



Colorado Department
of Public Health
and Environment

Colorado's Oil and Gas Air Rulemaking



Ongoing Efforts to Address Air Emissions from the Oil and Gas Sector

- 2004 Rulemaking to reduce VOC emissions from Oil and Gas Sector in the Denver Metro/North Front Range as part of Early Action Compact
- 2006 update to 2004 rules and adoption of new rules with statewide applicability
- 2008 Ozone Action Plan to address non-compliance with Ozone NAAQS
- 2012 partial adoption of NSPS OOOO

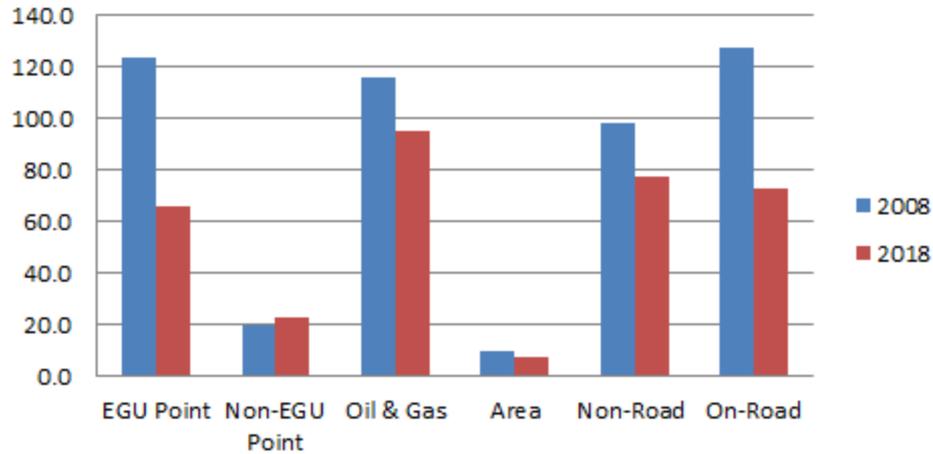
Significant Ozone Precursors

Source Category	NO _x Emissions [tons/day]*		VOC Emissions [tons/day]*	
	Statewide	9-County Ozone NAA	Statewide	9-County Ozone NAA
Point	195 (28%)	65 (21%)	37 (4%)	20 (4%)
Oil & Gas	149 (21%)	51 (16%)	463 (47%)	291 (52%)
Area	25 (3%)	13 (4%)	206 (21%)	105 (19%)
Non-Road Mobile	133 (19%)	68 (22%)	91 (9%)	41 (7%)
On-Road Mobile	202 (29%)	115 (37%)	189 (19%)	106 (19%)
Totals:	704	312	986	563

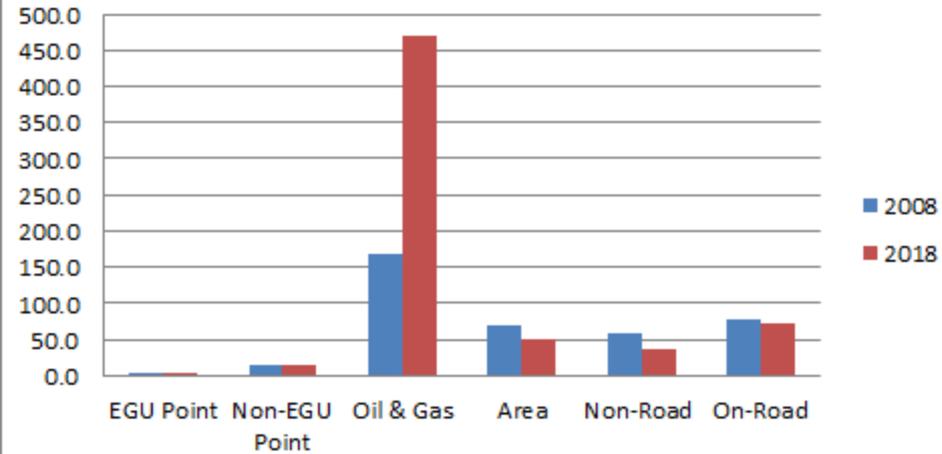
*2010 Data

Draft 2018/2008 Colorado Emissions Outside NAA

CO Non-NAA NOx Emissions (TPD)



CO Non-NAA VOC Emissions (TPD)



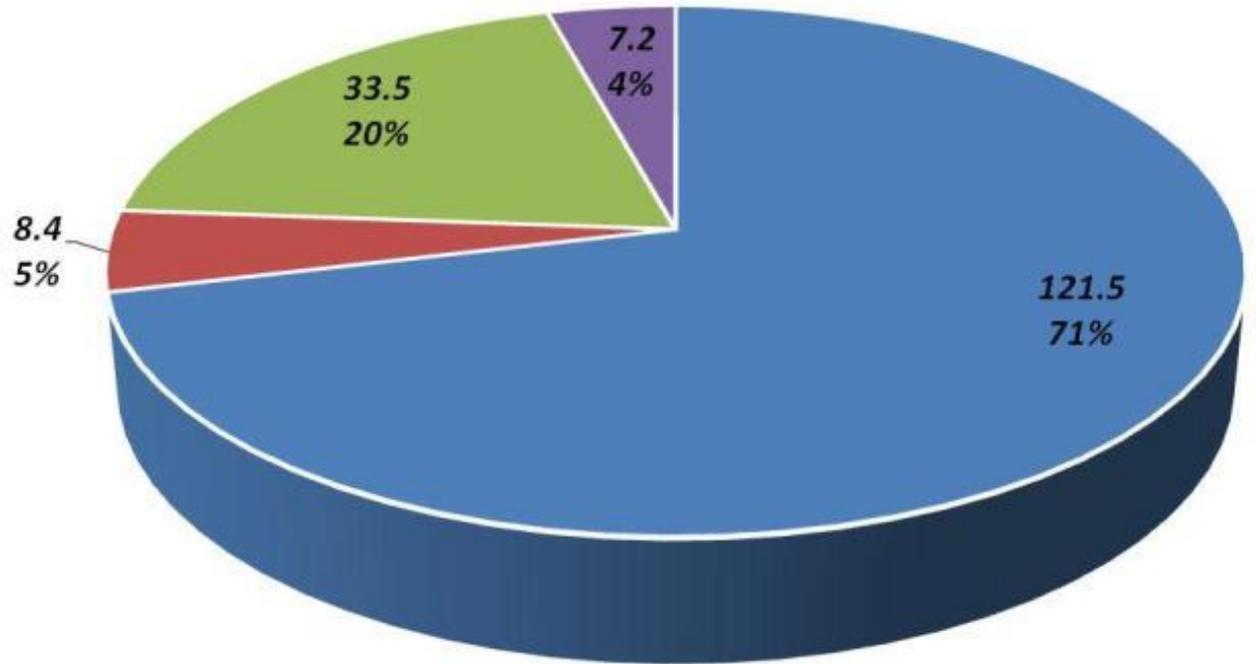
DMA/NFR NAA Category	NO _x Emissions (TPD)			VOC Emissions (TPD)		
	2008	2018	%	2008	2018	%
Total Anthropogenic	492.4	340.1	-30.9%	389.2	644.7	65.6%
Biogenic	87.4	87.4	0.0%	2264.7	2264.7	0.0%
Total	579.8	427.5	-26.3%	2653.9	2909.4	9.6%

High Level Observations – Oil and Gas Emissions in Colorado

- Oil and Gas operations significantly contribute to air emissions in Colorado
- Oil and Gas emissions impact multiple areas across the state
- Future development opportunities will likely increase oil and gas air emissions and result in impacts for more areas of the state
- Oil and Gas sector is the predominant source of VOC emissions
- Absent additional requirements, oil and gas emissions are expected to increase while VOC emissions from other sectors are expected to decrease
- Oil and Gas sector is one of several contributors to NO_x emissions
 - Significant NO_x emission reductions over the next 5 years due to Regional Haze rules and vehicle fleet turnover

Oil and Gas VOC Sources

Statewide (excluding Ozone NAA)
2010 - VOC Emissions - O & G Sources
171 tons/day



■ Condensate Tanks

■ Pneumatic Devices (Area)

■ Unpermitted Fugitives (Area)

■ Other

2013 Rulemaking Effort Goals

- Identify and implement strategies that **improve the effectiveness and efficiency** of Colorado's air quality program
- Find ways to **reduce permitting burdens** for both the Division and the regulated community without impacting environmental benefits from the permitting program
- Address the growth in oil and gas development through the **adoption of reasonable emission reduction strategies**
- Lay the groundwork for ongoing efforts to **reduce oil and gas emissions** while minimizing burdens that don't provide environmental value

Summary of Requirements Being Considered

- Expand control requirements for storage tanks
 - Lower threshold for required controls from 20 tpy to 6 tpy
 - Apply control requirement to crude oil tanks and produced water tanks
 - Expand non-attainment area requirement for controls during the first 90 days of production statewide
- Enhance capture at controlled storage tanks
 - Clarify that venting from thief hatches and pressure relief valves is not allowable during normal operation
 - Require operators to employ a storage tank emission management system to ensure capture and control of emissions from tanks

Summary of Requirements Being Considered

- Expand non-attainment area auto-igniter requirements to rest of the state
- Expand leak detection and repair requirements
 - Compressor stations
 - Well production sites

Summary of Requirements Being Considered

- Expand non-attainment area pneumatic control requirements statewide
 - Applies to new and existing pneumatic devices
- Reduce venting and flaring of gas stream at well sites
 - Require that gas stream be routed to a pipeline or flared during the 1st six months
 - After six months operators must route gas stream to a pipeline or obtain an exemption from the Division

Summary of Requirements Being Considered

- Leak detection:
 - Require leak detection at compressor stations and well production facilities
- Revise permitting and reporting requirements
- Full adoption of NSPS OOOO
- Regulatory development process is ongoing
 - Balance interests of industry and environmental stakeholders
 - Formulate regulatory requirements that are enforceable, achieve environmental benefits, minimize administrative burdens

Expected Schedule

- Workgroup Meetings Aug/Sept/Oct 2013
- Individual Meetings, as needed Sept/Oct 2013
- Request for Hearing, November 2013
- Hearing, February 2014

Thank you...
Questions?

Garry Kaufman

garrison.kaufman@state.co.us

303-692-3269