



Land Use

Courthouse Annex • 2045 13th Street • Boulder, Colorado 80302 • Tel: 303.441.3930 • Fax: 303.441.4856
Mailing Address: P.O. Box 471 • Boulder, Colorado 80306 • www.bouldercounty.org

BOULDER COUNTY PLANNING COMMISSION

AGENDA ITEM #7

JUNE 20, 2012 – 1:30 PM

Commissioners' Hearing Room, Third Floor
Boulder County Courthouse, 1325 Pearl Street

FROM: Peter L. Fogg –Manager, Long Range Policy Team
DATE: June 20, 2012
RE: Docket BCCP-012-001: Amendments to Oil and Gas Policies
Add

Review of draft oil and gas policy amendments for inclusion into the Boulder County Comprehensive Plan per direction provided by the Board of County Commissioners in Resolutions 2012-16 and 2012-46 and as authorized by Planning Commission on May 16, 2012.

Action Requested: Comment and direction for further revision.

Public testimony will be taken

(Staff Planner: Peter Fogg)

Docket Webpage: <http://www.bouldercounty.org/dept/landuse/pages/oilgas.aspx>

SUMMARY The potential for increased oil and gas exploration and development in the Niobrara Formation within Boulder County, known as the Wattenberg Field, has led the Board of County Commissioners to direct, and the Planning Commission to authorize, that the Land Use staff revisit and propose amendments to the oil and gas policies of the Boulder County Comprehensive Plan. Current policies are dated, providing limited guidance and information to decision makers, applicants, county staff and interested parties about the county's issues and positions regarding this activity. With input from the county's Public Health, Transportation, Attorneys, and Parks and Open Space Departments, combined with research into and consultation with other sources of information about oil and gas development and exploration, staff has prepared the attached draft policy and text recommendations for consideration, comment and further direction by the Planning Commission. Public comment will be taken and considered. Following today's hearing staff will make appropriate and necessary revisions to the draft recommendations and return to the Planning Commission on July 18th with a request for adoption into the Boulder County Comprehensive Plan.

Readers interested in information about oil and gas exploration and development-related issues should refer to the document available at <http://www.bouldercounty.org/find/library/build/oilgasstaffreport2012.pdf> or by going to the Boulder County homepage on the Web, clicking on Departments, then clicking on Land Use and scrolling down to **Oil and Gas Development Update**. Here one will find documents and reports provided by various county departments to the Board of County Commissioners for their March 1, 2012 public hearing to consider the termination, renewing or amending the temporary moratorium on the processing of applications for oil and gas development in the unincorporated areas of the county.

ATTACHMENT A: Draft BCCP Oil and Gas Policy Amendments

ATTACHMENT B: Staff Memo to the Planning Commission dated May 16, 2012 for Agenda Item #5 – Request for Authorization to Initiate an Oil and Gas Policies Amendment Process

ATTACHMENT C: Partial Bibliography of Sources Used in Preparation of This Docket

BACKGROUND: A Little History and Geology Boulder County has been the site of oil and gas exploration, drilling and production since 1901, with wells dotting the landscape north and northeast of the City of Boulder. Over the intervening years, the county has seen both active and dormant periods, the level of intensity strongly influenced by global and national markets, politics, and energy strategies rather than by any particular set of local factors or forces. In the past few decades the oil and gas industry has focused on the Wattenberg Field, a “play” containing commingled oil and gas resources that is located in the west-northwestern portion of the greater Denver Julesburg Basin. It is the most productive field in the Basin, the state’s second largest, and the 7th largest in the US.

The primary oil and gas bearing formation within the Wattenberg is the Niobrara Shale, classified as an “unconventional continuous-type play”. In simple terms an “unconventional play” is one with very tight rock permeability that cannot be productive using vertical, unstimulated well technology. Horizontal wells and/or some form of intervention like hydraulic fracturing or “fracking” is needed to increase hydrocarbon mobility and well productivity. The Niobrara formation in that portion of the Wattenberg extending into Boulder County lies on average about 4,000 – 6,000 feet below the surface but may be as deep as 8,600 feet. Thickness of the formation ranges between 200+ feet to 350+ feet.

Drilling Technology Hydraulic fracturing has been in use for over 50 years. It is not a new technology. What has changed is some of the additives used in the water that is injected into the wells to induce a more effective fracturing of the oil and gas bearing rock to release and capture those resources. Another major change has been the development and deployment of horizontal drilling. In very simple terms, horizontal drilling entails boring down to the formation or geologic strata that contains the oil and gas, then angling the drilling to run into and parallel with that formation rather than the

more conventional vertical wells, which intersect and penetrate the desired formation and stop there as the “bottom hole”. Horizontal drilling opens up a much longer and therefore productive boring for extraction of oil and gas. The bores may run for several thousand feet. It is this advance in technology, coupled with other external factors like energy markets, economics, and policies calling for expanding the use of all energy resources (both renewal and nonrenewable) that have led to the recent surge in activity in the Wattenberg Field.

The Wattenberg Field in Boulder County As of early 2012, there were 345 oil and gas wells actively operating in Boulder County, mostly in the Wattenberg Field. None are yet employing horizontal drilling technology. By comparison, there are over 17,000 operating wells in Weld County. Under the Colorado Oil and Gas Conservation Commission’s “Wattenberg Rule”, up to five wells may be drilled per quarter section (160 acres) or 20 wells per square mile. For Boulder County this could add up to 1,800 additional wells on unincorporated land located primarily between Longmont on the north, the Weld County/Boulder County line to the east, Erie/Louisville/Lafayette on the south, and 75th/76th Streets and the Diagonal (SH 119) to the west. This subarea landscape of the county contains a mixture of residential subdivisions, farms, and single family homes on rural parcels, making up most of the built environment. The remaining area is predominantly agricultural lands and county or city/county open space held in fee and in conservation easements. Numerous water courses such as irrigation and supply ditches and creeks, as well as ponds, reservoirs and lakes are found here. Many residences rely on wells and on-site waste disposal systems for their water and sanitation needs. Several rare plant areas, significant natural communities, critical wildlife habitats, environmental conservation areas, and other environmental features of importance have been identified, mapped and included as part of the Boulder County Comprehensive Plan within the area underlain by the Wattenberg Field. The road system consists of three state/federal highways and a few county arterials with collectors and local access roads, both paved and unpaved, serving residents. Estimates based on research conducted by the county Transportation Department suggest that installing and servicing 1,800 wells could generate over 3,300,000 vehicle trips, most of which would be heavy trucks bringing equipment, water, sand, and other materials necessary for well development to the drilling sites.

Boulder County Comprehensive Plan Provisions The current Boulder County Comprehensive Plan (“BCCP”), adopted in 1978, established foundational goals in its first statements on the Design of the Region: urban growth should occur within or next to urban areas, and the unincorporated areas should be sustained in a rural condition “...to preserve agricultural, forestry and open space land uses, and to maximize the utility of funds invested in public facilities and services”. At the same time, the Plan also recognized that certain natural resources at fixed locations within the county were the sources of important basic materials for constructing, supporting and maintaining residents’ quality of life. However, extraction of these resources should only be conducted with care and attention to minimizing impacts to land, air, water, and the natural and human environment. In that context, the BCCP contains general provisions expressly addressing oil and gas development, primarily in the Geology Element

(adopted in 1980) and Agricultural Element (adopted in 1997). These policies call for the county to prepare regulations for 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 also establish longstanding goals and policies aimed at protecting valued county open and rural lands, scenic vistas, and natural resources.

In 2007, the BCCP was amended to add a Sustainability Element which speaks to sustaining county character and natural resources, minimizing further actions that fragment, disrupt and intrude into ecosystems and the rural landscape, promoting waste diversion and recycling, reducing consumption of nonrenewable resources while making more efficient use of renewable ones, and taking a leadership role as a county government in diminishing the county's contribution to total greenhouse gas emissions. The adoption of this Element was the initial step introducing a transition to the scope and intent of the BCCP. Containment of urban growth to urban areas and the preservation and protection of the largely rural areas in the unincorporated county, the foundational goals of the 1978 Plan, have been achieved for the most part. While the maintenance of this benchmark achievement will continue, efforts to promote and implement sustainability will receive more attention as Plan amendments and implementation tools are developed. The January 18, 2012 Planning Commission approval of seven Guiding Principles for connecting all Elements of the Plan under a common set of directives is an example of movement in this direction. A substantially amended Transportation Element was added to the BCCP in 2009 which also incorporated this new direction by 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.

The Need for Policy Amendments With the renewed interest and activity surrounding oil and gas development - spurred not only by an improved economic environment and technology for its development, but by the promotion of natural gas as a “clean,” more “environmentally friendly” fossil fuel of significance contributing to a national energy strategy - and considering the ever-changing oil and gas regulatory environment, staff believes that the existing oil and gas policies of the BCCP require revision to better capture these movements as well as to respond to public concerns about the impacts to health, safety and welfare that may accompany accelerated exploration and development in the Wattenberg Field. Some of the issues that support policy amendments were highlighted in the March 1, 2012 materials presented to the Board of County Commissioners in a document accessible at the Web site referenced in the **Summary** statements at the beginning of this memo. They are reiterated here for the readers' convenience:

“(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 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.”

Proposed Policy Amendments The following is a summary of the proposed amendments found in **Attachment A**.

Oil and Gas Exploration and Development – this section cites the BCCP and other actions and Colorado statutes that support enacting the proposed amendments. It recommends that the amendments be incorporated into the Geology Element of the Plan and provides a definition of what is included under the term “oil and gas exploration and development”.

OBJECTIVE The purpose of the proposed amendments and recognition of the existence of the mineral estate property rights held in Boulder County.

Policy GE 4.01 A recognition of the different jurisdictional authorities (state, state and county, county) over oil and gas exploration and development and the county’s intentions in each of those categories.

Policy GE 4.02 A comprehensive, but not limited, list of areas where the county has an interest in regulating and influencing the regulation of oil and gas exploration and development.

Policy GE 4.03 A comprehensive, but not limited, list of current Best Management Practices for oil and gas exploration and development and the county’s intentions of requiring and/or promoting their use.

Policy GE 4.04 A listing of specific steps the county is committed to pursuing in order to achieve the stated Objective.

Policy GE 4.05 A request that the oil and gas operators in Boulder County provide infrastructure location information to the Boulder Office of Emergency Management and why the request is being made.

Policy GE 4.06 A recommendation to surface landowners about acquiring expert advice in negotiating use agreements with oil and gas companies/operators.

ADDITIONAL AMENDMENTS AND RECOMMENDATIONS Proposed minor changes to the existing oil and gas policies found in the Geology and Agricultural Elements of the BCCP.

Staff Request Staff is presenting Docket BCCP-12-0001 policy recommendations to the Planning Commission for their consideration and requesting additional comment, input and direction for preparing an adoption draft to be brought to Planning Commission at their regularly scheduled July 18, 2012 hearing.

ATTACHMENT A

DRAFT: BCCP Oil and Gas Policy Amendments

June 20, 2012

Oil and Gas Exploration and Development

The Boulder County Comprehensive Plan's Geology Element is amended to incorporate the following policies. These policies are consistent with the goals of the BCCP, the various Elements and maps that make up the body of the Plan – in particular the Transportation, Environmental Resources, Agriculture, Open Space and Sustainability Elements - Boulder County Commissioners' Resolution 2005 – 137 Adopting a Sustainable Energy Path for Boulder County, and the authority granted counties under the County Planning Act (CRS 30-28-101 *et seq*) and Local Government Land Use Enabling Act (CRS 29-20-101 *et seq*). They are to be applied to the fullest extent allowable under current Colorado law.

The term “oil and gas exploration and development” as used in the following policies are synonymous and encompass all on and off-site activities related to oil and gas exploration, extraction, development, infrastructure, site closure, reclamation and transportation.

OBJECTIVE: Boulder County recognizes the existence of mineral estate property rights within its unincorporated area and its responsibility to allow those owners to explore and develop these resources. With this in mind it is the county's objective to exercise its equally important responsibilities for protecting public health, safety, welfare and the environment from potential adverse that may be caused by oil and gas exploration and development, and by minimizing potential land use conflicts between oil and gas activities and current or planned land uses.

Policy GE 4.01: Boulder County is dedicated to promoting, requiring and implementing practices that adhere to principles of sustainability for the purpose of protecting the public's health, safety and welfare as well as the air, water and ecosystems on which all life depends. To that end, it is county policy to pursue the following steps regarding the exploration and development of oil and gas resources:

- a) For all activities associated with oil and gas exploration and development as regulated by the state both currently and in the future, strongly encourage the use of Best Management Practices;
- b) For oil and gas exploration and development activities of shared state/county regulatory authority, provide direction, leadership and support for incorporating by reference Best Management Practices into applicable jurisdictional codes, regulations, and rules as they may be adopted by standard-setting organizations from time to time; and
- c) For reviewing and permitting oil and gas exploration and development activities that are subject to the county's jurisdiction, establish and maintain a comprehensive planning basis for amending, revising and updating the Land Use Code as well as the full array of regulatory tools

and procedures available to the county including the incorporation of Best Management Practices and cooperative agreements as they are identified and developed.

Policy GE 4.02: Areas where the county has an interest in assuring the avoidance, minimization and /or mitigation of significant short-term or long term on and off-site impacts associated with oil and gas exploration and development include, but may not be limited to:

- Transportation impacts on roads and their users
- County open space lands and conservation easements
- Impacts on and consumption of environmental resources, including
 - Wildlife and plant habitat
 - Wetlands
 - Riparian areas
 - Surface and subsurface water
 - Air and water quality
 - Soil quality and productive integrity
- Geologic hazards
- Wildfire mitigation
- Storm water, drainage and erosion controls
- Solid and liquid wastes management
- Noise, lighting and odor controls
- Land reclamation
- Agricultural land preservation
- Irrigation ditches, drain tiles, laterals, ponds and other water resource systems associated with agricultural operations
- Fencing, both temporary and replacement
- Noxious weed control
- Floodplain and floodways
- Visual impacts and preservation of scenic views
- Access roads/facilities removal upon well completion
- Historic/archeological/cultural protection
- Emergency response planning and capabilities
- Adjacent landowner concerns
- Other areas of public health, safety and welfare as they may be identified

Policy GE 4.03: Best Management Practices (BMPs) are the application of proven and emerging techniques and technologies used in conducting oil and gas activities which avoid, eliminate, mitigate or minimize adverse on and off- site impacts to public health and the environment, landowners, and natural resources, and which may reduce conflicts between the goals and policies of the BCCP, potentially impacted landowners, and the oil and gas industry. As BMPs are developed, tested and confirmed, they should be employed at every level and stage of oil and gas exploration and development. BMPs may include but are not limited to:

- waterless and/or green hydraulic fracturing systems;
- green and reduced emissions well completions;

- closed- loop drilling and containment systems;
- minimization or elimination of all exposed surface impoundments for storing of fluids and wastewater used in and produced by exploration and development activities;
- vented gas capture systems;
- liquids flowback capture, recycling and reuse systems;
- heavy duty flowback units (separators) to minimize flaring and odors;
- air quality controls including volatile organic compounds (VOC) emissions monitoring for wellheads, condensate tanks, and compressor stations;
- use of electric motors or muffled internal combustion engines in pumping and production operations;
- extensions of setbacks from adjacent land uses, water bodies, water courses, riparian areas and other important environmental resources as determined on a case-by-case and site-by-site basis;
- extensions of setbacks to achieve public health objectives as determined on a case-by-case and site-by-site basis;
- comprehensive drilling and phasing plans for oil and gas holdings within and adjacent to Boulder County)
- comprehensive groundwater quality and level monitoring
- plugged and abandoned well integrity surveys within 0.25 miles of proposed new well sites to identify those wells that were improperly plugged or where plugs have failed over time;
- “laydown” roads for access to sites from local, county, state and/or federal roads;
- dark sky lighting and noise reduction measures;
- complete reclamation and restoration of all disturbed areas, including roads, to their pre-exploration and development conditions; and
- use of existing easements and infrastructure where appropriate and allowed by easement holders, for above and below ground infrastructure necessary for drilling and extraction operations.

Policy GE 4.04: Achieving the county’s **Objective** regarding oil and gas activities requires not only a thorough review of local regulations but also communication and cooperation between the county, other levels of government and organizations involved in the oil and gas industry and in the study of oil and gas development and exploration. To this end the county will appoint a Local Governmental Designee pursuant to Rule 214 of the Colorado Oil and Gas Conservation Commission. In addition, the county is committed to working with and/or lobbying other groups to:

- a) Identify and address deficiencies in regulating detrimental land use and surface impacts as well as environmental and health impacts;
- b) Continue review of studies, data and other information to ensure regulations and implementation measures are presently addressing or need revising to incorporate the most contemporary research on impacts and technological advances;
- c) Monitor state and federal legislation and policies, to be followed when deemed necessary by lobbying, letters of support and advocacy, and dissemination of information to enhance local protection for land use, surface impacts, public health and the environment; and
- d) Investigate the feasibility and utility of entering into memoranda of understanding (MOUs), intergovernmental agreements (IGAs) or other accords with industry, the state, and other public

or private sector interests where the outcome will help facilitate the implementation of these policies.

Policy GE 4.05: Oil and gas operators are strongly encouraged to provide the Boulder Office of Emergency Management with maps depicting the locations, sizes, and depths below grade of all oil and gas gathering and transmissions lines and associated facilities for emergency response and management purposes in case of an incident or accident involving the transmission infrastructure presenting an immediate or potential hazard to public health, safety and welfare.

Policy GE 4.06: The county will encourage landowners to seek expert advice in negotiating surface use agreements with the oil and gas industry prior to signing leasing arrangements for oil and gas exploration and development.

ADDITIONAL AMENDMENTS AND RECOMMENDATIONS

*** Retain Policy GE 2.06, Geology Element, with the following revision:**

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.

*** Retain, Policy AG 2.01 et seq, Agricultural Element, with the following revision:**

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, other public rights-of-way, or fallow lands 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 growing season.
- **AG 2.01.03** Any agricultural lands and water resource systems disturbed by infrastructure construction shall be restored to their former productivity.

ATTACHMENT B



Land Use

Courthouse Annex • 2045 13th Street • Boulder, Colorado 80302 • Tel: 303.441.3930 • Fax: 303.441.4856
Mailing Address: P.O. Box 471 • Boulder, Colorado 80306 • www.bouldercounty.org

BOULDER COUNTY PLANNING COMMISSION

AGENDA ITEM #5

May 16, 2012

Afternoon Session – 1:30 PM

Commissioners' Hearing Room, Third Floor
Boulder County Courthouse, 1325 Pearl Street

FROM: Peter L. Fogg – Manager, Long Range Policy Team
DATE: May 16, 2012
RE: Docket BCCP-12-0001: Amendments to Oil and Gas Policies
Request for Planning Commission to authorize initiation of an oil and gas policies amendment process.
Action Requested: Authorization
Public testimony will not be taken

SUMMARY The Board of County Commissioners have adopted two resolutions, the first initially imposing and the second extending a moratorium on Boulder County from accepting applications for oil and gas drilling until no later than February 4, 2013 (Resolutions 2012-16 and 2012-46). During that period county staff is directed to analyze whether the existing county Comprehensive Plan and 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. By Colorado statute it is the duty of the planning commission to make, adopt and amend a “master” or comprehensive plan for the physical development of the unincorporated territory within the county. For a plan amendment process to proceed, authorization must be granted by the planning commission. Staff is requesting that authorization.

EXHIBITS A: BOULDER COUNTY COMMISSIONERS RESOLUTION 2012-16
B: BOULDER COUNTY COMMISSIONERS RESOLUTION 2012-46
C : STAFF PACKET FOR BOCC PUBLIC HEARING MARCH 1, 2012
D: COUNTY WEBSITE FOR INFORMATION ON OIL AND GAS

Cindy Domenico County Commissioner

Deb Gardner County Commissioner

Will Toor County Commissioner

BACKGROUND Advances in technology and enhanced extraction methodologies for tapping oil and gas resources, coupled with favorable economic factors, have led to a substantial increase in oil and gas activities within the Wattenburg Field and other geologic formations underlying Boulder County. Concerns about the variety of impacts that are and might be associated with drilling have led to the Boulder County Commissioners imposing a six month moratorium on accepting applications for such activities (Resolution 2012-16). Following a public hearing on March 1, 2012 the Commissioners extended the moratorium to no later than February 4, 2013 (Resolution 2012-46).

The attached Exhibits provide in-depth coverage of the situation in oil and gas drilling, staff presentations and assessments, and other supporting materials that have led to the enactment of the moratoria and staff's request for Planning Commission to authorize an amendment process. See particularly the County Commissioners' findings #1 – 6 on pages two and three of Exhibit B.

The current Comprehensive Plan policies dealing explicitly with oil and gas drilling are found in two sections or Elements of the Plan:

Geology Element (Adopted 1980): 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

Agricultural Element (Adopted 1997): 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.

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.

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.

- Infrastructure Development on Ag Lands: 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.
 - 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.
 - 2.01.02 If the infrastructure location is determined necessary, infrastructure construction activities across agricultural lands should not occur during the growing season.
 - 2.01.03 Any agricultural lands and water resource systems disturbed by

infrastructure construction shall be restored to their former productivity.

PROCESS Staff proposes to undertake an assessment of these policies as well as others in the BCCP between **May 16th** and early June in consultation with the County Attorney's Office and other county departments. Research into what other local jurisdictions' plans say or are contemplating regarding oil and gas activities will be conducted. Other sources of information and guidance may also be sought. This effort could be considered a "gap analysis" about the sufficiency of existing policies to meet the County Commissioners' directives for protecting public health, safety and welfare to the greatest extent possible under current state statutes governing oil and gas operations. A preliminary recommendation for any policy amendments with accompanying supporting information will be prepared and presented to Planning Commission on **June 20th** for review, discuss and further direction. Staff will then proceed to work on a final adoption draft recommendation for Planning Commission's **July 18th** public hearing.

Staff has also reserved a large public space at the county Recycling Center for the evening of **May 31st** from 6:30 – 8:30 PM for an open house. This is to offer residents and interested parties the opportunity to become informed about the process, timelines, purpose of a BCCP amendment, and the various areas staff is assessing in developing some policy recommendations. At this meeting staff is not contemplating making a formal presentation or soliciting public comment and input. Those opportunities will be available at Planning Commission and Commissioner hearings as well as through the internet, Website, letters and other mechanisms.

RELATIONSHIP TO THE COUNTY LAND USE CODE In brief, comprehensive or master plans are to provide the policy basis and guidance for enacting and revising land use regulations or codes that are consistent with and implement the intentions of the Plan. In Boulder County's case, Article 1-300 of the Land Use Code recognizes this linkage by stating, in part:

"Enactment, amendment, and administration of this Code shall in accordance with and shall serve to implement the goals and policies of the **Boulder County Comprehensive Plan**, and the authority set forth in the applicable provisions of the Colorado Revised Statutes as well as the provisions of any jointly adopted intergovernmental agreement or master plan governing the use and development of land of mutual concern to Boulder County and another governmental entity."

It follows, then, that an assessment of the BCCP's effectiveness in providing policy direction for land use matters need to occur through a public process and acted upon by the Planning Commission before proceeding with Land Use Code or other regulation amendments or revisions.

RECOMMENDATION Staff recommends that the Planning Commission grant authorization to proceed with the process as outlined above for **Docket BCCP-12-001: Amendments to Oil and Gas Policies.**

ATTACHMENT C

BCCP-12-0001: Partial Bibliography

- Boulder County Oil and Gas Information Page
<http://www.bouldercounty.org/dept/landuse/pages/oilgas.aspx>
- New York Times series "Drilling Down".
http://www.nytimes.com/interactive/us/DRILLING_DOWN_SERIES.html
- Ground Water Protection Council and the Interstate Oil and Gas Compact Commission.
<http://fracfocus.org/>
- Colorado Oil and Gas Conservation Commission
http://cogcc.state.co.us/RR_Docs_new/Rules_new2.html
- American Petroleum Institute – Overview of Industry Guidance/Best Practices on Hydraulic Fracturing (HF) 2012. Available at www.api.org
- Earthworks <http://www.earthworksaction.org/>
- Mesa, Gunnison, Routt, Pitkin, Garfield, Douglas, La Plata, Rio Blanco, Elbert, Arapahoe, Douglas Counties Comprehensive Plans and addenda
- Santa Fe County, NM General Plan: Oil and Gas Element. November, 2008.
- CU Natural Resources Law Center - Intermountain Oil and Gas BMP Project (*several topical areas related to oil and gas – this is but one of them*)
http://www.oilandgasbmps.org/laws/colorado_localgovt_law.php
- Texas A&M Environmentally Friendly Drilling Project - Low Impact Access Roads Demonstration (Pecos Research Test Center) 2008 – 2011.
- Encana In The News/Encana Corporation
- Colorado Dept. of Natural Resources – Colorado Geological Survey "Rock Talk". Volume 13, No 1. Spring 2011. Colorado's New Boom – the Niobrara
- Pipeline Safety Trust – Landowner's Guide To Pipelines
- Scientific American – "How Can We Cope with the Dirty Water from Fracking?". May 25, 2012
- Oil and Gas Investment Bulletin – December 13, 2011; February 24, 2012; May 17, 2012
- Coloradobiz Magazine – 2012 Oil & Gas Insert
- Massachusetts Institute of Technology Energy Initiative – The Future of Natural Gas. June, 2011 (an MIT Interdisciplinary Study)
- National Ground Water Association – Hydraulic Fracturing: Meeting the Nation's Energy Needs While Protecting Groundwater Resources. Position Paper November, 2011.
- Colorado Water and Energy Research Center, CU-Boulder.
- America's Natural Gas Alliance <http://www.anga.us/> ; <http://anga.us/critical-issues/national-voices-for-natural-gas>
- US Department of the Interior - Bureau of Land Management
http://www.blm.gov/wo/st/en/prog/energy/oil_and_gas/best_management_practices.html