



8 Hour Ozone NAAQS

What We Know Today

Statewide Planning Section
MDOT



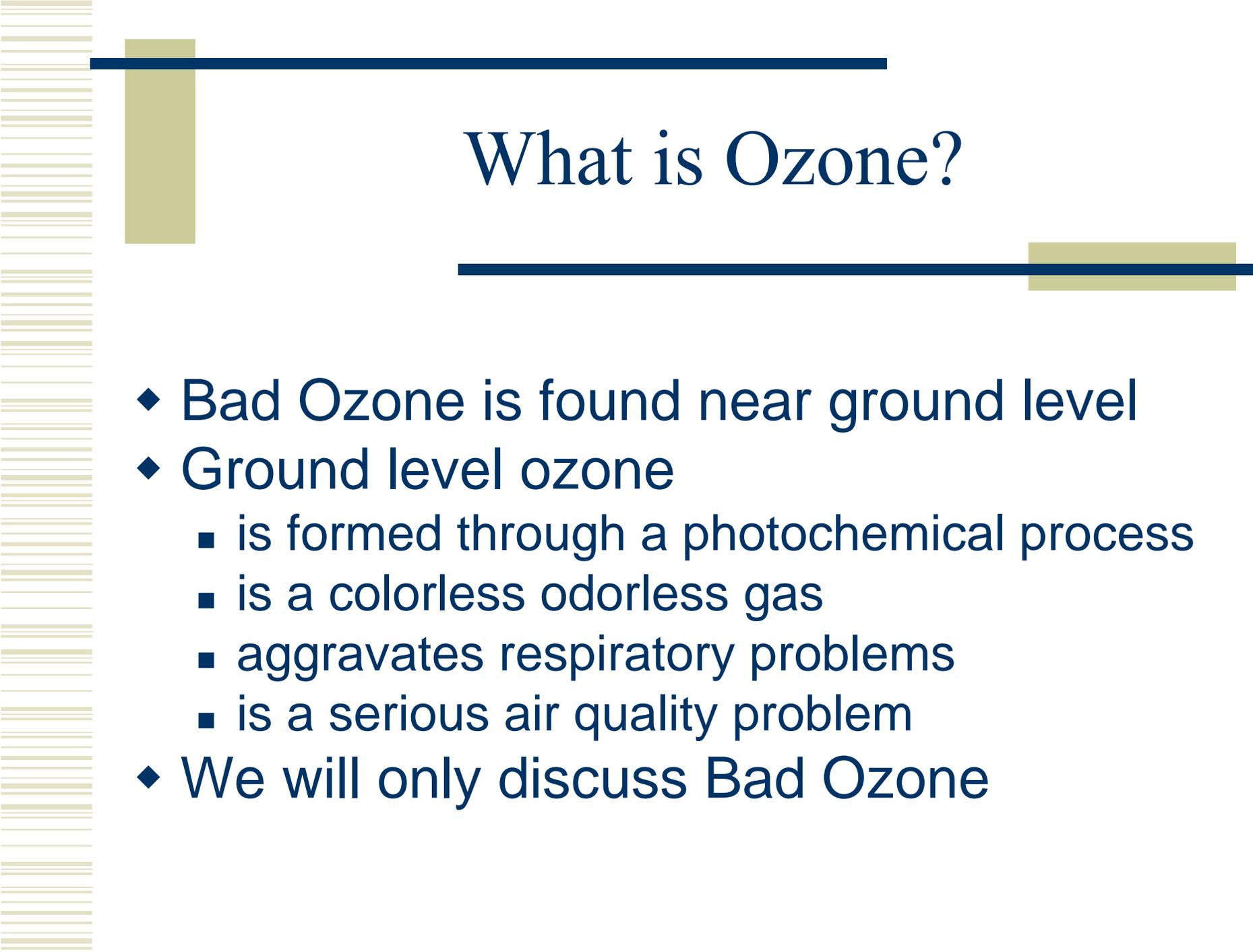
Overview

- ◆ Basics on Ozone, Emissions & Monitoring
- ◆ Nonattainment Designation Process
- ◆ Proposals and Counter Proposals
- ◆ Implementation Rules
- ◆ Conformity Rules
- ◆ CMAQ Funding



What is Ozone?

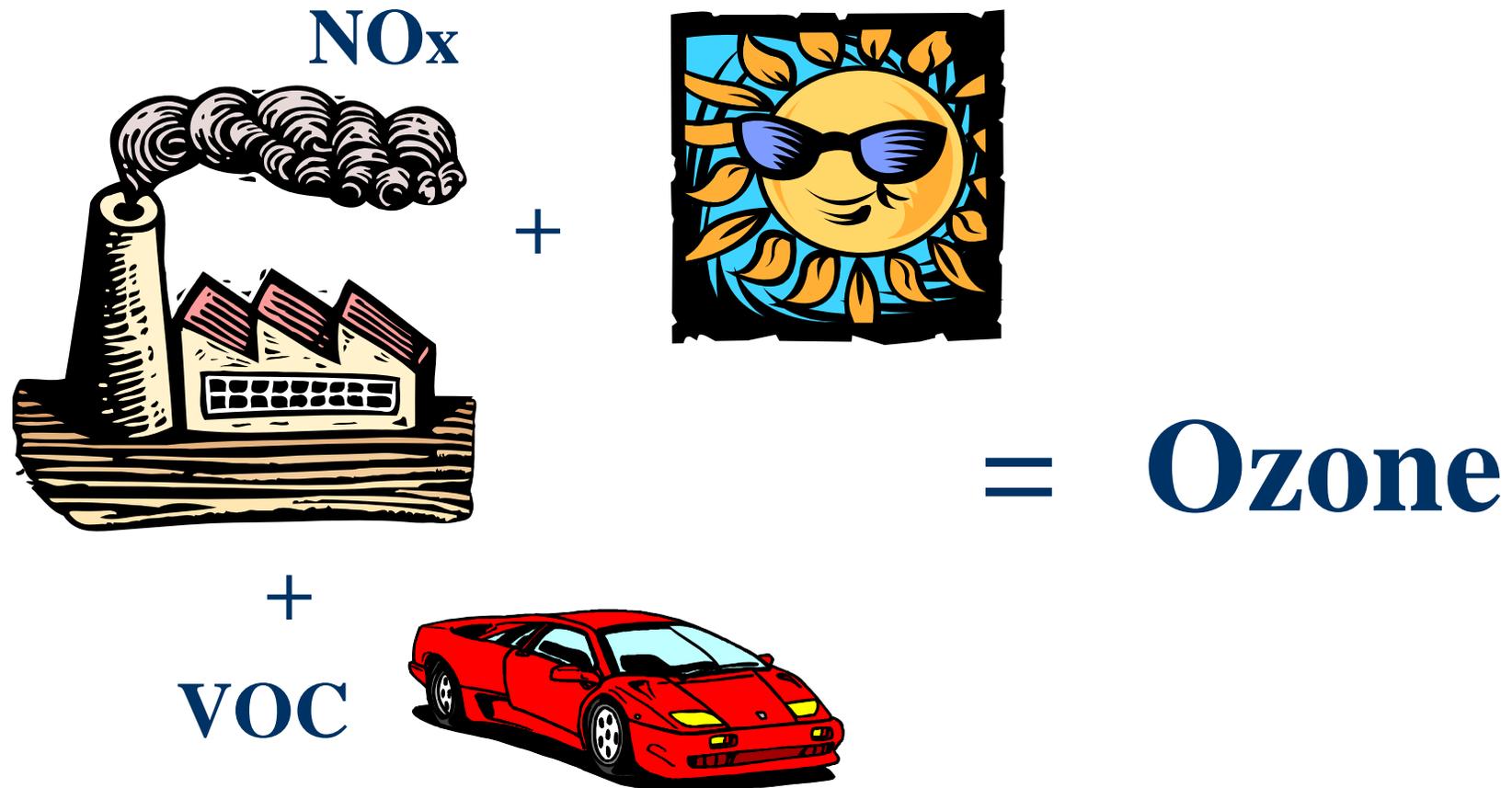
- ◆ Ozone is a gas that occurs in the Earth's upper atmosphere and at ground level.
- ◆ Ozone can be "good" or "bad", depending on where it is found
- ◆ Good Ozone occurs naturally
 - 10 to 30 miles above the Earth's surface
 - Shields us from the sun's ultraviolet rays



What is Ozone?

- ◆ Bad Ozone is found near ground level
- ◆ Ground level ozone
 - is formed through a photochemical process
 - is a colorless odorless gas
 - aggravates respiratory problems
 - is a serious air quality problem
- ◆ We will only discuss Bad Ozone

Ozone Formation





8 Hour Ozone Standard



0.08 ppm
(157 $\mu\text{gm}/\text{m}^3$)



Violation of the Standard

An area violates the standard when the three year average of the 4th highest monitored reading is greater than 0.085 ppm.

Ozone Monitors



How do we reduce Ozone?



By Reducing Emissions



Sources of Emissions

Point Sources



Factories



Power Plants

Sources of Emissions

Area Sources



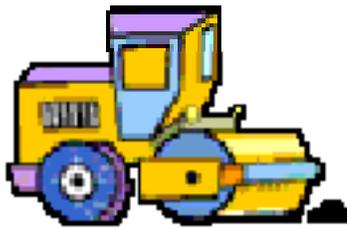
Dry Cleaners



Gas Stations

Sources of Emissions

Mobile Sources

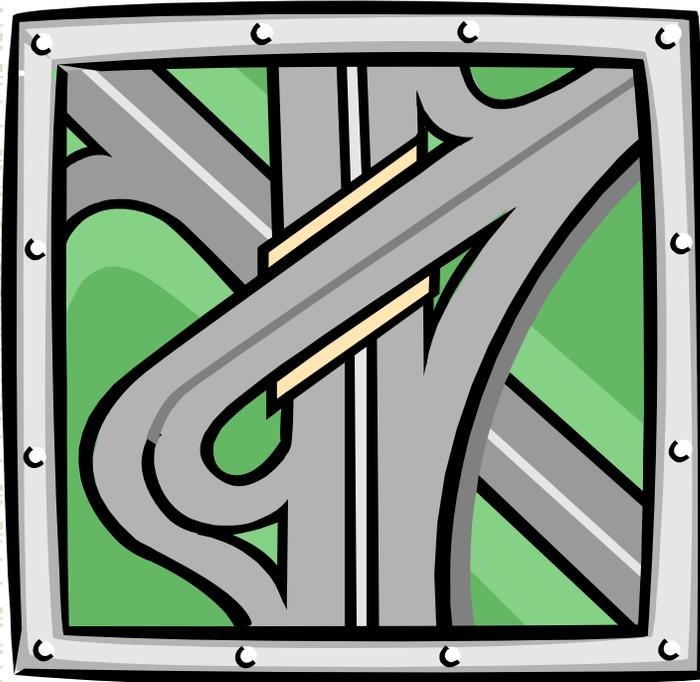


Off Road



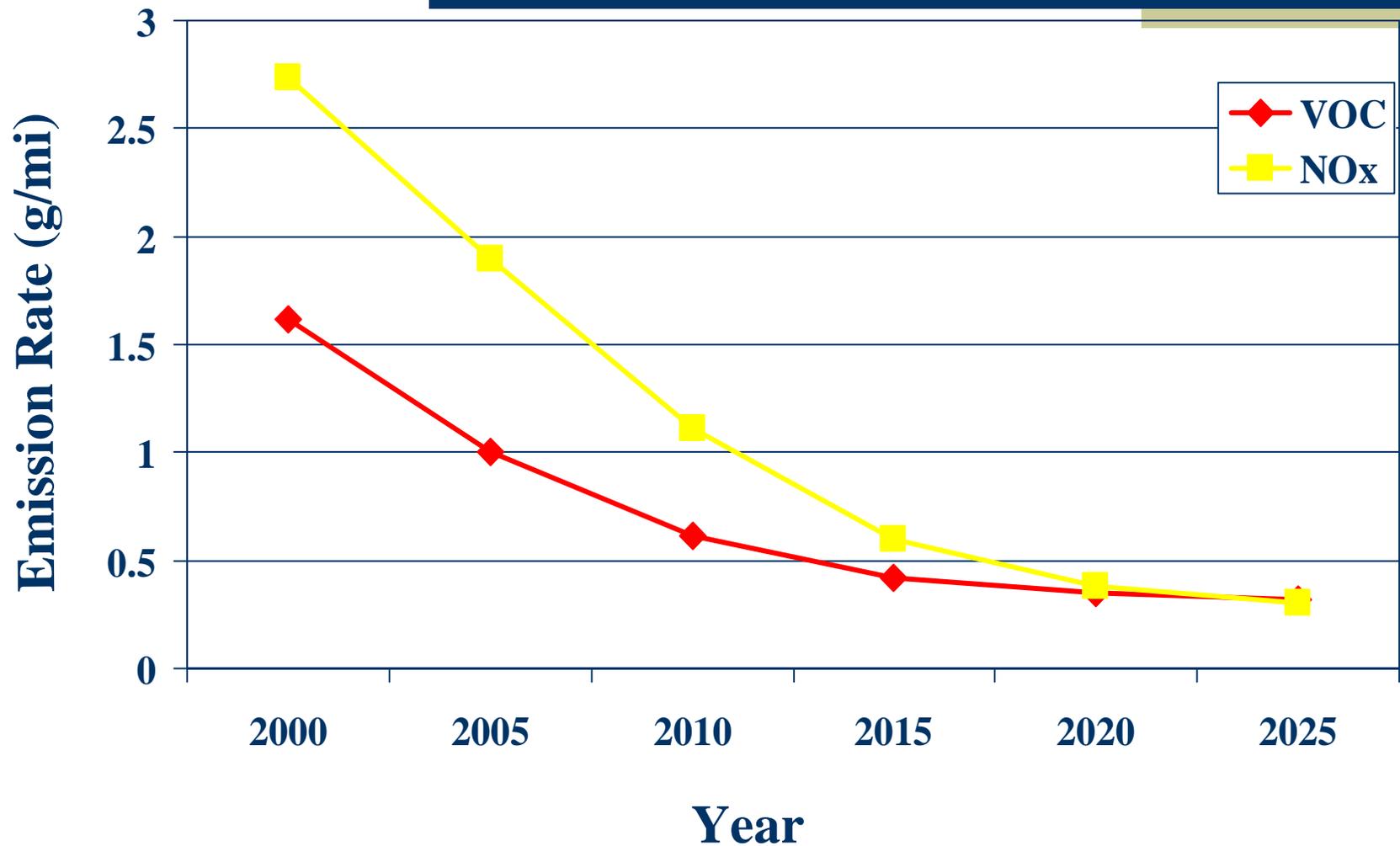
On Road

Sources of Emissions

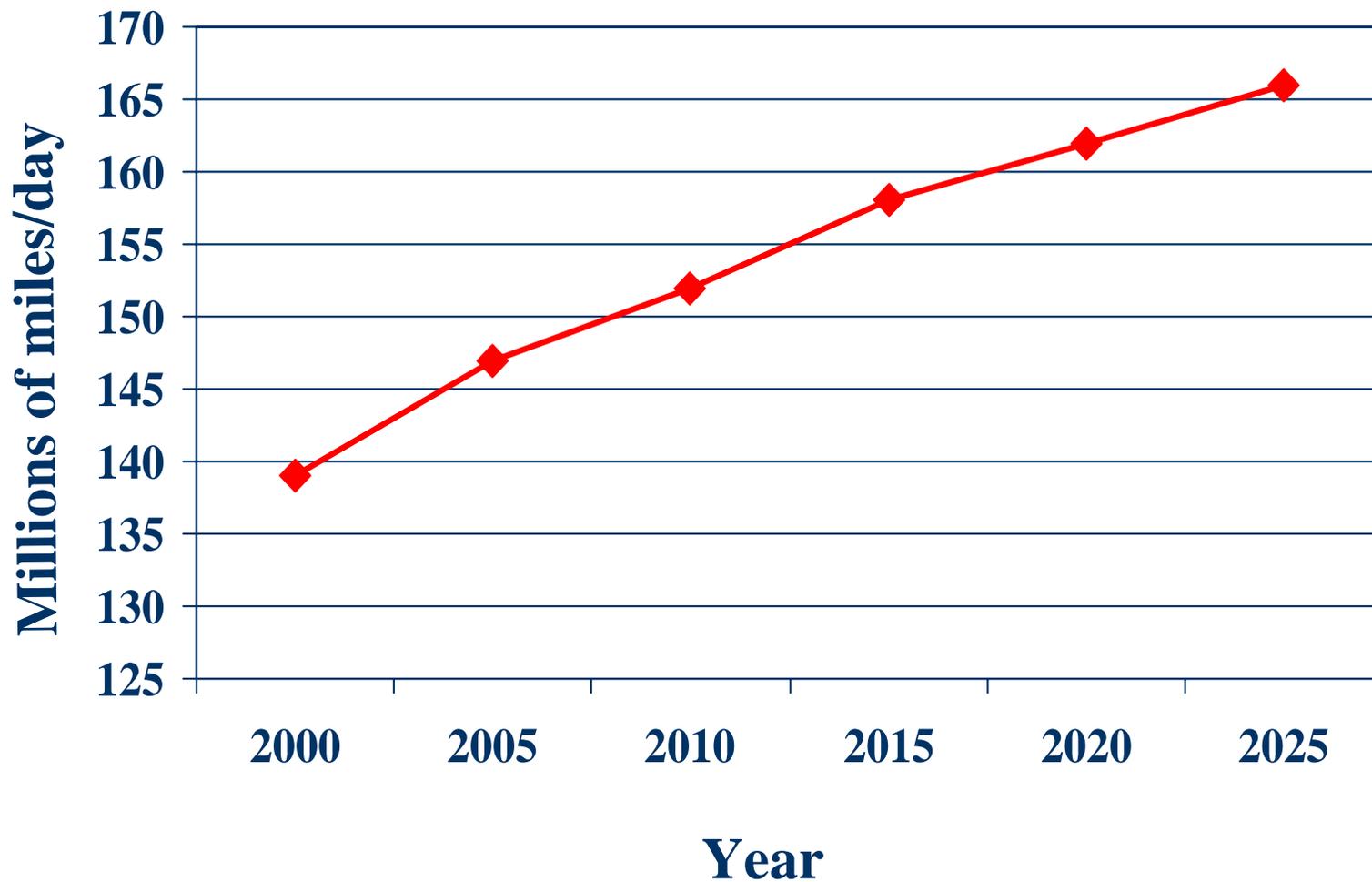


On Road Mobile Sources Only

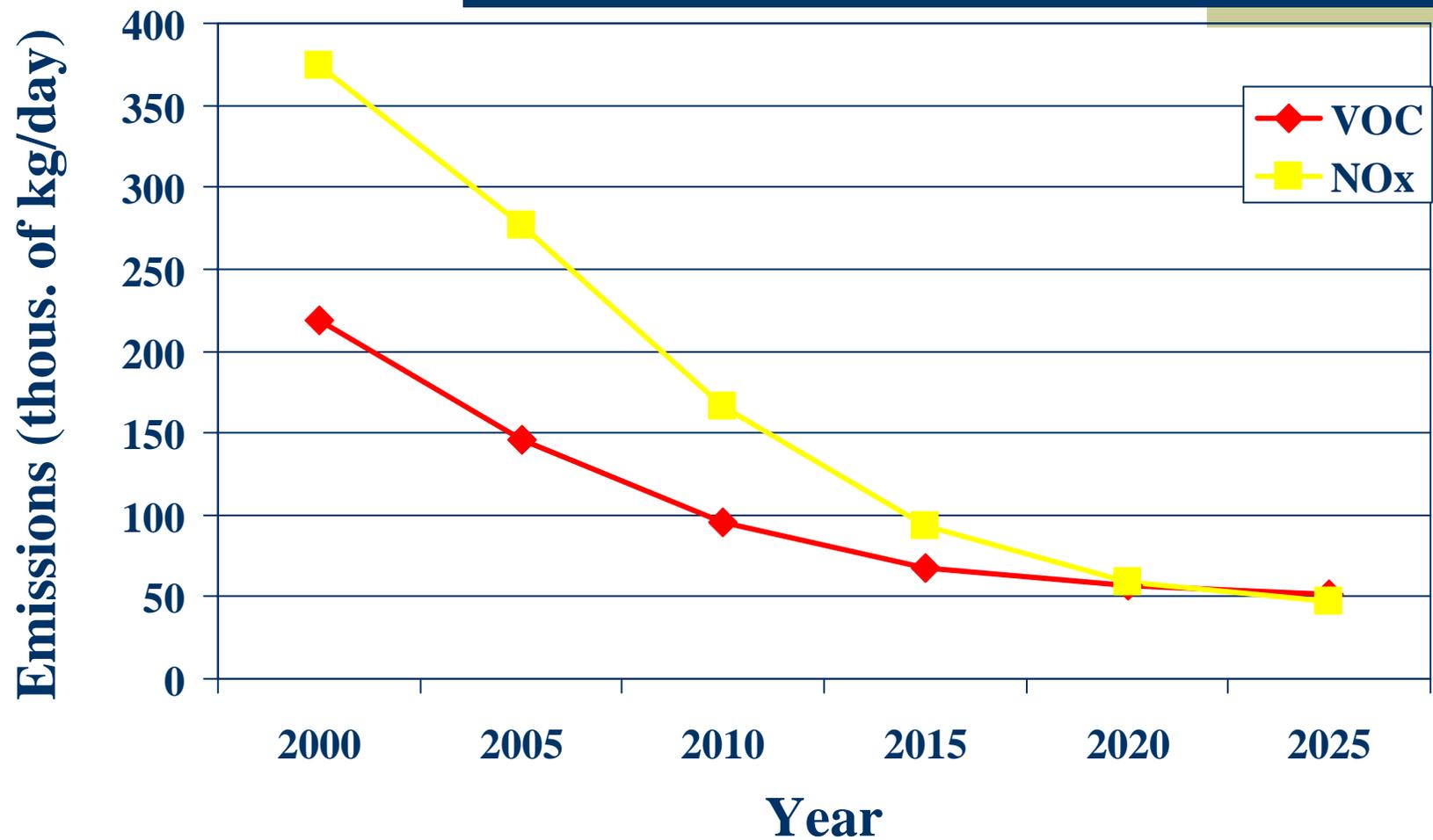
How are mobile emission rates changing?



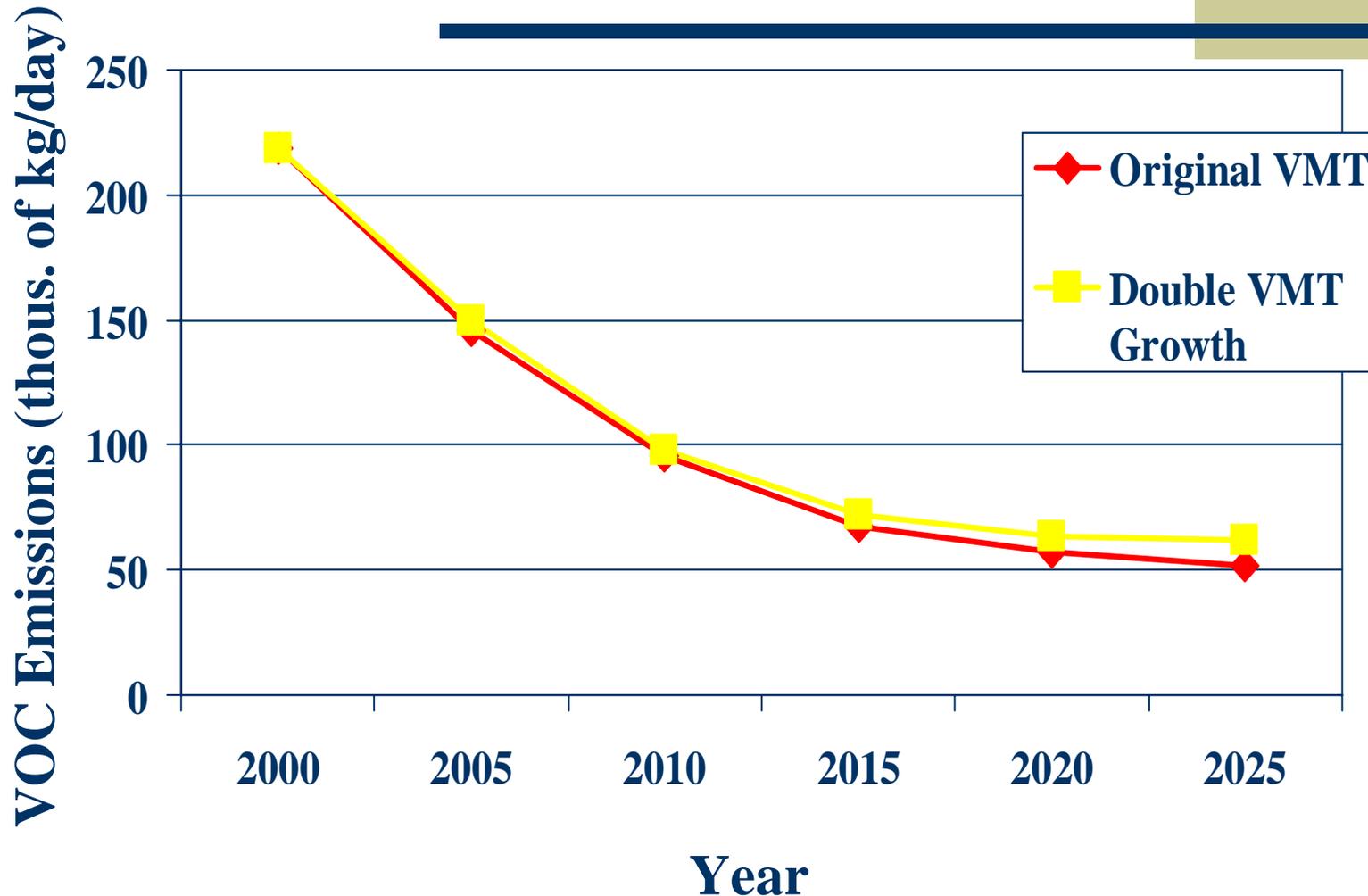
How is travel changing?



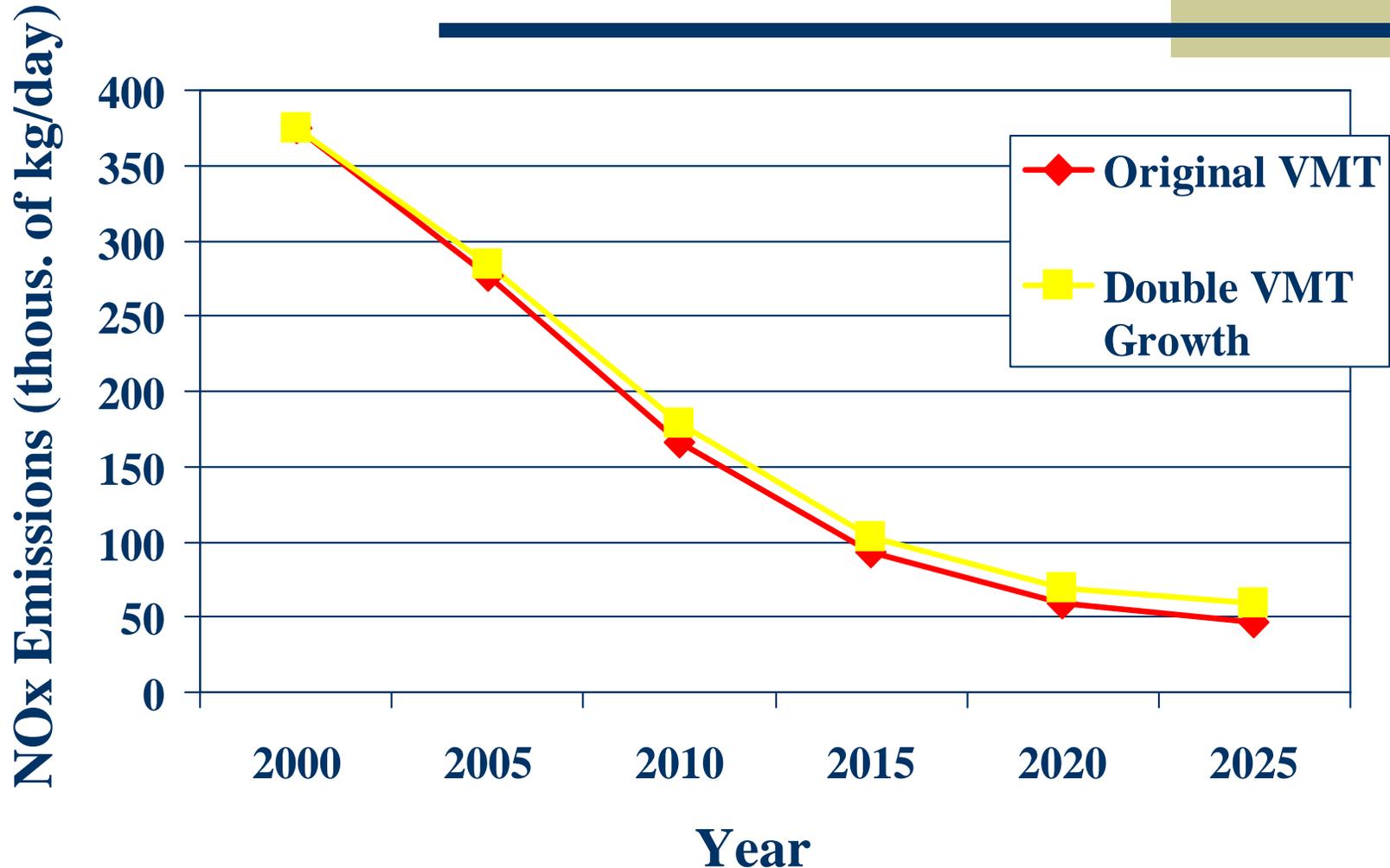
How will mobile emissions be changing?



What happens to VOC Emissions if growth in travel was doubled?



What happens to NO_x Emissions if growth in travel was doubled?





Reasons for Decline

- ◆ Emissions are declining even with increased growth and travel mainly due to:
 - Cleaner Fuels
 - Newer fleets of cars with better gas mileage

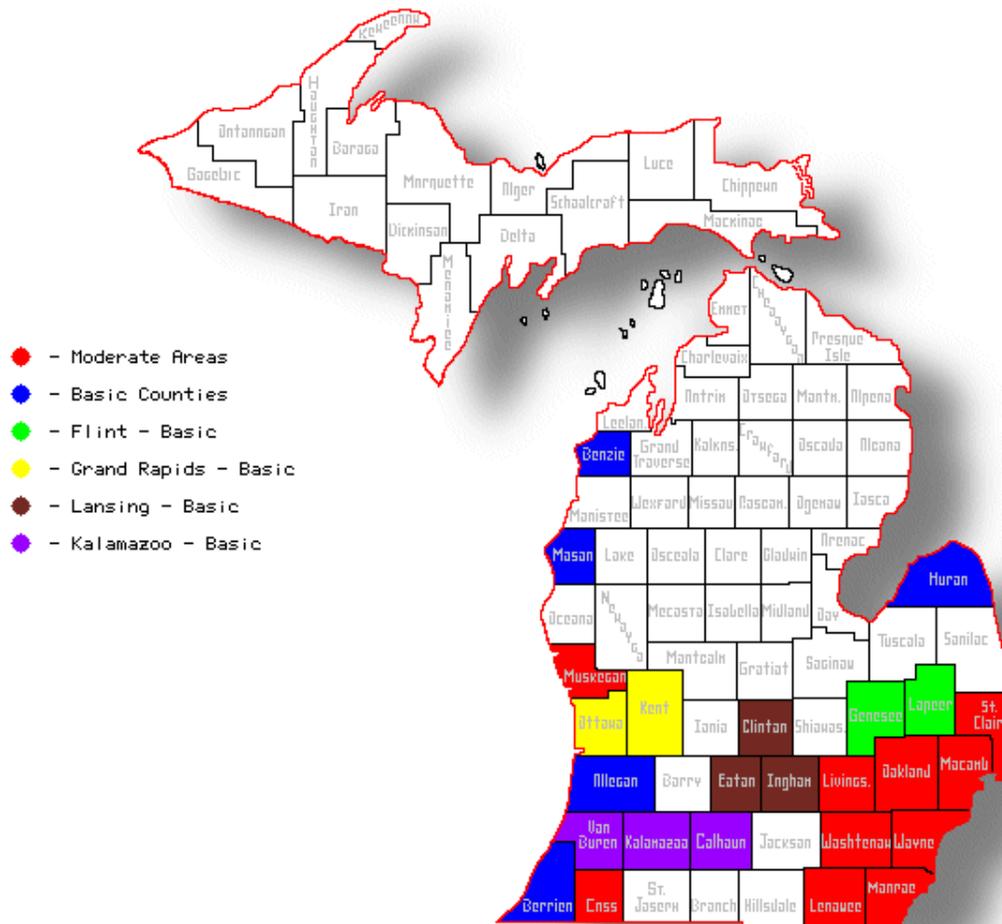


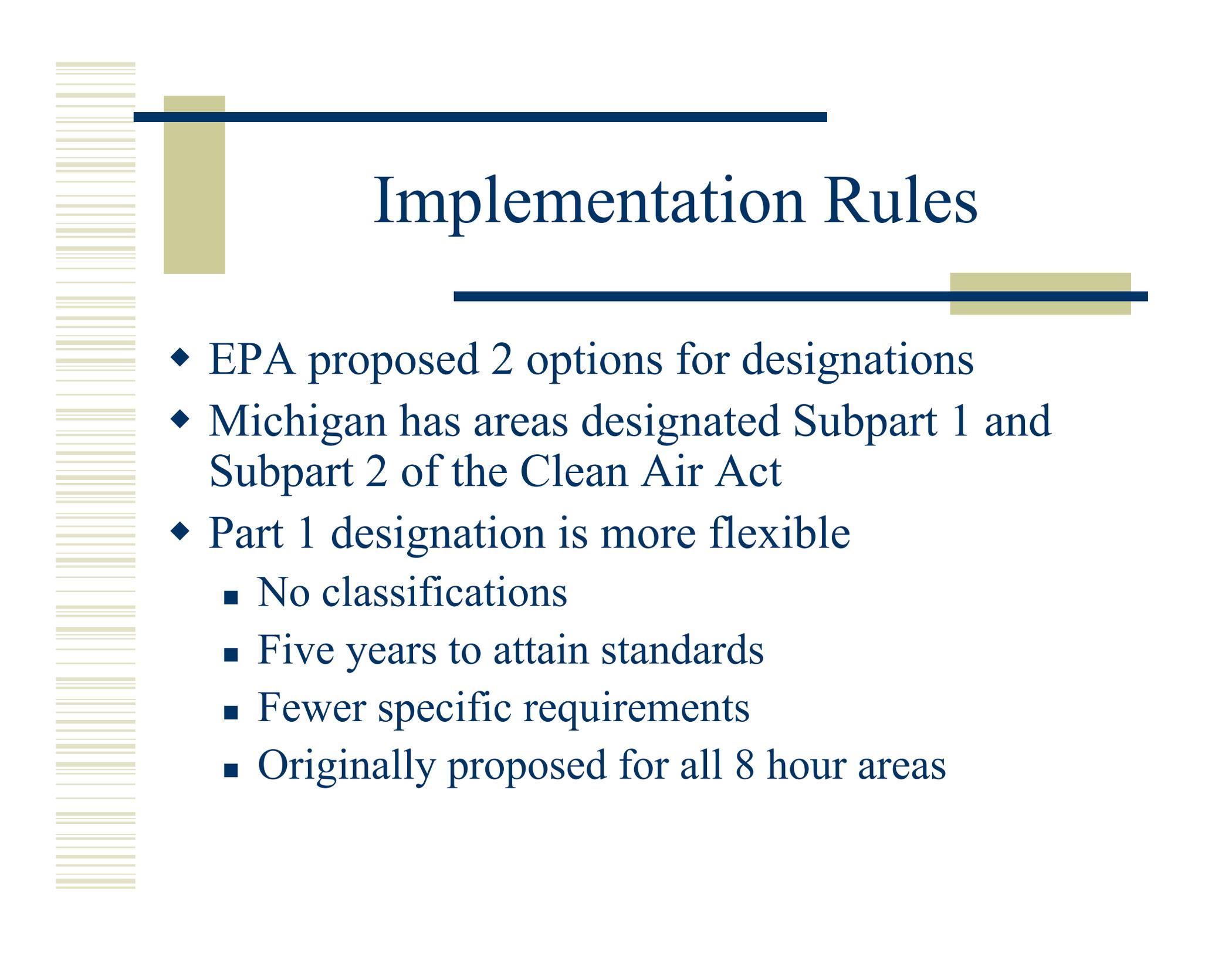
Nonattainment Designation Process

- ◆ State Proposed Nonattainment Areas
 - July 15, 2003
- ◆ EPA Commented on State Proposal
 - December 3, 2003
- ◆ State Responded to EPA Comments
 - February 6, 2004
- ◆ EPA Designated Nonattainment Areas
 - April 15, 2004

Final Nonattainment Areas

8 Hour Ozone Nonattainment Areas





Implementation Rules

- ◆ EPA proposed 2 options for designations
- ◆ Michigan has areas designated Subpart 1 and Subpart 2 of the Clean Air Act
- ◆ Part 1 designation is more flexible
 - No classifications
 - Five years to attain standards
 - Fewer specific requirements
 - Originally proposed for all 8 hour areas

Michigan Subpart 1 Areas: Basic Nonattainment

Official Nonattainment Area Name

Counties

Flint, MI

Genesee, Lapeer

Grand Rapids, MI

Kent, Ottawa

Allegan Co, MI

Allegan

Huron Co, MI

Huron

Kalamazoo/Battle Creek, MI

Calhoun, Kalamazoo, Van Buren

Lansing/East Lansing, MI

Clinton, Eaton, Ingham

Benton Harbor, MI

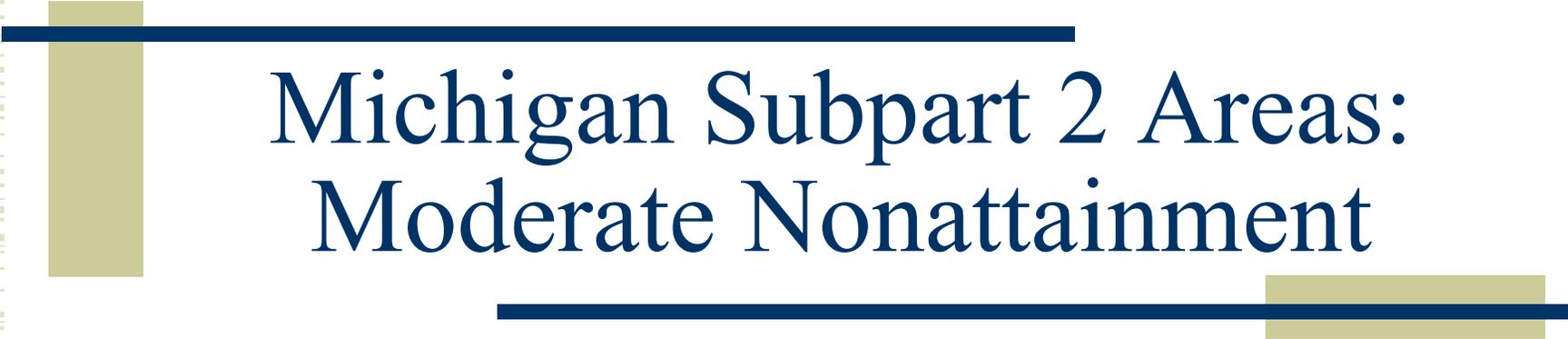
Berrien

Benzie Co, MI

Benzie

Mason Co, MI

Mason



Michigan Subpart 2 Areas: Moderate Nonattainment

Official Nonattainment Area Name

Detroit/Ann Arbor, MI

Muskegon Co, MI

Cass Co, MI

Counties

Livingston, Macomb,
Monroe, Oakland,
St. Clair, Washtenaw,
Wayne, Lenawee

Muskegon

Cass



Transportation Requirements Under Subpart 1

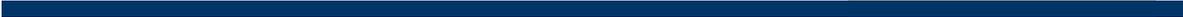
- ◆ Transportation Conformity Analysis

One time choice of either:

- Budget Test using 2002 Baseline
- Build less than or equal to No Build for target years



Transportation Requirements Under Subpart 2



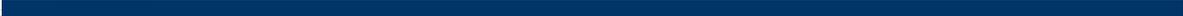
- ◆ Transportation Conformity Analysis
 - Build less than No Build for target years
- ◆ Mandatory Basic Inspection and Maintenance Program

This sounds way too confusing!

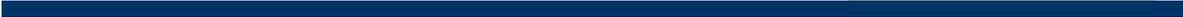


Do I have to do conformity?





What is Transportation Conformity?



- ◆ Comparison of emissions from upcoming projects to 2002 Baseline or No Build.
- ◆ Transportation Projects cannot advance without IAWG review.



What is an Interagency Work Group (IAWG)?

IAWG is composed of

- FHWA
- DEQ
- EPA
- MDEQ
- Local Agencies including Transit

The group reviews all projects to determine if they are air quality exempt.



TMA and MPO Project Development

- ◆ MPO TIP Development or Project Selection Committee
- ◆ Process for TP/TIP
- ◆ MDOT/MDEQ Interaction
- ◆ Public Involvement for TIP/TP



Non MPO and Rural Project Development

- ◆ IAWG to review projects for rural conformity and CMAQ
- ◆ Current process to be used to develop CMAQ projects
- ◆ MDOT/MDEQ Interaction
- ◆ Public Involvement same as amendment to the STIP



Rural Process Conformity

- ◆ A Regional Conformity Committee (RCC) will be formed to work with Rural Task Forces (RTF)
- ◆ Identify STIP Projects
- ◆ Determine if any of the Projects require Conformity Analysis
- ◆ Run Conformity Analysis
- ◆ Public Involvement



Conformity Rules

What We Know

- ◆ Must conform within 1 year of designation
- ◆ Baseline test and Build/No-Build test
- ◆ Marginal and Part 1 areas conform if
 - Emissions are less than or equal to Baseline
 - Emissions from Build are less than or equal to No Build
- ◆ Moderate and above areas conform if
 - Emissions are less than Baseline
 - Emissions from Build are less than No Build



Conformity Analysis Basics

- ◆ Conformity analysis is done with a complicated computer model.
- ◆ TMAs do their own conformity analysis.
- ◆ MPOs may or may not be able to conduct their own conformity analysis.
- ◆ MDOT is responsible for the rest of the counties/areas.



Conformity Analysis Basics

- ◆ 2002 is established as the baseline year for nonattainment and basic areas choosing the budget test.
- ◆ Conduct Build/No Build tests against target years determined by IAWG
- ◆ Conformity is determined when
 - FHWA, FTA, EPA, and DEQ concur
 - FHWA and FTA issue a conformity finding
- ◆ Every nonattainment area must complete some kind of conformity analysis
 - Budget Test
 - Build/No Build



Conformity Analysis



- ◆ Data Collection and Model Calibration (TP/TIP)
 - Projects
 - Network Data
 - S/E
- ◆ Travel/Emissions Model
- ◆ Run Conformity Analysis
- ◆ Potential Conflict Resolution
- ◆ Public Involvement



Conformity Finding

- ◆ MPO Action on TP/TIP
- ◆ MDEQ/MDOT Concurrence
- ◆ Potential Conflict Resolution
 - Governor's Office - 14 Days



Final Conformity Finding



- ◆ MDOT Sends TIP/TP Conformity
- ◆ Finding to FHWA/FTA
- ◆ EPA 30 Day Review

Questions?

