PUBLIC HEARING TO RECEIVE A STATUS UPDATE FROM STAFF ON THE MATTERS DISCUSSED IN RESOLUTIONS 2013-55 AND 2014-56, AND TO CONSIDER WHETHER TO EXTEND OR OTHERWISE AMEND THE CURRENT TEMPORARY MORATORIUM ON BOULDER COUNTY’S PROCESSING OF APPLICATIONS FOR OIL AND GAS DEVELOPMENT IN THE UNINCORPORATED COUNTY

Board of County Commissioners
November 10, 2014
Today’s Agenda

1. COUNTY STAFF PRESENTATION
   - Status Update Related to the Current Moratorium
   - Staff report posted to Boulder County’s Oil & Gas website
     (http://www.bouldercounty.org/dept/landuse/pages/oilgas.aspx)

2. PUBLIC TESTIMONY
   - Public comment will be taken
     2:00 p.m. Afternoon Session
     6:00-7:00 p.m. Break
     7:00 p.m. Evening Session
   - All written comments are posted on website

No decision will be made by the BOCC today. A public meeting has been scheduled for Thursday, November 13 at 9:30 a.m. in the Commissioners’ Hearing Room for deliberation on the Commissioners’ decision. No further public comment will be taken at that time.
CONSIDERATION OF MORATORIUM EXTENSION

- February 2, 2012 BOCC imposed a temporary moratorium on oil & gas development
- Current temporary moratorium is in effect until January 1, 2015
- Unincorporated Boulder County only
- BOCC provided direction to staff in Resolution 2013-55 in regard to extending the moratorium
  - Updates were provided in June 2014
- Subsequent updates will be discussed today
BACKGROUND
REASONS FOR MORATORIUM

• Accelerated development of oil and gas industry in the Wattenberg Basin in the eastern portion of Boulder County and neighboring Weld County
• Rapidly changing technology surrounding oil and gas drilling, especially hydraulic fracturing of horizontally and directionally drilled wells
• Widespread public concern over the land use, environmental, and public health impacts of fracking
• Former oil and gas regulations were almost 20 years old (administrative review only)
REASONS FOR MORATORIUM

➢ Explore adequacy of the Boulder County Comprehensive Plan and Oil & Gas regulations based on a more informed assessment of:
  • Industry activities and trends
  • Anticipated land use impacts
  • Appropriate regulatory response on the County level

➢ Analyze whether existing protections are sufficient to protect the public health, safety, and welfare of the citizens

➢ Required update and amendments
TRENDS AND EXPECTATIONS

Difficult to predict drilling activity with any accuracy but can examine COGCC data, Boulder County trends, and Industry’s own information

COGCC data 2003-2012 (www.cogcc.state.co.us/)

- Ave. wells permitted per year= 17 wells
- Annual totals ranged from 6 to 29 wells
- Cumulative total over the last decade= 173 wells

Fellsberg, Holt, & Ullevig/BBC Research & Consulting

- Estimated a “drill out” period of 16 years with a cumulative total of 609 wells
- Average of 38 wells per year over that period
TRENDS AND EXPECTATIONS

- Practice of horizontal and directional drilling is also on the increase

Weld County horizontal wells:

<table>
<thead>
<tr>
<th>Year</th>
<th>Number Wells</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>3</td>
</tr>
<tr>
<td>2009</td>
<td>7</td>
</tr>
<tr>
<td>2010</td>
<td>76</td>
</tr>
<tr>
<td>2011</td>
<td>300</td>
</tr>
<tr>
<td>2012</td>
<td>888</td>
</tr>
</tbody>
</table>

- Notices received (2010-2013) for potential wells on BoCo open space are for horizontal and directional drilled wells

www.cogcc.state.co.us/
COGCC PERMITS

• There are currently no pending or approved COGCC drill permits in unincorporated Boulder County.
  ➢ An approved permit is good for 2 years

• 47 wells are identified as intended for development on County open space lands
BOULDER COUNTY WELLS

Recent DPR applications to Land Use Dept.:

2010: 11 DPR applications submitted & approved
   11 wells total
   5 wells on County-owned land

2011: 3 DPR applications submitted & approved
   8 wells total (5 wells on one site)
   3 wells on County-owned land

2012: No DPR applications filed or pending at the time the moratorium went into effect
PROJECTIONS

• Can expect similar pressures in Boulder County portion of the Wattenberg field
• Industry does not provide information on comprehensive drilling plans
• Owned or leased mineral right information on land other than County-owned land, unknown
FORMER REGULATIONS

• Effective October 1, 1993
• Administrative process
• No ability to deny an application
• Indefinite approval; no expiration
• Criteria Review:
  • 350’ setback from buildings
  • 150’ setback from Rights-of-way
  • Visual impacts and surface land disturbance
  • Consistent with COGCC and state/County public health requirements
*NEW* OIL AND GAS REGULATIONS

### Standard DPR Process

- Pre-application conference
- Notice within ½ mile
- Applicant Neighborhood Meeting
- PC + BOCC Public Hearings
- Mitigation plans / review standards involving the siting of wells to address land use issues such as:
  - Agricultural Land Mitigation
  - Surrounding Land Uses
  - Emergency Preparedness
  - Transportation System Impacts
  - Air Quality Provisions
  - Water Quality
  - Geologic hazards
  - Natural resources
  - Recreational activities
  - Scenic Attributes & Rural Character
  - Cultural and Historic Resources
  - Wetlands Protection

### Expedited DPR Process:

- Pre-application conference
- Notice within ½ mile
- Must meet well siting provisions to qualify:
  - **New well pads:**
    - 1000 ft from occupied structures +
    - 500 ft from surface water bodies +
    - 500 ft from water wells
  - **Existing well pads:**
    - 500 ft from occupied structures +
    - 300 ft from water bodies +
    - 500 ft from water wells
  - Not in subdivision or townsite
  - Not in high hazard geologic area, floodway, or BCCP natural resource and critical wildlife habitat areas

- Air Quality Provisions (more expansive)
- Water quality monitoring and well testing
- 45-day Administrative Review after 10-day Completeness Review of application
TRANSPORTATION IMPACT FEE

• Fellsberg, Holt, & Ullevig/BBC Research & Consulting Oil & Gas Roadway Impact Study

• On May 16, Board voted unanimously to adopt an impact fee in the amount of $37,900 per well
PUBLIC HEALTH MONITORING

- Oil and gas site visits
- Data collection
- Recent / Ongoing Studies

Boulder County
OIL AND GAS SITE VISITS

- 219 visits conducted
- 113 visits conducted with Optical Gas Imaging Camera
  - Leaks detected at 43% of the visits
  - Past releases/staining identified at approximately 29%
- Air/Water/Soil Concerns - notification issues
- Technology advancements
BOULDER COUNTY FUNDED AIR QUALITY MONITORING STUDY

- Conducted from May through August
  - 5 sites - 1 at BCPH & 4 in Oil and Gas intensive areas
  - Data collection concluded
- Early results show that exposure data collection methods set up by Boulder County are comparable with EPA-approved monitoring
- Preliminary report in December
RESULTS FROM RECENT STUDIES

• Increased Stray Gas Abundance in a Subset of Drinking Water Wells Near Marcellus Shale Gas Extraction (2013)
• Noble Gases Identify the Mechanisms of Fugitive Gas Contamination in Drinking-Water Wells Overlying the Marcellus and Barnett Shale (2014)
• A New Look at Methane and Non-methane Hydrocarbon Emissions from Oil and Natural Gas Operations in the Colorado Denver-Julesburg Basin (2014)
• Four Corners- The Largest US Methane Anomaly Viewed from Space (2014)
• The 2001- Present Induced Earthquake Sequence in the Raton Basin of Northern New Mexico and Southern Colorado (2014)
• Proximity to Natural Gas Wells and Reported Health Care Status: Results of a Household Survey in Washington County Pennsylvania (2014)
ONGOING STUDIES

- Boulder County Public Health: Air Quality Monitoring Study (2014)
  - Data collection completed
- NOAA Study of Sources of Atmospheric Pollutants (2014)
  - Data collection completed
- University of Colorado- National Science Foundation Sustainability Research Network (2017)
- Colorado State University- Garfield County Gas Emissions Study (2016)
  - Data collection is underway
- CDPHE North Front Range Oil and Gas Emissions Study (2016)
  - Data collection is underway
- Front Range Air Pollution and Photochemistry Experiment (Data Collection 2014)
  - Data collection completed
- CDPHE’s Ongoing Monitoring in Platteville
- EPA Study of the Impact of Hydraulic Fracturing on Drinking Water
  - Draft expected this year
CHANGES TO REGULATORY LANDSCAPE

Federal

• EPA Actions - disclosure and reporting of chemicals

State

• New Air Quality Rules adopted by Colorado AQCC
• Colorado General Assembly 2014 Session:
  • No local control bills passed
  • CDPHE bill conducting a health survey in Front Range postponed
  • Bill passed increasing fines for violations
  • Special session did not materialize
• Ballot Initiatives withdrawn / Statewide Task Force
LOCAL LAWSUIT RULINGS

**Longmont** - Appealing the Boulder District Court order overturning the voter-approved fracking ban

**Ft. Collins** - Appealing the Larimer District Court order overturning the voter-approved 5-year moratorium on fracking

**Lafayette** - Boulder District Court overturned the voter-approved fracking ban, and the City is not appealing

**Broomfield** - Broomfield District Court held that the City’s voter-approved 5-year moratorium on fracking does not apply to Sovereign’s MOU; other decisions on the remaining claims are pending

**Loveland** - Proposed 2-year moratorium on fracking failed
PROGRESS MADE

✓ Updated Comprehensive Plan policies
✓ Updated Land Use Code regulations
✓ Transportation Impact Fee
✓ On-going Monitoring & Inspections through County funding
✓ Analyzed results from numerous studies
✓ Helping design other studies
✓ Supported numerous legislative efforts
✓ Led local gov’t coalition to strengthen AQCC rule

Boulder County
OUTSTANDING

• Awaiting data and results from ongoing (and future) studies
  ➢ Studies underway, but they are lacking information on impact on public health besides ozone

• Concern over sufficiency of state and federal rules

• Engaging with State Task Force

• Future legislation and ballot initiatives

• Changing technology

• Amendments to our updated regulations
  ➢ Including floodplain, intensively developed operations sites, spill and release notification requirements, local air provisions post 2014-AQCC
  ➢ Phasing concept tabled indefinitely in June 2013
ENERGYSMART

• EnergySmart, the County's Energy Efficiency Service, offers one of the best home and commercial natural gas savings programs in the country
• This program has reached 13,000 homes and 3,200 businesses in Boulder County
• Helps reduce our need for natural gas by supporting energy efficiency upgrades and behavior change in the homes and businesses of Boulder County