

Maintenance Plan for the Illinois portion of  
the Metro-East St. Louis Ozone  
Nonattainment Area for the 2008 8-Hour  
Ozone Standard

# Before a Redesignation to Attainment can be Promulgated:

- NAAQS for Ozone has to be attained
- Show that improvement in air quality due to permanent and enforceable emission reductions
- Maintenance Plan has to be approved
- All other requirements applicable to nonattainment areas have to be met

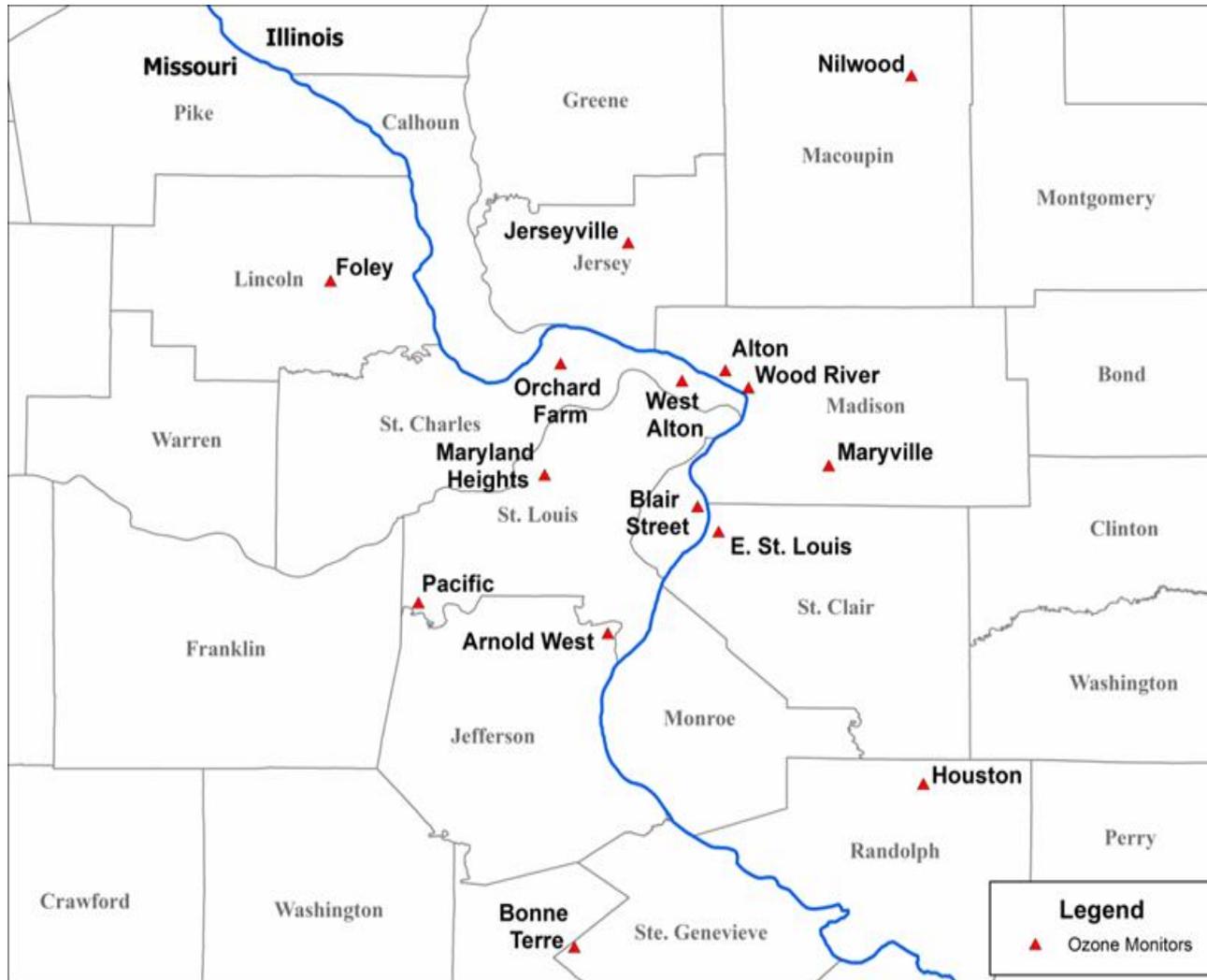
# The Maintenance Plan Must Contain the Following Elements

- A comprehensive emissions inventory of precursors of ozone for the attainment year
- A projection of the emissions inventory to at least ten years after redesignation
- Continue to operate an appropriate monitoring network
- Legal authority
- Annual emissions statements from major sources
- Motor vehicle emissions budgets for transportation conformity for the ten year maintenance period
- Commit to a revised maintenance plan eight years after redesignation

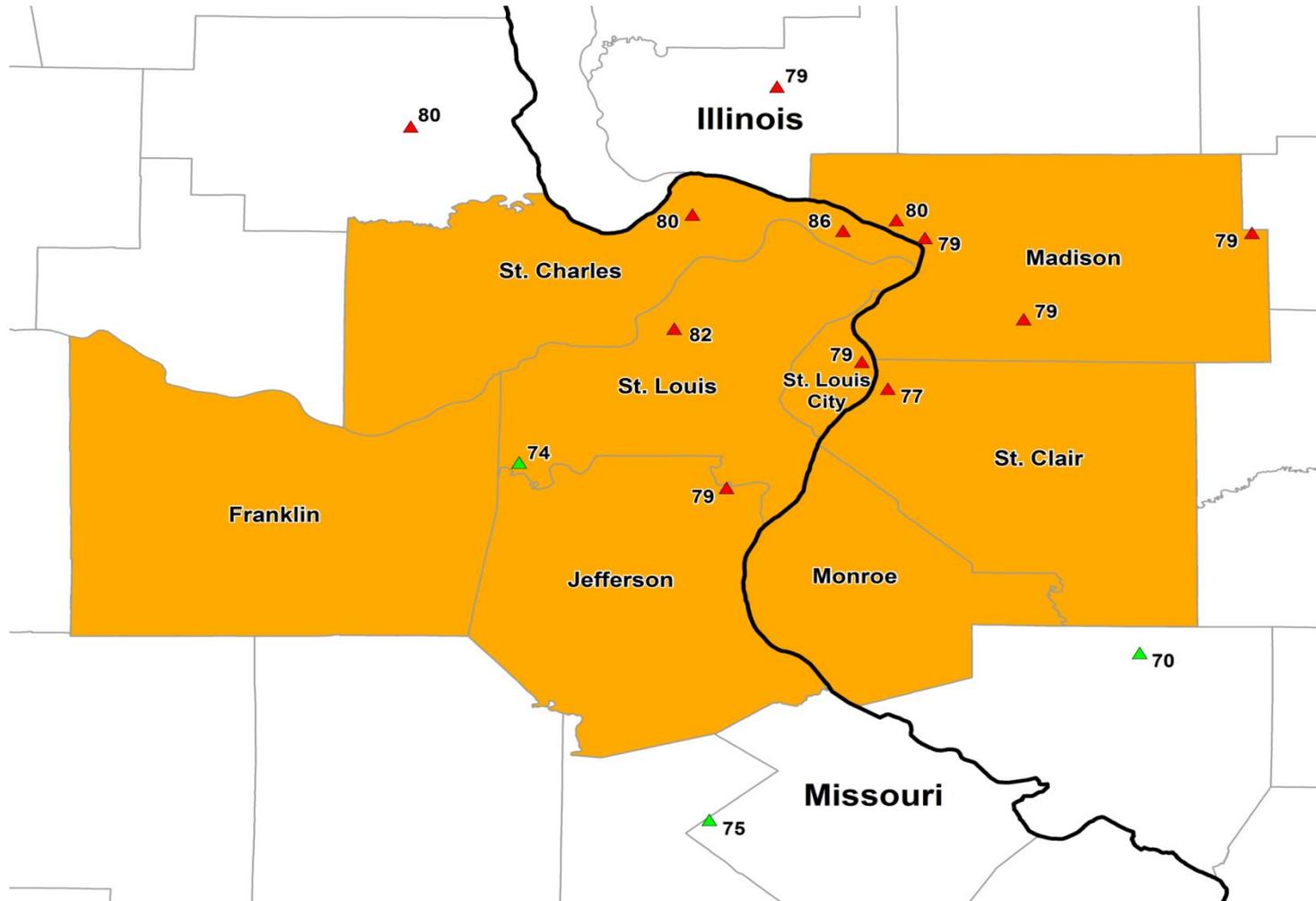
# 8-Hour Ozone Nonattainment Area St. Louis MO-IL



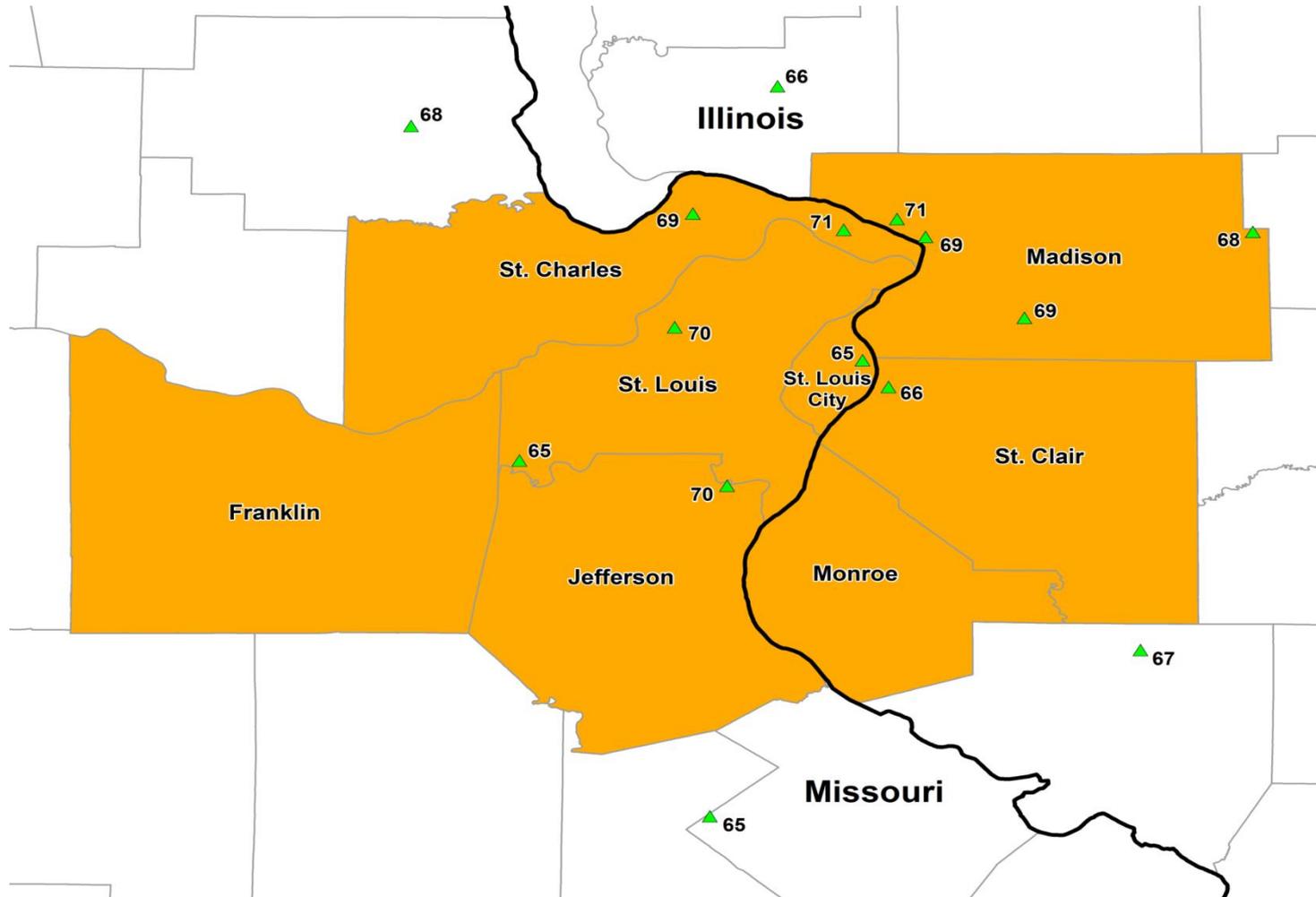
# Ozone Monitors in the St. Louis Region



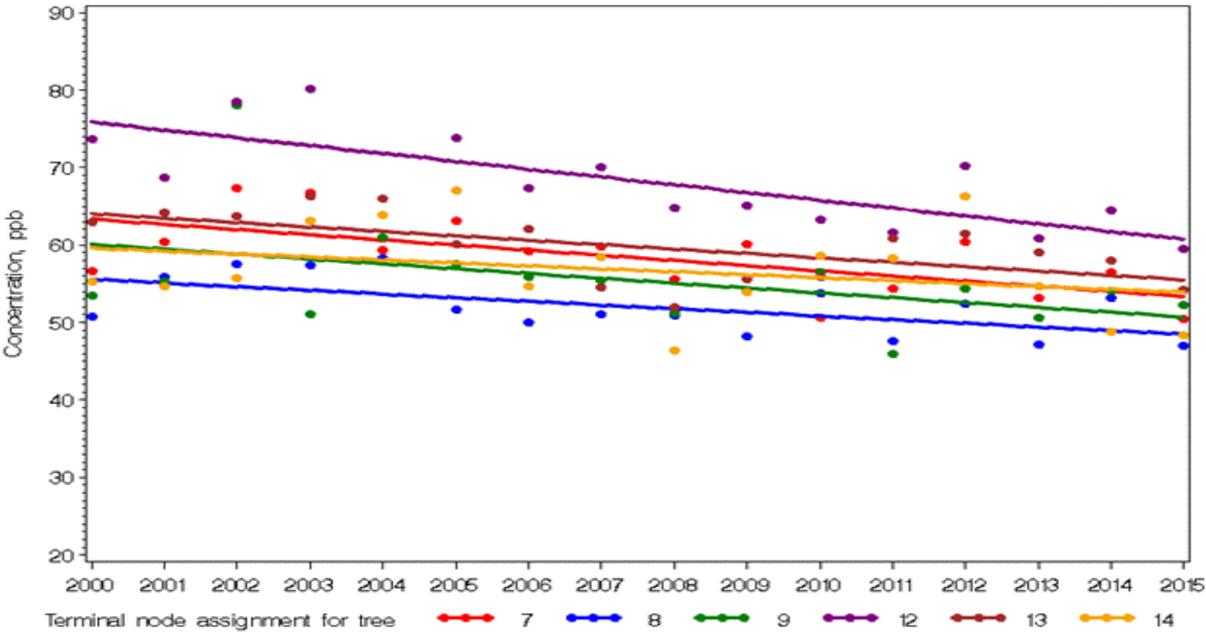
# 8-Hour Ozone Design Values (ppb) 2010-2012



# 8-Hour Ozone Design Values (ppb) 2013-2015



# Ozone Concentration Trends in CART nodes (> 50 ppb)



# Emission Inventory and Conformity

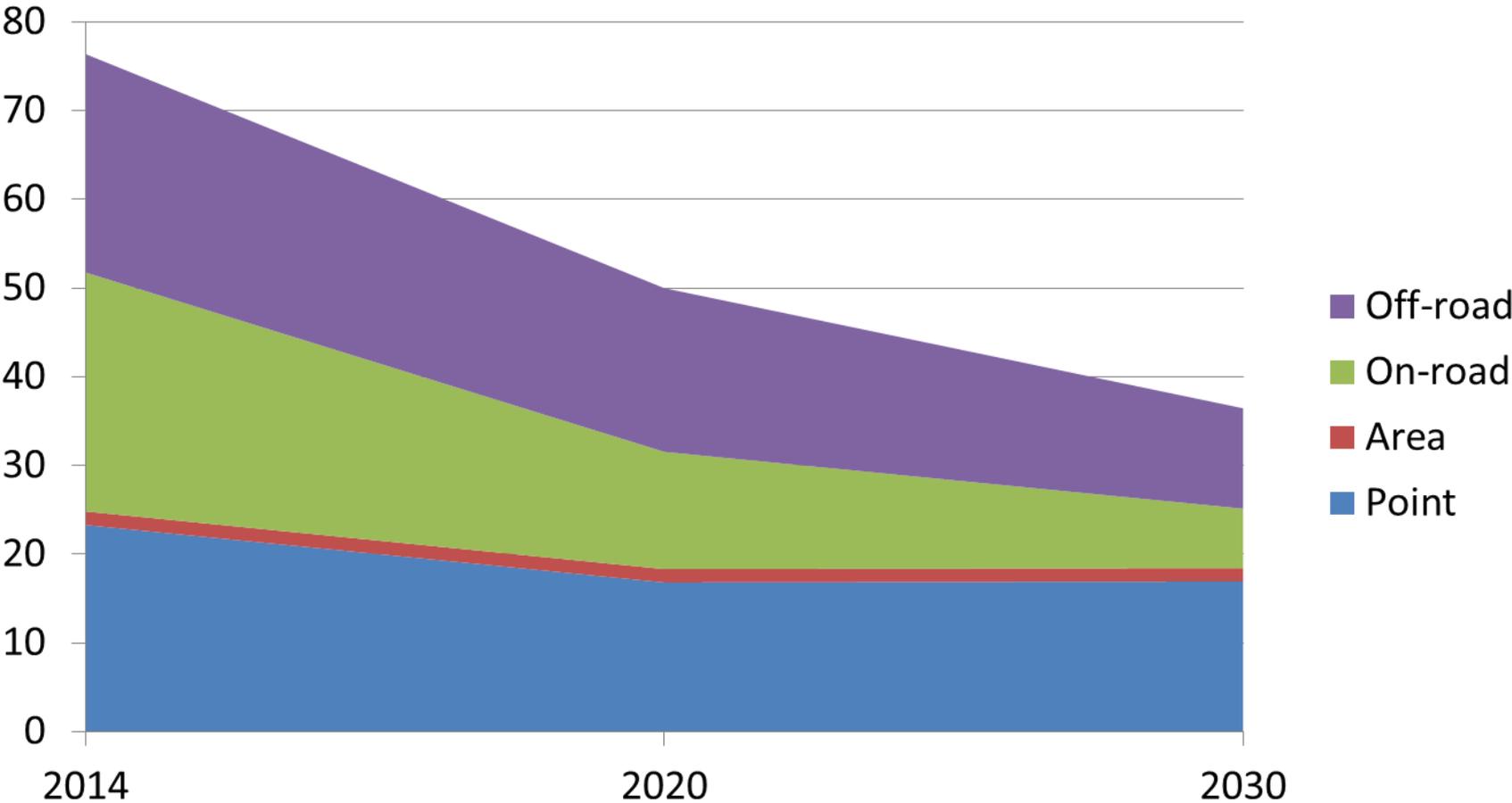
# Base Year Inventory - 2014

- Point Sources
  - Annual emission reports, existing data, etc.
- Area Sources
  - Emission factors
- On-road mobile sources
  - MOVES2014
- Off-road mobile sources
  - MOVES2014
  - Other (locomotives, commercial marine vessels, aircraft)

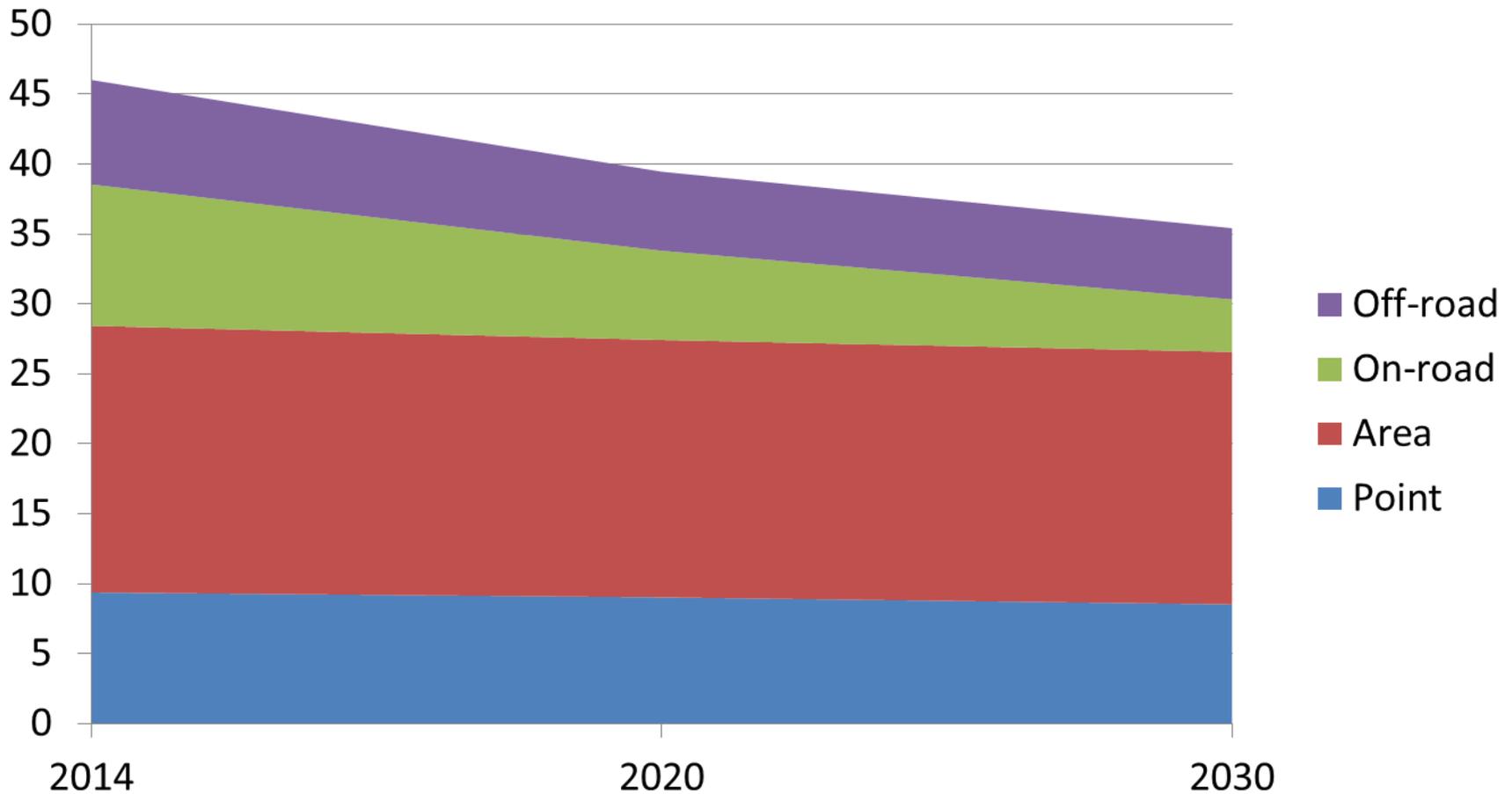
# Future Year Inventories

- Take current data and “grow” to a future year
  - Economic
  - Population
  - New Regulations
  - Shutdowns
- NODA for USEPA’s Ozone Transport Modeling
- Rerun MOVES for future years
- Future year < Base year

# NOx Emissions (tons/day)



# VOM Emissions (tons/day)



# Transportation Conformity

- Clean Air Act requirement intended to ensure the implementation of transportation plans does not
  - Cause or contribute to new air quality violations
  - Worsen existing violations
  - Delay timely attainment of relevant air quality standards
- Effectively places a “cap” (emission budget) on emissions

# Transportation Conformity

- Illinois EPA and East-West Gateway
  - Work together/consultation
  - Both run MOVES
  - Likely differences
    - Does it work with maintenance inventory requirements?
  - Apply safety margin
    - Does it still work?

# Motor Vehicle Emission Budget

Pollutant	2030 Emissions (tons/day)	Safety Margin (tons/day)	Budget (tons/day)
NOx	6.70	9.98	16.68
VOM	3.75	5.30	9.05

- Safety Margin
  - Difference between 2014 and 2030
- Use percentage of that amount
- We used
  - 50% for NOx
  - 40% for VOM

# Final Maintenance Inventory

