



# **The Ambient Air Quality System**

The Year in Review



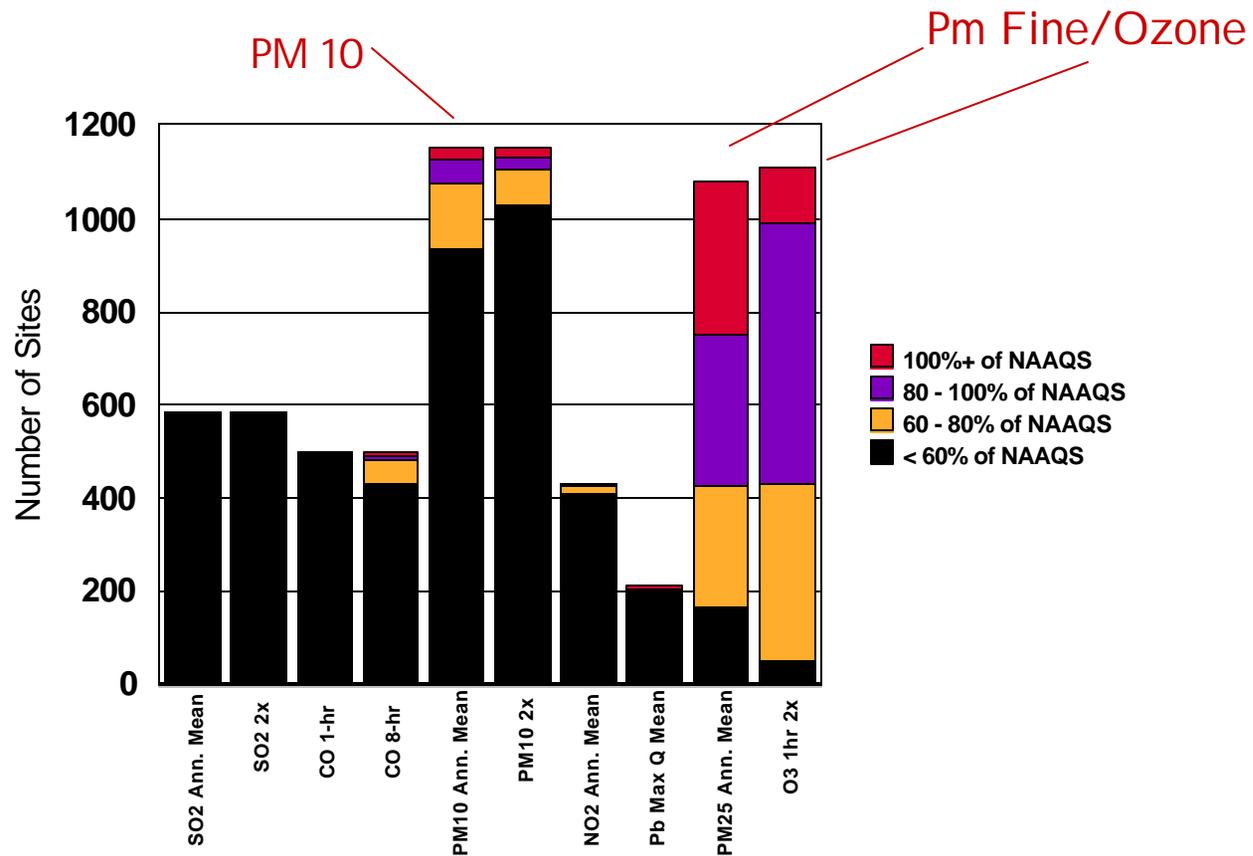
## Topic Areas

- Monitoring Strategy
- QA Strategy
- Monitoring Programs
  - PM2.5
  - Speciation
  - Toxics
- Quality system changes/improvements

# National Monitoring Strategy

## Why Do We Need a New Strategy?

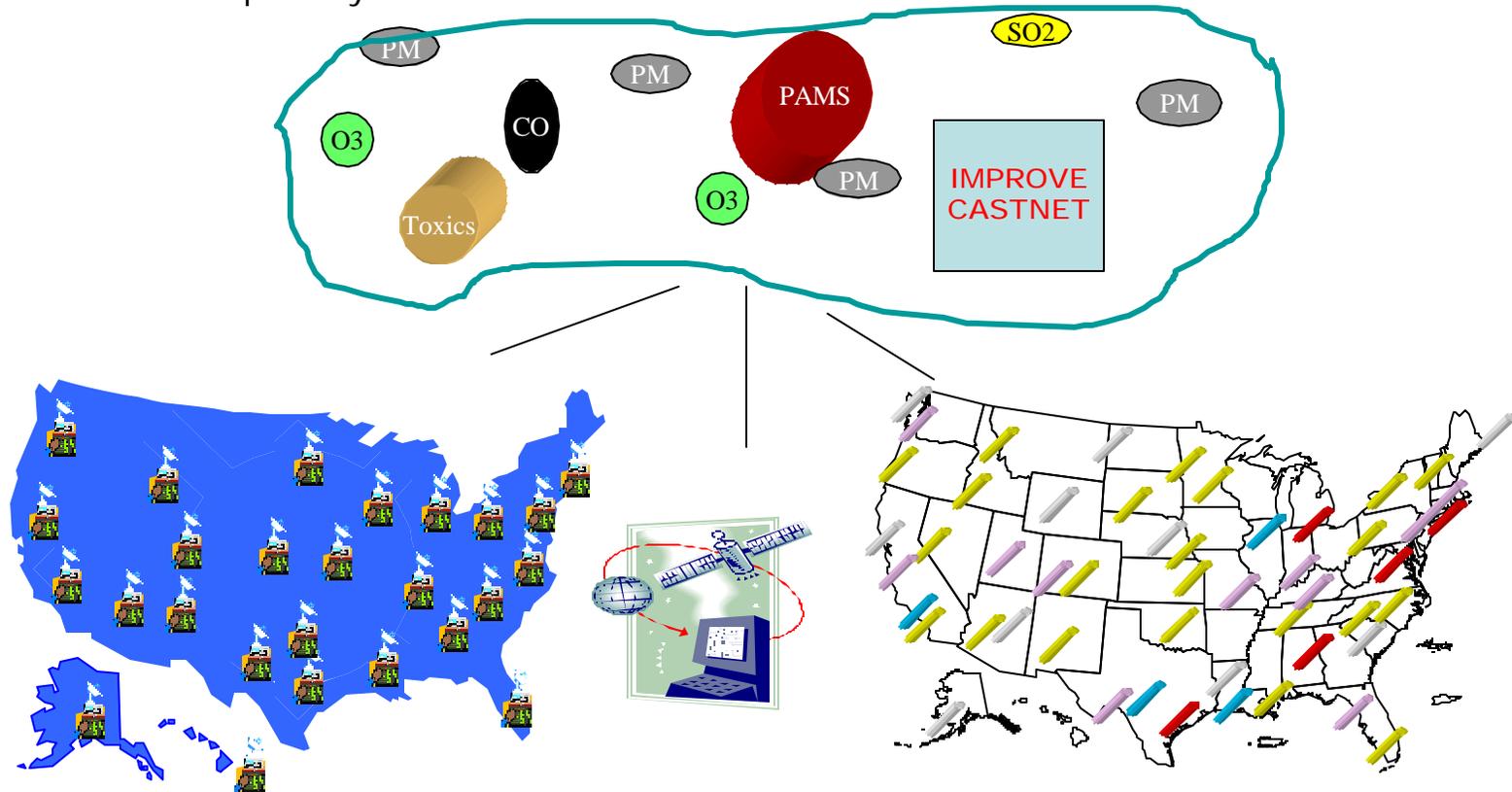
Most criteria measurements (except O3, PM2.5) well Below NAAQS



# National Monitoring Strategy

## National Core Network: **NCORE**

**Goal:** Move from loosely tied single-pollutant networks to coordinated, highly leveraged multi-pollutant networks with real time reporting capability

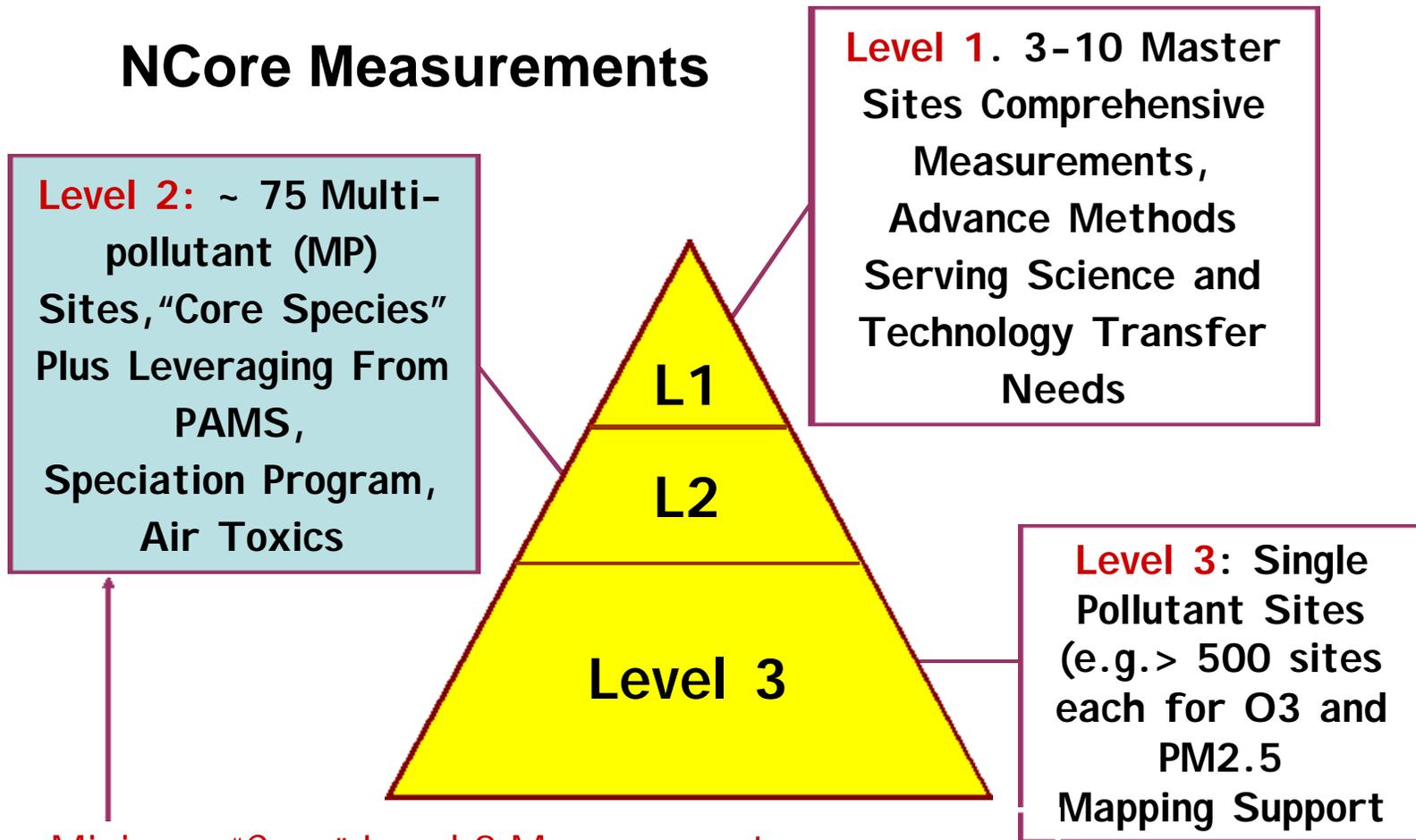


# Principal Data Objectives of NCore

- **Public Information**
- **Health/Exposure Assessment Support**
- **Emissions Strategy Planning**
- **Air Quality Trends and Program Accountability**
- **Science Support**
- **NAAQS Determinations and Related Regulatory Requirements.**

<http://www.epa.gov/ttn/amtic/monitor.html>

# NCore Measurements



## Minimum "Core" Level 2 Measurements

Continuous N, SO<sub>2</sub>, CO, PM<sub>2.5</sub>, PM<sub>10</sub>, O<sub>3</sub>; PM<sub>2.5</sub> FRM, Meteorology (T, RH, WS, WD)

## QA Strategy

*review and if necessary redevelopment of a quality system that is germane, flexible where necessary, and responsive to changes in the monitoring program.*

- QA Strategy Report on AMTIC
  - Priority list developed
- Validation templates developed
- Graded approach to QA
- Redefined roles of the QA Manager
- Starting revision of CFR
- DQOs for Ozone and Coarse

<http://www.epa.gov/ttn/amtic/qaqcrein.html>

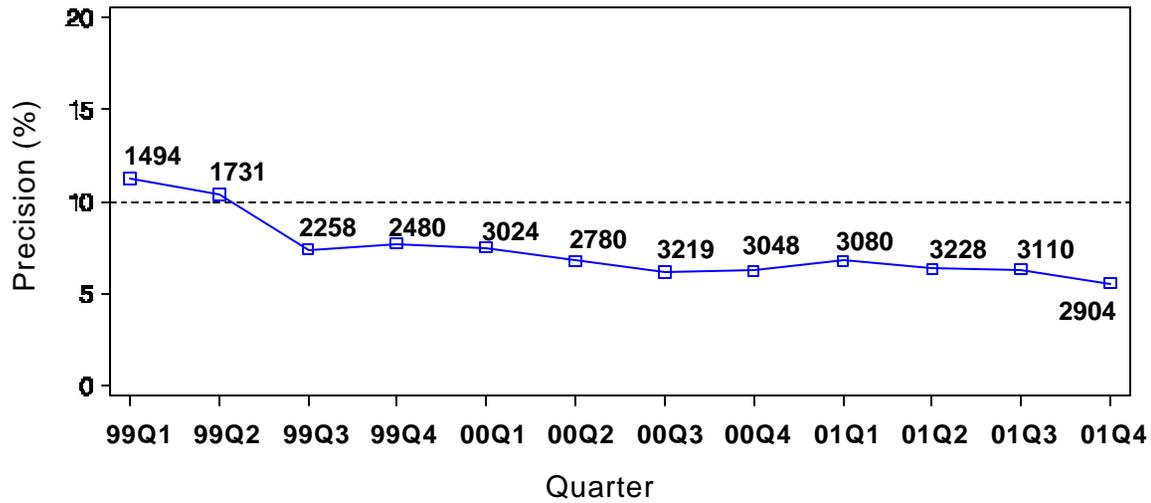
# Monitoring Programs – PM2.5

- 3- Year QA Report – due 5/03
  - DQOs being met
  - Bias may be a problem- New WA to take a hard look
- Collocation requirement reduced to 15% –official 3/31/03
- DQO Tool complete & up on AMTIC
- Working to link Federal Reference Method acceptance criteria to DQOs-loosening the FRM criteria-helps continuous methods.

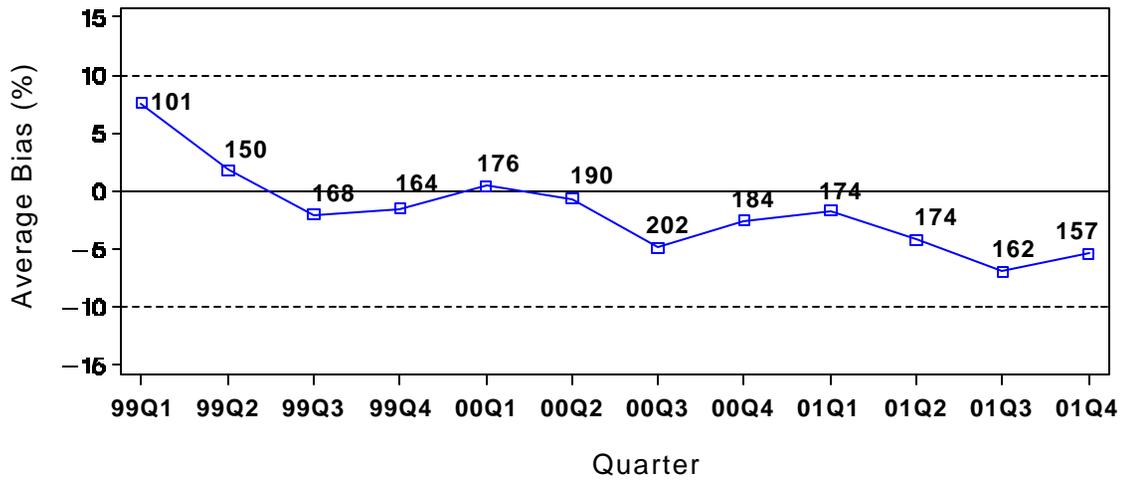
Mike Papp QA lead [papp.michael@epa.gov](mailto:papp.michael@epa.gov)

<http://www.epa.gov/ttn/amtic/pmqagen.html>

CY99, 00, and 01 Precision Estimates  
DQO 10%



CY99, 00 and 01 Bias Estimates  
DQO 10%



# Monitoring Programs – PM2.5 Speciation

- QA Report in progress- expected
- Speciation/IMPROVE Integration
  - Speciation/IMPROVE Intercomparison study
  - Elemental Carbon Method Consistency
  - Continuous PE Study – (spiked filter strips)
- Audits, PE and QA Summary Reports
  - CARB PE
  - RTI Audits
  - RTI data summary reports
- Special Studies

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<http://www.epa.gov/ttn/amtic/speciepg.html>

# National Air Toxics Monitoring Trends Network

*Detect a 15% change in concentration over a 3 year period*

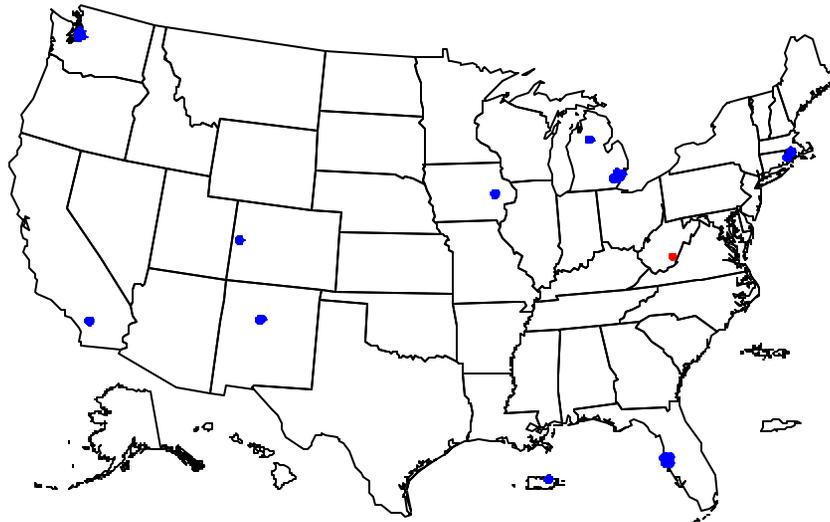
- Began in CY01
  - 22-site trend (urban/rural) network under development. Additional sites for local objectives will be added
- Technical Assistance Document On AMTIC
- DQO Developed (In QAPP)
- QMP for Toxics Trends Network Developed
- National QAPP Developed
- Round Robin PE studies accomplished (CARB)

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<http://www.epa.gov/ttn/amtic/airtxfil.html>

# Locations of Monitoring Sites



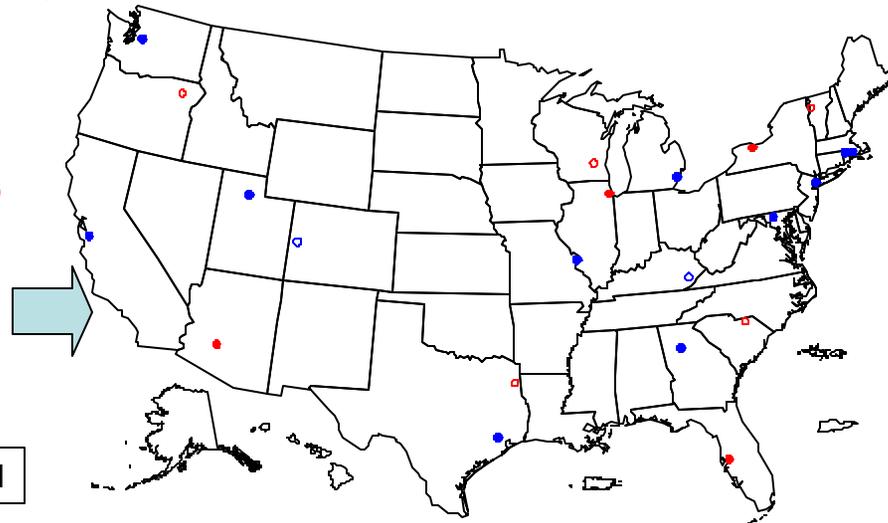
## Jan/03 Startup (13)

- Providence RI
- Roxbury MA
- NY, NY
- Washington DC
- Decatur (Atlanta), GA
- Hazard, KY (Rural)
- Detroit, MI
- Deer Park (Houston), TX
- St. Louis MO
- Bountiful UT
- Grand Junction, CO (Rural)
- San Jose CA
- Seattle WA

## Jan/04 Startup (9)

- Chittenden County, VT (Rural)
- Rochester, NY
- Tampa, FL
- Chesterfield, SC (Rural)
- Chicago, IL
- Mayville WI
- Harrison County TX (Rural)
- Phoenix AZ
- La Grande, OR (Rural)

● Urban ○ Rural



## Pilot Sites

38 sites in 10 cities

- Barcelenta/San Juan, PR
- Providence, RI
- Keeney Knob, WV \*no data
- Tampa, FL
- Detroit, MI
- Rio Rancho, NM
- Cedar Rapids, IA
- San Jacinto, CA
- Grand Junction, CO
- Seattle, WA

# Office of Radiation & Indoor Air (ORIA)

## QA Support to the Ambient Air Program

**Montgomery NAREL**  
**Mike Clark**

- Speciation & IMPROVE Program
  - Lab System Audits
  - PE Audits
  - Special Studies
  - Supporting analyses
  - Cont Nitrate/Sulfate monitoring
- PM2.5 PEP PE Samples
- NATTN Laboratory TSA

**Las Vegas R&IE**  
**Jed Harrison**

- Ozone SRP Program
- PAMS Retention Time Cylinders
- Tribal PM2.5 Weighing Lab
- Tribal Air Monitoring (TAMS) Center
- Speciation/IMPROVE Field TSAs
- Western Training and Evaluation Platform

## Quality System Changes and/or Improvements

- National Performance Evaluation Program
  - Through the probe audits
- Ozone DQO work
- CFR Revisions
- Standard Reference Photometer Program
- Resurrecting Protocol Gas Program?
- Speciation