CASTNET Ozone Monitoring Program

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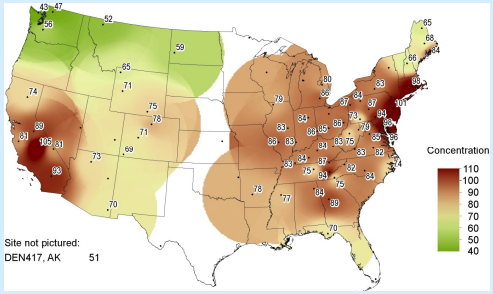
Rocky Mountain NP, CO (ROM406/206)

Great Smoky Mountains NP, TN (GRS420)

The Clean Air Status and Trends Network (CASTNET) is a long-term monitoring network supported by the Environmental Protection Agency (EPA), National Park Service (NPS), and Bureau of Land Management (BLM) Wyoming State Office. Although developed to assess regional trends in sulfur and nitrogen pollutant concentrations and deposition, nearly all CASTNET sites also measure ambient ozone concentrations to assess compliance with the NAAQS and evaluate trends in air quality as a result of NO_x emission reduction programs.

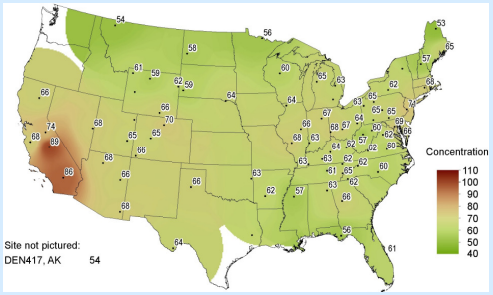
CASTNET is the principal network for monitoring rural, ground-level ozone concentrations in the United States and providing critical information on geographic patterns in rural ozone levels. Data from eighty one sites are used to calculate design values as these data meet the requirements under Title 40 Code of Federal Regulations (CFR) Part 58.

3-yr Averages of 4th Highest DM8A Ozone Concentrations for 2000-2002 (ppb)



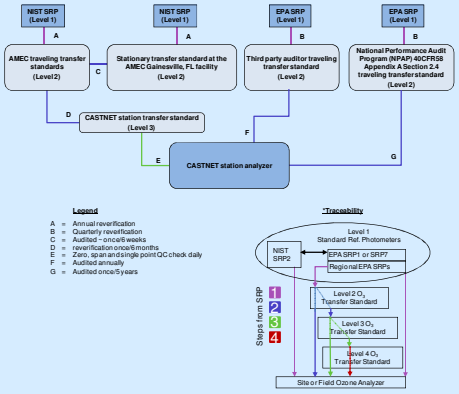
The 3-year averages of the fourth highest DM8A O_3 concentrations for 2013-2015 provide examples of the design values for CASTNET sites used to determine compliance with the O_3 National Ambient Air Quality Standard (NAAQS). Three-year averages of the fourth highest DM8A concentrations for 2000-2002 shown on the left provide a comparison to the 2013-2015 values. O_3 concentrations were not included on the maps if data did not meet completeness criteria.

3-yr Averages of 4th Highest DM8A Ozone Concentrations for 2013-2015 (ppb)



Huntington Wildlife Forest, NY (HWF187)

Ozone Standard Verification and Traceability Hierarchy Used at CASTNET Sites



CASTNET consists of seven different Principal Quality Assurance Organizations working under the same Quality Assurance Project Plan. This collaboration ensures nationwide geographic coverage and consistent field and data management operations.

Numerous Principal Quality Assurance Organizations

PQAO[1]	PQAO Name	Number of Sites
1344	Environmental Protection Agency – Clean Air Markets Division	53[2]
745	National Park Service – Air Resources Division	22
1366	Bureau of Land Management – Wyoming State Office	2
905	Cherokee Nation	1
973	South Dakota – Department of Environment and Natural Resources	1
782	North Dakota – Department of Health	1
635	Maine Department of Environmental Protection – Bureau of Air Quality	1
	Total	81

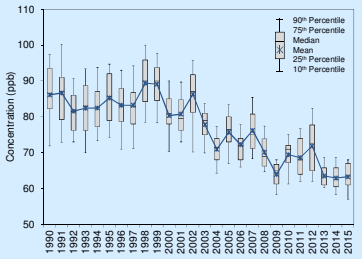
[1] Principal Quality Assurance Organization (PQAO) as identified within the AQS AMP480 report.
[2] EPA-CAMD's site count of 53 includes two NAAQS Excluded ozone monitors: the EPA-sponsored QA monitor at Rocky Mountain National Park, CO (ROM206) and the collocated QA monitor at Mackville, KY (MCK231).

Sites with Design Values for 2013-2015 >=70 ppb

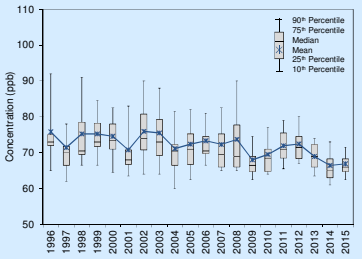
Site ID	State	Sponsor	3yr Average
SEK430	CA	NPS	89
JOT403	CA	NPS	86
YOS404	CA	NPS	74
WSP144	NJ	EPA	71
ROM406	CO	NPS	70

The CASTNET eastern reference sites show an overall reduction in O_3 concentrations since 2002. The western reference sites show a decrease in 2009 followed by increases through 2012. Concentrations decreased again in the west in 2013 and 2014. There are 34 eastern reference sites and 16 western reference sites selected for their long-term data record and consistent performance.

Trend in 4th Highest DM8A: Eastern Reference Sites



Trend in 4th Highest DM8A: Western Reference Sites



Cedar Creek State Park, WV (CDR119)