



Overview of New PAMS Requirements

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Agenda

- Network Design
- Speciated VOCs
- Carbonyls
- Nitrogen Oxides
- Meteorology



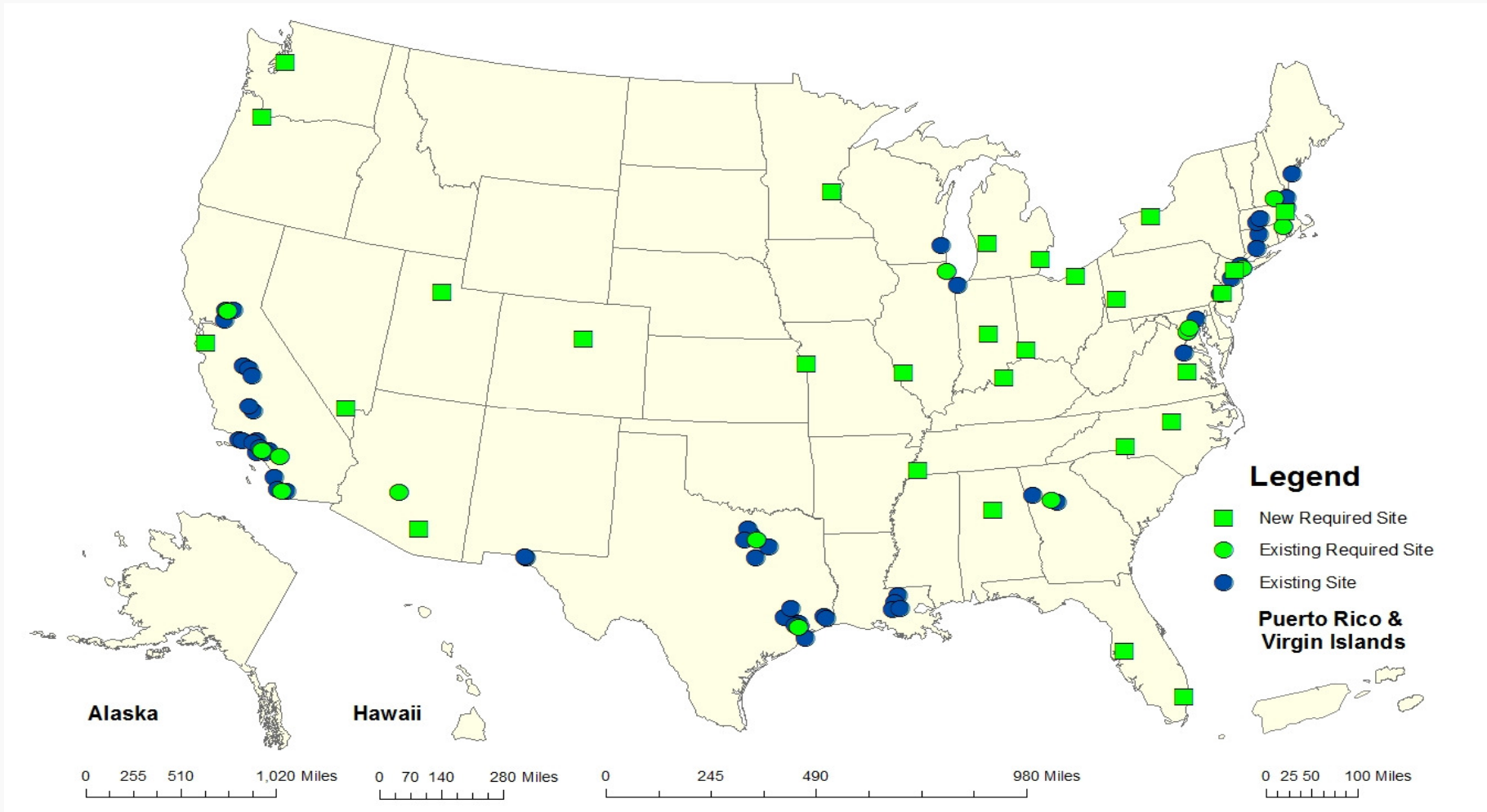
Updates to PAMS Network Design

- 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

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New and Existing PAMS Sites





Changes to Required PAMS Measurements

- Requires hourly VOC measurements
 - Included a waiver to allow 3 8-hr canister samples in locations with low VOC concentrations and for “logistical and programmatic constraints”
- Requires 3 8-hr carbonyls samples on a 1 in 3 day schedule
 - Included an alternative to allow for continuous formaldehyde measurements
- Requires “true NO₂” in addition to existing NO_y
- Requires hourly mixing height measurement (replaces “upper air measurements”)
 - Added a waiver option to allow measurements to be made at an alternative location (e.g., NOAA ASOS sites)
- Additional required PAMS meteorology measurements that are not part of the NCore requirements include atmospheric pressure, precipitation, solar radiation, and UV radiation

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Summary of Flexibility in Requirements

- A number of waiver options are available to help provide flexibility
 - Waiver for low ozone concentrations (<85% of NAAQS)
 - Waiver to move location to alternative site
 - Waiver to use longer averaged VOC sampling (i.e., canisters) instead of autoGCs in some circumstances
 - Waiver to use off-site meteorology where appropriate
- EMPs are intended to provide support for flexible approaches for collecting data to understand ozone issues in new and existing high ozone areas
 - Just because a state isn't required to have an EMP doesn't mean they can't or shouldn't!



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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





EPA Commitments

- PAMS Funding reallocation
 - Start in 2017, and spread over multiple years
- National Procurements for autoGCs, true NO₂, and ceilometers
- Guidance documents
 - Technical Assistance Document
 - Generic QAPP
 - SOPs for autoGCs, true NO₂, and ceilometer
 - EMP Guidance
- National QA Program
- Training, Training, and more Training!
 - Data Validation/Reporting
 - AutoGC operation
 - Mixing height/Ceilometer

