

# Boulder County Land Use Department



**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

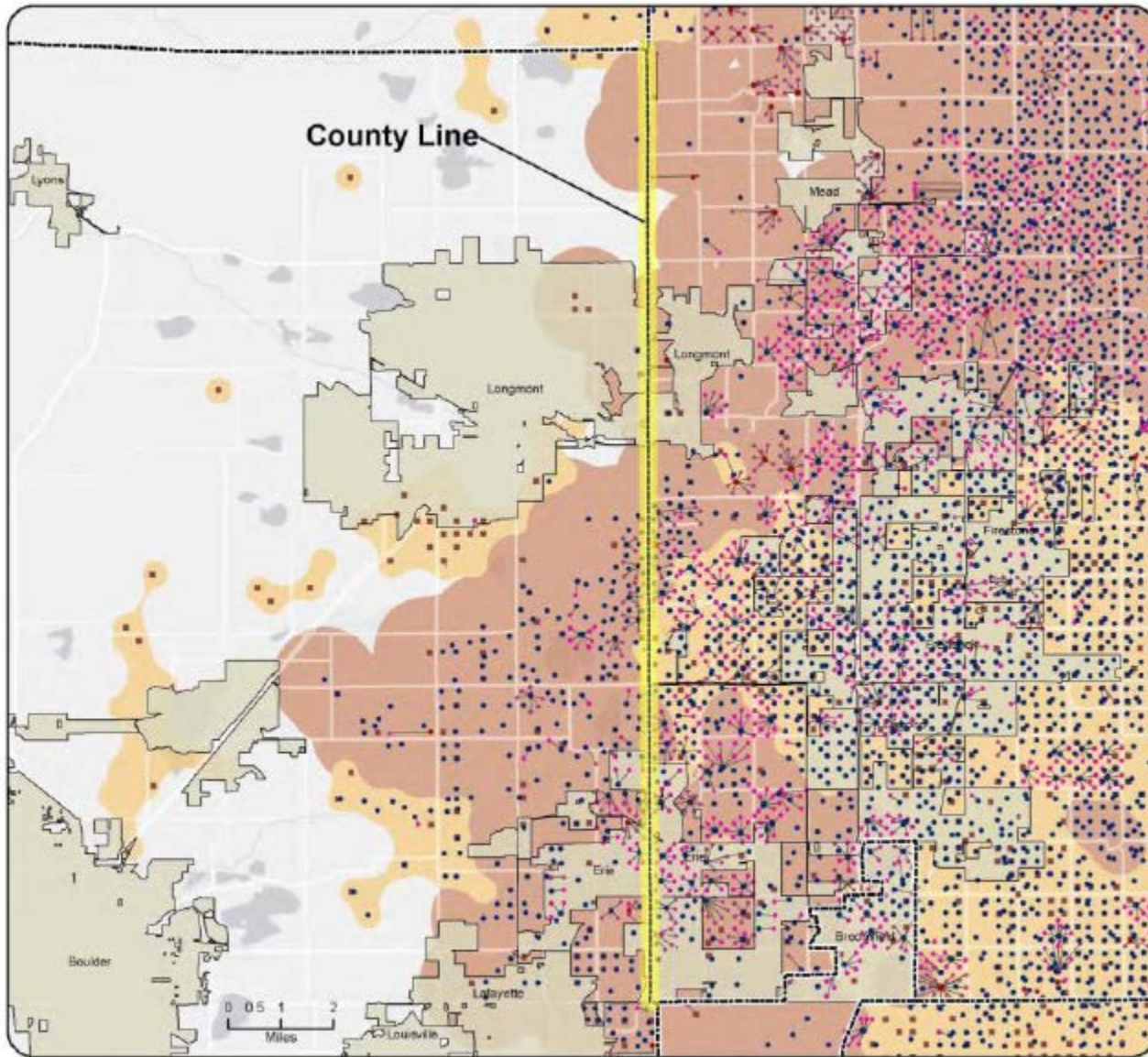




# REASONS FOR MORATORIUM

- 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)





## Colorado Oil and Gas Conservation Commission Wells: GIS Data Map

- Wells
- State Permitted Sites
- Pit Facility
- Directional Well Bottomhole: Actual
- Directional Well Bottomhole: Planned
- Directional Well Line
- Oil or Gas Field
- Wattenberg Gas Field



**source:**

<http://cogcc.state.co.us/>

# Boulder County

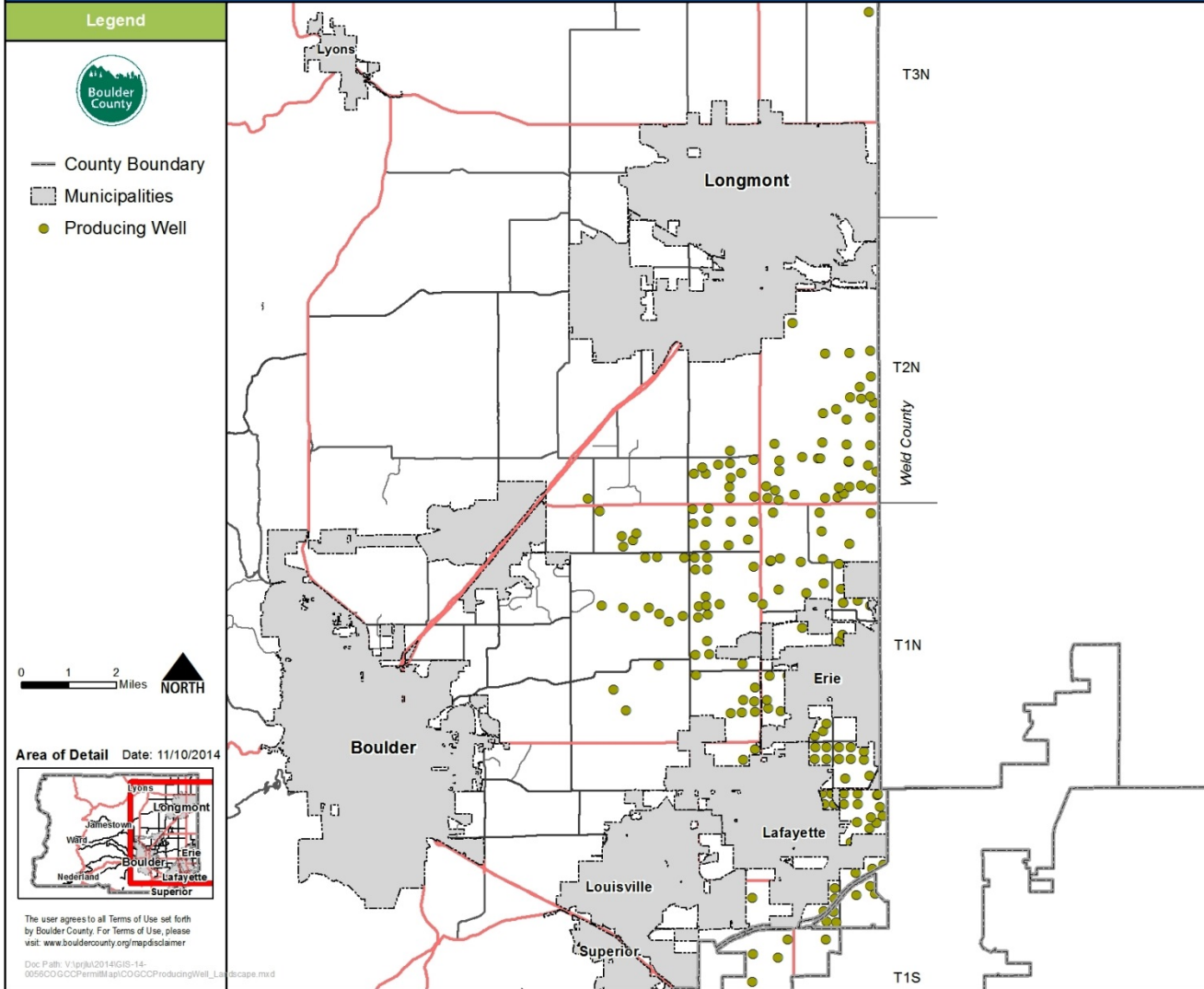




# REASONS FOR MORATORIUM

- 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/](http://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:

Year	Number Wells
2008	3
2009	7
2010	76
2011	300
2012	888

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

[www.cogcc.state.co.us/](http://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



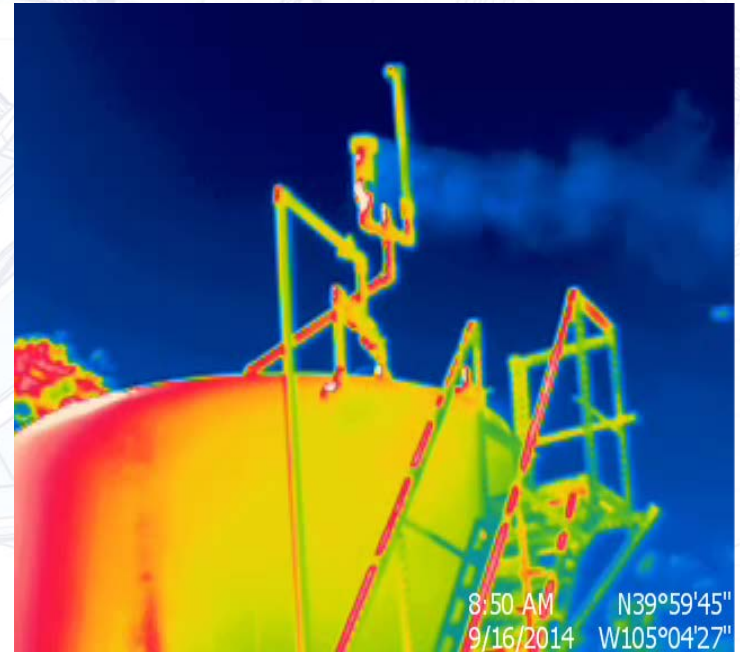


# UPDATES



# PUBLIC HEALTH MONITORING

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





# 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



# 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



## Boulder County

