Public Meeting for the Board of County Commissioners to discuss approaches, other than local land use regulations, to reduce the impacts of oil and gas development in Boulder County

Board of County Commissioners
April 25, 2017
11:00 a.m.
Background

• Adopted new regulations March 23, 2017
• Currently working on Implementation of those regulations
• Moratorium set to expire May 1
• Concurrently working on numerous other efforts, aside from the regulations
Multi-Pronged Approach for Oil & Gas Control

- Changes to state and federal legislation
- Changes to COGCC rules
- Changes to state AQCC rules
- Statewide Ballot Initiatives
Today’s Agenda - April 25

I. Updates
- Litigation update, Legislative update, Crestone Comprehensive Development

II. Multi-pronged Approach - Efforts & Initiatives
- Sustainability programs, Public Health studies and efforts, 2017 Legislation and Policies, Statewide Initiatives, State Rulemakings, Legal Efforts, etc.

III. Board Discussion

Multi-pronged Approach to Address Oil and Gas Development
Presenting Staff

Kim Sanchez - Chief Planner, Land Use Department
ksanchez@bouldercounty.org / 303-441-3930

David Hughes – Deputy County Attorney, County Attorney’s Office
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Mark Ruzzin – Senior Policy Analyst, Commissioners’ Office
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Kate Burke – Assistant County Attorney, County Attorney’s Office
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Susie Strife - Sustainability Coordinator, Commissioners’ Office
sstrife@BoulderCounty.org / 303-441-4565

Pam Milmoe – Air Quality and Business Sustainability Coordinator, Boulder County Public Health
pmilmoe@bouldercounty.org / 303-441-1189

Multi-pronged Approach to Address Oil and Gas Development
UPDATES
Litigation Update

- Attorney General lawsuit
- *Martinez v. COGCC*
- *Neighbors Affected by Triple Creek v. COGCC*
- *Weld Air and Water (et al.) v. COGCC*
- *Juliana v. United States*
- *Climate Bill of Rights*
### Legislative Update

**2017 Introduced State Oil and Gas Legislation**

<table>
<thead>
<tr>
<th>Bill #</th>
<th>Position</th>
<th>Short Title</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>HB17-1124</td>
<td>Oppose</td>
<td>Local Government Liable Fracking Ban Oil and Gas Moratorium</td>
<td>Postponed Indefinitely</td>
</tr>
<tr>
<td>HB17-1256</td>
<td>Support</td>
<td>Oil and Gas Facilities Distance from School Property</td>
<td>Postponed Indefinitely</td>
</tr>
<tr>
<td>HB17-1336</td>
<td>Support</td>
<td>Additional Protections Forced Pooling Order</td>
<td>In House Appropriations</td>
</tr>
<tr>
<td>SB17-014</td>
<td>Monitor</td>
<td>Limits on Underground Storage Tank Regulation</td>
<td>In House Transportation &amp; Energy</td>
</tr>
<tr>
<td>SB17-035</td>
<td>Oppose</td>
<td>Tampering with Oil and Gas Equipment</td>
<td>Postponed Indefinitely</td>
</tr>
</tbody>
</table>
Crestone Comprehensive Drilling Plan (CDP) proposal:

- Feb. 2017: Crestone submits application for CDP to COGCC
  - Maximum 216 wells divided among maximum 18 sites
  - 12 square miles in eastern Boulder County
- COGCC process is unclear
  - County staff pushing for information
  - COGCC staff says public will have opportunities for input
- May 1—COGCC hearing on Crestone request for hold on COGCC permitting
  - Final CDP expected in late fall 2017
- Regardless of CDP outcome, Crestone will have to go through County regulatory process
- County requests public presentation by Crestone

Multi-pronged Approach to Address Oil and Gas Development
Crestone CDP

Multi-pronged Approach to Address Oil and Gas Development
Crestone Peak Resources’ Comprehensive Drilling Plan Application to Colorado Oil and Gas Conservation Commission

On Feb 20, 2017, Crestone Peak Resources Operating LLC filed an application with the Colorado Oil and Gas Conservation Commission (COGCC), asking approval of a “Comprehensive Drilling Plan” or CDP in Boulder County. A CDP is a preliminary step toward oil and gas development that attempts to plan for development throughout a large area. Crestone’s CDP covers 12 square miles in eastern Boulder County, between Longmont and Erie. Crestone’s CDP application contains few details on its plans; it has said it intends to develop the subsurface of the plan over the next 6-9 months, with input from local governments, state agencies, and affected landowners. The application calls for a maximum of 216 wells divided among a maximum of 18 separate well pads throughout the CDP area. In addition, Crestone asked the COGCC to put a hold on accepting any applications to drill in the CDP area while the plan is developed. The COGCC is scheduled to make a decision on the hold request at its meeting May 1. The County supports the request for a hold on drilling permit applications at the state level. However, County staff is well aware of the significant concerns raised by large-scale drilling in the county and is committed to doing all it can to avoid or mitigate any impacts involved with the COGCC County staff from all affected departments, including the County Attorney’s Office. Is taking advantage of every chance to gather information on Crestone’s plans, and the plans of other operators and stakeholders, and to provide input. Staff has pushed for further information on how the process will be conducted after May 1 and when and how the public can give input and will make all information received available to the public.

Documents:
- Crestone Notice of Hearing 170500119 (May 1-2, 2017)
- Crestone Comprehensive Drilling Plan application 170500189
- Crestone drilling and spacing unit application 170500099
- Crestone drilling and spacing unit application 170500119
- Ken-McGee’s Protest to Variance Request
- B North’s Protest to Variance Request
- Krezcha’s Motion to Intervene
- Boulder County’s Motion for 510 Statement, submitted April 21, 2017 In advance of the May 1 COGCC hearing on thestandby issue. Operators B North and Ken McGee filed substantial protests to Crestone’s request for an interim hold on drilling applications at the COGCC. County staff believe such a hold is in the County’s benefit and therefore filed the following statement for the COGCC’s consideration at its May 1 hearing. Staff also intends to appear and speak at the hearing and our response raised by the hold request.

View COGCC rules for hearings. Rules 504 and 510 address objections and testimony at hearings. View COGCC instructions to submit a written statement under Rule 510.
COUNTY EFFORTS & INITIATIVES
SUSTAINABILITY

Multi-pronged Approach to Address Oil and Gas Development
Reducing our Reliance on Fossil Fuels
COUNTYWIDE GHG EMISSIONS

- Commercial: 34%
- Residential: 28%
- Industrial: 10%
- Transportation: 22%
- Agriculture: 1%
- Street Lights: 1%
- Industrial Processes: 3%
- Offsets: -1%

62% from commercial and residential usage
SUSTAINABILITY SERVICES

- EnergySmart
- 15,200 homes served
- Energy advising, incentives and financing
SUSTAINABILITY SERVICES

- Partners for a Clean Environment
- 4,000 business served
SUSTAINABILITY SERVICES

- 35 Businesses
- 328 Homes
= 3MW of Solar
SUSTAINABILITY SERVICES

- Almost 300 electric vehicles sold
- EV charging stations
SUSTAINABILITY SUCCESS

- Just under 30,000 metric tones CO2e reduced/yr
  or 6,220 cars off the road/yr
- For every $1 we spend, $5 is recirculated
- Over $43 million in local investment
NEW SUSTAINABILITY INITIATIVES

• Communities for Climate Action (CC4CA)
  14 member communities

• Carbon Sequestration Study

• Fossil Free Pilot
**Energy Advising & Support**

**Incentives**

**Financing**

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**FOSSIL FREE HOME PILOT**

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**About This Household**

<table>
<thead>
<tr>
<th>HOME PROFILE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year Built: 1990</td>
</tr>
<tr>
<td>square footage: 2,344 sq ft</td>
</tr>
<tr>
<td>Number of bedrooms: 3</td>
</tr>
<tr>
<td>Number of bathrooms: 1.5</td>
</tr>
</tbody>
</table>

**This Home’s Solar Potential**

- Estimated install year: 2005
- Estimated replacement year: 2020

**Energy System**

- **HVAC**: Forced-air natural gas furnace.
- **DHW**: Natural gas tank water heater.
- **Dryer**: Electric
- **Desktop**: Natural Gas
- **Oven**: Natural Gas
- **Solar PV**: None

**Vehicles**

- 2008 Honda Accord, 12,000 miles/year, 28 mpg
- 2000 Nissan Pathfinder, 6,000 miles/year, 18 mpg

**Historical Permits**

<table>
<thead>
<tr>
<th>Program</th>
<th>Replaced</th>
<th>Expected replacement</th>
</tr>
</thead>
<tbody>
<tr>
<td>HVAC</td>
<td>Natural gas furnace</td>
<td>2005</td>
</tr>
<tr>
<td>DHW</td>
<td>Natural gas hot water heater</td>
<td>2000</td>
</tr>
<tr>
<td>Roof</td>
<td>Tear + replacement</td>
<td>1990</td>
</tr>
<tr>
<td>Electrical</td>
<td>Electrical for remodel</td>
<td>2005</td>
</tr>
</tbody>
</table>

**Previously Completed Upgrades**

- Air Sealing 2012: Energy Smart
- Attic Insulation 2012: Energy Smart
- Replaced Windows 2012: Energy Smart

**Upgrade Scenarios Summary**

<table>
<thead>
<tr>
<th>PACKAGE 1</th>
<th>PACKAGE 2</th>
<th>PACKAGE 3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Home Performance</strong></td>
<td>**Home Performance</td>
<td>Heat-pump HVAC**</td>
</tr>
<tr>
<td>+ Air sealing</td>
<td>+ Package 1</td>
<td>+ Package 2</td>
</tr>
<tr>
<td>+ Weatherstripping at doors</td>
<td>+ New HVAC on upper level</td>
<td>+ New HVAC, and heater in cottages</td>
</tr>
<tr>
<td>+ Crawlspace sealing and insulation</td>
<td>+ Additional heat losses</td>
<td>+ CO2 Reduction: 3.5 ton/year Project cost $6,350</td>
</tr>
</tbody>
</table>

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**Eleanor Bryon Household**

1631 Spruce St, Boulder, CO 80302 | (303) 810-8089
BOULDER COUNTY PUBLIC HEALTH STUDIES AND OTHER EFFORTS
BC Oil and Gas Voluntary Inspection Program

- Since January of 2014- 541 visits conducted throughout Boulder County
- 291 visits conducted with Optical Gas Imaging Camera
  - Leaks detected with IR Camera at 133 (45%) of the visits
  - Since January of 2014 there have been 15 spills reported to COGCC- 4 have threatened ground water.
  - Worked with operators to provide proper containment during spill clean up
- Air/Water/Soil Concerns
- Technology advancements
- Continue to conduct inspections through this program and work to get issues resolved

- **Public Health will participate in 2017 CDPHE Stakeholder Process (Air Quality Control Commission)**
  - Increased frequency for LDAR
  - Include all hydrocarbons
  - Pneumatic Devices
# Current and Ongoing Research

<table>
<thead>
<tr>
<th>Study</th>
<th>Area of Study</th>
<th>Performed BY</th>
<th>Year</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Study of Hydraulic Fracturing on Drinking Water</td>
<td>Hydraulic Fracturing and Drinking Water</td>
<td>EPA</td>
<td>2016</td>
<td>Complete</td>
</tr>
<tr>
<td>Garfield County Gas Emissions Study</td>
<td>Oil &amp; Gas Air Emissions</td>
<td>Colorado State University (CSU)</td>
<td>2016</td>
<td>Complete</td>
</tr>
<tr>
<td>North Front Range Oil and Gas Emissions Study</td>
<td>Oil &amp; Gas Air Emissions</td>
<td>CSU, CDPHE</td>
<td>2016</td>
<td>Complete- Health Risk Assessment being conducted</td>
</tr>
<tr>
<td>Air, Water, Gas- CU NSF Sustainability Research Network</td>
<td>Air Quality, Water Quality, and Societal Impacts</td>
<td>CU</td>
<td>2017</td>
<td>Initial studies complete</td>
</tr>
<tr>
<td>Front Range Air Pollution and Photochemistry Experiment</td>
<td>Air Emissions</td>
<td>CDPHE, CU, CSU, UC Berkley, NASA, NOAA, NCAR</td>
<td>2017</td>
<td>Initial analysis is being reported</td>
</tr>
<tr>
<td>Childhood hematologic cancer and residential proximity to oil and gas development</td>
<td>Public Health</td>
<td>CU- School of Public Health</td>
<td>2017</td>
<td>Complete</td>
</tr>
</tbody>
</table>
2017 VOC Monitoring Study

- Enable us to quantify and better understand the impact of oil and gas emissions on air quality.
- Monitoring is co-located with the state’s ozone monitoring site, at the Boulder Reservoir
- Provide Boulder County with a baseline against which we can measure future increases in the amount of local and regional oil and gas emissions- VOC and Toxic Air Pollutants
2017 Baseline Groundwater Quality Monitoring

• Currently, knowledge of groundwater quality, in Boulder County, is limited.

• 400 samples will be collected over an 18 month period-nearly 30% of domestic use wells

• This research will generate a robust baseline of the quality and characteristics of the groundwater in Eastern Boulder County.

• Create a record that can be referenced if any changes in groundwater quality occur

• Achieving the goals of this study will be reliant upon the willingness of water well owners taking part in this study
2017 State Legislative Agenda - Oil and Gas Policies

• Support legislation and other policy approaches to address the air and water quality impacts associated with oil and gas operations
• Support legislation to affirm and expand the authority of Colorado counties and municipalities to regulate land use activities of the oil and gas industry
• Support legislation to amend the Oil and Gas Conservation Act to reform various operating practices of the COGCC
• Support increasing Colorado’s severance taxes and pursuing other approaches to increase state revenues received from the oil and gas industry
• Support legislation to affirm and expand the authority of Colorado counties and municipalities to impose impact and other fees on oil and gas activities
• Support creation of a scientific advisory committee to provide independent review of and advice regarding the technical bases for the regulations promulgated by the COGCC

Multi-pronged Approach to Address Oil and Gas Development
Statewide Initiatives

• Amendment 71

• Potential Statewide Ballot Issues

Multi-pronged Approach to Address Oil and Gas Development
State Rulemakings

• COGCC “C”-Scale Noise and Vibration Mitigation

• Initiation of other rulemakings
Legal Efforts

- Continued amicus and other litigation support
- Scrutiny of COGCC decisions
- Legal options to hold industry accountable for costs and burdens of climate change
IDEAS FROM THE PUBLIC

E-mail: oilgascomment@bouldercounty.org
Multi-pronged Approach to Address Oil and Gas Development

Oil & Gas Development

Boulder County is concerned about the potential for significantly expanded oil and gas development within the county, and supports appropriate, effective restrictions and increased local control to mitigate the impacts of these activities. A temporary moratorium on accepting new applications for oil and gas development in unincorporated Boulder County is currently in place through May 1, 2017.

Public Comment Submission

Crestone Peak Resources' Comprehensive Drilling Plan Application to Colorado Oil and Gas Conservation Commission

On Feb. 22, 2017, Crestone Peak Resources Operating LLC filed an application with the Colorado Oil and Gas Conservation Commission (COGCC), asking approval of a "Comprehensive Drilling Plan" (CDP) in Boulder County. A CDP is a document that outlines drilling and gas development that attempts to plan for development throughout a large area. Crestone's CDP covers 58 square miles in eastern Boulder County, between Longmont and Erie. Crestone's CDP application contains a great deal of information about the plan and the potential impacts. It is important to develop a comprehensive plan for the future of oil and gas development in this area, considering the impact of these activities on the environment, public health, and the economy.

The application is divided into four sections: land use, air quality, water quality, and climate change. The land use section includes a map of the proposed development area and a description of the proposed development. The air quality section includes a detailed analysis of the potential impacts on air quality and a proposed plan to mitigate these impacts. The water quality section includes a detailed analysis of the potential impacts on water quality and a proposed plan to mitigate these impacts. The climate change section includes a detailed analysis of the potential impacts on climate change and a proposed plan to mitigate these impacts.

The COGCC is scheduled to make a decision on the CDP application in the next few months. The County supports the development of a comprehensive plan for the future of oil and gas development in this area, considering the impact of these activities on the environment, public health, and the economy.

The Boulder County Planning Department is committed to working with the COGCC, state officials, and other stakeholders to ensure that the development of oil and gas resources in this area is done in a way that is safe, environmentally responsible, and beneficial to the community.
BOCC DISCUSSION

Multi-pronged Approach to Address Oil and Gas Development