Air Pollution Prevention and Control under the Clean Air Act

February 25, 2011

Presented by:
Candace Carraway, EPA Office of Air Quality Planning and Standards;
Vernice Miller-Travis, Miller-Travis and Associates and member of National Environmental Justice Advisory Council

Objectives of the Training Module

- To get more community members engaged in air programs (state, tribal, local, and EPA) in a meaningful way
- To provide basic information that community members can build on
  - This is one of several community-oriented webinars planned by EPA
  - It supplements other CAA trainings developed for general audiences

Topics We Will Cover

- The roles of state, tribal, and local agencies and EPA in air quality management

- How agencies plan and manage air pollution

- How the quality of the outdoor air is regulated

- How toxic air pollutants are regulated at stationary sources

- Opportunities for public involvement

How Does a Law Become a Rule?

- Congress passes an environmental law (like the Clean Air Act)

- The law directs the EPA to develop a regulation (or rule) specific to that law

- EPA proposes a regulation or rule and asks the public to comment on it before the rule is finalized

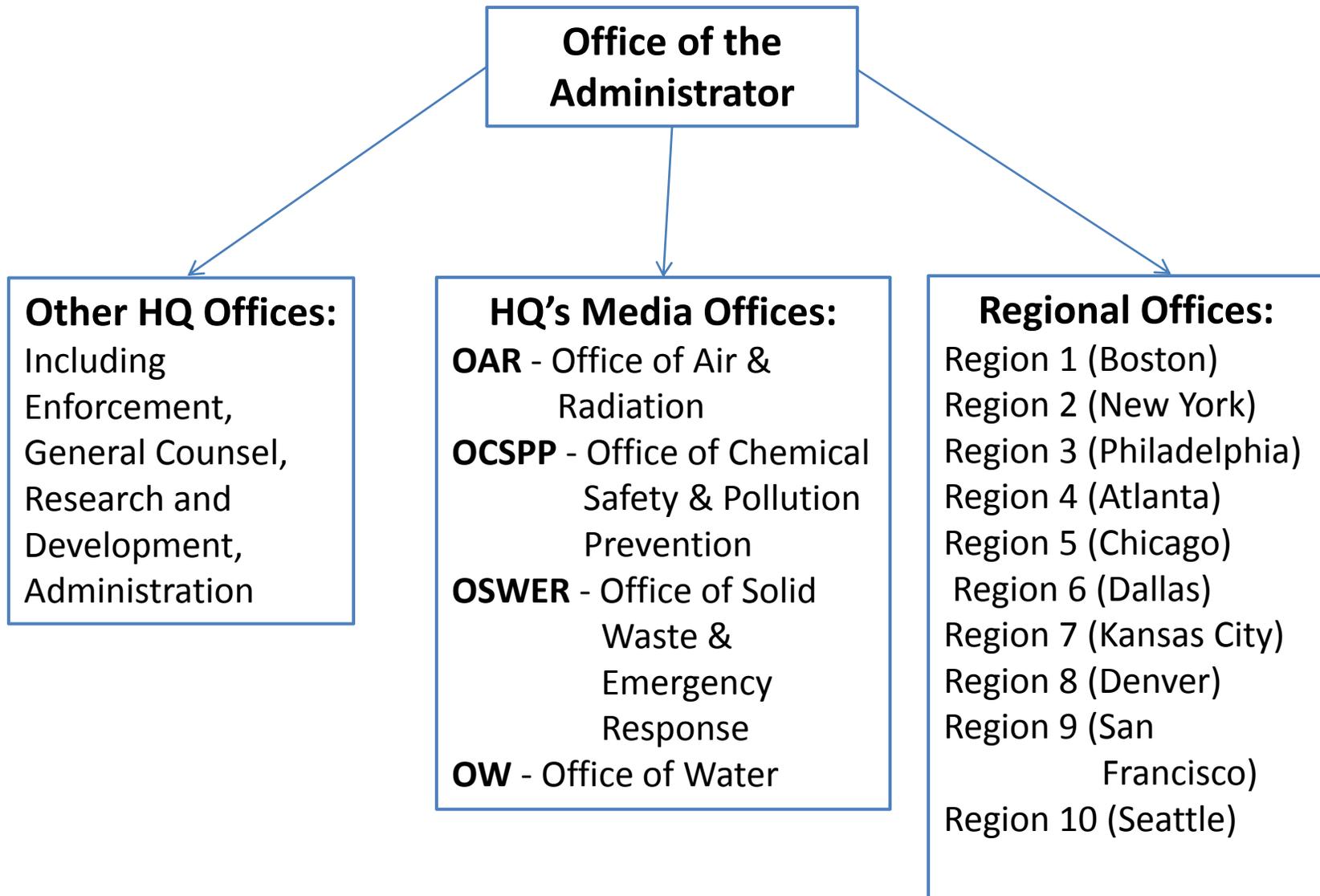- EPA finalizes the environmental rule

Community Engagement

- Why communities need to be engaged in the rulemaking process

- Need to have conversations and 2-way dialog about rules

- Barriers to community engagement

- Communities need a general knowledge base to be effective in this process; purpose of the training is to increase that knowledge base
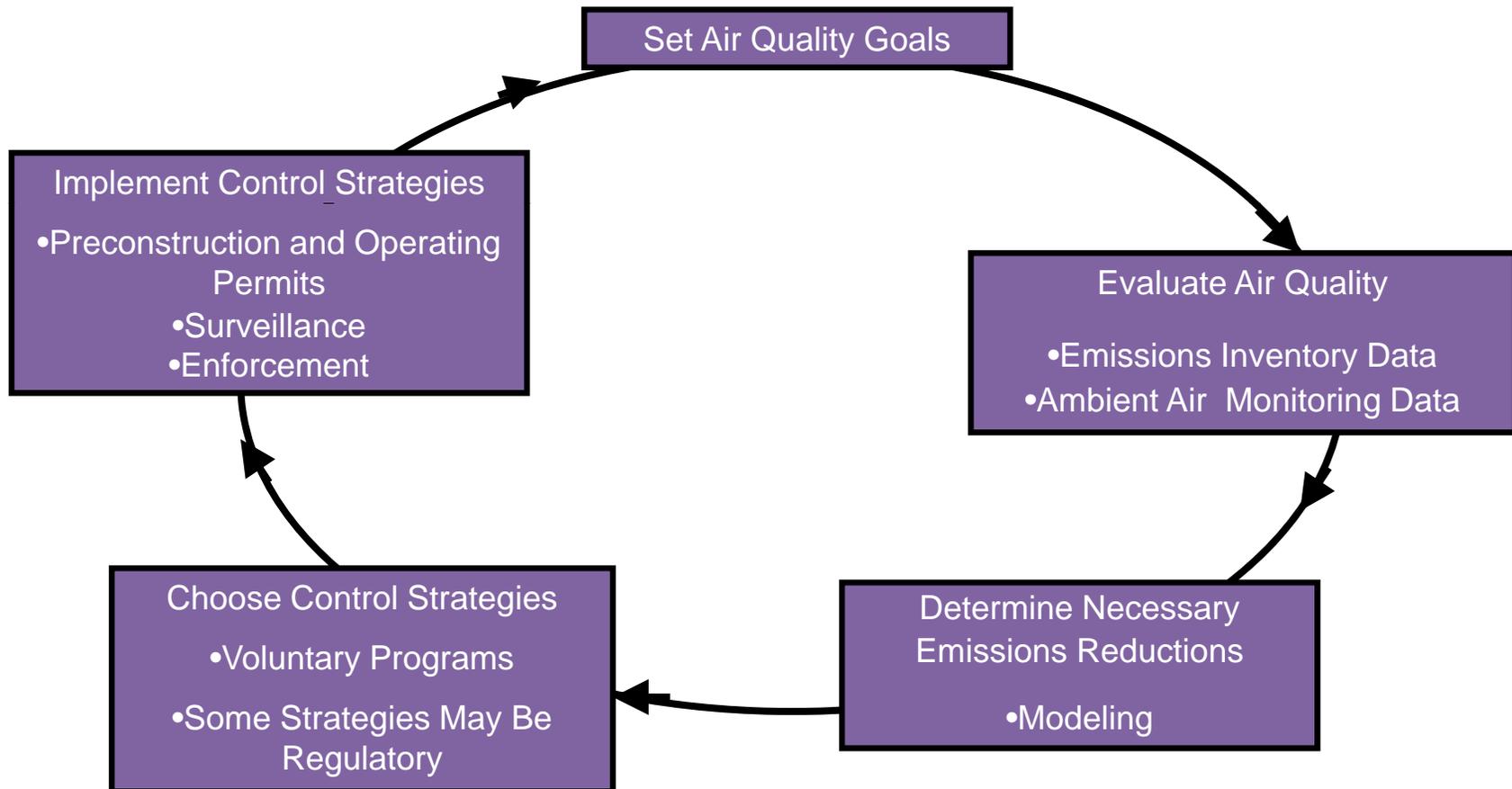
The Role of State, Tribal, and Local (S/T/L) Agencies and EPA

- EPA role:
  - Issues standards for air quality and regulations that require sources to control emissions
  - EPA sets minimum standards for S/T/L air agencies and permit programs
  - EPA provides oversight (and some funding) for S/T/L air agencies
- State, tribal and local air agencies run most of the air programs and issue most of the permits you are likely to be concerned about
- Tribal air agencies are just getting started so most are not currently regulating sources on their own
  - Currently 3 tribes have approved programs

How EPA is Organized

Office of the Administrator

Other HQ Offices:
Including Enforcement, General Counsel, Research and Development, Administration

HQ's Media Offices:
OAR - Office of Air & Radiation
OCSPP - Office of Chemical Safety & Pollution Prevention
OSWER - Office of Solid Waste & Emergency Response
OW - Office of Water

Regional Offices:
Region 1 (Boston)
Region 2 (New York)
Region 3 (Philadelphia)
Region 4 (Atlanta)
Region 5 (Chicago)
Region 6 (Dallas)
Region 7 (Kansas City)
Region 8 (Denver)
Region 9 (San Francisco)
Region 10 (Seattle)

How S/T/L Agencies Plan and Manage Air Pollution

Set Air Quality Goals

Evaluate Air Quality
- Emissions Inventory Data
- Ambient Air Monitoring Data

Determine Necessary Emissions Reductions
- Modeling

Choose Control Strategies
- Voluntary Programs
- Some Strategies May Be Regulatory

Implement Control Strategies
- Preconstruction and Operating Permits
- Surveillance
- Enforcement

Clean Air Act Dictates How Air Pollutants are Regulated

- EPA must set national standards for the outdoor (ambient) air
- EPA must regulate specific sources

Setting Standards for Outdoor (Ambient) Air

– EPA sets standards for concentrations of 6 "criteria" pollutants that are commonly found in outdoor air across the country

- Particulate matter (PM)
- Ground level ozone (O3)
- Carbon monoxide (CO)
- Sulfur dioxide (SO2)
- Nitrogen oxides (NOx)
- Lead (Pb)

– Clean Air Act requires state and local air agencies to develop their own plans for how they will meet the national standards

– Tribes may develop their own plans or work with EPA to address air quality

Setting Standards for Outdoor (Ambient) Air

- EPA's limits for these pollutants are called National Ambient Air Quality Standards (NAAQS)
- There are two types of NAAQS:
  - Primary standards are set at a level to protect public health with an adequate margin of safety for sensitive groups
  - Secondary standards are set at a level to protect ecosystems, the environment and other values

Regulating Outdoor Air

- For the 6 criteria pollutants, EPA designates all areas in the country as:
  - Clean or in "attainment"
  - Above the standard or contributing to unhealthy air quality in a nearby location or "nonattainment"
  - Not having enough information to determine the air quality status or "unclassifiable"
- CAA sets dates by which these air quality levels must be reached
- EPA provides guidance to states on how to address air quality and reviews and approves (where appropriate) state air plans
- EPA oversees implementation of plans and can enforce state requirements where necessary
- State plan for cleaning the air or keeping it clean to meet the national standards for these six criteria pollutants is called a State Implementation Plan (SIP)
- Tribal Implementation Plans are referred to as TIPs

What is a SIP or TIP?

- Implementation plans include information to understand and track air quality, such as:
  - Emissions inventories (what sources are in the area and what their emissions are)
  - Air quality monitoring
  - Modeling to show how the plan will achieve or maintain good air quality
- Implementation plans include control strategies for all the sources of pollution in an area, which can include:
  - Voluntary programs such as diesel retrofit programs
  - Regulatory programs, such as limits on emissions from power plants
- States and tribes have great leeway in developing SIPs and TIPs
- Development of these components generally takes 3-4 years
- SIPs are constantly updated, but backsliding is not allowed
- Most air pollution control regulations in the US are found in SIPs (State Implementation Plans)

SIPs Must Meet Minimum EPA Requirements

- The Clean Air Act has many requirements for SIPs, including a requirement that non-attainment areas come into attainment as soon as possible
- SIPs must have:
  - Enforceable emission limits and control measures
  - An air monitoring program
  - Permit programs to control construction and modification of new stationary sources (which must provide opportunities to request public hearings, comment on draft permits, and appeal final actions)
  - Measures to prevent one state from significantly contributing to nonattainment in another state
- SIPs are submitted to EPA for approval
  - EPA must give notice before approving or taking other action on a SIP (typically found in the Federal Register) and must give the public an opportunity to request a public hearing and at least a 30-day comment period

Implementing Control Strategies

- Pre-construction and operating permits help with compliance and enforcement of the SIP or TIP
  - Permits contain requirements and become enforcement tools
  - Before a permit is issued, the public can request a public hearing and make comments on the draft permit
- Progress can be tracked through
  - Ambient air monitoring
  - Reporting requirements contained in permits and regulations
- Enforcement is essential; states have primary responsibility for enforcement

Find Links to Your SIP Online

http://www.epa.gov/air/urbanair/sipstatus/regionalpgs.html

The State Implementation Plan Process

SIP Process and Roles	Opportunities for Input
State / local agencies start to develop SIP	Meet w/state SIP development team, join SIP stakeholder group, get on mailing list
State drafts SIP and submits to EPA for informal review	Work w/regional office to provide input and community or tribal perspective
State modifies SIP based on EPA comments	
State holds public hearing and comment period	Attend and speak at public hearing, submit written comments
State revises SIP to respond to public comment	
State adopts & officially submits SIP to EPA regional office	Public can seek judicial review of state action
EPA performs completeness review (EPA has 6 months)	Work w/regional office to review and provide input
EPA publishes proposed notice in Federal Register	
EPA holds public comment period	Attend and speak at public hearing, submit written comments
EPA publishes final action responding to public comment	Public can seek judicial review of final EPA action
SIP is now federally enforceable	Work w/EPA and state to ensure controls are in place and working

Regulation of Sources and Source Categories

- EPA issues regulations to control criteria pollutants
  - e.g., criteria pollutants are also regulated through New Source Performance Standards issued by EPA, which apply to certain <u>new</u> air pollution sources
- EPA issues regulations to control toxic air pollutants, which may cause cancer or serious health problems
- To see emissions standards for source categories:
  - www.epa.gov/ttn/atw/eparules.html (toxics rules and some NSPS)
  - www.epa.gov/ttn/oarpg/t1pfpr.html (regulations covering criteria pollutants)

Regulation of Toxic Pollutants

- The Clean Air Act listed 188 (now 183) toxic air pollutants
- There are literally thousands of sources of toxic air pollutants (also called hazardous air pollutants or HAPs)
- Sources range from gigantic oil refineries to the dry cleaner on the corner
- Clean Air Act requires EPA to set standards for specific source types
- Federal standards are NOT designed to address specific air quality goals or a community's specific problems

Regulation of Toxic Pollutants from Stationary Sources

- Federal rules for source categories are based initially on the emissions of the best performing sources within the source category

- Followed in 8 years with new "residual risk" requirements if more risk reduction is needed

- EPA may delegate authority to implement federal air toxics rules to state, tribal, and local agencies but can run the program if necessary

- Two major ways to regulate stationary sources of toxics:

  - "Major" source categories are subject to Maximum Achievable Control Technology (MACT) Standards

  - Regulations for "area" (small) sources are based on Generally Available Control Technology (GACT) Standard

Difference Between Area and Major Sources

- Major sources have the potential to emit at least 10 tons per year of a single toxic pollutant or more than 25 tons per year of a mixture of toxic pollutants

- Sources of air toxics that have the potential to emit less than these amounts are called area sources

Setting the MACT Standard

- EPA sets MACT (Maximum Achievable Control Technology) standards for source categories

- MACT standards do not set a "healthy" level for ambient air

- MACT standards are based on the best-performing sources

- MACT standards are typically expressed as an emission limit

Setting the MACT Standard

- MACT emissions levels set a minimum baseline (often called the "MACT floor") for the standard
- MACT emissions limits do not dictate how compliance must be achieved but leave it up to industry to determine the most effective way to comply with the standard
- MACT may be different for new and existing sources within the same source category
- Costs may <u>not</u> be considered in setting the MACT floor
- EPA can establish a more stringent standard when this makes environmental, public health, and economic sense

Community-Based Risk Assessment/Reduction Projects

- National standards are often not enough to address local issues
- Part of EPA's air toxics reduction strategy is to support community-based activities
- EPA maintains a National Air Toxics Assessment (NATA) which characterizes local risks from exposure to toxics
- EPA has a competitive grant process for assisting communities in developing their own strategies to reduce local risk
  - Community Action for Renewed Environments (CARE)
  - Community Air Toxics Monitoring Grants

Opportunities for Public Involvement in Air Toxics Programs

- Public can comment and request a public hearing when EPA proposes a new regulation

- For some new proposals, EPA will focus resources on outreach <u>before</u> the proposal

- As states and tribes develop or change their air toxics programs, there are typically opportunities for comment and public involvement and the right to seek judicial review of final actions

EPA Rulemaking Activity	Opportunities for Public Involvement
Phase 1. EPA begins to develop a rule	Check EPA's Rulemaking Gateway for rules of interest. Contact and work with rule development group to provide input and community and tribal perspectives. Ask for technical assistance if you need it in order to participate in a meaningful way. Ask for web address that will post updates on the rulemaking.
Phase 2. EPA develops draft rule and publishes it in the Federal Register. Public comment period is set.	Ask for a community meeting and/or a public hearing. Review draft rule on line, along with supporting documents. Participate in meeting and/or public hearing and submit written comments. Check EJAir web and links there to see if EPA will offer webinars on the proposal.
Phase 3. Final rule is published in the Federal Register.	Public has the right to seek judicial review of the final rule. Work with EPA and state to understand and participate in monitoring how well the rule is working.

Rulemaking Gateway

A portal to priority rules under development

| Home | Sort by Phases | Sort by Topics | Sort by Effects | All Gateway Rules | Newly Added Rules | Search |

The Rulemaking Gateway provides information to the public on the status of EPA's priority rulemakings. Use the tabs at the top of this page to sort the rules according to specific criteria, or view a list of all of the priority rulemakings currently in the Gateway. Go to About the Rulemaking Gateway to learn more.