

CASTNET 2019 Annual Network Plan

Response to Comments

Clean Air Markets Division
Office of Atmospheric Programs
US Environmental Protection Agency

July 1, 2019

Table of Contents

1. US EPA Region 4.....	3
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1. Comment received in regard to the CASTNET sites located within EPA Region 4.

Commenter: Daniel Garver, EPA Region 4.

Date received: June 4, 2019

Comment 1. *Thanks for the opportunity to review the CASTNET network plan and provide comments. Here are the Region 4 comments on the Draft 2019 CASTNET plan:*

- *Most sites list the distance to trees as “> 50 meters” and wind obstruction as “360 degrees” but approximate measurements taken from satellite imagery indicate that most measurements are less than 50 meters and 360 degrees. Site photos in many cases also appear to contradict this information in the plan. Several sites in Region 4 may not meet siting criteria requirements (minimum of 10 meters from tree drip lines, and minimum of 270 degrees unobstructed airflow). Please see the attached powerpoint file for approximate distance measurements taken using satellite imagery. We recommend ensuring that these measurements in the plan are accurate.*
- *Several sites on the CASTNET website do not have site photos or site histories posted. For all of the sites in Region 4, the site photos on the website are either not available or are from 2010 or 2011. Links to each site webpage are included in the attached powerpoint file.*
- *How is the monitoring objective for each site determined? For example, how is it determined that a rural site should be classified as maximum concentration rather than population exposure or background? Recommend ensuring consistency between how these objectives are determined across different sites.*
- *In Section 11, Network Modification, the plan states that “EPA will add a non-regulatory ozone monitor above the forest canopy at Duke Forest, NC (DUK008).” Please include more information about this modification. We recommend including all of the information listed in 40 CFR 58.10(b) for this proposed site.*

I also sent the plan to all of the R4 state, local, and tribal monitoring agency contacts, and have not received any comments from them. Please let me know if you’d like to discuss any of our comments.

Response 1. In addition to the annual performance evaluations, independent field system audits are performed every other year to assess siting criteria, operator sample handling, and equipment performance. The distance from the sampler inlet to tree(s) noted in the draft Annual Network Plan was provided within the independent field systems audit reports. The tree and wind obstruction arc measurements have been reviewed and updated since the draft Network Plan was submitted for public comment based on the latest field systems audit results.

Regarding the use of satellite imagery to determine siting criteria violation, Google Earth does not provide tree height measurements and, by itself, is unsuitable for determining siting criteria violations. CASTNET relies on the independent site auditor to provide in-field measurements.

In regards to the comment that the Coweeta Screwdriver Knob low-footprint site (COW005, North Carolina) does not meet siting criteria based on the site photo, this was a filterpack-only CASTNET site installed for a special study. The site was not added to the Annual Network Plan because there were no criteria pollutants measured and it did not meet the requirements of 40 CFR Part §58.10(a). This site was decommissioned when the special study ended in 2016. Similarly, Duke Forest, North Carolina (DUK008)

is a research site established to measure gradient fluxes through a forest canopy. Due to this site not meeting Appendix E of Part 58 siting criteria requirements because it has an inlet height of 44 meters, this site's ozone analyzer will not be listed as a regulatory ozone analyzer within the Network Plan.

The CASTNET website includes site images for active sites. The outdated site images will be updated in the future and any active sites without site photos will be added. A review of the CASTNET website found that many of the sites that do not have images included are inactive.

The monitoring objective for each CASTNET ozone analyzer is determined based on available monitoring data within the respective county. At many locations, the CASTNET site is the only ozone analyzer within the county therefore a monitoring objective of "Highest concentration" is appropriate.