

US EPA ARCHIVE DOCUMENT



NYS Dept. of Environmental Conservation
Division of Air Resources

Air Quality Management Plan Pilot Project

Summary of Current Status

Robert D. Bielawa, P.E.
June 4, 2008
Chapel Hill, North Carolina

Summary of Current Status (1)

- Air Quality Issues and Concerns
- Climate Change, Greenhouse Gas Initiatives
- Energy Issues, Renewable Energy, Energy Efficiency
- Ecosystem Health

Summary of Current Status (2)

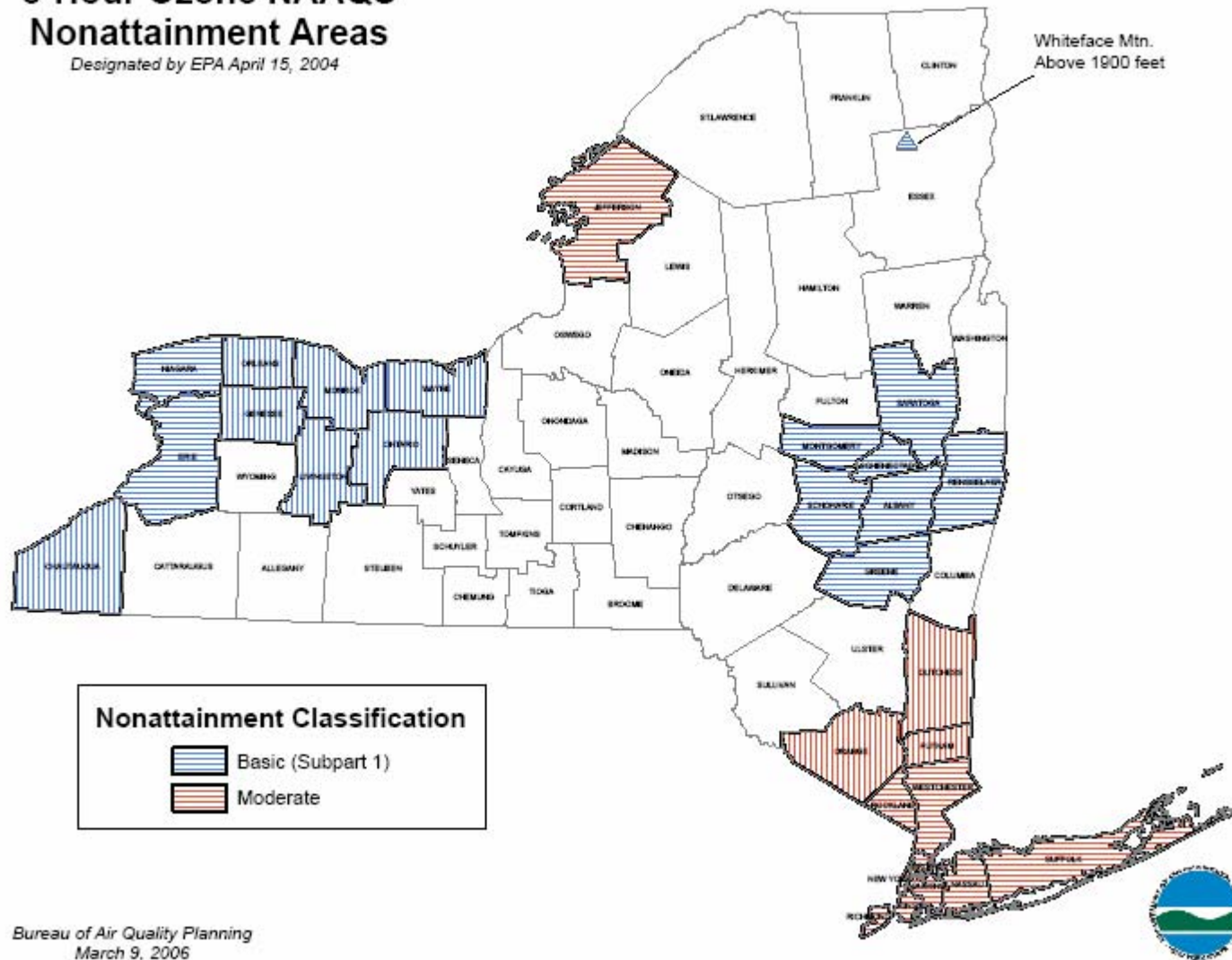
- Human Health Effects
- Current Stakeholders
- Current Implementation Process
- Other Planning Efforts

Air Quality Issues and Concerns For New York State

- NAAQS Non-attainment
 - Ozone
 - PM_{2.5}
- Toxics
- Regional Haze
- Greenhouse Gases
- Acid Deposition

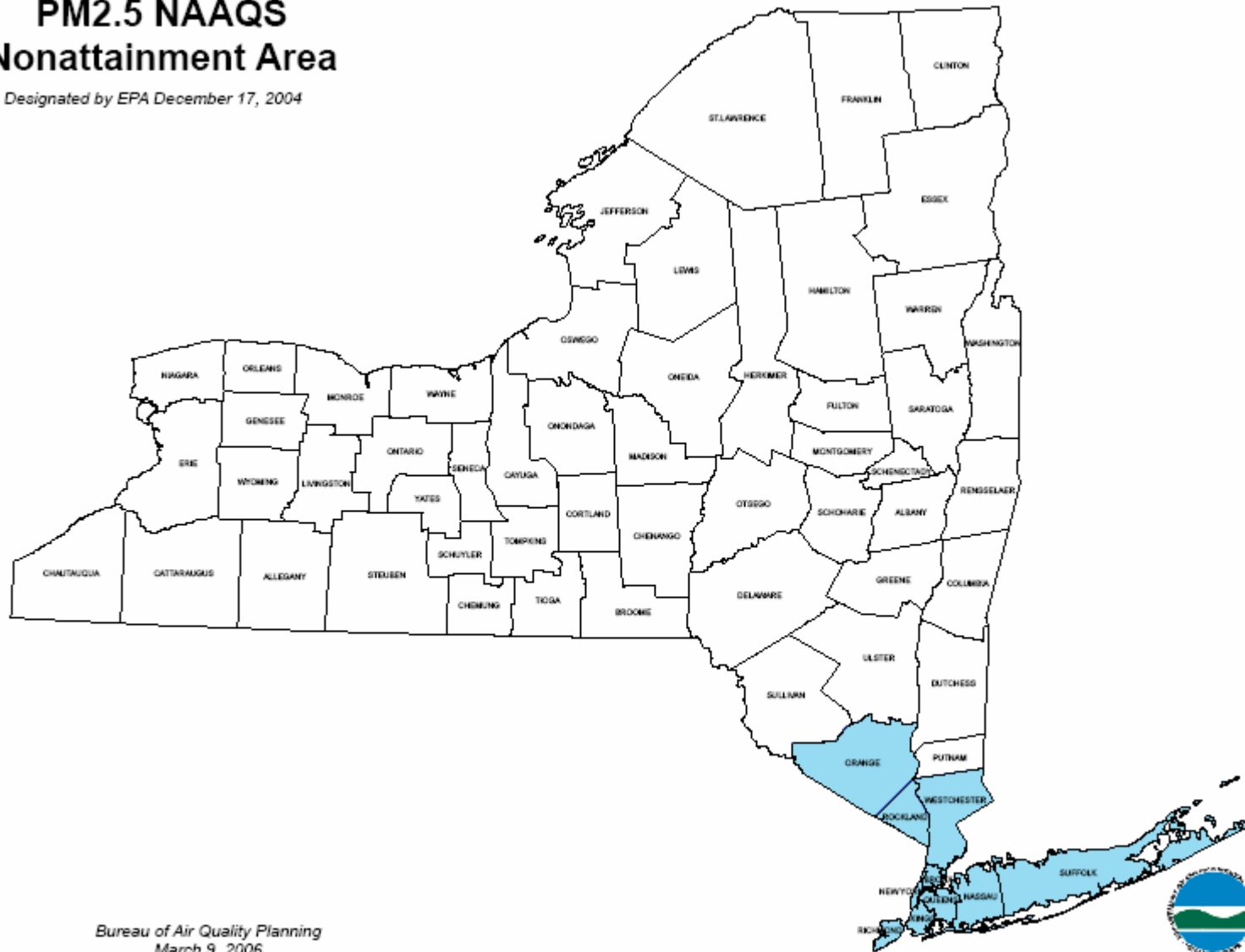
8-Hour Ozone NAAQS Nonattainment Areas

Designated by EPA April 15, 2004



PM2.5 NAAQS Nonattainment Area

Designated by EPA December 17, 2004



*Bureau of Air Quality Planning
March 9, 2006*



Air Quality Issues and Concerns For New York State

- Toxics
 - Mercury
 - Acetaldehyde
 - Acrolein
 - Benzene
 - 1,3-Butadiene
 - Formaldehyde
 - Nickel Compounds
 - Polycyclic Organic Matter (POM)

Air Quality Issues and Concerns For New York State (Toxics)

- Part 246 will achieve a 90 percent reduction in mercury emissions from certain coal-fired electricity generating units in two phases.
- Phase I of Part 246 imposes facility-wide mercury emission limitations based upon the state mercury budget distributed to New York State by EPA. The facility-wide emission limitations will be in effect from 2010 to 2014. [746 pounds/year total]
- Phase II of Part 246 establishes a unit-based emission limit of 0.6 pounds per trillion Btu on a 30-day rolling average basis for each applicable unit starting in 2015.

Air Quality Issues and Concerns For New York State (Toxics)

- 2007 Statewide Monitored Annual Average
 - Benzene = 0.91 ug/m₃ (1.2ug/m₃ in NYC)
 - 1,3-Butadiene = 0.12 ug/m₃ (0.14 ug/m₃ in NYC)
 - Nickel Compounds = 0.01 to 0.06 ug/m₃
(urban monitored 2000 speciated PM_{2.5} data)

To Air Quality Issues and Concerns For New York State (Toxics)

- Lead
 - No NYS areas < 1.5ug/m₃ (current NAAQS)
 - New NAAQS 0.10 – 0.30 ug/m₃
 - One county possible non-attainment

Air Quality Issues and Concerns For New York State

- Regional Haze
 - Currently finalizing Regional Haze SIP
 - Best Available Retrofit Technology (BART)
- Acid Deposition
 - SO₂, NO_x and Ammonia (NH₃)
 - Acid Deposition Reduction NO_x Budget Trading Program
 - Acid Deposition Reduction SO₂ Budget Trading Program
 - NO_x Budget Trading Program

Climate Change, Greenhouse Gas Initiatives

- 2005 Emissions in New York State
 - 244.96 Million Tons CO₂
 - 819,252 tons Methane
- 88.5% GHG emissions formed during fuel combustion
- Transportation fuel combustion = >30%
- Electric power plants emit 25% of CO₂

Climate Change, Greenhouse Gas Initiatives

- RGGI Cap
- Constant through 2014
- 10% reduction by 2019

- NY initial CO₂ budget approx. 64.3 million tons

Climate Change, Greenhouse Gas Initiatives

- Implementation
 - NYSDEC
 - NYS Department of Public Service (NYSDPS)
 - NYS Energy Research and Development Authority (NYSERDA)
- 6 NYCRR Part 242
- NYSERDA will implement auction process

Energy Issues, Renewable Energy, Energy Efficiency

- 2004 Renewable Portfolio Standard
 - 19.3% renewable electricity used by New Yorkers on 2004
 - 25% goal by 2013
- Wind energy development is an important component of the RPS

Energy Issues, Renewable Energy, Energy Efficiency

- Climate Change Goals
 - 30% CO₂E emission reduction by 2020
 - 80% CO₂E emission reduction by 2050

Energy Issues, Renewable Energy, Energy Efficiency

- Potential Strategies
 - Building Efficiency Standards
 - Transportation Efficiency Standards
 - Power Generation
 - Municipal Solid Waste
 - Forest Storage
 - Soil Storage
 - Transmission and Distribution
 - Natural Gas Line Leakage
 - Combined Heat and Power
 - Cement Manufacture

Ecosystem Health

- Acid Deposition Sensitivity
 - Adirondacks
 - Catskills
 - Hudson Highlands
 - Rensselaer Plateau
 - Parts of Long Island

Human Health

- In 2005, asthma affected
 - 1.1 million adult New Yorkers
 - 370,000 children in New York
- 300 deaths/year 2003 - 2005
- 42,400 asthma hospitalizations 2003-2005
 - 14,700 for NYS children
 - 3 – 7 percent total reduction from 1999 - 2001

Environmental Justice

- NYSDEC program established in 1999
- 2003 NYSDEC Environmental Justice Policy
 - Key objective: promote more involvement of low-income and minority communities in NYSDEC's permitting and project review processes.

Current Stakeholders

- All New York State Residents
- Intra-Agency
 - Office of Climate Change
 - Div. Of Solid and Hazardous Waste
 - Division of Water
 - Division of Lands and Forests

Current Stakeholders

- Inter-Agency
 - Transportation
 - Health
 - Agriculture and Markets
 - Public Service
 - Energy Research and Development Authority
 - Adirondack Park Agency
 - New York Power Authority (NYPA)
 - Long Island Power Authority (LIPA)

Current Stakeholders

- Local Governments
 - County
 - City
- Metropolitan Planning Organizations
 - Highway Projects and Mobile Source Emissions

Current Process For Implementing Air Quality Management

- Regulations governed by State Administrative Procedures Act (SAPA), some specific statutory requirements and Executive Order #20 (GORR)
- Regulatory Initiation Memorandum initiates process, signed by Commissioner

Current Process For Implementing Air Quality Management

- Rule Development
 - Rule (express terms)
 - SAPA and SEQR documents
 - Stakeholder involvement
- Public Hearings
- Environmental Board

Other Current Planning Efforts

- PlaNYC

- A compilation of initiatives in NYC focusing on five key environmental areas:

- Land

- Air

- Water

- Energy

- Transportation

Other Current Planning Efforts

- Select PlaNYC Air Initiatives
 - Reduce taxi emissions
 - Retrofit ferries
 - Replace, retrofit and refuel diesel trucks
 - Improve anti-idling laws
 - Improve building energy efficiency
 - Power plant improvements
 - Reduce port and airport emissions

Other Current Planning Efforts

- 15 x 15 Initiative
 - Reduce electricity use by 15% from forecasted levels by the year 2014 through new energy efficiency programs in industry and government.
 - New appliance efficiency standards
 - More rigorous energy building codes

Collaborators

- NESCAUM/NYSERDA
 - “Sustainable Energy and Air Quality Planning for the Northeast US: Application of a Multi-Pollutant Policy Analysis Framework to New York State”
- UNC/EPA
 - Control Strategy Tool (CoST)
- RTI/EPA
 - CoST

CONTACT INFORMATION

Robert D. Bielawa, P.E.
Environmental Engineer II
SIP Planning Section

Bureau of Air Quality Planning
Division of Air Resources
625 Broadway, 2nd Floor
Albany, NY 12233-3251
(518) 402-8396