Today's webinar:
National Ambient Air Quality Standards (NAAQS)

Future webinars:
NAAQS Designations – February 13, 2017
NAAQS Implementation – March 20, 2017
Congress designed the Clean Air Act to protect public health and welfare from different types of air pollution caused by diverse sources.
Dense, visible smog in many of the nation's cities and industrial centers helped prompt passage of the 1970 legislation.

Subsequent revisions in 1977 and 1990 were designed to improve the Act’s effectiveness and to target newly recognized air pollution problems.
EPA has set air quality standards for six common "criteria pollutants."

- particulate matter
- ozone
- sulfur dioxide
- nitrogen dioxide
- carbon monoxide
- lead

These have numerous and diverse sources and can reasonably be anticipated to endanger public health and welfare.
EPA is required to establish NAAQS for certain common and widespread pollutants based on the latest science.

Primary Standards: Health-based
- Considers populations that may be at increased risk

Secondary Standards: Welfare-based
- Includes effects on soils, water, crops, vegetation, man-made materials, animals, wildlife, weather, visibility and climate

- CAA does not permit consideration of cost of implementation in setting the NAAQS
- CAA requires the EPA to receive input from an independent scientific review committee (Clean Air Scientific Advisory Committee) and the public
Science is the foundation of the NAAQS

Integrated Science Assessment (ISA) provides a comprehensive evaluation of the body of scientific evidence for health and welfare effects related to ambient air pollution.

- Integrates evidence across disciplines
  - Atmospheric chemistry
  - Studies evaluating health effects
  - Studies evaluating welfare effects

The scientific evidence is the basis for informing judgments about the impacts of air pollution on public health and welfare and informing policy decisions on adequacy of the current standards.
Health effects of air pollution

The Clean Air Act requires the EPA to set primary standards that, in the “judgment of the Administrator” are “requisite” to protect public health with an “adequate margin of safety”

Includes consideration of populations that may have increased risks for health effects. For example: children, older adults, people with pre-existing disease, etc.

Examples of health effects that may be related to exposure to criteria air pollutants:
- Respiratory effects: respiratory symptoms, changes in lung function
- Cardiovascular effects: atherosclerosis, heart attacks
- Reproductive/developmental effects: low birth weight, preterm labor
- Cancer
- Mortality: all-cause and cause specific
Welfare effects of air pollution

The Clean Air Act requires the EPA to set secondary standards to “protect the public welfare from any known or anticipated adverse effects.” Welfare effects include . . . “effects on soils, water, crops, vegetation, man-made materials, animals, wildlife, weather, visibility and climate . . .”

Examples of effects that can impact public welfare include:
- Decreased visibility
- Direct vegetative effects
- Deposition-related ecological effects
- Deposition-related materials damage
Overview of NAAQS Process

Planning Stage

Kick-off Workshop → Integrated Review Plan (IRP): timeline and key policy-relevant issues and scientific questions → Integrated Science Assessment (ISA): evaluation and synthesis of most policy-relevant studies → Risk/Exposure Assessment (REA): quantitative assessment, as warranted, focused on key results, observations, and uncertainties → Policy Assessment (PA): staff analysis of policy options based on scientific evidence and risk and exposure analyses → Clean Air Scientific Advisory Committee (CASAC) review → Public comment

Assessment Stage

Agency decision making and draft proposal notice → Interagency review → EPA proposed decisions on standards

Rulemaking Stage

EPA final decisions on standards → Interagency review → Agency decision making and draft final notice → Public hearings and comments on proposal
Air Quality Management Partnership

EPA reviews/revises NAAQS and monitoring requirements

EPA designates nonattainment areas

Scientific Research

Air agency assesses expected improvement from federal measures, and develops additional control strategies to attain standards

Ongoing evaluation by EPA and air agency: air quality monitoring, tracking emissions, and implementation of control programs

Air agency submits plan to EPA and implements control strategies through regulatory and non-regulatory approaches
Tribal Consultation and Participation in the Public Input Process

- EPA will engage with tribes through outreach at various stages of the NAAQS process to keep tribes apprised of opportunities to participate (i.e., monthly NTAA/EPA Air Policy calls).

- EPA offers consultation when the proposed rule is published in the Federal Register. Regional offices send consultation letters to tribal leaders inviting them to consult.

- When providing input during the public comment period for a proposed NAAQS rulemaking, tribes are encouraged to submit comments as well as any relevant data and information that could be helpful to the NAAQS review.
What’s ahead...

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<thead>
<tr>
<th>Pollutant</th>
<th>Stage</th>
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<tbody>
<tr>
<td>Particulate matter</td>
<td>Final IRP released December 2016</td>
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<tr>
<td></td>
<td>Draft ISA in preparation</td>
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<tr>
<td>SO₂ Primary</td>
<td>2\textsuperscript{nd} draft ISA released December 2016</td>
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<td></td>
<td>REA Planning Document anticipated February 2017</td>
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<td>Public meeting for CASAC review of both documents March 2017</td>
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<tr>
<td>NO₂ Primary</td>
<td>Final PA anticipated Spring 2017</td>
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<td>Proposed rulemaking anticipated Fall 2017</td>
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<tr>
<td>NOₓ/SOₓ Secondary</td>
<td>Final IRP anticipated end of January 2017</td>
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<td>Draft ISA anticipated February 2017</td>
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<td>Public meeting for CASAC review of draft ISA May 2017</td>
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<tr>
<td>Ozone</td>
<td>Final rule signed October 2015</td>
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<td>Lead</td>
<td>Final rule signed September 2016</td>
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<td>Carbon Monoxide</td>
<td>Final rule signed August 2011</td>
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