



# The Evolution of the Clean Air Status and Trends Network (CASTNET): 1986 to Present

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CASTNET traces its origin to the National Dry Deposition Network (NDDN), which was formed in 1986 to measure concentrations of air pollutants and meteorological parameters with the end goal of estimating dry deposition throughout the United States. The 1990 Clean Air Act Amendments (CAAA) mandated a national air quality monitoring network to measure changes in air quality associated with the scheduled emission reductions. In response to this mandate, the NDDN was transformed into CASTNET in mid-1991. During the past two decades, CASTNET has consistently measured concentrations of sulfur and nitrogen pollutants and ozone but has gone through many changes while satisfying the requirements of the CAAA. At one point a 50-station network with numerous subprojects, such as small visibility and air toxics networks as well as the Mountain Acid Deposition Program (MADPro), CASTNET currently consists of 92 monitoring stations at 90 locations and has evolved from a strictly research network into a regulatory network for ozone while continuing weekly filter pack measurements. Other recent changes to the network include the participation of the Bureau of Land Management (BLM) as a new sponsor for five sites in Wyoming, five new "small footprint" sites for filter pack measurements, and the addition of trace-level gas monitoring at six EPA-sponsored sites, one of which (BVL130, IL) is an official EPA National Core Monitoring site (NCore) for trace-level SO<sub>2</sub>, NO/NO<sub>y</sub>, and CO.

## NCore

The NCore site at BVL130, IL measures trace levels of SO<sub>2</sub>, NO/NO<sub>y</sub>, and CO. Trace-level instrumentation (Teledyne API) was added to the existing CASTNET site in late 2012.

## Regulatory Ozone Sites

4<sup>th</sup> Highest DMBA Ozone Concentrations for 2013



During 2010 and 2011, EPA-sponsored CASTNET O<sub>3</sub> monitoring systems were upgraded to comply with regulatory monitoring requirements (Title 40 CFR Part 58). Level 3 site transfer standards were installed at 51 sites during this time period. NPS-sponsored CASTNET sites have complied with regulatory monitoring requirements from site inception. The ozone measurements at two of the BLM-sponsored sites are considered regulatory. The network today consists of 78 regulatory CASTNET O<sub>3</sub> sites. Their data will be used to gauge compliance beginning with the 3-year period from 2011-2013.

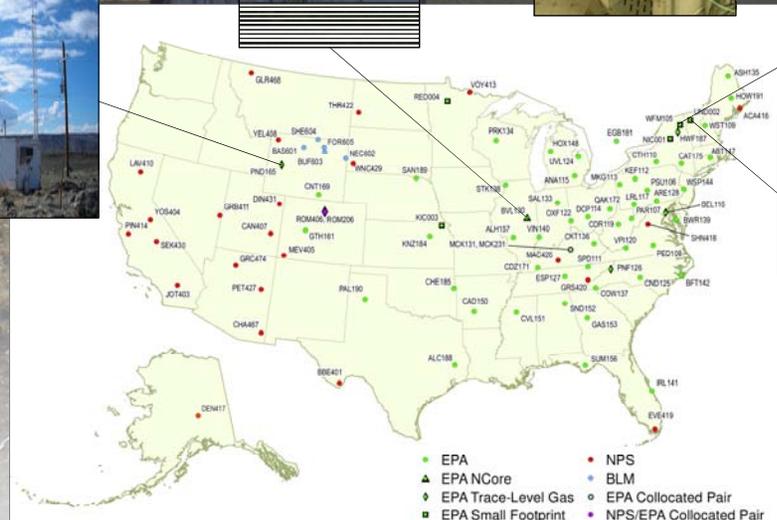


HWF187



## Trace-Level Sites

Trace-level gas monitoring for NO/NO<sub>y</sub> is currently being conducted at BEL116, MD, HWF187, NY, PND165, WY, PNF126, NC, and ROM206, CO. The BEL116 site also measures trace-level SO<sub>2</sub>.



## Small Footprint Sites

The "small footprint" filter pack only sites do not have traditional CASTNET shelters but use tower-mounted equipment boxes in lieu of a shelter.