



VOC Stationary Source Strategies

Presentation to the
Regional Air Quality Council

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Approach to VOC Stationary Source Strategy Development

- Throughout the stakeholder process:
 - Numerous stationary sources and oil and gas options were described by APCD
 - Stakeholders have reviewed and commented
 - APCD has responded to comments
 - Some comments incorporated into the papers
 - Some comments were not
 - APCD to focus on a finite set of options, based on:
 - Significant emission reductions
 - Equity
 - Other options are put to the side for time being



The RAQC's Endorsement is Sought for the Approach to VOC Stationary Source Strategy Development

- Fully develop the following strategies so that there is a "menu of options" to select from when a proposal is formulated
 - All current regulatory programs remain in place
 - SS: expand Reg. 7 to entire NAA, remove exemptions, reduce emissions from certain large stationary sources, all new VOC sources apply RACT
 - O&G: reduce emissions from new/existing tanks and pneumatics



Approach to VOC Stationary Source Strategy Development

- For the next phase of the stakeholder process, all RAQC/NFR endorsed options will be considered necessary to meet the Governor's directive
 - Attainment of the current 8-hour standard
 - Reducing/eliminating ozone concentrations above 80 ppb
 - Further reducing ozone levels for the lower federal ozone standard



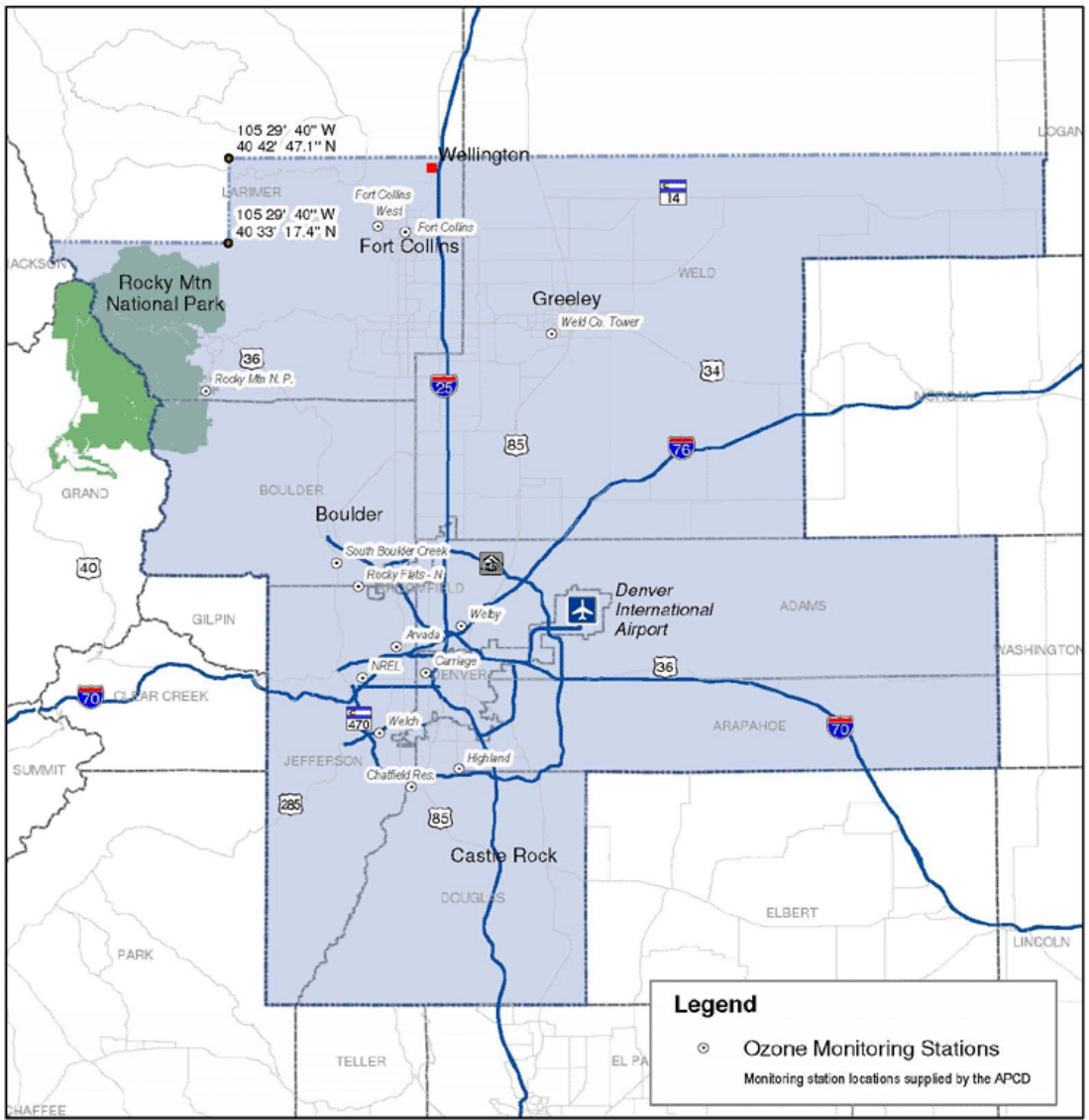
Approach to VOC Stationary Source Strategy Development

- For all endorsed options, regulatory language to be developed in the coming months with stakeholders, including and considering:
 - Control requirements
 - Reporting requirements
 - Compliance dates – shorter term (2-4 years)
 - Economic and air quality impacts (costs and benefits)
 - \$/ton
 - Equity issues



Approach to VOC Stationary Source Strategy Development

- Throughout the continuing stakeholder process
 - No weight will be given at this time to the specific target with regards to:
 - SIP versus State-only
 - Going beyond attainment of the 84 ppb standard to provide headroom or meet the Governor's directives
 - All strategies will be deemed necessary
- At the end of the process (late July), APCD/RAQC staff will formulate recommendations on these matters for stakeholder discussion
- Control package(s) to be modeled in August
- Final control strategy package(s) will be proposed by the RAQC/NFR to the AQCC in September

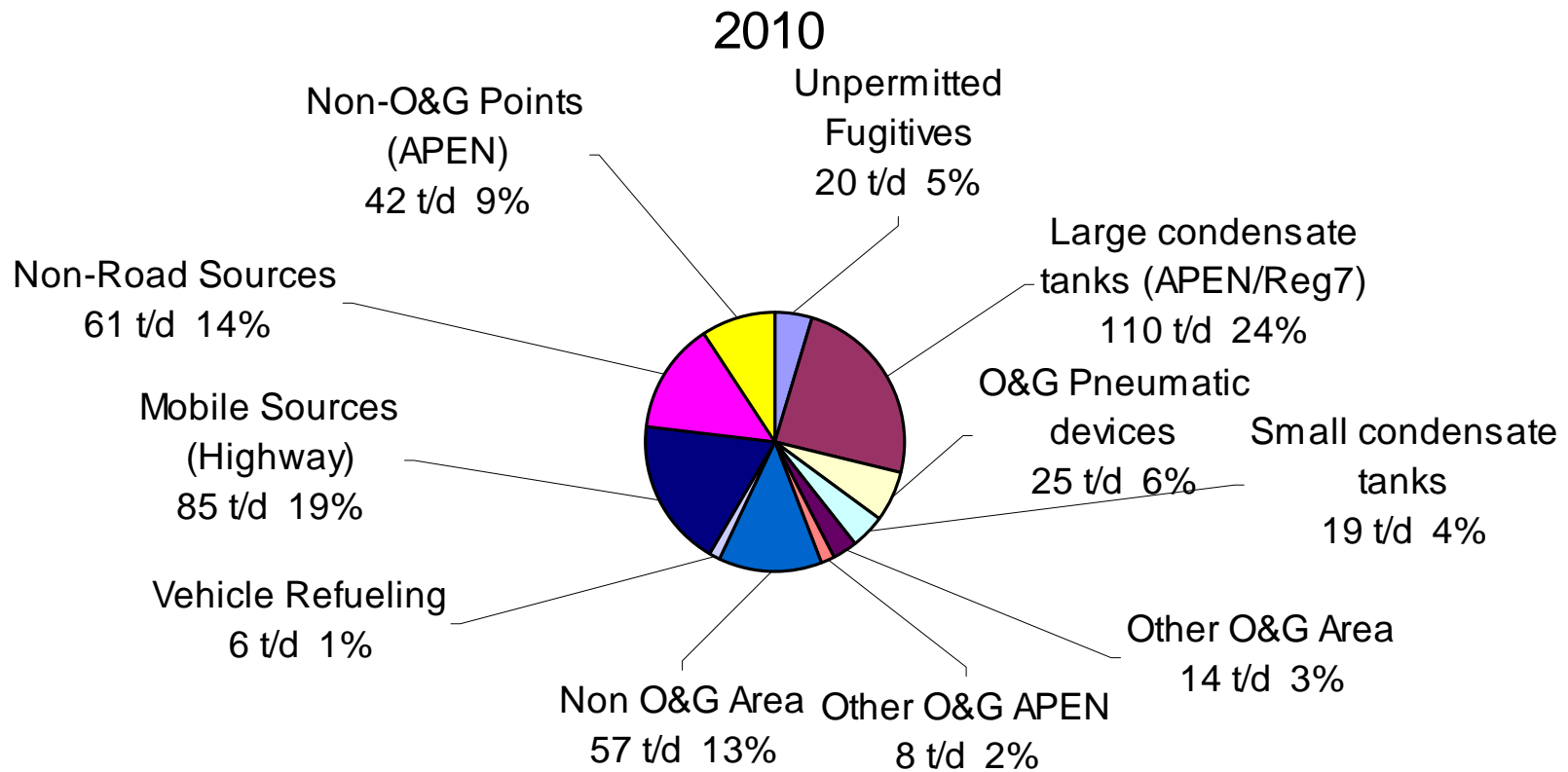


Denver-Boulder-Greeley-Fort Collins, Colorado
Eight-Hour Ozone Control Area



Front Range NAA VOC Emissions – 2010

(3% reduction since 2006)





New Stationary Sources VOC Control Options

- Expand Regulation No. 7 to Entire Nonattainment Area
- Eliminate Exemptions for Significant Categories
- Reduce Emissions from the Largest Existing VOC Facilities
- All new VOC sources apply RACT



Examples of Sources Subject to Reg. 7 Expansion

- Surface Coaters
 - Paint shops
 - Coil, fabric, can, appliance, wire, plastic film, vinyl, metal parts, wood, tires, furniture coating operations
- Use of Solvents for Degreasing and Cleaning
- Use of Cutback Asphalt
- Petroleum Storage and Transfer
- Graphic Arts
- Pharmaceutical Production



Elimination of Categorical Exemptions for Stationary Sources

- Chemical storage tanks
- Small fleet fueling stations
- Emergency power generators



Reduce VOC Emissions from the Largest Facilities in the Nonattainment Area

- Suncor Refinery
 - Storage tank controls
 - Fugitive controls
- Coors Brewing
 - Bottle/can filling controls
- Metal Container Corp.
 - Can coating operation controls
- Anheuser Busch Brewery
 - Can filling and other operation controls
- CEMEX, Inc
 - Kiln controls
- Insulfoam LLC
 - Resin storage controls



All New VOC Sources Apply RACT in the Nonattainment Area

- Permitting of new/modified VOC sources starts at 2 tons/year
 - Formerly 5 tons/year
- Newly permitted sources must apply reasonably available control technology (RACT)
 - Case-by-case analysis during the permitting process, unless other rules apply



VOC SS Control Options Not Being Considered at this Time

- Adoption of new/updated “Control Technique Guidelines”
 - Small amount of emission reduction potential
- Further control of numerous smaller sources
 - Small amount of emission reduction potential
- Back-up generators
 - Small amount of emission reduction potential
- Architectural/Traffic/Industrial and Consumer Products Standards
 - Federal requirements kick-in in 2009
 - More stringent California standards could be considered in the future



New Oil and Gas VOC Control Options

- Further Control Condensate Tanks
- Control Pneumatic-Actuated Devices
- Eliminate Exemptions for Significant Categories



Condensate Tank Control Options

- All new/modified condensate tanks with 2 tpy or greater VOC emissions to control
- Option 1 - All existing condensate tanks with 2-5 tpy or greater VOC emissions to control
- Option 2 - Increase 75% system-wide control program towards 95%





Pneumatics Control Options

- Retrofit/replace existing 1 ton/year high-bleed pneumatic actuated devices with low/now-bleed devices
- Low/no-bleed pneumatics required for most new devices
- Safety exemptions – enhanced maintenance on remaining high-bleed devices required





Elimination of Categorical Exemptions for Oil and Gas Sources

- Crude oil truck loading equipment
- Oil/gas production wastewater tanks
- Stationary Internal Combustion Engines meeting horsepower and hours of operation restrictions
- Condensate tanks with production 730 BBL/year or less
- Fuel burning equipment (includes heater treaters, separators, and dehydrator reboilers)
- Petroleum industry flares less than 5 tons per year (tpy) emissions
- Storage of butane, propane, LPG
- Crude oil storage tanks
- Surface water storage impoundment
- Internal combustion engines on drill rigs
- Venting of natural gas lines for safety purposes (for APEN purposes only)
- Oil and gas production activities including: well drilling, workovers and completions (for APEN purposes only)



VOC O&G Control Options Not Being Considered at this Time

- Leak detection at wellsites
 - Small amount of emission reduction potential due to the diversity and remoteness of sources
 - Little/no knowledge of control techniques
 - An option to further research for future implementation
- Well completions
 - Small amount of emission reduction potential for the nonattainment area
 - OGCC regulatory process is considering well completion controls for the State
- Numerous small, individual sources & equipment
 - Small amount of emission reduction potential due to the diversity of sources and the small amount of emissions
 - Little/no knowledge of control techniques



Next Steps

- May-August** **RAQC/NFR considers modeling and strategy analyses**
- May-July** **RAQC/APCD staff draft regulations**
- September** **RAQC/NFR/APCD proposes draft plan/regulations to AQCC**
- Oct.-Dec.** **AQCC prehearing process**
- December** **AQCC hearing and SIP/regulation adoption**
- January-May** **Legislative review**
- July 1, 2009** **Deadline to submit plan to EPA**