



CASTNET Ozone Monitoring Program



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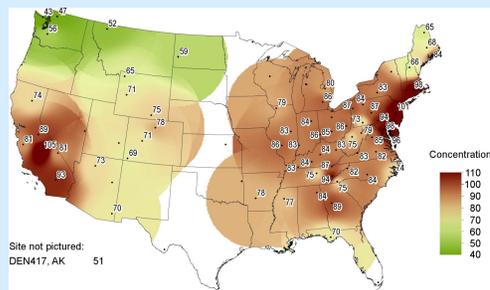
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The Clean Air Status and Trends Network (CASTNET) is a long-term monitoring network supported by the Environmental Protection Agency (EPA), National Park Service (NPS), and Bureau of Land Management (BLM) Wyoming State Office. Although developed to 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.

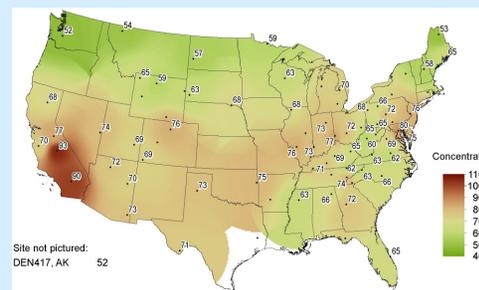
In early 2011, EPA completed the upgrade of CASTNET ozone (O₃) measurements and enhanced the quality assurance procedures at EPA-sponsored sites to make them compliant with Title 40 of the CFR Part 58 requirements and the EPA guidance outlined in the QA Handbook. Ozone data from EPA-sponsored sites commenced routine submittal to the EPA Air Quality System (AQS).

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

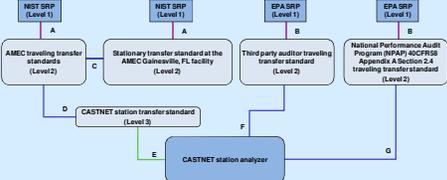


The 3-year averages of the fourth highest DM8A O₃ concentrations for 2011-2013 provide examples of the design values for CASTNET sites used to determine compliance with the O₃ National Ambient Air Quality Standard (NAAQS). Three-year averages of the fourth highest DM8A concentrations for 2000-2002 shown on the left provide a comparison to the 2011-2013 values. O₃ concentrations were not included on the maps if data did not meet completeness criteria.

3-yr Averages of 4th Highest DM8A Ozone Concentrations for 2011-2013 (ppb)



Ozone Standard Verification and Traceability Hierarchy Used at CASTNET Sites



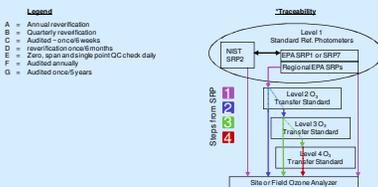
Annual CASTNET performance evaluations (PE) and results from the National Performance Audit Program (NPAP) are also submitted to AQS routinely. NPS-sponsored CASTNET sites have been considered regulatory compliant for ozone since their inclusion in the network. Two of the BLM CASTNET sites are also operated per regulatory requirements resulting in 80 CASTNET ozone sites as of August 2014, 78 of which are considered regulatory.

Sites with Design Values for 2011-2013 >75 ppb

site id	state	sponsor	3yr average
SEK430	CA	NPS	93
JOT403	CA	NPS	90
BEL116	MD	EPA	80
YOS404	CA	NPS	77
OXF122	OH	EPA	77
ROM406	CO	NPS	76
ALH157	IL	EPA	76
WSP144	NJ	EPA	76



The eastern reference sites show an overall reduction in O₃ concentrations since 2002. The western reference sites show an increase through 2012 from the 2009 project minimum with a decrease in 2013.

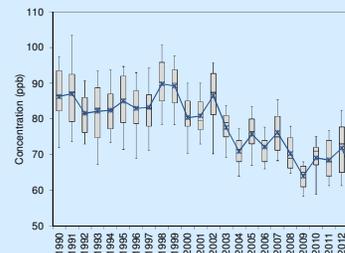


2012 Audit Summary

Sites* or Equipment Audited	Audit/Certification Performed	Results
All sites	Certification of site transfer standard	All sites passed
All Level 2 standards utilized during the year	Certification to Level 1 standard for Level 2 standards	All standards passed
All sites	Annual performance evaluation	All sites passed
BEL116, MD BWR139, MD HOW132, ME HWF187, NY KEF112, PA LAV410, CA SEK430, CA BFT142, NC CHD125, NC AMEC field instrumentation laboratory, FL	National Performance Audit Program	All sites passed
	Technical systems facilities audit	Minor findings related to documentation.
BEL116, MD BWR139, MD GTH161, CO ROM206, CO ROM406, CO	State of Maryland technical systems and performance audit State of Colorado technical systems and performance audit	All sites passed



Trend in 4th Highest DM8A: Eastern Reference Sites



Trend in 4th Highest DM8A: Western Reference Sites

