

Mobile Sources and Air Quality in Colorado

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Presentation Overview - *I Will be Brief!*

- ▶ Colorado's Air Quality
- ▶ Inspection and Maintenance - Gasoline and Diesel
- ▶ Roadside Remote Sensing
- ▶ Fuels Quality
- ▶ Advanced Clean Cars Adoption



Colorado's Air Quality

The Denver/Boulder, Colorado Springs, Fort Collins “Front Range” is our problem area

- ▶ Currently Moderate Nontainment for Ozone
- ▶ We're getting bumped to Serious NA
 - ▶ ODV currently at ≥ 76 ppb
- ▶ Historically, Carbon Monoxide was a problem - Mile High Altitude
- ▶ PM elevated, but in attainment



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Colorado's Efforts in MS Emissions Reductions -I/M Programs

- ▶ Gasoline I/M in place since 1981
 - ▶ Centralized IM-240 since 1995
 - ▶ 7 Year new vehicle exemption, two biennial cycles of OBD, then tailpipe test
- ▶ Diesel I/M in place since 1987
 - ▶ Fleet Self-Cert for HD
 - ▶ Decentralized for LDDV and OO's/small fleets (1990)
 - ▶ Opacity based - Full load lugdown
 - ▶ Colorado is currently researching in-use NOx testing for diesel I/M



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Colorado Efforts - Roadside Remote Sensing

- ▶ Remote Sensing Developed at University of Denver - Drs. Stedman and Bishop
- ▶ Much research and experimentation in the 1990's
 - ▶ Greeley Pilot study
 - ▶ Denver Pilot
- ▶ CDPHE found a poor correlation between RS and I/M results
- ▶ -But a good correlation in ID'ing I/M 'Clean' vehicles (Gasoline)
- ▶ RS Clean Screened vehicles excused from I/M, since 2004 - 25%



Colorado Efforts - Fuel Quality

- ▶ Gasoline Rvp 7.8 + 1# Etoh waiver
- ▶ Possible consideration of a LC Fuel standard (tentative)
- ▶ Diesel Cetane and Sulfur meet ASTM
- ▶ Colorado has one small/medium refinery, We import about 1/2
- ▶ Summer and winter fuels monitoring programs ongoing



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Colorado Efforts - Advanced Clean Cars - *By Executive Order*

- ▶ Colorado Adopted California LEV Standard November 2018
- ▶ Colorado Adopted California ZEV Standard August 2019
- ▶ Challenges:
 - ▶ Colorado LD fleet is 77% 'Truck'
 - ▶ Long commutes and trips are the norm
 - ▶ Heavy opposition from Dealer's association, Rural Counties
- ▶ OEM's Came Aboard in Support of ZEV - with Early Action and Proportional Credits for startup; Support from the public and NGO's was very strong



In Conclusion -

- ▶ Colorado has been a quiet leader and innovator in many areas of Mobile Source emissions reduction
- ▶ HD NOx, VOC and PM is a major contributor to Ozone and Health Effects
- ▶ This California Ex-Pat has 45 years of experience in HD tech and emissions efforts - I believe I can add to today's discussion and the advancement of further NOx emissions from the fleet.
- ▶ Thanks! Doug Decker-(303) 692-3126;
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