

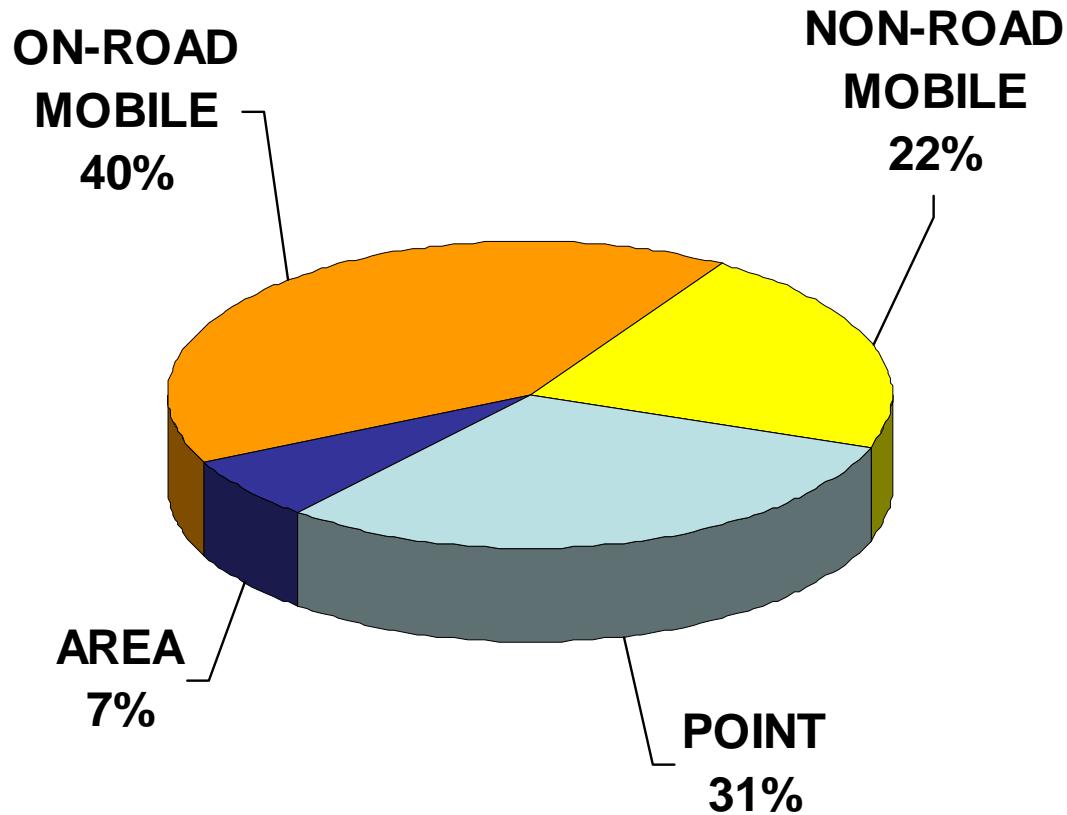
# **Emissions Reduction Strategies for the Railroad Industry**

**Shelley Whitworth**

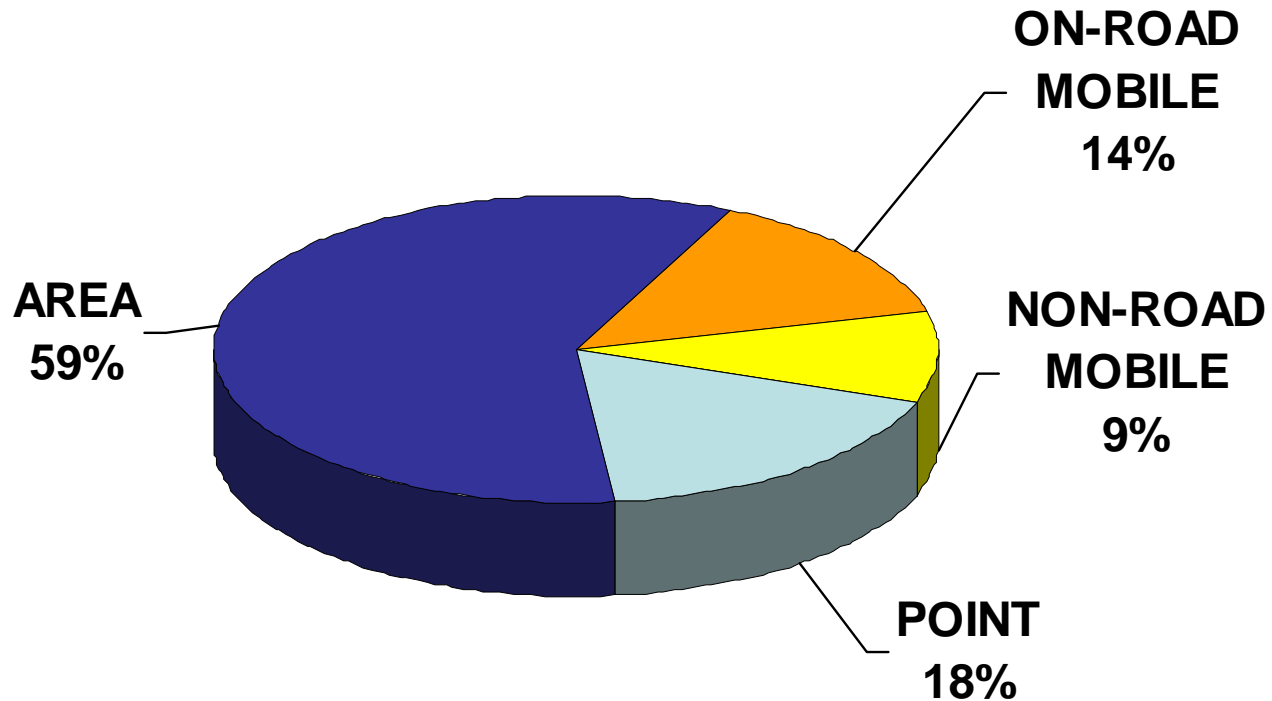
**Houston-Galveston Area Council**



# 2005 HOUSTON - GALVESTON - BRAZORIA NO<sub>x</sub> EMISSIONS INVENTORY



# 2005 HOUSTON - GALVESTON - BRAZORIA VOC EMISSIONS INVENTORY



# Creation of Mobile Source Emissions Reduction Plan

- Start with a wide range of strategy ideas (Master List)
  - Public input
  - Additional measures used elsewhere
- Describe/outline potential emission reduction strategies
- Focus on significant NO<sub>x</sub> reduction strategies
- Less focus on implementation
- Create a shortened list of most effective control strategies

# Master List

- Old Master List from 2006 stakeholder meetings plus supplementing a few additional measures that were thought of following the 2006-07 process and deleting unacceptable measures
- Specific measures suggested for the greater Houston area have been developed

# Criteria for Inclusion as a Short List Strategy

- EPA minimum criteria for emission reduction strategies to be considered viable
  - Quantifiable: measurable reduction in activity or emission rates
  - Surplus: emission reductions not counted elsewhere in emission control plans
  - Federally enforceable: EPA could administer the program and therefore meets Federal guidance
  - Permanent: emission reduction strategy cannot be rescinded
  - Adequately supported: funding, personnel dedicated to administering the program

# Criteria for Inclusion as a Short List Strategy

- Feasibility/practicality: technology or administrative structure available
- Public acceptance: stakeholder burden and general public interest
- Emission reduction potential
- Cost effectiveness

# Creation of Short List

- Measures included will focus on:
  - Highest emission reduction control strategies
  - Strategies that deserved more attention and data
  - Strategies with fewer implementation barriers
  - Cost or feasibility

# Control Strategies

- Some Examples:
  - Require accelerated purchase of Tier II locomotive engines
  - Limitations on idling of locomotives
  - Use of auxiliary power units
  - Electrification of rail switching yards
  - On-road diesel vehicle improvements
- See handouts for specific control measures

# VMEPS and TCMs

- Both are commitments made in the SIP by local and regional governments
- Both result in mobile source emissions reductions
- VMEPs
  - Flexible, bottom-line commitments
  - Take the form of broad programmatic goals
- TCMs
  - Legally-binding specific commitments
  - Take the form of specific projects

# Committed VMEPs

- All current VMEP commitments can be found below

Measure	Description
Regional Computerized Traffic Signal System	Average speed on local streets increased by 21%
Locomotives/ Clean Air Action	MOA
Commercial Marine/ Clean Air Action	Tugs/Tows–MOA Ferries–MOA
Vehicle Scrappage/ Clean Air Action	Emission reductions through repair or replacement of high emitting vehicles.

# Committed VMEPs (cont.)

<b>Measure</b>	<b>Description</b>
Smoking Vehicle/ Clean Air Action	TCEQ program –marketing and advertising by H-GAC
Clean Cities / Vehicles Program	Public and private heavy-duty engine/vehicle replacement/ retrofit
Commute Solutions	Van pools, additional transit, alternative commuting, and other initiatives

# Information

- Documentation:

<http://www.h-gac.com/taq/airquality/sip>

- Contacts:

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