

Mobile Source Measures for the Ozone SIP

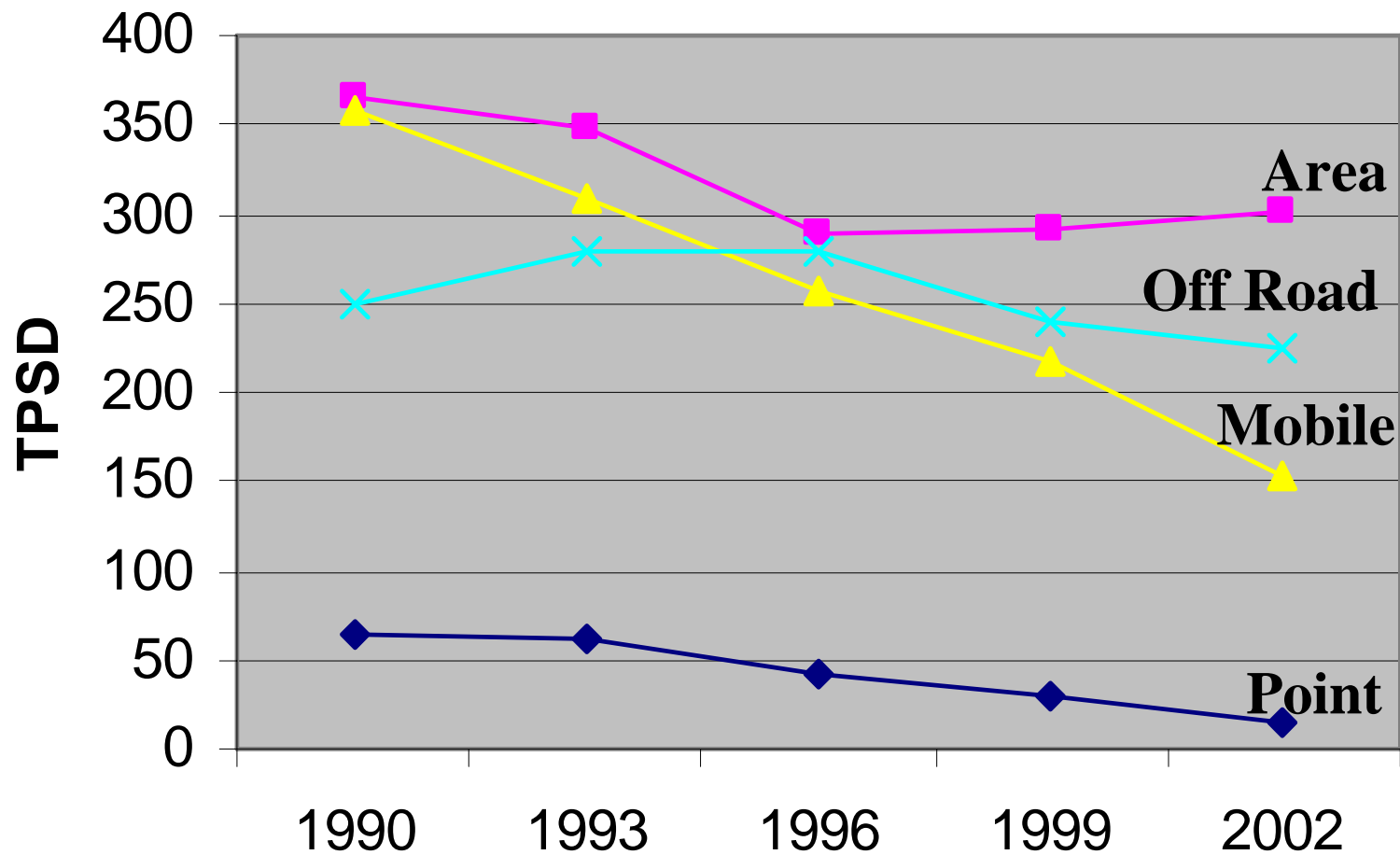
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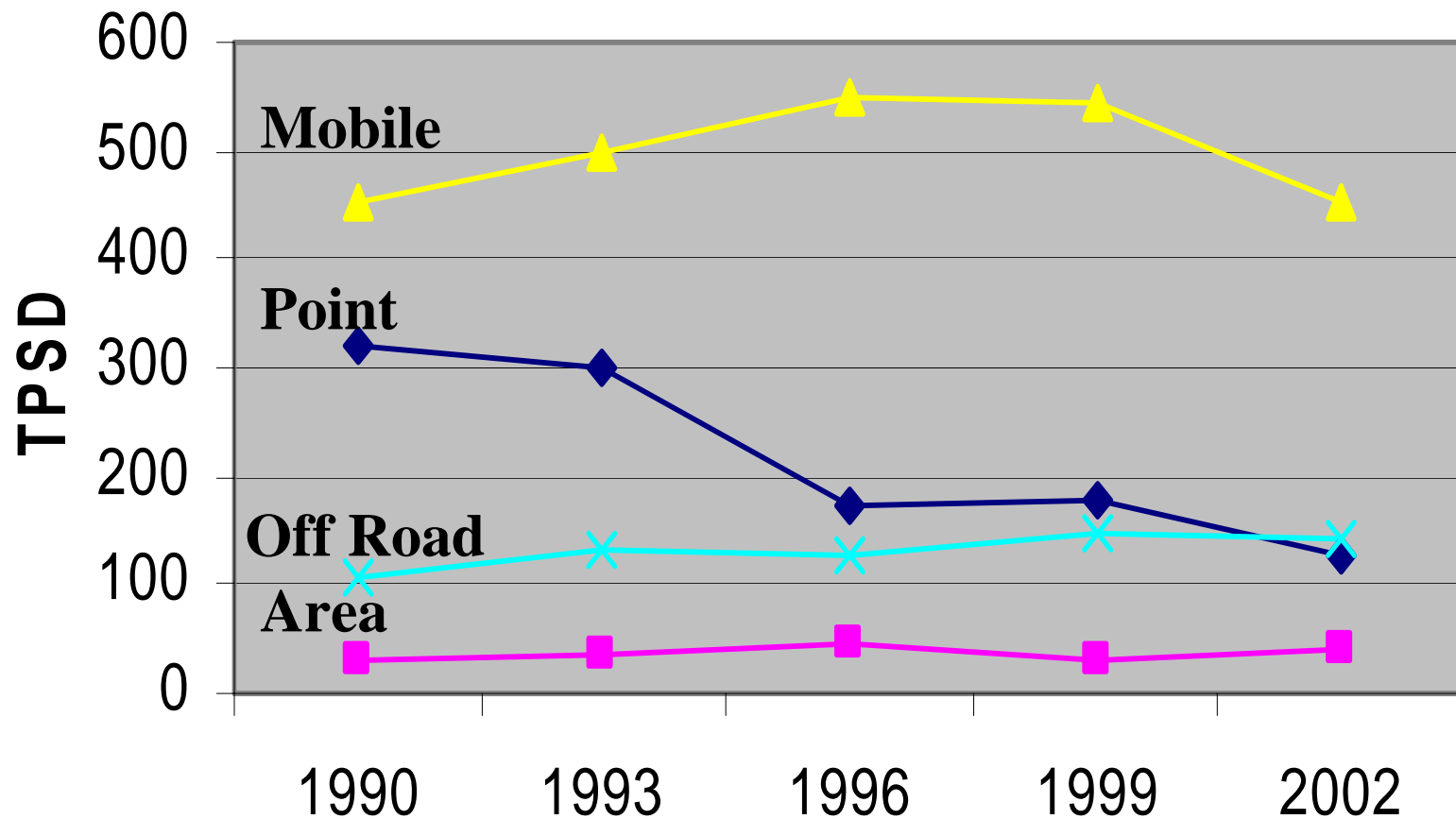
Overview

- Emission trends
- Existing SIP measures (state and federal)
- Possible new measures
- Conclusions

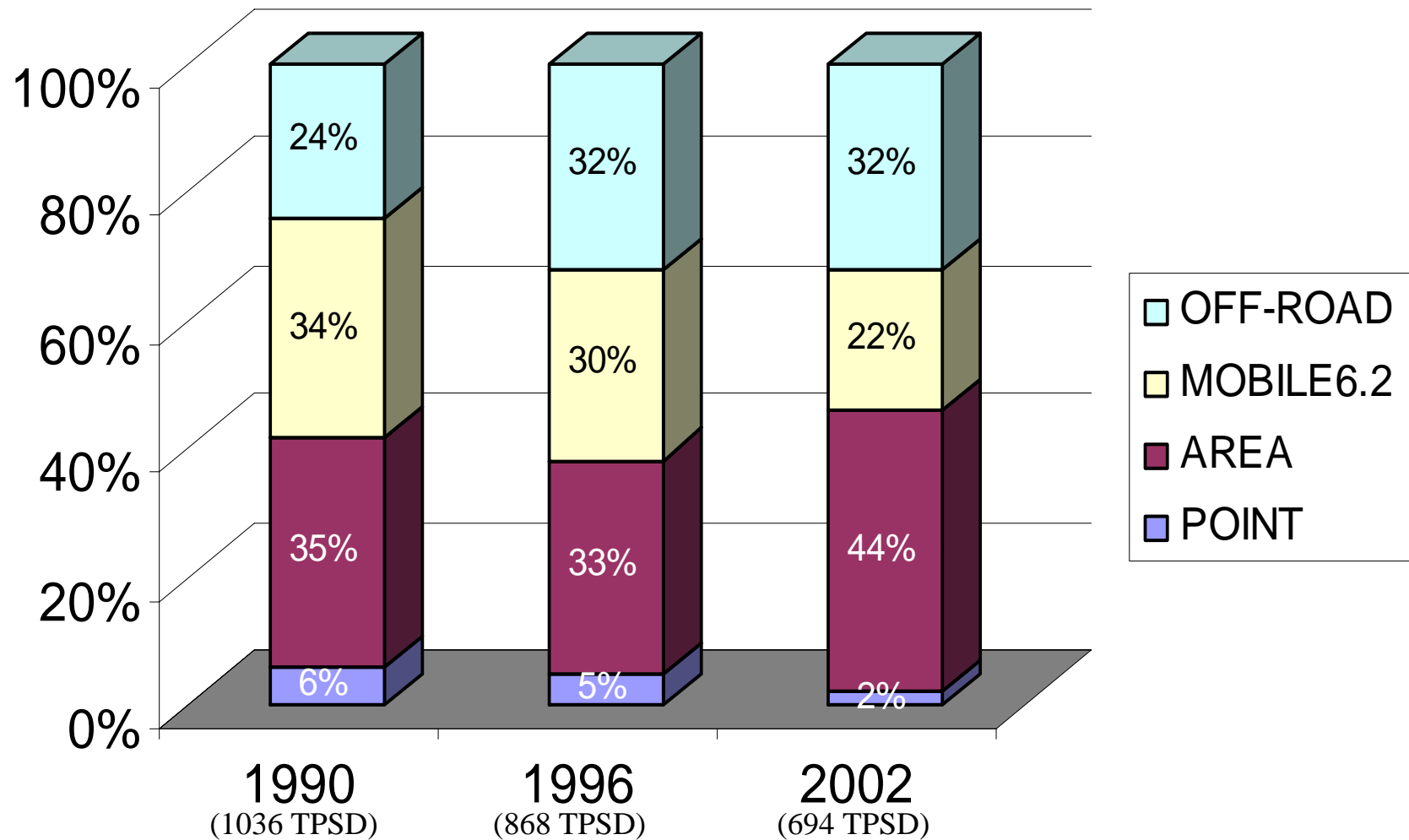
Trend of VOC Emissions



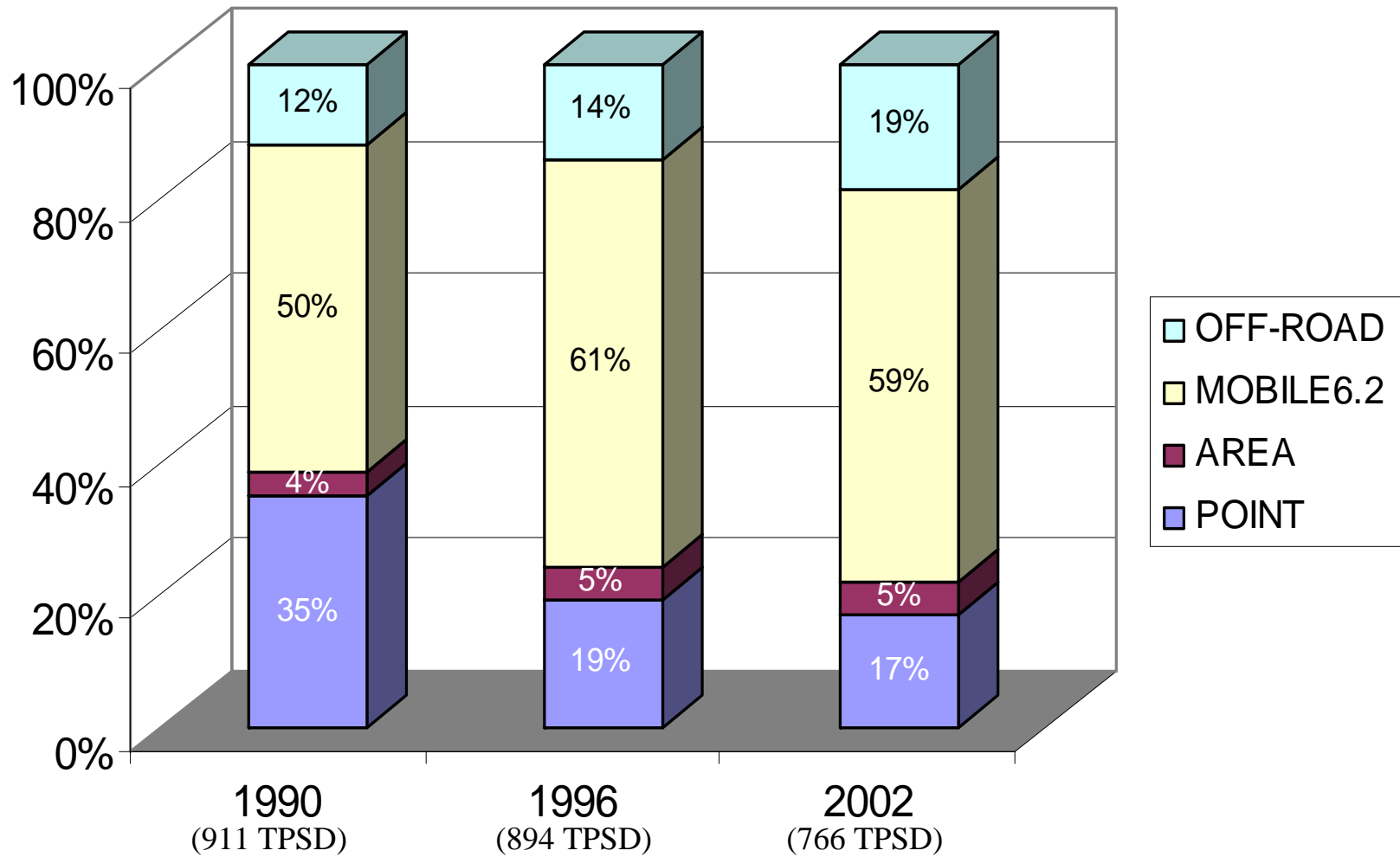
Trend of NOx Emissions



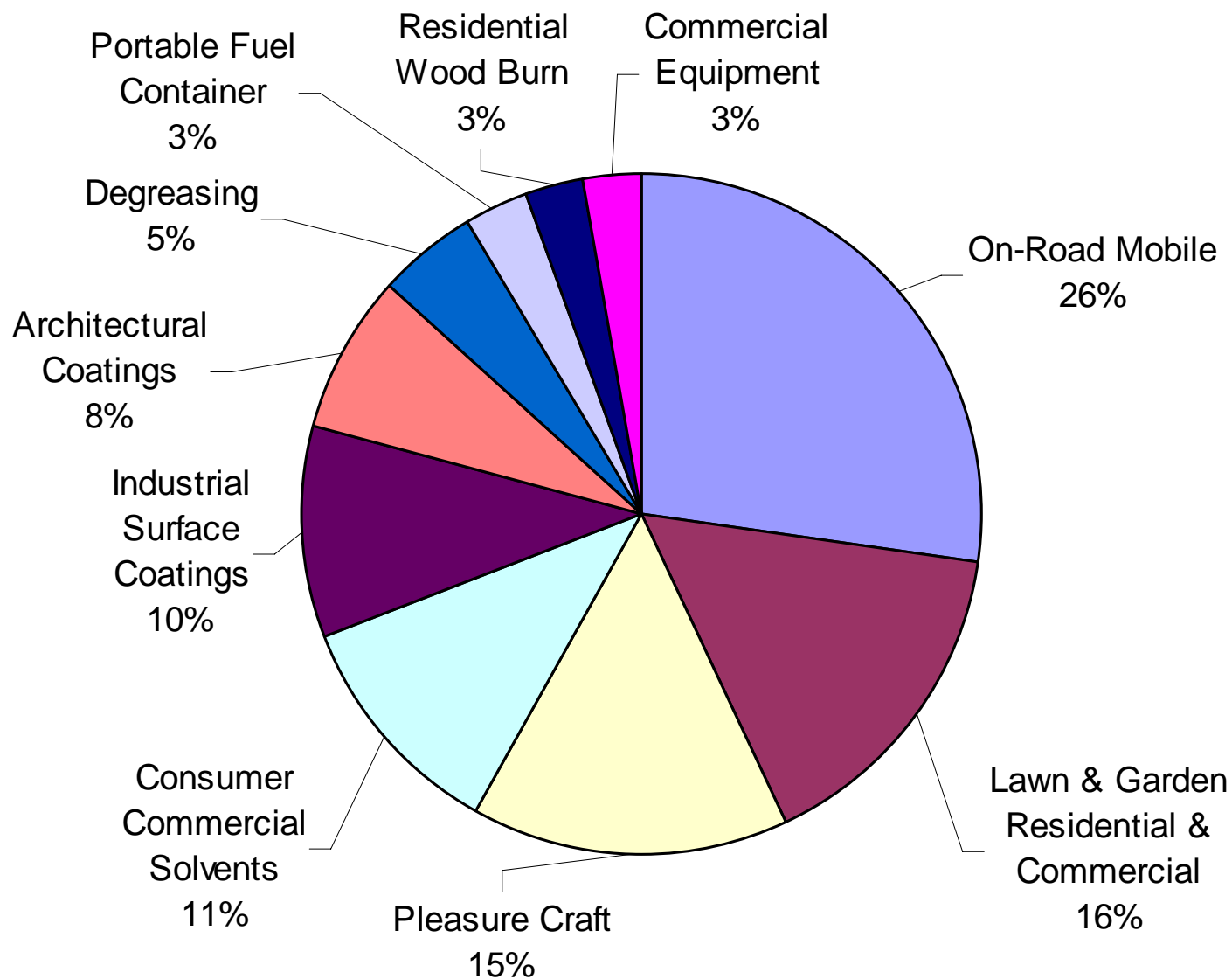
Source Contribution for VOCs



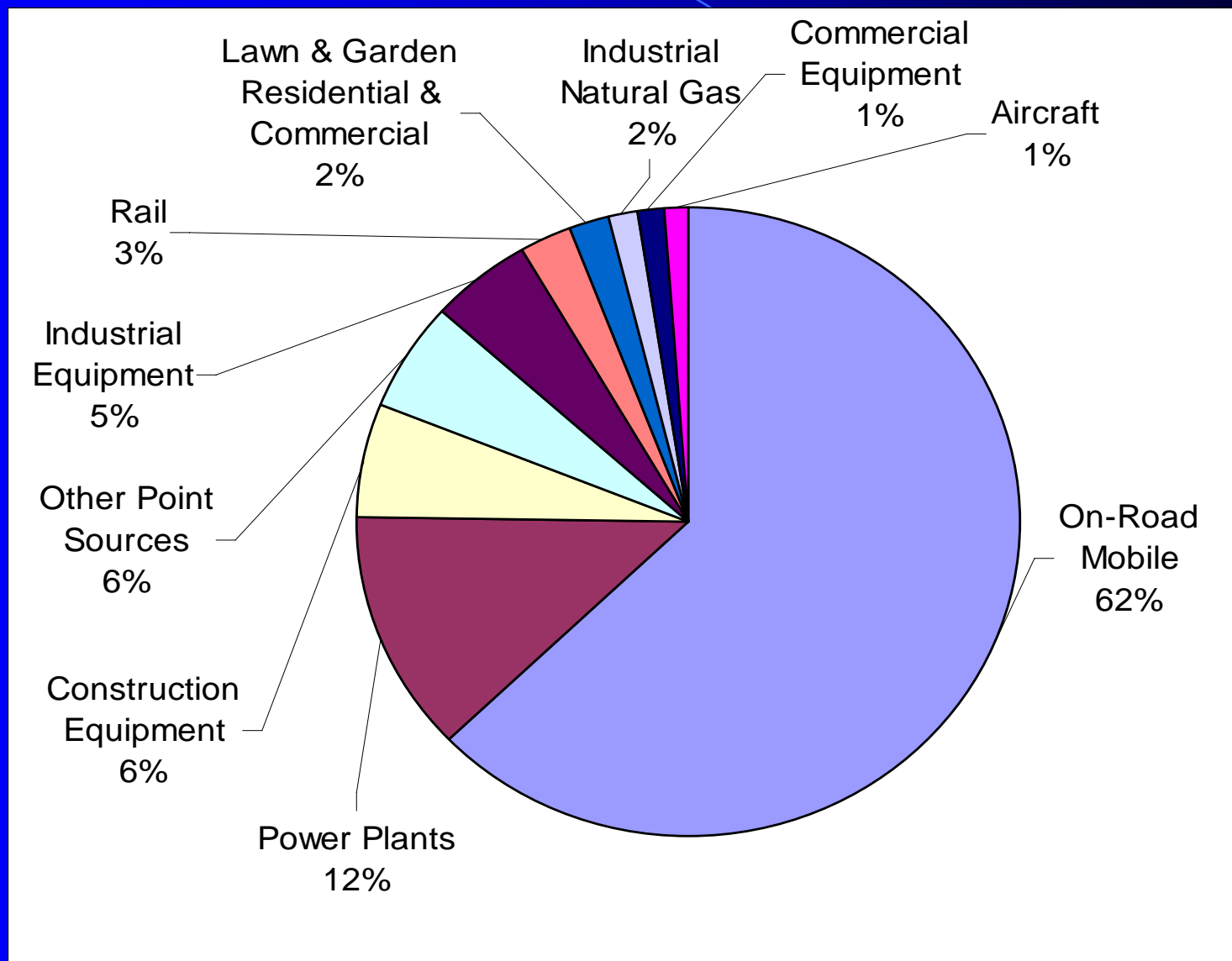
Source Contribution for NO_x



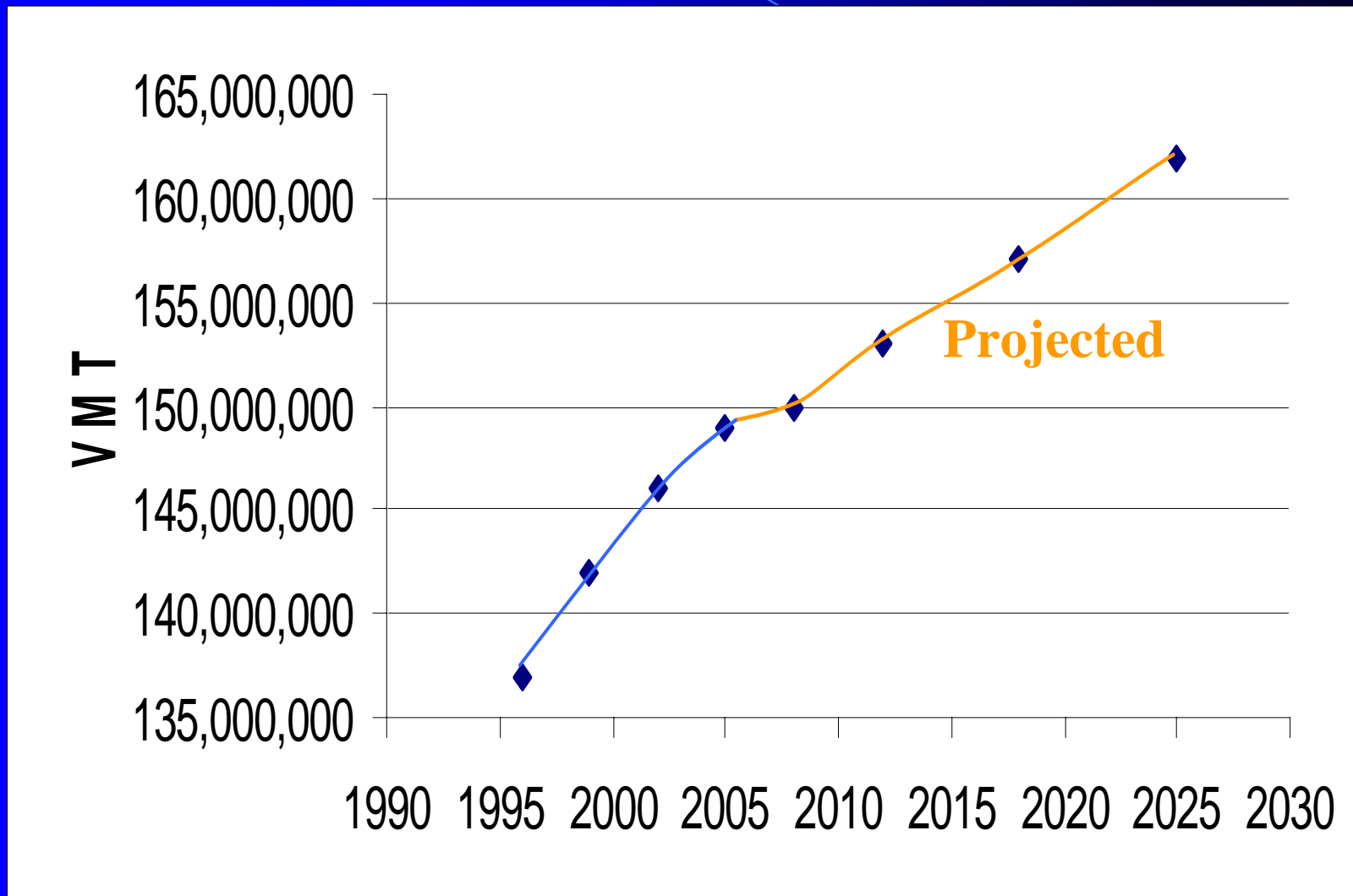
VOC Top 10 Categories 2002



NOx Top 10 Categories 2002



Vehicle Miles Traveled



Existing Massachusetts SIP

Mobile Source Control Measures

- Enhanced Inspection Maintenance Program
- State II Vapor Recovery
- Low Emission Vehicle Program
- Reformulated Gasoline
- Transportation Control Programs

Existing Federal Control Measures

Control Measures	VOC	NO _x
Motor Vehicle Control Program (Tier 0)	✓	✓
Heavy Duty Diesel Engines (On-Road)		✓
Non-Road Heavy Duty Diesel Engines		✓
Non-Road Gasoline Engines		✓
Marine Engines	✓	✓
Railroad Locomotive Controls		✓

Existing MA Control Measures

Control Measures	VOC	NO _x
CA Low Emission Vehicle (CA LEV)	✓	✓
Enhanced Inspection and Maintenance	✓	✓
Reformulated Gasoline	✓	✓
On-Board Diagnostics	✓	✓

MA Control Measures (cont.)

Control Measures	VOC	NO _x
Transportation Control Measures	✓	✓
CA LEV II	✓	✓
ZEV Mandate and Revision	✓	✓
Not-to-Exceed Standards for Heavy and Medium Duty Diesel Engines		✓

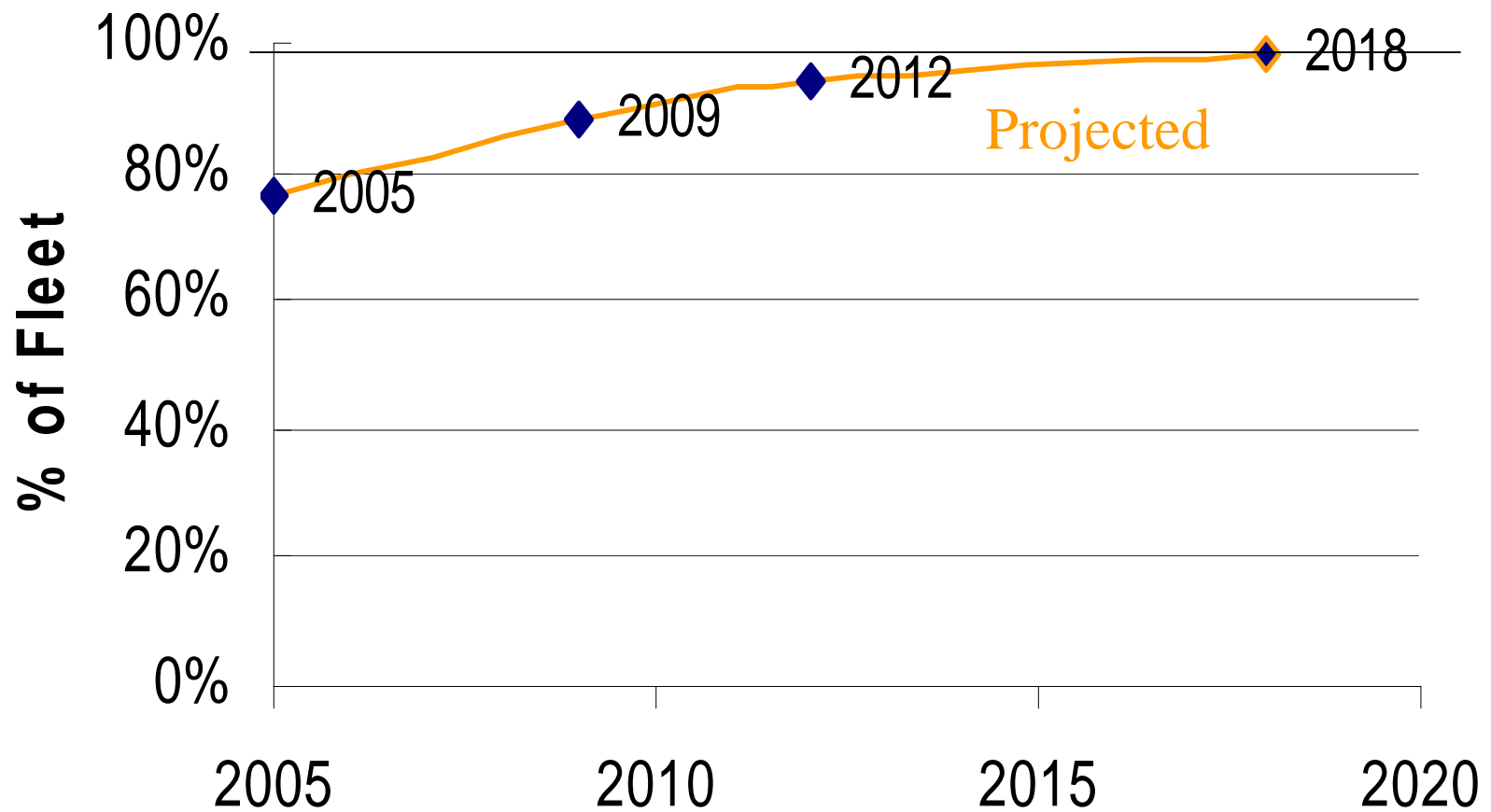
MA Transportation Control Measures

Control Measures	VOC	NO _x
Parking Freeze Regulations	✓	✓
Certification of Tunnel Ventilation Systems	✓	✓
High Occupancy Vehicle Lanes	✓	✓
Transit System Improvements	✓	✓
MBTA Commuter Pass Program	✓	✓
Fringe/Commuter Parking	✓	✓

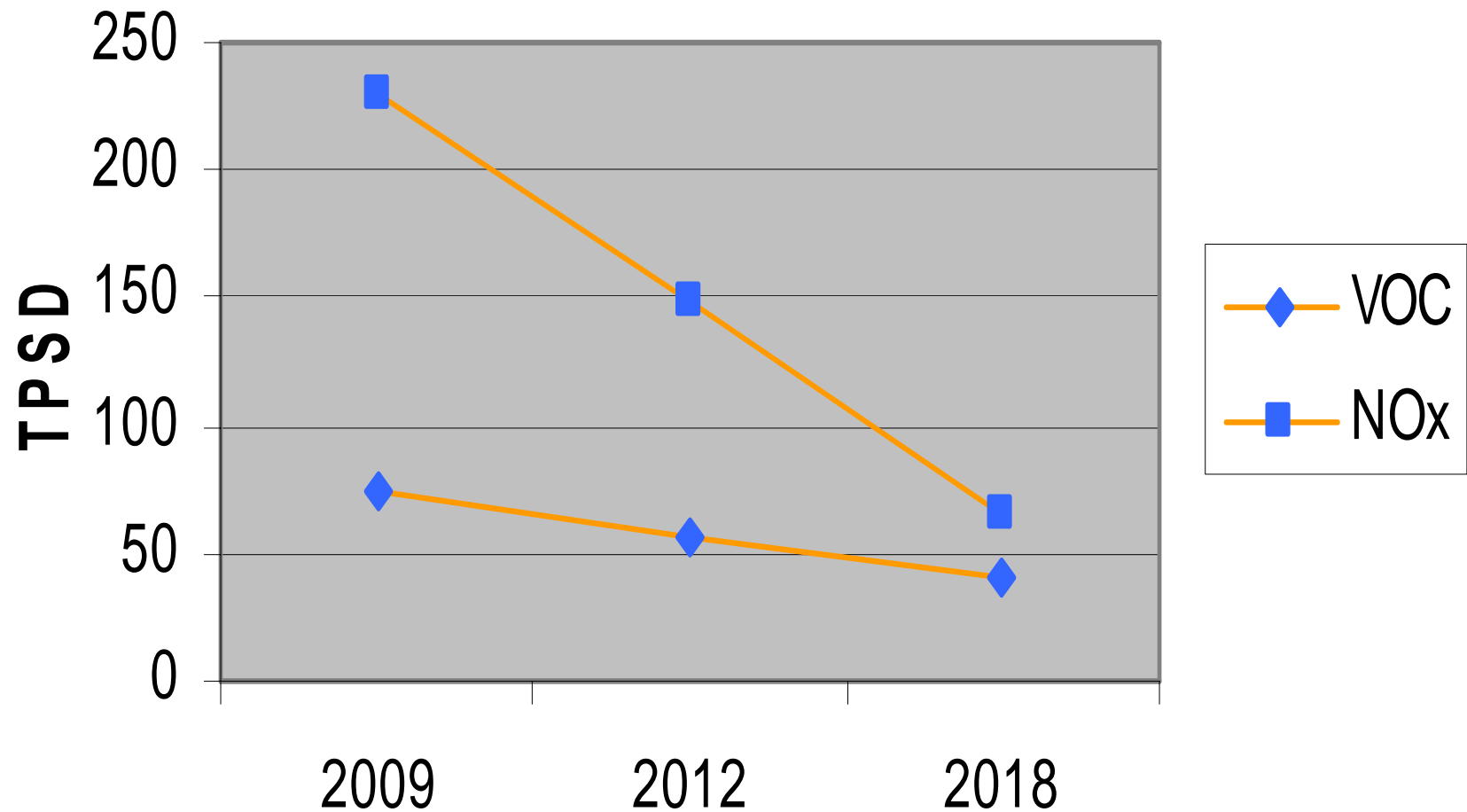
MA Transportation Control Measures (cont.)

Control Measures	VOC	NO _x
Carpool Matching Program	✓	✓
Bicycle Use Program	✓	✓
Downtown Crossing Auto Restricted Zone	✓	✓
Rideshare Regulation	✓	✓
Vehicle Idling Restriction	✓	✓

Percentage of Fleet with OBD



Projected Emissions with IM Program Option



Additional Mobile Source Control Measures Under Consideration by OTC

- Regional Fuel
- Chip Reflash
- HD Opacity Testing Cutpoints

Conclusions

- Mobile Source measures important to MA air quality programs
- Levels dropping but VMT continues to rise
- More measures being considered for 8-hour SIP
- Other ideas from SIP Steering?