

# Proposed Ozone Action Plan and State Implementation Plan

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**Presentation by  
Regional Air Quality Council  
December 11, 2008**



**LET'S TAKE CARE OF OUR SUMMER AIR.**

[OzoneAware.org](http://OzoneAware.org)

# Ozone History



- **EPA established more stringent 8-hour ozone standard in 1997 (.08 ppm)**
- **Early Action Compact with EPA – 2002**
- **Ozone Action Plan – 2004**
- **Region violated 8-hour standard in 2007 based on 2005-2007 3-year average (.085 ppm)**
- **EPA designated the Denver/NFR region nonattainment in November 2007**
- **Region must submit a new ozone plan (SIP) to EPA by July 1, 2009**
- **EPA established a new, even more stringent ozone standard in March 2008 (.075 ppm) that will be subject of future planning requirements**

# Governor's Directive



- **Propose measures to reduce ozone further in the 2008 summer ozone season**
- **Submit a proposed plan to the AQCC by September 2008 to assure compliance with the federal standard**
- **Set a goal of reducing or eliminating ozone levels above .08 ppm**
- **Consider the addition of elements that would further reduce ozone levels in anticipation of a lower federal standard (.075 ppm)**

# Ozone Planning Overview



- **Strategy evaluation and development**
  - RAQC, APCD and stakeholders spent over 14 months evaluating strategies and performing technical analyses
  - Extensive photochemical air quality modeling was conducted
- **Significant stakeholder involvement**
  - Over 45 stakeholder and public meetings
- **Proposed Ozone Action Plan and SIP**
  - RAQC presented a proposed plan to the AQCC in September
  - Further resolution of issues during AQCC prehearing process
  - AQCC hearing and adoption December 11-12
  - Legislative review during 2009 session
  - Submittal to EPA by July 1, 2009
  - Action by EPA by October 1, 2010

# Plan Overview



- **Ozone Action Plan**
  - SIP control measures
  - State-only control measures
  - Measures for additional evaluation & SIP amendment
- **State Implementation Plan**
  - Federal Requirements
  - Ozone Monitoring Information
  - Emission Inventories
  - SIP Control Measures
  - Attainment Demonstration
    - » Photochemical Modeling
    - » Weight of Evidence Analysis
  - Motor Vehicle Emission Budgets
  - Section 110 Transport SIP

# State Implementation Plan



- **Meets all relevant provisions of the Clean Air Act and requirements for “marginal” ozone nonattainment areas**
- **Based on sound science and state-of-the art air quality modeling**
- **Contains sufficient and appropriate measures to demonstrate attainment of the standard in 2010**
- **Contains cost-effective and enforceable measures**
- **Additional state-only measures provide additional reductions**
- **Important first step on path to achieving new .075 ppm standard**

# Strategies in Proposed SIP



- 1) **More stringent I/M cutpoints (Denver area)**
  - Revisions to Regulation No. 11 adopted March 2008
- 2) **7.8 RVP gasoline in NFR (same as Denver area)**
  - Revision to Federal regulation necessary
- 3) **Increase condensate tank control requirements – 95% control on all tanks  $\geq$  10 tpy and new/modified tanks  $\geq$  2 tpy in NAA**
  - Proposed revisions to Regulation No. 7
- 4) **Low-bleed pneumatic controllers on most new and existing pneumatic devices in NAA**
  - Proposed revisions to Regulation No. 7
- 5) **Expand current Regulation. 7 (VOC point source control) requirements to entire NAA**
  - Proposed revisions to Regulation No. 7
- 6) **Remove exemptions for sources to file APENs and obtain permits**
  - Proposed revisions to Regulation No. 3
- 7) **Require RACT for new/modified minor point sources in entire NAA – VOC  $\geq$  2 tpy, NO<sub>x</sub>  $\geq$  5 tpy**
  - Revisions to Regulation No. 3 adopted February 2008

# Strategies Proposed for State-Only Adoption



- 1) I/M program in North Front Range**
  - Proposed program identical to Denver area program in former basic area
  - Proposed revisions to Regulation No. 11
  - Expanded boundary area will be considered in 2009 legislative session
- 2) Continue high-emitter pilot program (Denver area)**
  - Possible full-scale implementation after evaluation of pilot
- 3) Tighten collector plate requirements**
  - Will be considered in 2009 legislative session
- 4) Control requirements for smaller existing O&G condensate tanks – 95% control for tanks  $\geq$  2 tpy**
  - Proposed revisions to Regulation No. 7
  - $\geq$  5 tpy tanks by 2011,  $\geq$  2 tpy tanks by 2012
- 5) Statewide oil & gas regulations – reciprocating internal combustion engines (RICE)**
  - Proposed revisions to Regulation No. 7

# Strategies For Further Review



## 1) Ozone Fuels Strategies

- Lower RVP gasoline (7.0 RVP)
- Federal Reformulated Gasoline
- Eliminate ethanol waiver

## 2) Controls on larger NO<sub>x</sub> sources

- Power plants
- Boilers
- Cement kilns

## 3) Statewide oil & gas controls for new condensate tanks and pneumatic controllers

## 4) CA Paints/Solvents/Consumer Products rule

## 5) Other Strategies – NO<sub>x</sub> and VOC

# Emission Reductions



<b>Reduction 2006-2010</b> <b>Federal, SIP, State-only Measures</b>	<b>VOC</b>	<b>NOx</b>
<b>Federal programs</b> (motor vehicles, nonroad engines, refueling vapor recovery, paints & solvents)	<b>30 tpd</b>	<b>51 tpd</b>
<b>Local mobile source controls</b> (I/M cutpoints, NFR RVP, NFR I/M)	<b>5 tpd</b>	<b>4 tpd</b>
<b>Oil &amp; Gas Regulations</b> (condensate tanks, pneumatic controllers, RICE)	<b>85 tpd</b>	<b>13 tpd</b>
<b>Total Reductions</b>	<b>120 tpd</b> <b>&gt;25%</b>	<b>68 tpd</b> <b>&gt;20%</b>

# Modeling Summary



	<b>RFN</b>	<b>FTCW</b>	<b>Max Grid Reduction</b>
<b>Current 8-Hour Design Value</b>	<b>85 ppb</b>	<b>86 ppb</b>	
<b>2010 Base Case</b>	<b>84.9 ppb</b>	<b>84.9 ppb</b>	
<b>2010 SIP Control Case</b>	<b>84.8 ppb</b>	<b>84.7 ppb</b>	<b>-1.2 ppb</b>
<b>SIP + State-Only Control Case</b>	<b>84.7 ppb</b>	<b>84.5 ppb</b>	<b>-1.7 ppb</b>

# Weight of Evidence Analysis



- **Weight of Evidence Analysis required if modeled results are between 82-87 ppb**
- **Weight of Evidence Analysis includes:**
  - Emission trends
  - Trends in monitored ozone values
  - Review of ozone conceptual models
  - Review of modeled metrics
  - Alternative attainment test methodology
  - Efficacy of SIP, state-only and voluntary strategies
- **Overall WOE Analysis supports the modeling analysis that concludes the region is likely to attain the .08 ppm standard by 2010**

# Emission Budgets

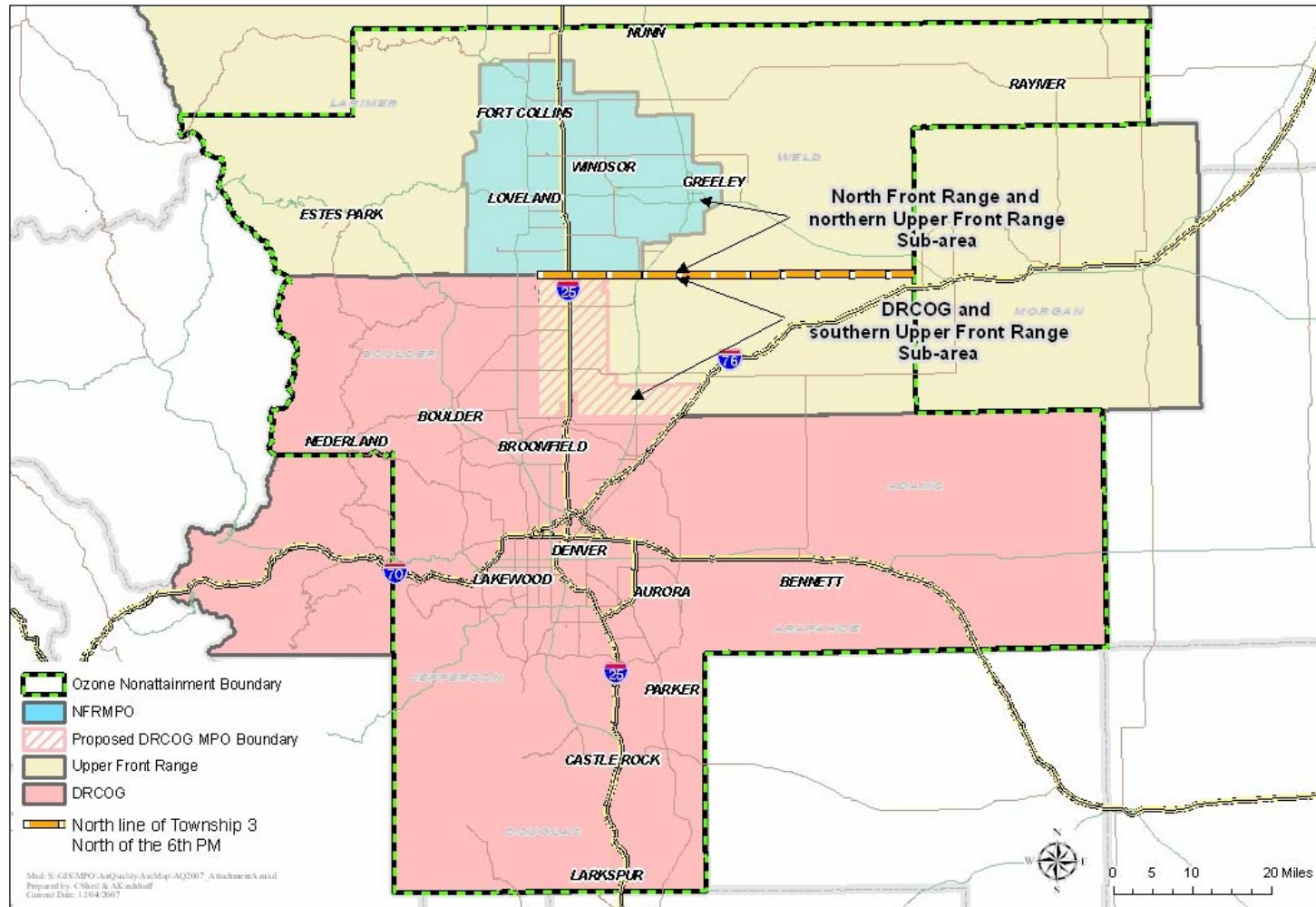


- **Motor vehicle emissions budgets for VOC and NOx will be established based on 2010 base case attainment inventory**
- **Contains a regional budget and two subarea budgets**
  - **Denver Metro Area (including southern Weld Co.)**
  - **North Front Range (including Upper Front Range)**
- **Separate conformity determinations by DRCOG and NFRMPO are allowed based on their respective subarea budgets**
- **Revised SIP addresses comments from EPA**
  - **SIP specifies nonattainment-area wide budget used in initial conformity determination**

# Conformity Subareas



Attachment A:  
8-Hour Ozone Nonattainment Area  
and Sub-areas



# .075 ppm Standard Timeline



- **Nonattainment designations**
  - State recommendations by March 2009
    - » Based on 2006-2008 ozone data
  - EPA makes final designations by March 2010
    - » Based on 2007-2009 ozone data
- **Attainment SIPs**
  - Due by March 2013 (3 years after final designations)
- **Attainment Dates**
  - 2016-2030 depending on severity of problem and classification
  - Classifications will be addressed by future EPA rulemaking

# Issues and Alt. Proposals



- **RAQC supports Division's Alternative Proposal #1 (11/25/08), with proposed compromise modifications:**
  - **System-wide approach for condensate tanks:**
    - ❖ 81% SIP control in 2009
    - ❖ 85% SIP control in 2010
    - ❖ 90% SIP control in 2011
    - ❖ Defer consideration of 95% control to future planning process
  - **Remove pneumatic controllers control from SIP**
- **RAQC encourages the Commission to include recommended additional measures in the SIP to increase confidence in attainment demonstration**
- **RAQC supports July 1, 2010 implementation date for North Front Range I/M program**
- **RAQC supports statewide RICE controls**
- **Revised Ozone Action Plan indicates future fuels study is included for informational purposes only**