

# 2007 AQMP Summit

Panel #5

## Off-Road Control Strategies

Dean Saito  
Mobile Source  
Strategies Manager

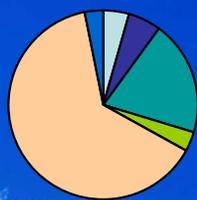
### Goals & Objectives

- Identify Off-Road Control Concepts w/  
Focus On Technology Availability and  
Development
- Identify Strategies to Accelerate Fleet  
Turnover

# Topics

- Engine Technology
- Clean Fuels
- Cold Ironing
- Fleet Modernization
- Hybrid System
- Incentive Program
- Retrofit Technology
- Remote Sensing
- Other

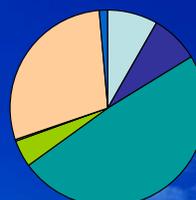
# Off-Road NOx Emissions



2002 – 322 tpd



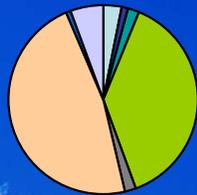
2015 – 262 tpd



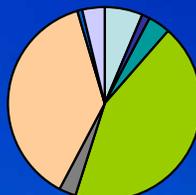
2020 – 249 tpd



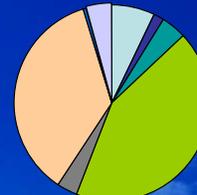
## Off-Road VOC Emissions



2002 – 203 tpd



2015 – 134 tpd



2020 – 121 tpd



## Off-Road PM2.5 Emissions



2002 – 20 tpd



2015 – 17 tpd



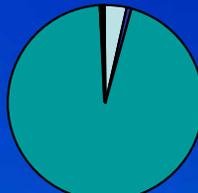
2020 – 16 tpd



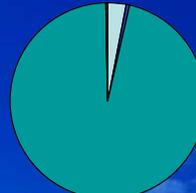
## Off-Road SOx Emissions



2002 – 28 tpd



2015 – 53 tpd



2020 – 65 tpd



## Panel 5 Questions:

- Recommend three control strategies that in your view would provide a significant contribution to the emission targets in the time frame specified
- Describe the problems you see as a barrier to the introduction of clean air technologies; and
- Suggest the one research priority the air agencies should engage in for the next 5 to 10 years