PAMS Program Update

Kevin Cavender
EPA/OAPQS/AAMG

MARAMA Monitoring Meeting
December 10, 2014

1

Outline

- Regulatory Changes Being Considered
- Target List Revisions
- AutoGC Evaluation Update
- New Data Validation/Analysis Tool
- Training Opportunities

2

Regulatory Revisions Being Considered

- Reduce number of required sites to 1 per area but expand PAMS applicability to all O3 non-attainment areas
  - Require PAMS at NCore sites in O3 non-attainment areas but allow for Regional approval of alternative site (e.g., existing type 2 PAMS sites)
  - Require sites to collect hourly VOC data
  - Require sites to collect carbonyls (formaldehyde, etc.)
  - Require sites to measure “true NO2” in addition to current NOy
  - Change requirement for upper air meteorology to requirement for measuring mixing height
- Require all O3 NA areas to also develop and implement an “enhanced ozone monitoring plan”
  - Could include additional O3 sites, PAMS sites, radar profilers, mobile sites, etc.

3

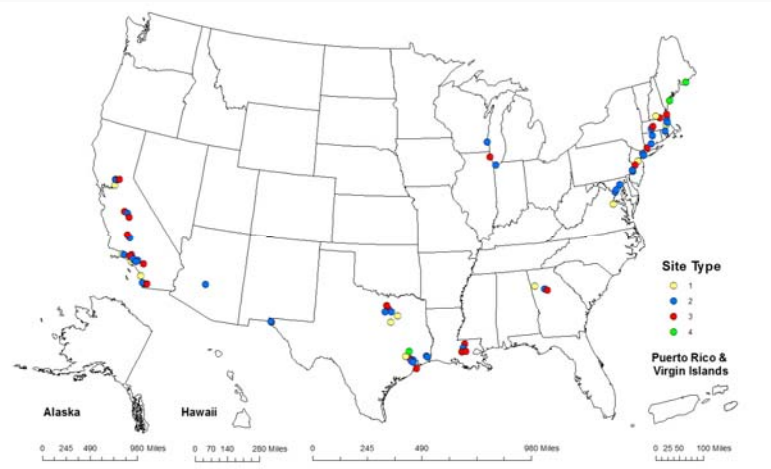
Estimated Impact of Level of Ozone NAAQS on Size of Required Network

Potential NAAQS Level (ppb)	Number of Sites (existing)
75	27 (14)
70	48 (16)
65	65 (17)

Estimates based on 2011-2013 ozone design values
PAMS requirements will be based on 2014-2016 data

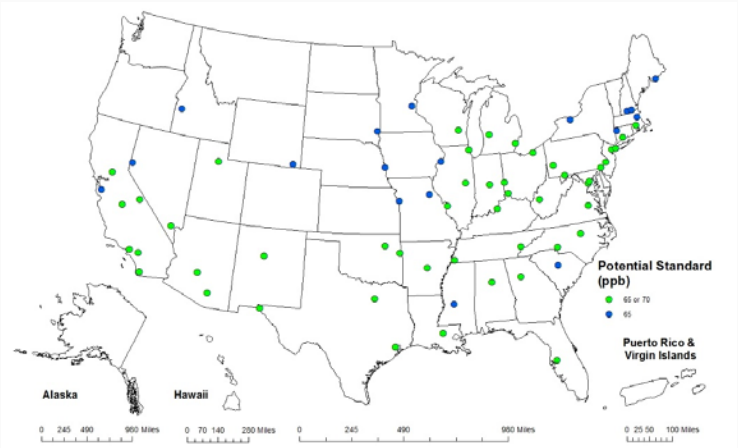
4

Current PAMS Network



5

Potential Revised Network



Map based on 2011-2013 ozone design values
PAMS requirements will be based on 2014-2016 data

6

Potential Revised Network w/ Population Limit of 1M

Map based on 2011-2013 ozone design values
PAMS requirements will be based on 2014-2016 data

7

Timing and other Logistical Considerations

- Proposed PAMS regulatory changes are being included as part of the ozone NAAQS proposal which is expected to be signed December 1
- Final regulatory changes would be part of the final NAAQS package expected to be signed in October 2015
- We are planning a staggered deployment to allow time for monitoring agencies to buy equipment (autoGCs, true NO2 analyzers, and ceilometers) and to train staff and develop SOPs and QAPPs
- October 2017 earliest anyone would likely need to comply – likely staggering deadlines through 2019 based on designations schedule

8

Revisions to Target List

- The specific VOC compounds to be measured at PAMS sites ("the Target list") was revised in November 2013
  - http://www.epa.gov/ttn/amtic/files/ambient/pams/targetlist.pdf
- Target list split into two groups – 28 priority and 29 optional compounds
- Six new compounds are being considered for addition to the priority compound list
  - α/β Pinene
  - 1,3 Butadiene
  - Benzaldehyde
  - Carbon Tetrachloride
  - Ethanol
  - Tetrachloroethylene

9

AutoGC Evaluation Update

- EPA is conducting an evaluation of current autoGC technology
- Laboratory phase conducted during April
  - 8 autoGC systems were included
  - Systems were challenged with various concentrations of PAMS target compounds at differing temperatures and relative humidities
- Field phase will start this winter and run through next fall
  - 6 autoGC systems will be included
  - A mobile lab will be equipped and 1-month evaluations will be conducted at up to 4 locations - Research Triangle Park, Baton Rouge, Los Angeles, and New York
  - We plan to conduct training on the systems for the host state and nearby states at each location

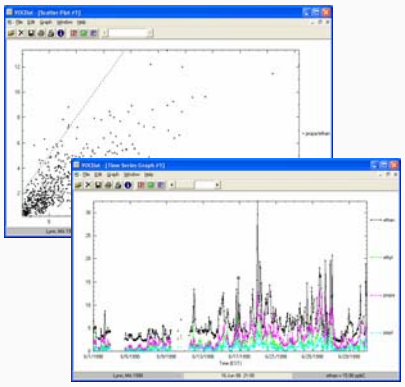
10

Thank You to Our Participants!

11

New Data Validation/Analysis Tool

- EPA and Sonoma are updating the old VOCDat data analysis program
- New program is a web based app that will work with more than just VOC data (criteria pollutants, speciation data, toxics)
- Beta Version is now accessible through AirNowTech
- App is designed primarily with monitoring agencies in mind, but will also be useful to data users.
- Current Functions include -
  - Prepare data for submittal to AQS
  - Simple data analysis and validation tools
  - Pull data from AQS
- Future functions being considered –
  - Report directly to AQS
  - Data updates to AQS
  - Additional data validation and analysis tools
  - Multi-site capability



12

VOCWhat?

- We decided we needed a new name since the new web app will work with more than VOC data
- We have settled on the name “Data Analysis and Reporting Tool”
  - DART

13

Training Opportunities

- We plan to hold autoGC training at each of the four field study locations (RTP, LA, NY, and CA)
- We will be holding online training on DART
- Keep an eye out for announcements on our listserv

14