other permit violations occur. The permitting and construction of site accesses shall comply with the City design standards.

4. Private Access Roads

For private access roads connecting oil and gas well facilities with a public street or state highway, the applicant shall provide written documentation as part of the application demonstrating that it has the legal right to use such road(s) for the purpose of accessing the facilities. All private roads used to access oil and gas well facilities shall be graded for appropriate drainage, and surfaced and maintained to provide adequate access for oil and gas operation vehicles and emergency vehicles. The operator shall comply with City standards regarding vehicle tracking and dust mitigation. The operator shall also enter into an agreement with the private road owner regarding maintenance and reimbursement for damages.

5. State Highway Access

If access is directly to a state highway, the applicant must have an approved State Highway Access Permit for the proposed facility.

Signs

Oil and gas well facilities shall have signage consistent with the COGCC rules. In addition, each well site and production site shall have posted in a conspicuous place a legible sign of not less than three square feet and not more than six square feet bearing the current name of the operator, a current phone number including area code, where the operator may be reached at all times, name or number of the lease and number of the well printed thereon. The sign shall warn of safety hazards to the public and shall be maintained on the premises from the time materials are delivered for drilling purposes until the well site and production site is abandoned.

Definitions

For purposes of these oil and gas well regulations only, the following words shall have the following definitions:

Act means the Oil and Gas Conservation Act of the State of Colorado

Ancillary Facilities means all of the equipment, buildings, structures, and improvements associated with or required for the operation of a well site, pipeline, or compressor facility. Ancillary facilities include, but are not limited to, roads, well pads, tank batteries, combustion equipment and exclude gathering lines.

Assembly Building means any building or portion of building or structure used for the regular gathering of fifty (50) or more persons for such purposes as deliberation, education, instruction, worship, entertainment, amusement, drinking or dining, or awaiting transport.

Best Management Practices (BMPs) are 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 means a building or structure intended for human occupancy. A dwelling unit is equal to one (1) building unit, every guest room in a hotel/motel is equal to one (1) building unit, and every five thousand (5,000) square feet of building floor area in commercial facilities, and every fifteen thousand (15,000) square feet of building floor area in warehouses, or other similar storage facilities, is equal to one (1) building unit.

Centralized Exploration and Production (E&P) Waste Management Facility means a facility, other than a commercial disposal facility regulated by the Colorado Department of Public Health and Environment, that (1) is either used exclusively by one owner or operator or used by more than one operator under an operating agreement; and (2) is operated for a period greater than three (3) years; and (3) receives for collection, treatment, temporary storage, and/or disposal produced water, drilling fluids, completion fluids, and any other exempt E&P wastes as defined by the COGCC Rules that are generated from two or more production units or areas or from a set of commonly owned or operated leases. This definition includes oil-field naturally occurring radioactive materials (NORM) related storage, decontamination, treatment, or disposal. This definition excludes a facility that is permitted in accordance with Rule 903 pursuant to Rule 902.e.

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Commercial Disposal Well Facility means a facility whose primary objective is disposal of Class II waste from a third party for financial profit.

COGCC means the Colorado Oil and Gas Conservation Commission.

Completion means an oil well shall be considered completed when the first new oil is produced through well head 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 the Director, 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.

Dedicated Injection Well means any well as defined under 40 C.F.R. §144.5 B, 1992 Edition, (adopted by the U.S. Environmental Protection Agency) used for the exclusive purpose of injecting fluids or gas from the surface. The definition of a dedicated injection well does not include gas storage wells.

Designated Agent means the designated representative of any oil and gas well operator.

Designated Outside Activity Areas means a well-defined outside area (such as a playground, recreation area, outdoor theater, or other place of public assembly) that is occupied by twenty (20) or more persons on at least forty (40) days in any twelve (12) month period or by at least five hundred (500) or more people on at least three (3) days in any twelve (12) month period.

Educational Facility means any building used for legally allowed educational purposes for more than twelve (12) hours per week for more than six (s) persons. This includes any building or portion of building used for licensed day-care purposes for more than six (6) persons.

Exploration and Production Waste (E&P Waste) means those wastes associated with 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 operations that are exempt from regulation under Subtitle C of the Resource Conservation and Recovery Act (RCRA), 42 USC Sections 6921, et seq. For natural gas, primary field operations include those production-related activities at or near the well head and at the gas plant (regardless of whether or not the gas plant is at or near the wellhead)but prior to transport of the natural gas from the gas plant to market. In addition, uniquely associated wastes derived from the production stream along the gas plant feeder pipelines are considered E&P wastes, even if a change of custody in the natural gas has occurred between the wellhead and the gas plant. In addition, wastes uniquely associated with the operations to recover natural gas from underground storage fields are considered to be E&P Wastes.

Flowlines mean those segments of pipe from the wellhead downstream through the production facilities ending at: in the case of gas lines, the gas metering equipment; or in the case of oil lines the oil loading point or LACT unit; or in the case of water lines, the water loading point, the point of discharge to a pit, the injection wellhead, or the permitted surface water discharge point.

Gathering Line means a pipeline and equipment described below 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.

Green Completion Practices mean those practices intended to reduce emissions of salable gas and condensate vapors during cleanout and flowback operations prior to the well being placed on production.

Groundwater means subsurface waters in a zone of saturation.

High Density Area mean any tract of land determined to be a high density area in accordance with Rule 603.b.

Hospital, Nursing Home, Board and Care Facilities mean buildings used for the licensed care of more than (5) in-patients or residents.

Inactive Well means any shut-in well from which no production has been sold for a period of twelve (12) consecutive months; any well which has been temporarily abandoned for a period of (6) consecutive months; or, any injection well which has not been utilized for a period of twelve (12) consecutive months.

Jail means those structures where the personal liberties of occupants are restrained, including but not limited to mental hospitals, mental sanitariums, prisons, reformatories.

Local Government Designee means the office designated to receive, on behalf of the local government, copies of all documents required to be filed with the local government designee pursuant to these rules.

Mineral Estate Owner means the owner or lessee of minerals located under a surface estate that are subject to an application for development.

Multi-well Site means a common well pad from which multiple wells may be drilled to various bottomhole locations.

Oil means crude petroleum oil and any other hydrocarbons, regardless of gravities, which are produced at the well in liquid form by ordinary production methods, and which are not the result of condensation of gas before or after it leaves the reservoir.

Oil and Gas means oil or gas or both oil and gas.

Oil and Gas Well means a hole drilled into the earth for the purpose of exploring for or extracting oil, gas, or other hydrocarbon substances.

Oil and Gas Well Facility means equipment or improvements used or installed at an oil and gas well location for the exploration, production, withdrawal, gathering, treatment, or processing of oil or natural gas.

Oil and Gas Well Location means a definable area where an operator has disturbed or intends to disturb the land surface in order to locate an oil and gas well facility.

Oil and Gas Well Operations means exploration for oil and gas, including the conduct of seismic operations and the drilling of test bores; the siting; drilling; deepening, recompletion, reworking, or abandonment of an oil and gas well, or gas storage well; production operations related to any such well including the installation of flowlines and gathering systems; the generation, transportation, storage, treatment,; and any construction, site preparation, or reclamation activities associated with such operations.

Operating Plan means a general description of a facility identifying purpose, use, typical staffing pattern, equipment description and location, access routes, seasonal or periodic considerations, routine hours of operating, source of services and infrastructure, and any other information related to regular functioning of that facility.

Operator means any person who exercises the right to control the conduct of oil and gas operations.

Owner means any person with a working interest ownership in the oil and gas or leasehold interest therein.

Pit means a subsurface earthen excavation (lined or unlined), or open top tank, used for oil or gas exploration or production purposes for retaining or storing substances associated with the drilling or operation of oil and gas wells. Pits may include drilling pits, production pits, reserve pits and special purpose pits as defined in COGCC Rules

Plugging and Abandonment means the cementing of a well, the removal of its associated production facilities, the removal or abandonment in-place of its flowline, and the remediation and reclamation of the wellsite.

Pollution means man-made or man-induced contamination or other degradation of the physical, chemical, biological, or radiological integrity of air, water, soil, or biological resource.

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

Production Site means that surface area immediately surrounding proposed or existing production equipment, or other accessory equipment necessary for oil and gas production activities, exclusive of transmission and gathering pipelines.

Public Water System means those systems listed in Appendix VI to these Rules. These systems provide to the public water for human consumption through pipes or other constructed conveyances, if such systems have at least fifteen (15) service connections or regularly serve an average of at least twenty-five (25) individuals daily at least sixty (60) days out of the year. Such definition includes:

(i) Any collection, treatment, storage, and distribution facilities under control off the operator of such system and used primarily in connection with such system.
(ii) Any collection or pretreatment storage facilities not under such control, which are used primarily in connection with such system.

The definition of "Public Water System" for purposes of Rule 317B does not include any "special irrigation district," as defined in Colorado Primary Drinking Water Regulations (5 C.C.R. 1003.1).

Reclamation means the process of returning or restoring the surface of disturbed land as nearly as practicable to its condition prior to the commencement of oil and gas operations or to landowner specifications with an approved variance under Rule 502.b.

Remediation means the process of reducing the concentration of a contaminant or contaminants in water or soil to the extent necessary to ensure compliance with the concentration levels in Table 910-1 and other applicable ground water standards and classifications.

Seismic Operations means all activities associated with acquisition of seismic data including but not limited to surveying, shothole drilling, recording, shothole plugging and reclamation.

Sensitive Area means an area vulnerable to potential significant adverse groundwater impacts, due to factors such as the presence of shallow groundwater or pathways for communication with deeper groundwater; proximity to surface water, including lakes, rivers, perennial or intermittent streams, creeks, irrigation canals, and wetlands. Additionally, areas classified for domestic use by the Water Quality Control Commission, local (water supply) wellhead protection areas, areas within 1/8 mile of a domestic water well, areas within ¼ mile of a public water well, ground water basis designated by the Colorado Ground Water Commission, and surface water supply areas are sensitive areas.

Sidetracking means entering the same well head from the surface, but not necessarily following the same well bore, throughout its subsurface extent when deviation from such well bore is necessary to reach the objective depth because of an engineering problem.

Spill means any unauthorized sudden discharge of E&P waste to the environment.

Subsurface Disposal Facility means a facility or system for disposing of water or other oil field wastes into a subsurface reservoir or reservoirs.

Surface Water Supply Area means the classified water supply segments within five (5) stream miles upstream of a surface water intake on a classified water supply segment. Surface Water Supply Areas shall be identified on the Public Water Supply Area Map or through use of the Public Water System Surface Water Supply Area Applicability Determination Tool described in Rule 317B.b.
Tank shall mean a stationary vessel that is used to contain fluids, constructed of non-earthen materials (e.g. concrete, steel, plastic) that provide structural support.

Treatment facilities means any plant, equipment or other works used for the purposes of treating, separating or stabilizing any substance produced from a well.

Twinning means the drilling of a well within a radius of fifty feet from an existing well bore when the well cannot be drilled to the objective depth or produced because of an engineering problem, such as a collapsed casing or formation damage.

Water Bodies mean reservoirs, lakes, perennial or seasonally flowing rivers, streams, creeks, springs, irrigation ditches, aquifers, and wetlands.

Waters of the State mean any and all surface and subsurface waters which are contained in or flow in or through this state, but does not include waters in sewage systems, waters in treatment works of disposal systems, water in potable water distribution systems, and all water withdrawn for use until use and treatment have been completed. Waters of the state include, but are not limited to, all streams, lakes, ponds, impounding reservoirs, wetlands, watercourses, waterways, wells, springs, irrigation ditches or canals, drainage systems, and all other bodies or accumulations of water, surface and underground, natural or artificial, public or private, situated wholly or partly within or bordering upon the State.

Well means an oil or gas well for purposes of exploration and production.

Well Site means the areas that are directly disturbed during the drilling and subsequent operation of, or affected by production facilities directly associated with, any oil or gas well or injection well and its associated well pad.

All terms used in this section that are defined in the Act or in COGCC rules and are not otherwise defined in Chapter 15.10 of this development code shall be defined as provided in the Act.

All other words used in this section shall be given their usual customary and accepted meaning, and all words of a technical nature, or peculiar to the oil and gas industry, shall be given that meaning which is generally accepted in the oil and gas industry.

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County, state reach compromise on oil and gas regulations

February 21, 2012 11:28 AM

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ANDREW WINEKE
THE GAZETTE

El Paso County commissioners Tuesday approved a modification to the recently passed oil and gas regulations that preserves the county's desire for enhanced water quality monitoring while heading off a threat of litigation from the state.

In a unanimous vote, commissioners passed a resolution that requires oil and gas drillers to perform an initial, baseline water quality test and, after drilling is completed, one follow-up test between one and three years later. For the six drilling permits Houston-based Ultra Resources has already applied for with the Colorado Oil and Gas Conservation Commission, two follow-up tests would be required over six years after drilling is finished.

"I think this offers protection on the one end while also being very pro-business and bringing in a new industry," said commissioner Sallie Clark.

The resolution also directs county staff to pursue an intergovernmental agreement with the oil and gas commission to transfer that water quality monitoring to the state level. If such an agreement is reached, the county would then again modify its regulations to reflect it.

County commissioners passed the oil and gas regulations 3-2 in a contentious nine-hour meeting Jan. 31. The Colorado Attorney General's Office, the oil and gas commission and the oil and gas industry all objected to the proposed rules approved earlier in January by the county's planning commission, arguing that many of the proposed regulations would usurp the state's authority. The version commissioners eventually agreed on tossed most of the disputed regulations, but kept a water quality provision that the state continued to object to.

Both sides hammered out the compromise agreed to Tuesday, said county attorney Bill Louis.

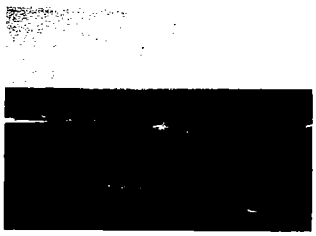
"Think of this resolution as a peace treaty, if you will," he said.

Tisha Conoly Schuller, president and CEO of the Colorado Oil and Gas Association, an industry group, said the compromise gives both sides what they wanted.

"It meets everyone's objectives," she said. "It ensures water will be sampled in El Paso County, while ensuring state supremacy."

Not everyone was satisfied with the compromise, though. Jim Lockhart, conservation chair for the Pikes Peak group of the Rocky Mountain chapter of the Sierra Club, said the county was weakening its citizens' input on the process by deferring so much to the state.

"I'm concerned that what you're going to do today is going to further take away the public's right under the land use code," he told commissioners.



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ANDY WINEKE, THE GAZETTE
On Feb. 17, Ultra Resources began building an access road to a drilling site in eastern El Paso County. It will be the company's first drilling site in the county.

1 of 2

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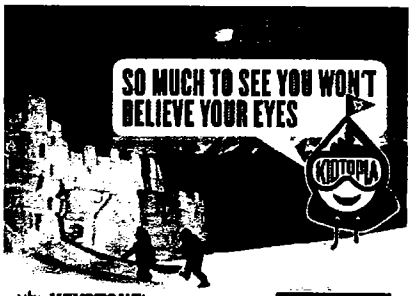

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The commissioners also heard some good news from El Paso County Assessor Mark Lowderman. He said he had been working on the assumption that the county would receive little property tax from oil and gas drilling because the production would likely fall under the personal property category, which the county doesn't tax. A little more digging, however, revealed a state statute that classifies oil and gas production as real property, which is taxed in El Paso County, and lays out two special assessment rates for the industry.

The upshot of all that, Lowderman said, is that the county stands to receive very roughly $9,000 a year from a primary well that generates $1.2 million a year in production. A less-productive well is assessed at a lower rate and might generate only $700 a year in property taxes. Both those examples came from actual wells in Weld County, he said.

"This is new for us, the evaluation of oil and gas wells and the taxes that go with it," Lowderman said. "It's kind of mind-boggling how much revenue is produced by that industry."

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DENNIS HISEY
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Passed 2/21/12

AGENDA ITEM SUMMARY

Date: February 21, 2012 Agenda Item No: 9

To: Board of County Commissioners

From: Max Rothschild - Director, Development Services Department/Mark Gebhart - Land Development Code Manager, Development Services Department

Subject: Request for review and determination of the administrative process for Oil and Gas applications (continued from February 9, 2012).

SUMMARY (including information on budgeted matters):

N/A.

BACKGROUND (including information on budgeted matters):

N/A.

FINANCIAL IMPLICATIONS (completed only if not currently budgeted, and is an emergency, mandated or grant/unanticipated revenue funding request before the Board for consideration):

Not Applicable

Revenue/Funding Sources:	NA
Revenue/Funding Amount:	NA
Subject to TABOR?	NA
Increase to Original Adopted Budget:	NA
Net Cost to El Paso County:	NA
Total Project Cost:	NA

RESOLUTION NO. 12-____

BOARD OF COUNTY COMMISSIONERS, COUNTY OF EL PASO, COLORADO

REQUEST FOR REVIEW AND DETERMINATION OF THE ADMINISTRATIVE PROCESS FOR OIL AND GAS APPLICATIONS

WHEREAS, on January 31, 2012 the Board of County Commissioners of El Paso County, Colorado (the "Board" or the "County'), approved the addition of Section 5.2.37 to the El Paso County Land Development Code (the "Code") in order to provide specific development standards and special use review criteria for oil and gas exploration and extraction in the unincorporated parts of El Paso County (the "Code Amendment); and,

WHEREAS, prior to the Board's adoption of the Code Amendment, the Code did not permit oil and gas extraction as a use by right or as a special use in any county zoning district, thereby effectively prohibiting oil and gas extraction in El Paso County; thus, prior to the Board's adoption of the Code Amendment the County's land use process discouraged, rather than encouraged, the commercial exploitation of oil and gas resources in El Paso County; and,

WHEREAS, the Board's adoption of the Code Amendment encourages job growth and the investment of capital in El Paso County for oil and gas exploration and extraction by creating a simplified, one-stop administrative special use process in every county zoning district, which simplified process provides for the issuance of a permit for oil and gas operations, including both exploration and production; and,

WHEREAS, the record of the hearing on January 31, 2012 is not clear concerning which special use review standards the Board finally adopted for inclusion in Section 5.2.37 and, therefore, it is reasonable and necessary for the Board to resolve the review standards issue prior to the implementation of Section 5.2.37; and,

WHEREAS, given that General Assembly has comprehensively granted regulatory authority over oil and gas exploration and extraction to the Colorado Oil and Gas Commission (the "COGCC"), the Board's approved motion on January 31, 2012 intends adoption of the special use review criteria that staff presented to the Board in Alternative #3 (Clerk to the Board Exhibit ___) to be the special use review criteria that the Development Services Director (the "Director") applies when determining whether to administratively approve a special use for oil and gas exploration and extraction; furthermore, this approach to limiting the scope of special use review is consistent with County policy and practice in the context of land uses in which legislative, regulatory or judicial bodies have limited local government authority, for example, in land use issues involving telecommunication towers, adult uses and religious land uses; and,

WHEREAS, since the adoption of the current version of the Code in 2006, and as subsequently amended, the Board has increasingly granted administrative authority concerning special use applications; accordingly, in granting administrative special use authority over oil and gas exploration and extraction the Board intends, being aware that applicable case law precludes a local government authority from prohibiting oil and gas exploration at a location for

WHEREAS, in addition to the foregoing, the Board further directs its LGD and its staff to commence discussions and negotiations with the COGCC to develop an Inter-Governmental Agreement ("IGA") for approval by both the Board and the COGCC, the provisions of which may address all aspects of Section 5.2.37, but at a minimum will address the establishment of the Water Quality Testing Program as a standard condition of approval for COGCC well permits in El Paso County and, upon such IGA becoming effective, the Board directs its staff to commence the process of amending the Code by rescinding or amending the relevant provisions of Section 5.2.37 so as not to be in conflict with the approved IGA; and,

WHEREAS, Representatives of the County, the Attorney General's Office and industry representatives negotiated the provisions of this Resolution in order to facilitate implementation of a water quality testing program in El Paso County without any delay from preemption litigation, and the same representatives concur that development of an IGA must proceed to a formal public process through the COGCC; and,

WHEREAS, the Board directs the County Administrator and the County Attorney to carry out and oversee the intent of the Board as expressed herein and the Board directs the County Administrator and the County Attorney to provide resources and support to the LGD as needed.

NOW, THEREFORE, BE IT RESOLVED that the Board of County Commissioners of the County of El Paso County hereby approves this Resolution and directs the County Administrator and the County Attorney to carry out the intent of the Board as expressed herein.

DONE THIS 21st day of February at Colorado Springs, Colorado.

ATTEST:

BOARD OF COUNTY COMMISSIONERS OF EL PASO COUNTY, COLORADO

By: _____
Wayne W. Williams
Clerk and Recorder

By: _____
Amy Lathen
Chair

which the COGCC has issued a permit, that the Director shall grant administrative special use approval in all instances in which the applicant for a special use for oil and gas exploration and extraction has obtained a permit from COGCC, and has satisfied the development standards in Section 5.2.37 adopted on January 31, 2012 pertaining to transportation impacts, noxious weed management, and emergency response, and has satisfied the water testing requirements as set forth in more detail in this Resolution, below; however, in the event the Director has a reasonable basis to conclude that the Department has developed clear and convincing reasons that the proposed oil and gas exploration and extraction site presents a material danger to the public health safety and welfare, the Director shall then confer with both the County Administrator and the County Attorney prior to making a decision to elevate the application to process before the Planning Commission and the Board or before making a decision to administratively deny the application; and,

WHEREAS, in recognition of the fact that COGCC has not adopted any statewide water quality testing rules at this time, the Board desires to strengthen the water quality testing standards adopted in Section 5.2.37 on January 31, 2012, by adopting the following implementation standard and instructing the Director that any well permit issued by COGCC (Form 2/2A) that contains the following implementation standards shall be deemed to satisfy Section 5.2.37 as adopted on January 31, 2012, specifically, a condition of approval whereby the permit holder is required at a minimum to conduct water quality pre-drilling and post-drilling testing in accordance with the Baseline Ground Water Quality Sampling Program (the "Water Quality Testing Program") established under the auspices of the Colorado Oil & Gas Association and endorsed by the COGCC, except that in the case of Ultra Petroleum's three pending[1] permits, the well permits shall contain the same condition of approval appended to its three approved permits whereby Ultra Petroleum is required, in addition to the above-stated provisions of the Water Quality Testing Program, to require that the first post-drilling testing occur during the first year following conclusion of drilling and that there be a second post-drilling testing that occurs during the third year following conclusion of drilling; and,

WHEREAS, in order to carry out the intent expressed in the provisions immediately above concerning the Water Quality Testing Program, the Board directs its El Paso County Local Government Designee (the "LGD") to COGCC, pursuant to COGCC Rule 306 (c) and (d), to formally request that COGCC impose a condition of approval on all pending and future well permit applications according to the provisions set forth in the paragraph immediately above; and,

WHEREAS, in the event the COGCC Director declines to add the requested condition of approval to the well permit as per the above-stated provisions of this Resolution, the Board directs the LGD to file a hearing request on the matter pursuant to COGCC Rules 305.d (2) and 503.b (7), pursuant to which request for hearing the issuance of the well permit shall be suspended pending such hearing; and,

[1] Pending includes well permits for which Ultra has begun discussion with COGCC but for which Ultra has not yet made formal application.

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County adopts slimmed-down oil and gas regulations

ANDREW WINEKE
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El Paso County commissioners on Tuesday narrowly approved a basic set of regulations to govern oil and gas drilling in the county.

The Board of County Commissioners voted 3-2 to approve a proposal that was significantly scaled down from what the county's planning commission approved earlier this month. The regulations govern transportation, emergency response, noxious weeds and, controversially, water quality issues related to drilling.

Commissioners Peggy Littleton and Darryl Glenn objected to the water quality regulations, arguing that the county was overstepping its authority because the Colorado Oil and Gas Conservation Commission also regulates drilling-related water issues.

"I think it would be irresponsible for us to open ourselves up to lawsuits," Littleton said.

The Attorney General's Office and oil and gas commission director Dave Neslin have expressed concern over the county's proposed rules, both in the version approved by the planning commission and a trimmed-down version the county's planning staff developed last week, arguing that the county can't regulate areas where the state has its rules in place.

However, commissoners Amy Lathen, Sallie Clark and Dennis Hisey said that water quality was too important to leave up to the state.

"I really don't mind pushing the envelope when it comes to our water quality," Hisey said.

The water quality monitoring regulations adopted by the county are similar to what the oil and gas commission has agreed to in other counties, requiring wells to be monitored initially for a baseline measurement and then at one, three, and six-year intervals after drilling begins.

The commissioners scrapped most of the rules proposed by the planning commission, including measures that would have governed setbacks from structures and property lines, mitigation of visual impacts and noise and impacts to wildlife. The commissioners will instead try to address those issues by working with the oil and gas commission on an intergovernmental agreement.

Getting some kind of oil and gas regulations in place was vitally important for the county, since a moratorium on oil and gas permits expired at midnight Tuesday and the county had no other regulations in place. Houston-based Ultra Resources has applied to drill six wells in El Paso County, four in unincorporated parts of the county and two more in Banning Lewis Ranch, inside the Colorado Springs city limits. The city imposed its own moratorium and set up a task force to study oil and gas regulations. The task force plans to make a recommendation to City Council by early May.

All of this was decided in a meeting that stretched nearly nine hours Tuesday. Several dozen speakers weighed in on the proposed regulations on each side of the issue.

Jeff Cahill, who lives near the Corral Bluffs Open Space, said that the proposed drilling has already hurt his property values and made it difficult for he and his wife to sell their home.

"They say they're not going to impact us," he told the commission. "Well, they've already impacted me."

Steve Hicks, chairman of the El Paso County planning commission, urged the commission to pass more stringent regulations such as those approved by the planning commission.

"At times, there needs to be extra regulation where the state doesn't go far enough, and this is one of them," he said.

Other speakers praised the economic potential of expanded oil and gas development in the county.

Bob Stovall recounted his experience as an oil and gas lawyer and a city attorney in Farmington, N.M.

"Air is pretty clean there. Water is pretty clean there - and that's after 100 years of oil and gas," he said. "If oil and gas is around in this county, it could be good for us and it can be done well."

Tisha Conoly Schuller, president and CEO of the Colorado Oil and Gas Association, said the county's new regulations were a good framework to build on.

"The El Paso County commissioners made significant progress today," she said. "The rules passed are 90 percent within the guidance provided by the Attorney General. There are still a couple of important issues to work through, but I am confident that the county is serious about finding common ground, and after seeing the progress made today, we will continue to work toward county regulations that are protective of the environment and within the scope of the county's jurisdiction."

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CHAPTER 5 USE AND DIMENSIONAL STANDARDS

5.2.37. Oil and/or Gas Operations

(A) General

(1) Purpose

The intent of this section is to facilitate the exploration and production of oil and/or gas resources within the unincorporated areas of the County in a responsible manner, which includes ensuring that potential land use and environmental conflicts will be avoided or appropriately mitigated. The following regulations are enacted in order to preserve the rights and privileges of surface and mineral estate owners and lessors, while ensuring the health, safety, and general welfare of the present and future residents of El Paso County and the preservation and protection of the environment and wildlife resources.

(2) Applicability

All oil and/or gas operations, including exploration and production activities, are subject to the requirements of this section. In the event that the provisions of this section conflict with any other provisions of the Code, this section shall supersede as it applies to oil and/or gas facilities.

(3) Authority

This section is adopted pursuant to C.R.S. §§ 29-20-11 et seq., 34-60-101 et seq., and 30-28-101 et seq. These standards are not intended to supersede state laws, regulations, and rules pertaining to oil and/or gas development, but rather are meant to supplement those requirements where appropriate.

(4) Waivers

(a) General

The Board of County Commissioners (BOCC), after a properly noticed public hearing, may grant a waiver for one or more of the requirements of this section or a condition of approval on the grounds that there is an operational conflict between the requirements of this section or a condition of approval and the Regulations of the Colorado Oil and Gas Conservation Commission (COGCC), or that full compliance with this section or a condition of approval is financially impracticable or technically infeasible. These provisions do not supersede the authorities granted to the Development Services Department (DSD) Director in the Setbacks subsection below.

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(b) Burden of Proof

The burden of proof shall be on the applicant to demonstrate by a preponderance of the evidence that an actual, substantial, and irreconcilable operational conflict exists or that a requirement is financially impracticable or technically infeasible.

(c) Criteria for Waiver Approval

(i) Operational Conflict

An operational conflict may be deemed to exist when it is demonstrated that a County regulation or condition of approval conflicts in operation with the state statutory or regulatory scheme and such conflict materially impedes or destroys the state's interest in the development, production, or utilization of oil and gas resources and the protection of the public health, safety, welfare, and the environment. An operational conflict may occur where the County regulation or condition prohibits an activity which the state regulations have clearly authorized. An operational conflict may also occur where the County regulation or condition authorizes an activity which the state regulations have clearly prohibited. An operational conflict shall not be deemed to exist when it is possible to comply with both the state and County regulations.

(ii) Financial Impracticality or Technical Infeasibility

Financial impracticality or technical infeasibility may be deemed to exist when the financial burden of compliance outweighs the benefit of such compliance or where there is no economical technology commercially available to comply with the specific County condition or regulation. If a condition or regulation is financially impracticable or technically infeasible, the applicant shall comply with the condition or regulation to the maximum extent which is practicable and feasible.

(5) Right to Enter

The empowerment of the DSD Director to enter and inspect a property is authorized under Section 11.1.4 of this Code. If entry is denied, the County shall have the authority to discontinue application processing, revoke approved permits and applications, or to obtain an order from a court of competent jurisdiction to obtain entry.

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(B) **Definitions**

The application of the following terms and associated definitions shall be limited to those applications submitted under this section of the Land Development Code (LDC). These terms and definitions do not modify, alter, or replace any other terms or definitions included within other sections of this Code, including, but not limited to, those terms and definitions contained within Chapter 1.

Assembly Building

Any building or portion of a building or structure used for the regular gathering of twenty (20) or more persons.

Centralized Facility

A facility serving one or more well pads and consisting of one or more compressors, generators, and/or water, gas, or oil treatment equipment.

Educational Facility

Any building used for legally allowed educational purposes for more than twelve (12) hours per week for more than six (6) persons. This includes any building or portion of a building used for licensed day-care purposes for more than six (6) persons.

Equipment

Machinery or structures located on well pads or rights-of-way including, but not limited to, wellheads, separators, dehydration units, heaters, meters, storage tanks, compressors, pumping units, internal combustion engines, and electric motors.

Gas Compressor Station

Any facility the purpose of which is to compress or otherwise treat natural gas in order to prepare the gas for transportation from one location to another.

Private Gathering Line

A pipeline transporting produced gas, oil, or water from multiple intermediate lines.

Private Intermediate Line

A pipeline transporting produced gas, oil, or water from one well pad after it passes through production metering equipment and extending to a gathering line.

Oil and/or Gas Facility

Equipment or improvements used or installed at any location for the exploration, production, withdrawal, gathering, treatment, or processing of oil or natural gas.

Oil and/or Gas Facility, Minor

Any oil and/or gas facility that consists of one or more of the following:

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1) A single well pad built and operated for the purpose of exploratory drilling, including associated equipment required for such exploration,
2) Intermediate lines extending beyond one-quarter (1/4) mile from a wellhead, gathering line, or other ancillary equipment, or
3) Temporary storage and construction staging yards in place for twelve (12) months or less.

Oil and/or Gas Facility, Major

Any oil and/or gas facility that includes one or more of the following:

1) Any well site which may be initially drilled for a single exploratory well but is proposed to be converted for production purposes,
2) A centralized facility for oil and/or gas production, water injection, water transfer or recycling, or water pumping and associated facilities,
3) Storage yards and construction staging yards in place for longer than twelve (12) months,
4) Permanent facilities or structures related to the production of oil and/or gas which contain internal combustion engines with a cumulative horsepower, de-rated for elevation, of 200 BHP or greater,
5) Gathering lines,
6) Pipelines other than gathering lines,
7) Any facility not meeting the definition of minor oil and/or gas facility,
8) Any well site which may be initially drilled for a single exploratory well but is proposed to be expanded for multiple wells if commercial amounts of oil or gas are encountered, or
9) Any minor oil and/or gas facility elevated by the DSD Director for review by the Planning Commission and for final action by the BoCC.

Oil and/or Gas Operations

Exploration for oil and/or gas, including the conduct of seismic operations and the drilling of test bores; the siting, drilling, deepening, recompletion, reworking, or abandonment of an oil and/or gas well, underground injection well, or gas storage well; production operations related to any such well including the installation of flowlines and gathering systems; any construction, site preparation, or reclamation activities associated with such operations; or any other related activity.

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Operator

The person or entity who has the legal right to drill into and produce from a pool and to appropriate the oil or gas produced therefrom either for such operator or others.

Storage Pit

Any natural or man-made depression in the ground used for the purpose of retaining or storing substances associated with the drilling or operation of oil and/or gas wells.

Site

Any lands, including the surface of a severed mineral estate, on which exploration for, or extraction and removal of oil or gas is authorized pursuant to a lease agreement.

Surface Owner

The owner of the surface property on which the facility will be constructed or any owner of a surface estate within one mile of an oil and/or gas facility.

Water Pumping Station

A facility that receives produced water through gathering lines for the purpose of lowering gathering line water pressure.

Water Transfer Station

A facility that receives produced water through gathering lines or surface transportation from one or more well pad locations.

Wellhead

The equipment attached to the casing of an oil, gas, or injection well above the surface of the ground.

Well Pad

The area in which operations for a well take place, including those portions of the pad area occupied within the drilling rig anchors. Well pads may contain one or more wellheads and associated equipment.

All other terms used in this article, which are not otherwise defined by this Code, shall be given their usual, customary, and accepted meaning.

(C) Application Review and Approval Process

(1) Required Applications

(a) Requirement for Special Use and Site Development Plan

Approval of a special use and site development plan are required for minor and major oil and/or gas facilities in all zoning districts. The application submittal and review process for all oil and/or

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gas facilities shall follow the provisions outlined in the Procedures Manual for an oil and/or gas facility special use.

(2) Processing of Applications for Oil and Gas Operations

(a) Minor Oil and Gas Facilities

Special use applications for minor oil and gas facilities may be reviewed and approved administratively by the DSD Director. The Director may, at his or her discretion, choose to elevate any minor facility for review by the Planning Commission and for final action by the BoCC. Site development plans associated with the special use applications for minor facilities may be reviewed and approved administratively by the DSD Director, unless otherwise required by the BoCC as a condition of the special use approval.

(b) Major Oil and Gas Facilities

Special use applications for major oil and gas facilities shall be reviewed and a recommendation made by the Planning Commission and reviewed and a final action taken by the BoCC. Site development plans associated with the special use applications for major facilities may be reviewed and approved administratively by the DSD Director unless otherwise required by the BoCC as a condition of the special use approval.

(D) General Development and Performance Standards

(1) Water Supply

Applications for all oil and gas facilities shall include evidence of source and legal entitlement to use water if such use is proposed (e.g., Water Court decree).

(2) Hazard Assessment and Mitigation

Oil and gas facilities should not be located in hazard areas. A hazard is a geologic, wildfire, flood, or man-made (e.g., airport, landfill, etc.) condition which is adverse to past, current, or foreseeable construction or land use and constitutes a hazard to public health and safety or to property. Land should not be developed for oil and gas operations until hazards have been identified and avoided, removed, or until the applicant can show that the impact of the hazard(s) can be mitigated to the maximum extent practicable, as determined by the DSD Director or BoCC as part of the special use approval.

(3) Site Security and Safety

The operator of all oil and gas facilities shall follow the Colorado Oil and Gas Conservation Commission (COGCC) requirements for initial and ongoing site security and safety measures.

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(4) Operation Plan

Applications for all oil and gas facilities shall include an operation plan, which shall, at a minimum, include the operator's method and schedule for drilling, well completion, transportation, resource production, and post-operation activities.

(E) Specific Development and Performance Standards

(1) Transportation Impact Analysis and Mitigation

(a) Purpose

This section is meant to ensure that oil and gas facility operators plan, manage, and mitigate impacts to County roadways and bridges that result from facility construction, facility operation, and ongoing new traffic generation. In order to protect the health, safety, and welfare of the existing and future residents of El Paso County, mitigation of potential transportation impacts shall be required.

(b) Transportation Impact Study

Applications for all oil and gas facilities may be required to include a transportation impact study which shall clearly identify and distinguish the impacts to County roads and bridges related to facility construction, operations, and ongoing new traffic generation. All required studies shall be prepared in accordance with the Engineering Criteria Manual (ECM) or other guidelines as provided by the ECM Administrator. The process for mitigation of transportation impacts typically includes a plan for traffic control, the receipt of all necessary permits, ongoing roadway maintenance, and improving or reconstructing County roads, including providing financial assurance.

(i) Traffic Control Plan Required

A traffic control plan shall be prepared for each phase of construction where County roads will be utilized for transportation of materials in support of site construction and/or operations. The plan shall include the following components:

- Method for Handling Traffic (MHT)
- Haul Route Plan
- Detour Plan
- Existing Conditions Survey

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(ii) Construction Drawings Required

In the event that public road improvements are required to accommodate an oil and gas facility, drawings prepared by a Colorado licensed civil engineer shall be approved prior to permitting work in the right-of-way. Such drawing shall be in substantial conformance with the ECM, as determined by the ECM Administrator. Financial assurance shall be required for the construction or reconstruction of all public roads. The following permits are typically required prior to construction of public improvements:

- Construction Permit
- Work in the Right-of-Way Permit
- Erosion and Stormwater Quality Control Permit
- Special Transport Permit

(iii) Maintenance

In the event that the activities of a facility operator cause any roadway to become substandard, the County may require the operator to provide ongoing maintenance of the applicable substandard County roadways. Such maintenance may include dust control measures and roadway improvements such as graveling, shouldering, and/or paving as determined in the Transportation Impact Study.

(iv) Site Access

Any access to a property from a County roadway requires a County-issued access permit. Access permits to the County road system are issued through either the DSD private driveway permit process or through the Public Services Department (PSD) temporary access permit process. Both permits are revocable upon issuance of a stop work order or if other permit violations occur. The permitting and construction of site accesses shall comply with the standards of the ECM.

(v) Financial Assurance Required

The transportation impact study, along with the associated construction drawings and cost estimate, shall determine whether to require the operator to enter into an Oil and Gas Impact Mitigation Agreement with the County and any other applicable jurisdiction. Such

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agreement shall be supported by an acceptable form of financial assurance, as outlined in this section under the Financial Assurance subsection.

(2) Setbacks

(a) Minor Facilities

All minor oil and gas facilities shall be set back at least 500 feet from the closest existing: residential structure; platted residential lot; education facility; place of worship; nursing home; jail; commercial, office, or warehouse establishment; assembly building, playground, designated recreation area, or any other designated place of public assembly.

(b) Major Facilities

The setback requirements for all major oil and gas facilities shall be determined on a case-by-case basis by the BoCC based upon specific site circumstances as part of the special use approval. Major facilities shall typically be located at least 500 feet from the closest existing: residential structure; platted residential lot; education facility; place of worship; nursing home; jail; commercial, office, or warehouse establishment; assembly building, playground, designated recreation area, or any other designated place of public assembly. However, additional setback requirements may be imposed by the BoCC as a result of any potential adverse impacts to the health, safety, and welfare of the existing and future residents of El Paso County or to the environment.

(c) Measurement of Setback

All setback measurements shall be established as follows:

(i) For measurements from well sites, such measurements shall be taken from the well head.

(ii) For measurements from intermediate lines, gathering lines, or any other pipeline, such measurements shall be taken from the center of the line.

(iii) For measurements from storage or construction staging yards, such measurements shall be taken from the designated outer boundary of the yard.

(iv) For measurements from any major facility not included above in subsections (i) – (iii), such measurements shall be taken from the closest well head, structure, tank or tank battery, pit, or any other equipment associated with a major facility.

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(v) For measurements to a platted residential lot, such measurements shall be taken to the closest point on the lot in which a dwelling unit, as defined by the Code, could be legally constructed.

(vi) For measurements to a residence, educational facility, place of worship, nursing home, jail, commercial establishment, office, warehouse, or assembly building, such measurements shall be taken to the outside of the closest exterior wall of the structure.

(vii) For measurements to a playground, designated recreation area, or any other designated place of public assembly, such measurements shall be taken to the designated boundary of the activity area, which can be defined by, but is not limited to, perimeter fencing, paving, or landscaping.

(d) Setback Waivers

A waiver to the required setbacks may be approved by the DSD Director or the BoCC as part of the special use approval for a minor or major facility, respectively, if the operator can demonstrate that compliance with such setbacks would render siting of the facility impossible or technically impracticable. If a waiver is approved, the facility shall be required to meet the setbacks to the maximum extent practicable and may be required, by the DSD Director or the BoCC, to implement special mitigation measures.

(3) Storage Pits

(a) Limitation

To prevent contamination of ground water, surface water, and soils and to prevent the creation of attractive nuisances in developed areas, the use of excavated storage pits as part of an oil and gas operation shall only be allowed by waiver approved by the BoCC. The use of storage pits should be limited in favor of more environmentally protective alternatives, such as closed loop systems and tanks.

(b) Permitting, Construction, and Closure

Any storage pit approved by the BoCC as a waiver to subsection (a) above shall comply, at a minimum, with the COGCC rules regarding permitting, reporting, construction, and closure.

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(c) **Safety Measures**

Additional safety measures may be required by the BoCC for pits approved as a waiver to subsection (a) above. Additional safety measures shall be determined based upon site-specific circumstances including, but not limited to, proximity to existing residential dwellings or platted residential lots, proximity to existing schools or parks, proximity to existing public water supplies, or proximity to sensitive wildlife habitat.

(4) **Pipelines and Gathering Systems**

(a) **General**

The design, construction, cover, and reclamation of all pipelines and gathering lines for oil and gas operations shall be subject to the requirements of the COGCC.

(b) **Grading and Erosion Control Plan**

In all circumstances, grading and erosion control associated with pipeline or gathering line construction and reclamation shall be accounted for on a site-specific grading and erosion control plan, as approved by the ECM Administrator.

(c) **Recordation of Pipeline Location**

The alignment location of any approved pipeline or gathering system shall be recorded against the respective property in the records of the County Clerk and Recorder, with locations accurate to the nearest 10 feet. The location and a notice of abandonment of any pipelines and/or gathering lines which are proposed for abandonment shall also be recorded against the respective property in the records of the County Clerk and Recorder upon abandonment.

(5) **Drainage**

(a) **Purpose**

The purpose of this subsection is to ensure that oil and gas facility operators plan, manage, and mitigate drainage impacts. In order to protect the health, safety, and welfare of the existing and future residents of El Paso County and the environment, mitigation of potential drainage impacts shall be required. Such mitigation shall be in accordance with Section 6.3.2 of this Code, the Drainage Criteria Manual (DCM), the Engineering Criteria Manual (ECM), and any other applicable state and federal regulations.

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(b) **Report Requirements**

Applications for any oil and gas facility may be required to include a drainage report. All required reports shall be prepared in accordance with the DCM and the ECM.

(6) Grading and Erosion Control

(a) Purpose

In order to protect the health, safety and welfare of the existing and future residents of El Paso County and the environment, oil and gas facility operators shall be responsible for preventing adverse erosion impacts associated with the construction of oil and gas facilities. Any proposed erosion control measures shall be in accordance with the DCM, the ECM, and any other applicable state and federal regulations.

(b) Report Requirements

Applications for all oil and gas facilities may be required to include a Stormwater Management Plan (SWMP), Erosion and Stormwater Quality Control Permit (ESQCP), Grading and Erosion Control Plan, and copies of all applicable state and federal permits (e.g., Colorado Department of Public Health and Environment permits, FEMA floodplain development permits, etc.). All County-required reports and permit applications shall be prepared in accordance with the DCM and the ECM.

(7) Visual Impact Analysis and Mitigation

(a) Purpose

Adverse visual impacts associated with permanent oil and gas facilities, which are those facilities that are proposed to be located on the site for one year or longer, are typically the result of introducing the industrial character and scale of oil and gas operations to an area that is otherwise agricultural, residential, or commercial in character and scale. To ensure that oil and gas operations are compatible with other uses in the surrounding area to the maximum extent practicable, specific visual mitigation measures may be required.

(b) Mitigation

Methods for appropriate visual impact mitigation include, but are not limited to, facility painting, vegetative or structural screening, berming, or minor relocation of the facility to a less visible location on the respective site. Minor on-site relocation may be required by the BoCC where the proposed facility would cause

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visual impacts to natural ridgelines, rock outcroppings, or other unique geologic formations.

Where the painting of a facility or any structural screening (i.e., fence or wall) is required as a method of impact mitigation, such facility and screening shall be painted a uniform or camouflaging, non-contrasting, non-reflective color tone, similar to the Bureau of Land Management (BLM) Standard Environmental and Supplemental Colors coding system. The facility or structural screening paint color shall be matched to the land, not the sky, and shall be slightly darker than the adjacent landscape. The selection of any proposed vegetative screening shall be supported by a landscaping plan, as part of the special use application, and by documented consultation with the Natural Resources Conservation District (NRCD) and the El Paso County Environmental Division. The use of berming as a method of impact mitigation shall be supported by a grading and erosion control plan, as approved by the ECM Administrator.

(8) Emergency Response Plan

(a) General

All oil and gas facility operators shall provide an emergency response plan to the El Paso County Sheriff's Office, Fire Marshal, and the fire protection jurisdiction having authority. No applications for a minor or major oil or gas facility shall be considered complete or be approved until and unless the operator has provided such plan to the Sheriff's Office, Fire Marshal, and the fire protection jurisdiction having authority. The plan shall be filed with the Sheriff's Office, Fire Marshal, and the fire protection jurisdiction having authority and updated on an annual basis. Each annual update is to be provided for each calendar year by February 1 of the same year.

(b) Required Plan Content

The emergency response plan shall, at a minimum, consist of the following:

(i) Name, address, and phone number, including 24-hour emergency numbers for at least two persons responsible for emergency field operations.

(ii) An as-built facilities map showing the name, location, and description of all minor and major facilities, including the size, type, and content of all pipelines, pits, and tanks. To the extent allowed by law, the as-built facilities map shall be held confidentially by the El Paso County

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Office of Emergency Management (OEM), and shall only be disclosed in the event of an emergency. To the extent allowed by law, the County OEM shall deny the right of inspection of the as-built facilities map to the public pursuant to C.R.S. §24-72-204(3)(a)(IV).

(iii) A written response plan for any potential emergencies that may be associated with the construction, drilling, completion, or operation of the facilities. This plan shall include, but not be limited to, any or all of the following: explosions, fires, gas, chemical or water pipeline leaks or ruptures, hydrogen sulfide or other toxic gas emissions, or hazardous material vehicle accidents or spills.

(9) Noise Emissions and Special Mitigation

(a) General

Noise emissions shall, at a minimum, be in compliance with the standards outlined in the COGCC Rules, as amended, unless otherwise approved by the COGCC, the DSD Director, or the BoCC.

(b) Electric Engines and Motors, If Available

All oil and gas facilities with engines or motors (except for wellhead compressor engines) shall be electrified if located within 1,320 feet of distribution voltage. The electrification requirements contained herein refer to the use of 3-phase power and "distribution voltage" means 12.47 kV 3-phase power. An exception to the requirement for electrification may be approved by the DSD Director or the BoCC if the operator can demonstrate that the extension of such service is not financially practicable or technically feasible. Internal combustion engine powered artificial lift equipment may be used prior to the time that the facility is electrified.

(c) Special Mitigation

Special noise mitigation measures may be required by the BoCC where any oil and gas facility is unable to comply with the required setbacks of this section in order to meet the standards to the maximum extent practicable. The following site-specific characteristics shall be considered prior to reviewing and approving any proposed special noise mitigation measures:

(i) Topography of the site and adjoining properties

(ii) Proximity and developed status of adjoining properties

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(iii) On-site vegetation

(iv) Prevailing weather patterns, specifically wind direction

Special mitigation measures may include installation or construction of equipment enclosures, vegetative screening, and/or noise walls or fences.

(10) Lighting and Special Mitigation

(a) General

The operator of all oil and gas facilities shall follow the COGCC requirements for lighting.

(b) Special Mitigation Measures

Special light mitigation measures may be required where any oil and gas facility is unable to comply with the required setbacks of this section. The following site specific characteristics shall be considered prior to reviewing and approving any proposed special light mitigation measures:

(i) Topography of the site and adjoining properties

(ii) Proximity and developed status of adjoining properties

(iii) On-site vegetation

Special mitigation measures may include installation or construction of a screen wall or fence, vegetative screening, or the requirement of less intensive lighting fixtures while still providing the minimum amount of lighting necessary to comply with industry safety standards.

(11) Water Quality Assessment, Monitoring, and Mitigation Plan

(a) Groundwater Quality Monitoring Plan

Applications for all oil and gas facilities shall include a groundwater quality monitoring plan if well drilling activities are proposed. Well drilling activities include the drilling of any wells for exploration, production, and/or reinjection. The purpose of a monitoring plan is to ensure the preservation and protection of those groundwater resources that could be affected by oil and gas operations. The requirements of a groundwater monitoring plan include:

(i) Establishing a monitoring network of existing water wells, seeps, and/or springs in order to evaluate the potential effects of oil and gas drilling on groundwater,

(ii) Determining baseline conditions for naturally occurring constituents, and

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(iii) Providing mitigation measures to be implemented if monitoring results indicate significant impacts to groundwater quality as a result of oil and gas operations.

(b) Existing Well Monitoring Network

A monitoring network of existing wells, seeps, and/or springs shall be included in the groundwater quality monitoring plan. A minimum of four (4) existing water wells, seeps, and/or springs within a one-half (1/2) mile radius from the wellhead shall be included in the monitoring plan, if available. The DSD Director and/or the BoCC, in consultation with EPCPH, may require the inclusion of additional wells, seeps, and/or springs into the monitoring plan, subject to availability. The inclusion of any well, seep, and/or spring into a monitoring network requires documented landowner consent, which should include right of entry for the County to enter the site in the event of execution of the financial assurance for the groundwater monitoring plan

(c) Water Quality Samples

Groundwater samples shall be collected prior to the commencement of any drilling activities for the purpose of establishing baseline water quality. Subsequent to the completion of drilling activity, all water wells within the respective monitoring network shall be tested annually for the first six (6) years and then every five (5) years thereafter. The monitoring network shall also include any future water wells drilled within the 1/2 mile radius subsequent to the oil and gas well drilling, subject to El Paso County Public Health (EPCPH) determination and landowner consent. Testing shall continue during any shut-in periods of the well and for a minimum of ten years after the abandonment of the well. Non-producing wells shall be sampled twice, on five (5) year intervals after abandonment. All samples shall be collected by a qualified independent contractor experienced in water quality sampling and shall be sent to a State of Colorado certified laboratory for analysis. The groundwater samples shall be analyzed for the following:

(i) pH units (EPA Method 150.2 or calibrated field instrument),

(ii) Total dissolved solids (TDS),

(iii) BTEX compounds (benzene, toluene, ethylbenzene, total xylene),

(iv) Methane,

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(v) Major ions, including but not necessarily limited to, chloride, sulfate, sodium, calcium, potassium, bromide, magnesium, nitrate and nitrite as N, and

(vi) Dissolved Metals, including but not necessarily limited to arsenic, barium, chromium (total), and cadmium.

Testing results shall include the analysis for the above listed parameters, location of the water well, seep, and/or spring (to the nearest 10 feet), location of the oil or gas well site (to the nearest 10 feet), depth of any included water well, depth and identification of aquifers (if identifiable), and date of sampling. Such results, upon prior approval by the respective landowner, shall be submitted to the COGCC, DSD, EPCPH, and any applicable water district and/or central water provider within 90 days of the date of sample collection.

(12) Air Quality Control Permitting and Monitoring

(a) Compliance with Air Pollution Control Regulations

Oil and gas operations that emit air pollutants which exceed State air pollution notice thresholds shall submit an Air Pollutant Emission Notice (APEN) to the Colorado Department of Public Health and Environment, Air Pollution Control Division. A copy of the APEN shall also be submitted to the EPCPH and DSD within 90 days after state issuance.

(b) Compliance with El Paso County Public Health Regulations

All oil and gas operations within the County shall comply with any applicable EPCPH Air Quality Regulations.

(c) Developments to Comply with Emission Standards

The construction of oil and gas facilities resulting in disturbance of greater than one acre shall be required to comply with the applicable El Paso County Air Quality Regulations, including obtaining a Construction Activity Permit from EPCPH. The operator of the facility shall, at all times, remain in compliance with the Construction Activity Permit and any other applicable requirements.

(d) Fugitive Dust Control Measures

Acceptable dust control measures and operating procedures for oil and gas construction activities may include, but are not limited to, planting vegetative cover, installing synthetic cover, watering, chemical stabilization, furrows, compacting, minimizing areas of disturbance, installing wind breaks, enforcing on-site or County

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road vehicle speed controls, and delayed surface opening. All required fugitive dust control plans shall be reviewed and approved by EPCPH.

(e) Air Quality Monitoring

The DSD Director or the BoCC may require, upon consultation with the EPCPH, on-going air quality monitoring, where appropriate, as part of the special use approval. Such monitoring may be required to test for particulates and volatile organic compounds (VOCs). The operator shall provide the documented results from the required monitoring to the EPCPH for review.

(13) Waste Management

(a) Exploration and Production Waste Management Plan

Applications for all oil and gas facilities shall include an exploration and production waste disposal plan, if such waste will be produced. The plan shall describe the handling, storage, transportation, treatment, recycling, and disposal of waste generated as part of the oil and gas exploration and production (if applicable) processes.

(b) Hydraulic Fracturing Fluids Management Plan

Applications for all oil and gas facilities that propose to utilize hydraulic fracturing shall include a hydraulic fracturing fluids management plan. The plan shall describe the handling, storage, transportation, treatment, recycling, and disposal of hydraulic fracturing fluids.

(c) Trash, Debris, and Human Waste

(i) Trash and Debris

All oil and gas facility sites shall be maintained free of trash and debris at all times during construction and operation. The removal and disposal of trash or debris from the site shall be conducted in a legal manner. At no time shall a facility operator be allowed to conduct on-site burning of trash or debris.

(ii) Human Waste

The selection of a method(s) for appropriate human waste containment and disposal shall be determined through documented consultation with and permitting, if applicable, from the El Paso County Public Health Department.

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(14) Noxious Weed Management

(a) Purpose

The purpose of this section is to ensure that proposed oil and gas facilities assess, manage, and mitigate the potential spread of noxious weeds, pursuant to Section 6.3.7. of this Code, the Colorado Noxious Weed Act C.R.S. § 35-5-5 et. seq., and the El Paso County Weed Management Plan adopted by Resolution 09-106 on March 24, 2009.

(b) General

Oil and gas facility operators shall be responsible for ongoing site and access road noxious weed control during construction and operation of the facility. The selection of a reseeding mix and the method(s) for appropriate weed control shall be determined through documented consultation with the County Environmental Division, the Natural Resources Conservation District, and the Colorado Department of Agriculture, as applicable.

(F) Financial Assurance

(1) Financial Assurance for Road Damage and Construction

The applicant may be required to provide financial assurance in favor of El Paso County, in an amount to be determined by the ECM Administrator, which is sufficient to ensure restoration of any damage to County roads caused by the applicant's permitted activities and/or to ensure construction of any required public roadways to appropriate design standards. The form of the financial assurance must be acceptable to the County. If a commercial bond is provided, the bonding company must be currently authorized to provide bonds for federally funded projects.

(2) Financial Assurance for Erosion Control

The applicant may be required to provide financial assurance in favor of El Paso County in an amount to be determined by the DSD, in consultation with the ECM Administrator, which is sufficient to mitigate any erosion or excessive deposition of eroded sediment caused by the applicant's permitted activities. The form of the financial assurance must be acceptable to the County. If a commercial bond is provided, the bonding company must be currently authorized to provide bonds for federally funded projects.

(3) Financial Assurance for Groundwater Quality Monitoring Plan

The applicant may be required to provide financial assurance in favor of El Paso County in an amount to be determined by DSD, in consultation

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with EPCPH, which is sufficient to guarantee performance of any groundwater quality monitoring requirements. The form of the financial assurance must be acceptable to the County. If a commercial bond is provided, the bonding company must be currently authorized to provide bonds for federally funded projects.

(G) Notice of Application

Notice to surface property owners and affected residents of the County shall follow the provisions of the Procedures Manual pertaining oil and gas operations. At a minimum, written notice shall be provided by the applicant to any surface owner of parcels within one (1) mile of a proposed oil or gas facility and to all surface owners within one-half (1/2) mile of the terminus of any directional well bore at the time of special use application to the County. In addition, notice shall be provided by the County to any surface owner of parcels within one (1) mile of a proposed oil or gas facility a minimum of 14 days prior to a hearing by the Planning Commission or the BoCC on the proposed facility. Placing of such notices in the U.S. Mail, First Class postage prepaid, shall be considered to be adequate notice.

(H) Review Criteria

In approving special use applications for oil or gas facilities, the following findings shall be made:

- The special use is consistent with the applicable Master Plan;
- The special use is in compliance with the applicable requirements of the Land Development Code;
- The special use is in compliance with the applicable requirements of the Engineering Criteria Manual and the Drainage Criteria Manual;
- The special use conforms or will conform to all other applicable County rules, regulations, or ordinances;
- The impact of the special use does not overburden or exceed the capacity of public facilities and services or, in the alternative, the special use application demonstrates that it will provide adequate public facilities in a timely and efficient manner;
- The special use will not create undue traffic congestion or traffic hazards in the surrounding area, and has adequate, legal access;
- The special use will avoid land use and environmental conflicts or, at a minimum, includes mitigation measures and applicable financial assurance in order to ensure that any potentially unavoidable land use and environmental conflicts will be mitigated to the maximum extent practicable;
- The special use will not be otherwise detrimental to the public health, safety, and welfare of the present or future residents of El Paso County;

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- The financial burden of compliance with the special use is practical and does not outweigh the benefit of such compliance; and
- The technical requirements for compliance with the special use are technically feasible and commercially available.

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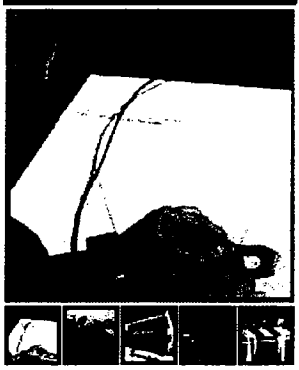
ATTACHMENT K



Oil and Gas Regulations

On Jan. 3, 2012, the Arapahoe County Board of County Commissioners voted not to amend the County's Land Development Code with the proposed oil and gas regulations, citing that many of the regulations were duplicative of the regulations adopted by the State Oil and Gas Conservation Commission, which have been known as some of the most comprehensive in the country.

The Board voted for staff to continue to work on local land-use concerns to protect the community and environment through the following avenues:

1. Work with the Colorado Oil and Gas Conservation Commission, an agency managed by the State of Colorado, to consider the creation of a Memorandum of Understanding that would allow for increased oversight of local land-use issues such as: inspection of permitted oil and gas operations, closed-loop systems, etc.
2. Continue to work on County-specific land use issues: transportation plans, roadway infrastructure, Grading/Erosion/Sediment control, building and access permits, notification requirements, etc.
3. Use the Colorado Oil and Gas Conservation Commission's local government designee process and the County's use by special review process to address County-specific concerns for each permit application.
4. Appoint a committee of industry experts to meet with County staff monthly to work through County-specific concerns to create appropriate solutions. The meetings will be posted and open to the public.

The proposed oil and gas regulations will be used as a guide to begin more in-depth conversations and agreements with the Colorado Oil and Gas Conservation Commission.

Over the past few months, the County held numerous meetings and open houses to gather stakeholder input on proposed land-use regulations. Since the Colorado Oil and Gas Conservation Commission oversees statewide oil and gas regulations and is responsible for issuing state drilling and oil and gas exploration permits, the County will continue to work with the agency to minimize duplicity while allowing the County to address local land-use issues.

For more information, sign up for Access Arapahoe to receive county news releases and follow "Arapahoe County" on Twitter and Facebook.

Helpful Resources

The Dec. 23 documents were presented to Commissioners during a public hearing on Jan. 3

Planning Commission's Recommended Oil and Gas Regulations (Dec. 23)
Staff's Recommended Oil and Gas Regulations (Dec. 23)
Staff Report explaining Proposed Revisions(Dec. 23)
Oil and Gas Frequently Asked Questions

Contact Information

Please Note Our New Location
Arapahoe County Lima Plaza
6924 S. Lima Street
Centennial, CO 80112
Phone: 720-874-6500
TDD: 720-874-6574
E-mail: Public Works & Development

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SECTION 12-1900 OIL AND GAS OPERATIONS

12-1901 General Purpose and Intent

A. The purpose of this Section is to establish rules that provide reasonable limitations and safeguards for the exploration and production of oil and gas resources in the County. The goal is to provide a framework for the responsible exploration and production of oil and gas resources in a manner that conserves other natural resources, that is sensitive to surrounding land uses, and that mitigates adverse impacts to and protects the public health, safety, welfare and the environment of the County. The intent of these regulations is to provide for a separate and distinct approval process for Oil and Gas Operations based on performance standards.

B. The County intends to avoid duplicative permit processes or requirements. The County will review permit applications concurrently with other required state or federal agency permitting processes whenever possible and practicable.

C. Relationship to Other Arapahoe County Requirements. Any Oil and Gas Operation shall also be required to comply with all other applicable Arapahoe County Regulations and requirements that are in addition to the requirements of this Section 12-1900, including but not limited to, the most recent editions of the Arapahoe County Infrastructure Design and Construction Standards, the Stormwater Management Manual, the Grading, Erosion and Sediment Control Manual, and the Arapahoe County Building Code, except that an Oil and Gas Operation shall not also be required to obtain Use by Special Review approval.

12-1902 Authority

This Section of the Arapahoe County Land Development Code is authorized by, ***inter alia,*** C.R.S. §§29-20-101, **et *seq.,*** 30-28-101, ***et seq.,*** 30-28-201, ***et seq.,*** and 34-60-101, ***et seq.***

12-1903 Applicability

A. All Oil and Gas Operations on public and private land within the unincorporated areas of the County shall comply with this Section 12-1900.

B. No Person shall engage in, cause, allow or conduct any Oil and Gas Operations prior to obtaining an Oil and Gas Operations Permit unless the operations fall within the exemptions in Section 12-1904.

C. Any such Oil and Gas Operations Permit issued pursuant to this Section 12-1900 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 County Regulations and requirements.

D. Oil and Gas Operations Permits may be issued for sites that are within the Agricultural zone

districts and Industrial zone districts, and within PUD zone districts where Oil and Gas Operations are specifically listed as an allowed or permitted use. Oil and Gas Operations Permits may be issued in all other zone districts only upon showing that there is no other reasonable alternative to access the oil and gas resources.

12-1904 Exemptions

The following Oil and Gas Operations are exempt from this Section 12-1900:

12-1904.01 Mapping activities. Mapping activities that do not result in any surface disturbance.

12-1904.02 Existing Oil and Gas operations. Operation and maintenance of well sites, wells and pipelines that are legal nonconforming uses under Section 12-1905. Any expansion of a nonconforming Oil and Gas Operation shall comply with Section 12-1905.

12-1904.03 Modifications to existing well sites or production facilities. When a well is allowed under an approved Oil and Gas Operations Permit, any twinning, deepening, or recompleting of a well, or relocation of accessory equipment or gathering lines or flowlines does not require a new permit and shall be administratively approved so long as all applicable regulations of the County and the State are met, and the operator has submitted a revised site and operating plans to the Planning Division depicting any changes from the approved permit.

12-1904.04 Oil and Gas Operations subject to regulation by the Federal Energy Regulatory Commission. Oil and Gas Operations subject to the jurisdiction of the Federal Energy Regulatory Commission, or successor regulatory agency.

12-1905 Nonconforming Oil and Gas Operations.

Oil and Gas Operations that were legally established before the effective date of this Section 12-1900 and that do not conform to the regulatory provisions of this Section shall be allowed to continue, so long as the Operations otherwise remain legal and comply with subsections 12-1905.01 through 12-1905.04.

12-1905.01 Extension, Expansion and Alteration of Nonconforming Oil and Gas Operations. A legal nonconforming Oil or Gas Operation shall not increase the extent of the nonconforming use beyond that expressly permitted by a previous land use approval.

12-1905.02 Relocation. A legal nonconforming Oil or Gas Operation shall not be moved, in whole, or in part, unless said Oil or Gas Operation first obtains an Oil and Gas Operations Permit.

12-1905.03 Abandonment of Nonconforming Oil or Gas Operation. A legal nonconforming Oil or Gas Operation cannot be discontinued or abandoned for a period longer than one (1) year. The resumption of any Oil and Gas Operation that has been discontinued or abandoned for a period longer than one (1) year is not allowed without the approval of an Oil and Gas

Operations Permit under this Section 12-1900.

12-1905.04 Damage or Destruction. A legal nonconforming Oil or Gas Operation that is demolished or destroyed by an Act of God or through any manner not willfully accomplished by or for the owner may be restored so long as it restored within a period of one (1) year from the date of the damage or destruction.

12-1906 Oil and Gas Operations

~~**12-1906.01 Minor Oil and Gas Operation.** A permit application for a Minor Oil and Gas Operation shall be reviewed administratively by the Planning Division under Section 12-1909.02. A Minor Oil and Gas Operation shall be defined as any of the following:~~

~~A. A well site built and operated to explore for or to produce petroleum and/or natural gas, including accessory equipment such as well site flow pipelines, separators, dehydrators, pumping units, tank batteries, and other equipment that is not within fifteen hundred (1,500) feet of a residential structure, public facilities, water body, wildlife area, riparian area, nature area, or public open space or park, and that does not fall within the definition of a Major Oil and Gas Operation as set forth in section 12-1906.02 below.~~

~~B. Intermediate well lines which extend from a wellhead, gathering lines, and ancillary equipment including, but not limited to, drip stations, vent stations pigging facilities, chemical injection stations, and valve boxes.~~

~~C. Temporary storage and construction staging yard in place for less than six months.~~

~~ALTERNATE~~ **12-1906.01 Minor Oil and Gas Operation**. A permit application for a Minor Oil and Gas Operation shall be reviewed administratively by the Planning Division under Section 12-1909.02. A Minor Oil and Gas Operation shall be defined as any of the following:

A. Any Oil and Gas Operation not meeting the definition of Major Oil and Gas Operation.

~~**12-1906.02 Major Oil and Gas Operation.** A permit application for a Major Oil and Gas Operation shall be reviewed pursuant to the procedures set forth in Section 12-1909.03. A Major Oil and Gas Operation is defined as any of the following:~~

~~A. A well site built and operated to explore for or to produce petroleum and/or natural gas, including accessory equipment such as well site flow pipelines, separators, dehydrators, pumping units, tank batteries, and other equipment, that is within fifteen hundred (1,500) feet of a residential structure, public facilities, water body, wildlife area, riparian area, nature area, or~~

~~public open space.~~

~~B. Centralized production facilities.~~

~~C. Water injection sites, centralized water transfer stations, centralized water pump stations and associated facilities serving multiple well pads.~~

~~D. Storage yards and construction staging yards in place for longer than six months.~~

~~E. A comprehensive drilling plan that includes multiple well sites.~~

~~F. Any other Oil and Gas Operations not meeting the definition of Minor Oil and Gas Operations.~~

~~**ALTERNATE**~~ **12-1906.02 Major Oil and Gas Operation.** A permit application for a Major Oil and Gas Operation shall be reviewed pursuant to the procedures set forth in Section 12-1909.03. A Major Oil and Gas Operation is defined as any of the following:

A. Any Oil and Gas Operation that is in a floodplain, as defined in Section 12-2000 of this Code.

B. Any Oil and Gas Operation that is within fifteen hundred (1,500) feet of a residential structure or public facility, unless all owners of residential structures or public facilities that are within fifteen hundred (1500) feet of the proposed operation have provided written approval of the location of the operation, or unless the location the operation has been specifically approved by the Board of County Commissioners in a preliminary development plan or other land use approval.

C. Centralized production facilities.

D. Water injection sites, centralized water transfer stations, centralized water pump stations and associated facilities serving multiple well pads.

E. Storage yards and construction staging yards in place for longer than six months.

F. A comprehensive drilling plan that includes multiple well sites.

12-1906.03 Standards for Measurement of Distance. For purposes of section 12-1906, the distance between a well site and any residential structure or public facility shall be measured in a straight line, without regard to intervening structures or objects, from the nearest boundary of the well site to the nearest perimeter of the residential structure or of the public facility structure, except in the case of open space properties or parks, which shall be measured from the nearest boundary of the well site to the nearest boundary of the open space property or park. The Planning Division's determination of the distance shall be final and may not be appealed."

~~**12-1906.03 Standards for Measurement of Distance.** For purposes of section 12-1906, the distance between a well site and any residential structure, water body, wildlife area, riparian area, nature area, or public open space or park shall be measured in a straight line, without regard to intervening structures or objects, from the nearest boundary of well site and any associated areas of disturbance, to the nearest boundary, perimeter, or portion of the residential structure, water body, wildlife area, riparian area, nature area, or public open space or park. The Planning Division's determination of the distance shall be final and may not be appealed.~~

12-1906.04 Decision Making Authority

APPLICATION TYPE	AUTHORITY		
	Planning Division Manager	Planning Commission	Board of County Commissioners
MINOR	Decision		Appeal
MAJOR		Recommendation*	Decision*
*Public Hearing Required			

12-1907 Application Submittal Requirements for Oil and Gas Operations Permit.

12-1907.01 This Section shall apply to those Oil and Gas Operations not exempt under Section 12-1905.

12-1907.02 General. An applicant seeking an Oil and Gas Operations Permit to conduct an Oil and Gas Operation shall submit an application to the Planning Division containing the information required by this Section. An applicant may provide a copy of an application for permit to drill submitted to the Colorado Oil and Gas Conservation Commission as documentation for one or more of the following submittal requirements in this Section 12-1907 if it contains information sufficient to demonstrate compliance with this Section, and that the relevant information is highlighted.

12-1907.03 Submittal Requirements for Oil and Gas Operations Permit. An applicant for an Oil and Gas Operations Permit shall submit the following information:

A. Applicant. The name, address, telephone number, fax number, and e-mail address of the applicant; and if the applicant is to be represented by an agent, a notarized letter signed by the applicant authorizing the agent to represent the applicant and also stating the same information for the agent.

B. Any application for an Oil and Gas Operations Permit must be accompanied by the appropriate fees.

C. Surface ownership. Documentation of surface ownership, evidence of surface owner notification, and copies of any surface ownership agreements and leases affecting the area where the Oil and Gas Operation will be conducted (financial terms may be redacted). Name, address, telephone number, fax number, and e-mail address of the surface owner of the property.

D. Mineral estate ownership. Documentation of mineral ownership, including name, address, telephone number, fax number, and e-mail address of the mineral rights owner(s).

E. Parcel location. The legal description (referencing lot and block or tract numbers, homesteads, or metes and bounds), property address and common description of the Parcel on which the Oil and Gas Operation is proposed to be located. A copy of the recorded deed or lease to the Parcel should be included.

F. Identification of previously approved uses. List any permits, or other land use approvals, which have been previously approved for the Parcel on which the Operation is proposed.

G. Characteristics and current condition of the Oil and Gas Operation location. Provide general description of physical characteristics and current conditions of the site where such Operation is proposed to occur, including streams, irrigation ditches, ponds, soils, roads, vegetation, geologic hazards, and any other characteristics requested by the Planning Division to determine potential impacts.

H. List and map of adjacent property owners. A listing of all landowners and land uses that are adjacent to the boundaries of the Parcel on which the Oil and Gas Operation is proposed, including all properties that are separated from the Parcel by a roadway or would be adjacent to the Parcels except for the existence of the roadway. The source for the best-available information to identify those landowners is the Arapahoe County Assessor's Office.

I. Site Plan, 24-inch x 36-inch, drawn to scale with north arrow, including the following:

1. Vicinity map. 2. Operation location. Location of the Oil and Gas Operation 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.

3. Distances. A map indicating the specific location and distance from the Oil and Gas Operation site of any existing residential structure, water body, wildlife area, riparian area, nature area, or public open space or park that is within fifteen-hundred (1500) feet of the proposed Oil and Gas Operation and any proposed mitigation plan .The distance between an Oil and Gas Operation site and any residential structure, waterbody, wildlife area, riparian area, nature area, or public open space or park shall be measured in a straight line, without regard to intervening structures or objects, from the nearest boundary of the well site and any associated areas of disturbance to the nearest boundary, perimeter or portion of the residential structure, water body, wildlife area, riparian area, nature area, or public open space or park.

4. Topographic features. Streams, lakes, ponds, water bodies, wetlands, contour lines and elevations, within one (1) mile radius of the area to be disturbed by the proposed Oil and Gas Operation.

5. Roads. All public and private roads that traverse and/or provide access to the proposed Oil and Gas Operation, and identification of the public or private entity having jurisdiction over each road.

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

7. Boundaries of districts, municipalities or subdivisions. Locations of special district boundaries, municipalities or subdivisions within one (1) mile of the Parcel.

8. Proximity of other wells and other Oil and Gas Operations. Location of wells and other Oil and Gas Operations within one (1) mile of the Parcel.

9. Proximity of Groundwater wells. Location of all groundwater wells within one (1) mile of the Parcel.

10. Utility easements and rights-of-way.

11. Existing improvements.

12. Proposed facilities such as structures, pipelines, tanks, wells, pits, flowlines, impoundment facilities, staging and storage areas and equipment.

13. Site features such as Special Flood Hazard Areas, water bodies, drainage patterns, aquatic habitat, vegetative cover, wildlife migration routes, riparian areas, and nature areas.

14. Existing and proposed topography at five-foot intervals or some other interval established by the Planning Department as necessary to portray the direction and slope of the area affected by the Oil and Gas Operation.

15. All boundaries of the leasehold interest upon which the Operation will take place.

J. Applications and permits. Copies of all local, state and federal applications required for the Oil and Gas Operation, and permits when issued. If the applicant has not received approval from the COGCC, the Planning Division shall process the application conditioned on the submittal of an approved COGCC permit.

K. Lighting plan showing location and type of proposed lighting in compliance with this section 12-1900.

L. Fencing plan in compliance with this section, 12-1900.M. An operating plan including the method and schedule, including hours of operation, for drilling, completion, transporting,

production, and post-operation.

N. A weed management plan for the management and prevention of noxious weeds on the site.

O. A map and truck traffic report that identify the access route to and within the Parcel, and a narrative estimating the number and types of vehicles anticipated per day, including vehicle weights, that will travel over the route. Surface treatment and roadway condition must be specified for all roadways along the route.

P. Identification of irrigation ditches and other water structures, and evaluation of any impacts to the structures or water quality.

Q. A traffic analysis of the impacts of the Operation to the roadway system within the County in accordance with the County's requirements for a Traffic Impact Study.

R. A written description of the type, character, and density of existing and proposed vegetation on the Parcel, a summary of the impacts of the Oil and Gas Operation on vegetation, and the proposed mitigation plan.

S. An emergency response plan that addresses fire protection and hazardous spills, including the name, address, and phone number, including 24-hour emergency numbers for at least two (2) persons responsible for emergency field operations, proposed signage, access/evacuation routes, and health care facilities anticipated to be used. The plan shall include a provision for the Oil and Gas Operator to reimburse the appropriate emergency response service providers for costs incurred in connection with the emergency.

T. Water quality non-point source impacts.

1. Identification of all water bodies. An inventory and location of all water bodies within one (1) mile of the proposed Oil and Gas Operation.

2. Description of existing water quality. A description of existing water quality for all water bodies within one (1) mile of the Oil and Gas Operation, based upon a current baseline water quality analysis.

3. Non-point source impacts to water quality. A description of potential Non-Point Source Pollution associated with the proposed Oil and Gas Operation and proposed mitigation measures for any such pollution.

4. Mitigation and avoidance. Proposed avoidance and mitigation measures to minimize the water quality impacts associated with the Operation. Proposed mitigation may include a Grading, Erosion and Sediment Control ("GESC") documents required under this Section.

U. Water supply. If fresh or potable water is required for any Oil and Gas Operation, identification of the proposed source.

V. Cultural survey. If requested by the Planning Division, a cultural, historical, and/or archeological survey of the Parcel prepared by a qualified professional.

W. Drainage analysis prepared in accordance with the County's Stormwater Management Manual and a GESC plan prepared in accordance with the County's GESC Manual.

X. Wildfire hazards. An assessment of wildfire hazards within one (1) mile of the Parcel, and a plan for mitigating wildfire hazards.

Y. Existing and future land uses. A written summary of the existing uses of the Parcel and any known, planned future land uses of the Parcel after completion of the Operation.

Z. Technical infeasibility or operational conflict waiver. Documentation of the basis for any technical infeasibility or operational conflict waiver from the Oil and Gas Operations Standards that the applicant may request pursuant to Section 12-1911.

12-1908 Coordination with State or Federal Actions and County Permit Process.

Final action by the County on an Oil and Gas Operations Permit application may be delayed until any required Environmental Assessment (EA), Environmental Impact Statement (EIS) or other permit by a state or federal agency is issued, so that the County will have the benefit of the analysis and determinations made by other entities in reaching its own decision.

12-1909 Permit Application Review Procedures for Minor and Major Oil and Gas Operations.

12-1909.01 General Review Procedures.

A. Pre-Submittal. A pre-submittal meeting is required for all Oil and Gas Operations. Pre-submittal meetings provide an opportunity to review the application process, number of required referral packets, and fees. Pre-submittal meetings may be waived upon approval of the Planning and Engineering Divisions.

B. Determination of Completeness. Within three (3) working days of receiving an Oil and Gas Permit application, the Planning Division shall notify the applicant in writing that the application is either complete or incomplete, or shall indicate a date by which such determination shall reasonably be made.

B. Incomplete Application. If the application is not complete, the Planning Division shall inform the applicant, in writing, by certified mail, 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 sixty (60) days of the postmarked or certified date of the mailing of the notification of incompleteness, the application shall be considered withdrawn.

C. Complete Application. If the application is complete, the Planning Division shall notify the applicant, in writing, that processing has begun. A determination that an application is complete shall not constitute a determination that it complies with the applicable standards of this Section.

D. Concurrent Review

Staff and outside referral agency review will be conducted concurrently.

1. Planning and Engineering staff review. The site plan and other elements of the Oil and Gas Operations Permit application will be reviewed for compliance with the requirements of this Code.

2. Review by Referral Agencies. Upon determination that the application is complete, the Planning Division may require that the application materials or a portion thereof be submitted for review and recommendations by referral agencies identified at the pre-submittal meeting, such as fire districts, Arapahoe County Sheriff's Dept, drainage authorities, water and sewer service providers, conservation districts, Colorado Division of Parks and Wildlife, Colorado Department of Public Health and Environment, adjacent counties or municipalities, or others with expertise or authority pertinent to the application.

E. Third-Party Technical Reviews. Upon determination that the application is complete, the Planning Division may require that the application materials or a portion thereof be submitted to a technical consultant deemed by the Planning Division to be appropriate and necessary to complete the review. The cost associated with such review shall be paid by the applicant.

12-1909.02 Review of Minor Oil and Gas Operations

~~A. Determination of completeness by the Planning Division. The Planning Division shall make a determination of completeness following the procedure in Section 12-1909.01, prior to beginning any review of the application.~~

~~B. Review by Referral Agencies. Upon determination that the application is complete, the Planning Division may require that the application materials or any portion thereof be submitted to referral entities for review and comment, such as fire districts, Arapahoe County Sheriff's Dept, drainage authorities, water and sewer service providers, conservation districts, or others specific to the identified site.~~

~~C. Public notice shall be provided as follows:~~

~~1. The posting of a sign on the Parcel indicating that an application for an Oil and Gas Operations Permit has been filed with Planning Division shall be completed by the applicant in accordance with Section 17-101 of this Code.~~

~~2. Mail notification of the filing of an application for an Oil and Gas Operations Permit shall be completed by the applicant in accordance with Section 17-102 of this Code to all Affected Parties as defined in Section 12-1914.~~

~~3. The Planning Division shall be responsible for publishing a notice of application in a newspaper of general circulation in the County.~~

~~D. Comment period. The comment period shall be thirty (30) days from the date of sign posting, mail notification, or the publication date of the notice of application, whichever is the latest.~~

~~E. Administrative decision. Upon expiration of the comment period, the Planning Division may approve, approve with conditions, or deny the application, after taking into consideration the Oil and Gas Operations Standards set forth in Section 12-1910.~~

~~G. Notice of administrative decision. Within five (5) working days of the decision on the application for a Minor Oil and Gas Operations Permit, the Planning Division shall notify the applicant, the Board of County Commissioners and the County Attorney, in writing, of the decision to approve, approve with conditions or deny the application.~~

~~H. Reconsideration of administrative decision by the Board of County Commissioners. Within fourteen (14) days after receipt of the notice of administrative decision, the Board may, in its discretion, decide to reconsider the administrative decision.~~

~~1. Schedule reconsideration. The Planning Division shall schedule a hearing for reconsideration of the administrative decision to be held within twenty-one (21) days of receipt by the Board of the notice of administrative decision.~~

~~2. Notice of the public hearing to reconsider the Planning Division's decision shall be provided at least fourteen (14) days prior to the public hearing date in the same manner as set forth in Section 12-1909.02 C.~~

~~3. Decision by the Board. The Board may affirm, reverse and/or amend the administrative decision. The Board may consider the evidence that was before the Planning Division, and any additional evidence that may be presented to the Board regarding compliance with the requirements of this Section.~~

~~J. Appeals to the Board of County Commissioners. Any Aggrieved Party by an administrative decision on a Minor Oil and Gas Operations Permit application may file an appeal to the Board.~~

~~1. Notice of appeal. A written notice of appeal setting forth the reasons why the Board should modify or reverse the administrative decision shall be submitted to the Planning Division within ten (10) days of the notice of administrative decision.~~

~~2. Schedule public hearing. If the Board decides to hear the appeal, the Planning Division shall schedule a hearing for the Board to hear the appeal and render its decision within forty-five (45) days of receipt of the notice of appeal.~~

~~3. Public notice. Notice of the public hearing to consider the appeal of the Planning Division's decision shall be provided at least fourteen (14) days prior to the public hearing in the same manner as set forth in Section 12-1909.02 C.~~

~~4. Decision by the Board. The Board may affirm, reverse and/or amend the Planning Division's administrative decision. The Board may consider the evidence that was before the Planning Division and any additional evidence that may be presented to the Board regarding compliance with the requirements of this section.~~

A. After a Minor Oil and Gas Operation Permit application is deemed complete, the concurrent 14 day staff review and outside referral period shall commence.

B. Applicant meeting. Within three (3) working days of the completion of the concurrent review period, Staff shall contact the applicant to schedule a meeting to review any necessary modifications and relevant outside referral agency comments related to the Oil and Gas Permit application materials.

C. Application re-submittal. The applicant shall revise its application if requested by the Planning Division to address relevant review and referral comments received.

D. Planning Division Report. The Planning Division shall prepare a report that identifies whether the Oil and Gas Operation complies with the Oil and Gas Operation Standards set forth in Section 12-1910 within five (5) working days of receipt of revised/corrected plans which adequately address the review comments.

E. Administrative decision. Following the concurrent review and outside referral period, the Planning Division ~~may~~ shall approve, conditionally approve, or deny the application, after taking into consideration the Oil and Gas Operations Standards set forth in Section 12-1910.

F. The applicant shall submit a photographic mylar (24 x 36 inch) (prepared such that it does not bleed, flake or rub off) of the site plan incorporating all of the necessary corrections and revisions.

G. Notice of administrative determination. Within three (3) working days of the determination on the application for a Minor Oil and Gas Operations Permit, the Planning Division shall notify the applicant, in writing, of the decision to approve, approve with conditions or deny the application.

H. Applicant's Right to Appeal of Conditional Approval or Denial.

1. In the event that the Planning Division conditionally approves or denies or an application for a Minor Oil and Gas Operations Permit, the applicant shall be entitled to appeal the conditional approval or denial to the Board of County Commissioners (Board). The applicant must file an appeal for this purpose with the Planning Division in writing no later than seven (7) days after the date of the Planning Division's determination. If the determination is mailed to the applicant, three additional days for mailing shall be added to the time for filing an appeal.

2. The Board shall review the Planning Division's determination at a public hearing held as soon as practical after the date of the determination. Prior written notice of this hearing shall be provided to the applicant and to property owners within fifteen hundred (1500) feet, and shall be published as part of the Board's agenda in a newspaper of general circulation in the County.

3. At the public hearing the Board shall consider evidence related to the Planning Division's determination which may be presented by County staff, the applicant, or interested members of the public. The Board shall not be limited in their review to the subject of the appeal, but may review any aspect of the Oil and Gas Permit application. Based upon this evidence, the Board may affirm the Planning Division's determination, or may approve the Oil and Gas Operations Permit with modified, altered, deleted, or added conditions. No County building, grading, access, or floodplain development permit shall be issued, or the applicant otherwise allowed to proceed with the operation, until the Board acts on the Planning Division's determination at the public hearing and approves the Oil and Gas Operations Permit with or without the addition or modification of conditions.

I. Board of County Commissioners' Review ("Call-up") of a Determination to Approve or Conditionally Approve an Oil and Gas Permit.

1. Any approved or conditionally approved Oil and Gas Operations Permit shall not become valid until the Call-up period has expired. The Call-up period shall consist of the fourteen (14) days following the Planning Division's approval or conditional approval of an Oil and Gas Permit. The applicant shall be authorized to proceed with the proposed oil and gas operation, fifteen (15) calendar days after the date of the Planning Division's approval. At the same time

written approval of the Oil and Gas Operations Permit is provided to the applicant, the Planning Division shall forward the Board a written statement which shall include the location of the site, a description of the proposed oil and gas operation, and the Planning Division's approval of the Oil and Gas Permit, or, if the Oil and Gas Operations Permit is conditionally approved, the conditions of approval.

2. Upon receiving the Planning Division's statement, and no later than fourteen (14) calendar days after the date of the approval, the Board may call the Planning Division's determination up for review before the Board. The Call-up generally shall be made by the Board at a public meeting convened within this fourteen (14) day period. However, if it is not practical for the Board to convene a public meeting for this purpose with the fourteen (14) day period, any member of the Board may authorize a Call-up within a fourteen (14) day period, which Call-up shall be effective provided that the Board subsequently ratifies the Call-up at a public meeting held within a reasonable period of time after the fourteen (14) day period expires.

a. The Board shall review the Planning Division's determination at a public hearing held as soon as practical after the Planning Division's determination. Prior written notice of the hearing shall be provided to the applicant and to property owners within fifteen hundred (1,500) feet, and shall be published as part of the board's agenda in a newspaper of general circulation in Arapahoe County.

3. At the public hearing, the Board shall consider evidence related to the Planning Division's determination which may be presented by County staff, the applicant, or interested members of the public. The Board shall not be limited in their review to the subject of the Call-up, but may review any aspect of the Oil and Gas Operations Permit application. Based upon this evidence, the Board may affirm the Planning Division's determination, or may approve the Oil and Gas Operations Permit with modified, altered, deleted, or added conditions.

12-1909.03 Review for Major Oil and Gas Operations.

A. Review by the Planning Division. After a Major Oil and Gas Operation Permit application is deemed complete, the concurrent 21-day staff review and outside referral period shall commence.

B. Applicant meeting. Within five (5) working days of the completion of the concurrent review period, Staff shall contact the applicant to schedule a meeting to review any necessary modifications and relevant outside referral agency comment related to the Oil and Gas Operations Permit application materials.

C. Application re-submittal. The applicant shall revise its application if requested by the Planning Division to address relevant review and referral comments received. D. Planning Division Report. The Planning Division shall prepare a report that identifies whether the Oil and Gas Operation complies with the Oil and Gas Operation Standards set forth in Section 12-1910 within five (5) working days of receipt of revised/corrected plans which adequately address the review comments.

E. Following the determination that the application complies with 12-1910, the Application shall be placed on the next available public hearing agenda of the Planning Commission.

F. Planning Commission.

1. The Planning Commission, following a properly noticed public hearing, shall consider the application for a Major Oil and Gas Operation Permit.

2. The following public notice of the Planning Commission hearing shall be required:

a. The posting of a sign on the Parcel providing public notice of the nature of the application shall be completed by the applicant no less than fourteen (14) days prior to the public hearing in accordance with section 17-101 of this Code.

b. Mail notification of the public hearing to all Affected Parties as defined in Section 12-1914 shall be provided by the applicant in accordance with Section 17-102 of this Code.

c. The Planning Division shall be responsible for publishing a notice of public hearing in a newspaper of general circulation in the County no less than fourteen (14) days prior to the date of the hearing.

3. Planning Commission decision. Following the public hearing, the Planning Commission shall recommend approval, approval with conditions or denial of the application after consideration of the Oil and Gas Operations Standards set forth in Section 12-1910.

G. Board of County Commissioners. The Board, upon proper notice of a public hearing in the same manner as provided for in subsection 12-1909.03 B. 2., shall consider the application for a Major Oil and Gas Operations Permit. Following a public hearing and after considering the recommendation of the Planning Commission, the Board shall approve, approve with conditions or deny the application for a Major Oil and Gas Operations Permit, after consideration of the Oil and Gas Operations Standards set forth in Section 12-1910.

12-1910 Oil and Gas Operations Review Standards.

An Oil and Gas Operation shall comply with the following standards and criteria unless a technical infeasibility or operational conflict waiver is granted under Section 12-1911:

12-1910.01 Drainage and Erosion Control. The Oil and Gas Operation shall be conducted in accordance with an approved drainage plan and GESC documents.

12-1910.02 Private Access Roads. All private roads used to access the Oil and Gas Operation site shall be graded for adequate drainage, shall be surfaced and maintained to prevent dust and mud, and shall provided sufficient access for emergency vehicles. The operator

may be required by the County to implement dust mitigation measures.

12-1910.~~03~~ 0203 Public Roadway and Traffic Impacts.

A. Ingress and egress. Ingress and egress points to public roads shall be located, maintained and improved to assure adequate capacity for efficient movement of existing and projected traffic volumes and to minimize traffic hazards. A County access permit shall be required for all Oil and Gas Operations which access a County road.

B. Maintenance agreement or financial assurance. If the projected use of the public roads resulting from the Oil and Gas Operation will result in a need for an increase in roadway improvements, maintenance or snow removal, the County may require the Operator to:

1. Enter into an agreement with the County whereby the Operator provides for private maintenance, improvements and snow removal, or reimburses the County for such increased costs; and/or

2. Provide financial assurance in a form and amount acceptable to the County to cover the costs of impacts to the roads.

C. An Oversize Moving Permit shall be required for all oversized/overweight trucks and equipment which use County roads. The permit, if required, shall be obtained from the Engineering Services Division prior to mobilization.

D. All public roads shall be kept free of debris, mud, trash and waste material from oil and gas operations.

12-1910.~~04~~ 0304 Wildlife. The Oil and Gas Operation shall not cause Significant Adverse Impact to wildlife and wildlife habitat. The operator shall implement such mitigation procedures as recommended by the Colorado Division of Parks and Wildlife.

12-1910.~~05~~ 0405 Livestock and Livestock Grazing. The Oil and Gas Operation shall not cause Significant Adverse Impact to livestock or livestock grazing. Fencing or other agreements between private grazing operations and the Oil and Gas Operator may be used to satisfy this requirement.

12-1910.~~07~~ 0506 Water Quality.

A. Surface Waters. The Oil and Gas Operation shall not cause Significant Degradation in the quality or quantity of surface waters from the addition of Non-Point Source Pollution.

B. Water Wells. The Oil and Gas Operation shall not cause Significant Degradation in the water quality or water pressure of any public or private water wells.

~~C. Water Body Setbacks. Activities associated with the Oil and Gas Operation shall be located a minimum of 500 feet from any Water Body unless such a setback would interfere with spacing~~

~~requirements established by the Colorado Oil and Gas Conservation Commission.~~

12-1910.~~08~~ 0607 Cultural and Historic Resources. The Oil and Gas Operation shall not cause Significant Degradation of cultural or historic resources.

12-1910.~~09~~ 0708 Wildfire Hazard. The Oil and Gas Operation shall not cause a significant risk of wildfire hazard.

~~**12-1910.10 Geological Hazards**. The Oil and Gas Operation shall not cause a significant risk of geological hazard.~~

12-1910.~~11~~ 09 Emergency Response. Oil and Gas Operations shall provide the County with an acceptable written emergency response plan for the potential emergencies that may be associated with the operation of the facilities. This shall include, but not be limited to, any or all of the following:

A. Explosions, fires, gas or water pipeline leaks or ruptures, hydrogen sulfide or other toxic gas emissions, and hazardous material vehicle accidents or spills.

B. Operation-specific emergency preparedness plans are required for any Oil and Gas Operation that involves drilling or penetrating through known zones of hydrogen sulfide gas.

C. The plan shall include a provision for the Operator to reimburse the appropriate emergency response service provider for costs incurred in connection with the emergency.

12-1910.~~12~~ ~~08~~ 10 Floodplain Restrictions. Oil and Gas Operations shall not be located in a floodplain, as defined in this Code, unless the applicant can show no other reasonable alternative location for the Oil and Gas Operations exists. Oil and Gas Operations approved within a floodplain must comply with Section 12-2000 of this Code.

~~**12-1910.13 09 Noise Regulation and Special Mitigation Measures.**~~

~~A. At a minimum, any equipment used in the drilling, completion or production of a well must not exceed maximum permissible noise levels set forth at section 25-12-103, C.R.S.~~

~~B. Based upon the specific site characteristics, the nature of the proposed activity, and its proximity to surrounding development, and type and intensity of the noise emitted, additional noise abatement measures may be required or requested. The level of required or requested mitigation may increase with the proximity of the facility to existing residences and platted subdivision lots and/or the level of noise emitted by the facility. One or more of the following additional noise abatement measures may be required or requested:~~

~~1. Acoustically insulated housing or covers enclosing any motor or engine;~~

~~2. Screening of the site or noise-emitting equipment by fence or landscaping;~~

~~3. Solid wall or fence of acoustically insulating material surrounding all or part of the facility.~~

~~4. A noise management plan specifying the hours of maximum noise and the type, frequency, and level of noise emitted; and/or operation; and/or~~

~~5. Construction of buildings or other enclosures may be required where facilities create noise and visual impacts that cannot otherwise be mitigated because of proximity, density, and/or intensity of adjacent land use.~~

12-1910.~~14~~ 11 Visual Impacts and Aesthetics.

A. To the maximum extent practicable, Oil and Gas Operations shall be located away from prominent natural features such as distinctive rock and land forms, vegetative patterns, public open space areas and parks, and other landmarks.

B. To the maximum extent practicable, the applicant shall use structures of minimal size and/or height to minimize the impact on viewsheds .

C. To the maximum extent practicable, when clearing trees and vegetation for construction of oil and gas facilities, the applicant shall feather and thin edges of vegetation.

D. To the maximum extent practicable, a well site and production site shall be located to avoid the top of hills and ridges.

E. To the maximum extent practicable, the applicant shall align access roads to follow existing grades and minimize cuts and fills.

~~F. Facilities shall be painted as follows:~~

~~1. Uniform, non-contrasting, non-reflective color tones.~~

~~2. Color matched to land, not sky, slightly darker than adjacent landscape.~~

~~3. Exposed concrete colored or painted to match soil color.~~

~~G. Electrical lines servicing pumping and accessory equipment shall be installed below ground only.~~

~~**12-1910.15 Lighting**. To the maximum extent practicable, exterior lighting shall be directed away from residential areas, or shielded from such areas to eliminate glare.~~

12-1910.~~16~~ 12 Fencing Requirements. At the time of initial installation, fencing is required for all pumps, wellheads and production facilities that are within an approved subdivision or within one thousand (1,000) feet of an existing public road or existing structure or if a well site falls within a high-density area as defined by the COGCC. All pumps, pits, wellheads and

production facilities shall be adequately fenced to restrict access by unauthorized persons. For security purposes, all such facilities and equipment used in the operation of a completed well shall be surrounded by a fence six (6) feet in height, and so long as the material is noncombustible and allows for adequate ventilation, the gates shall be locked. The following specific standards shall apply to all oil and gas wells and production facilities. Fence enclosures shall be constructed of one (1) of the following materials:

1. A solid masonry wall.

2. A chain-link fence with wire mesh not to exceed three and one-half (3 ½) inches.

3. Any other material compatible with surrounding uses, which effectively secures the site, approved by the County.

4. All fencing or masonry walls shall be of a solid neutral color compatible with surrounding uses and maintained in a neat, orderly and secure condition. Neutral colors shall include sand, grey and unobtrusive shades of green, blue and brown or other colors approved by the County.

5. All chain-link fences and masonry walls shall be equipped with at least one (1) gate. The gate shall meet the following specifications:

    a. The gates shall be of chain-link construction that meets the applicable specifications or of other approved material that, for safety reasons, shall be at least as secure as a chain-link fence;

    b. The gates shall be provided with a combination catch and locking attachment device for a padlock and shall be kept locked except when being used for access to the site; and

    c. The operator must provide the applicable fire protection district and the Arapahoe County Sheriff's Department with a "Knox Padlock" or "Knox Box with a key" to access the well site to be used only in case of an emergency.

12-1910.~~17~~ ~~10~~ ~~12~~13 Setback Requirements. A minimum setback of at least 450 feet shall be required between the well site and the closest existing residential structure, unless the affected residential property owner has waived this requirement in writing or ~~,~~ unless ~~the applicant can show no other way of getting the oil~~there is no other reasonable alternative location for the well site.

~~**12-1910.18 Waste Disposal.** Any solid or hazardous wastes generated at Oil and Gas Operations shall be managed in compliance with all applicable federal, state and local waste disposal regulations.~~

12-1910.~~19~~ ~~111~~314 Closed-loop Systems. Closed-loop systems are preferred in lieu of pits. If pits are necessary, they shall be constructed in accordance with all applicable state and federal regulations.

12-1911 Building Permits Required.

Building permits shall be obtained from the Arapahoe County Building Division for all structures to which the Arapahoe County Building Code applies.

12-1912 Waiver of Oil and Gas Operation Requirements.

12-1912.01 Technical Infeasibility Waiver. One or more of the Oil and Gas Operations Standards set forth in this Section may be waived during the application process, if the Operator demonstrates to the satisfaction of the County that it is technically infeasible to comply with the standard(s). To be granted a waiver from a standard for technical infeasibility, the burden is on the Operator to demonstrate that there is no economical technology commercially available to conduct the Oil and Gas Operation in compliance with the County standard, and the applicant will implement the best available technology to conduct the Oil and Gas Operation in compliance with the County standard to the maximum extent feasible; and

A. The waiver will not cause substantial injury to the owner or occupant of adjacent property; and

B. The waiver will not cause substantial injury to human health, safety, or welfare or to the environment.

12-1912.02 Operational Conflict Waiver. A waiver of any of the requirements within this section 12-1900, or a condition imposed upon Permit approval, may be granted where the application of the requirement or condition would result in an operational conflict with the requirements of the Colorado Oil and Gas Conservation Act or implementing regulations. For purposes of this subsection, an operational conflict exists where actual application of a County requirement or condition of approval conflicts in operation with the State statutory scheme, and such conflict would materially impede or destroy the Colorado Oil and Gas Conservation Commission's goals of fostering the responsible, balanced development and production and utilization of the natural resources of oil and gas in the State of Colorado in a manner consistent with the protection of the environment and wildlife resources. If the Board determines that compliance with any of the requirements of this Section or condition of Permit approval results in an operational conflict with the state statutory or regulatory scheme, a waiver may be granted, in whole or in part, to the extent necessary to remedy the operational conflict. The Board may mitigate any impacts of a waiver by conditioning approval as necessary to protect the public health, safety, and welfare. Any such condition shall not conflict with the requirements of the COGCC.

12-1913 Enforcement and Penalties.

12-1913.01 Oil and Gas Operations in Violation of These Regulations. Any Operator engaging in Oil and Gas Operations who does not obtain an Oil and Gas Operations Permit pursuant to this section, who does not comply with Oil and Gas Operations Permit requirements, or who acts outside the jurisdiction of the Oil and Gas Operations Permit, may be enjoined by the County from engaging in such Oil and Gas Operations and may be subject to such other criminal or civil liability as may be prescribed by law. In addition, if the County prevails in

whole or part in any action, the operator shall pay all reasonable attorney fees and expert costs incurred by the County.

12-1913.02 Revocation of Oil and Gas Operations Permit.

A. The County may, following notice and hearing, revoke an Oil and Gas Operations Permit granted pursuant to this Section if any of the activities conducted by the Operator violate the conditions of the Oil and Gas Operations Permit or this Section, or constitute material changes in the Oil and Gas Operation approved by the County. The County shall provide written notice to the Operator of the violation or the material changes, and the time and date of the hearing. No less than thirty (30) days prior to the revocation hearing, the County shall provide written notice to the permit holder setting forth the violation and the time and date for the revocation hearing. Public notice of the revocation hearing shall be published in a newspaper of general circulation not less than fourteen (14) days prior to the hearing. Following the hearing, the County may revoke the Oil and Gas Operations Permit or may specify a time by which revocation shall occur if satisfactory action is not taken to correct the violation.

B. The County may also consider revocation of an Oil and Gas Operations Permit under this Section if false, misleading, deceptive or inaccurate information or documentation was provided upon which approval of an Oil and Gas Operations permit was based, which the applicant, its authorized agents, or employees knew or reasonably should have known was materially false, misleading, deceptive or inaccurate.

12-1913.03 Transfer of Permits. An Oil and Gas Operations Permit may be transferred only with the written consent of the County. The County shall ensure, in approving any transfer, that the proposed transferee can and will comply with all the requirements, terms, and conditions contained in the Oil and Gas Operations Permit and this Section, and appropriate state and federal regulations and conditions, that such requirements, terms, and conditions remain sufficient to protect the health, welfare, and safety of the public, and the environment; and that an adequate guaranty of financial security can be timely made.

12-1913.04 Inspection. The County may enter and inspect any property subject to this Section at reasonable hours for the purpose of determining whether an Oil and Gas Operation is in violation of the provisions of this Section.

12-1913.05 No Review or Approval for Persons Subject to Enforcement Action. No permit application shall be processed or approved pursuant to this Section for an Operator, or for a Parcel that is subject to an ongoing enforcement action.

12-1914 Commencement of Operation.

The Oil and Gas Operation shall be commenced within two years of the issuance of an Oil and Gas Operations Permit under this Section or the permit shall terminate and be of no force and effect.

12-1915 Definitions.

All terms used in Section 12-1900 that are defined in the Oil and Gas Conservation Act of the State of Colorado ("Act") or in the Oil and Gas Conservation Commission ("COGCC") Rules and Regulations and are not otherwise defined in this Section are defined as provided in the Act or in such rules and regulations. All other words used in this Section are given their usual, customary, and accepted meaning, and all words of a technical nature, or peculiar to the oil and gas industry, shall be given that meaning which is generally accepted in that industry. When not clearly otherwise indicated by the context, the following words and phrases used in this Section 12-1900 have the following meanings:

A. **Abandonment of Nonconforming Use:** The intent to not continue the legally established nonconforming Oil and Gas Operation coupled with the discontinuance of the nonconforming Oil and Gas Operation.

B. **Affected Parties**: All adjacent property owners and the~~The~~ owners ~~or residents~~ of real property within 1500 feet of the subject Parcel when the Oil and Gas Operation is located on private land, and within 1500 feet of the section (640 acres) when the Oil and Gas Operation is located on public land. This term also includes the owners ~~or residents~~ of non-adjacent property within an existing subdivision or 35-acre or larger tract development, if any part of an existing subdivision or 35-acre or larger tract development is within 1500 feet of the subject Parcel when the Oil and Gas Operation is located on private land, or within 1500 feet of the section (640) acres) when the Oil and Gas Operation is located on public land.

~~C. Aggrieved Party: The applicant, the owner of the subject Parcel, or any Affected Party.~~

~~D~~C. **Applicant**: The person making an application for an Oil and Gas Permit on behalf of the operator or owner.

~~E~~D. **Board**: The Board of County Commissioners of Arapahoe County, Colorado.

~~F~~E. **Centralized Facility:** A support facility capable of serving multiple well pads consisting of one or more compressors, generators, or equipment for treating water, gas, and oil.

~~G~~F. **Code**: Arapahoe County Land Development Code.

~~H~~G. **COGCC:** The Colorado Oil and Gas Conservation Commission.

~~I~~H. **County**: Arapahoe County, Colorado, its officers, employees and agents.

~~J~~I. **Flowline**: A pipeline from the wellhead downstream through the production facilities ending at the gas metering equipment or the oil loading point.

~~K~~J. **Gathering Line:** A pipeline that transports gas from a current production facility to a transmission line or main.

~~L~~K. **Groundwater.** Subsurface waters in a zone of saturation.

~~M~~L. **Injection well:** any hole drilled into earth into which fluids are injected for the purposes of secondary recovery, storage, or disposal pursuant to COGCC approval.

~~N~~M. **Intermediate Line:** A pipeline transporting produced gas, oil, or water from one well pad after it passes through production metering equipment to a gathering line.

~~O~~N. **Manager**: the Manager of the Arapahoe County Planning Division.

~~P~~O. **Non-Point Source (NPS) Pollution**: Pollution that is caused by or attributable to diffuse sources. Typically, NPS pollution results from land runoff, precipitation, atmospheric deposition, or percolation.

~~Q~~P. **Oil and Gas Operations**: Exploration for and/or the production of oil or gas resources, including the siting, drilling, deepening, recompletion, reworking, refracturing or abandonment of an oil and gas well, underground injection well or gas storage well; production facilities related to any such wells, including the installation of flow lines and gathering lines; the generation, transportation, storage, treatment or disposal of exploration and production wastes; and any construction, site preparation, reclamation and related activities associated with the development of oil and gas resources.

~~R~~Q. **Oil and Gas Permit**: The zoning approval issued by the County for all Oil and Gas Operations pursuant to this Section 12-1900.

~~S~~R. **Operating Plan:** A general description of a well site or production site identifying the purpose, use, typical staffing, seasonal or periodic considerations, routine hours of operation, source of services/infrastructure and other information related to the regular functioning of the facility.

~~T~~S. **Operation**: Oil and gas operations.

~~U~~T. **Operator:** The applicant, a parent or subsidiary entity or person, or an entity that has a financial interest in the operation.

~~V~~U. **Parcel**: A tract or lot of land upon which the Oil and Gas Operation will occur.

~~W~~V. **Permanent Equipment:** Equipment located onsite for a duration of time greater than six months effective one year after the drilling and completion of a well.

~~X~~W. **Person:** Any individual, partnership, corporation, association, company, or other public or corporate entity, including but not limited to the state or federal governments, and any of their political subdivisions, agencies. or instrumentalities.

~~Y~~X. **Planning Commission:** Arapahoe County Planning Commission.

~~Z~~Y. **Planning Division**: Arapahoe County Planning Division.

~~AA~~Z. **Production Facilities:** All storage, separation, treating, dehydration, artificial lift, power supply, compression, pumping, metering, monitoring, flow lines, and other equipment directly associated with oil wells, gas wells or injection wells.

~~BB~~AA. **Public Facilities:** May include, but not be limited to, open space, parks, educational facilities, child-care facilities, nursing homes, board and care facilities, churches, and hospitals.

~~CC~~BB.___**Referral Agency:** An agency, organization, or technical consultant deemed appropriate and necessary, by the County, to review an application and provide professional analysis and recommendations, including, without limitation, other County offices and departments, and/or municipal, state, or federal agencies having an interest in, or authority over, all or part of the application or permit.

~~DD~~CC. **Significant Degradation**: Of considerable or substantial consequence in the lowering in grade or desirability or the lessening of quality.

~~EE~~DD. **Significant Adverse Effect/Impact:** An impact of an action, after mitigation, that is considerable or substantial, and unfavorable or harmful; includes social, economic, physical, health, aesthetic and historical impact, and biological impacts including but not limited to, effects on natural resources or the structure or function of affected ecosystems.

~~FF~~EE. **Water Body:** A perennial or intermittent river, stream, lake, reservoir, pond, spring or wetland, but does not include irrigation ditches or roadway drainage ditches or artificial lakes or ponds or wetlands that are created and used for the primary purpose of agricultural operations. A Water Body may be described as one of the following:

1. Intermittent River, Stream, Lake, Reservoir, Pond, Spring or Wetland. A Water Body that normally holds water or flows at least 60 days a year as a result of ground water discharge or surface runoff.

2. Natural Water Body. A Water Body not created for the purpose of a land use change.

3. Perennial River, Stream, Lake, Reservoir, Pond, Spring or Wetland. A Water Body that normally holds water or flows continuously during all of the year as a result of ground water discharge or surface runoff.

FF. Well: An Oil & 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.

GG. Well Site: Shall mean the areas that are directly disturbed during the drilling and subsequent operation of, or affected by production facilities directly associated with, any oil well, gas well, or injection well and its associated well pad.

ATTACHMENT L

Memorandum of Understanding
Between the Colorado Oil and Gas Conservation Commission and Gunnison County

This MEMORANDUM OF UNDERSTANDING ("MOU") is hereby made and entered into by and between the Colorado Oil and Gas Conservation Commission ("Commission") and the Board of County Commissioners of Gunnison County, Colorado ("Gunnison County"), together referred to as the "Parties".

A. Introduction

The Commission and Gunnison County value a balanced approach to oil and gas development and propose to achieve that by fostering a robust regulatory landscape that is protective of human health, safety and welfare, as well the environment and wildlife, while coordinating regulatory efforts to provide for a regulatory framework that is predictable and consistent for industry. To that end, the Commission and Gunnison County are engaged in discussions to attempt to clarify and coordinate the application of their respective regulatory programs to oil and gas development within Gunnison County.

B. Purpose of Memorandum of Understanding

The Parties have enjoyed a successful working relationship in regulating oil and gas exploration and production and expect that relationship to continue. The Parties enter into this MOU to memorialize:

1. The intent of the Parties to continue their joint discussion to clarify and coordinate the application of their respective regulatory programs;

2. The intent of the Parties to schedule and conduct regular coordination meetings;

3. The intent of the Parties to take specific actions to make most beneficial use of the Commission's Local Government Designee ("LGD") process;

4. The intent of the Parties to take specific actions regarding assignment by the Commission to Gunnison County of certain Commission inspection authority and monitoring functions; and

5. The intent of the parties to enter into formal intergovernmental agreements to implement actions that result from this MOU.

C. Authorities

The authorities to enter into this MOU include, but are not limited to, the Colorado Constitution, Article XIV, Section 18 and Colorado Revised Statutes §§29-1-201 et. seq.

D. Reservations

This MOU is entered into without prejudice to, and without waiving, any jurisdiction or other rights, powers and privileges of either of the Parties.

This MOU is not a final agency action by either of the Parties, and is not intended to, and does not create, any right, benefit, or trust responsibility, substantive or procedural, enforceable at law or equity, between the Parties, or by any non-party.

This MOU is not intended to supersede existing state or federal law, rule, regulation, or pre-existing MOU(s). Nothing in this MOU will be construed as affecting the authorities of the Parties or as binding beyond their respective authorities.

E. Coordination Meetings

The Parties will initially hold coordination meetings, at least twice a year, to discuss implementation of this MOU. Approximately six months after the effective date of this MOU, the Commission will accept public comment on, and review implementation of, the MOU at a regularly scheduled public meeting. Thereafter, the Commission will accept public comment on, and review implementation of, the MOU at a regularly scheduled public meeting on an annual basis.

F. Local Government Designee Process

The Parties recognize that the Commission's LGD process can be one valuable tool for communication between the Parties, for identification of application-specific issues and information, for conveyance of data to and from an applicant, and for making available to the public accurate and complete information. The Parties intend to make most beneficial use of the LGD process by, among other things:

1. Within the time frames identified by statute, rule, or current practice, the Commission will provide adequate time for the LGD to review the application materials submitted to the Commission;

2. The Parties will promptly and efficiently exchange all information pertinent to permit applications pending before either of the parties;

3. The Commission will provide to the LGD opportunities for consultation that include meaningful and substantive input;

4. The Commission will give thoughtful weight to the LGD's input on the permit applications; and

5. Gunnison County will, in turn, give thoughtful weight to the Commission's permit conditions, mitigations and other decisions.

G. Inspection Authority

It is the intent of the Parties that the Commission shall assign to Gunnison County certain Commission inspection and monitoring functions, pursuant to Colorado Revised Statute §34-60-106(15), so that Gunnison County can provide Commission inspection and monitoring services during both development and operational phases of various projects within Gunnison County. Any such assignments are subject to the following conditions:

1. The inspection and monitoring functions to be delegated by the Commission are not considered land use permit conditions such that, pursuant to Colorado Revised Statute §34-60-106(15), Gunnison County will not impose any new tax or fee, direct or indirect, in order to conduct the inspection or monitoring functions to be delegated by the Commission and will assume all fiscal responsibility for the inspection and monitoring assignments to be delegated by the Commission. While the inspection and monitoring functions are not considered land use permit conditions, nothing in this MOU precludes Gunnison County's authority, pursuant to Colorado Revised Statute §34-60-106(15), to charge fees for inspection and monitoring for road damage and compliance with local fire codes, land use permit conditions, and local building codes.

2. Gunnison County will not receive compensation contingent on the number or nature of alleged violations referred to the Commission by Gunnison County.

3. The Commission will approve and train the county official responsible for inspection and monitoring.

4. The Commission will retain all enforcement authority.

5. The Parties will draft a formal intergovernmental agreement to accomplish this assignment. The Parties will involve a broad range of stakeholders to participate in developing this intergovernmental agreement.

H. Information Disclosure

Any information furnished pursuant to this MOU will be subject to disclosure to the extent allowed under the Freedom of Information Act (5 U.S.C. § 552), the Privacy Act (5 U.S.C. §552a), and/or the Colorado Open Records Act (C.R.S. § 24-72-201 *et seq.*).

I. Similar Activities

This MOU in no way restricts the Parties from participating in similar activities with other public or private agencies, organizations, or individuals.

J. Effective Date, Duration, and Amendment

This MOU takes effect upon the signature of both Parties thereto, and it shall remain in effect for ten (10) years from the date of execution or until terminated upon 30 days written notice by either party. This MOU may be extended or amended upon written request of either Party, and written concurrence of the other Party.

K. Separate Activities and Resources

Each of the Parties will conduct its own activities and utilize its own resources, including expenditure of its own funds, in implementing this MOU. Each Party will carry out its separate activities as expeditiously as possible in a coordinated and mutually beneficial manner.

L. Obligation of Funds

Nothing in this MOU shall commit either Party to obligate or transfer any funds. Specific work projects or activities that involve the transfer of funds, services, or property between the Parties will require separate agreements and be contingent upon the availability of appropriated funds.

M. Authorized Representatives

By signature below, each of the Parties certifies that its representatives are authorized, pursuant to the authority of the Parties' Commissions, to act in their respective areas for matters related to this agreement.

For Gunnison County:

_____
Hap Channell, Chairman

_____
Phil Chamberland, Commissioner

_____
Paula Swenson, Commissioner

For the Commission:

_____
Thomas L. Compton, Chairman

_____
Peter Gowan, Secretary

ATTACHMENT M

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New state oil and gas rules could lead to more horizontal drilling in Weld

Weld likely to see more horizontal drilling after changes to regulations

By Chris Casey
ccasey@greeleytribune.com
Tuesday, August 9, 2011

The state oil and gas regulatory agency has approved rules that give energy producers more leeway in how they drill horizontal wells in the Wattenberg Field, which covers a large portion of Weld County. The rules likely will lead to more horizontal drilling.

Operators sought the changes that offer more flexibility for well spacing in the region that has seen steady growth in horizontal drilling. With more than 18.6 million barrels of oil produced a year, the Greater Wattenberg Area accounts for more than half of the state's oil production since 2006.

The Colorado Oil and Gas Conservation Commission board on Monday night unanimously approved several amendments to what is known as Rule 318A, or the Greater Wattenberg Area rule.

"There was a limit on the number of wells produced from a particular formation," said Robert Willis, a COGCC enforcement officer. "The limit was eight wells in a governmental quarter section from a particular reservoir, or oil and gas formation. The (new) rule removes the limit."

Thom Kerr, COGCC permitting manager, said the amendments came about because the commission had been getting roughly a dozen drilling applications a month that sought exceptions to Rule 318A, which was initially adopted in 1998 and modified in 2005.

"After a few months it starts to look like something is broken (with the rule). They were coming in applying for exceptions," Kerr said.

Oil and gas operators – including Noble Energy Inc., Anadarko Petroleum Corp., and Encana Oil and Gas Inc. – told the COGCC that the proposed amendments would provide an improved framework for drilling in the Wattenberg Field, which includes the oil-prone Niobrara formation. The amendments would "eliminate countless hearings before the commission on individual horizontal well spacing applications," Noble, Anadarko and Encana said in a letter to the COGCC.

The approved amendments include:

- Changes to the wellbore spacing unit to a more flexible concept for horizontal wells.
- Changes to the procedures for notice and hearing for mineral interest owners in wellbore spacing units.
- Eliminating the infill area, making infill and boundary wells optional in all of the Greater Wattenberg Area.
- Eliminating the need to count well completions by quarter section of land.
- Adding water sampling in any section in the Wattenberg area where none has been reported.
- Adding the requirement for operators to submit waste management plans.

The changes to the spacing of well units are intended to allow for a more equitable sharing of oil and gas revenues by mineral interest owners.

Kerr said operators can now customize each wellbore as a spacing unit.

"It makes it simpler for the operator and other mineral interest owners that might be included in the well," he said. Another amendment establishes a notice and hearing process to inform mineral owners of the intent of an operator to create a new unit and drill a well. The idea is to streamline the process to create a unit and only go through the commission hearing process when the parties can't agree on terms.

Weld County by far leads the state in oil and gas production with roughly 17,000 active wells. Kerr said the amended rules will result in more horizontal drilling, "but it shouldn't result in tons and tons of wells, uncontrolled. Because each well is going to have to produce enough oil and gas to pay for itself. So, there's a huge piece of economics in there."

It costs $4 million to $8 million to drill, complete and bring each well online, he said. The new rules pertain mostly to drilling in Weld, but also apply to portions of Larimer and Boulder counties.

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Top Jobs

"There's a lot of production in Wattenberg and a lot more that could be produced," Kerr said. He added that the new rules are "of economic benefit to the oil and gas industry, to the state, the county, to the mineral interest owners. It creates jobs. There are a lot of reasons for it."

Agency's online system wins honor

The Colorado Oil and Gas Conservation won an award for a system that streamlines permitting of oil and gas operations and allows for online completion of regulatory forms

The Council of State Governments cited the COGCC for innovation in natural resources for the agency's "eForm" system, the COGCC announced Tuesday

COGCC staff worked with the Ground Water Protection Council to develop the system, which debuted in 2009. Within six months of its introduction, more than 80 percent of forms submitted were being done using the eForms.

"The system was a double-win for our constituents," David Neslin, COGCC executive director, said in a prepared statement. "Not only was it easier for the industry to submit forms but because the system made data management and analysis easier for our staff, this has helped us to significantly reduce our processing times."

The system allows form review by several state agencies at the same time rather than only one at a time. The system also allows the public to query, view and comment on oil and gas applications that are under active review

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Dear Readers,

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BEFORE THE OIL AND GAS CONSERVATION COMMISSION
OF THE STATE OF COLORADO

IN THE MATTER OF CHANGES TO THE RULES OF PRACTICE AND PROCEDURE OF THE OIL AND GAS CONSERVATION COMMISSION OF THE STATE OF COLORADO	))))	CAUSE NO. 1R ORDER NO. 1R-114

REPORT OF THE COMMISSION

TO ALL INTERESTED PARTIES AND TO WHOM IT MAY CONCERN:

DEFINITIONS
(100 SERIES)

BASE FLUID shall mean the continuous phase fluid type, such as water, used in a hydraulic fracturing treatment.

CHEMICAL ABSTRACTS SERVICE shall mean the division of the American Chemical Society that is the globally recognized authority for information on chemical substances.

CHEMICAL ABSTRACTS SERVICE NUMBER OR CAS NUMBER shall mean the unique identification number assigned to a chemical by the chemical abstracts service.

CHEMICAL(S) shall mean any element, chemical compound, or mixture of elements or compounds that has its own specific name or identity such as a chemical abstract service number, whether or not such chemical is subject to the requirements of 29 Code of Federal Regulations §1910.1200(g)(2) (2011).

CHEMICAL DISCLOSURE REGISTRY shall mean the chemical registry website known as fracfocus.org developed by the Ground Water Protection Council and the Interstate Oil and Gas Compact Commission. If such website becomes permanently inoperable, then chemical disclosure registry shall mean another publicly accessible information website that is designated by the Commission.

CHEMICAL FAMILY shall mean a group of chemicals that share similar chemical properties and have a common general name.

HEALTH PROFESSIONAL shall mean a physician, physician assistant, nurse practitioner, registered nurse, or emergency medical technician licensed by the State of Colorado.

HYDRAULIC FRACTURING ADDITIVE shall mean any chemical substance or combination of substances, including any chemicals and proppants, that is intentionally added to a base fluid for purposes of preparing a hydraulic fracturing fluid for treatment of a well.

HYDRAULIC FRACTURING FLUID shall mean the fluid, including the applicable base fluid and all hydraulic fracturing additives, used to perform a hydraulic fracturing treatment.

HYDRAULIC FRACTURING TREATMENT shall mean all stages of the treatment of a well by the application of hydraulic fracturing fluid under pressure that is expressly designed to initiate or propagate fractures in a target geologic formation to enhance production of oil and natural gas.

PROPPANT shall mean sand or any natural or man-made material that is used in a hydraulic fracturing treatment to prop open the artificially created or enhanced fractures once the treatment is completed.

TOTAL WATER VOLUME shall mean the total quantity of water from all sources used in the hydraulic fracturing treatment, including surface water, ground water, produced water or recycled water.

TRADE SECRET shall have the meaning set forth in § 7-74-102(4) (2011) of the Colorado Uniform Trade Secrets Act.

GENERAL RULES
(200 SERIES)

205. ACCESS TO RECORDS

a. All producers, operators, transporters, refiners, gasoline or other extraction plant operators and initial purchasers of oil and gas within this State, shall make and keep appropriate books and records covering their operations in the State, including natural gas meter calibration reports, from which they may be able to make and substantiate the reports required by the Commission or the Director.

b. Beginning May 1, 2009 on federal land and April 1, 2009 on all other land, operators shall maintain MSDS sheets for any Chemical Products brought to a well site for use downhole during drilling, completion, and workover operations, excluding hydraulic fracturing treatments. With the exception of fuel as provided for in Rule 205.c., the reporting and disclosure of hydraulic fracturing additives and chemicals brought to a well site for use in connection with hydraulic fracturing treatments is governed by Rule 205A.

c. Beginning June 1, 2009, operators shall maintain a Chemical Inventory by well site for each Chemical Product used downhole during drilling, completion, and workover operations, excluding hydraulic fracturing treatments, in an amount exceeding five hundred (500) pounds during any quarterly reporting period. Operators shall also maintain a chemical inventory by well site for fuel stored at the well site during drilling, completion, and workover operations, including hydraulic fracturing treatments, in an amount exceeding five hundred (500) pounds during any quarterly reporting period.

The five hundred (500) pound reporting threshold shall be based on the cumulative maximum amount of a Chemical Product present at the well site during the quarterly reporting period. Entities maintaining Chemical Inventories under this section shall update these inventories quarterly throughout the life of the well site. These records must be maintained in a readily retrievable format at the operator's local field office. The Colorado Department of Public Health and Environment may obtain information provided to the Commission or Director in a Chemical Inventory upon written request to the Commission or the Director.

d. Where the composition of a Chemical Product is considered a Trade Secret by the vendor or service provider, Operators shall only be required to maintain the identity of the Trade Secret Chemical Product and shall not be required to maintain information concerning the identity of chemical constituents in a Trade Secret Chemical Product or the amounts of such constituents. The vendor or service provider shall provide to the Commission a list of the chemical constituents contained in a Trade Secret Chemical Product upon receipt of a letter from the Director stating that such information is necessary to respond to a spill or release of a Trade Secret Chemical Product or a complaint from a potentially adversely affected landowner regarding impacts to public health, safety, welfare, or the environment. Upon receipt of a written statement of necessity, information regarding the chemical constituents contained in a Trade Secret Chemical Product shall be disclosed by the vendor or service provider directly to the Director or his or her designee.

The Director or designee may disclose information regarding those chemical constituents to additional Commission staff members to the extent that such disclosure is necessary to allow the Commission staff member receiving the information to assist in responding to the spill, release, or complaint, provided that such individuals shall not disseminate the information further. In addition, the Director may disclose information regarding those chemical constituents to any Commissioner, the relevant County Public Health Director or Emergency Manager, or to the Colorado Department of Public Health and Environment's Director of Environmental Programs upon request by that individual. Any information so disclosed to the Director, a Commission staff member, a Commissioner, a County Public Health Director or Emergency Manager, or to the Colorado Department of Public Health and

Environment's Director of Environmental Programs shall at all times be considered confidential and shall not become part of the Chemical Inventory, nor shall it be construed as publicly available. The Colorado Department of Public Health and Environment's Director of Environmental Programs, or his or her designee, may disclose information regarding the chemical constituents contained in a Trade Secret Chemical Product to Colorado Department of Public Health and Environment staff members under the same terms and conditions as apply to the Director.

e. The vendor or service provider shall also provide the chemical constituents of a Trade Secret Chemical Product to any health professional who requests such information in writing if the health professional provides a written statement of need for the information and executes a Confidentiality Agreement, Form 35. The written statement of need shall be a statement that the health professional has a reasonable basis to believe that (1) the information is needed for purposes of diagnosis or treatment of an individual, (2) the individual being diagnosed or treated may have been exposed to the chemical concerned, and (3) knowledge of the chemical constituents of such Trade Secret Chemical Product will assist in such diagnosis or treatment. The Confidentiality Agreement, Form 35, shall state that the health professional shall not use the information for purposes other than the health needs asserted in the statement of need, and that the health professional shall otherwise maintain the information as confidential. Where a health professional determines that a medical emergency exists and the chemical constituents of a Trade Secret Chemical Product are necessary for emergency treatment, the vendor or service provider shall immediately disclose the chemical constituents of a Trade Secret Chemical Product to that health professional upon a verbal acknowledgement by the health professional that such information shall not be used for purposes other than the health needs asserted and that the health professional shall otherwise maintain the information as confidential. The vendor or service provider may request a written statement of need, and a Confidentiality Agreement, Form 35, from all health professionals to whom information regarding the chemical constituents was disclosed, as soon as circumstances permit. Information so disclosed to a health professional shall not become part of the Chemical Inventory and shall in no way be construed as publicly available.

f. Such books, records, inventories, and copies of said reports required by the Commission or the Director shall be kept on file and available for inspection by the Commission for a period of at least five years except for the Chemical Inventory, which shall be kept on file and available for inspection by the Commission for the life of the applicable oil and gas well or oil and gas location and for five (5) years after plugging and abandonment. Upon the Commission's or the Director's written request for information required to be maintained or provided under this section, the record-keeping entity or third-party vendor shall supply the Commission or the Director with the requested information within three (3) business days in a format readily-reviewable by the Commission or the Director, except in the instance where such information is necessary to administer emergency medical treatment in which case such information shall be provided as soon as possible. Information provided to the Commission or the Director under this section that is entitled to protection under state or federal law, including C.R.S. § 24-72-204, as a trade secret, privileged information, or confidential commercial, financial, geological, or geophysical data shall be kept confidential and protected against public disclosure unless otherwise required, permitted, or authorized by other state or federal law. Any disclosure of information entitled to protection under any state or federal law made pursuant to this section shall be made only to the persons required, permitted, or authorized to receive such information under state or federal law in order to assist in the response to a spill, release, or complaint and shall be subject to a requirement that the person receiving such information maintain the confidentiality of said information. The Commission or the Director shall notify the owner, holder, or beneficiary of any such protected information at least one (1) business day prior to any required, permitted, or authorized disclosure. This notification shall include the name and contact information of the intended recipient of such protected information, the reason for the

disclosure, and the state or federal law authorizing the disclosure. Information so disclosed shall not become part of the Chemical Inventory and shall in no way be construed as publicly available. 200-4 As of May 30, 2009

g. The Director and the authorized deputies shall have access to all well records wherever located. All operators, drilling contractors, drillers, service companies, or other persons engaged in drilling or servicing wells, shall permit the Director, or authorized deputy, at the Director's or their risk, in the absence of negligence on the part of the owner, to come upon any lease, property, or well operated or controlled by them, and to inspect the record and operation of such wells and to have access at all times to any and all records of wells; provided, that information so obtained shall be kept confidential and shall be reported only to the Commission or its authorized agents.

h. In the event that the vendor or service provider does not provide the information required by Rules 205.d, 205.e, or 205.f directly to the Commission or a health professional, the operator is responsible for providing the required information.

i. In the event the operator establishes to the satisfaction of the Director that it lacks the right to obtain the information required by Rules 205.d, 205.e, or 205.f and to provide it directly to the Commission or a health professional, the operator shall receive a variance from these rule provisions from the Director.

205A. HYDRAULIC FRACTURING CHEMICAL DISCLOSURE.

a. Applicability. This Commission Rule 205a applies to hydraulic fracturing treatments performed on or after April 1, 2012.

b. Required disclosures.

(1) Vendor and service provider disclosures. A service provider who performs any part of a hydraulic fracturing treatment and a vendor who provides hydraulic fracturing additives directly to the operator for a hydraulic fracturing treatment shall, with the exception of information claimed to be a trade secret, furnish the operator with the information required by subsection 205A.b.(2)(A)(viii) – (xii) and subsection 205A.b.(2)(B), as applicable, and with any other information needed for the operator to comply with subsection 205A.b.(2). Such information shall be provided as soon as possible within 30 days following the conclusion of the hydraulic fracturing treatment and in no case later than 90 days after the commencement of such hydraulic fracturing treatment.

(2) Operator disclosures.

A. Within 60 days following the conclusion of a hydraulic fracturing treatment, and in no case later than 120 days after the commencement of such hydraulic fracturing treatment, the operator of the well must complete the chemical disclosure registry form and post the form on the chemical disclosure registry, including:

(i) the operator name;

(ii) the date of the hydraulic fracturing treatment;

(iii) the county in which the well is located;

(iv) the API number for the well;

(v) the well name and number;

(vi) the longitude and latitude of the wellhead;

(vii) the true vertical depth of the well;

(viii) the total volume of water used in the hydraulic fracturing treatment of the well or the type and total volume of the base fluid used in the hydraulic fracturing treatment, if something other than water;

(ix) each hydraulic fracturing additive used in the hydraulic fracturing fluid and the trade name, vendor, and a brief descriptor of the intended use or function of each hydraulic fracturing additive in the hydraulic fracturing fluid;

(x) each chemical intentionally added to the base fluid;

(xi) the maximum concentration, in percent by mass, of each chemical intentionally added to the base fluid; and

(xii) the chemical abstract service number for each chemical intentionally added to the base fluid, if applicable.

B. If the vendor, service provider, or operator claim that the specific identity of a chemical, the concentration of a chemical, or both the specific identity and concentration of a chemical is/are claimed to be a trade secret, the operator of the well must so indicate on the chemical disclosure registry form and, as applicable, the vendor, service provider, or operator shall submit to the Director a Form 41 claim of entitlement to have the specific identity of a chemical, the concentration of a chemical, or both withheld as a trade secret. The operator must nonetheless disclose all information required under subsection 205A.b.(2)(A) that is not claimed to be a trade secret. If a chemical is claimed to be a trade secret, the operator must also include in the chemical registry form the chemical family or other similar descriptor associated with such chemical.

C. At the time of claiming that a hydraulic fracturing chemical, concentration, or both is entitled to trade secret protection, a vendor, service provider or operator shall file with the commission claim of entitlement, Form 41, containing contact information. Such contact information shall include the claimant's name, authorized representative, mailing address, and phone number with respect to trade secret claims. If such contact information changes, the claimant shall immediately submit a new Form 41 to the Commission with updated information.

D. Unless the information is entitled to protection as a trade secret, information submitted to the Commission or posted to the chemical disclosure registry is public information.

(3) Ability to search for information.

A. If the Commission determines, as of January 1, 2013, that:

(i) The chemical disclosure registry does not allow the Commission staff and the public to search and sort the registry for Colorado information by geographic area, ingredient, chemical abstract service number, time period, and operator; and

(ii) There is no reasonable assurance that the registry will allow for such searches by a date certain acceptable to the Commission,

Then the provisions of subsection 205A.b.(3)(B) below shall apply.

B. Beginning February 1, 2013, any operator who posts a chemical disclosure form on the chemical disclosure registry shall also submit the form to the Commission in an electronic format acceptable to the Commission. As soon thereafter as

practicable, the Commission shall make such forms available on the Commission's website in a manner that allows the public to search the information and sort the forms by geographic area, ingredient, chemical abstract service number, time period and operator, as practicable.

(4) Inaccuracies in information. A vendor is not responsible for any inaccuracy in information that is provided to the vendor by a third party manufacturer of the hydraulic fracturing additives. A service provider is not responsible for any inaccuracy in information that is provided to the service provider by the vendor. An operator is not responsible for any inaccuracy in information provided to the operator by the vendor or service provider.

(5) Disclosure to health professionals. Vendors, service companies, and operators shall identify the specific identity and amount of any chemicals claimed to be a trade secret to any health professional who requests such information in writing if the health professional provides a written statement of need for the information and executes a confidentiality agreement, Form 35. The written statement of need shall be a statement that the health professional has a reasonable basis to believe that (1) the information is needed for purposes of diagnosis or treatment of an individual, (2) the individual being diagnosed or treated may have been exposed to the chemical concerned, and (3) knowledge of the information will assist in such diagnosis or treatment. The confidentiality agreement, Form 35, shall state that the health professional shall not use the information for purposes other than the health needs asserted in the statement of need, and that the health professional shall otherwise maintain the information as confidential. Where a health professional determines that a medical emergency exists and the specific identity and amount of any chemicals claimed to be a trade secret are necessary for emergency treatment, the vendor, service provider, or operator, as applicable, shall immediately disclose the information to that health professional upon a verbal acknowledgement by the health professional that such information shall not be used for purposes other than the health needs asserted and that the health professional shall otherwise maintain the information as confidential. The vendor, service provider, or operator, as applicable, may request a written statement of need, and a confidentiality agreement, Form 35, from all health professionals to whom information regarding the specific identity and amount of any chemicals claimed to be a trade secret was disclosed, as soon as circumstances permit. Information so disclosed to a health professional shall in no way be construed as publicly available.

c. Disclosures not required. A vendor, service provider, or operator is not required to:

(1) disclose chemicals that are not disclosed to it by the manufacturer, vendor, or service provider;

(2) disclose chemicals that were not intentionally added to the hydraulic fracturing fluid; or

(3) disclose chemicals that occur incidentally or are otherwise unintentionally present in trace amounts, may be the incidental result of a chemical reaction or chemical process, or may be constituents of naturally occurring materials that become part of a hydraulic fracturing fluid.

d. Trade secret protection.

(1) Vendors, service companies, and operators are not required to disclose trade secrets to the chemical disclosure registry.

(2) If the specific identity of a chemical, the concentration of a chemical, or both the specific identity and concentration of a chemical are claimed to be entitled to protection as a trade secret, the vendor, service provider or operator may withhold the specific identity, the concentration, or both the specific identity and concentration, of the chemical, as the case may be, from the information provided to the chemical disclosure registry. Provided, however, operators must provide the information required by Rule 205A.b.(2)(B) & (C).

The vendor, service provider, or operator, as applicable, shall provide the specific identity of a chemical, the concentration of a chemical, or both the specific identity and concentration of a chemical claimed to be a trade secret to the Commission upon receipt of a letter from the Director stating that such information is necessary to respond to a spill or release or a complaint from a person who may have been directly and adversely affected or aggrieved by such spill or release. Upon receipt of a written statement of necessity, such information shall be disclosed by the vendor, service provider, or operator, as applicable, directly to the Director or his or her designee and shall in no way be construed as publicly available.

The Director or designee may disclose information regarding the specific identity of a chemical, the concentration of a chemical, or both the specific identity and concentration of a chemical claimed to be a trade secret to additional Commission staff members to the extent that such disclosure is necessary to allow the Commission staff member receiving the information to assist in responding to the spill, release, or complaint, provided that such individuals shall not disseminate the information further. In addition, the Director may disclose such information to any Commissioner, the relevant county public health director or emergency manager, or to the Colorado Department of Public Health and Environment's director of environmental programs upon request by that individual. Any information so disclosed to the Director, a Commission staff member, a Commissioner, a county public health director or emergency manager, or to the Colorado Department of Public Health and Environment's director of environmental programs shall at all times be considered confidential and shall not be construed as publicly available. The Colorado Department of Public Health and Environment's director of environmental programs, or his or her designee, may disclose such information to Colorado Department of Public Health and Environment staff members under the same terms and conditions as apply to the director.

e. Incorporated materials. Where referenced herein, these regulations incorporate by reference material originally published elsewhere. Such incorporation does not include later amendments to or editions of the referenced material. Pursuant to section 24-4-103 (12.5) C.R.S., the Commission maintains copies of the complete text of the incorporated materials for public inspection during regular business hours. Information regarding how the incorporated material may be obtained or examined is available at the Commission's office located at 1120 Lincoln Street, Suite 801, Denver, Colorado 80203.

DRILLING, DEVELOPMENT, PRODUCTION AND ABANDONMENT
(300 SERIES)

RULE 305.E.(1).A CONTENT OF NOTICES.

A. Landowner Notice. The landowner notice shall include the Form 2A itself (without attachments), a copy of the information required under Rule 303.d.(3).B, 303.d.(3).C, 303.d.(3).E, the COGCC's information sheet on hydraulic fracturing treatments and any additional information the operator deems appropriate and inform the recipient that the complete application (including attachments) may be reviewed on the COGCC website and that he or she may submit comments to the Director, as provided on the COGCC website. The operator need not provide the COGCC's information sheet on hydraulic fracturing treatments where hydraulic fracturing treatments are not going to be applied to the well in question. For the surface owner, this notice shall include a copy of the COGCC Informational Brochure for Surface Owners, a postage-paid, return-addressed post card whereby the surface owner may request consultation pursuant to Rule 306, and, where the oil and gas location is not subject to a surface-use agreement, a copy of the COGCC Onsite Inspection Policy (See Appendix or COGCC website).

RULE 316C. NOTICE OF INTENT TO CONDUCT HYDRAULIC FRACTURING TREATMENT.

Operators shall give at least 48 hours advance written notice to the Commission of a hydraulic fracturing treatment at any well. Such notice shall be provided on a Form 42 notice of hydraulic fracturing treatment. The Commission shall provide prompt electronic notice of such intention to the relevant local governmental designee (LGD).

RULES OF PRACTICE AND PROCEDURE
(500 SERIES)

523.c. BASE FINE SCHEDULE

Rule 523c. Base fine schedule

Base fine schedule. The following table sets forth the base fine for violation of the rules listed

Rule Number 205A

Base Fine $1000

Attached, as **Exhibit A**, is a statement giving the basis and purpose of the revisions and such statements are incorporated herein by reference.

DONE AND PERFORMED by the Oil and Gas Conservation Commission of the State of Colorado this 13th day of December, 2011.

IN THE NAME OF THE COLORADO
OIL AND GAS CONSERVATION COMMISSION
OF THE STATE OF COLORADO

By Peter J. Gowen
Peter J. Gowen, Acting Secretary

Dated at Suite 801
1120 Lincoln Street
Denver, Colorado 80203
December 13, 2011

Exhibit A

Proposed Statement of Basis, Specific Statutory Authority, and Purpose

AMENDMENTS TO 100 SERIES DEFINITIONS, 200 SERIES GENERAL RULES, 300 SERIES DRILLING, DEVELOPMENT, PRODUCTION AND ABANDONMENT RULES and 500 SERIES PRACTICE AND PROCEDURE RULES

2 CCR 404-1

This statement sets forth the basis, specific statutory authority, and purpose for the new rules and amendments to Rules 100, 205, 305, 316 and 523 of the Rules of the Colorado Oil and Gas Conservation Commission promulgated by the Colorado Oil and Gas Conservation Commission ("Commission" or "COGCC").

In adopting the new rules and amendments, the Commission relied upon the entire administrative record for this rulemaking proceeding, which formally began in the fall of 2011 and informally began in the summer of 2011. The new rules and amendments were initially discussed with representatives of the oil and gas industry and conservation community during informal meetings in August 2011. These discussions continued during September 2011, and the Commission staff held work sessions with these groups during October 2011 to help develop the proposed rules. The administrative record includes the proposed rules and recommended modifications and alternatives; public comments, testimony, and exhibits; and one day of public and party hearings.

Statutory Authority

The new rules and amendments are based on: 1) general Commission jurisdiction and rulemaking authority granted in section 34-60-105 (1) C.R.S; and 2) specific statutory authority of sections 34-60-106(2), 34-60-106(4) and 34-60-106(10) C.R.S. The Commission adopted the following statement of basis and purpose consistent with section 24-4-103(4), C.R.S., of the Administrative Procedure Act. This statement is incorporated by reference in the rules adopted. The rulemaking hearing for these new rules and amendments was held by the Commission on December 5, 2011. These amendments become effective twenty days after publication in the *Colorado Register.*

Basis and Purpose

INTRODUCTION

A major reason for adopting the new rules and amendments was to address concerns regarding hydraulic fracturing. Members of the public have expressed interest in learning the identity of chemicals in hydraulic fracturing fluids. Many oil and gas operators are currently providing such information through the FracFocus.org website, and several other states have adopted or are adopting similar regulations.

Hydraulic fracturing, commonly referred to as *fracing*, is the process of creating small cracks, or fractures, in underground geological formations providing pathways to allow oil and natural gas to flow into the wellbore and thereby increase production. Prior to initiating hydraulic fracturing, engineers and geoscientists study and model the physical characteristics of the hydrocarbon bearing rock formation, including its permeability, porosity and thickness. Using this information, they design the process to keep the resulting fractures within the target formation. In Colorado, the target formation is often more than 7,000 feet below the ground surface and more than 5,000 feet below drinking water aquifers.

To fracture the formation, fracturing fluids are injected down the well bore and into the formation. These fluids typically consist of water, sand, and chemical additives. The pressure created by injecting the fluid opens the fractures. Sand is carried into the fractures by the fluid and keeps the fractures open to increase the flow of oil or natural gas to the well bore. The chemicals serve a variety of purposes, including increasing viscosity, reducing friction, controlling bacteria, and decreasing corrosion. Following the treatment, much of the fracturing fluid flows back up the well bore and is collected at the surface in tanks or lined pits.

Fracture treatment of oil and gas wells in Colorado began in the 1970s and has evolved since then. Most of the hydrocarbon bearing formations in Colorado would not produce economic quantities of hydrocarbons without hydraulic fracturing.

The Commission Staff believes the new rules and amendments will significantly increase the transparency of hydraulic fracturing operations. The proposed rules require service companies and vendors to disclose all known chemicals in hydraulic fracturing fluids to operators and require operators to disclose such chemicals to the public via the website FracFocus.org or, with respect to an operator's trade secrets, directly to the Commission or health professionals. FracFocus.org is a hydraulic fracturing chemical registry website created by the Ground Water Protection Council and the Interstate Oil and Gas Compact Commission.

The new rules and amendments reflect staff discussions with those intergovernmental organizations, as well as other states, industry associations, individual operators, and conservation groups. Although states have taken different approaches to disclosure, and the industry and conservation groups disagree on several issues, the Commission believes the proposed new rules and amendments strike a responsible balance.

The following discussion summarizes the new rules and amendments and explains their purpose.

IDENTIFICATION AND EXPLANATION OF AMENDMENTS

The new rules and amendments make substantive amendments and additions to the Rules and Regulations of the Colorado Oil and Gas Conservation Commission, 2 CCR 404-1 ("Commission Rules"). The general authority for adoption of these rules is set out in the Statutory Authority section set forth above and is generally applicable to all the new rules and amendments. The most specific authority and a summary of the purpose for each rule change are set forth below. References to particular factors or testimony are intended to be illustrative and not comprehensive.

100 Series Definitions

The Commission's 100 Series Rules contain many definitions that occur throughout the Commission Rules and throughout the Oil and Gas Conservation Act, § 34-60-100 C.R.S. *et seq.*

Amendments

The following definitions were substantively amended:

Chemical(s)

Basis: The statutory basis for this amendment is § 34-60-106 (2)(d) C.R.S.

Purpose: The purpose of this amendment is to clarify the scope of disclosure obligations under the new and amended rules. Under the proposed Colorado rule, all chemicals used in hydraulic fracturing treatments must be disclosed irrespective of whether the chemical is listed on a Material Safety Data Sheet pursuant to the federal Occupational Safety and Health Act.

Trade Secret

Basis: The statutory basis for this amendment is § 34-60-106 (2)(d) C.R.S.

Purpose: The purpose of this amendment is to conform the definition of trade secret in the rules to the statutory definition set forth in the Uniform Trade Secrets Act, § 7-74-102(4).

The following definitions were added:

Base Fluid; Chemical Abstracts Service; Chemical Abstracts Service Number or CAS Number; Chemical Disclosure Registry; Chemical Family; Health Professional; Hydraulic Fracturing Additive; Hydraulic Fracturing Fluid; Hydraulic Fracturing Treatment; Proppant; and Total Water Volume.

Basis: The statutory basis is § 34-60-106 (2)(d) C.R.S.

Purpose: These definitions are necessary as terms of art to give meaning to Colorado's disclosure regime.

200 Series Rules

Amendments to 200 Series Rules: Rule 205., Access to Records

Basis: The statutory basis is § 34-60-106 (2)(d) C.R.S.

Purpose: Rule 205 requires operators, among other things, to maintain chemical inventories for chemical substances brought to a well site for use downhole. Under amended Rule 205, chemicals used for hydraulic fracturing treatments are exempted from this requirement and are instead addressed in new Rule 205A, which requires the public disclosure of chemicals used in hydraulic fracturing. Public disclosure under Rule 205A would be limited to hydraulic fracturing fluids, while other chemical products used downhole, other than hydraulic fracturing fluids, would continue to be inventoried and disclosed upon request to the Commission and health professionals under Rule 205. Operators will still need to maintain inventories of fuel regardless of whether such fuel is used in connection with hydraulic fracturing treatments or other activities. Further, if diesel or other fuel is used as a hydraulic fracturing fluid, such use shall be disclosed pursuant to Rule 205A.

Additions to 200 Series Rules: Rule 205A., Hydraulic Fracturing Chemical Disclosure

Basis: The statutory basis is § 34-60-106 (2)(d) C.R.S.

Purpose: New Rule 205A would require public disclosure of hydraulic fracturing chemicals using the FracFocus.org website, which has been voluntarily used by numerous Colorado operators to report information on about 50% of the wells hydraulically fractured in Colorado this year. It is similar to regulations recently proposed in Texas. Other states have similarly adopted or are considering adopting regulations mandating the public disclosure of hydraulic fracturing chemicals through the FracFocus.org website.

Rule 205A, Subpart a: Applicability. Rule 205A provides that the new fracturing chemical disclosure requirements will apply to all hydraulic fracturing treatments performed on or after April 1, 2012. As previously noted, many Colorado operators are already submitting information to the FracFocus.org website. Therefore, the COGCC staff believes that it is feasible and fair for Rule 205A to apply to all treatments performed on or after April 1, 2012. If an operator finds that, despite diligent efforts, it is unable to satisfy the requirements of Rule 205A beginning April 1, 2012, then it may seek a temporary variance under Rule 502.b(1).

Rule 205A, Subpart b: Required Disclosures. Rule 205A imposes disclosure obligations on suppliers, service companies, and operators. The supplier or service company must, as soon as possible within 30 days following the conclusion of a hydraulic fracturing treatment, furnish the operator of the well with the information necessary for the operator to meet its disclosure obligations. Provided, however, vendor and service providers need not provide information claimed to be a trade secret to operators. The operator must, within 60 days following the conclusion of a hydraulic fracturing treatment, complete and post the chemical registry disclosure form with FracFocus. The FracFocus form includes information about the well, the volume of water used, and the chemicals and their concentrations. The Commission acknowledges concerns expressed by industry that certain formats for disclosure may present the possibility of competitors "reverse engineering" proprietary formulas for hydraulic fracturing additives. Accordingly, the rule permits operators to report the required information in a format that does not link chemical ingredients (including chemical names, CAS numbers and concentrations) to their respective hydraulic fracturing additive. If a chemical is entitled to trade secret protection, then the operator must still provide information on its chemical family. The supplier, service company, or operator, as applicable, must also provide the identity of a trade secret chemical to a health professional that satisfies certain conditions (immediate disclosure is required in medical emergencies).

At the time of claiming that a chemical, concentration, or both is a trade secret, the vendor, service provider or operator must file with the Commission a Claim of Entitlement, Form 41, containing the claimant's name, authorized representative, mailing address, and phone number. Among other things, this is intended to assist

the Commission and health professionals in promptly obtaining trade secret information where appropriate.

FracFocus currently allows the public to search and sort information by well, geographic area and operator, but not by ingredient, chemical abstract service number or time period. In the event FracFocus does not permit searching and sorting by ingredient, chemical abstract service number and time period by January 1, 2013, and there is no reasonable assurance that FracFocus will allow for such searches by a date certain acceptable to the Commission, then the proposed rules require operators to also file their disclosure reports with the Commission by February 1, 2013. As soon thereafter as practicable, the Commission will make the forms available on the Commission's website in a manner that enables the public to search and sort them by geographic area, ingredient, chemical abstract service number, time period, and operator, as practicable.

The requirement that information claimed to be a trade secret be disclosed to health professionals under certain circumstances is patterned after existing Rule 205. In addition, most other states have required or are proposing to require similar disclosure, and several of them have patterned their requirements after Rule 205 as well. The Commission staff believes that this type of disclosure is generally well accepted and just as appropriate for hydraulic fracturing chemicals as for other downhole chemicals.

Rule 205A, Subpart c: Disclosures Not Required. Rule 205A will not require suppliers, service companies or operators to disclose chemicals which are not disclosed to them, were not intentionally added to the hydraulic fracturing fluid, or occur incidentally or are otherwise unintentionally present. This part of Rule 205A is similar to the proposed Texas disclosure rule and is intended to ensure that requiring disclosure of all chemicals will not impose unfair or unreasonable burdens on companies.

Rule 205A, Subpart d: Trade Secret Protection. As previously noted, Rule 205A will protect information claimed to be a trade secret from disclosure. Under the Commission Rules, a trade secret is defined as "any confidential formula, pattern, process, device, information, or compilation of information that is used in an employer's business, and that gives the employer an opportunity to obtain an advantage over competitors who do not know or use it." Unless the information is entitled to protection as a trade secret, information submitted to the Commission or posted through FracFocus is public information.

The Colorado Open Records Act, the Colorado Uniform Trade Secrets Act, all other states that require hydraulic fracturing chemical disclosure and the FracFocus website protect trade secrets. The trade secret provisions of the proposed rule are patterned after existing Rule 205, which was the subject of extensive comment, review, and deliberation by the Commission in 2008. It allows suppliers, service companies, and operators to withhold trade secret information. But they must still provide such information to the Commission if the Commission determines the information is necessary to respond to a spill, release, or complaint.

Trade Secret Challenges Whether and under what circumstances a vendor, service company or operator's use of the trade secret provisions of Rule 205A could be challenged was the subject of much discussion during the rulemaking.

Section 114 of the Oil and Gas Conservation Act provides: "In the event the commission fails to bring suit to enjoin any actual or threatened violation of this article, or of any rule, regulation, or order made under this article, then any person or party in interest adversely affected and who has notified the commission in writing of such violation or threat thereof and has requested the commission to sue, may, to prevent any or further violation, bring suit for that purpose in the district court of any county in which the commission could have brought suit. If, in such suit, the court holds that injunctive relief should be granted, then the commission shall be made a party and shall be substituted for the person who brought the suit, and the injunction shall be issued as if the commission had at all times been the complaining party." § 34-60-114, C.R.S. This allows an adversely affected individual to notify the COGCC if they believe that a trade secret claim is invalid. The COGCC could issue an order

requiring the claimant to substantiate the validity of its claim. If the COGCC declines to act, or if the adversely affected individual disagrees with a COGCC determination that a claim is valid, then such individual could seek judicial review.

In addition, Rule 522.(a)(1) authorizes any person who may be directly and adversely affected or aggrieved as a result of an alleged violation of any COGCC Rule to file a complaint requesting that the Director issue a Notice of Alleged Violation (NOAV). If the Director, after investigating the complaint, decides not to issue an NOAV, the complainant may file an application to the COGCC requesting the COGCC to enter an Order Finding Violation. Such a proceeding could be resolved without disclosure of the chemical identity or concentration. The issue would be whether the claimant can substantiate that the information constitutes a trade secret as defined in Rule 100.

For purposes of determining public challenges to trade secret designation under Section 114 of the Oil and Gas Conservation Act and under Commission Rule 522, the COGCC believes the question of whether someone has been directly and adversely affected or aggrieved should be broadly construed.

The Commission determined that the foregoing statutory and regulatory provisions allowed the COGCC, in its discretion, to receive, investigate, assess and determine claims that a vendor, service company or operator has improperly claimed a trade secret. The COGCC's exercise of these powers will be utilized on a case-by-case basis. In some circumstances, the COGCC may exercise its authority to investigate and challenge a trade secret claim. In other circumstances, the COGCC may abstain from such a challenge to allow for immediate resolution by a court, which should have more experience, and better procedural tools and protections.

Designation of Trade Secrets Whether the COGCC should review and approve trade secret claims was likewise the subject of much discussion during the rulemaking. The Commission considered and rejected a trade secrets regime that would have required the COGCC to review and approve all trade secret claims. Such a regime raised a number of concerns, including the COGCC's general lack of experience in evaluating trade secret claims, the risk of inadvertent disclosure, and the reprioritization of COGCC objectives and reallocation of COGCC resources, potentially at the expense of other priorities, many of which directly or indirectly involve environmental protection.

Additionally, the Commission was also concerned that a review and approval process would enable any person to request, under the Colorado Open Records Act, all documents concerning a trade secret designation from the COGCC, including the identity or concentration of the chemical and any internal staff documents evaluating the trade secret claim. In the event of such a request, the COGCC would be obligated to either disclose such information to the requesting party, or withhold it as a trade secret. Under the latter scenario, the requesting party could sue the COGCC in district court to challenge the trade secret designation. Although the trade secret claimant would likely intervene in the lawsuit to preserve the confidentiality of the information, the COGCC would nonetheless be a party and would have to devote resources to the litigation. Further, the requesting party could be entitled to its attorneys' fees and costs from the COGCC under CRS § 24-72-204(5). The Commission wished to avoid these risks.

Rule 205A.b.(2).B. provides, among other things, that a vendor, service provider, or operator, as applicable, "shall submit to the director a Form 41, Claim of Entitlement, to have the specific identity of a chemical, the concentration of a chemical, or both withheld as a trade secret." The Commission has adopted a Form 41, Claim of Entitlement, for this purpose. A copy of From 41 is attached as Appendix IX to these Rules and may be modified only through the Commission's rulemaking procedures as provided in Rule 529.

The Commission also notes that, in the event of a spill or release of a trade secret chemical, or for purposes of investigating a complaint alleging such a spill or release, the COGCC Director can demand the trade secret information. The COGCC, in turn, may disclose this information to its Commissioners, certain county officials, and the Colorado Department of Public Health and Environment.

The Commission expects the Director to issue a report identifying, among other relevant information, the number of trade secret claims made under Rule 205A and identifying the vendors, service providers and operators making such claims. The Commission expects the Director to issue such a report within twelve months of the effective date of the proposed rules.

The Commission considered the foregoing issues carefully and determined that the proposed rules reflect an appropriate policy choice balancing numerous interests.

Rule 205A, Subpart e: Incorporated Material. This is boilerplate language that Colorado law requires where a regulation incorporates by reference material published elsewhere, e.g., the OSHA regulations.

300 Series Rules

Additions to 300 Series Rules:

Rule 305.e.(1).A, Landowner Notice.

Basis: The statutory basis is § 34-60-106 (2)(d) C.R.S.

Purpose: An operator making application for approval of an Oil and Gas Location Assessment, Form 2A, must provide the surface owner and owners of surface property within five hundred (500) feet of the proposed oil and gas location with various information. These information requirements are broadened under the amendment to include a new COGCC information sheet on hydraulic fracturing. This information sheet will, among other things, advise surface owners that most wells in Colorado are hydraulically fractured, provide general information on hydraulic fracturing treatments, and offer instruction in the collection of baseline water samples if the surface owner is concerned about potential impacts from hydraulic fracturing. However, such notice will not be required if hydraulic fracturing treatments are not going to be applied to the well in question.

Rule 316C., Notice of Intent to Conduct Hydraulic Fracturing Treatment.

Basis: The statutory basis is § 34-60-106 (2)(d) C.R.S.

Purpose: New Rule 316C will require operators to provide the Commission with 48 hours advance written notice of their intention to hydraulically fracture a well. The COGCC shall then provide prompt electronic notice of such intention to the relevant local governmental designee. The COGCC staff would develop a new form for this purpose, which would be designated Form 42, Notice of Hydraulic Fracturing Treatment. This notification would assist the COGCC in arranging inspections to observe hydraulic fracturing where appropriate.

500 Series Rules

Addition to 500 Series Rules: Rule 523C., Base Fine Schedule.

Basis: The statutory basis is § 34-60-106 (2)(d) C.R.S.

Purpose: Amended Rule 523C was proposed in order to establish a base line fine for violations of the new and amended rules. A fine of $1000 per day, subject to adjustment by the Commission, is consistent with the fines imposed by the Commission for violations of the majority of the Commission's Rules.

CONCLUSION

The new rules and amendments are expected to increase the transparency of hydraulic fracturing operations in the State of Colorado and, at the same time, afford appropriate protections for vendor, service provider and operator trade secrets. The new rules and amendments are also expected to increase the Commission Staff's ability to inspect and oversee hydraulic fracturing operations.

APPENDIX IX

FORM 41

Form 41

Section A - Classification of Entity Asserting Trade Secret Claim

__ Operator __ Vendor __ Service provider ___ Other - specify in detail: _____

Section B – Entity Asserting Trade Secret Claim

The entity below submits this form to claim that it is entitled under COGCC Rule 205A to withhold certain information from disclosure as a trade secret:

Entity name: _____

Street Address: _____

City/State/Zip Code: _____

Contact person: _____

Contact phone: _____ Contact fax: _____

Contact email: _____

Section C – Claim of Entitlement to Trade Secret Protection

Rule 205A requires disclosure of all chemicals intentionally added to base fluid as part of a hydraulic fracturing treatment, as well as the maximum concentrations and (if applicable) CAS numbers for those chemicals, except in those limited situations where the specific identity or concentration of a chemical are permitted to be withheld as a trade secret. For purposes of Rule 205A, the term "trade secret" is defined in the COGCC Series 100 Definitions.

The Entity identified in Section B claims that the (____) identity or (___) maximum concentration, or (__) both, of the following chemical qualifies as a trade secret:

_____ (Chemical identifier). You may use a descriptive label, such as "Company TS1," for a chemical identifier in lieu of identifying the chemical. This chemical identifier may be used to reference the chemical in subsequent disclosures filed with the Chemical Disclosure Registry.

In order to claim that information is entitled to protection as a trade secret, you must check all the affirmations below and submit specific information regarding each of the following (can be attached on separate pages).

__ 1. The entity holding the trade secret information has not disclosed the information to any other person, other than a member of a local emergency planning committee, an officer or employee of the United States or a state or local government, an employee of such person, or a person who is bound by a confidentiality agreement, and such person has taken reasonable measures to protect the confidentiality of such information and intends to continue to take such measures, or disclosure has otherwise been limited such that the information is not readily available to competitors.

__ 2. The information is not required to be disclosed, or otherwise made available, to the public under any other Federal or State law.

___ 3. Disclosure of the information is likely to cause harm to the competitive position of the entity holding the trade secret information.

___ 4. The information is not readily discoverable through reverse engineering.

CERTIFICATION

This form must be signed by an authorized agent of the entity identified in Section B.

I declare under penalty of perjury that this report has been examined by me and to the best of my knowledge is true, correct and complete.

_____

Signature

_____

Name and title

COGCC Well to Building Setback Stakeholder Review

During the 2007-2008 rule making process, the Colorado Oil and Gas Conservation Commission deferred action on the well to building setback requirements set forth in Rule 603.. Since that time, some local governments, environmental groups, and individuals have continued to raise questions and express concerns about these requirements. In response to these questions and concerns, the COGCC Director recommended at the January 2012 Commission hearing that the Commission staff commence a stakeholder process to discuss this issue. The Commission agreed to the recommendation.

The COGCC staff will initiate the stakeholder process on the well to building setback issue on Thursday, February 23, 2012 from 1 to 3 pm. The initial meeting will be held at the Hunter Education Building at 6060 Broadway, Denver, CO. Interested stakeholders and members of the pubic are welcome.

It is anticipated that this process will focus at the outset on reviewing the facts associated with this issue, including the actual setbacks between wells and buildings, variations in such setbacks between different areas, types of wells, and other circumstances, and reasons why larger or shorter setbacks are adopted. After the facts have been gathered and reviewed, the participants will have opportunities to share their perspectives on this issue. If problems are identified, then the participants will consider options for responding in a fair, efficient, and effective manner.

Because of the potential breadth and depth of the subject matter the stakeholder meetings may extend over several months. Please keep this in mind if you are interested in participating.

COGCC Hydraulic Fracturing Rules

Rule 205 inventory chemicals

Rule 317 Well casing and cementing; Cement bond logs.

Rule 317B setbacks and precautions near surface waters and tributaries that are sources of public drinking water.

Rule 341 monitor pressures during stimulation.

Rule 608 Special requirements for CBM wells.

Rules 903 & 904 pit permitting, lining, monitoring, & secondary containment

Rule 906 requires Commission, CDPHE and the landowner of any spill that threatens to impact any water of the state.

Frequently Asked Questions About Hydraulic Fracturing:

What is hydraulic fracturing?

Hydraulic fracturing, commonly referred to as fracing, is the process of creating small cracks, or fractures, in underground geological formations to allow oil or natural gas to flow into the wellbore and thereby increase production. Prior to initiating hydraulic fracturing, engineers and geoscientists study and model the physical characteristics of the hydrocarbon bearing rock formation, including its permeability, porosity and thickness. Using this information, they design the process to keep the resulting fractures within the target formation. In Colorado, the target formation is often more than 7,000 feet below the ground surface and more than 5,000 feet below any drinking water aquifers.

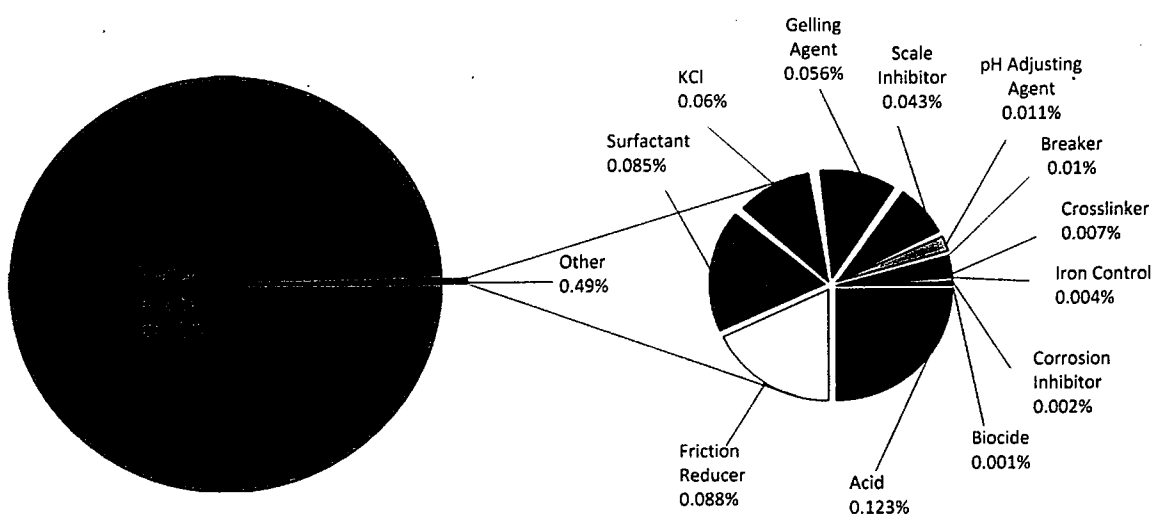
To fracture the formation, special fracturing fluids are injected down the well bore and into the formation. These fluids typically consist of water, sand, and chemical additives. The pressure created by injecting the fluid opens the fractures. Sand is carried into the fractures by the fluid and keeps the fractures open to increase the flow of oil or natural gas to the well bore. The chemicals serve a variety of purposes, including increasing viscosity, reducing friction, controlling bacteria, and decreasing corrosion. Following the treatment, much of the fracturing fluid flows back up the well bore and is collected at the surface in tanks or lined pits.

Why is hydraulic fracturing necessary in Colorado?

Most of the hydrocarbon bearing formations in Colorado have low porosity and permeability. These formations would not produce economic quantities of hydrocarbons without hydraulic fracturing. Fracture treatment of oil and gas wells in Colorado began in the 1970s and has evolved since then. Recent technological advances combine multi-stage fracture treatment with horizontal drilling.

What chemicals are used in fracing?

Approximately 99.5% of the fracing fluid volume is water and sand. Other typical ingredients include friction reducers, gelling agents and biocides. In Colorado, potassium chloride (KCl) is a common additive and can constitute 2% to 4% of the fracing fluid. A generalized fracturing mixture and list of additives are provided below:



Source: US DOE, Modern Shale Gas Development in the United State, Exhibit 35: Volumetric composition of a fracture fluid.

Frequently Asked Questions About Hydraulic Fracturing:

Fracturing Ingredients			
Product Category	**Main Ingredient**	**Purpose**	**Other Common Uses**
Water	~98%	Expand fracture and deliver sand	Landscaping and manufacturing
Sand	water & sand	Allows the fractures to remain open so the gas can escape	Drinking water filtration, play sand, concrete and brick mortar
Acid	Hydrochloric acid or muriatic acid	Helps dissolve minerals and initiate cracks in the rock	Swimming pool chemical and cleaner
Biocide	Glutaraldehyde	Eliminates bacteria in the water that produces corrosive by-products	Disinfectant; Sterilizer for medical and dental equipment
Breaker	Ammonium persulfate	Allows a delayed break down of the gel	Used in hair coloring, as a disinfectant, and in the manufacture of common household plastics
Corrosion inhibitor	n,n-dimethyl formamide	Prevents the corrosion of the pipe	Used in pharmaceuticals, acrylic fibers and plastics
Crosslinker	Borate salts	Maintains fluid viscosity as temperature increases	Used in laundry detergents, hand soaps and cosmetics
Friction reducer	Petroleum distillate	"Slicks" the water to minimize friction	Used in cosmetics including hair, make-up, nail and skin products
Gel	Guar gum or hydroxyethyl cellulose	Thickens the water in order to suspend the sand	Thickener used in cosmetics, baked goods, ice cream, toothpaste, sauces and salad dressings
Iron control	Citric acid	Prevents precipitation of metal oxides	Food additive; food and beverages; lemon juice ~7% citric acid
Clay stabilizer	Potassium chloride	Creates a brine carrier fluid	Used in low-sodium table salt substitute, medicines and IV fluids
pH adjusting agent	Sodium or potassium carbonate	Maintains the effectiveness of other components, such as crosslinkers	Used in laundry detergents, soap, water softener and dishwasher detergents
Scale inhibitor	Ethylene glycol	Prevents scale deposits in the pipe	Used in household cleansers, de-icer, paints and caulk
Surfactant	Isopropanol	Used to increase the viscosity of the fracture fluid	Used in glass cleaner, multi-surface cleansers, antiperspirant, deodorants and hair color

Source: US DOE, Modern Shale Gas Development in the United State, Exhibit T 36: Fracturing fluid additives, mani compounds, and common uses.

Are fracing chemicals dangerous?

Fracing chemicals are similar to other industrial or household chemicals which must be handled properly. For certain chemicals, safe work practices, proper site preparation, and attentive handling are required to ensure that employees, the public, and the environment are protected. The COGCC requires an operator to maintain an inventory of the chemical products used downhole or stored at a well site for use downhole, including fracing fluids. Such chemicals must also have Material Safety Data Sheets (MSDSs), which are readily available at a central location for all personnel on the job site. The MSDSs outline the hazards associated with the chemicals and the appropriate steps to protect the user and the environment.

Frequently Asked Questions About Hydraulic Fracturing:

Does hydraulic fracturing greatly increase the pressures on a gas well, including the well casing and cementing?

Hydraulic fracturing involves injection pressures that exceed those of the geologic formation. In practice, however, the well casing and cementing are designed to manage these pressures. In Colorado, the COGCC requires that the well components be designed to manage the site and reservoir specific pressures. Rule 317.d mandates that well casings be "planned and maintained" to "prevent the migration of oil, gas or water from one (1) horizon to another." Rules 317.g and 317.h set forth specific cementing requirements. And Rule 317.j requires production casing to be "adequately pressure tested for conditions anticipated to be encountered during completion and production operations."

In addition, Rule 341 requires operators to monitor the well's bradenhead pressure during hydraulic fracturing and to report promptly to the COGCC any significant pressure increase. Monitoring these pressures helps to indicate if hydraulic fracturing fluids have escaped the target formation.

Does hydraulic fracturing greatly increase the volumes of liquids which must be managed?

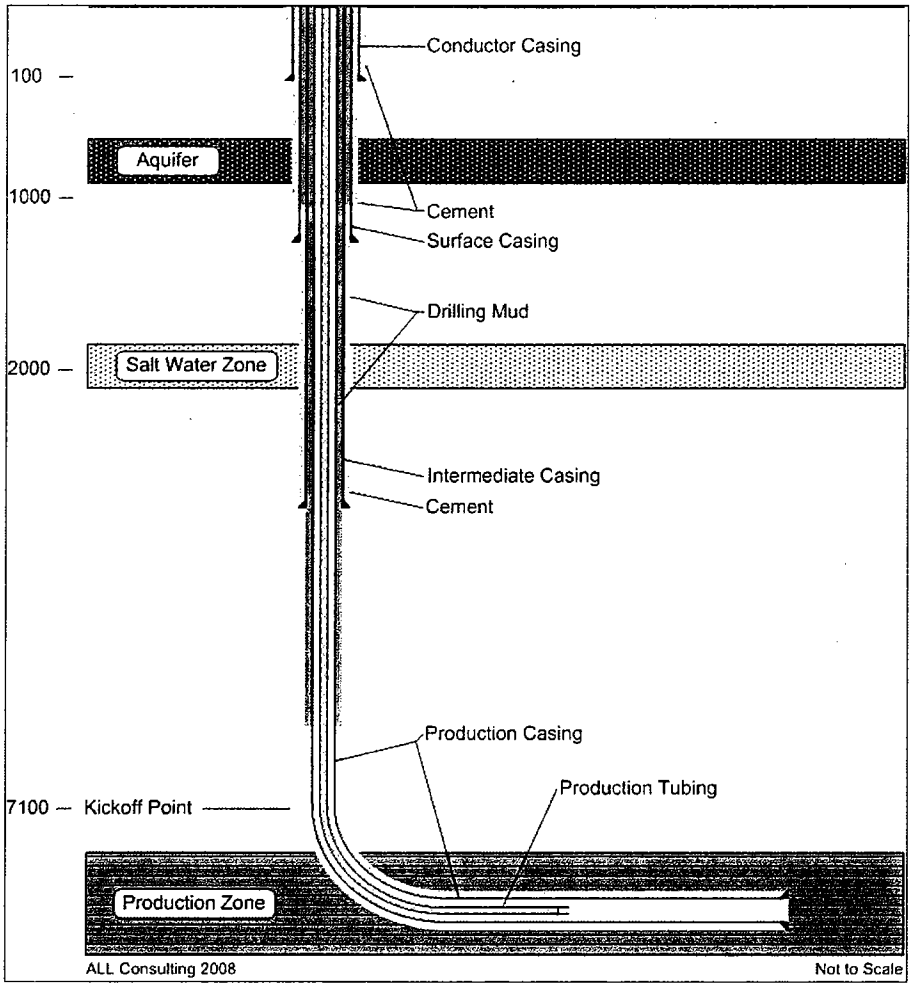
Oil and gas development typically involves large volumes of liquids, which may include liquid hydrocarbons, produced water, and fracturing fluids. The COGCC estimates that fracturing fluids constitute about 9% of the total liquids generated by or used for oil and gas development. To ensure that all such liquids are properly managed, the COGCC has adopted a variety of regulations, including Rules 206 (compliance checklists), 209 (protection of water-bearing formations), 317 (general drilling operations), 317A (special drilling operations), 317B (public water system protection), 324A (pollution prevention), 604 (oil and gas facilities), 608 (coalbed methane wells), 902 (general and special pits), 903 (pit permitting), 904 (pit lining), 905 (pit closure), 907 (waste management), 908 (centralized waste management), 1002 (stormwater management), and 1003 (interim reclamation). These regulations were comprehensively updated in 2008. Under these updated regulations, Colorado operators are improving their water management. For example, the percentage of well pads utilizing closed loop or pitless drilling systems has increased from 31% in January 2010 to 79% in March 2011.

How is groundwater protected?

The COGCC requires all wells to be constructed with cemented surface and production casing to isolate fresh water aquifers from the hydrocarbon zone. The steel casing and surrounding layers of cement protect the drinking water aquifers that the wellbore penetrates. Surface casing is required to extend 50 feet below the base of the freshwater aquifer to seal it off from any possible migration of fluids associated with oil and gas development. The production casing cement is required to be verified by a specialized well survey (cement bond log) on all wells.

After it is determined that the well is capable of producing oil or natural gas, a tubing string is set to provide an added layer of separation between the oil or natural gas stream and freshwater aquifer. The multiple layers of steel and cement used to construct an oil or natural gas well, when properly installed, provide several layers of protection to prevent the contamination of freshwater zones.

Frequently Asked Questions About Hydraulic Fracturing:



Source: US DOE, Modern Shale Gas Development in the United State, Exhibit 30: Casing zones and cement programs.

How much water is used to frac a well?

Water is the primary component of most fracing fluids. The amount of water needed to frac a well in Colorado depends on the geologic basin, the formation, and the well. For example, approximately 50,000 to 300,000 gallons may be used to frac a shallow coalbed methane well in the Raton Basin, while approximately 800,000 to 2 million gallons may be used to frac a deeper tight sand gas well in the Piceance Basin. In the DJ Basin, approximately 250,000 gallons may be used to frac a vertical well, while up to 5 million gallons may be used to frac a horizontal well.

How much is one million gallons of water?

One million gallons is the amount of water consumed by:

- A 1,000 megawatt coal-fired power plant in 2.5 hours
- A golf course in 5 days
- 1.5 acres of corn in a season

Frequently Asked Questions About Hydraulic Fracturing:

While these represent continuing consumption, the water used for fracing is a one-time use, and the flowback water can often be reused or recycled.

Has the Colorado Oil and Gas Conservation Commission undertaken any studies relating to the potential for seismic activity as a result of drilling?

Colorado is very familiar with "induced seismicity" related to human activity tied to a variety of processes, including the deep underground injection of waste. The Colorado Geological Survey and the Colorado School of Mines, as well as the University of Colorado, have a wealth of data on these matters and the COGCC can and does turn to these institutions for assistance. Tens of thousands of oil and gas wells in Colorado have been hydraulically fractured without notable geological impacts.

Please describe Colorado's process for permitting oil and gas wells?

Anyone seeking to drill a natural gas or oil well in Colorado must submit a Form 2, Application for Permit to Drill ("APD"), under COGCC Rule 303.a. The APD includes information on the well location, formations and spacing, and drilling plans and procedures, including the casing, cementing, and blowout preventer. This information is reviewed by engineers and permit technicians at the COGCC, and additional conditions are imposed where necessary to protect public health and the environment.

Applicants must also submit a Form 2A, Oil and Gas Location Assessment, for the well pad and certain related facilities under Rule 303.b. The Location Assessment contains information about the location, including information about the equipment to be used, nearby improvements, surface and ground water, access roads, current and future land uses, and soils. This information is reviewed by environmental professionals at the COGCC, and conditions of approval can be imposed where necessary to protect public health and the environment.

All Location Assessments and associated APDs are subject to public notice and at least 20 days of public comment under Rule 305. Special notice is provided to the local government, the surface owner, and, across most of the state, the owners of surface property within 500 feet.

Operators are also required to consult with the surface owner and the local government in locating certain facilities under Rule 306. If a proposed well pad is located in important wildlife habitat, then the COGCC will consult with the Colorado Division of Wildlife. If the operator seeks a variance from certain environmental regulations or the local government requests, then the COGCC will consult with the Colorado Department of Public Health and Environment.

Following staff review and any consultation and public comment, Location Assessments and APDs are approved by the COGCC Director. The COGCC may attach technically feasible and economically practicable conditions of approval under Rule 305, and, as noted above, the COGCC often does so to protect public health and the environment. In addition, applicants must provide financial assurance to the State under Rule 304 and the 700 Series of Rules. Following the drilling and completion of the well, additional reporting requirements apply under Rules 308A, 308B, and 309.

How does the COGCC confirm that operators are complying with its regulations?

The COGCC actively monitors and inspects oil and gas drilling and production operations. Operators are required to have approved permits and provide as-constructed completion

Frequently Asked Questions About Hydraulic Fracturing:

reports under Rules 308A and 308B, which are verified by inspections. The COGCC preformed more than 17,000 inspections during 2010, most of which were unannounced.

What type of agency reporting is required?

Under Rules 308A and 308B, an operator is required to submit to the COGCC completion reports providing information on the cemented surface casing which isolates the freshwater aquifer. The operator must also provide information on the cemented production casing, which isolates the hydrocarbon producing zone. This information includes the size and amount of casing used in the well, in addition to the amount of cement used to seal off the casing from the surrounding earth. The report will detail the locations where the fracing occurred. It will also note any additional operational equipment installed in the wellbore.

What is the likelihood of a spill at the wellhead during the fracing process?

Spills at the wellhead during fracing activities are relatively rare. The piping and fracing equipment used to transport fluids to the wellhead are inspected and pressure tested prior to the start of each fracture treatment. The equipment is pressure rated and continuous monitoring occurs during operations to ensure that pressures remain below the safety-rated pressure levels. Raw chemicals are maintained inside lined secondary containment areas to catch any releases before they can migrate off the site. Likewise, the sites are specifically constructed to contain any releases on the wellsite.

ATTACHMENT N

Denver Post (p. 3B)
3/17/12

OIL AND GAS DRILLING

Communities retain a vote

A Senate panel kills a bill to place in state hands all supervision of the industry.

By Bruce Finley
The Denver Post

The state-local [illegible] over regulation of oil [illegible] drilling [illegible] Thursday [illegible] lawmakers [illegible] to establish the [illegible] and counties to [illegible] own rules.

Senators on the Local Government Committee voted 4-1 [illegible] bill [illegible] have [illegible] Gas [illegible] the [illegible] are [illegible] Colorado's [illegible] front range [illegible] requirements [illegible] and [illegible] environment-friendly practices.

Elected leaders in Colorado Springs and Longmont responded by passing drilling moratoriums. Leaders in Commerce City, Erie and [illegible] also are considering new local controls. Boulder County passed a moratorium. Arapahoe, Douglas, Elbert, El Paso and Gunnison counties are honing land-use regulations.

The local government intervention has led to an uneasy standoff with COGCC state regulators, who have established comprehensive rules to try to protect the environment statewide. COGCC simultaneously is charged with encouraging oil and gas development.

State Department of Natural Resources officials oppose rule-making by towns and cities, arguing that a mosaic of local regulation would be inefficient. They advocate a consistent statewide approach, saying oil and gas production is important for the economy.

"We think there is a [illegible] collaborative [illegible] work through these [illegible] than that contained in the bill," department spokesman Todd [illegible]

1-31-12: Introduced to Senate Judiciary Committee

Second Regular Session
Sixty-eighth General Assembly
STATE OF COLORADO

INTRODUCED

LLS NO. 12-0626.01 Thomas Morris x4218

SENATE BILL 12-107

SENATE SPONSORSHIP

Carroll,

HOUSE SPONSORSHIP

Wilson,

Senate Committees
Judiciary

House Committees

A BILL FOR AN ACT

101 CONCERNING ADDITIONAL PROTECTIONS FOR WATER RELATING TO
102 HYDRAULIC FRACTURING.

Bill Summary

(Note: This summary applies to this bill as introduced and does not reflect any amendments that may be subsequently adopted. If this bill passes third reading in the house of introduction, a bill summary that applies to the reengrossed version of this bill will be available at http://www.leg.state.co.us/billsummaries.)

The bill enacts the "Water Rights Protection Act", under which the Colorado oil and gas conservation commission (commission) must establish rules for:

! Hydraulic fracturing near radioactive materials and sites listed on the national priority list pursuant to the federal

Shading denotes HOUSE amendment. Double underlining denotes SENATE amendment.
Capital letters indicate new material to be added to existing statute.
Dashes through the words indicate deletions from existing statute.

"superfund" law; and

! The shut-down of hydraulic fracturing operations when monitoring equipment detects a pressure drop.

Oil and gas operators must submit water quantity reports showing projected and actual sources and amounts of water needed for hydraulically fracturing a well. Operators must also submit pre- and post-fracturing water quality reports for all active water wells located within .5 mile of oil and gas wells that will be or have been hydraulically fractured. This information will be posted on the commission's web site. Operators cannot inject into the ground any chemical compound that would cause cancer.

In addition to existing financial assurances, each operator that engages in a high-risk hydraulic fracturing treatment must take out an environmental bond that would be forfeited if the operator's operations cause any damage to water rights.

Subject to listed affirmative defenses, an operator is presumed to be responsible for the pollution of a water supply that is within .5 mile of a line between the well head and the surface projection of the bottom hole location of the well, if the pollution occurred within 6 months after the completion of the hydraulic fracturing of the well. Hydraulic fracturing would be prohibited within .5 mile of any surface water, including a pond, reservoir, or other natural or artificial impoundment or stream, ditch, or other artificial waterway, unless the operator uses a closed-loop system.

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1 *Be it enacted by the General Assembly of the State of Colorado:*

2 **SECTION 1. Legislative declaration.** (1) The general assembly

3 hereby finds and declares that:

4 (a) Energy exploration by means of hydraulic fracturing is a topic

5 of increasing interest and significance in Colorado;

6 (b) Energy exploration by means of hydraulic fracturing should be

7 conducted in a responsible way that ensures the safety of Colorado

8 residents and Colorado communities;

9 (c) Water quality and an adequate supply of water are essential to

10 Colorado's economy and are topics of great concern to Colorado's cities

11 and towns, Colorado's agricultural economy, and the outdoor recreation

1 and tourism for which Colorado is known across the nation and
2 throughout the world;
3 (d) To follow up on findings made in the October 2011 "Colorado
4 Hydraulic Fracturing State Review":
5 (I) The Colorado oil and gas conservation commission and the
6 division of water resources should evaluate available sources of water for
7 use in hydraulic fracturing; and
8 (II) The Colorado oil and gas conservation commission should
9 evaluate naturally occurring radioactive materials in wastes associated
10 with hydraulic fracturing operations;
11 (e) According to the April 2011 report addressing chemicals used
12 in hydraulic fracturing of the United States house of representatives
13 committee on energy and commerce, between 2005 and 2009, hydraulic
14 fracturing companies in Colorado used more than:
15 (I) 1.5 million gallons of fracturing products containing at least
16 one carcinogen; and
17 (II) 375,000 gallons of fracturing products containing at least one
18 chemical regulated under the "Safe Drinking Water Act of 1974";
19 (f) The United States environmental protection agency has called
20 the use of diesel fuel in fracturing fluids the greatest threat to
21 underground sources of drinking water;
22 (g) The United States secretary of energy advisory board shale gas
23 production subcommittee has stated that there is no technical or economic
24 reason to use diesel fuel in fracturing fluids, and has further
25 recommended that manifests be used to document all transfers of water
26 among different locations; and
27 (h) It is in the interest of all Colorado water right holders to

1 maintain the value of those water rights.

2 **SECTION 2.** In Colorado Revised Statutes, **add** 34-60-130 as
3 follows:

4 **34-60-130. Hydraulic fracturing - water rights protection.**
5 (1) **Short title.** THIS SECTION SHALL BE KNOWN AND MAY BE CITED AS
6 THE "WATER RIGHTS PROTECTION ACT".

7 (2) **Contamination protocols.** THE COMMISSION SHALL
8 ESTABLISH RULES FOR:

9 (a) HYDRAULIC FRACTURING NEAR:

10 (I) RADIOACTIVE MATERIALS; AND

11 (II) SITES LISTED ON THE NATIONAL PRIORITY LIST PURSUANT TO
12 THE FEDERAL "COMPREHENSIVE ENVIRONMENTAL RESPONSE,
13 COMPENSATION, AND LIABILITY ACT OF 1980", 42 U.S.C. SEC. 9601 ET
14 SEQ., AS AMENDED; AND

15 (b) SHUT-DOWN OF HYDRAULIC FRACTURING OPERATIONS WHEN
16 PRESSURE READINGS INDICATE THAT THE HYDRAULIC FRACTURING FLUID
17 HAS ENTERED A NONTARGETED AREA OF THE GEOLOGIC FORMATION.

18 (3) **Water quantity reporting.** (a) BEFORE CONDUCTING A
19 HYDRAULIC FRACTURING TREATMENT, AN OPERATOR SHALL PREPARE AND
20 ELECTRONICALLY SUBMIT TO THE COMMISSION A WATER QUANTITY
21 REPORT, IN A FORMAT AND BY A DEADLINE SPECIFIED BY THE COMMISSION,
22 THAT INCLUDES:

23 (I) A GOOD-FAITH ESTIMATE OF WHERE AND HOW THE OPERATOR
24 INTENDS TO ACQUIRE THE REQUISITE WATER FOR THE HYDRAULIC
25 FRACTURING TREATMENT; AND

26 (II) A GOOD-FAITH ESTIMATE OF THE AMOUNT OF WATER THAT
27 WILL BE REQUIRED FOR THE HYDRAULIC FRACTURING TREATMENT.

1 (b) WITHIN SIXTY DAYS FOLLOWING THE CONCLUSION OF A
2 HYDRAULIC FRACTURING TREATMENT AND ANNUALLY THEREAFTER IF
3 MORE WATER IS REQUIRED FOR THE DRILLING OF OR PRODUCTION FROM A
4 WELL, AN OPERATOR SHALL PREPARE AND ELECTRONICALLY SUBMIT TO
5 THE COMMISSION A WATER QUANTITY REPORT, IN A FORMAT AND BY A
6 DEADLINE SPECIFIED BY THE COMMISSION, THAT INCLUDES:
7 (I) WHERE AND HOW THE OPERATOR ACTUALLY ACQUIRED THE
8 REQUISITE WATER FOR THE HYDRAULIC FRACTURING TREATMENT; AND
9 (II) THE AMOUNT OF WATER ACTUALLY USED IN THE HYDRAULIC
10 FRACTURING TREATMENT.
11 (c) THE COMMISSION SHALL PROMPTLY POST THE WATER
12 QUANTITY REPORTS ON ITS WEB SITE. THE REPORTS MUST BE SEARCHABLE
13 BY OPERATOR, WELL LOCATION, AND OTHER FACTORS ESTABLISHED BY
14 THE COMMISSION, AND MUST ALLOW THE PUBLIC TO EASILY FIND THE
15 TOTAL AMOUNT OF WATER USED FOR EACH WELL.
16 (4) **Water quality reporting.** (a) (I) BEFORE THE COMMISSION
17 AUTHORIZES AN OPERATOR TO HYDRAULICALLY FRACTURE A WELL, THE
18 OPERATOR SHALL COLLECT WATER QUALITY SAMPLES RELATED TO
19 POTENTIAL IMPACTS FROM HYDRAULIC FRACTURING, AS DETERMINED BY
20 THE COMMISSION, FROM ALL ACTIVE WATER WELLS LOCATED WITHIN
21 ONE-HALF MILE OF THE OIL AND GAS WELL. THE OPERATOR SHALL
22 COLLECT WATER QUALITY SAMPLES RELATED TO POTENTIAL IMPACTS
23 FROM HYDRAULIC FRACTURING BY THE FIRST, THIRD, AND SIXTH
24 ANNIVERSARY OF COMPLETION OF THE HYDRAULIC FRACTURING,
25 PURSUANT TO A SCHEDULE ESTABLISHED BY AND AS DETERMINED BY THE
26 COMMISSION, FROM ALL WATER WELLS LOCATED WITHIN ONE-HALF MILE
27 OF THE OIL AND GAS WELL. THE OPERATOR SHALL SUBMIT THE SAMPLES IN

1 A WATER QUALITY REPORT TO THE COMMISSION, IN A FORMAT AND BY A
2 DEADLINE ESTABLISHED BY THE COMMISSION.
3 (II) THE COMMISSION SHALL PROMPTLY POST THE WATER QUALITY
4 REPORTS ON ITS WEB SITE. THE REPORTS MUST BE SEARCHABLE BY
5 OPERATOR, WELL LOCATION, AND OTHER FACTORS ESTABLISHED BY THE
6 COMMISSION.
7 (b) (I) AN OPERATOR SHALL NOT INSERT INTO THE GROUND ANY
8 QUANTITY OF CHEMICALS KNOWN TO CAUSE OR REASONABLY
9 ANTICIPATED TO CAUSE CANCER, INCLUDING:
10 (A) DIESEL FUEL;
11 (B) BENZENE, TOLUENE, ETHYLBENZENE, OR XYLENE; AND
12 (C) ANY SUBSTANCE INCLUDED IN THE MOST RECENT "REPORT ON
13 CARCINOGENS" RELEASED BY THE NATIONAL TOXICOLOGY PROGRAM OF
14 THE UNITED STATES DEPARTMENT OF HEALTH AND HUMAN SERVICES.
15 (II) NOTHING IN THIS PARAGRAPH (b) PROHIBITS THE USE OR
16 REINJECTION OF FLOW-BACK FLUID.
17 (5) **Financial assurance.** (a) IN ADDITION TO THE FINANCIAL
18 ASSURANCES OF SECTION 34-60-106 (3.5) AND (13), EACH OPERATOR THAT
19 ENGAGES IN A HIGH-RISK HYDRAULIC FRACTURING TREATMENT SHALL
20 TAKE OUT AN ENVIRONMENTAL BOND OR OTHER FINANCIAL ASSURANCE
21 LISTED IN SECTION 34-60-106 (13) THAT WOULD BE FORFEITED IF THE
22 OPERATOR'S OPERATIONS CAUSE ANY DAMAGE TO ABSOLUTE OR DECREED
23 CONDITIONAL WATER RIGHTS OR NONTRIBUTARY WATER. THE
24 COMMISSION SHALL PROMULGATE RULES TO ESTABLISH THE REQUIRED
25 AMOUNT AND TYPE OF ASSURANCE. THE RULES MUST ALLOW AN
26 OPERATOR TO BOND PER HIGH-RISK WELL OR FOR ALL OF THE OPERATOR'S
27 WELLS IN OPERATION IN THE STATE AT THE OPERATOR'S ELECTION.

1 (b) AS USED IN THIS SUBSECTION (5), "HIGH-RISK HYDRAULIC
2 FRACTURING TREATMENT" MEANS A HYDRAULIC FRACTURING TREATMENT
3 THAT IS LOCATED WITHIN ONE-HALF MILE OF:
4 (I) ANY SITE LISTED ON THE NATIONAL PRIORITY LIST PURSUANT
5 TO THE FEDERAL "COMPREHENSIVE ENVIRONMENTAL RESPONSE,
6 COMPENSATION, AND LIABILITY ACT OF 1980", 42 U.S.C. SEC. 9601 ET
7 SEQ., AS AMENDED;
8 (II) NATURALLY OR NONNATURALLY OCCURRING RADIOACTIVE
9 MATERIAL EXPLOSIVES, INCLUDING MUNITIONS;
10 (III) SURFACE WATER; OR
11 (IV) FEDERALLY DESIGNATED WILDERNESS.
12 (6) **Rebuttable presumption.** (a) UNLESS REBUTTED BY ONE OR
13 MORE OF THE DEFENSES ESTABLISHED IN PARAGRAPH (b) OF THIS
14 SUBSECTION (6), AN OPERATOR IS PRESUMED TO BE RESPONSIBLE FOR THE
15 POLLUTION OF A WATER SUPPLY THAT IS WITHIN ONE-HALF MILE OF A LINE
16 BETWEEN THE WELL HEAD AND THE SURFACE PROJECTION OF THE BOTTOM
17 HOLE LOCATION OF THE WELL, IF THE POLLUTION OCCURRED WITHIN SIX
18 MONTHS AFTER THE COMPLETION OF THE HYDRAULIC FRACTURING OF THE
19 WELL.
20 (b) IN ORDER TO REBUT THE PRESUMPTION OF LIABILITY
21 ESTABLISHED IN PARAGRAPH (a) OF THIS SUBSECTION (6), THE OPERATOR
22 MUST AFFIRMATIVELY PROVE ONE OF THE FOLLOWING DEFENSES:
23 (I) THE POLLUTION EXISTED PRIOR TO THE HYDRAULIC
24 FRACTURING, AS DETERMINED BY A PREDRILLING OR PREALTERATION
25 SURVEY, INCLUDING A WATER QUALITY REPORT SUBMITTED PURSUANT TO
26 PARAGRAPH (a) OF SUBSECTION (4) OF THIS SECTION;
27 (II) THE SURFACE OWNER OR WATER WELL OWNER FAILED TO

1 ALLOW THE OPERATOR ACCESS TO CONDUCT A PREDRILLING OR
2 PREALTERATION SURVEY;
3 (III) THE WATER SUPPLY IS NOT WITHIN ONE-HALF MILE OF THE
4 WELL;
5 (IV) THE POLLUTION OCCURRED MORE THAN SIX MONTHS AFTER
6 INITIAL HYDRAULIC FRACTURING OF THE WELL; OR
7 (V) THE POLLUTION OCCURRED AS THE RESULT OF SOME CAUSE
8 OTHER THAN THE HYDRAULIC FRACTURING OF THE WELL.
9 (7) **Water-based setbacks.** (a) AN OPERATOR SHALL NOT
10 CONDUCT HYDRAULIC FRACTURING WITHIN ONE-HALF MILE OF ANY
11 SURFACE WATER, INCLUDING A POND, RESERVOIR, OR OTHER NATURAL OR
12 ARTIFICIAL IMPOUNDMENT OR STREAM, DITCH, OR OTHER ARTIFICIAL
13 WATERWAY UNLESS THE OPERATOR USES A CLOSED-LOOP SYSTEM.
14 (b) NOTHING IN THIS SECTION PROHIBITS THE COMMISSION OR A
15 LOCAL GOVERNMENT FROM ADOPTING MORE STRINGENT LOCAL
16 PROTECTIONS.
17 **SECTION 3. Applicability.** The provisions of this act apply to
18 acts occurring on or after the effective date of this act.
19 **SECTION 4. Safety clause.** The general assembly hereby finds,
20 determines, and declares that this act is necessary for the immediate
21 preservation of the public peace, health, and safety.

ATTACHMENT O

ATTACHMENT O

Denver Post

4/24/11

Don't rush on fracking rules

While there are legitimate concerns about hyrdraulic fracturing federal lawmakers shouldn't act until an EPA study is complete.

Recent reports about the cocktail of chemicals injected into the ground during natural-gas extraction activities can seem alarming.

The process is known as hydraulic fracturing — or fracking — and it is going gangbusters as the industry has surged to meet demand for clean-burning natural gas.

We share some of the concerns voiced by environmentalists, politicians and community activists about the potential for adverse environmental and health effects from fracking.

However, before federal lawmakers act to add drinking-water regulations to the rules that states already have in place, we would hope they would wait for the outcome of the Obama administration's fracking study.

The Environmental Protection Agency is studying the impact of fracking on drinking water and groundwater. Initial results are expected in 2012, and a full report by 2014.

The study will follow the cycle of water used in fracking, including how it's acquired, what happens when chemicals are added and injected into the ground, and how it is ultimately returned to the environment.

It should be noted that Colorado, which has conducted many investigations, has never confirmed a single instance of fracking fluids migrating into water wells from where they were first injected.

But still, the wisdom of undertaking a broad EPA study was underscored in recent days with the release of a report by congressional Democrats, including Rep. Diana DeGette of Denver. Their investigation showed that oil and gas companies injected hundreds of millions of gallons of chemicals, some of them carcinogenic, into wells in more than 13 states between 2005 and 2009.

Fracking is a technique used to create fractures in rocks deep underground, releasing the valuable gas trapped in the rock formations. The procedure is controversial, in no small measure because many oil and gas exploration companies have refused to make public the exact content of the fracking fluids they use, saying it is proprietary.

From a regulatory standpoint, it's difficult to know how, or if, the process is fouling drinking water if regulators don't know what companies are injecting into the ground.

Recently, companies have engaged in a voluntary effort to disclose fracking chemicals. However, we think this is something that companies should have to disclose.

We agree with the proposal by federal lawmakers, including DeGette and Rep. Jared Polis of Boulder, who support regulations requiring oil and gas companies to disclose what is in fracking fluid.

Recently, Gov. John Hickenlooper renewed his call for these companies to disclose fracking fluid content.

"For the life of me, I can't figure out why they won't reveal those," Hickenlooper said, according to an account in The Daily Sentinel, a Grand Junction newspaper.

David Neslin, director of the Colorado Oil and Gas Conservation Commission, said Colorado's recent moves to tighten up regulations put the state in a good position to protect its drinking water.

Oil and gas regulations passed several years ago require companies to provide, upon request, the content of fracking fluid to state government or health care providers. Neslin also said that Colorado's decades-long experience with fracking, and its history of requiring well testing before, during and after drilling activity, is a track record the EPA is considering including in its drinking-water study.

Having an outside look at Colorado's practices would be of benefit to this state.

In the meantime, we would hope federal lawmakers would hold off on applying additional regulations to the industry unless and until problems caused by fracking are clearly articulated.

Denver Post 11.6.11

Caution on local fracking policies

While we understand counties' concerns, the state and federal governments should handle most hydraulic fracturing regulation.

We're not surprised that some Front Range counties are developing local regulations to govern oil and gas leasing as exploratory activity in the Niobrara formation begins to encroach on populated areas.

Nor do we necessarily consider all such initiatives misguided. Energy development can involve noise, traffic and other activity that has an impact on a community's quality of life.

Having said that, however, we believe counties should proceed with caution. They need to recognize that most concerns regarding hydraulic fracturing — which involves the injection of water, sand and trace chemicals under pressure into rock formations to release oil and gas — are best regulated by the state.

Nevertheless, as Mark Jaffe reported in last Sunday's Denver Post, some counties appear determined to test the boundaries of state authority. A proposal in Elbert County, for example, which goes further than most, would require that "only nontoxic substances be used in fracking and the use of only closed-loop systems — in which all the fluids are brought and removed in tanks," Jaffe wrote.

Sorry, but groundwater quality — which invariably becomes a concern with fracking — is the regulatory domain of the state and federal governments. And properly so: If all 64 Colorado counties were allowed to craft their own rules governing the ingredients used in fracking, the result would be utter regulatory confusion.

It's not as if the state has been neglecting its responsibilities regarding energy development. After Bill Ritter was elected governor in 2006, the Colorado Oil and Gas Conservation Commission embarked upon a thorough rewrite of drilling rules that in many respects still serve as a model of enlightened oversight.

At the time of the revisions, no state was requiring full disclosure of chemicals used in fracking, and Colorado didn't either — although it did require disclosure of even proprietary secrets to appropriate officials in the event of a medical emergency.

Joe'l Lambe, shown with horses at her Parker home, helped form Landowners Alliance for NE Douglas County, which aids owners in oil and gas leasing deals. Industry representatives and state officials believe state oversight is best.
AAron Ontiveroz, The Denver Post

However, under draft state regulations issued just last week, Colorado will soon follow the lead of Texas and Wyoming and require disclosure of ingredients used in fracking by posting them on the FracFocus website.

Granted, the rules still would exempt disclosure of proprietary chemicals — but even in those cases the type of chemical would be listed.

The state also has required groundwater data at thousands of wells — an effort that is now being supplemented by a voluntary baseline groundwater quality sampling program that includes 90 percent of the industry.

In other words, regulators are doing their job on water quality. If counties are going to dip their toes into leasing rules, at the very least they should stick to issues where they can make a better case for a truly compelling local need.

Denver Post
2/5/12

"There is no hope for the satisfied man."

Post founder Frederick G. Bonfils, 1861-1933

Gregory L. Moore, Editor
J. Damon Cain, Managing Editor/Presentation
Curtis Hubbard, Editor of the Editorial Pages

The Post Editorials

A better way to address drilling

As long as regulators are willing to work with local jurisdictions we don't think lawmakers should meddle with drilling rules.

We've been fairly insistent that regulation of hydraulic fracturing is and should remain a state responsibility, but we also understand why so many Front Range jurisdictions have enacted or are considering moratoriums on such drilling.

Lots of people have concerns over fracking's possible impact on more densely populated areas. Some of the worries may have merit — the possibility of extra noise, traffic and dust, for example — while others reflect the sort of speculative claims routinely raised by opponents, such as contamination of groundwater.

However, so long as state regulators are willing to work with local jurisdictions on areas of concern, we don't think lawmakers should be proposing sweeping changes in drilling rules that have been revised twice in the past five years. Indeed, the fracking regulations finalized last year are among the strictest in the nation.

Nevertheless, House Bill 1176 would order the Colorado Oil and Gas Conservation Commission to require a fracking well's setback to be at least 1,000 feet from any school or residence while allowing a "surface owner who is not located in an urban area to request a shorter setback."

This amounts to a major change from current rules, which require setbacks of 150 feet in rural communities and 350 feet in urban areas. Maybe those rules need to be adjusted as fracking migrates into more populated areas. If so, however, we'd like to see it done through the same sort of collaborative process that preceded the more comprehensive revisions of fracking rules — not by a few lawmakers deciding that 1,000 feet sounds like a good number.

COGCC director David Neslin announced last month that the agency will hold stakeholder meetings to evaluate setbacks.

The process, spokesman Todd Hartman told us, "will be an opportunity to hear concerns, provide facts on how existing setback rules play out on the ground and hear viewpoints from those on different sides of the issue, including environmentalists, homebuilders, neighbors, industry and regulators. The meetings won't set out to change — or leave in place — current rules, but to educate all involved and develop an idea of whether adjustments are necessary."

Lawmakers need to give this process a chance before they jump in with further regulation. After all, since 2007 the commission has repeatedly demonstrated a willingness to respond to legitimate concerns about oil and gas drilling.

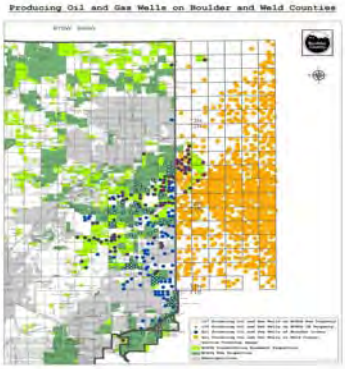
There are at least two other bills that would pile additional regulations on fracking having to do with water quality and storage, which we consider unnecessary given current rules.

Then there is Senate Bill 88, which stipulates that the state "has exclusive jurisdiction to regulate oil and gas operations." To the extent that SB88 merely restates current reality — which admittedly might change if local governments go too far and are supported by the courts — we fail to see why it is needed, too. When it comes fracking, the fewer new mandates from lawmakers this year the better.

Impact of Oil and Gas Development On Boulder County Parks and Open Space

Presenter - Ron Stewart, Director, Boulder County Parks and Open Space Department. March 1, 2012.

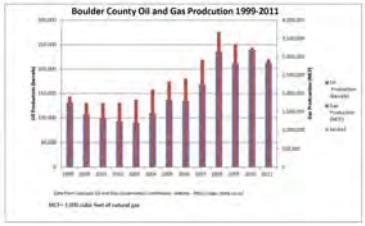
How many wells are there in Boulder County?



Why are there wells on Open Space?

- Oil and gas development is incompatible with the purposes of open space.
  - Not permitted under the Boulder County Comprehensive Plan
  - Not permitted under open space sales tax resolutions
- Boulder County purchased agricultural lands in eastern part of the county that were already subject to oil and gas leases.
  - Most oil and gas leases were entered into the 1970's and early 1980's, and Open Space purchases began in early 1990's.
- Boulder County has not, and will not, enter into additional oil and gas leases on open space, but cannot stop oil and gas development under existing leases.
  - Existing leases remain current as long as there is ongoing production within the leased area or areas pooled with that lease

How much oil and gas is produced in Boulder County?



- Oil and gas wells in Boulder County have produced between 200,000 and 250,000 barrels of oil and between 3,000,000 and 3,500,000 million cubic feet of natural gas over the past few years.
- These numbers represent about 1% of the oil production and 1.5% of the gas production in Weld County.
- Boulder County is at the far western edge of the Greater Wattenberg Area (7th largest oil and gas field in the United States). It is unknown how much additional development there will be in Boulder County, but it could be substantial.

- Surface use agreements also establish that the operator is responsible for damage to Open Space outside the normal scope of operations.
- Oil and gas lessees have extensive rights under Colorado law which limit what Boulder County can require of the oil and gas operators.
- POS will refuse to agree to allow drilling when operators won't agree to avoid critical resources.
  - Boulder County refused to enter into a surface use agreement and object to issuance of a COGCC permit when an operator sought to drill very closely to an active bald eagle nest.
  - After objecting with the COGCC, POS was able to negotiate a better location for the surface disturbance and the operator drilled directionally to reach the same bottom hole location.

What control does the Parks and Open Space Department have with regard to oil and gas development on Open Space?

- Staff requires oil and gas operators who wish to drill to assure they have the legal right to drill on Open Space.
- Staff negotiates the most appropriate sites to be disturbed:
  - Least new roads
  - Least disturbance to agricultural production
  - Lease impact to environmentally sensitive areas
  - Cluster development
  - To the extent possible, in previously disturbed areas
- Staff negotiates Surface Use Agreements to establish siting of the well and related infrastructure, timing, access, and reclamation.

What does Boulder County get in compensation for drilling on Open Space

- Boulder County typically receives between $7,000 and $25,000 for each Surface Use Agreement.
- In some instances where Boulder County owns some or all of the mineral rights, the County receives a 12%-18% royalty interest.
- Boulder receives approximately $1,000,000 per year from these royalties.
- Royalties are deposited in Boulder County's general fund and used to support POS staff and operations.

Water tanks on 3-acre drilling pad

East County Line Road – Regneir Conservation Easement in Weld County– February 17, 2012

Wellhead and Tank Battery

February 17, 2012

What are the impacts to open space related to oil and gas operations?

- Short term impacts:
  - large volume of truck traffic
  - noise, dust, and lights
  - drill rigs operates 24/7 for a minimum of one week.
- Loss of agricultural production
- Road damage
- Disturbance of natural resources and wildlife
- Noxious weeds
- Negligence in some cases has led to:
  - Oil spills, disturbance to prairie dog fencing, destruction of irrigation and drain tile systems, and poor reclamation

Long Term Impacts to Open Space

- Noxious weeds
  - Difficult to control weeds on denuded soil
  - Operators often do not follow up after drilling is complete
- Soil Disturbance/Compaction
  - Soil structure is often destroyed
  - Historic drainage is altered
  - Crop yields can be diminished for decades
- Increased roads/damage to existing roads
- Impaired aesthetics
  - Wellheads, separators, tank batteries etc.

Maintenance activity - oil and gas road to a Tank Battery and Wellhead
Henry Eastlack Open Space – February 17, 2012

Has Parks and Open Space noticed a difference in the scale of impacts and volume of activity on Open Space?

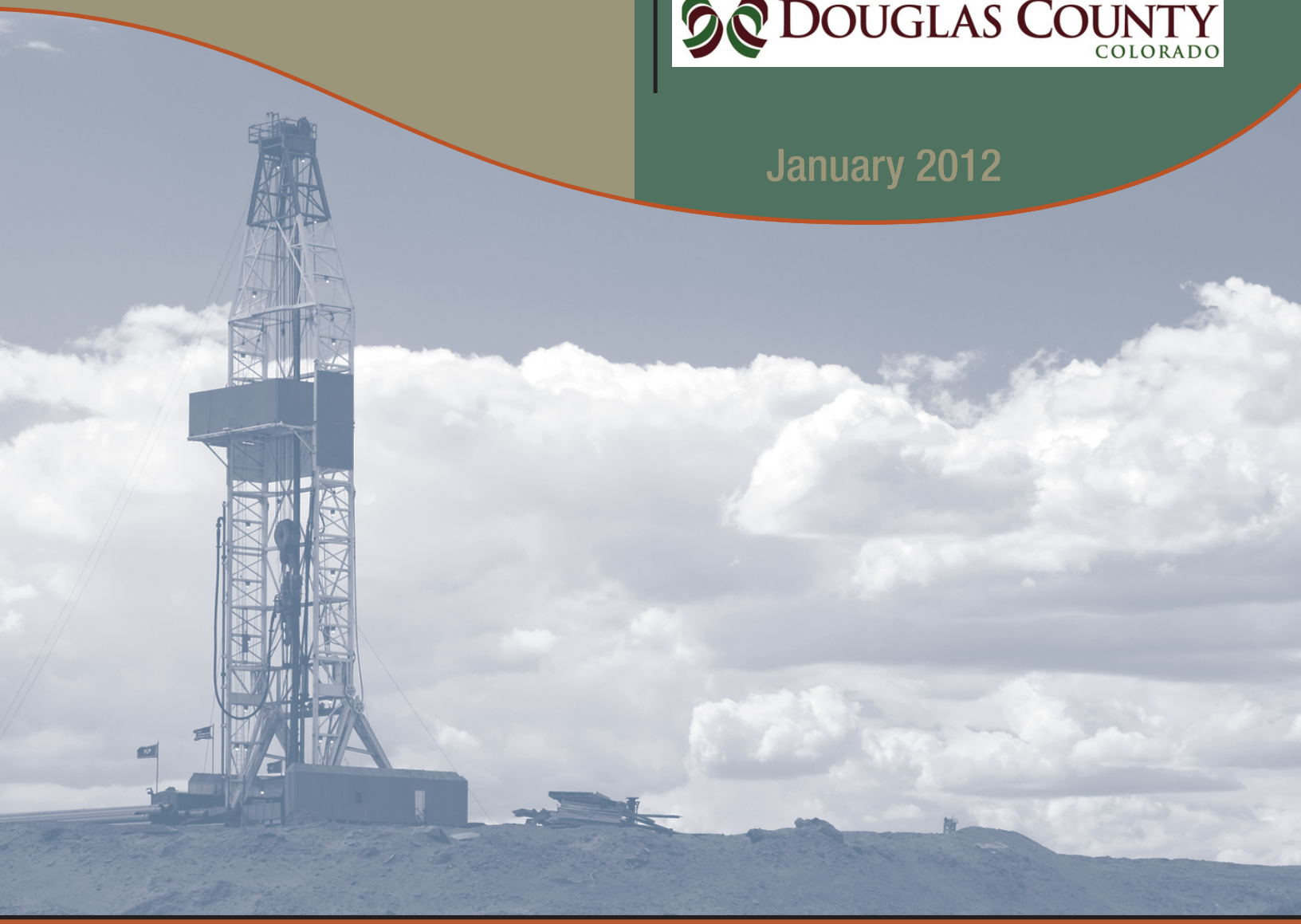
- New technologies allow for less impacts on undisturbed land and clustered development, however some technologies lead to larger footprints and longer durations of activity during drilling.
- Not a large increase in drilling, however the COGCC has approved 16 new permits and POS has received 47 notices of intent to drill on Open Space in 2012.
- There has been a dramatic increase of drilling occurring in Weld County.
- It is reasonable to believe there will be increased drilling in Boulder County.

Oxford Farm Open Space - December 2007

Douglas County Oil & Gas Production Transportation Impact Study

DOUGLAS COUNTY
COLORADO

January 2012



FELSBURG HOLT & ULLEVIG

BBC RESEARCH & CONSULTING

Douglas County Oil & Gas Production Transportation Impact Study

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EXECUTIVE SUMMARY

With a recent surge in oil and gas leases in Douglas County, the County has commissioned this study to understand the potential impacts to their roadway system that could result from oil and gas development and production. One of Colorado's largest oil and gas producing shale formations is the Niobrara, which covers over half of Douglas County. The Niobrara basin has been a highly productive source of oil and gas in Colorado's northern front range, most notably in Weld County. To date, there has been no oil and gas drilling activity in Douglas County; however, 2011 has shown a marked increase in the number of oil and gas leases obtained by oil and gas companies in Douglas County. As shown on **Figure ES-1**, a high volume of the current oil and gas leases are located near the eastern border of Douglas County with clusters in the northeast corner and the southeast region. There are a scattered number of leases in the central and east-central regions of the County.

Because of uncertainties associated with oil and gas development in Douglas County, this study looks at three potential development scenarios (high, medium, and low) in order to provide a range of potential impacts and revenues associated with resource development in the County. This study is not intended to predict oil and gas development, rather it is intended to provide County officials with information about the potential impacts to the transportation system and associated investment needs using an informed set of development scenarios based on the best available data.

Resource Development

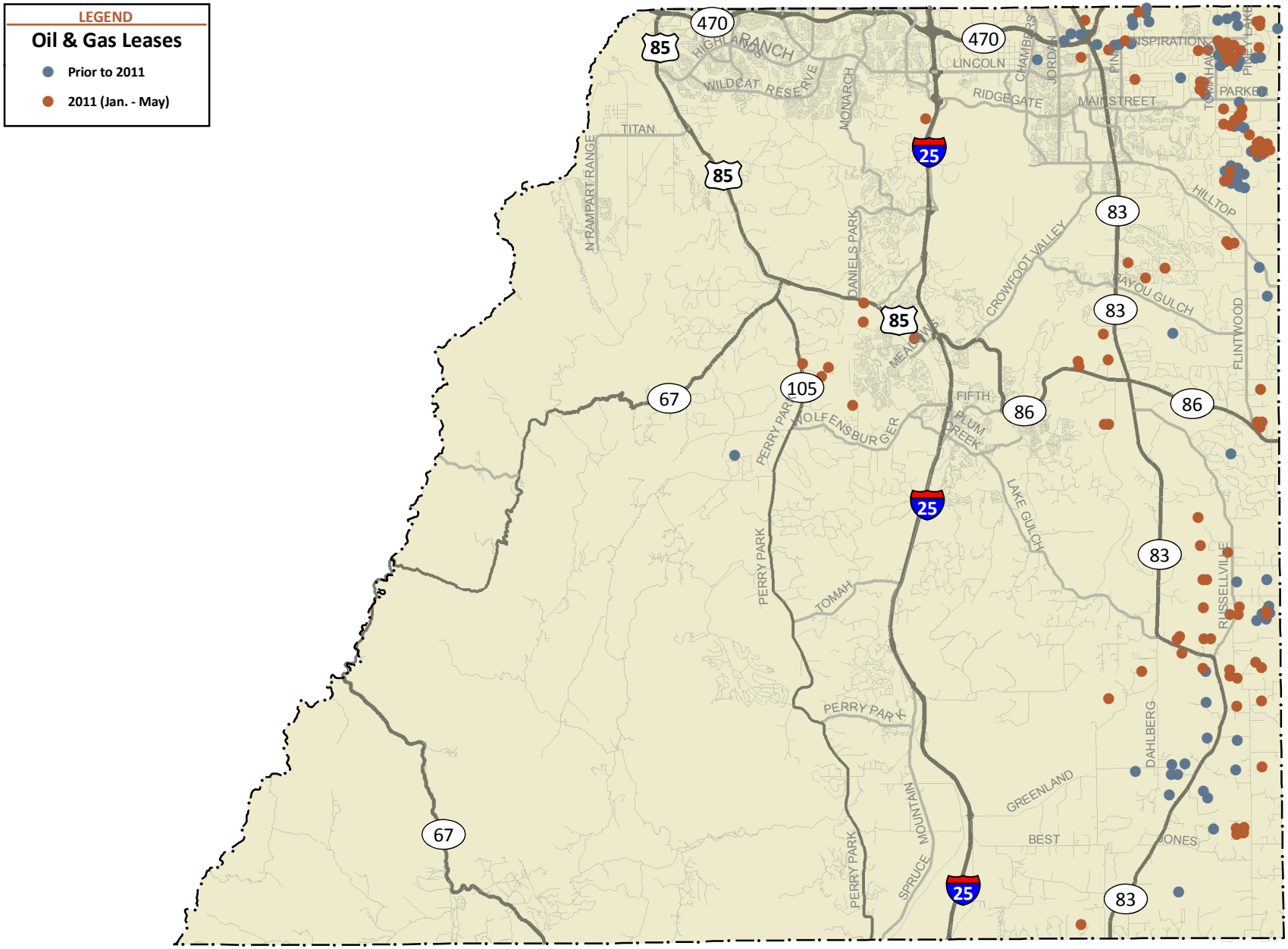
There are five stages in the development and operation of an oil and gas well.

Leasing and Exploration –Energy companies that have an interest in exploring an area for energy prospects must first buy or lease the appropriate subsurface ownership rights which are often, but not exclusively, owned apart from a property's surface rights. After securing the mineral rights and confirming a drilling and spacing plan with the Colorado Oil and Gas Conservation Commission (COGCC), exploratory wells are placed in order to obtain core samples to determine the likely productivity of the target shale.

Pad Construction – After the team of geologists and geophysicists identify the best site for drilling, a team of about 10 workers begin developing the well pad. Typically a well pad is a leveled one to five acres of land This stage includes construction of a gravel access road for supply transport.

Drilling – When the pad is fully constructed, a drilling rig can be moved onto the pad to begin drilling the well. The drilling rig requires two, six-person crews, typically working 12 hour shifts to operate the rig 24 hours a day. Once the well bore is drilled, finalizing a well requires the installation of thousands of feet of pipe and casing material to secure the well. In the Niobrara basin, once a well is drilled to the desired depth, it is typical to commence horizontal drilling in preparation for fracturing the shale deposit.

Oil & Gas Leases in Douglas County



Completion – The completion stage takes a drilled well and makes it suitable for energy extraction. In the Niobrara, the most likely well completion method is fracking, which involves the use of a highly pressurized water mixture to fracture the shale formation in order to release trapped oil or gas. The completion stage results in the most intense transportation demands; primarily for transporting fresh water to and removed produced water from the pad site.

Production – A well's production stage involves pumping the oil, gas, and produced water from the well for storage, disposal or distribution.

For a single well, the pad construction, drilling and completion stages typically occur over a 45 to 60 day time frame. The production stage lasts for the remaining life of the well, possibly 15-20 years.

Oil and Gas Development Scenarios

Based on producing wells in neighboring counties, energy development in Douglas County will likely be seeking oil rather than natural gas, and well depths will likely be between 5,000 and 9,000 feet. In order to increase production and extraction efficiency, pad sites in Douglas County will likely accommodate multiple-wells and horizontal drilling, a process that allows access to more of the formation without having to build an entirely new well pad for each well. This process lessens the surface impact, reduces drilling and completion times, and improves development efficiency in comparison with multiple single-well pad sites. Operating multiple wells on a single well pad is an increasingly common practice in the Niobrara basin and will likely be the dominant practice in Douglas County.

Energy companies are in the beginning stages of exploration in Douglas County. Many national and international factors will shape future levels of drilling activity, including oil and gas prices, national economic growth prospects, and the merit of the Niobrara Shale relative to other production areas. Locally, a host of additional factors will influence how quickly efforts are made to determine a new field's prospects. Douglas County is one of several counties that lie above the Niobrara Shale. Depending on the geology of the shale, drilling could occur in any of the counties.

The study team developed a set of three future development scenarios based on actual well development activity data obtained from the COGCC. This exercise is not an attempt to predict the future, but rather an effort to develop an informed set of development scenarios based on the best available data. By looking at the number of active wells in top five oil and gas producing counties in the state (Garfield, Weld, Yuma, Las Animas, and La Plata), the study team was able to estimate the number of annual wells developed in each county over a six year period. The average annual increase in active wells in these top five producing counties is just under 510 wells per year. This figure is used in establishing an upper limit for the well development scenarios in Douglas County.

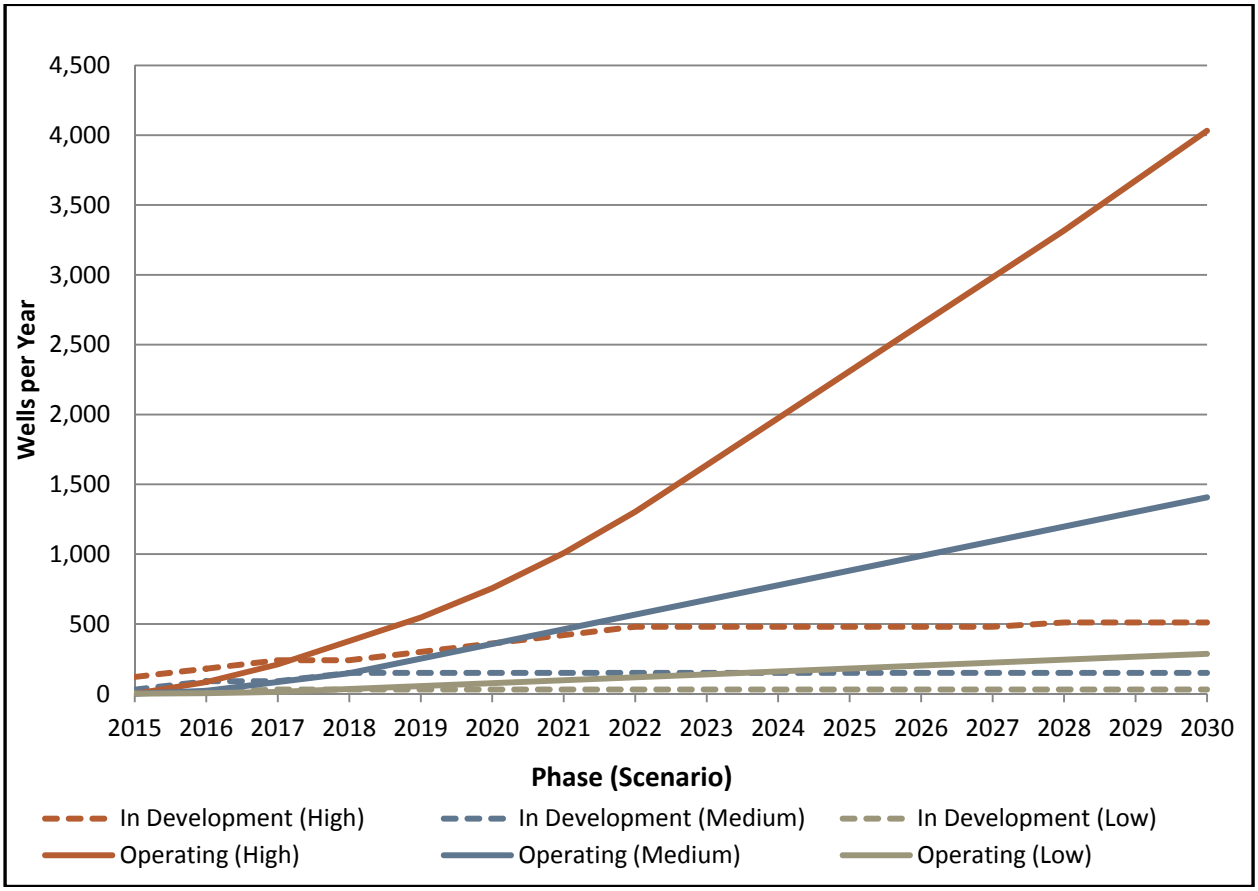
The study team developed three scenarios to input into the transportation impact model—high, medium and low development pace scenarios.

- The high development scenario was selected as the annual average increase in active wells in the top five oil and gas producing Colorado Counties—about 510 wells developed per year.
- For the medium scenario, the study team selected 150 wells developed per year, which is approximately the development pace in La Plata County over the last six years.

- The low scenario resembles the development pace observed in Boulder, Adams and Moffat Counties—about 30 wells per year. All well development scenarios are assumed to involve clustered development and horizontal drilling techniques.

The year-by-year profile of each of the development scenarios is shown on **Figure ES-2**. Each scenario assumes that oil and gas development would begin in earnest in 2015 (with leasing and exploration occurring in the years leading up to 2015). The addition of new wells each year begins at a slow rate and ramps up to the annual development figures described above. After the development phase, the production phase includes a 70 percent success rate for new wells drilled to effectively enter the operating stage.

Figure ES-2. Douglas County Development Scenario Profiles



Note: Douglas County development scenarios assume six wells per pad
Source: BBC Research and Consulting

As a check to the methodology described above, the study team contacted COGCC staff to discuss the scenarios developed above. COGCC staff described an alternate methodology, where drilling rigs and the well drilling period are used to calculate the total amount of annual wells drilled per year. According to the most current estimate, there are about 80 drilling rigs currently operating in Colorado. Based on typical drilling durations, the high scenario described above would require 43 drill rigs per year, over half of the state's current operating rigs. Based on this information, the study team believes the high scenario to be a plausible upper limit. It is important to note that this exercise is not intended to assign a probability to any of the scenarios occurring, but to appropriately define potential maximum and minimum levels of well development activity.

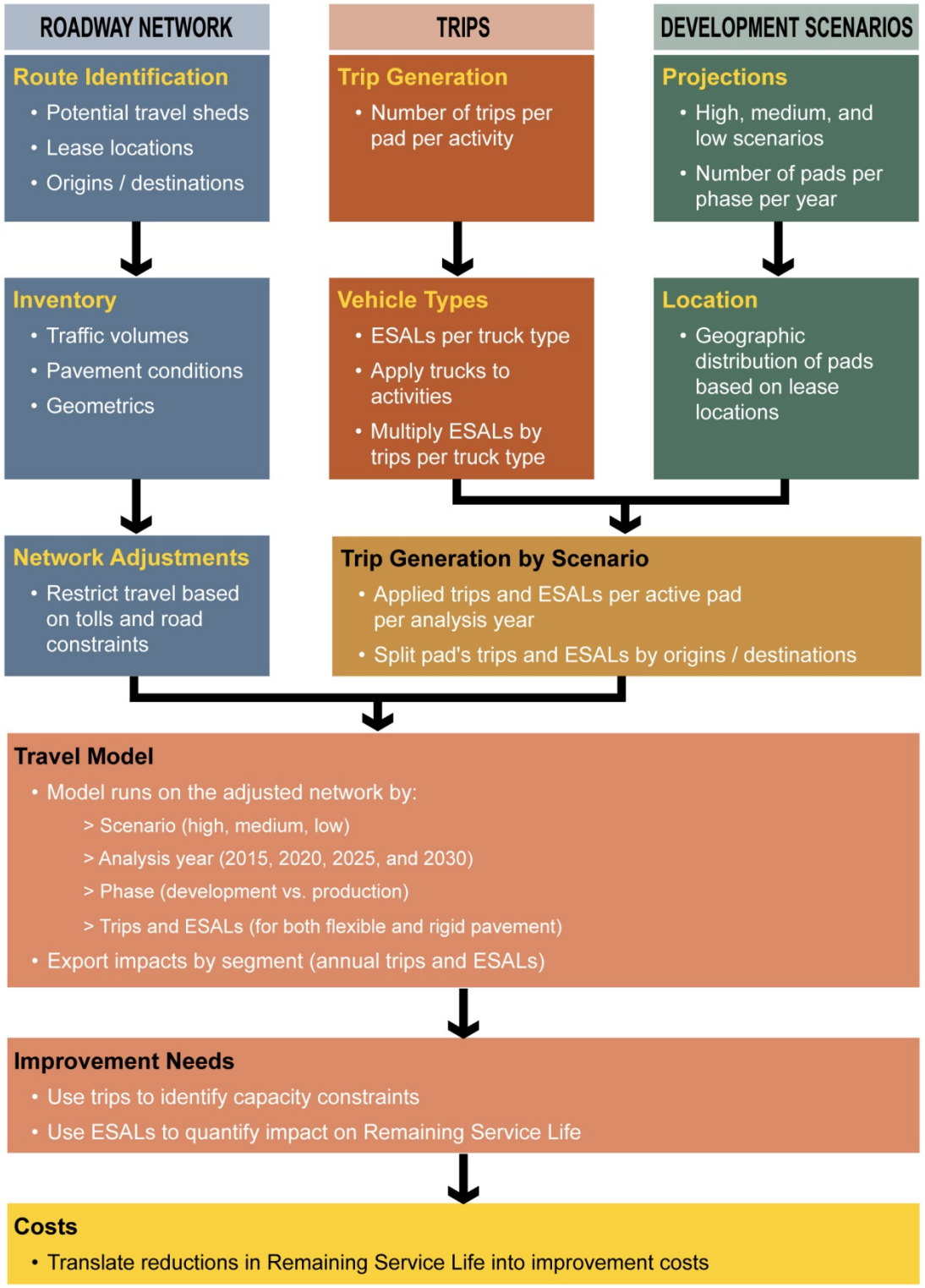
Travel Model

A travel model has been developed using TRAFFIX software to assign the trips and vehicle-loads associated with the high, medium, and low development scenarios to the Douglas County roadway system. Oil and gas development will result in increased traffic on the roadway network, as well as increased loads on the County's roads from the many heavy vehicle trips associated with the industry. For this reason, the travel model has been used to estimate not only vehicle trips, but also loads (as measured in equivalent single-axle loads [ESALs]). The travel model looks at potential industry impacts in five year increments from 2015 through 2030.

The process for estimating transportation impact costs is shown in **Figure ES-3**. This methodology required first identifying the likely travel routes for oil and gas vehicles. The oil and gas lease locations represent the best information available to date about likely geographic distribution of oil and gas development in the County. Given the uncertainty of where oil and gas pads may be developed, the lease locations were used to represent general areas where potential development might occur. The likely travel routes to access these locations are shown on **Figure ES-4**.

In anticipation of horizontal drilling and multiple wells per pad site in Douglas County, the study team has estimated trip generation rates primarily relying on the MIT/NTC analysis for the Marcellus formation, which is a reasonable comparison with the Niobrara formation. Based on the MIT study and subsequent adjustments based on local industry interviews, truck traffic is expected to average 11,040 vehicle trips per pad site with each pad accommodating six wells. Once the oil or gas well is fully operational, trip generation will be substantially reduced to approximately 730 vehicle-trips per year (two trips per day). The model also considers typical truck configurations, ESAL factors and likely origins and destinations for each activity.

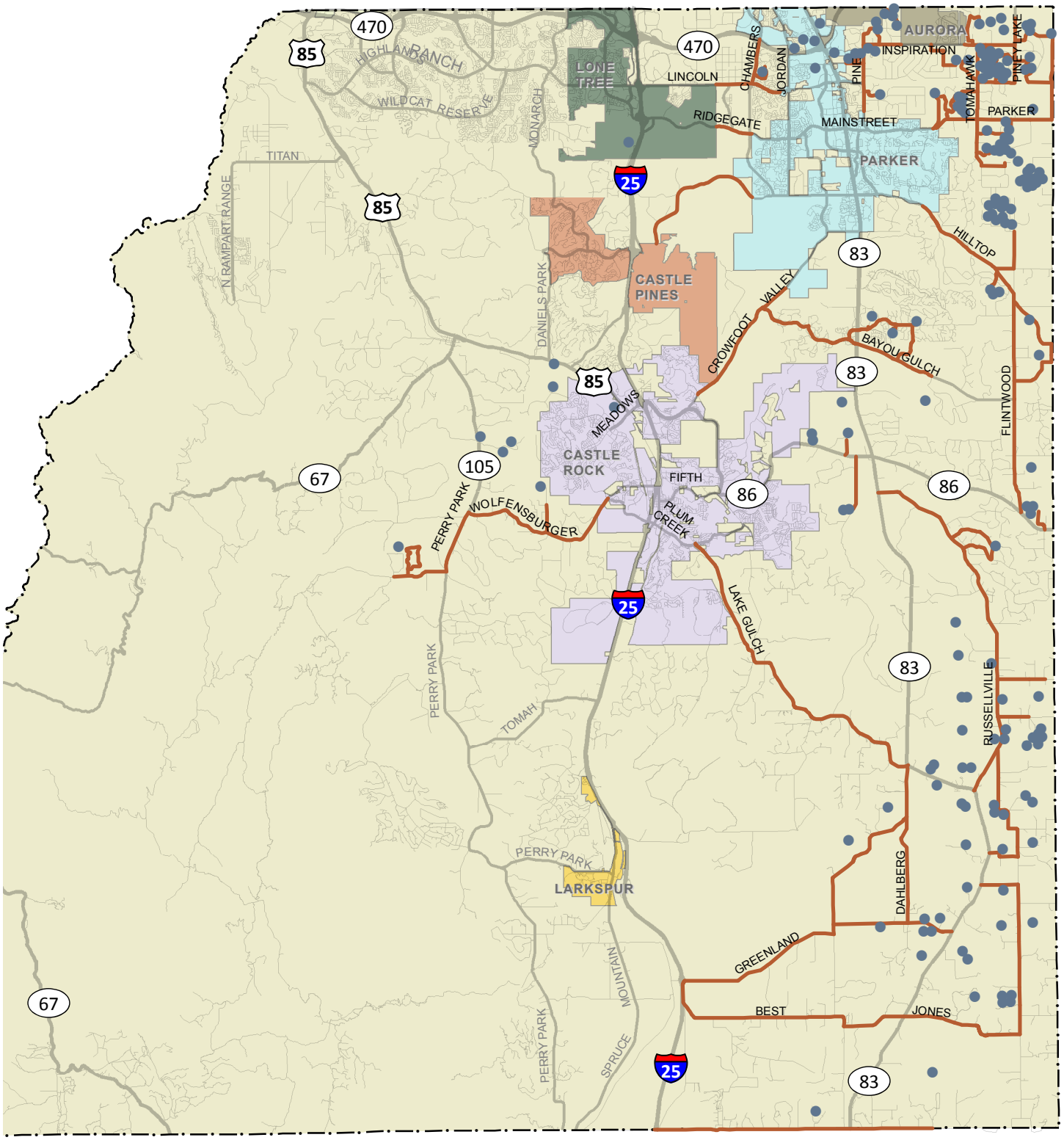
Figure ES-3. Process for Estimating Transportation Impact Costs



ESAL = Equivalent Single Axle Load

Figure ES-4

Oil & Gas Lease Locations and Travel Paths

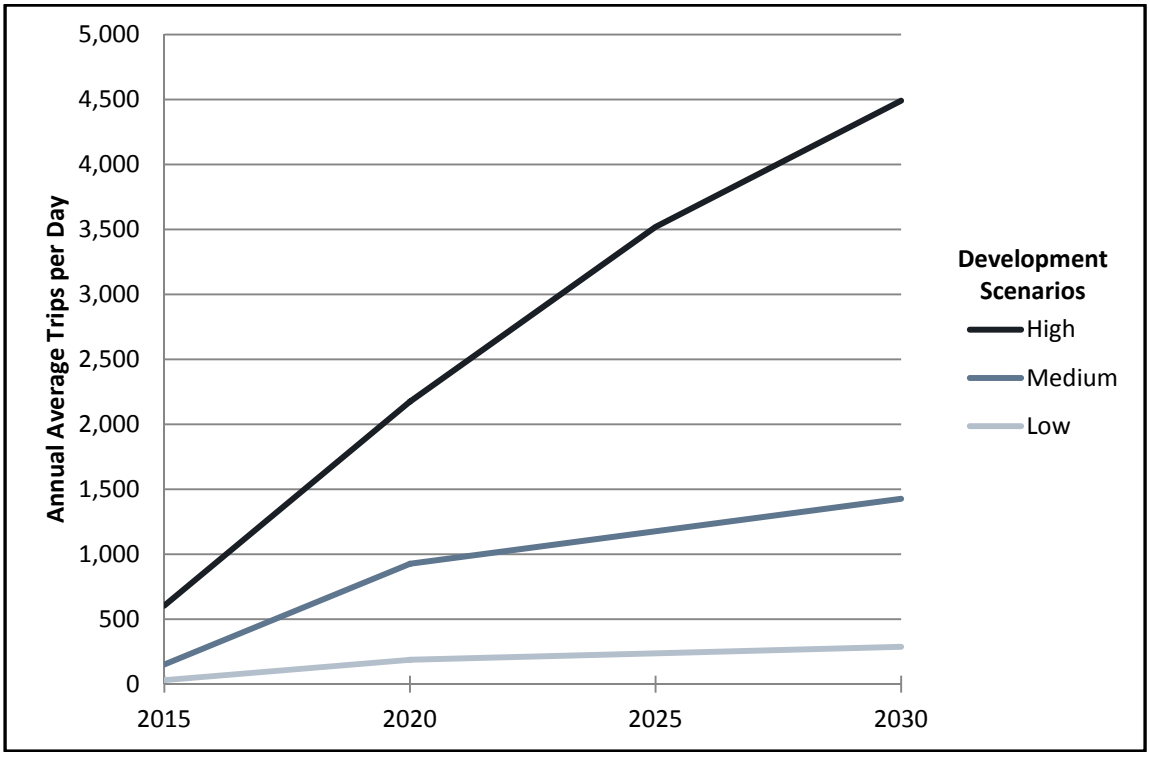


LEGEND

- Lease Location
- Roads Analyzed
- Roads Not Analyzed

The oil and gas trips have been modeled on an annual basis; in order to present the results in a more manageable fashion, trips from both phases (development and production) were aggregated and converted to average annual daily trips by simply dividing the annual trips by 365. **Figure ES-5** illustrates the average number of oil and gas trips per day for each scenario of the four analysis years. This figure depicts the cumulative trips of all pad being developed and producing wells.

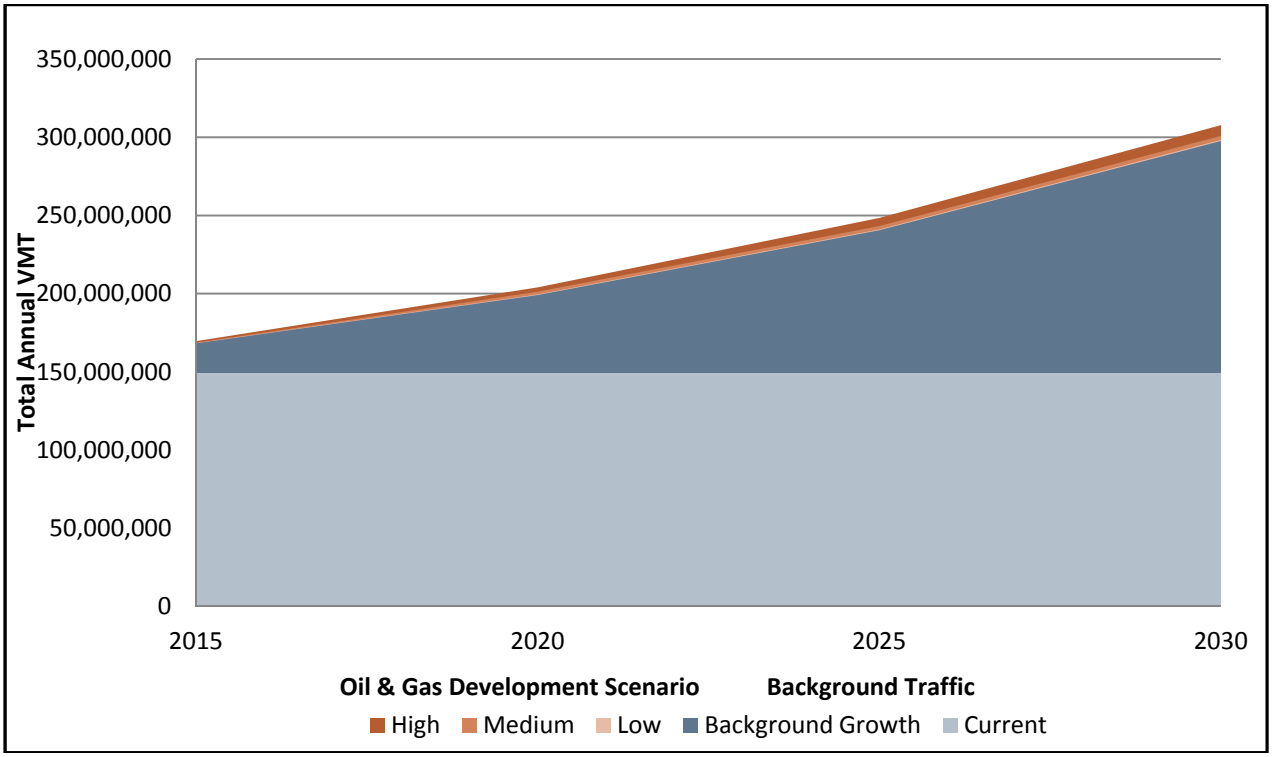
Figure ES-5. Estimated Oil & Gas Annual Average Trips per Day



Based on the travel model results, these trips are expected to occur over a large portion of the identified potential travel shed roadways. Some corridors handle a large portion of these trips, while others handle only one pad's worth or less. For Douglas County's roads, Lincoln Avenue and Lake Gulch Road show the highest number of both development and production trips. The highest number of predicted oil and gas trips for one County-maintained road segment is roughly 1,800 trips per day in 2030 for Lincoln Avenue east of Chambers Road, which is forecast to have 54,000 vehicles per day in total traffic in 2030. No road is expected to exceed the existing capacity threshold due to added oil and gas trips associated with the three development scenarios tested in this study.

The trips assigned by TRAFFIX were also converted into vehicle miles traveled (VMT) to compare the increase in VMT caused by oil and gas operations with existing VMT on the travel shed roads and predicted VMT growth based on the *Douglas County 2030 Transportation Plan*. **Figure ES-6** compares current VMT on County roads to predicted background growth and the three scenarios of oil and gas operations. At its highest point within this study's analysis horizon (2030) oil and gas operations would increase VMT by about 3.4% over the estimated background VMT.

Figure ES-6. Estimated Oil & Gas Vehicle Miles of Travel (VMT) Compared to Existing and Background Growth VMT



Although the number of the trips generated by the oil and gas industry in the three scenarios is relatively small in comparison to the existing traffic and the anticipated background growth, the much greater transportation impact associated with industry is due to the weight of the vehicles. The load impact of oil and gas trucks can be in the range of 5,000 – 30,000 times greater than that of a passenger car. Due to the high impact of heavy vehicles on the roads, Equivalent Single Axle Loads (ESALs) are essential in calculating potential improvements needed and the costs associated with those improvements, as described in the following section.

Improvement Needs and Costs

The improvements and associated costs represent the additional costs or funding needs attributable to growth in oil and gas traffic. They do not include baseline maintenance and/or improvement costs incurred by the County prior to substantial growth of oil and gas traffic.

Oil and gas traffic was distributed to the County's network of roads, and an ESAL was applied to the associated traffic. The ESALs were determined at 5-year increments starting at 2015 and extending to 2030. Road improvements and costs were then defined for the paved and unpaved roads impacted by oil and gas traffic based on the high, medium, and low development scenarios. The study team worked closely with Douglas County staff to establish a methodology for estimating improvements (and the associated costs) that is consistent with the County's current maintenance and reconstruction procedures.

- For unpaved roads, the improvements needed to offset the impacts of oil and gas trucks include more frequent dust suppressant application, grading, graveling, and paving where the truck volume is expected to exceed 100 vehicles per day.
- For asphalt roads, increased truck traffic from the oil and gas industry will primarily result in the need for more frequent, and thicker, overlays.
- On concrete roadway segments, oil and gas traffic will decrease the overall pavement service life, resulting in the need for reconstruction sooner than would be expected under current uses. The improvement costs for concrete roadway are based on the incremental reconstruction costs that result from decreased service life.

The estimated annual improvement costs by development scenario are presented in **Table ES-1**. The design year values represent the incremental improvement costs required to offset the impacts specifically associated with oil and gas vehicles in each of the high, medium, and low scenarios. The total incremental improvement costs for the time period 2015 through 2030 have been calculated by interpolating the improvement costs for the interim years (e.g., 2016, 2017, 2018, 2019, etc.).

Table ES-1. Estimated Annual Improvement Costs by Development Scenario

Design Year	Low	Medium	High
2015	$170,100	$861,800	$2,921,900
2020	$926,000	$4,682,500	$9,507,600
2025	$950,900	$6,670,500	$9,808,600
2030	$1,314,300	$5,508,400	$10,184,300
Total (2015-2030)	**$13,837,700**	**$75,875,600**	**$135,899,600**

On average, the County currently has about $40 million in revenue available for transportation capital projects, operations and maintenance each year.[1] Assuming a continuation of average funding, this equates to an estimated $640 million over the 16 year time period from 2015 through 2030. The estimated incremental improvement costs associated with the oil and gas industry over the same time period in the low, medium, and high scenarios represent a 2%, 12%, and 21% increase, respectively, over current Road and Bridge funding levels.

County Oil and Gas Revenue Projections

Property tax and severance tax are the major revenue sources that will increase as oil and gas wells are drilled and begin to produce. These tax revenues are designed to offset the additional county expense incurred to provide infrastructure and services to the industry. The following provides a general discussion of the factors that influence resource-based property and severance tax followed by a detailed description of each revenue source.

Perhaps the greatest factor that influences the amount of property and severance tax collected each year is the market value of oil and gas. Property is assessed and severance tax is imposed on the value of resource produced at each well. There are many factors that influence the value of oil and gas, including international

[1] The $40 million figure represents an annual average that is net of transportation funds transferred annually to municipalities. The figure was obtained through discussions with Douglas County finance staff.

supply, world demand, geo-political issues and natural disasters. The amount of resource related revenue Douglas County receives will ultimately be dependent on the value of resource recovered.

The study team conducted a fiscal analysis to estimate potential revenues associated with the high, medium and low development scenarios. **Table ES-2** combines projected property tax and severance tax revenue to calculate total revenue. It shows annual severance tax and property tax revenue collected by Douglas County.

Under the low scenario, oil and gas development will produce an additional $4.8 million in property and severance tax revenue over 15 years. Douglas County will collect about $22.4 million in the medium scenario over 15 years in the medium scenario. Under the high scenario, Douglas County will collect about $57.5 million in property tax and severance revenue over 15 years.

Table ES-2. Douglas County Well Scenarios and Projected Total Tax Revenue (2015-2030)

	Low	Medium	High
Severance Tax Revenue	$890,000	$3,325,000	$8,214,000
Road & Bridge Property Tax	$891,000	$4,330,000	$11,228,000
Other Property Tax	$3,028,000	$14,711,000	$38,070,000
Total Revenue	**$4,809,000**	**$22,366,000**	**$57,510,000**

Source: BBC Research & Consulting.

Capital Needs and Revenue

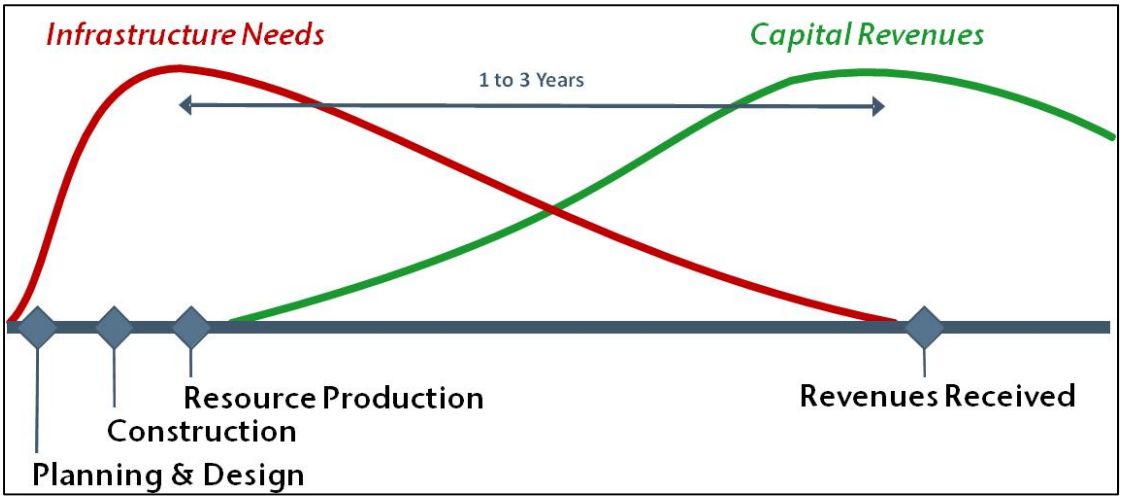
There are three important factors that should be considered in determining the likelihood that the Douglas County oil and gas industry will generate sufficient new tax revenue to cover industry associated road improvement expenses. These factors are; revenue time lags; compounding revenue growth; and field productivity, which are discussed below.

Revenue Time Lag

The development of oil and gas has the potential to require substantial front-end, capital investment in order to maintain, expand and improve affected road infrastructure. Generally, road systems need to be improved or expanded in advance of, or at least concurrent with, drilling activity. Road costs associated with oil and gas drilling occur largely in the early well development period. The tax revenues stemming from oil and gas associated property and severance tax will lag initial drilling by 1-3 years.

Simply stated, the energy industry and the residents of Douglas County need functioning and accommodating road infrastructure in order to drill and complete wells and support baseline traffic requirements, but revenue sources (property taxes and severance taxes) occur only after drilling and production is complete. **Figure ES-7** below shows a graphical depiction of the revenue lag issue.

Figure ES-7. Revenue Lag Issue



Compounding Revenue Growth

It should be noted that in a successful field, over time, the number of ongoing productive wells will outstrip the number of annual new wells and thus the problems of revenue time lag will diminish and, assuming prices and production remain high, annual energy related revenues will grow far faster than new road improvement costs. The critical factor here is simply the ratio of productive wells to new annual drilling. Although the pace of drilling is unknown, most counties have found that oil and gas tax revenues catch up and exceed associated costs.

Well Success and Productivity

A third factor to consider in determining appropriate tax policy is the impact of well success rates and well productivity on local tax revenue. The modeling presented here assumes a 70 percent well success rate. Non-productive wells produce road costs associated with drilling, but very little of the property and severance tax revenue. Similarly highly productive wells are also highly productive for tax revenue, while road costs will remain fairly stable on per well basis, regardless of well productivity.

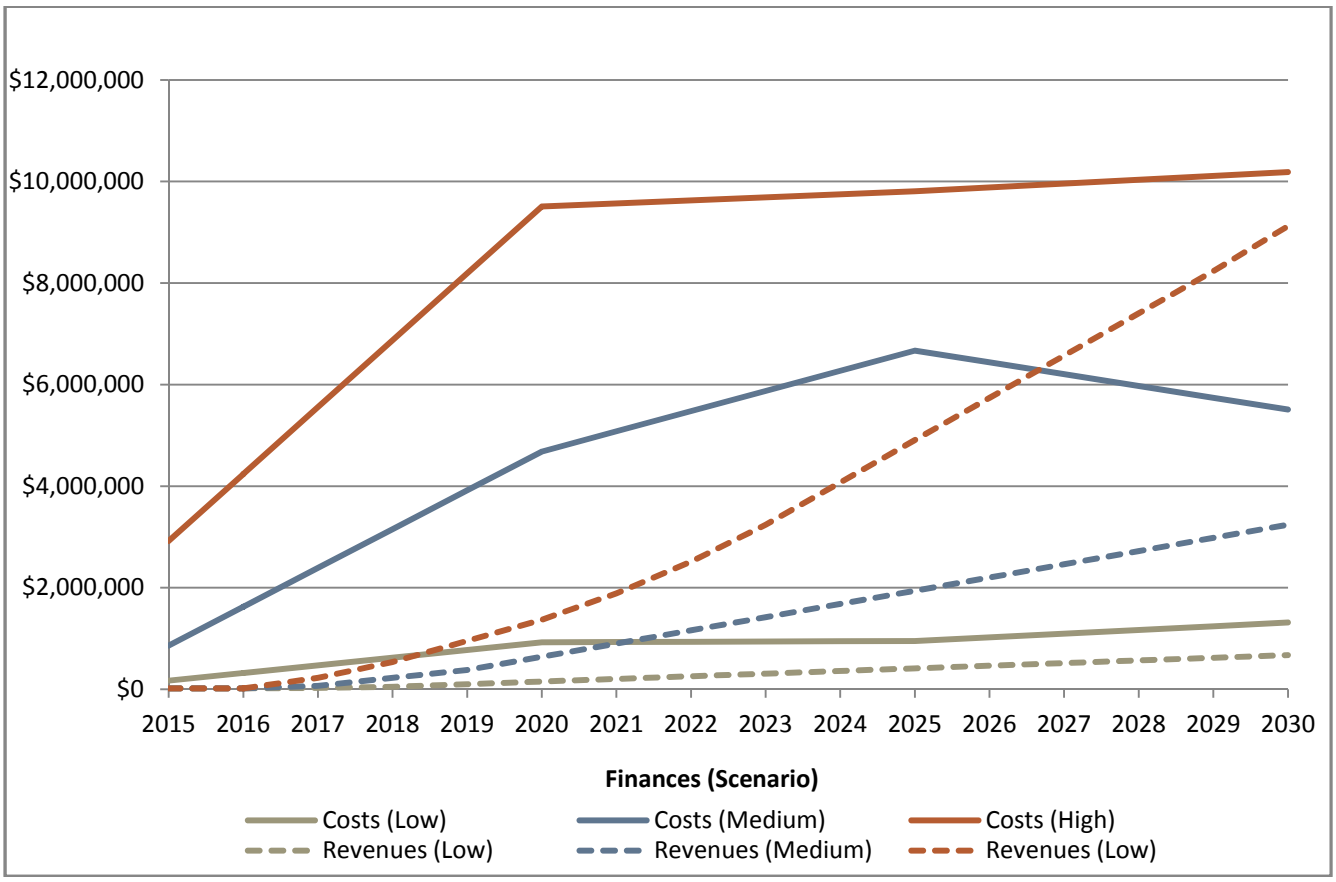
In essence, the county is sharing the risk and reward of well success with the field developers.

Other Potential Revenue Sources

The heavy truck traffic associated with oil and gas development will place new demands for road infrastructure investment in Douglas County. Truck traffic could potentially increase on many county roads that are not presently designed to accommodate the weight and volume of traffic if substantial resource deposits are discovered in Douglas County. Oil and gas activity also may generate substantial revenue for Douglas County through property and severance tax.

Given present local property tax rates and state severance tax redistribution practices, the study team projects a transportation funding gap over the 15 year study timeframe, as depicted on **Figure ES-8**.

Figure ES-8. Estimated Transportation Infrastructure Funding Gap, Douglas County, 2015 - 2030[2]



The estimated funding gap for each of the three development scenarios can be summarized as follows:

- **Low Scenario:** Funding gap ranges from $150,000 to $770,000 per year, with an average funding gap of $570,000 per year
- **Medium Scenario:** Funding gap ranges from $850,000 to $4.7 million per year, with an average funding gap of $3.4 million per year.
- **High Scenario:** Funding gap ranges from $1.1 million to $8.1 million per year, with an average funding gap of $4.9 million per year.

The funding gap shown in **Figure ES-8** is largely the product of the revenue lag issue shown on **Figure ES-7**. Annual oil and gas net revenues are dependent on the ratio of producing wells to new wells drilled each year. Annual revenues will likely eventually exceed annual transportation costs, particularly if the number of new wells being drilled tapers.

[2] The revenue figures in Figure ES-8 include all severance tax revenue and property tax revenue. In practice about three-quarters of property tax revenue is allocated to the general fund, social services fund and developmental disabilities fund. The property tax funds currently allocated toward the road and bridge fund account for about one-quarter of the property tax funds shown in Figure ES-8.There may be other funding priorities in the County aside from transportation needs.

Options for Douglas County officials to consider offsetting the projected transportation funding shortfall include:

- Public improvement district(s);
- Impact fees;
- Direct contributions; and
- Property tax reallocation.

Each option has its advantages and disadvantages (as described in Chapter VII), and the County should potentially consider using several of the above options together.

Over the course of this project, the study team had many conversations with industry and local government officials regarding industry transportation impacts in active resource development areas. Both industry and local government officials indicated that establishing a regular forum or working group for industry and local government officials to discuss community concerns has proven beneficial to both parties. There are regular working group meetings between industry and county officials in many active oil and gas areas, including Garfield, Weld and Rio Blanco Counties. Douglas County officials should engage the industry before widespread development occurs to develop an ongoing dialogue regarding industry road impacts and potential mitigation strategies. These working groups are crucial to the success of securing funding through any of the above recommended funding strategies. Interviews with county officials also indicated that ongoing monitoring of county roads has helped in assessing the impact of oil and gas development on the transportation system. A regular road condition monitoring system will allow the County to assess and appropriately address road degradation related to potential heavy oil and gas traffic.