

How Do Health Studies Inform the NAAQS?

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HEI Review Committee

Clean Air Act Section 109

§ 109(b)

- (1) National primary ambient air quality standards ... shall be ambient air quality standards the attainment and maintenance of which in the judgment of the administrator, based on such criteria and allowing an adequate margin of safety, are requisite to protect the public health...
- (2) Any national secondary ambient air quality standard ... shall specify a level of air quality the attainment and maintenance of which in the judgment of the administrator, ... is requisite to protect the public welfare from any known or anticipated adverse effects associated with the presence of such air pollutant in the ambient air.

Key Cases on NAAQS

- **Lead Industries Association v. EPA, 647 F.2d 1130 (DC Cir 1980)**
 - Industry challenge to 1978 NAAQS for lead, arguing standards must be based on “clearly harmful” effects
 - Court sides with EPA; Clean Air Act is meant to be precautionary so subclinical effect can provide basis for standards
- **Whitman v. American Trucking Association, 531 U.S. 457 (2001)**
 - Industry challenge to 0.08 ppm (8-hr) ozone standard and 15 ug/m³ PM_{2.5} standard on grounds EPA failed to adequately consider costs
 - Court sides with EPA; CAA doesn't allow Agency to consider costs in setting NAAQS

Timeline of Ozone Standards

	Indicator	Averaging Time	Level	Form
1971	Total Photochemical Oxidants	1 hr	.08 ppm	≤ 1 exceedance per year
1979	O ₃	1 hr	.12 ppm	≤ 1 exceedance day per year
1993 (no revision)	O ₃	1 hr	.12 ppm	≤ 1 exceedance day per year
1997	O ₃	8 hr	.08 ppm	3-year average of 4 th high daily max
2008	O ₃	8 hr	.075 ppm	3-year average of 4 th high daily max
2015	O ₃	8 hr	.070 ppm	3-year average of 4 th high daily max

NAAQS Information

NAAQS index page

<https://www.epa.gov/naaqs>

Example criteria/ISA documents

<https://www.epa.gov/naaqs/ozone-o3-air-quality-standards>

Example implementation regulations

<https://www.epa.gov/ozone-pollution/implementation-2015-national-ambient-air-quality-standards-naaqs-ozone-state>

NAAQS Review Process

- Integrated Review Plan (NCEA/OAQPS)
 - Schedule, process, policy-relevant science questions
- Integrated Science Assessment (NCEA)
 - Comprehensive review, synthesis, and evaluation of relevant science
- Risk/Exposure Assessment (OAQPS)
 - Characterization of exposure and risk for current conditions versus conditions just meeting revised standards
- Policy Assessment (OAR)

- Independent Clean Air Scientific Advisory Committee reviews drafts of all documents, advised Administrator on adequacy of current standards

US EPA acronyms:

NCEA = National Center for Environmental Assessment

OAQPS = Office of Air Quality Planning and Standards

OAR = Office of Air and Radiation