PAMS Monitoring Update

MARAMA Monitoring Committee Workshop - December 2016

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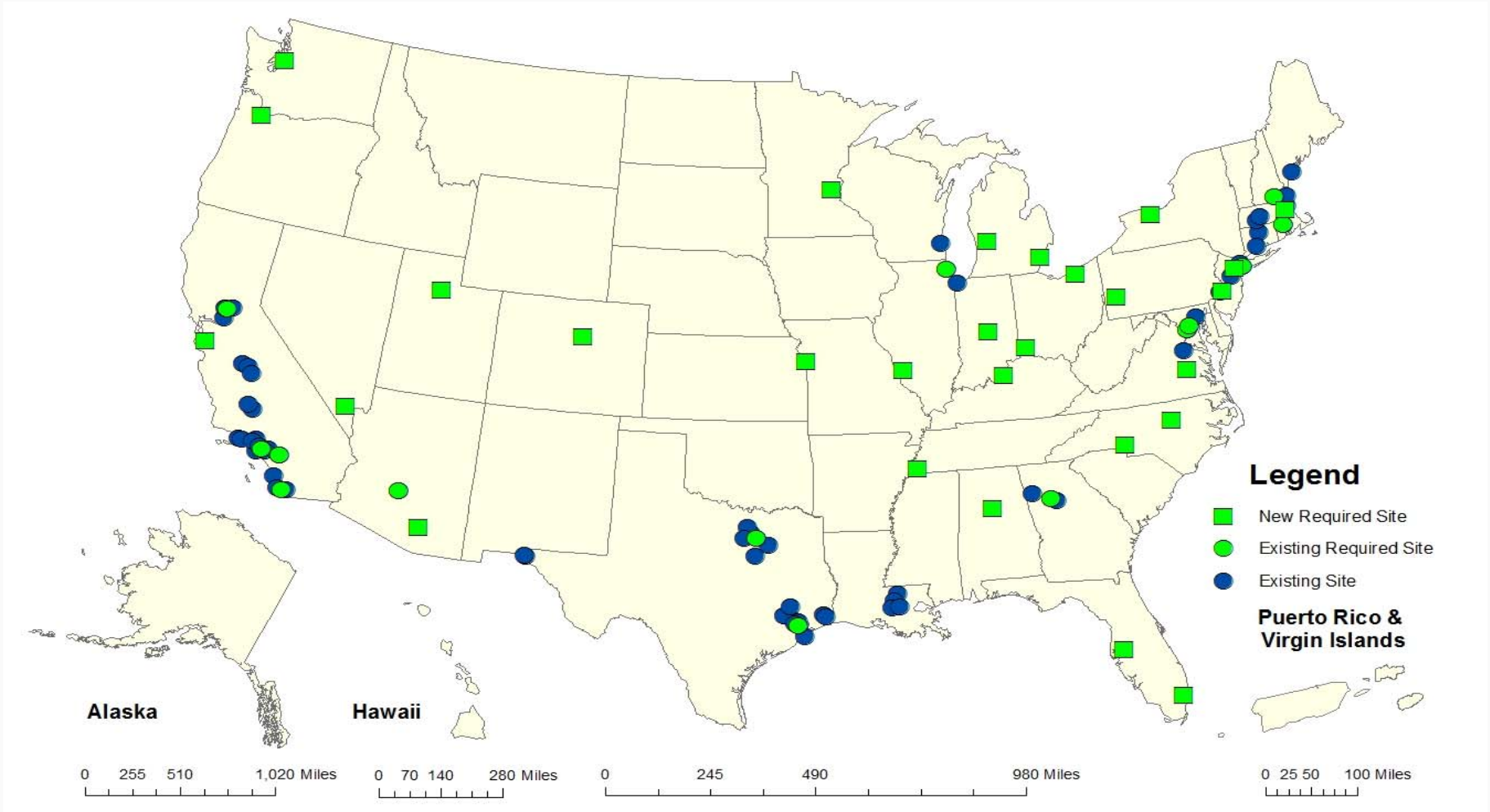
Discussion Topics

- Quick overview of new requirements
- PAMS Funding Reallocation
- Equipment Evaluations
- Equipment Purchases
- QA and other Implementation Activities
- EMP Guidance
- DART Update

Updates to PAMS Network Design

- Major changes to the PAMS requirements were finalized in October 2015 as part of the ozone NAAQS review
- We replaced the existing 20 year-old multi-site, enhanced ozone network design with an updated 2-part network design
- Requiring PAMS measurements to be collocated with existing NCore sites in areas with population of 1 million or more irrespective of Ozone NAAQS attainment status
- Results in a stable network of approximately 40 required sites with improved spatial distribution and reduced redundancy
- Includes a waiver for historically low ozone areas
- Includes an option to make PAMS measurements at an alternative location (e.g., an existing PAMS site) which may cross CBSA or even state boundaries
- Require states with moderate or above ozone non-attainment areas and states in the Ozone Transport Region to develop and implement an Enhanced Monitoring Plan (EMP)
- Provides support for flexible approaches for collecting data to understand ozone issues in new and existing high ozone areas

New and Existing PAMS Sites



PAMS Timeline and Milestones

- PAMS plan due July 1, 2018 as part of Annual Network Plan
  - Consider moving this up to July 1, 2017 if waivers are needed!
- PAMS monitoring at NCore sites will need to start by June 1, 2019
  - Looking for some states to be early implementors and start getting equipment installed in 2017 and 2018
- EMPs submitted within two years of designations or by October 1, 2019, whichever is later

PAMS Funding Reallocation

- The EPA has been working on implementing a PAMS Funding reallocation reflecting the revised requirements
  - The plan reflects a “minimal impact” approach designed to ensure adequate funding for each required PAMS sites with the remaining existing PAMS funding staying in their respective Regional allocation to fund EMPs and other activities
  - For years 2017-2020, money will also be held off the top to fund equipment purchases (discussed later)
- PAMS reallocation likely to be incorporated into the expected overall 105 funding reallocation
  - Expected to start in 2017 and be carried out over several years

Equipment Evaluations

- The EPA completed the autoGC evaluation and has identified 3 vendors which we will be setting up National Contracts to facilitate purchase of their autoGC systems
  - PerkinElmer,
  - Markes/Agilent, and
  - CAS
- The EPA has initiated an evaluation of additional ceilometers that may be be suitable for use at PAMS sites
  - An evaluation of the Vaisala CL-31 and CL-51
  - Two additional vendors have come forward claiming their systems can also make the desired mixing height measurements with their ceilometer.
    - Campbell Scientific, and
    - Lufft
  - The results of the evaluation are expected around January 2017
  - Depending on the outcome of this evaluation the EPA will setup a sole source contract with Vaisala, or will put the contract out for competitive bid if multiple vendors are identified as being suitable for use at PAMS sites.

Equipment Purchases

- The EPA is holding back a portion of the PAMS funds to ensure funding of the equipment needs for –
  - AutoGCs
  - True NO2 instruments, and
  - Ceilometers
- The EPA is developing national contracts to facilitate purchases of these systems using the held back funds
- States willing and able to purchase the equipment on their own will be sent targeted funding to purchase these three items
  - Alternatively EPA will make the purchases for the states via the National Contracts, and supply the equipment to the states
- The deployment of this equipment is expected to occur over the next three fiscal years (2017, 18, and 19).
  - Many states have already expressed interest in being an early implementer in 2017 (up to 13 states/local agencies at this point)
  - Others still wishing to early implement one or more of these systems should contact either Kevin Cavender (cavender.kevin@epa.gov) or Laurie Trinca (trinca.laurie@epa.gov)

QA Implementation Activities

- A "QA Implementation Team" has been formed consisting of EPA and State representatives
  - A member for each agency with a required PAMS site is included
  - The team is responsible for developing the basics of a new QA program for the required site portion of the PAMS program
    - QA for the EMP portion of the PAMS program is not being addressed due to the state driven and varied nature of that portion of the PAMS program
- A final QA Implementation Plan has been developed by the team which will act as a road map for the continued development of the QA program.
  - A copy of the plan can be obtained here – https://www3.epa.gov/ttnamti1/files/ambient/pams/PAMS%20Quality%20Assurance%20Implementation%20Plan_092716_V4.0.pdf
- The team will also assist in the development of various implementation documents including –
  - A generic QAPP
  - Generic SOPs for the autoGCs, ceilometers, and true NO2
  - Updated Technical Assistance Document

EMP Guidance

- Several states have expressed a need for advance guidance on implementation of the EMP Requirements to help states understand the implications for current and future activities.
- EPA understands the need for advance guidance and expects to provide formal guidance in mid-2017
  - Expected elements of the guidance include –
    - Flexibility in activities and measurements to meet state needs
    - Strong regional or “air shed” coordination of activities where appropriate
    - Level of effort to reflect degree of O3 problem, capabilities, and available funding

DART Development

- EPA is continuing to develop and support the online Data Analysis and Reporting Tool (DART)
  - The majority of this years development has been on incorporating a formal validation and approval tool for the CSN program
  - Some additional development has continued for the ad hoc review and validation of air quality data including PAMS data
- Feedback is always welcomed on problems encountered or additional features and needs