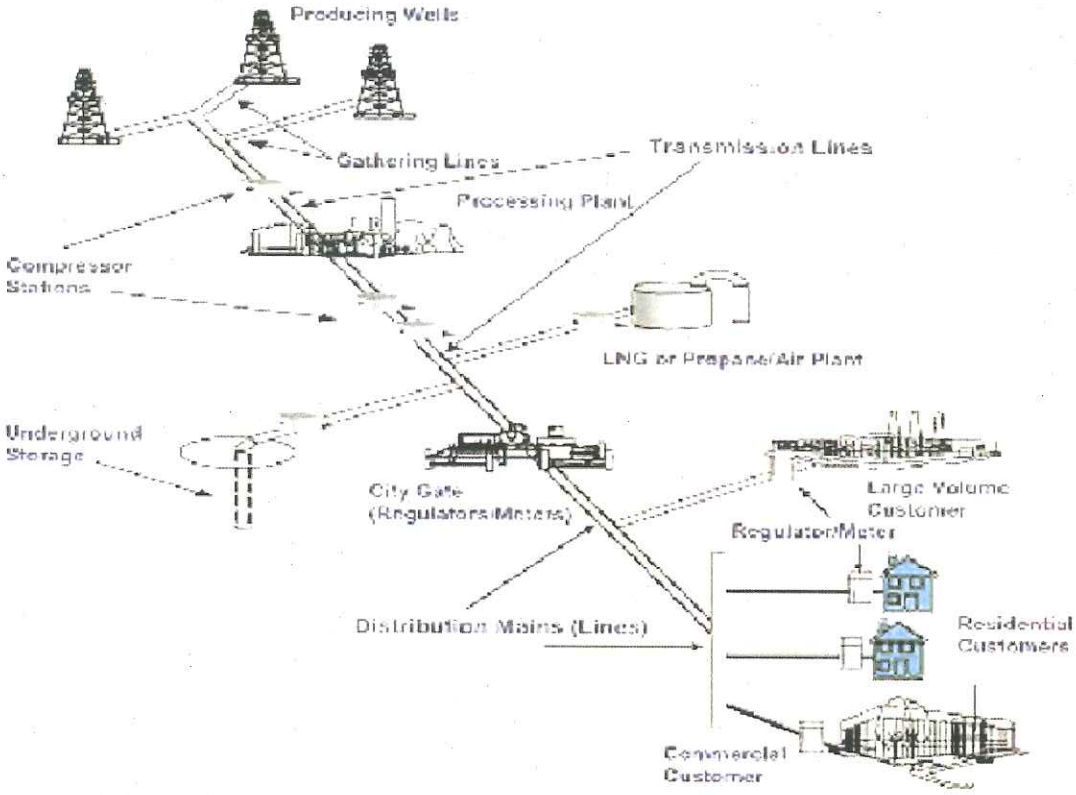
O& G Industry Overview

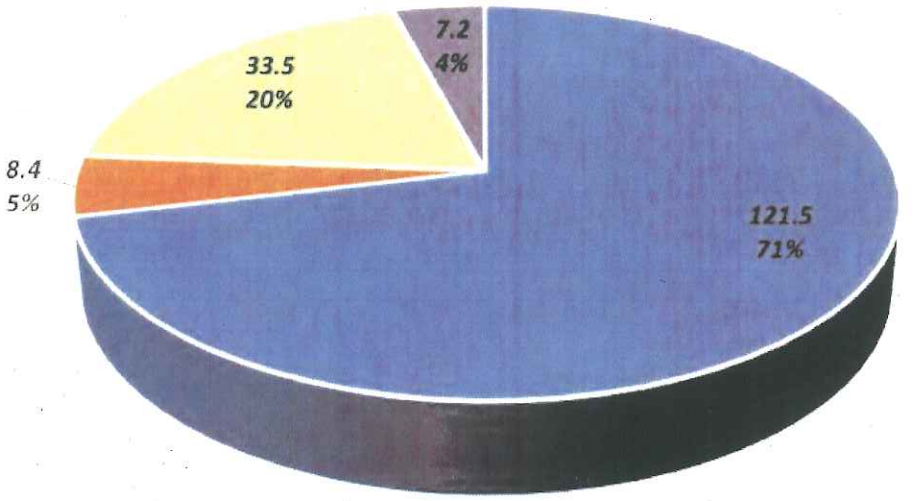


High Level Observations – Oil and Gas Emissions in Colorado

- 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 : 180,000 tons/yr
- 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

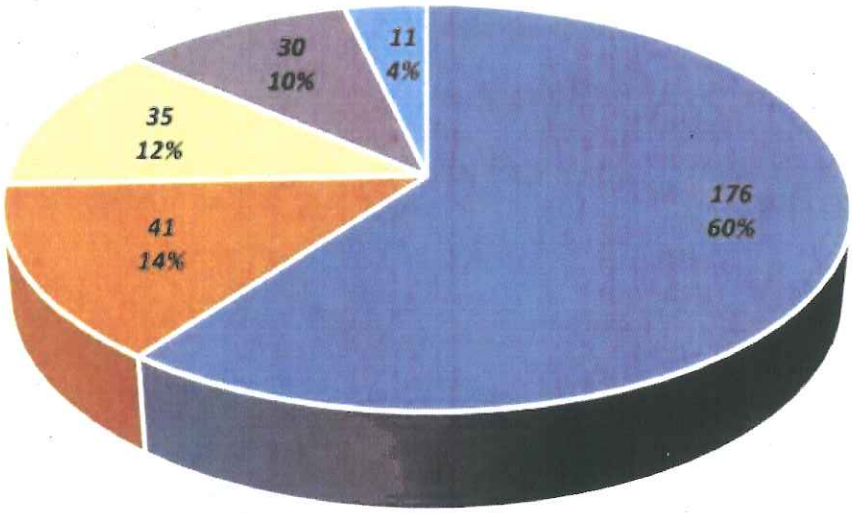
Statewide (excluding Ozone NAA)
2010 - VOC Emissions - O & G Sources
171 tons/day → 62,000 tons/yr



- Condensate Tanks
- Pneumatic Devices (Area)
- Unpermitted Fugitives (Area)
- Other

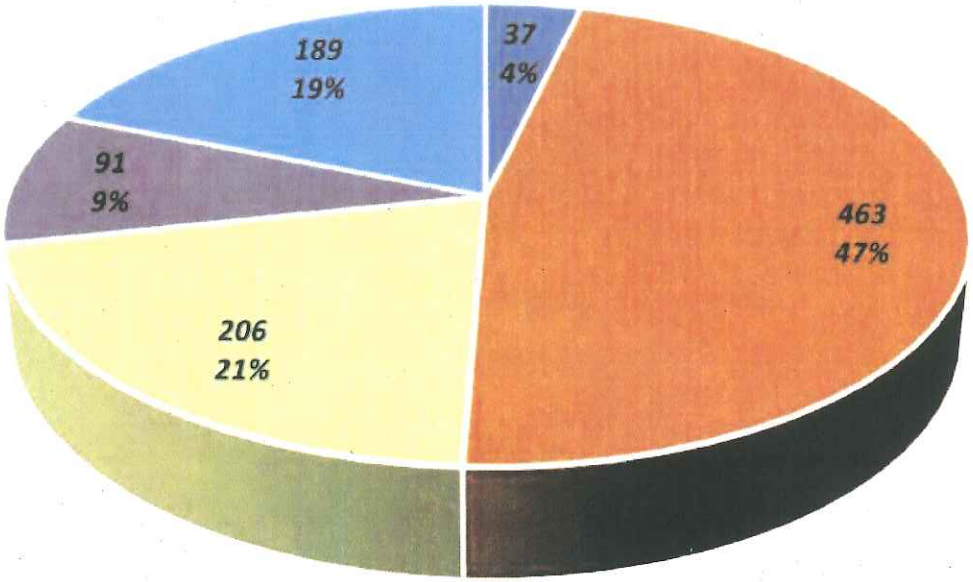
Oil and Gas VOC Sources

DMA/NFR Ozone Non-Attainment Area
2010 - VOC Emissions - O & G Sources
292 tons/day → 107,000 tons/yr



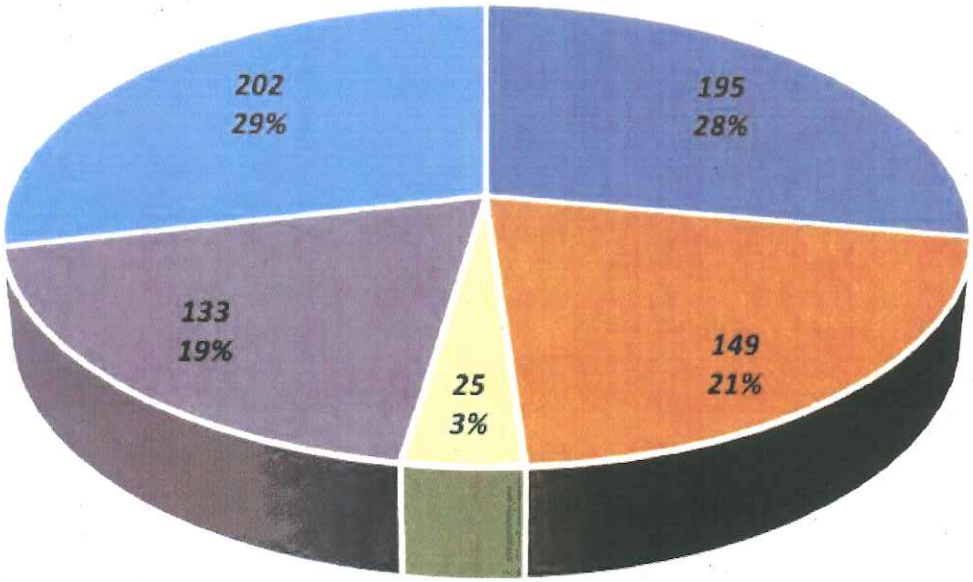
- Condensate Tanks
- Pneumatic Devices (Area)
- Unpermitted Fugitives (Area)
- Other Area
- Other O&G Point Sources

Colorado (Statewide)
2010 - Anthropogenic VOC Emissions
986 tons/day



- Point
- O&G Point and Area
- Area
- Non-Road Mobile
- On-Road Mobile

Colorado (Statewide)
2010 - Anthropogenic NOx Emissions
704 tons/day



- Point
- O&G Point and Area
- Area
- Non-Road Mobile
- On-Road Mobile

Significant Ozone Precursors

	NO_x Emissions [tons/ day]*		VOC Emissions [tons/ day]*	
Source Category	*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*