

Update on EPA activities on Develop Ground Validation Sites Across the United States Air Quality Network

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Recommendation 1: Consistently perform intensive campaigns dedicated to the validation of the capability of the Geo-AQ missions to observe the diurnal cycle of the target species. Such campaigns are conducted at several supersites within each Geo-AQ mission domain where a comprehensive suite of correlative reference measurements is made and a comprehensive set of auxiliary data from a variety of sources is exploited

PAMS Requirement #1:

- State-of-the-art regulatory grade, QA-QC hourly NO_x, NO_y, “true” NO₂, CO, ozone speciated VOC, formaldehyde (hourly or 8 hour), 1-in-3 day PM2.5 speciation
- Hourly boundary layer or mixed layer height measurement. Where available ceilometer return signal archived
- Meteorology measurements

PAMS Requirement 2:

- “required states with ozone non-attainment areas [and all states in the ozone transport region] to develop and implement Enhanced Monitoring Plans (EMPs)”
- The inclusion of the EMP element is intended to provide monitoring agencies flexibility to implement monitoring that is needed to address data gaps in their particular area”
- NJ, NY, CT and WI all included **PGN Pandora** in their EMP to help bridge surface/column info for AQ managers.



65292 Federal Register / Vol. 80, No. 206 / Monday, October 26, 2015 / Rules and Regulations

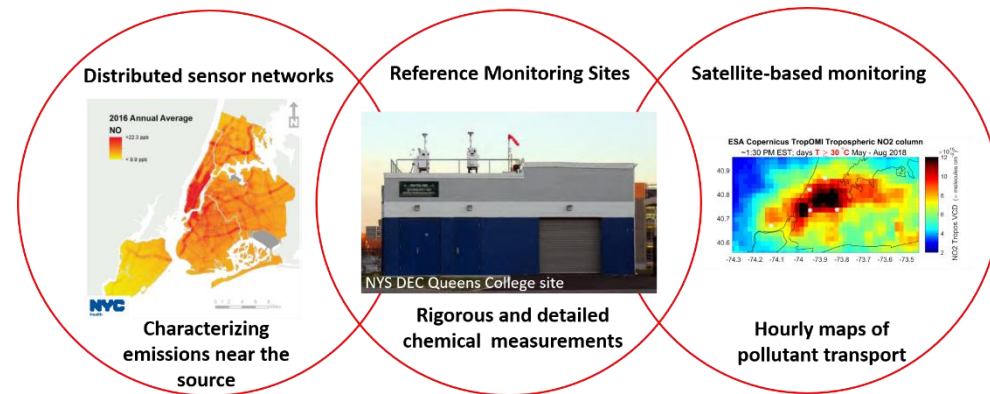
ENVIRONMENTAL PROTECTION AGENCY
 40 CFR Parts 50, 51, 52, 53, and 58
 [EPA-HQ-OAR-2008-0699; FRL-9933-18-OAR]
 RIN 2060-AP38
National Ambient Air Quality Standards for Ozone
 AGENCY: Environmental Protection Agency (EPA).
 ACTION: Final rule.

SUMMARY: Based on its review of the air quality criteria for ozone (O₃) and related photochemical oxidants and national ambient air quality standards (NAAQS) for O₃, the Environmental

DATES: The final rule is effective on December 28, 2015.
ADDRESSES: EPA has established a docket for this action (Docket ID No. EPA-HQ-OAR-2008-0699) and a separate docket, established for the Integrated Science Assessment (ISA) (Docket No. EPA-HQ-ORD-2011-0050), which has been incorporated by reference into the rulemaking docket. All documents in the docket are listed on the www.regulations.gov Web site. Although listed in the docket index, some information is not publicly available, e.g., confidential business information or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, is not placed on the Internet and may be viewed, with

Reports (HREA and WREA, respectively; U.S. EPA, 2014a, 2014b), available at http://www.epa.gov/ttn/naaqs/standards/ozone/s_o3_2008_rea.html; and the Policy Assessment for the Review of the Ozone National Ambient Air Quality Standards (PA; U.S. EPA, 2014c), available at http://www.epa.gov/ttn/naaqs/standards/ozone/s_o3_2008_pa.html. These and other related documents are also available for inspection and copying in the EPA docket identified above.

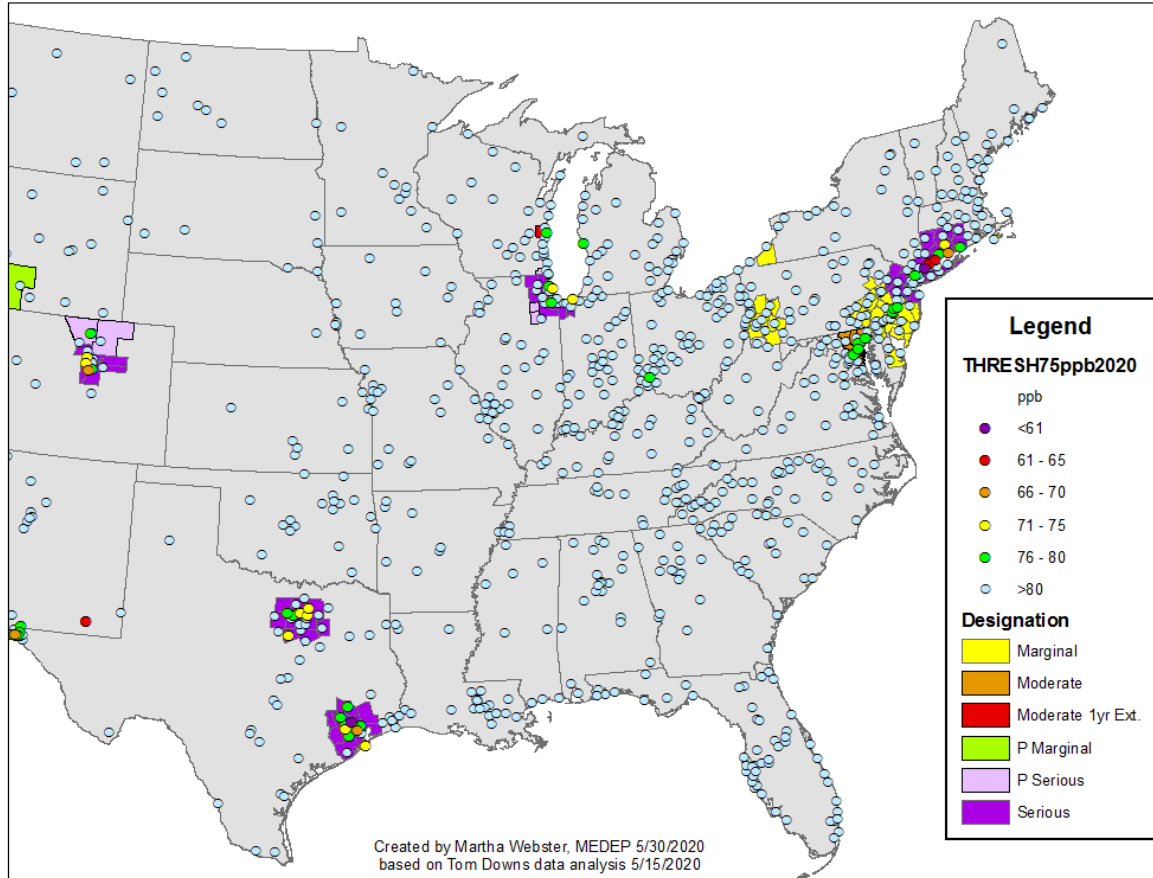
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 Executive Summary
 I. Background
 A. Legislative Requirements



EMPs: An opportunity to bridge scales

Phase I and II PGN Deployments Initial Focus on “Ozone Transport Region” in NE U.S. due to O₃ non-attainment issues

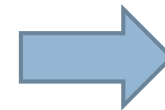
2020 Ozone Threshold 75 NAAQS with 2008 Ozone Nonattainment Areas



TROPOMI L2 Validation in the U.S. Mid-Atlantic Region; S5P Validation Project 28695

EPA PGN sites contributing to S5P evaluation and validation

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<https://doi.org/10.5194/amt-2020-119>
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Atmospheric
 Measurement
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Ground-based validation of the Copernicus Sentinel-5p TROPOMI NO₂ measurements with the NDACC ZSL-DOAS, MAX-DOAS and Pandonia global networks

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Atmospheric
 Measurement
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Evaluating Sentinel-5P TROPOMI tropospheric NO₂ column densities with airborne and Pandora spectrometers near New York City and Long Island Sound

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THANK YOU!

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EPA-PGN contribution would not be possible without much assistance from:

- Luftblick and ESA
- NASA Pandora Project
- NYDEC, NJDEP, CTDEEP, WDNR state air quality agencies

Queens College, NY PGN site - September 2019

