

Air Toxics Monitoring

National Air Monitoring Conference

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Las Vegas NV

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EPA Office of Air Quality Planning and Standards

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

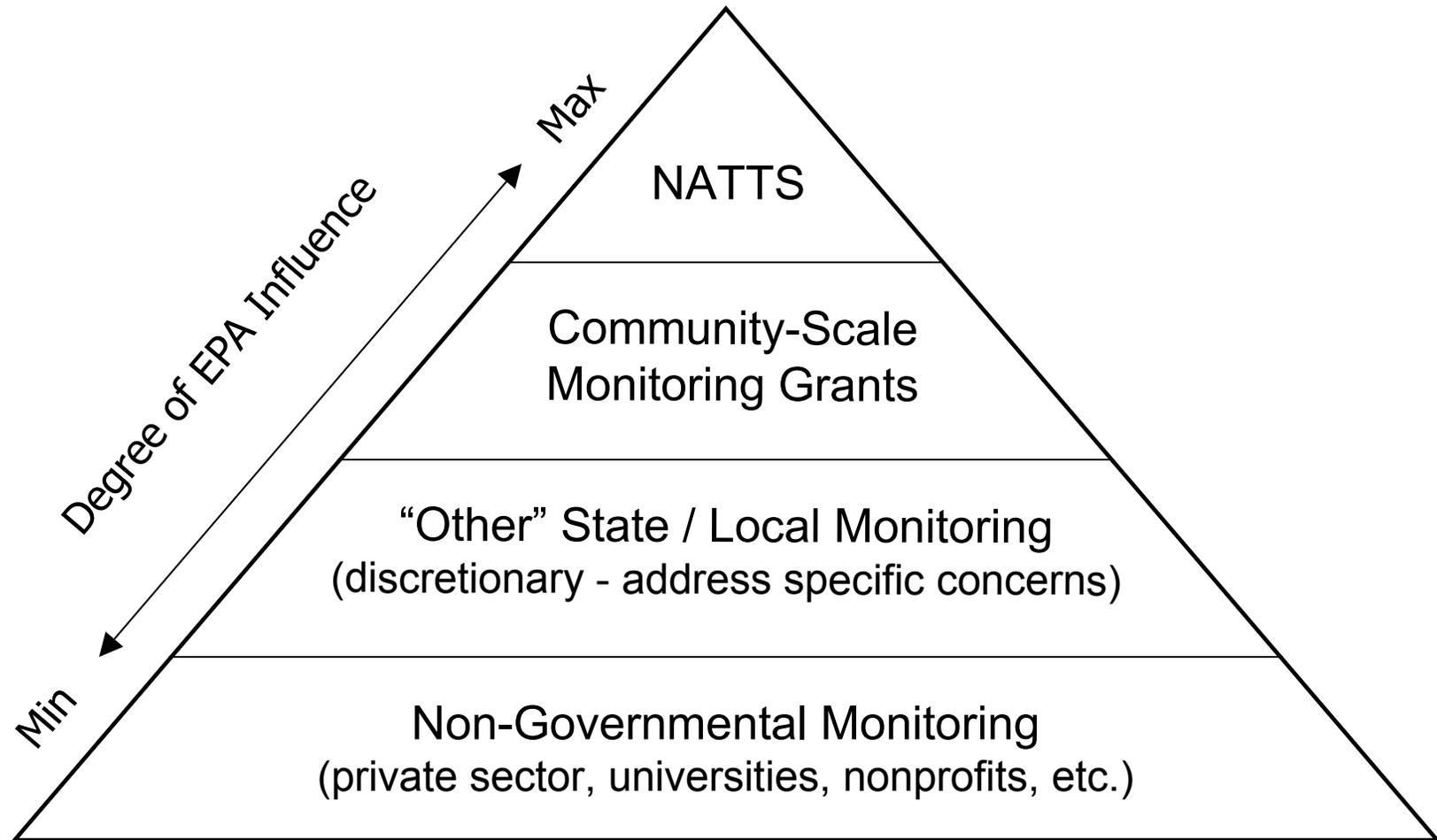
Overview

J.B. Dennison, Session Co-Chair *(not listed in program)*

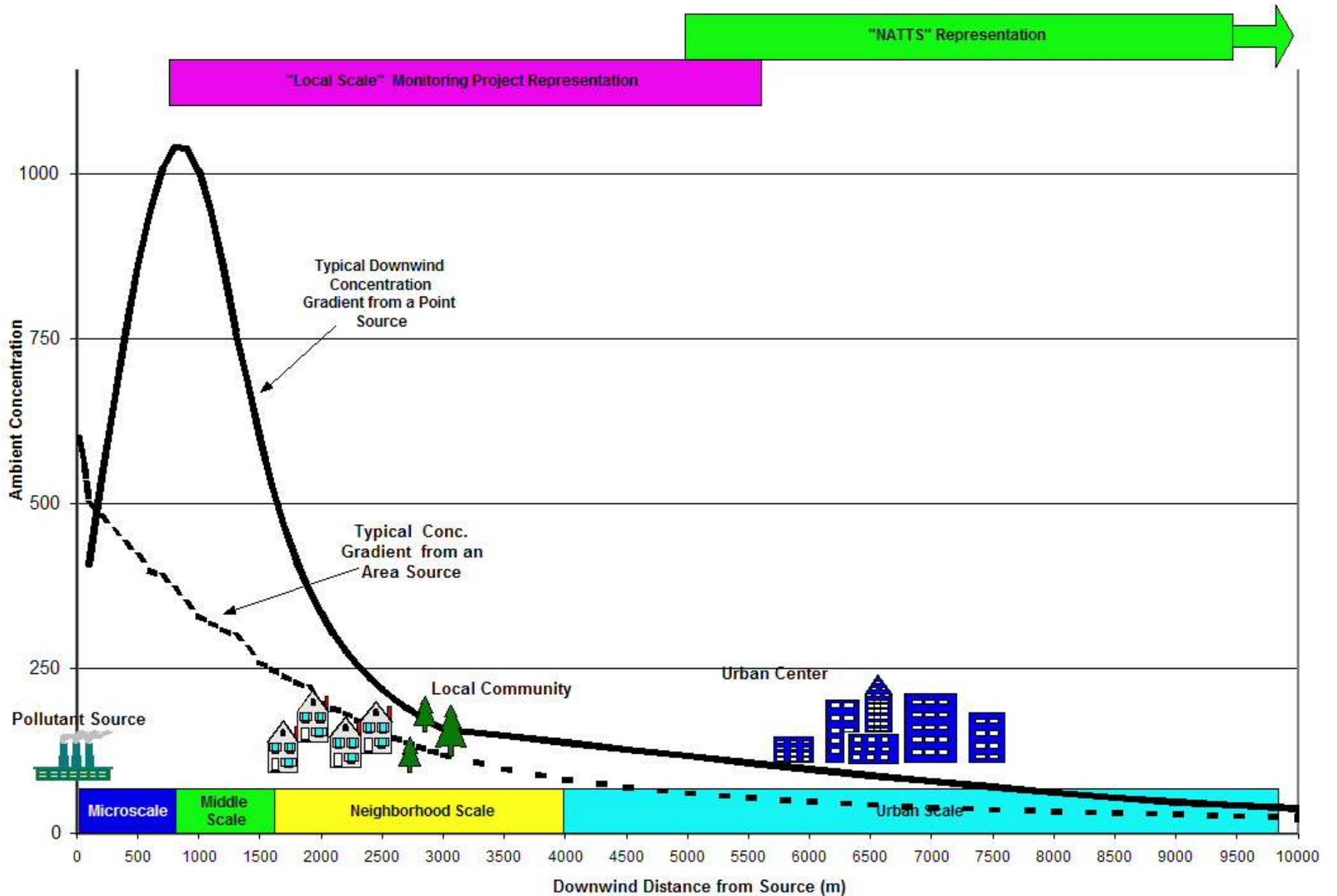
Three air toxics monitoring sessions

- Program / Regional Office Updates (Session I)
 - ✓ Methods
 - ✓ Data Analysis
 - ✓ Risk-Based Screening
 - ✓ Note: Quality Assurance will be addressed during QA Session II (3:30 - 5:30, Room Capri 101)
- Balance of presentations throughout the three sessions address S/L/T air toxics monitoring projects
- **Note:** Session III will begin 5 minutes early (1:10 PM)

National Air Toxics Ambient Monitoring



National Monitoring Projects Scales of Representation



National Air Toxics Trend Stations (NATTS)

- Initial sites established 2003; balance established 2004
 - ✓ Limited data for 2003/04; first “complete” year 2005
- 23 national air toxics trends sites; 17 urban / 6 rural
 - ✓ Principle Objective: trends and accountability
 - ✓ Scale: urban (5 km) and greater
- Collocated with PM_{2.5} speciation samplers, some also with PAMS
- Sampling and analysis
 - ✓ VOCs
 - ✓ Carbonyls
 - ✓ PM₁₀ HAP metals
 - ✓ TSP hexavalent chromium
- All sites expected to follow QA program for sampling & analysis

NATTS Sites and Pollutants

Sites

Roxbury MA	Houston TX
Providence RI	Bronx NY
Washington DC	Hazard KY
Dearborn MI	St. Louis MO
San Jose CA	Bountiful UT
Seattle WA	
Underhill VT	
Rochester NY	
Chesterfield SC	
Chicago (Northbrook) IL	
Mayville WI	
Harrison County TX	
Grand Junction CO	
Phoenix AZ	
La Grande OR	
Tampa FL (1) – Hillsborough Co.	
Tampa FL (2) – Pinellas Co.	
Atlanta (Decatur) GA	

Pollutants (Minimum Requirements)

VOCs by TO-15

- acrolein*
- perchloroethylene
- benzene
- carbon tetrachloride
- chloroform
- trichloroethylene
- 1,3-butadiene

Carbonyls by TO-11A

- formaldehyde
- acetaldehyde

PM10 Metals by IO 3.5

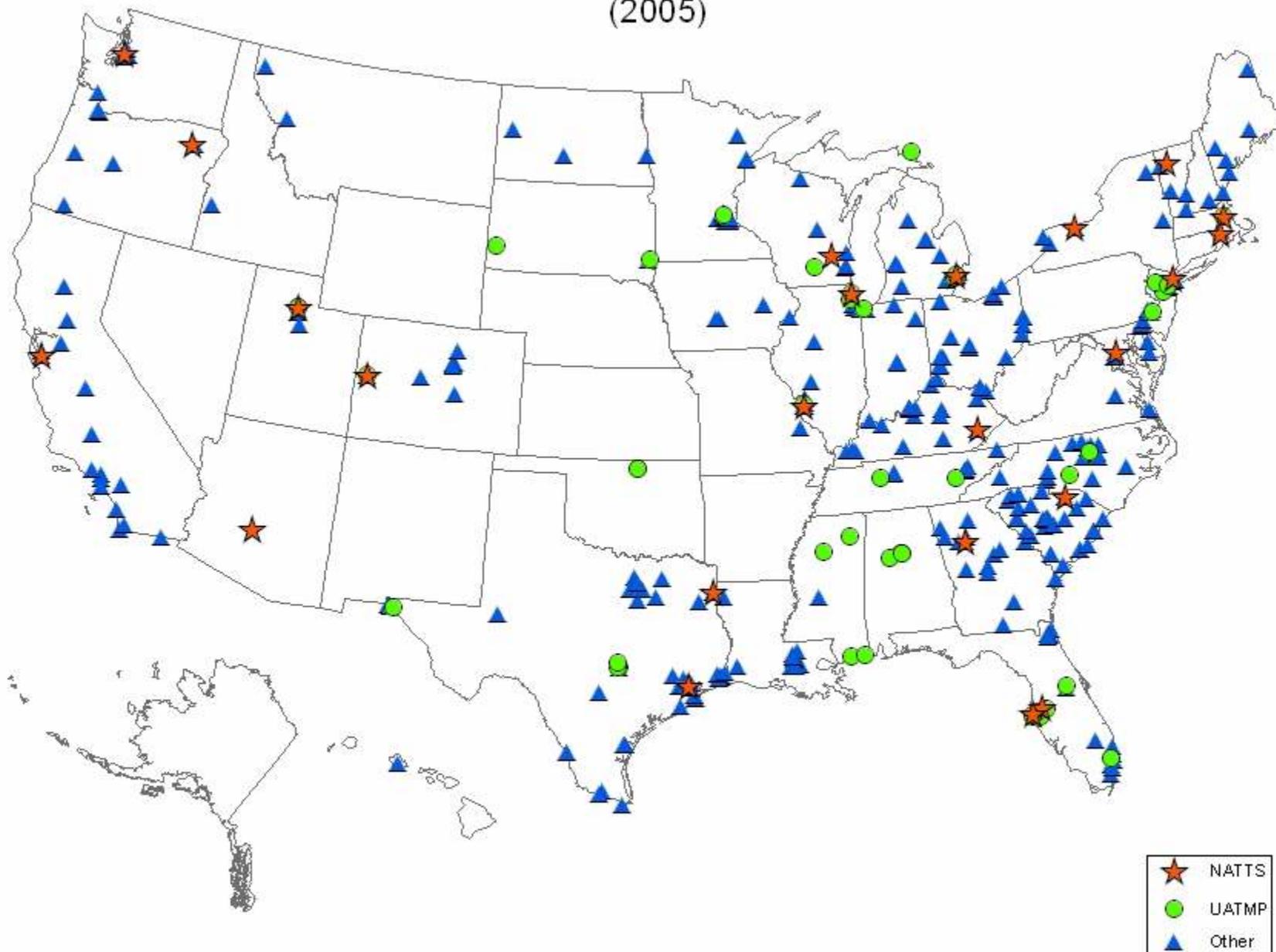
- nickel compounds
- arsenic compounds
- cadmium compounds
- manganese compounds

Hexavalent Chromium (TSP) by modified CARB Method 039

Local-Scale Monitoring Projects

- Competitively awarded grants
 - ✓ Proposals only accepted from air pollution control agencies
 - Section 302(b) of the Clean Air Act (see 2005 RFA)
 - ✓ Assist S/L/T agencies in:
 - Characterizing degree and extent of local air toxics problems
 - Identifying and profiling air toxics sources
 - Tracking progress of air toxics reduction activities
 - Developing and assessing emerging measurement methods
 - ✓ Middle and neighborhood scale (0.5 km to 5 km)
- Two competitions to date
 - ✓ 2004 and 2005
 - ✓ ~\$6 Million each
 - ✓ 37 total projects awarded
- Next RFA Nov/Dec 06
 - ✓ 2006 and 2007 combined
 - ✓ ~ \$10 million
 - ✓ Awards anticipated mid 2007

Air Toxics Monitoring Sites (2005)



Conclusion

- Air toxics monitoring... *slowly but surely*
 - ✓ More sites
 - ✓ More data reported to AQS
 - ✓ Increasing data quality
- Community-scale monitoring grants beginning to yield results
 - ✓ First round of projects nearing completion; results to be presented over next year (*some today!*)
- Challenges include...
 - ✓ Work to improve methods with MDLs near or above health benchmarks
 - ✓ Continue emphasis on data quality
 - ✓ Continue to emphasize coordination between local-scale monitoring and health studies / exposure assessments