

# LOCAL TOOLS FOR ADDRESSING AIR QUALITY CONCERNS: GARFIELD COUNTY

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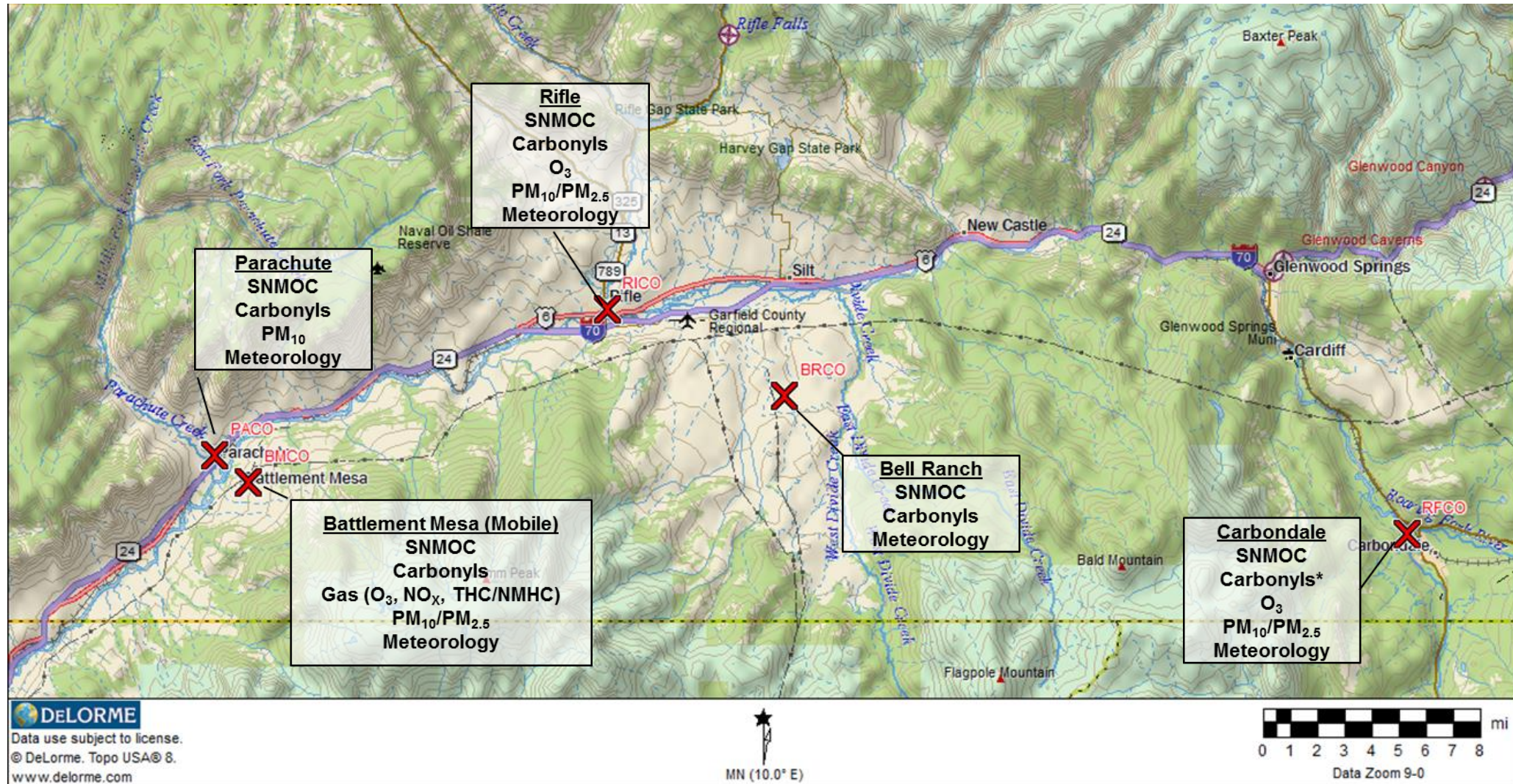


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Rocky Mountain Land Use Institute  
Annual Conference  
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# Ambient Air Monitoring Locations





# Criteria Pollutants

- Collected at 3 locations in Garfield County
- Regulated under the National Ambient Air Quality Standards (NAAQS)
  - Ozone
  - Particulate Matter
    - PM<sub>10</sub> – Dust
    - PM<sub>2.5</sub> – Smoke
  - Oxides of nitrogen



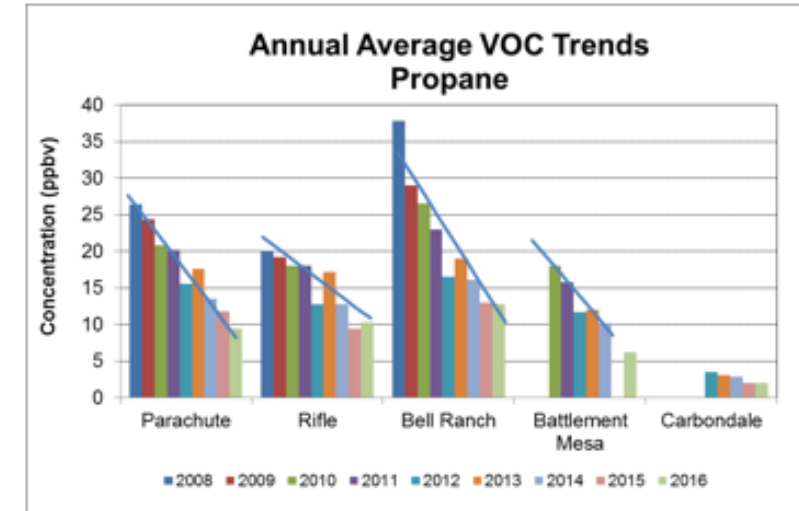
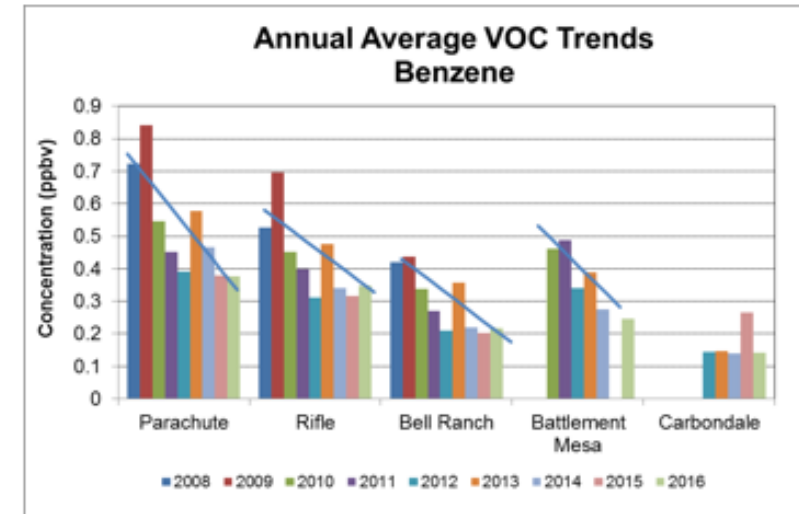
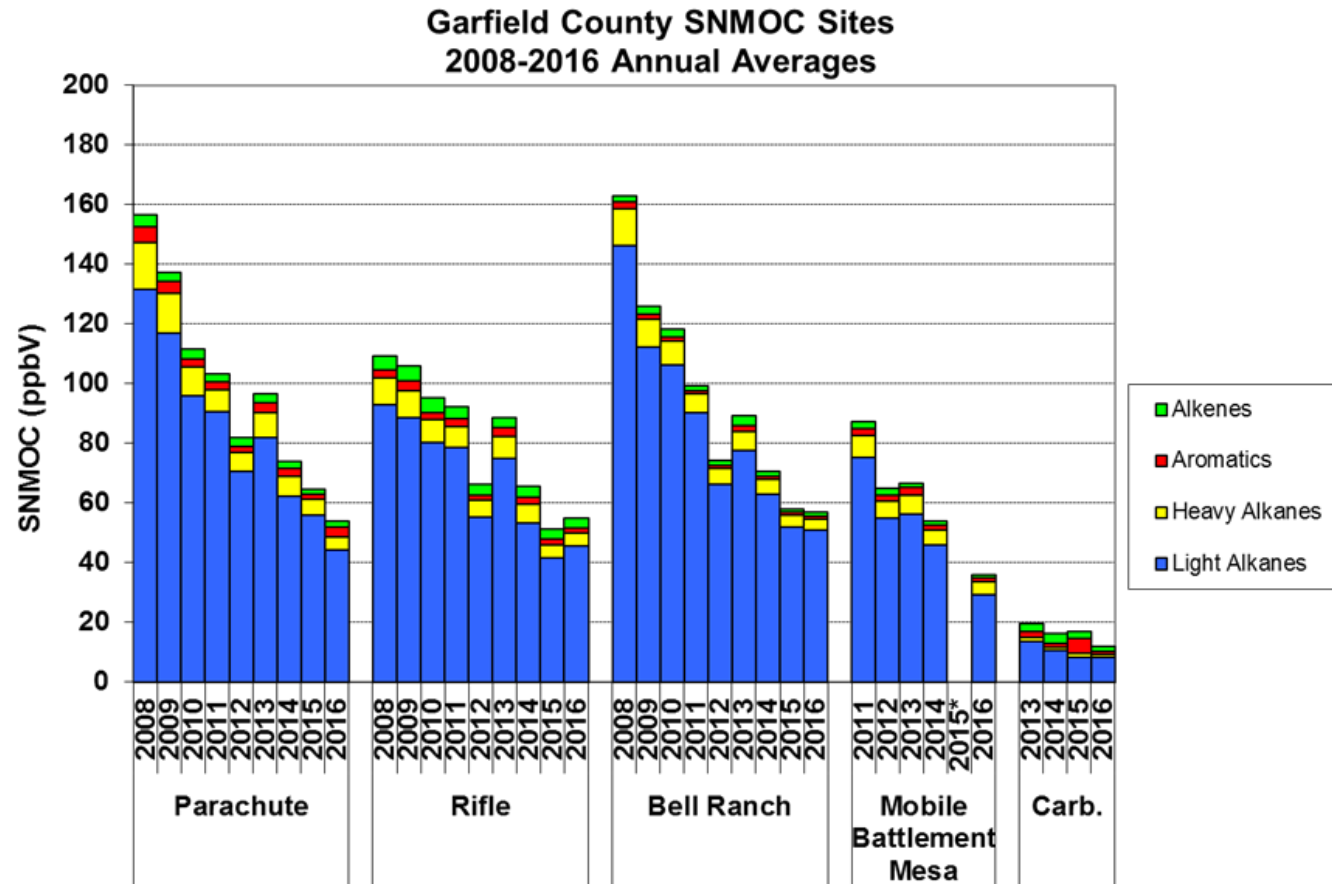
# Volatile Organic Compounds (VOCs)

- Two categories:
  - Speciated Non-Methane Organic Compounds (SNMOCs)
  - Carbonyls
- 90 Compounds
- 21 are Hazardous Air Pollutants
- Sampled every 6 days for 24 hours





# 2016 Data Highlights



*The mobile air monitoring unit, currently located in Battlement Mesa, was moved to Glenwood Springs during 2015 to characterize air quality there.*

# Annual Air Monitoring Reports

- Reports available on county website
  - <http://www.garfield-county.com/air-quality/>
- Annual reports summarize
  - Meteorology
  - Criteria Air Pollutants
  - Volatile Organic Compounds
- Citizen's Newsletter



# Facilitating Outside Research

- Colorado State University (CSU)'s "Characterizing Air Emissions from Natural Gas Drilling and Well Completion Operations in Garfield County, CO"
  - Separate Front Range Study
  - Health Risk Assessment contracted by CDPHE on both studies in progress
- CDPHE Health Risk Assessments for Garfield County VOC data
- Source Apportionment – what is our data telling us?

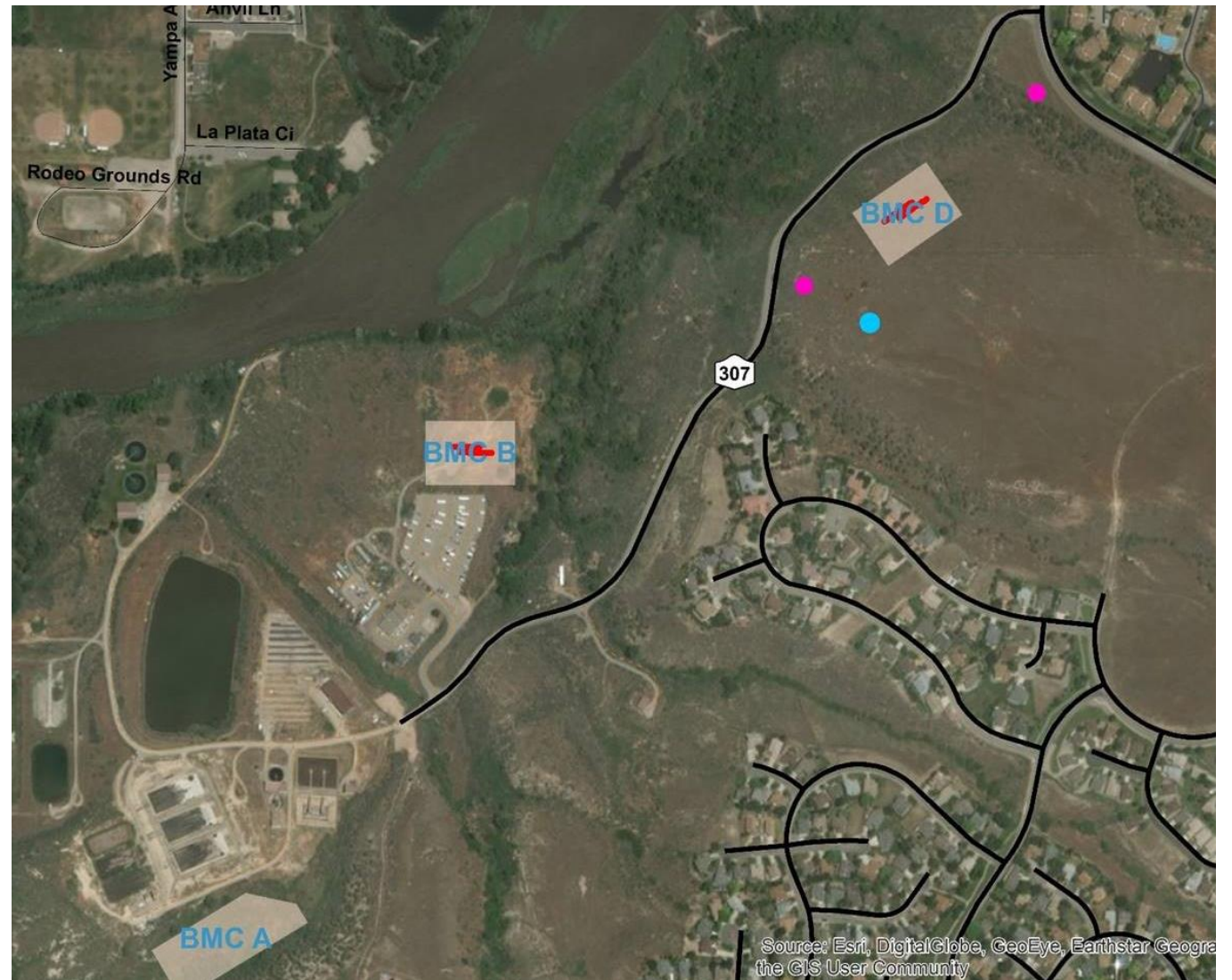
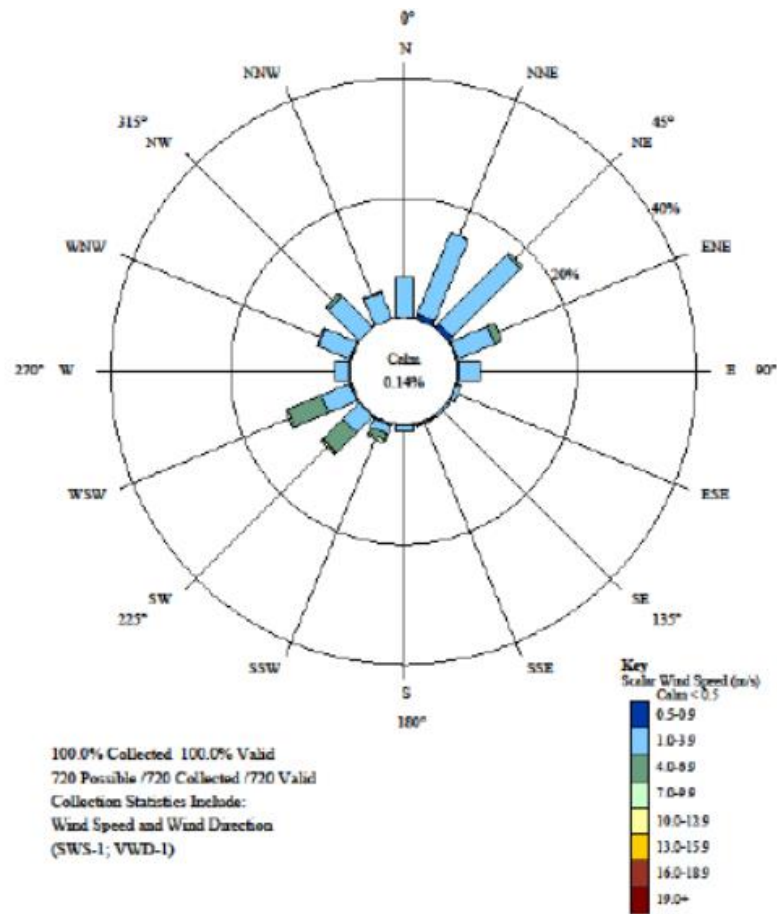


# Ursa Resources Drilling in Battlement Mesa Planned Unit Development

- Most well pads in Garfield County are a Use-by-Right
- Special Use Permit allowed for extensive conditions of approval (COA)
- Air monitoring as a COA
  - \$50,000 for Phase I
  - \$55,000 for Phase II
  - Landowner access
- Designed and operated autonomously by Garfield County staff
- Transparency is key: release quarterly reports with full dataset
- Review by CDPHE's Oil and Gas Health Information and Response Program (OGHIR)



# Sampler Locations



# Battlement Mesa Conditional Samplers

- Collects two samples per month upwind and downwind of well pad based on wind speed and direction



Upwind



Downwind



# Grab Sample Collection





# Thank you!

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