


# Repair Your Air Campaign



RAQC Meeting  
September 6, 2007

# Historical Policy Development

- 1993 Total Clean Cars Program
  - \$500,000 from Total Petroleum to repair/salvage high-emitters
- 1999 Blue Print for Clean Air
  - Focus on smoking high-emitters
- 2000 Carbon Monoxide SIP
  - Required implementation of a Clean Screen Program
- 2000 Governor's Options to Reform the Current IM Program
  - Increase clean screen program and implement a RSD based high-emitter identification and repair program
- 2002 High-Emitter Work Group
  - Recommended development Smoking Vehicle Enforcement Program to require repair of visibly smoking vehicles
  - Recommended development of an RSD based program to require repair of non-visibly polluting high-emitters – led to RYAC

# Phased Implementation Approach

- Partnership between CDPHE, CDOR, Envirotest and RAQC
- Phase I – simple program developed in 2003 to determine costs, benefits and obstacles to success
  - \$450K CMAQ ‘experimental pilot project’
  - Goals to repair 250 vehicles to reduce emissions for 2003 ozone season
- Phase II – program reengineered to include more rigorous protocols in 2005
  - 3 year \$1.2M CMAQ ‘experimental pilot project’
  - Goals to repair 840 vehicles to reduce emissions, test feasibility for full-scale implementation and assist repair industry with high HC vehicles
  - Salvage vehicles that can not be repaired
- HB06-1302 is passed by Colorado General Assembly
- Phase III – program being developed to compliment implementation of HB1302 with CDPHE

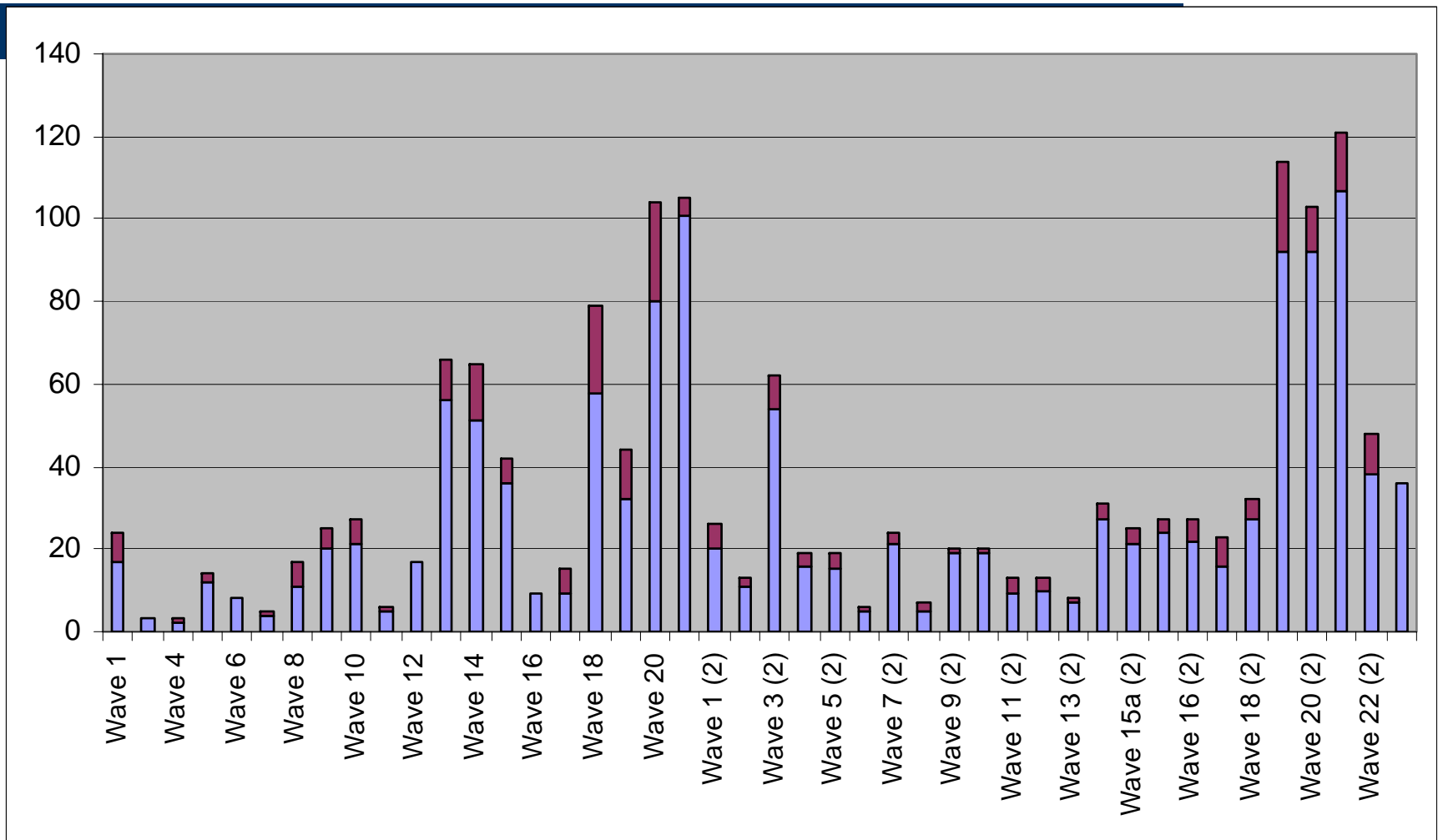
# General Program Processes

- Vehicle is identified by RapidScreen remote sensing vans
- CDPHE filters data twice per month and provides each 'wave' to RAQC (20 – 350 vehicles per wave)
- RAQC contacts vehicle owners offering \$1,000 repair assistance, free emissions testing and a free rental vehicle while the vehicle is being repaired
- Vehicle owner contacts RAQC
- RAQC prescreens vehicle for eligibility
- RAQC schedules vehicle into one of three CDPHE Emissions Technical Centers (ETC)
- ETC runs series of emissions tests on vehicle, if it fails it qualifies for program

# General Program Processes – Cont.

- ETC staff diagnose the vehicle and perform some repairs in-house and send others to participating repair facilities
- Vehicle is brought back to ETC upon repair and given post-repair emissions testing
- If vehicle passes, it is released, if not the vehicle is repaired further
- ETCs provide repair invoices and data to RAQC
- RAQC reimburses vendors

# Participation Rate by Wave



# Pass/Fail Rate

- Program IM240 pass rate:
  - 50% currently
  - 60% percent in first phase
- Potential pass rate issues:
  - In first phase, 60% pass rate due to identification with single hit
  - Vehicle emissions variability
  - Potential evaporative identifications
  - Site selection and cold starts
  - Potential vehicle repair

# Repaired Vehicles

- 487 vehicles repaired
  - Primary repairs – plugs/tunes-ups, catalysts, O2 sensors
- Average program repair cost \$325 - \$400
- Average rental car cost \$180 - \$275

# Average Reductions Per Vehicle

- Average reductions:
  - Approximately 80% average reduction in HC
    - Approximately 5 gr/mile to 1 gr/mile
  - Approximately 75% average reduction in CO
    - Approximately 40 gr/mile to 10 gr/mile
  - Approximately 20% average reduction in NOx
    - Approximately 2 gr/mile to 1.6 gr/mile

# Estimated Emissions Benefits

- 34 TPY HC, 210 TPY CO and 2.5 TPY NO<sub>x</sub>
- Benefits for the program are estimated to last two years and equate to a program lifetime emissions benefit of 69 TPY HC, 420 TPY CO and 5 TPY NO<sub>x</sub>

# Salvage Program

- Currently waiting for \$150,000 SEP funding to salvage high-emitting, gasoline powered vehicles that can not be repaired
- Program will run concurrently with RYAC
- Need to develop program policies and procedures that ensure engines and emissions control equipment are off the road

# HB06-1302

- Develops a hybrid approach to emissions testing with emphasis on remote sensing efforts
  - Increase clean screen and implement enforceable high-emitter program
  - Includes fines and registration suspension for high-emitters
  - Reduce lane infrastructure as RSD coverage increases
  - All eligible gasoline powered vehicles will be tested
    - Either identified by RSD as clean or as a high-emitter
    - All others will still go to Envirotest for regularly scheduled emissions testing
- Regulation 11 changes proceeding to implement HB1302 “Pilot Program” by end of 2007
- RYAC will support the 1302 Pilot by offering repair assistance for vehicles that fail their confirmatory testing

## **RYAC Phase III**

- Currently developing this effort
- Plans are to provide repair assistance to hardship waiver vehicles
  - Currently vehicles owned by economically disadvantaged citizens can be provided a waiver and not repaired if their vehicle fails
- Conduct in-depth analyses of other program issues

# Lessons Learned

- Potential to reduce mobile source HC substantially
- RYAC is a critical test bed for full-scale implementation
- Well received by the public since we have repair assistance
- IM pass rate is more than just dirty vehicles identified as clean
- Vehicle variability, potential evap identifications, site selection, cold starts and potential pre-testing repairs
  - RSD - 50 out of 100 vehicles tested pass
  - Current IM Program - ~90 out of 100 vehicles tested pass
- Program throughput is limited by number of ETCs and their resources
  - A vehicle may wait 2 months between identification and emissions testing



**Questions?**