



Florida Department of Environmental Protection

Office of Air Monitoring

Air Monitoring Regulatory Goals

March 23, 2016





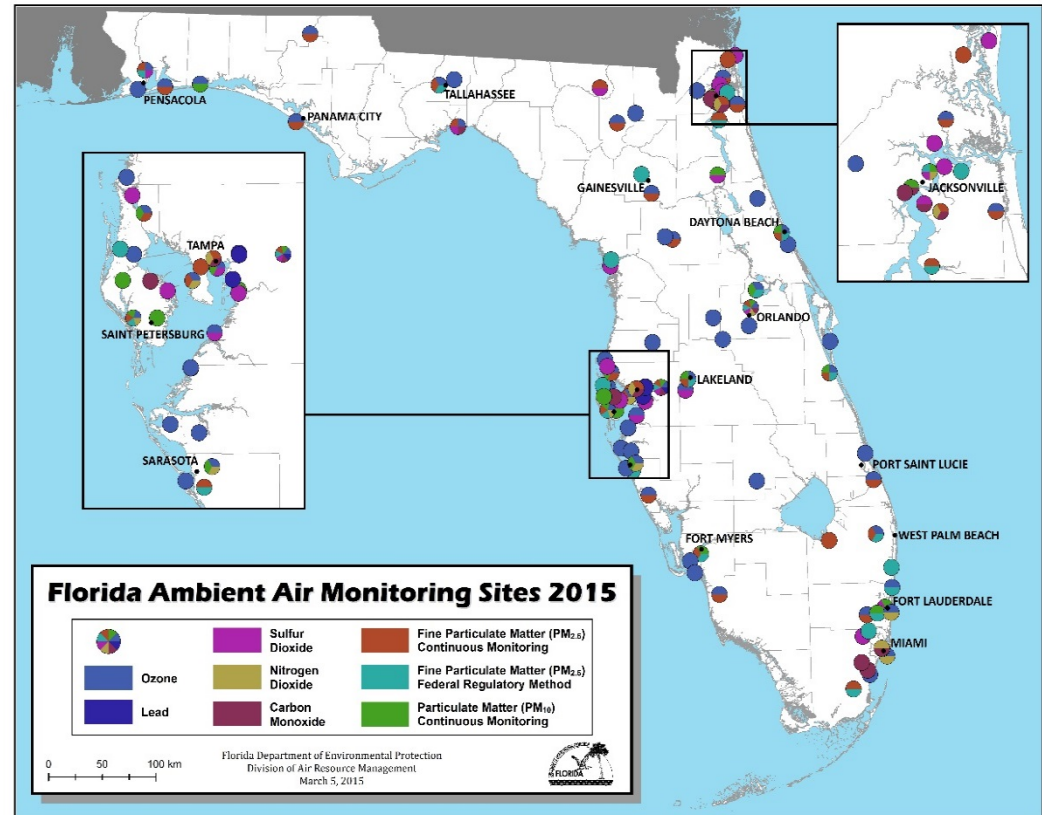
Overview

- Our Monitoring Network
 - o The Minimum Monitoring Requirements
- How Our Data Are Used
 - o Regulatory Uses
 - o Non-Regulatory
- Data Impacts



Florida's Air Monitoring Network

- Well established
- 102 Sites
- 220 Monitors
- 37 Counties
- Covers over 91% population
- One PQAO





Minimum Monitoring Requirements

- CFR specifies network design criteria and technical monitoring requirements:
 - o Number of sites
 - o Spatial scale
 - o Instrument type & measurement method
 - o Monitoring season & operating schedule
 - o QA procedures
 - o Data reporting requirements
- Revised standards = new requirements

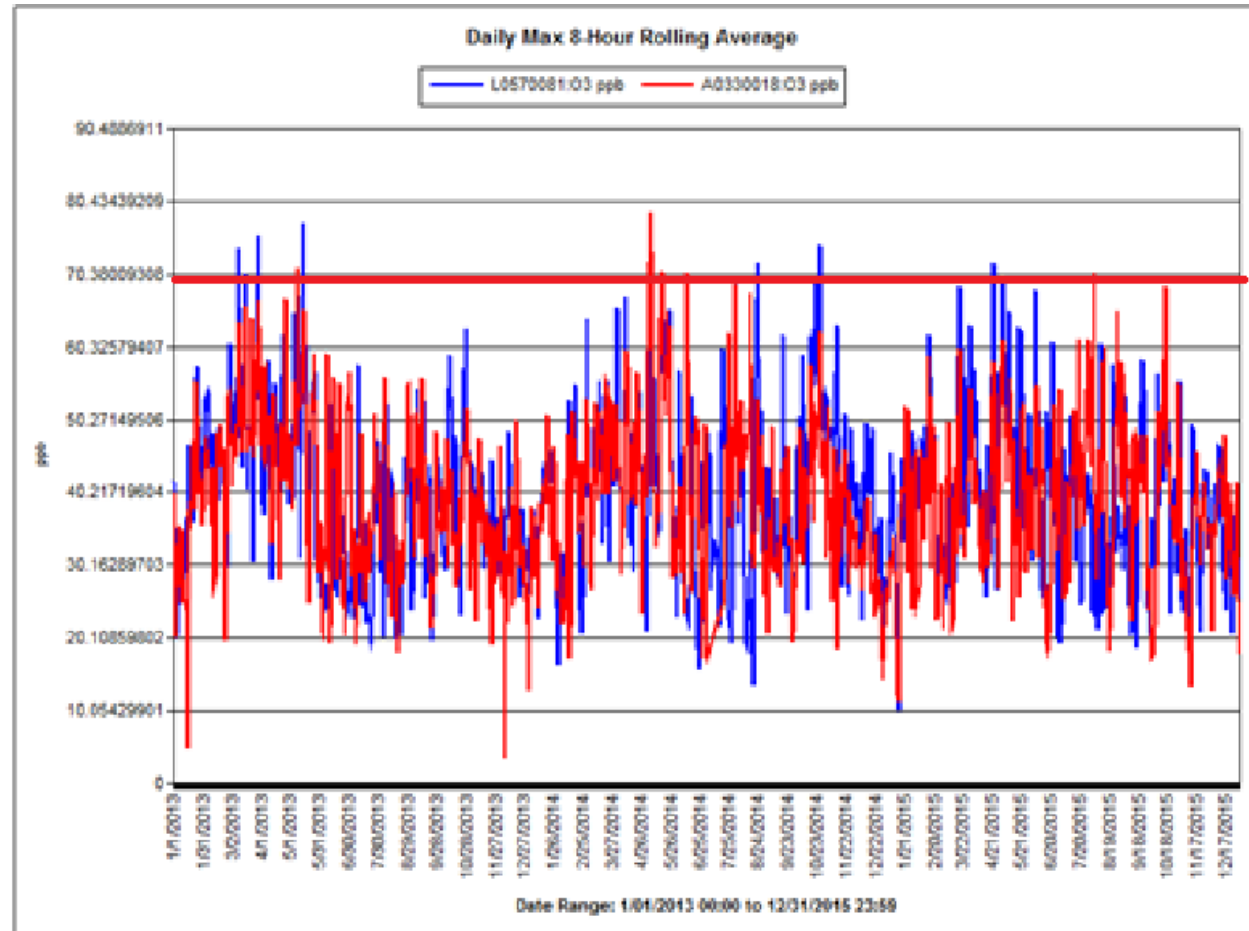


Broward County near road NO₂ site



Determining Compliance With Air Quality Standards

- Regulatory action requires complete, quality assured, and certified data.



Highest two ozone design value sites for 2013-2015, Simmons Park and Pensacola NAS



Priority Monitoring Sites are Critical

- Priority monitoring sites include all required monitoring sites, specifically:
 - o Nonattainment sites
 - o NCore sites
 - o Near road sites



Hillsborough
County Ncore
site at Sydney

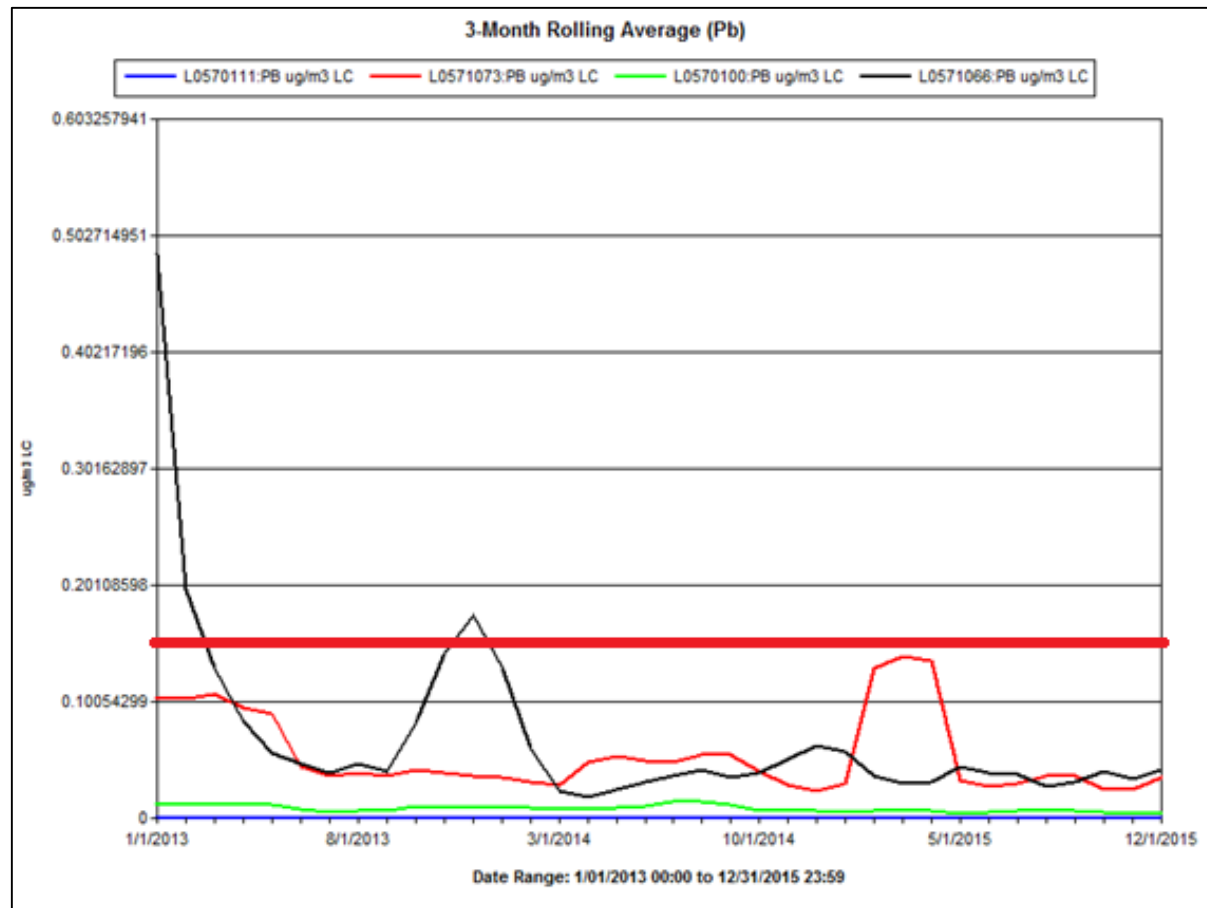


Nassau County SO₂ site



Priority Monitoring Sites

- Most areas have multiple sites
- An area does not attain until ALL sites meet the standard
- Sites with the highest concentrations are the highest priority

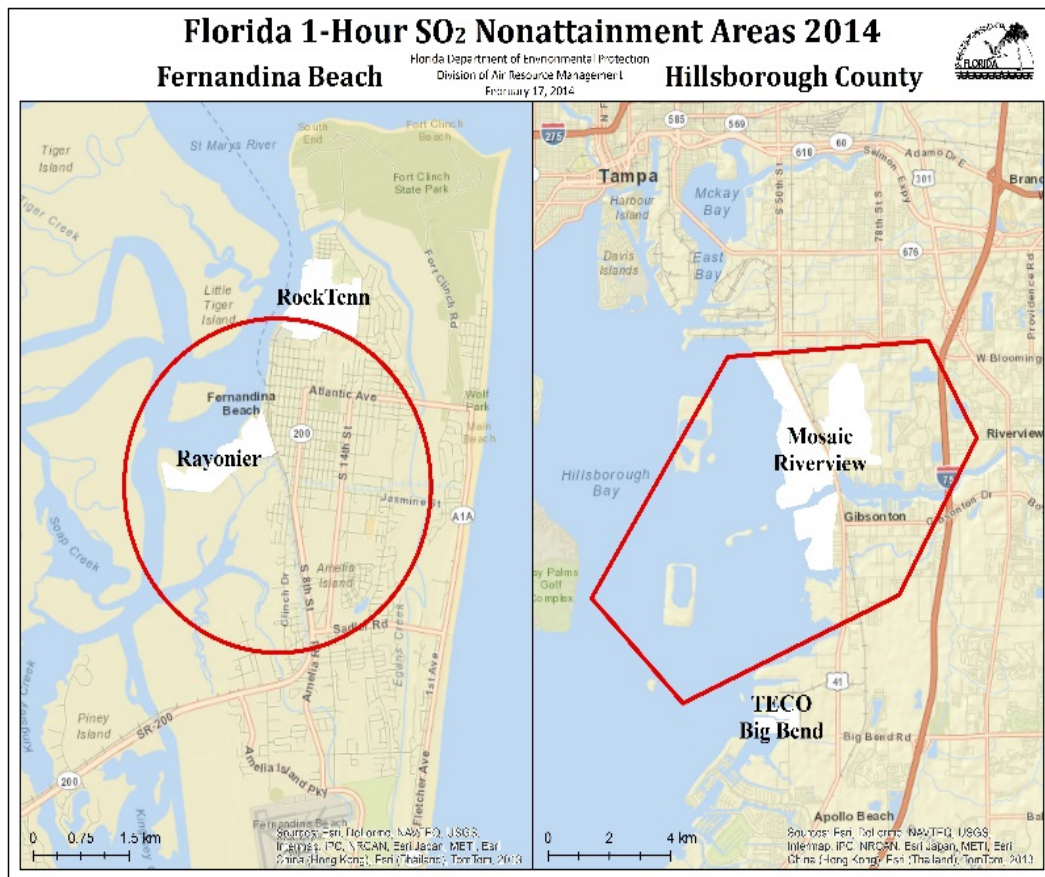


Hillsborough lead data for 2013-2015



Priority Monitoring Sites

- Priority sites are critical for:
 - Regulatory decisions
 - Basis for developing plans
 - Determine attainment
- Complete data are essential



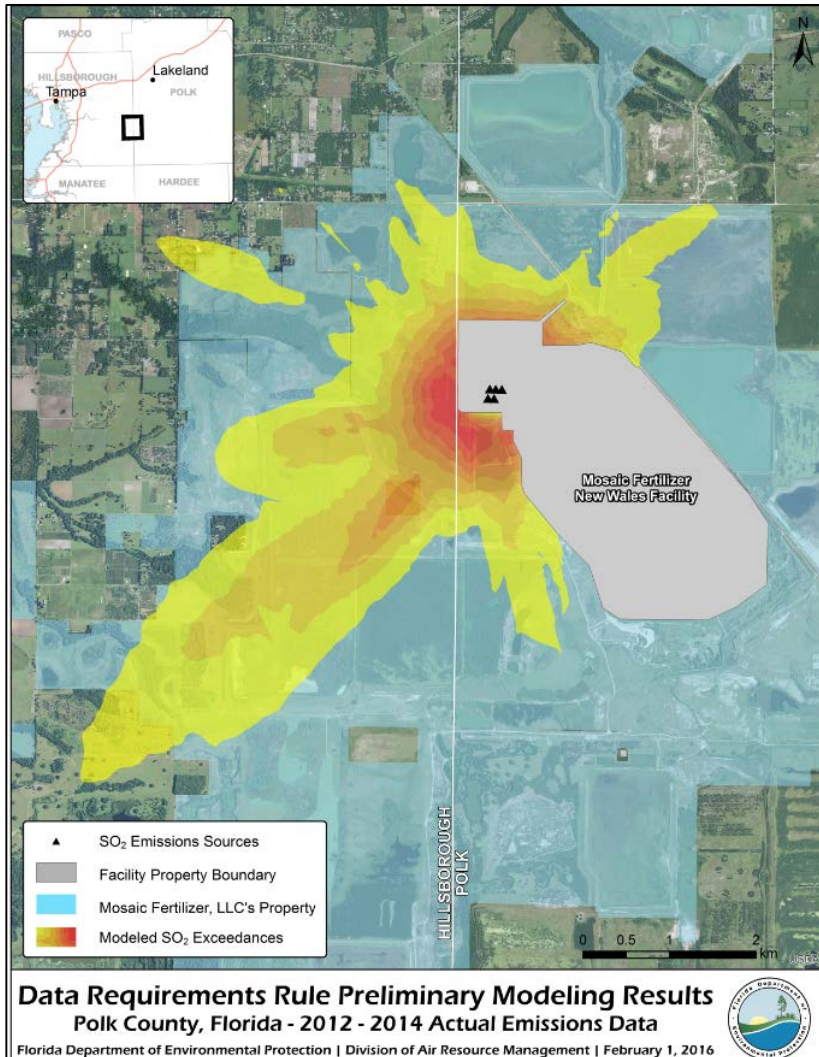
Size of SO₂ NAAs indicating the reach of concentrations not meeting the SO₂ NAAQS



State Implementation Plan & Control Strategy Development

Data are used to:

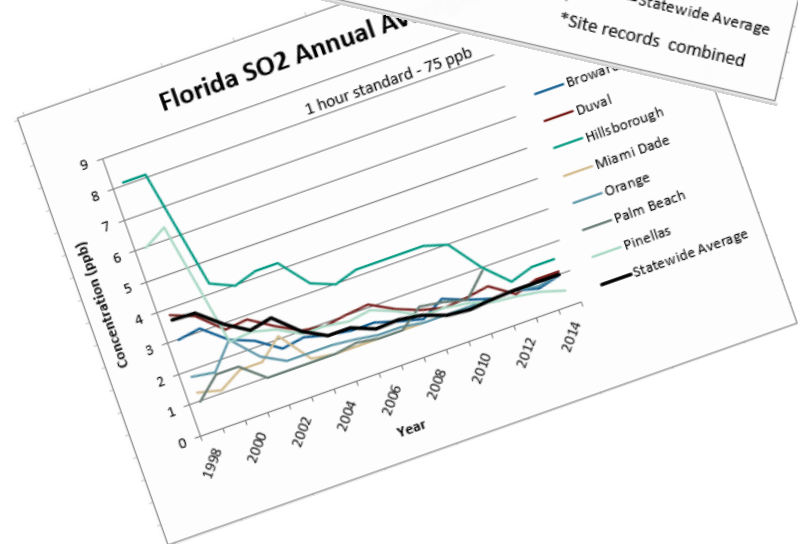
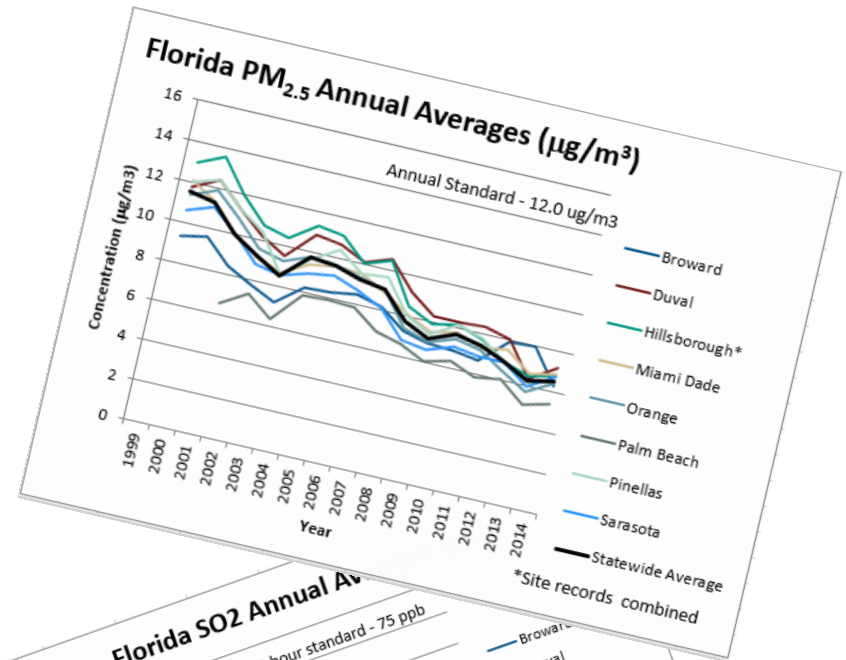
- Determine area design value and level of control
- Evaluate nature of problem
- Run models and evaluate performance





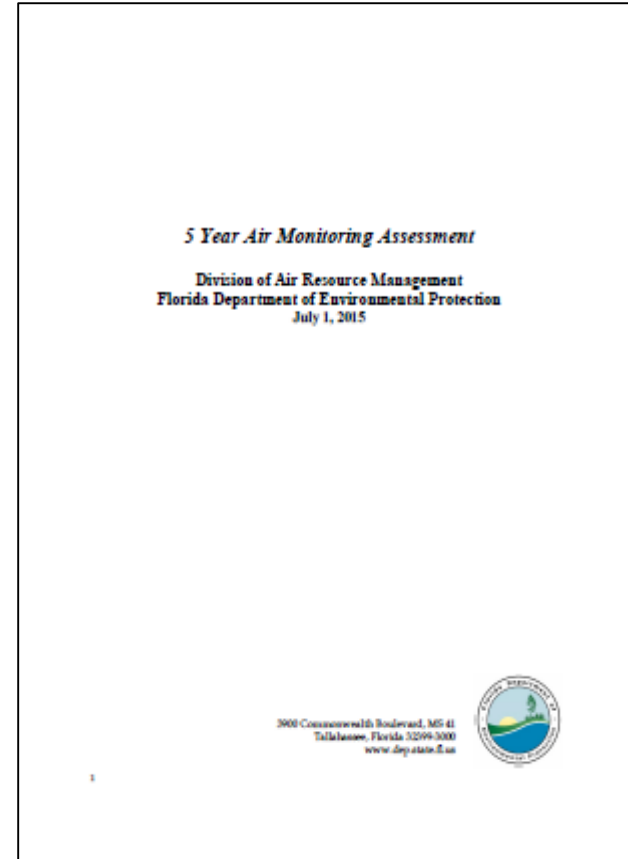
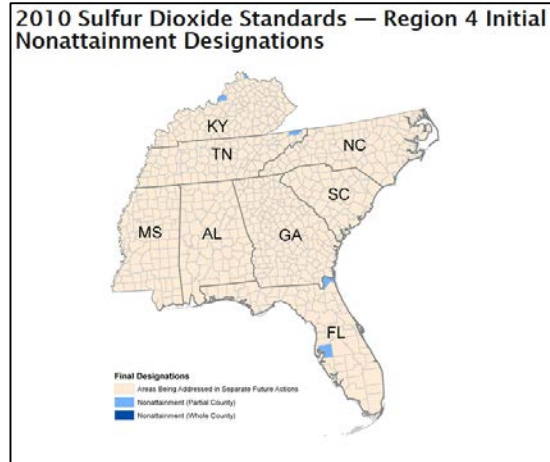
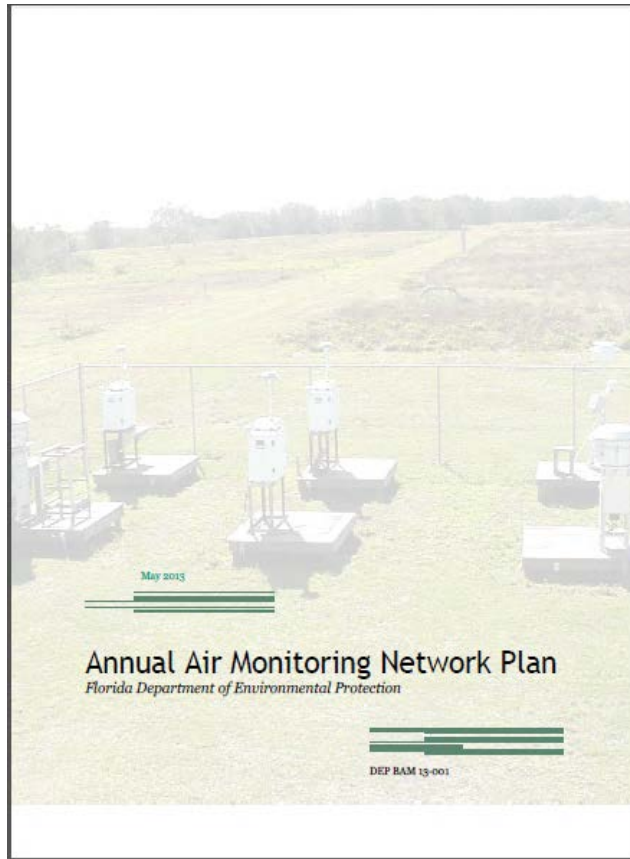
Air Quality Trends

- Evaluate progress toward attainment
- Compare progress in different areas
- Estimate exposure
- Assess effectiveness of control strategy





Presentations and Publications

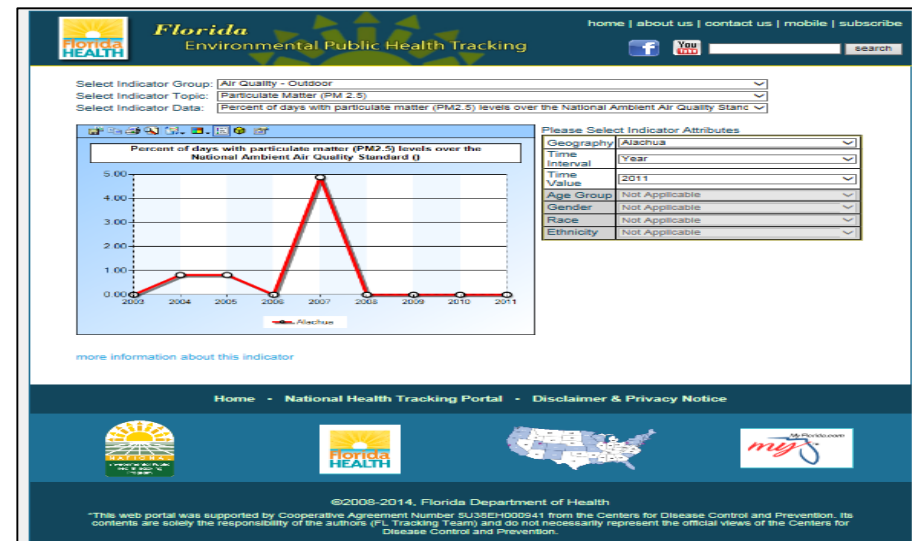




Data Support a Broad Range of Programs

- Air monitoring data:
 - Support health studies
 - Are the basis for regulatory programs
 - Are a critical part of emergency response efforts
 - Inform community assessments and environmental justice evaluations

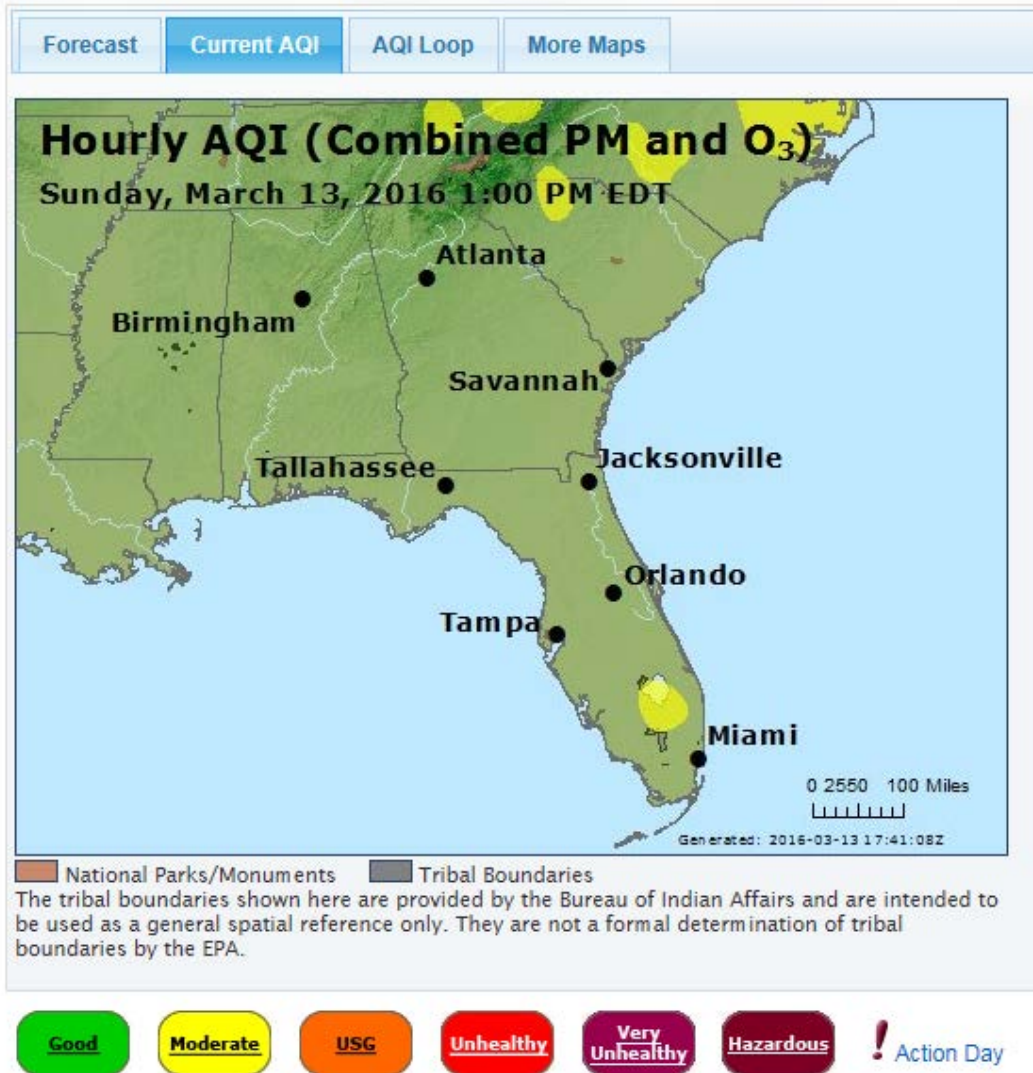
The screenshot shows the CNN.com website with a news article titled "Fires inch closer to Floridians' homes". The article is dated May 14, 2007, at 9:15 p.m. EDT. It reports on a large fire in Florida, mentioning that several hundred families were evacuated and that a mother bear and cub were rescued. The article also notes that fire crews were fighting flames against dry weather and higher winds. A placeholder for an image is visible on the left, stating "This image is no longer available".





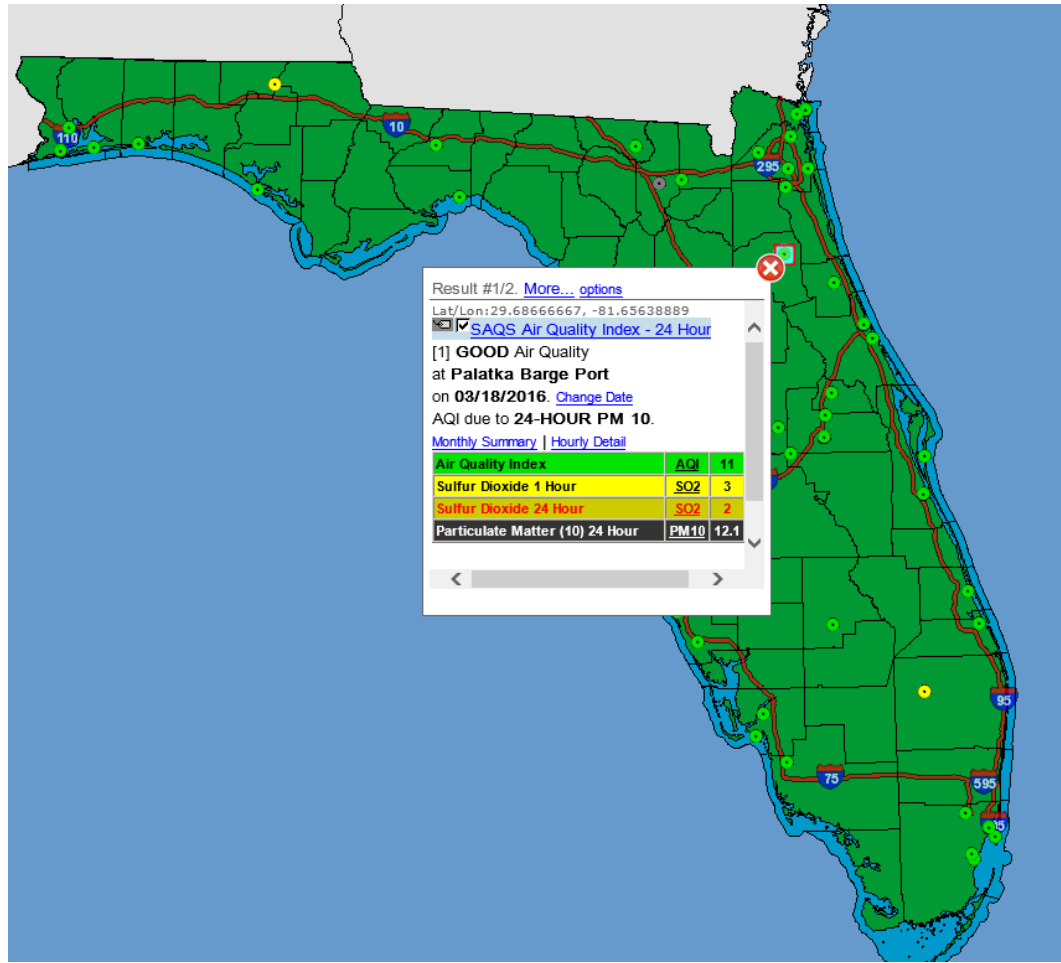
Air Quality Index

- Air Quality Index
 - o Indicates the healthfulness of current air quality
 - o Is based on real-time measurements at monitoring sites





Air Quality Index Forecasting



- Forecasters rely on the data for predictions and making corrections to the modeled forecast
- Modelers at NOAA use the data to correct the model



What's the Point?

- Reliable data are critical to the regulatory process
- Data must meet established siting, operating, reporting standards
- Annual network plans and data certifications demonstrate compliance
- Data that do not meet the standard can compromise regulatory decisions





The Domino Effect

PM_{2.5} is a good example:

- Missing just a couple of samples, can invalidate month, quarter, or year
 - There are limited samples
 - 75% data completeness needed
- Make-up samples must be on acceptable days
- Incomplete data impact design value and cannot be used to justify attainment





Protect Public Health



Protect Public Health:

- Designations
- AQI and forecasting
- Sharing with health researchers
- Supporting environmental decisions



What's Next?



- Annual Monitoring Plan
- PM_{2.5} designation
- Ozone designation
- Ozone monitoring requirements
- NO₂ designation
- SO₂ redesignation and additional area designations
- SO₂ Data Requirements Rule



Increased Frequency of NAAQS Reviews

- EPA is required by the CAA to review and if needed, update the NAAQS for criteria pollutants every 5 years
- Starting in 2008, the rate of review and revising of the NAAQS increased
 - It is now possible that a designation for a new standard could occur annually



Increased Interest in Monitoring Data

- The Office of Inspector General (OIG) for EPA has taken an interest in monitoring data and EPA's oversight of state and locals activities.



U.S. ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF INSPECTOR GENERAL

Air Quality

EPA Can Strengthen Its Reviews of Small Particle Monitoring in Region 6 to Better Ensure Effectiveness of Air Monitoring Network

Report No. 16-P-0079 December 17, 2015



◆ = Active fine particulate matter monitor locations in EPA Region 6.



Increased Interest in Monitoring Data

- In a recent letter to Janet McCabe, Acting Assistant Administrator, it was announced that the OIG plans to evaluate the ambient monitoring program within EPA's OAR.
 - o The objective is to determine whether data in AQS meets the criteria established by EPA.
 - o Specifically:
 - Do data revisions comply with EPA criteria?
 - Do data exclusions or gaps comply with EPA criteria?
- OIG will review EPA regulations, policies, procedures and guidance



Increased Interest in Monitoring Data

- OIG plans to begin this evaluation within the Office of Air Radiation's (OAR's) Office of Air Quality Planning and Standards (OAQPS)
- OAQPS will provide the OIG:
 - o Ozone ambient data reporting and guidance
 - o Policies and procedures related to data entry, data review/certification
 - o Results from any systems audits of AQS or AirNow
 - o Instructions for accessing data in AirNow and AQS
 - o Key points of contact for accessing data in AQS and AirNow
- OIG also plans to visit some state and local monitoring agencies responsible for collecting air monitoring data



Summary

- While there are many reasons to do what we do well:
 - o Provide quality data for attainment decisions
 - o Evaluate the effectiveness of control strategies
 - o Air quality reporting and forecasting
 - o Support health studies

However, the most important reason is to **protect public health!**





Comments or Questions



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❖ Thanks to the CARB PQAO for sharing their training slides.