

Consumer Products



Potential Denver Metro Area-North Front Range
Ozone Reduction Strategy

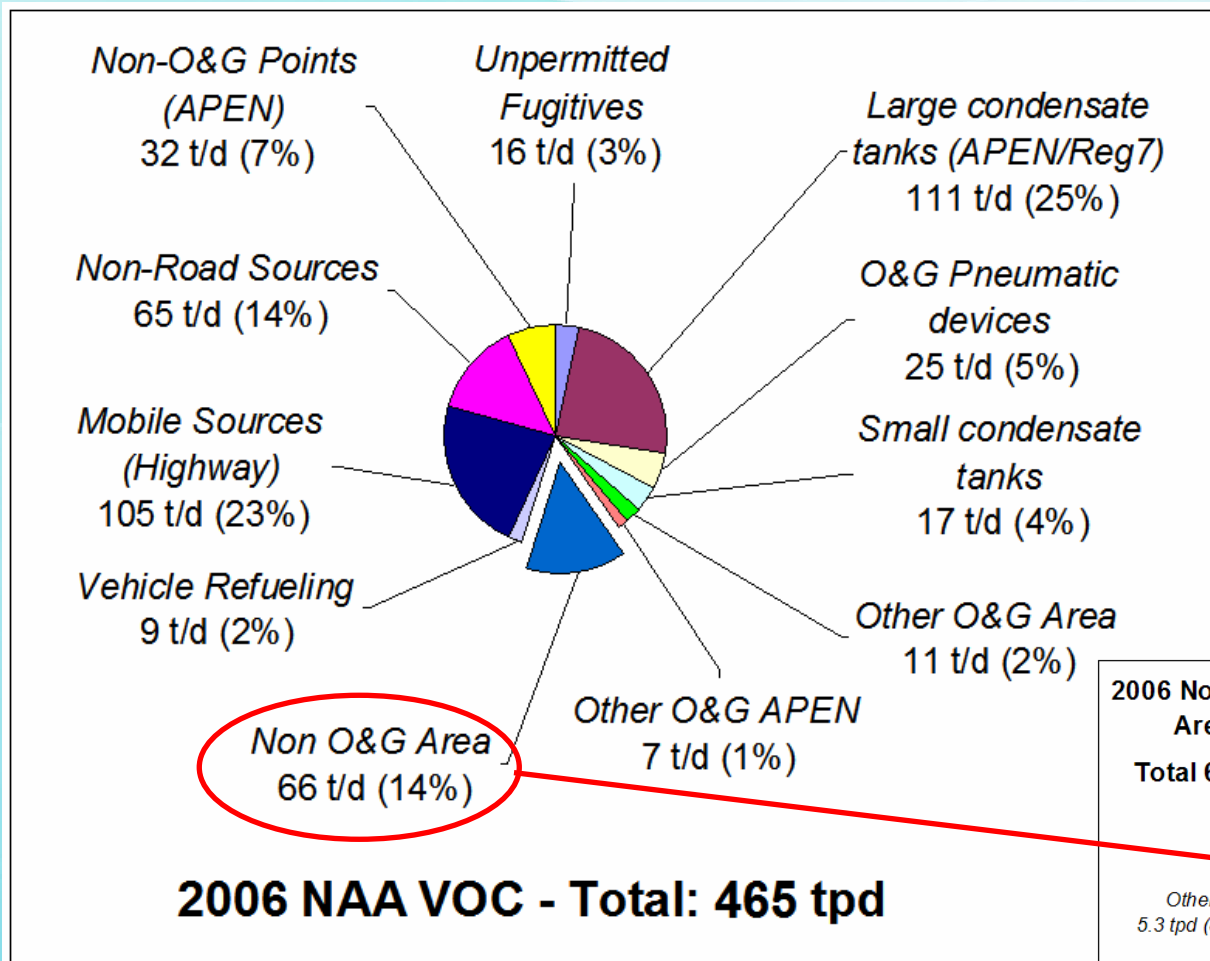
Technical Evaluation

Regional Air Quality Council Board Meeting

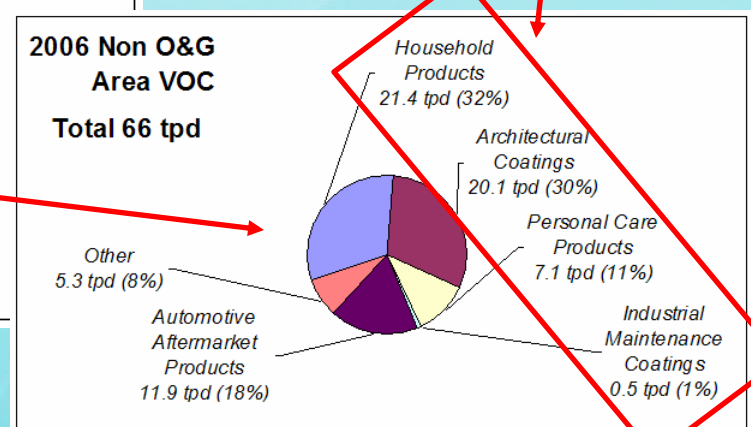
July 14, 2008



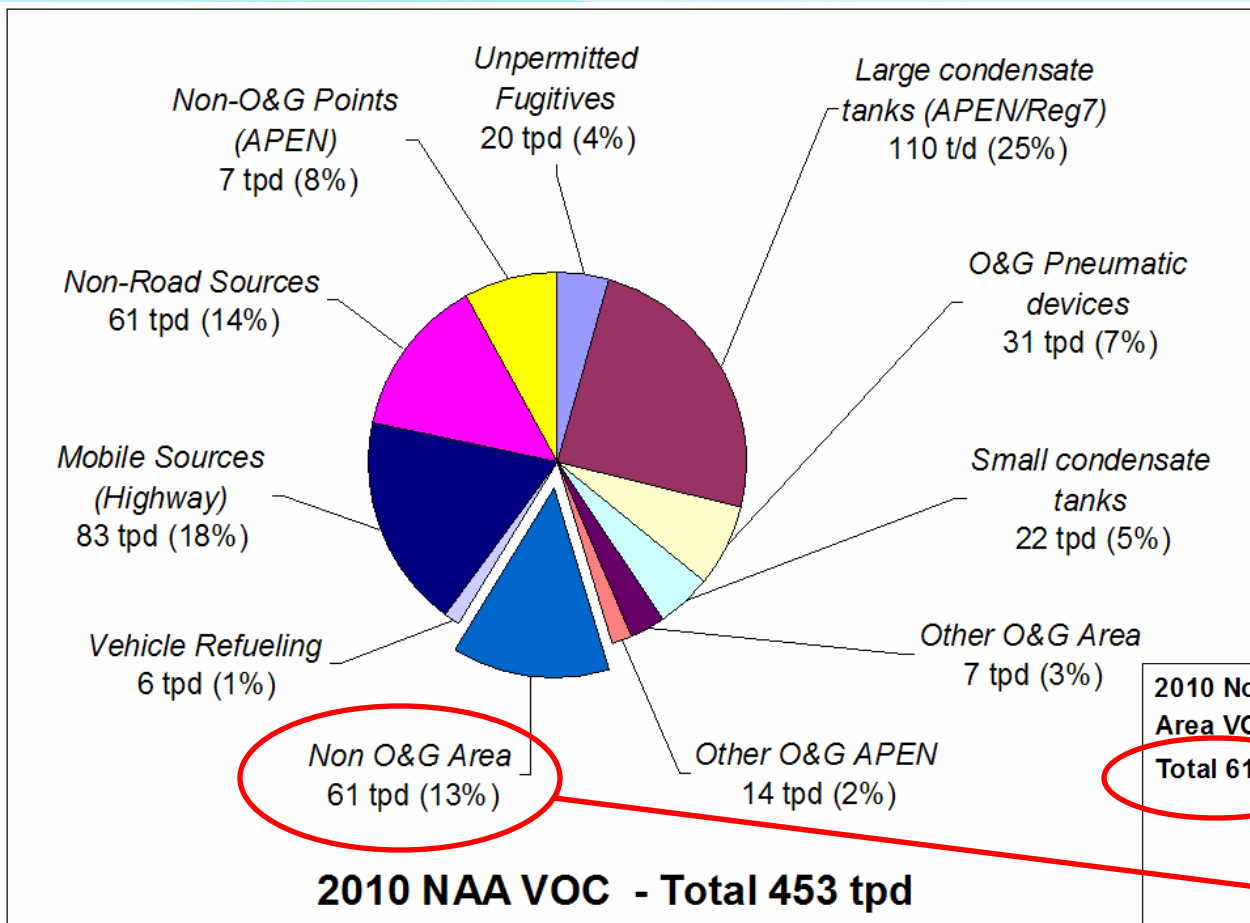
2006 Base VOC Emissions



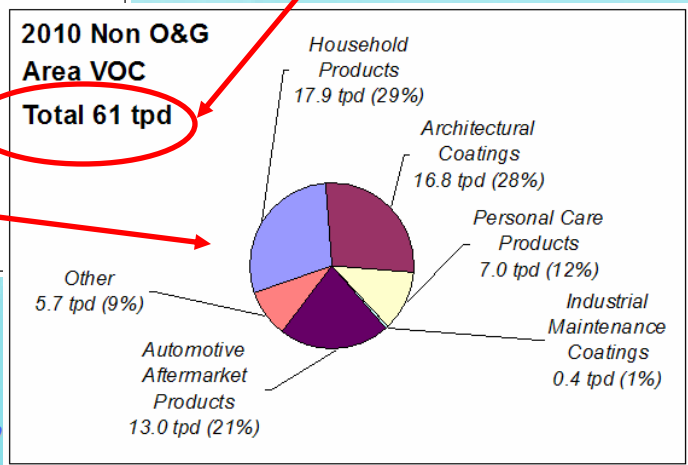
Coatings & Consumer Products Category



2010 Base VOC Emissions



Benefit of future EPA rules included in 2010 projections



Consumer Products

- VOCs estimated based on per capita emission factors
- Category includes:
 - Household Products
 - Cleaners, laundry detergents, adhesives, polishes & waxes
 - Architectural Coatings
 - Paints, lacquers, & varnishes
 - Industrial Maintenance
 - Cleaners, aerosol products & rubbing compounds
 - Personal Care Products
 - Deodorants, toiletries & beauty care



Consumer Products

- 2010 base case emission inventory includes VOC reductions from future EPA Consumer Product Rules
 - EPA allows a SIP Credit of 75% of the benefit of 3 future rules
 - Aerosol Coatings
 - Final Rule recently became effective June 23rd 2008
 - Establishes product weighted O₃ reactivity limits by coating category
 - EPA allowed SIP Credit = 0.086 lbs per capita (0.75*0.114)
 - Architectural/Industrial Maintenance (AIM) Coatings
 - No Rule proposed
 - EPA allowed SIP credit = 0.825 lbs per capita (0.75*1.1)
 - Consumer Products (CP)
 - No Rule proposed
 - EPA allowed SIP credit = 0.675 lbs per capita (0.75*0.9)



Evaluation of Control Options

- Option 1: Full Implementation of Future EPA Rules
 - Recapture the remaining 25% of the SIP credit
 - Projected VOC reduction
 - ~3.2 tons per day in the NAA
 - ~4.9 tons per day statewide
 - Due to the uncertainty in the timing of future EPA rules, consumer products standards could be developed using the 2005 California Air Resources Board (CARB) rules
 - The AIM & CP control standards that EPA has discussed generally meet 2005 CARB standards
 - Consumer Product Standards would need to apply statewide
 - Program would require sizable budget and staff to administer
 - Product sampling & laboratory analysis
 - Program enforcement would be necessary for SIP credit
 - Requirements could be difficult to enforce for out-of-state suppliers
 - Full program implementation could take several years beyond 2010
 - Costs to consumers unknown



Evaluation of Control Options

- **Option 2**: Implementation of most recent CARB Consumer Product Standards
 - Adopt CARB(2008) consumer product standards
 - Projected VOC reduction
 - ~7.7 tons per day in the NAA
 - ~11.9 tons per day statewide
 - Consumer Product Standards would need to apply statewide
 - Program would require sizable budget and staff to administer
 - Product sampling & laboratory analysis
 - Program enforcement would be necessary for SIP credit
 - Requirements could be difficult to enforce for out-of-state suppliers
 - Full program implementation could take several years beyond 2010
 - Costs to consumers unknown



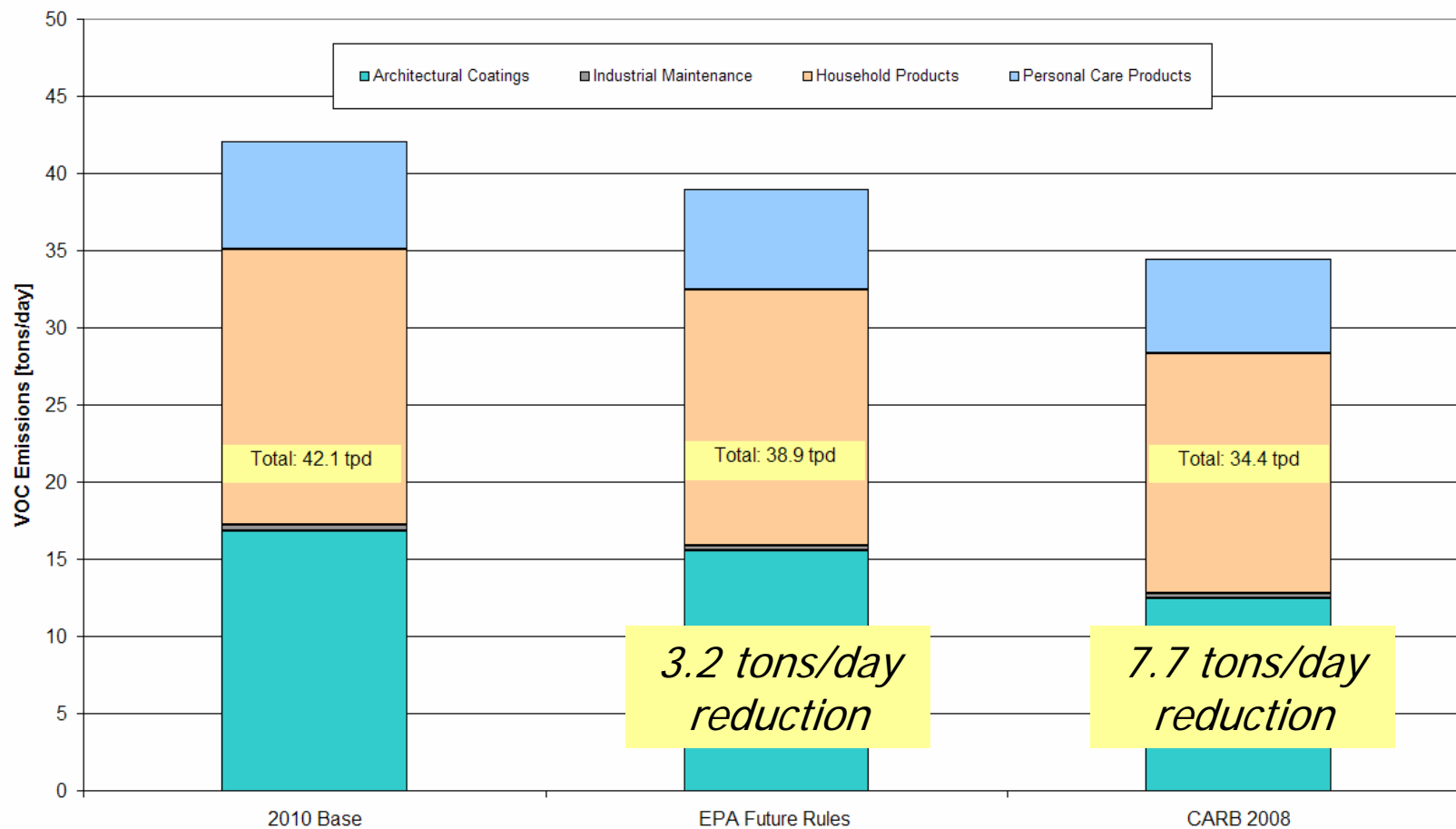
Other Considerations

- Informal survey of the major paint distributors in the metro-area indicates significant market penetration of CARB compliant architectural coatings
 - Some paint products are below South Coast Air Quality Management District (SCAQMD) standards (e.g. zero VOC)
- Although CARB compliant paint products seem to be readily available in Colorado, our geographic location may be a distribution barrier for other categories (e.g. household & personal care) of CARB compliant products
- Emission reductions presume that all products sold in California could be used in Colorado
 - There may be some issues with freezing temperatures that can affect the usability and quality of some products



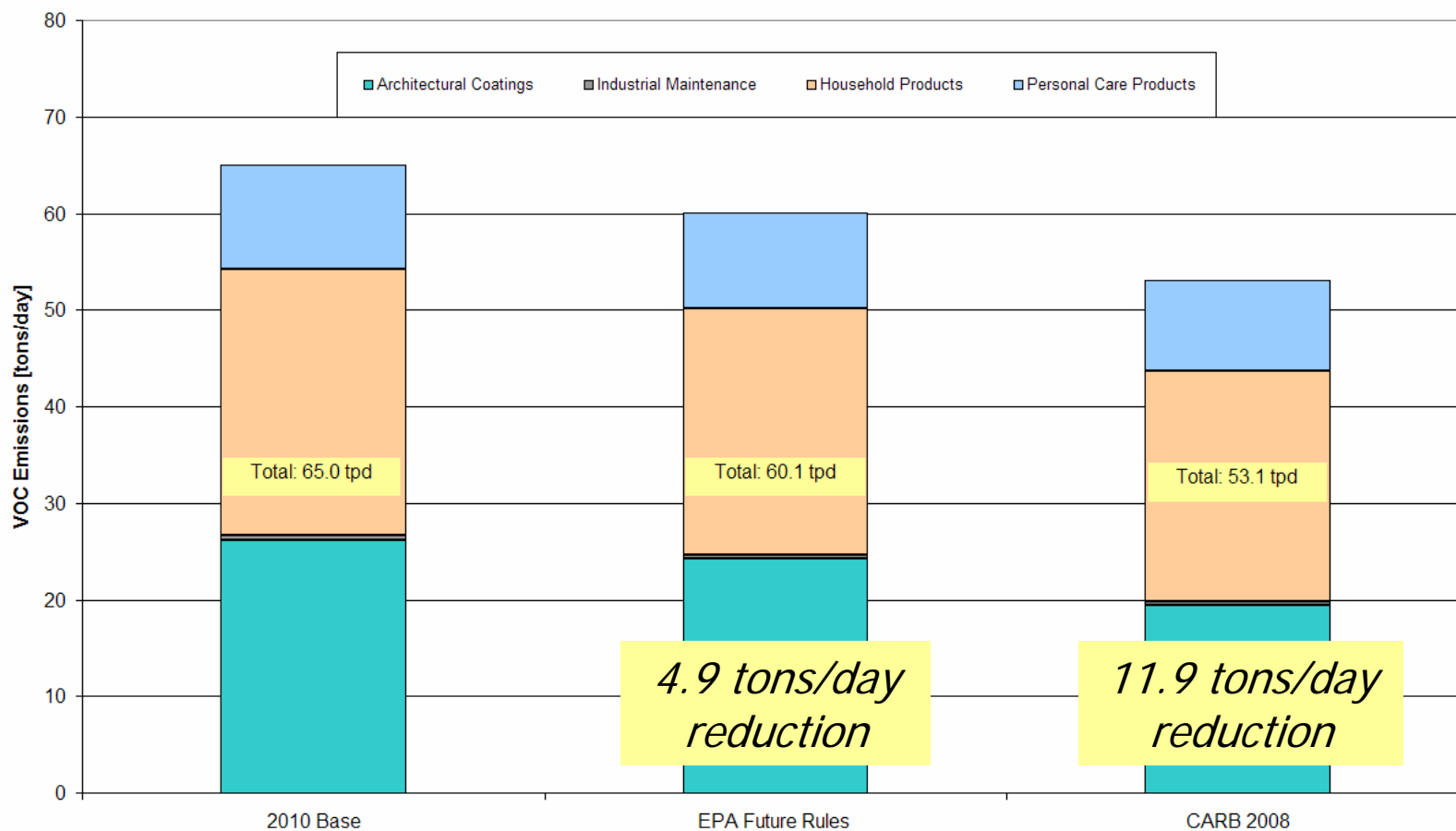
NAA Comparison of Options

Coatings & Consumer Products Category
VOC Emission Projections in 9-County Non-Attainment Area



Statewide Comparison of Options

Coatings & Consumer Products Category
VOC Emission Projections Statewide



Questions/Comments

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