

# Colorado Springs Air Monitoring and GHG Update

Presentation to the Peak Alliance for a Sustainable Future

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10/16/2019

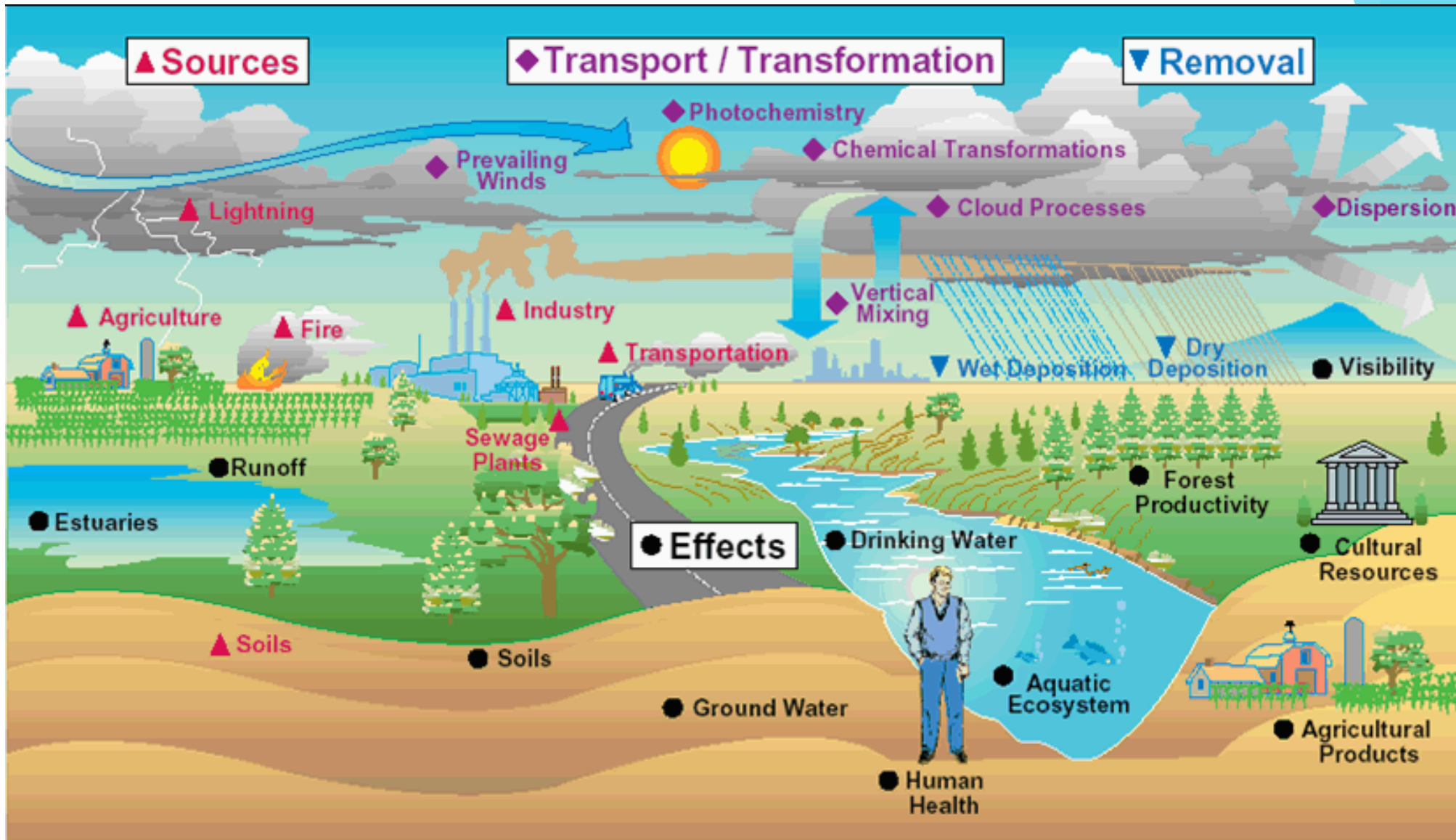


**COLORADO**

**Air Pollution Control Division**

Department of Public Health & Environment

# Air respects no boundaries



# NATIONAL AMBIENT AIR QUALITY STANDARDS

| POLLUTANT  | AVERAGING TIME                        | STANDARD               |
|--|---------------------------------------|------------------------|
| Carbon Monoxide (CO)   |                                       |                        |
| Primary Standard   | 1 Hour <sup>(a)</sup>                 | 35 ppm                 |
| Primary Standard   | 8 Hour <sup>(a)</sup>                 | 9 ppm                  |
| Ozone (O <sub>3</sub> )  |                                       |                        |
| Primary and Secondary Standards  | 8 Hour <sup>(b)</sup>                 | 0.070 ppm              |
| Nitrogen Dioxide (NO <sub>2</sub> )  |                                       |                        |
| Primary Standard   | 1 Hour <sup>(c)</sup>                 | 100 ppb                |
| Primary and Secondary Standards  | Annual Arithmetic Mean                | 0.053 ppm              |
| Sulfur Dioxide (SO <sub>2</sub> )  |                                       |                        |
| Primary Standard   | 1 Hour <sup>(d)</sup>                 | 75 ppb                 |
| Secondary Standard   | 3 Hour <sup>(a)</sup>                 | 0.5 ppm                |
| Particulates (PM <sub>10</sub> )   |                                       |                        |
| Primary and Secondary Standards  | 24 Hour <sup>(e)</sup>                | 150 µg/m <sup>3</sup>  |
| Fine Particulates (PM <sub>2.5</sub> )   |                                       |                        |
| Primary and Secondary Standards  | Annual Arithmetic Mean <sup>(f)</sup> | 12.0 µg/m <sup>3</sup> |
| Primary and Secondary Standards  | 24 Hour <sup>(g)</sup>                | 35 µg/m <sup>3</sup>   |
| Lead (Pb)  |                                       |                        |
| Primary and Secondary Standards  | 3-Month Rolling Average               | 0.15 µg/m <sup>3</sup> |
| <p>(a) Not to be exceeded more than once per year.</p> <p>(b) The three-year average of the fourth maximum value for each year is not to exceed this level.</p> <p>(c) The three-year average of the 98<sup>th</sup> percentile daily maximum value for each year is not to exceed this level.</p> <p>(d) The three-year average of the 99<sup>th</sup> percentile daily maximum value for each year is not to exceed this level.</p> <p>(e) Statistically estimated number of days with concentrations above this level, averaged over a three-year period, is not to be more than 1 per year.</p> <p>(f) The average of three years of annual averages (based on quarterly averages) is not to exceed this level.</p> <p>(g) The three-year average of the 98<sup>th</sup> percentile value for each year is not to exceed this level.</p> |                                       |                        |

6 “Criteria” pollutants with health-based standards established by the U.S. EPA

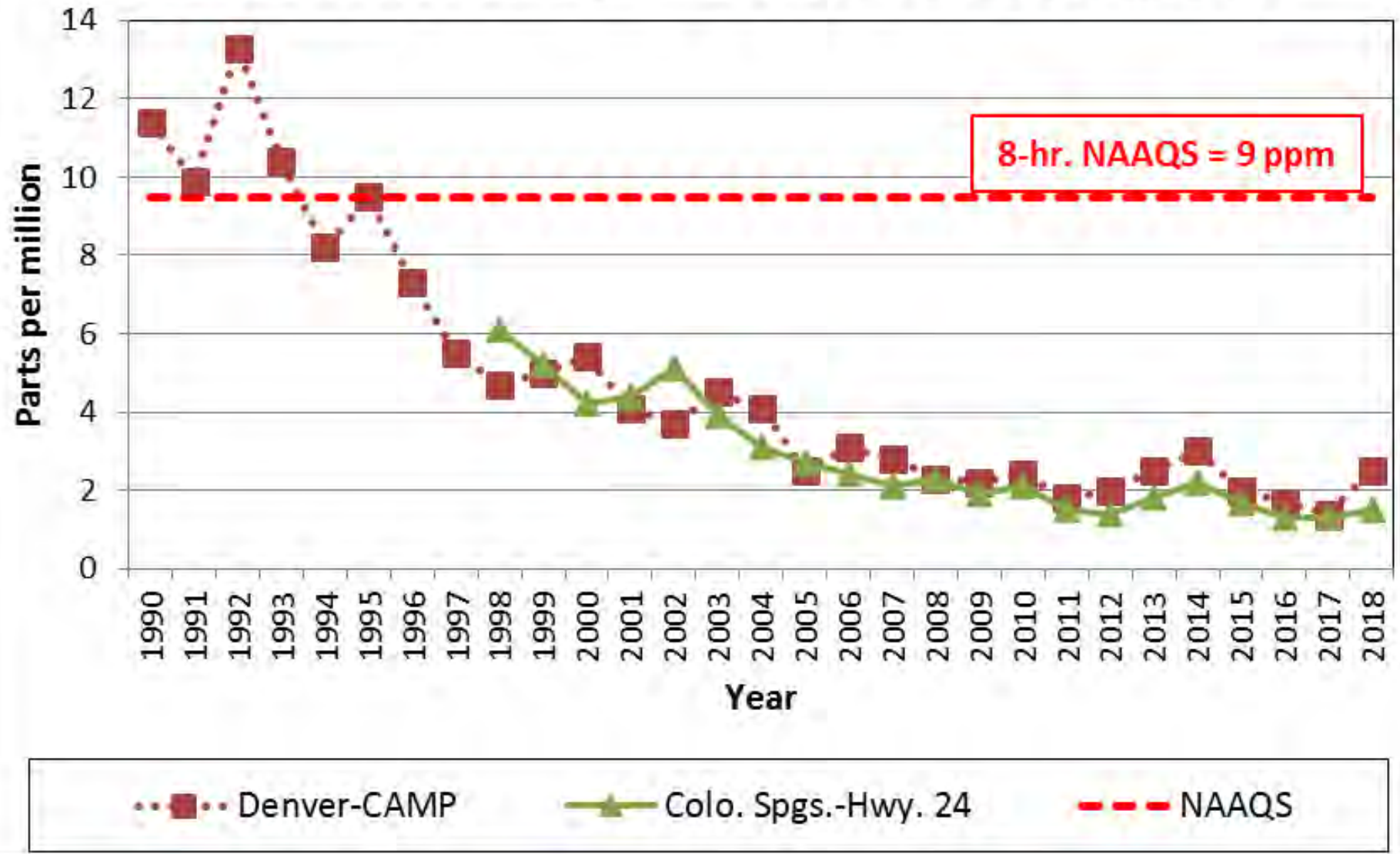
# CDPHE Air Monitoring in the Colorado Springs area

- ▶ Ozone
  - ▶ 1975 - current at 4 different sites
  - ▶ **2 active sites:** U.S. Air Force Academy, Manitou Springs
- ▶ Carbon Monoxide
  - ▶ 1975 - current at 4 different sites
  - ▶ **1 active site:** Highway 24
- ▶ Sulfur Dioxide
  - ▶ 2013 - current at **1 active site:** Highway 24
- ▶ Nitrogen Dioxide
  - ▶ None
- ▶ PM10
  - ▶ 1987 - current at 4 different sites
  - ▶ **1 active site:** Colorado College
- ▶ PM2.5
  - ▶ 1987 - current at 3 different sites
  - ▶ **1 active site:** Colorado College

# Air Monitoring by Colorado Springs Utilities and Others

- ▶ Ozone
  - ▶ 1981 - 1988 at 1 site
- ▶ Carbon Monoxide
  - ▶ 1988 - 2001 at 7 different sites
- ▶ Sulfur Dioxide
  - ▶ 1988 - 2001 at 10 different sites
- ▶ Nitrogen Dioxide
  - ▶ 1988 - 2001 at 3 different sites
- ▶ PM10
  - ▶ 1988 - 2001 at 12 different sites
- ▶ PM2.5
  - ▶ None

# Carbon Monoxide --- 8-Hour 2nd Maximum

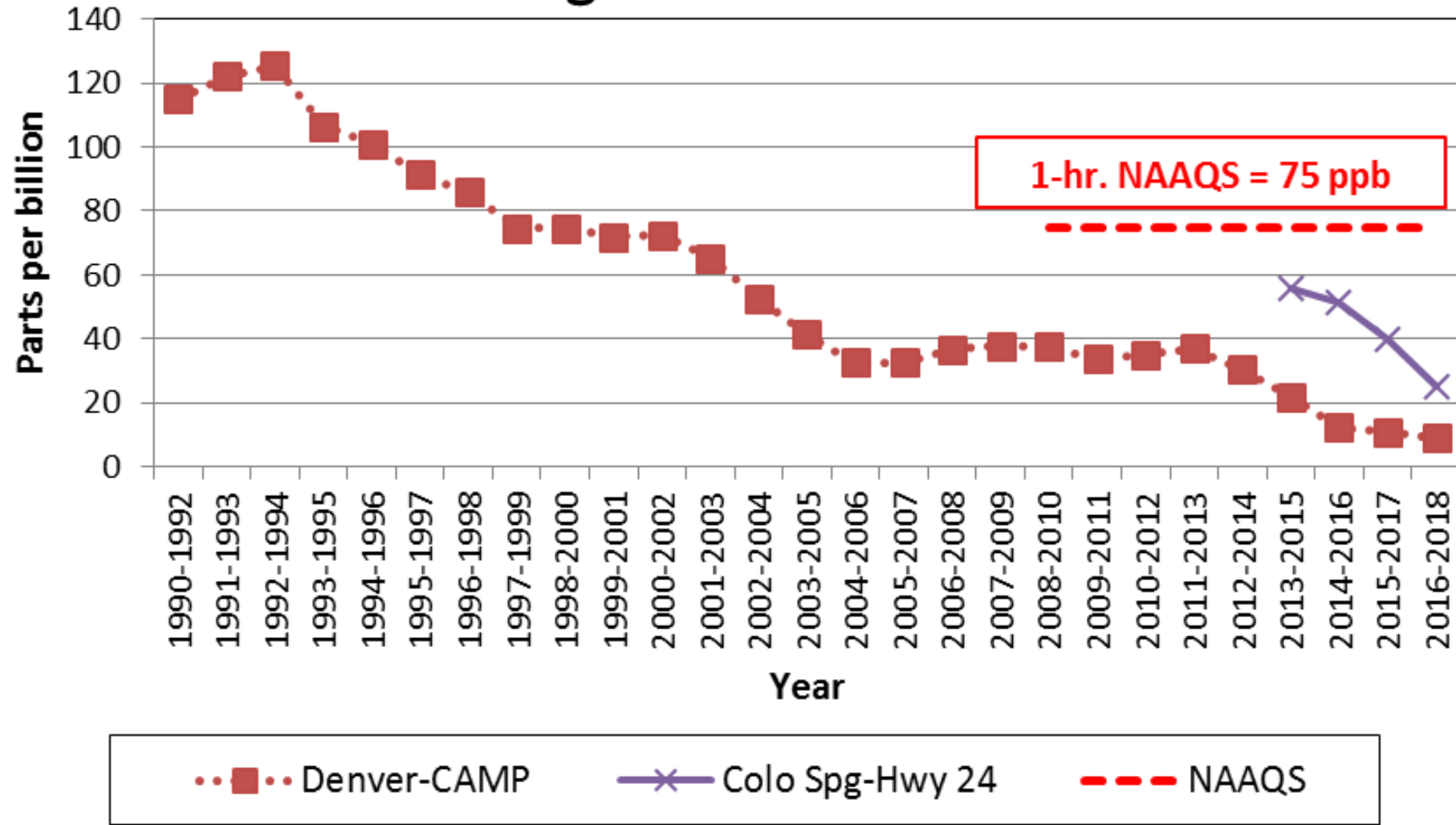


No issues nationwide



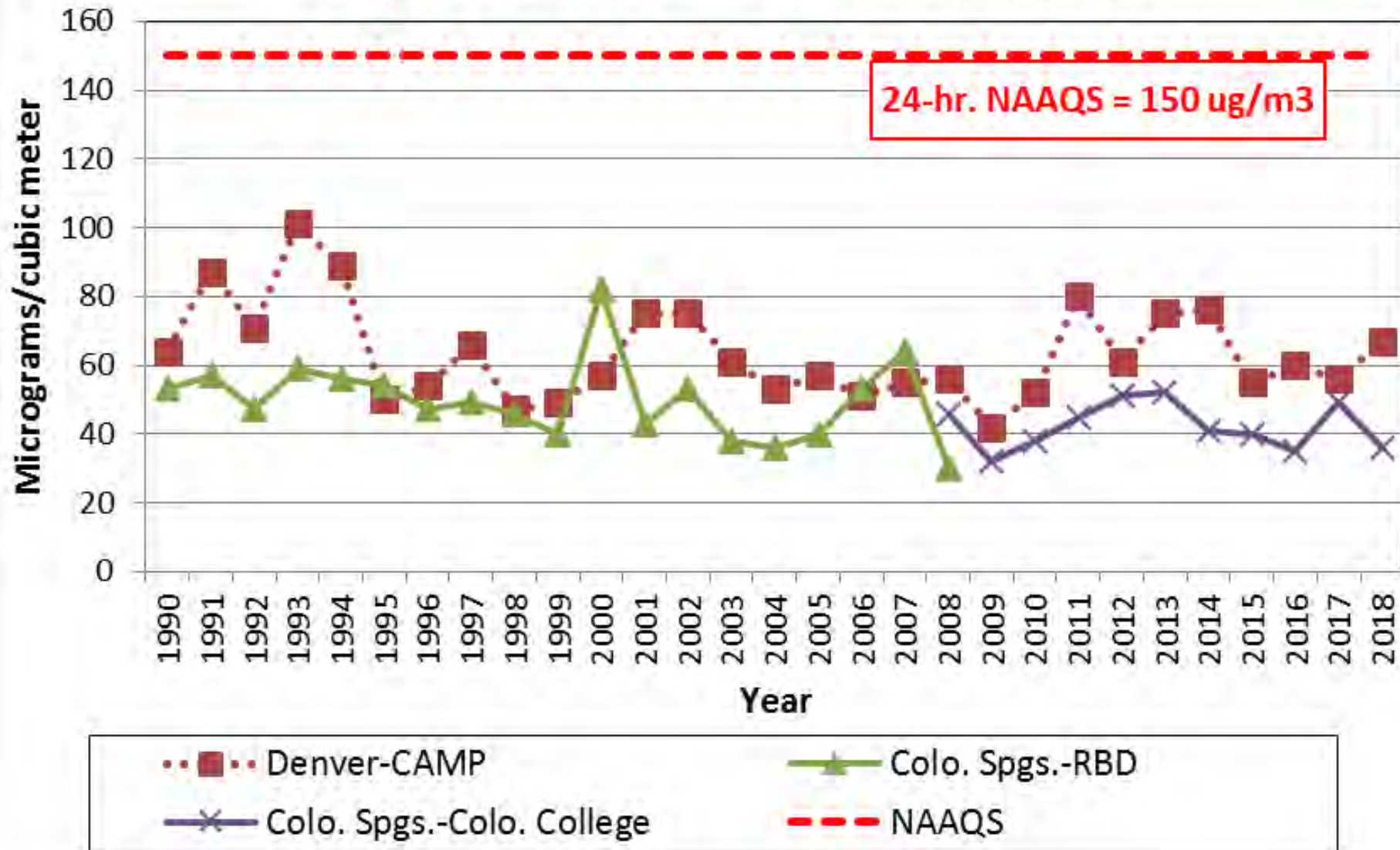
# 1-Hour Sulfur Dioxide

## --- 3-Yr. Avg. of 99th Percentile ---



Coal combustion the primary concern (if no good emissions controls)

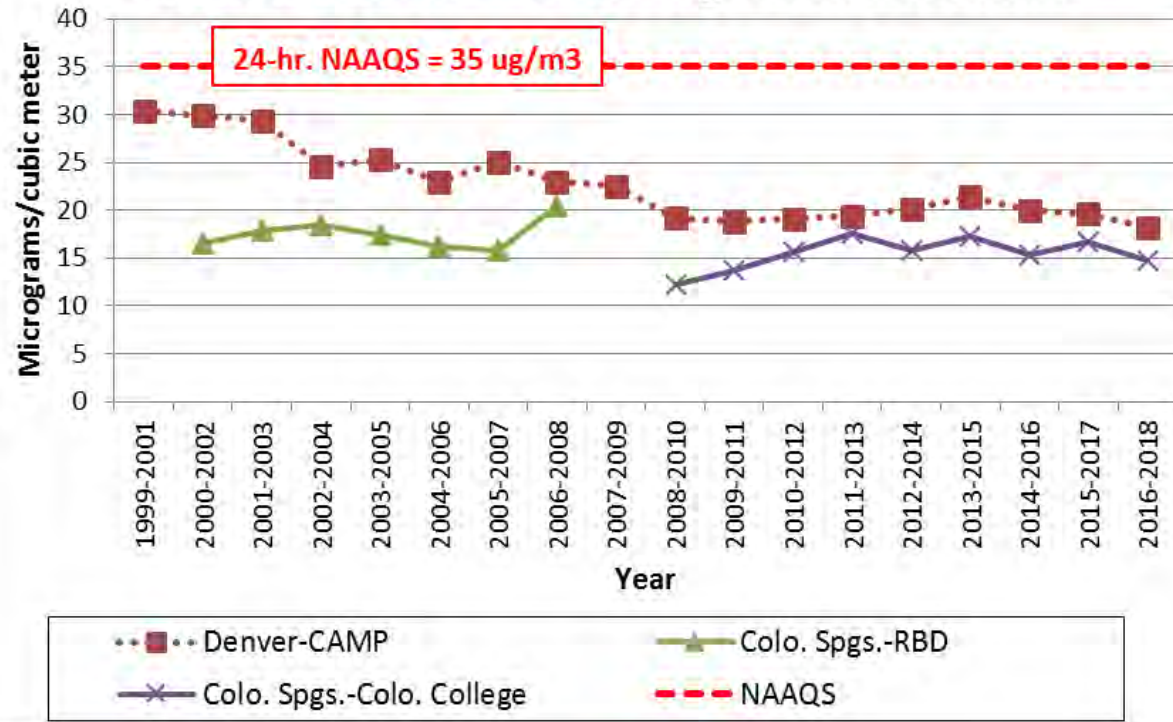
# 24-Hour PM10 --- 2nd Maximum



Blowing dust the primary concern

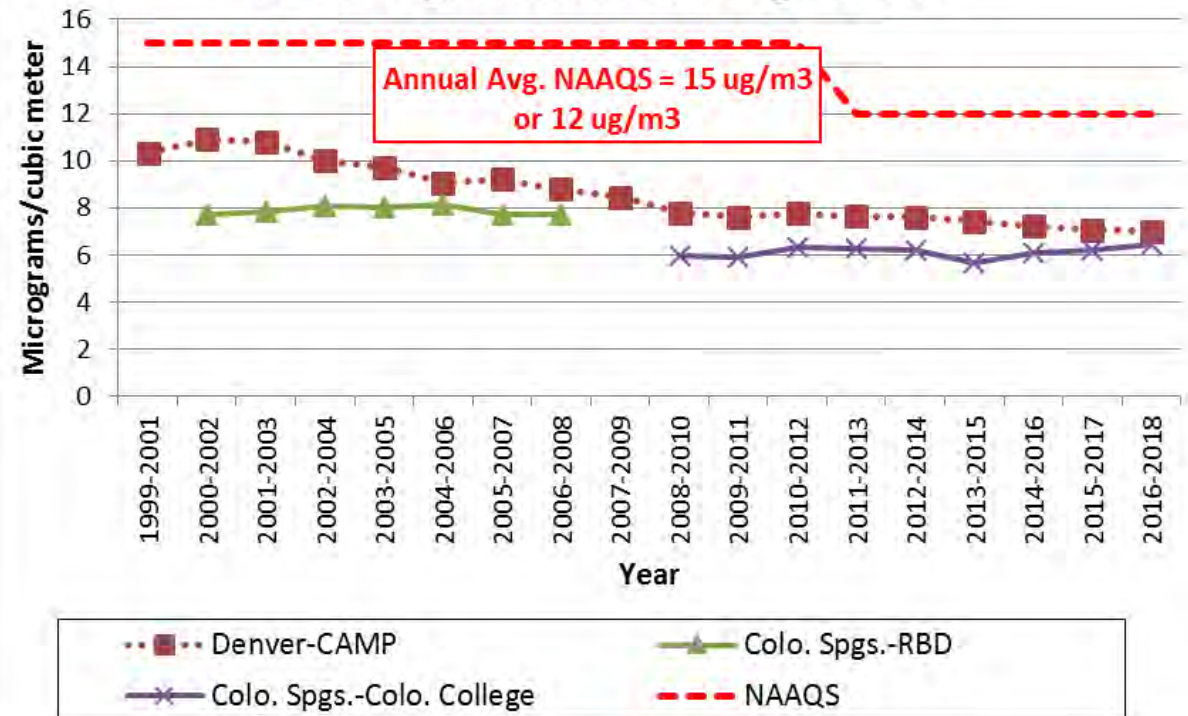


## 24-Hour PM2.5 --- 3-Yr. Avg. 98th Percentile



Primarily related to combustion (motor vehicles, industry, other)

## 3-Yr. Avg. Annual Average PM2.5

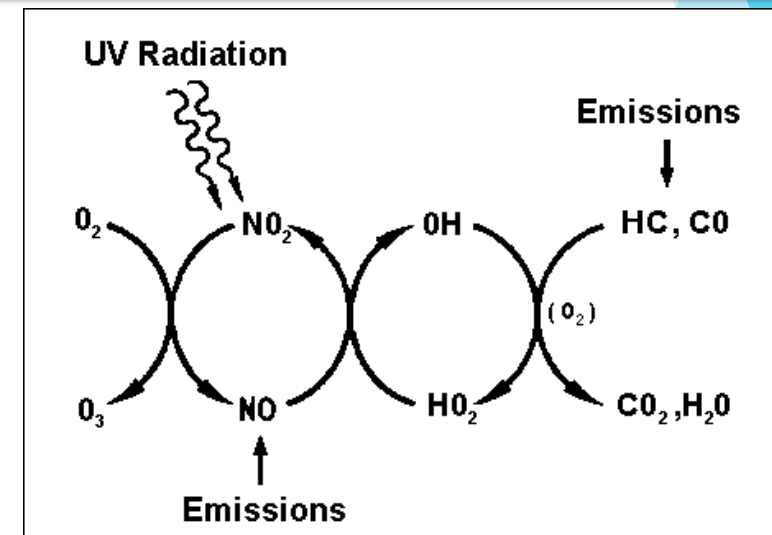
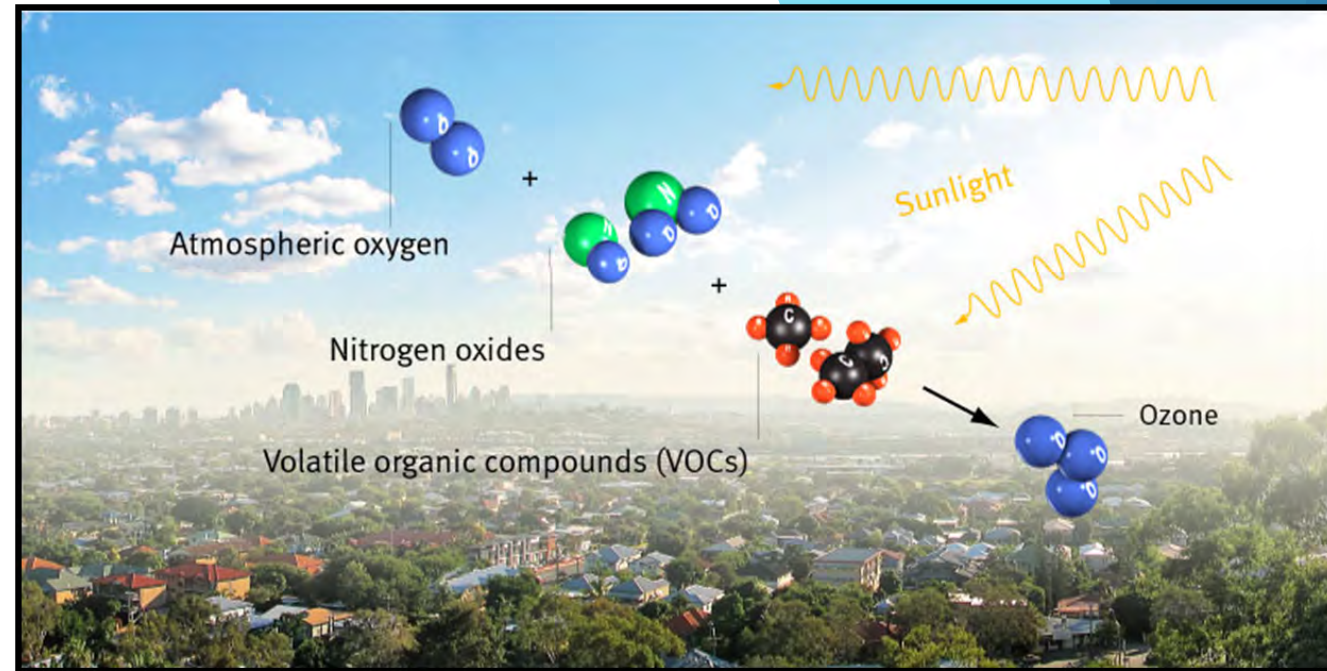


# Ozone standards and health effects

- ▶ National Ambient Air Quality Standards (NAAQS) currently in effect
  - ▶ **2015:** 0.070 ppm (or 70 ppb)
  - ▶ **2008:** 0.075 ppm (or 75 ppb)
  - ▶ Both defined as the 3-year average of the daily 4th maximum 8-hour values (truncated)
- ▶ Health effects
  - ▶ Irritates the airways and reduces lung function, causing coughing, sore or scratchy throat, and shortness of breath
  - ▶ Aggravates chronic lung diseases such as asthma, emphysema and bronchitis
  - ▶ Increased risk of premature death in people with heart and lung disease
  - ▶ Groups at risk include:
    - ▶ People with lung disease, especially children with asthma
    - ▶ Children and older adults
    - ▶ People who are active outside, especially children and people who work outdoors

# Ozone formation

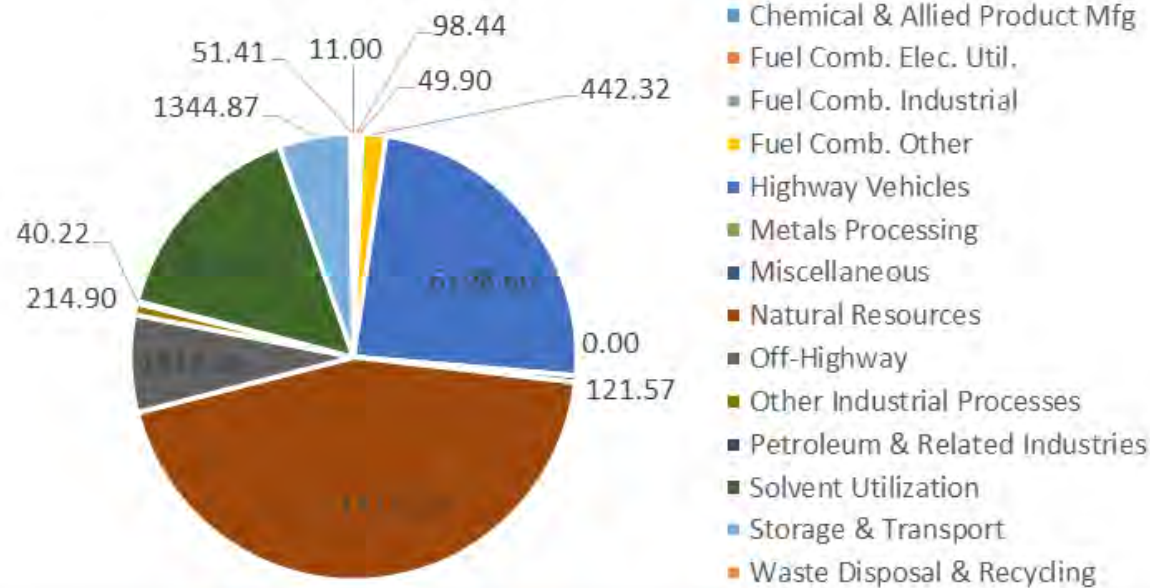
- ▶ Typically not directly emitted but secondarily formed
- ▶ Formed through complex interaction between volatile organic compounds (VOCs) and nitrogen oxides (NO<sub>x</sub>) in presence of sunlight
- ▶ Highest ground-level ozone concentrations usually occur in the summer
- ▶ Precursor emissions include:
  - ▶ motor vehicles
  - ▶ industry
  - ▶ oil and gas production
  - ▶ Biogenic (i.e. vegetation)



# Emissions Inventory - VOC

## 2014 NEI - Volatile Organic Compounds

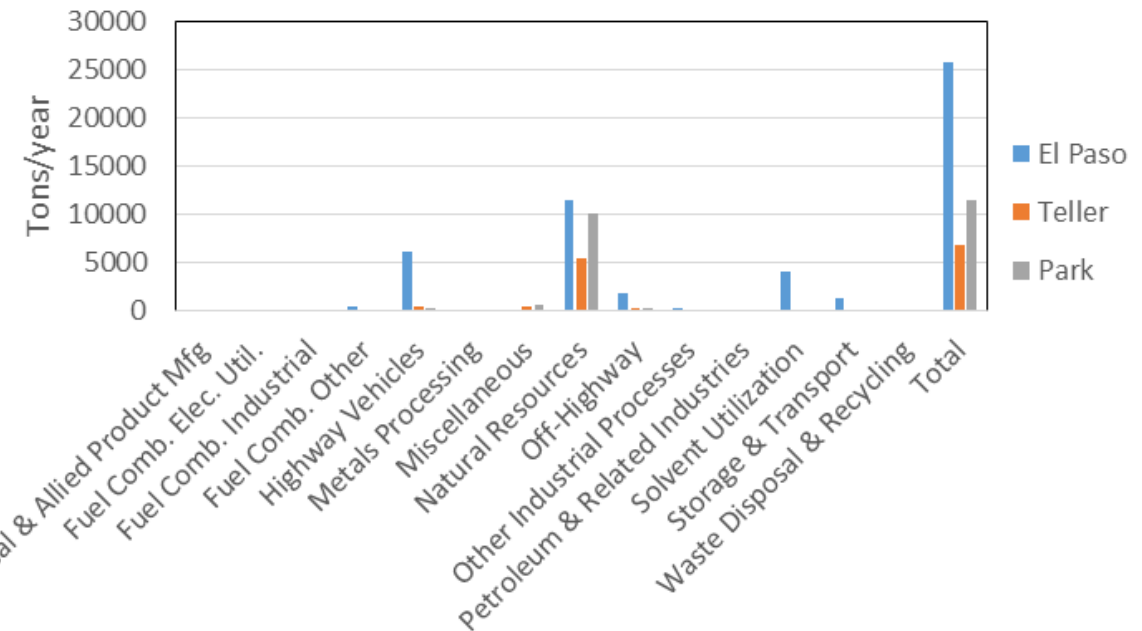
El Paso County



### Biggest Sources:

1. Natural/biogenic
2. Highway vehicles
3. Solvent use

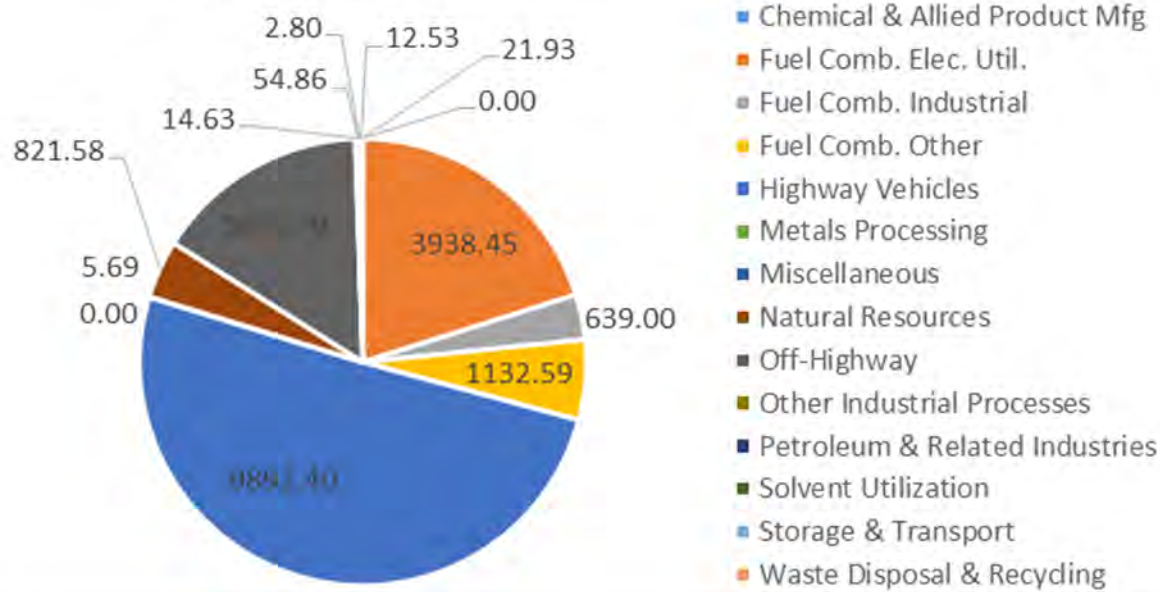
## 2014 NEI - Volatile Organic Compounds





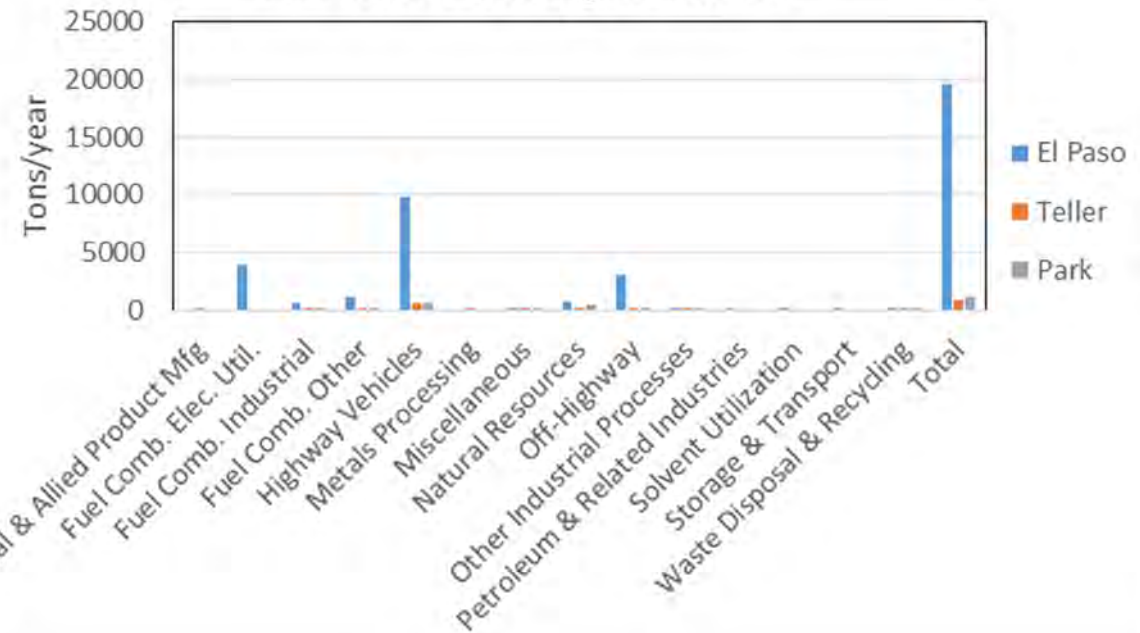
# Emissions Inventory - NOx

2014 NEI - Nitrogen Oxides  
El Paso County



- Biggest Sources:**
1. Highway vehicles
  2. EGU
  3. Off-highway vehicles

2014 NEI - Nitrogen Oxides



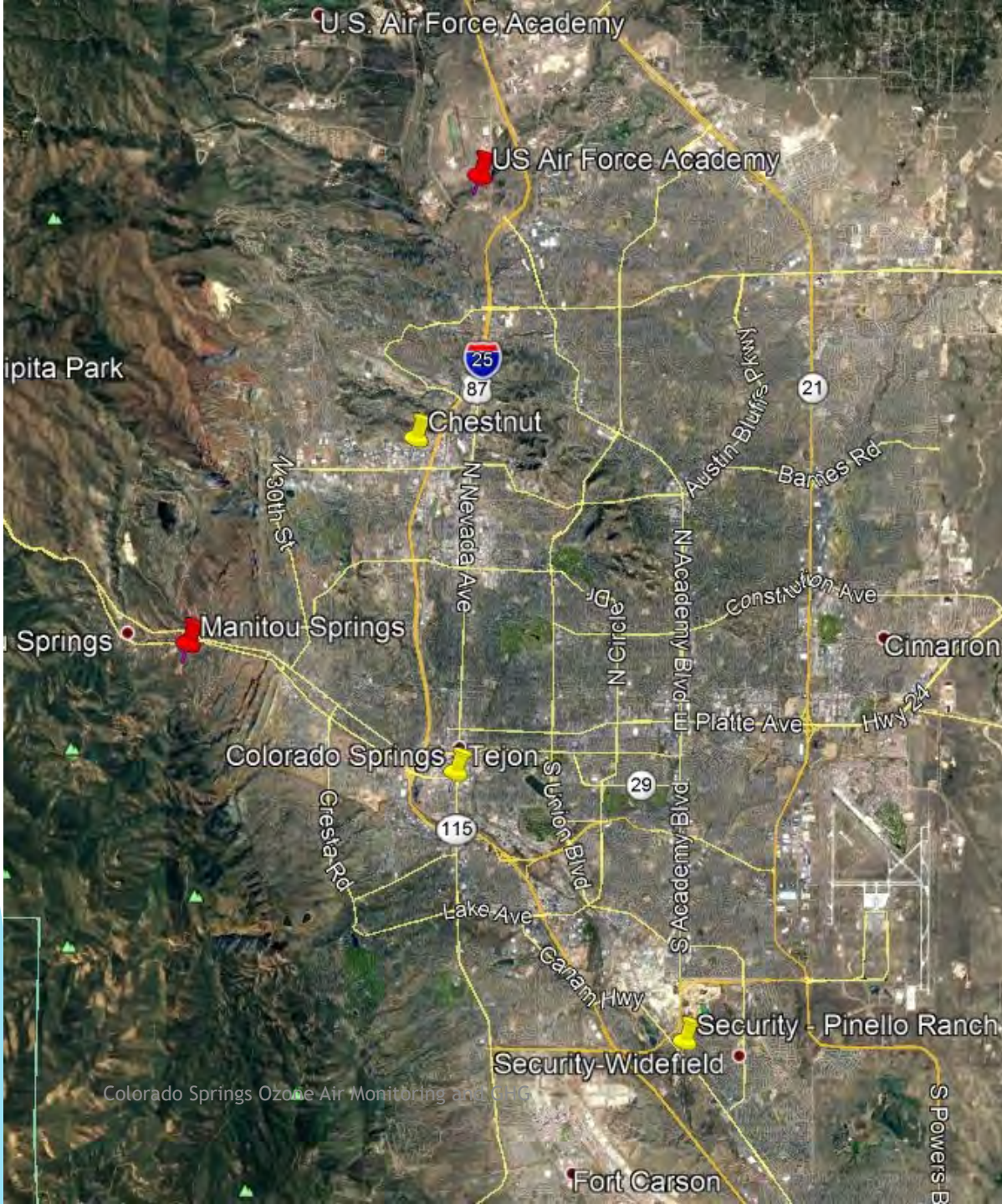


# EPA monitoring requirements

- ▶ Colorado Springs Metropolitan Statistical Area:
  - ▶ El Paso + Teller counties
  - ▶ Population: 725,900 (2017)
- ▶ Required number of sites: MSA > 350,000 and < 4,000,000
  - ▶ 2 sites if most recent 3-year design value concentrations  $\geq 85\%$  of any O<sub>3</sub> NAAQS
  - ▶ 1 site if most recent 3-year design value concentrations < 85% of any O<sub>3</sub> NAAQS
- ▶ Monitoring season for Colorado: January - December

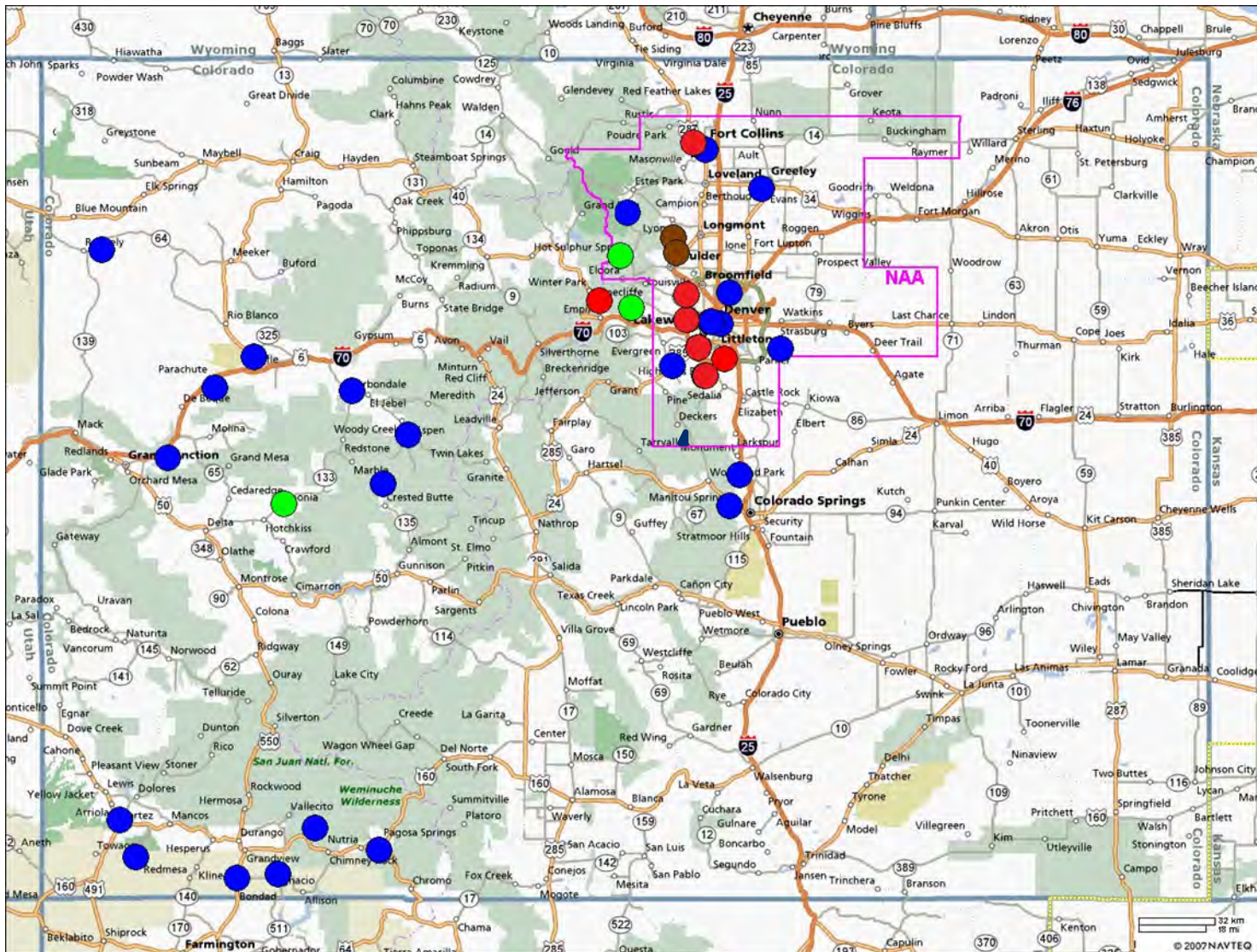
# Colorado Springs area ozone sites

- ▶ 1975 - 1997 = CDPHE - 712 S. Tejon
- ▶ 1988 - 1996 = CDPHE - 4705 N. Chestnut
- ▶ 1981 - 1988 = Colorado Springs Utilities - Security
- ▶ 1996 - present = CDPHE - US Air Force Academy
- ▶ 2004 - present = CDPHE - Manitou Springs





# Graphical for 70 ppb NAAQS



## Colorado Ozone Sites

Comparison to  
Federal Ozone Standard  
(70 ppb)

2017 - 2019 (thru 9/30)

Ozone Standard:  
3-year average of 4th maximum  
8-hour values must be  $\leq 70$  ppb

- Above level of standard  
(3+ years of data available)  
(Based on 3-yr. avg. of 4th max. for 2016 - 2018)
- Above level of standard  
(<3 years of data available)  
(Based on avg. of 4th max. for years available)
- Below level of standard  
(3+ years of data available)  
(Based on 3-yr. avg. of 4th max. for 2016 - 2018)
- Below level of standard  
(<3 years of data available)  
(Based on avg. of 4th max. for years available)

— Non-attainment area



# 3-year summary for Colorado Springs

2019 8-Hour Ozone (Updated through Sept. 30, 2019)

| AQS #       | Site Name                  | 2017<br>4 <sup>th</sup> Maximum<br>8-Hour Average<br>Value (ppb) | 2018<br>4 <sup>th</sup> Maximum<br>8-Hour Average<br>Value (ppb) | 2019 (thru 9/30)<br>4 <sup>th</sup> Maximum<br>8-Hour Average<br>Value (ppb) | 2017 - 2019<br>3-Year Average<br>4 <sup>th</sup> Maximum<br>Value (ppb) | 2020<br><i>Highest Allowable</i><br>4 <sup>th</sup> Maximum 8-Hour<br>Average Value (ppb) |
|-------------|----------------------------|--|--|--|---|---|
| 08-041-0013 | Colo. Spgs. - USAF Academy | 69   | 73   | 65   | 69  | 74  |
| 08-041-0016 | Manitou Springs            | 70   | 72   | 64   | 68  | 76  |

**NOTE:** Values above the 3-year average 4<sup>th</sup> maximum 8-hour standard of 70 ppb are highlighted in **red**, above the 75 ppb standard in **orange**.

**NOTE:** Data includes values that may be influenced by natural events.

**Colorado Springs is below NAAQS...even with possible exceptional events included**

2019 8-Hour Ozone (Updated through Sept. 30, 2019)

| AQS Number  | Site Name                  | 1st Max<br>8-Hour<br>(ppb) | Date<br>1st Max<br>8-Hour | 2nd Max<br>8-Hour<br>(ppb) | Date<br>2nd Max<br>8-Hour | 3rd Max<br>8-Hour<br>(ppb) | Date<br>3rd Max<br>8-Hour | 4th Max<br>8-Hour<br>(ppb) | Date<br>4th Max<br>8-Hour | 5th Max<br>8-Hour<br>(ppb) | Date<br>5th Max<br>8-Hour |
|-------------|----------------------------|----------------------------|---------------------------|----------------------------|---------------------------|----------------------------|---------------------------|----------------------------|---------------------------|----------------------------|---------------------------|
| 08-041-0013 | Colo. Spgs. - USAF Academy | 69                         | 06/06                     | 67                         | 07/24                     | 66                         | 08/07                     | 65                         | 07/19                     | 65                         | 09/09                     |
| 08-041-0016 | Manitou Springs            | 70                         | 06/06                     | 66                         | 07/24                     | 64                         | 06/19                     | 64                         | 07/19                     | 64                         | 08/06                     |



# 3-year summary for the North Front Range

2019 8-Hour Ozone (Updated through Sept. 30, 2019)

| AQS #       | Site Name                   | 2017<br>4 <sup>th</sup> Maximum<br>8-Hour Average<br>Value (ppb) | 2018<br>4 <sup>th</sup> Maximum<br>8-Hour Average<br>Value (ppb) | 2019 (thru 9/30)<br>4 <sup>th</sup> Maximum<br>8-Hour Average<br>Value (ppb) | 2017 - 2019<br>3-Year Average<br>4 <sup>th</sup> Maximum<br>Value (ppb) | 2020<br>Highest Allowable<br>4 <sup>th</sup> Maximum 8-Hour<br>Average Value (ppb) |
|-------------|-----------------------------|--|--|--|---|--|
| 08-001-3001 | Welby                       | 68   | 69   | 60   | 65  | 83   |
| 08-005-0002 | Highland                    | 72   | 77   | 73   | 74  | 62   |
| 08-005-0006 | Aurora East                 | 69   | 72   | 66   | 69  | 74   |
| 08-013-0014 | Boulder Reservoir           | 73   | 77   | 69   | 73  | 66   |
| 08-019-0006 | Mines Peak (non-regulatory) | 70   | 78   | 67   | 71  | 67   |
| 08-031-0002 | CAMP                        | 67   | 71   | 67   | 68  | 74   |
| 08-031-0026 | La Casa                     | 68   | 72   | 65   | 68  | 75   |
| 08-035-0004 | Chatfield State Park        | 74   | 83   | 78   | 78  | 51   |
| 08-047-0003 | Black Hawk (start 7/9)      | ---  | ---  | 69   | ---   | ---  |
| 08-059-0005 | Welch                       | 75   | 66   | 72   | 71  | 74   |
| 08-059-0006 | Rocky Flats - N             | 75   | 81   | 72   | 76  | 59   |
| 08-059-0011 | NREL *                      | 74   | 80   | 75   | 76  | 57   |
| 08-059-0013 | Aspen Park                  | 68   | 71   | 63   | 67  | 78   |
| 08-069-0007 | NPS - Rocky Mtn. NP         | 67   | 74   | 65   | 68  | 73   |
| 08-069-0011 | Fort Collins - West         | 75   | 81   | 71   | 75  | 60   |
| 08-069-1004 | Fort Collins - CSU          | 66   | 72   | 64   | 67  | 76   |
| 08-123-0009 | Greeley - Weld Tower        | 72   | 73   | 65   | 70  | 74   |

8 sites over  
70 ppb

3 are over  
75 ppb

**NOTE:** Values above the 3-year average 4<sup>th</sup> maximum 8-hour standard of 70 ppb are highlighted in red, above the 75 ppb standard in orange.

**NOTE:** Data includes values that may be influenced by natural events.

\* **NOTE:** Wildfire influence exceptional events concurred by EPA for NREL for 9/2/17 and 9/4/17. NREL 4th max value of 76 ppb removed.





# 3-year summary for the rest of Colorado

2019 8-Hour Ozone (Updated through Sept. 30, 2019)

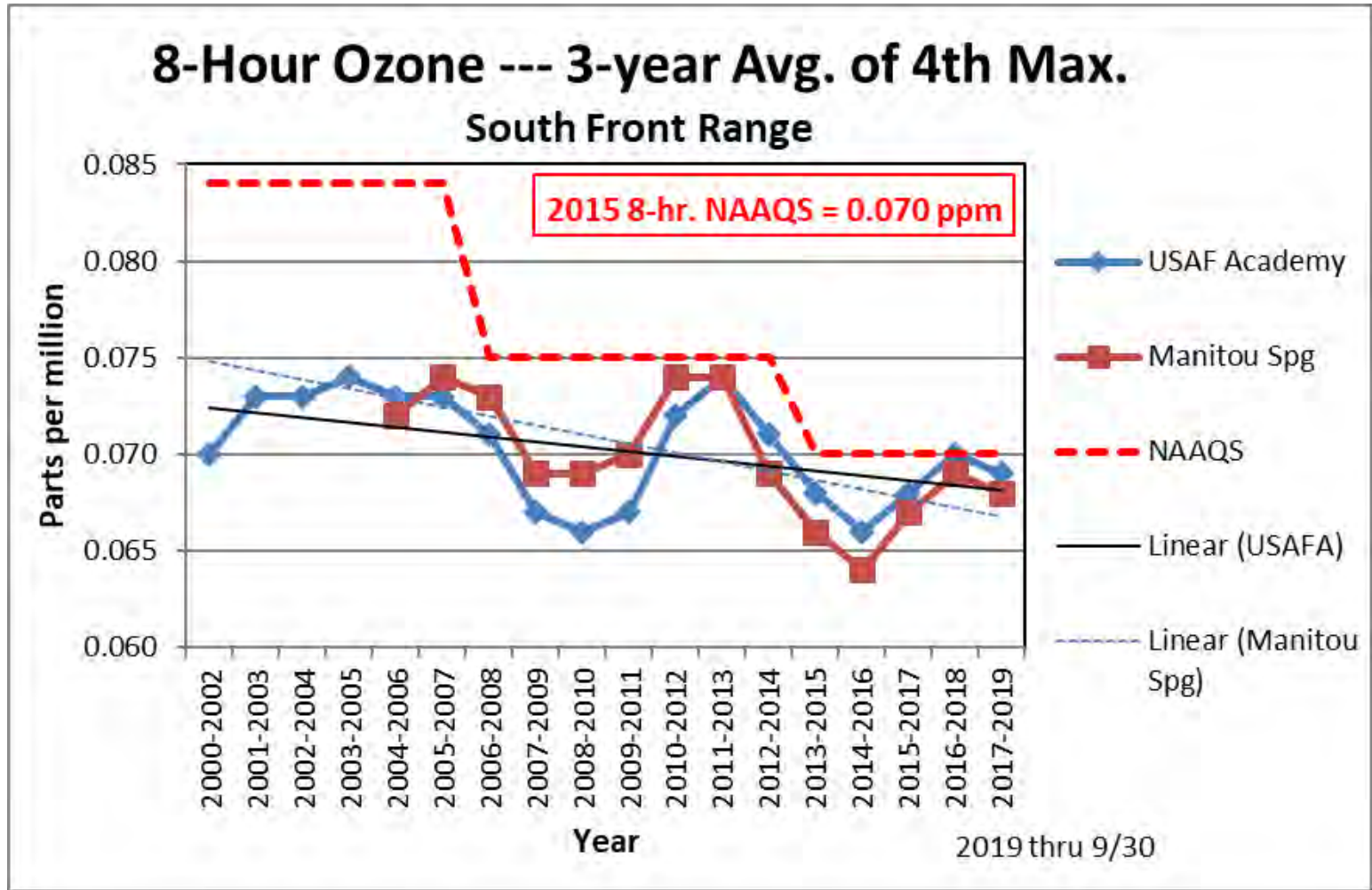
| AQS #       | Site Name                     | <u>2017</u><br>4 <sup>th</sup> Maximum<br>8-Hour Average<br>Value (ppb) | <u>2018</u><br>4 <sup>th</sup> Maximum<br>8-Hour Average<br>Value (ppb) | <u>2019 (thru 9/30)</u><br>4 <sup>th</sup> Maximum<br>8-Hour Average<br>Value (ppb) | <u>2017 - 2019</u><br>3-Year Average<br>4 <sup>th</sup> Maximum<br>Value (ppb) | <u>2020</u><br><i>Highest Allowable</i><br>4 <sup>th</sup> Maximum 8-Hour<br>Average Value (ppb) |
|-------------|-------------------------------|---|---|---|--|--|
| 08-029-0007 | BLM - Paonia (started 4/6/18) | ---   | 54  | 59  | ---  | 99   |
| 08-045-0012 | Rifle - Health                | 59  | 65  | 57  | 60   | 90   |
| 08-051-9991 | EPA - Gothic CASTNET          | 66  | 69  | 67  | 67   | 76   |
| 08-067-1004 | USFS – Shamrock (thru n/a)    | 66  | 71  | n/a   | n/a  | n/a  |
| 08-067-7001 | SUIT - Ignacio                | 69  | 67  | 63  | 66   | 82   |
| 08-067-7003 | SUIT - Bondad                 | 69  | 67  | 63  | 66   | 82   |
| 08-077-0020 | Palisade - Water              | 64  | 69  | 63  | 65   | 80   |
| 08-083-0006 | Cortez                        | 59  | 67  | 60  | 62   | 85   |
| 08-083-0101 | NPS - Mesa Verde NP           | 66  | 72  | 65  | 67   | 75   |
| 08-097-0007 | Aspen/Pitkin                  | 65  | 64  | 63  | 64   | 85   |
| 08-103-0006 | BLM - Rangely                 | 64  | 68  | 64  | 65   | 80   |

**NOTE:** Values above the 3-year average 4<sup>th</sup> maximum 8-hour standard of 70 ppb are highlighted in **red**, above the 75 ppb standard in **orange**.

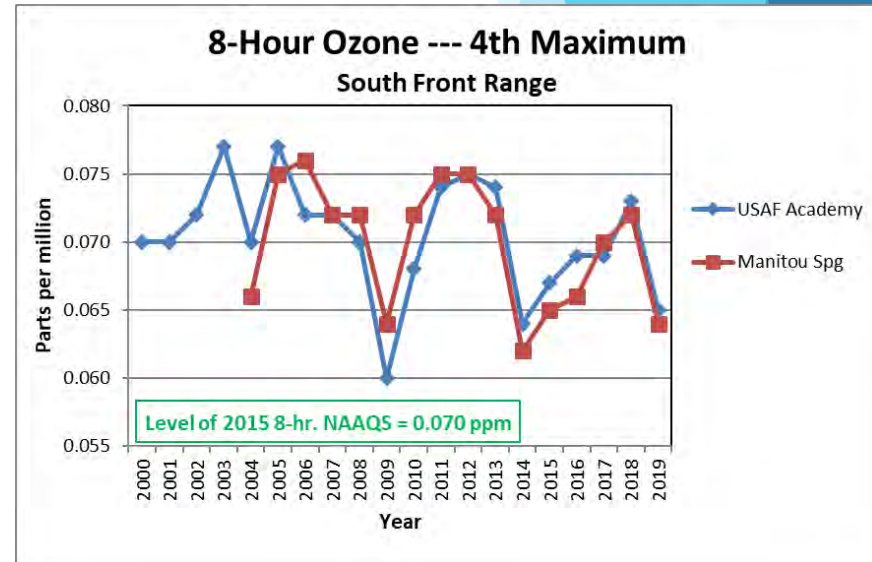
**NOTE:** Data includes values that may be influenced by natural events.

**None over 70 ppb NAAQS**

# Ozone Trends (2000 - current)



Overall downward trend since 2000  
 Cyclic trend due to meteorology  
 Need many years to see a trend  
 Population has increased significantly  
 Traffic has increased significantly  
 Level of NAAQS has decreased



# Exceptional events

- ▶ EPA allows for flagging and submitting demonstrations of events that are not reasonably controllable or preventable
- ▶ If approved by EPA, the values are removed from design value calculations
- ▶ For ozone, exceptional events include:
  - ▶ stratospheric intrusions
  - ▶ wildfire smoke influenced
- ▶ Not all are clear-cut
- ▶ Events may also be flagged as informational

“Exceptional event means an event(s) and its resulting emissions that affect air quality in such a way that there exists a clear causal relationship between the specific event(s) and the monitored exceedance(s) or violation(s), is not reasonably controllable or preventable, is an event(s) caused by human activity that is unlikely to recur at a particular location or a natural event(s), and is determined by the Administrator in accordance with 40 CFR 50.14 to be an exceptional event.”

- ▶ Only 1 exceptional event noted for Colorado springs in 2019
- ▶ June 6 - Stratospheric intrusion
- ▶ Below level of NAAQS
- ▶ Would not change 4<sup>th</sup> max values if excluded

# How to sign up for air quality alerts/advisories

- ▶ Issued once a day at 4 p.m.
- ▶ <http://www.enviroflash.info/>: Daily e-mail or cell phone forecast for ozone and fine particulates year-round. Forecast area is determined by your zip code.
- ▶ [https://www.colorado.gov/airquality/request\\_alerts.aspx](https://www.colorado.gov/airquality/request_alerts.aspx): Daily e-mail updates during ozone season. These are the Ozone Action Day Alerts, not the 3-day voluntary reduction e-mails. Also an option to receive other types of alerts (wildfire smoke, blowing dust, etc.) year-round.
- ▶ [https://www.colorado.gov/airquality/colorado\\_summary.aspx](https://www.colorado.gov/airquality/colorado_summary.aspx)

## CDPHE Air Quality Forecast Webpage

| Forecast - Air Quality Summary |          |                   |                 |                  |
|--------------------------------|----------|-------------------|-----------------|------------------|
| Monday                         | Ozone    | Fine Particulates | Carbon Monoxide | Nitrogen Dioxide |
| Denver - Boulder               | GOOD     | GOOD              | GOOD            | GOOD             |
| Colorado Springs               | GOOD     | GOOD              | GOOD            | NOT AVAILABLE    |
| Ft. Collins                    | GOOD     | GOOD              | GOOD            | NOT AVAILABLE    |
| Greeley                        | GOOD     | GOOD              | GOOD            | NOT AVAILABLE    |
| Grand Junction                 | MODERATE | GOOD              | GOOD            | NOT AVAILABLE    |
| Colorado River Valley          | GOOD     | GOOD              | NOT AVAILABLE   | NOT AVAILABLE    |
| Four Corners Area              | MODERATE | NOT AVAILABLE     | NOT AVAILABLE   | NOT AVAILABLE    |

# Monitoring summary

- ▶ Colorado Springs is in **attainment** for all “criteria” pollutants
- ▶ The trend in ozone is downward...**good news!**
- ▶ EPA has started the next round of reviews of the ozone and particulate standards and is expected to make final decisions on the levels by the end of 2020
- ▶ Real-time data can be found at:  
<https://www.colorado.gov/airquality/report.aspx>
- ▶ Data uploaded to EPA’s Air Quality System and can be accessed at:  
<https://www.epa.gov/outdoor-air-quality-data>



# Greenhouse Gases

## ▶ Carbon Dioxide (CO<sub>2</sub>):

- ▶ *Source:* living organisms, burning of fossil fuels

## ▶ Methane (CH<sub>4</sub>):

- ▶ *Source:* coal formations, oil and gas development, landfills, livestock digestive processes, decomposing waste

## ▶ Nitrous Oxide (N<sub>2</sub>O):

- ▶ *Source:* fuel burning, fertilizer manufacturing

## ▶ Fluorinated Gases (including):

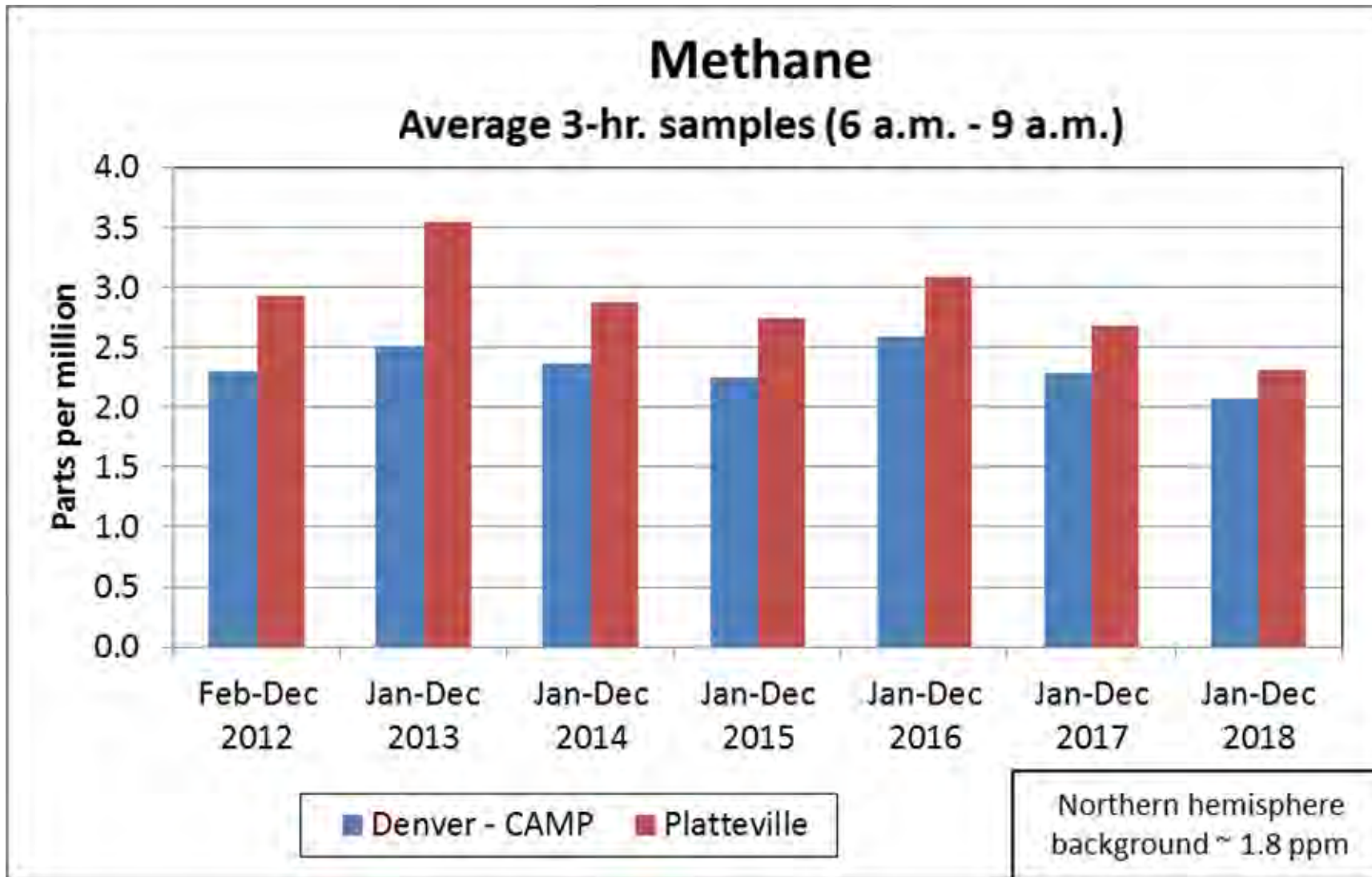
- ▶ ozone depleting substances (ODS)
- ▶ hydrofluorocarbons (HFCs)
- ▶ perfluorocarbons (PFCs)
- ▶ sulfur hexafluoride (SF<sub>6</sub>)
- ▶ nitrogen trifluoride (NF<sub>3</sub>)
  
- ▶ *Source:* refrigeration, industrial processes

# Global Warming Potential (GWP)

- ▶ Compares the climate change impact of different gases
- ▶ A factor that reflects how long a specific gas is likely to remain in the atmosphere and how strongly it absorbs energy
- ▶ CO<sub>2</sub> is the standard reference with a GWP of 1; potential of other gases calculated relative to CO<sub>2</sub> and expressed as CO<sub>2</sub> equivalent (CO<sub>2</sub>e)
- ▶ Standard values taken from International Panel on Climate Change (IPCC) periodic Assessment Reports

<https://www.epa.gov/ghgemissions/understanding-global-warming-potentials>

# Methane Monitoring (2012-2018)



# Colorado GHG Inventory History

- ▶ Several inventories completed since 1990
- ▶ Recent inventories have been updated on a 5-year schedule
- ▶ 2014 revision used the EPA State Inventory Tool (SIT) with data through 2010 and projections to 2030
- ▶ 2019 revision uses the EPA SIT with data through 2015 and projections to 2030
- ▶ Future inventories will incorporate new directives (SB19-096)

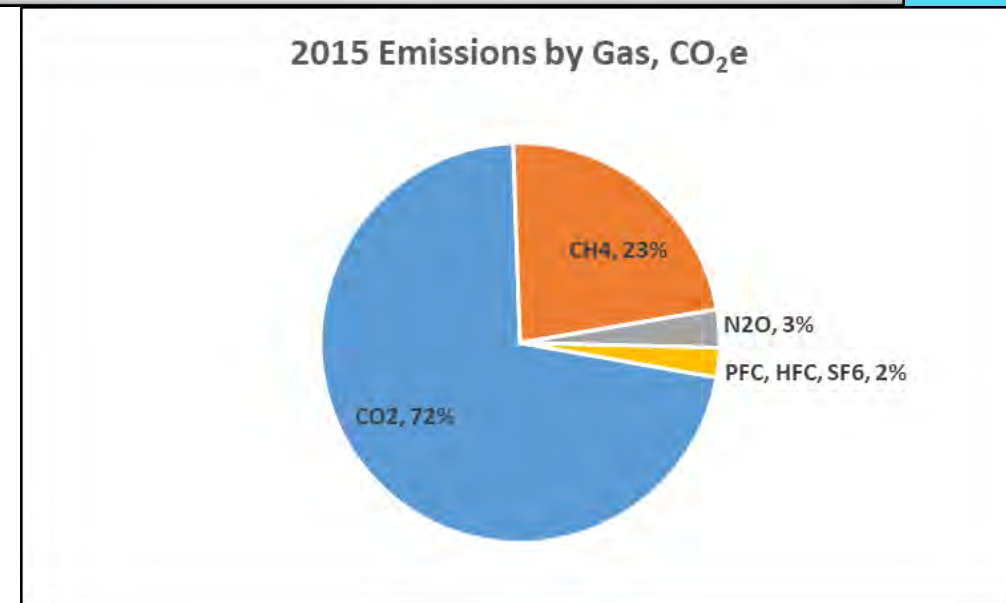
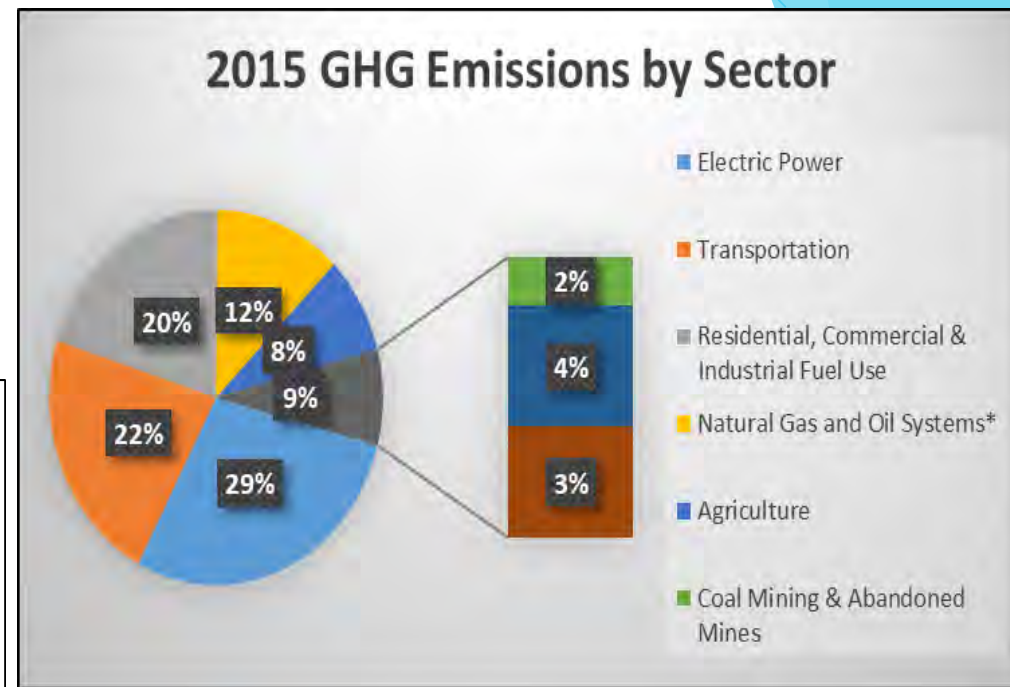
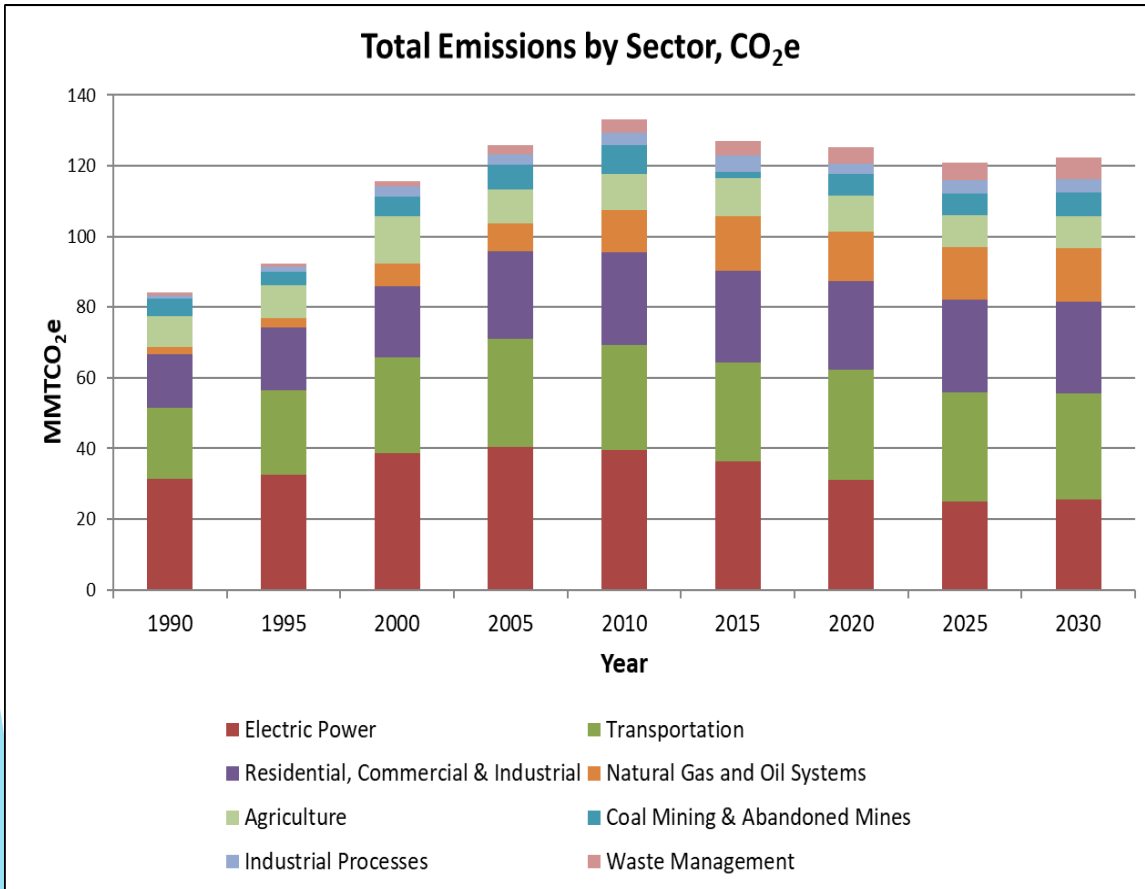
# Colorado GHG Emissions by Sector with Projections to 2030

| Emissions by Sector (MMT CO <sub>2</sub> e) | 1990        | 1995        | 2000         | 2005         | 2010         | 2015         | 2020         | 2025         | 2030         |
|---|-------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Electric Power                              | 31.4        | 32.7        | 38.8         | 40.3         | 39.5         | 36.3         | 31.0         | 25.4         | 25.5         |
| Transportation                              | 20.1        | 23.7        | 27.0         | 30.8         | 29.8         | 28.2         | 31.4         | 30.8         | 30.0         |
| Heating                                     | 15.0        | 17.9        | 20.0         | 24.6         | 26.2         | 25.7         | 24.8         | 25.7         | 26.1         |
| Natural Gas and Oil                         | 2.2         | 2.5         | 6.5          | 8.1          | 12.0         | 15.6         | 6.8          | 7.5          | 7.4          |
| Agriculture                                 | 8.6         | 9.3         | 13.4         | 9.6          | 10.1         | 10.7         | 10.4         | 9.4          | 9.1          |
| Coal Mining                                 | 5.2         | 3.8         | 5.5          | 6.8          | 8.1          | 1.9          | 6.0          | 6.1          | 6.6          |
| Industrial Processes                        | 0.7         | 1.4         | 3.0          | 3.2          | 3.7          | 4.5          | 3.0          | 3.6          | 3.9          |
| Waste Management                            | 1.0         | 1.1         | 1.5          | 2.4          | 3.6          | 4.2          | 4.7          | 5.4          | 6.1          |
| <b>Grand Total</b>                          | <b>84.1</b> | <b>92.4</b> | <b>115.8</b> | <b>125.7</b> | <b>133.0</b> | <b>127.0</b> | <b>118.2</b> | <b>114.1</b> | <b>114.7</b> |



# Colorado's CO<sub>2</sub>e

2015: 127.0 MMCO<sub>2</sub>e



# GHG Regulation History

- ▶ EPA's Mandatory Reporting Rule (Oct. 2009)
- ▶ EPA's Oil and Natural Gas Processing New Source Performance Standards and Emission Guidelines
- ▶ Colorado's Regulation 7 for Oil and Natural Gas Emissions
  - ▶ Indirectly: 2004, 2006, 2008
  - ▶ Directly: 2014
- ▶ Colorado's Regulation 20 for Colorado Low Emission Automobile Regulation

# SB19-096 Highlights

- ▶ GHG Reporting and Inventory
  - ▶ Adopt rules to implement goals
    - ▶ Adopt GHG monitoring and reporting by June 1, 2020
      - ▶ Inform GHG inventory process
      - ▶ Inform GHG reduction strategies
    - ▶ By July 1, 2020, propose rule to implement measures, which in conjunction with other State efforts, will help Colorado achieve its GHG emission reduction goals
  - ▶ Update statewide GHG inventory no less frequently than every 2 years
    - ▶ 2005 baseline
    - ▶ Forecast GHG emissions
    - ▶ Publicly available
    - ▶ Report to Governor, PUC and State Assembly

# HB19-1261 Highlights

- ▶ GHG Reduction Goals Statewide
  - ▶ 26% by 2025
  - ▶ 50% by 2030 using a 2005 baseline
  - ▶ 90% by 2050
- ▶ Timely promulgate rules taking into account laws, rules, relevant actions
- ▶ Identify disproportionately impacted communities
- ▶ Solicit input on statewide GHG mitigation from those most impacted by climate change
- ▶ Consult with PUC, including on Clean Energy Plans addressing the 80% GHG reduction target by 2030 (2005 baseline)
- ▶ Establish and implement requirements for energy and emission control audit



# SB19-236 Highlights

- ▶ **CO2 @ Qualifying Retail Utilities**
  - ▶ 80% reduction target by 2030 (2005 baseline)
  - ▶ 100% clean energy goal in 2050
    - ▶ technical feasibility
    - ▶ economic feasibility
  - ▶ Retire renewable clean energy credits
  - ▶ Other electric public utilities may opt in
  - ▶ Requires Clean Energy Plans filed with the PUC after January 20, 2020 to address 80% target/100% goal
  - ▶ AQCC/CDPHE participation

# Rulemaking Timelines

- ▶ Colorado is still in the process of mapping out the overall process for realizing the provisions in these bills
- ▶ First steps include:
  - ▶ Initial Rulemaking under SB 19-096: February 2020 AQCC Request, May 2020 AQCC Hearing
    - ▶ Greenhouse gas reporting requirements
    - ▶ Could include GHG reduction requirements (if not, separate rulemaking request proposed in May 2020)
- ▶ For more information:
  - ▶ Sign up to receive air quality information at: <https://www.colorado.gov/pacific/cdphe/air-mailing-lists>
  - ▶ Submit comments to: [cdphe.commentsapcd@state.co.us](mailto:cdphe.commentsapcd@state.co.us)
  - ▶ Watch
    - ▶ Air Pollution Control Division Stakeholder Engagement: <https://www.colorado.gov/pacific/cdphe/APCD-stakeholder-processes>
    - ▶ Air Quality Control Commission: <https://www.colorado.gov/pacific/cdphe/aqcc>

# Questions?

USAF Academy



Manitou Springs

