

# PAMS Re-engineering Update

MARAMA Monitoring Meeting  
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## Outline

- Changes to PAMS Target List
- AutoGC Evaluation Update
- Upper Air Considerations
- Data Analysis Funds
- Network Design Changes



## Changes to PAMS Target List

- EPA finalized revisions to target list in October (editorial revisions made in November)
  - Divided old list into two categories
    - 34 Priority compounds
    - 29 Optional compounds
    - Carbonyls identified as very important compound
      - EPA working to address carbonyl measurement issues
    - Added 7 new potential compounds to priority list
- Implementation/Timing
  - Monitoring agencies can start reporting only priority compounds as soon as next PAMS season
  - Monitoring agencies may wish to wait till EPA completes evaluation of new compounds to begin reporting new compounds



## AutoGC Evaluation Update

- EPA is conducting an evaluation of autoGC's to determine if these systems are suitable for use in the PAMS program
  - RTI leading effort
- Currently planning two phase evaluation
  - Laboratory based “open” evaluation in RTP (January 2014)
    - 7 vendors have agreed to participate
      - » Lab-style: Perkin Elmer, Agilent, Thermo (GCMS)
        - » Agilent being evaluated with two different auto-samplers
        - » Markes and CDS Analytical
      - » Rack mounted: Synspec, Chromatech, Ecotech/Baseline, SRI Instruments
  - Field based evaluation at up to 4 locations (NE, SE, SW, California) (Summer/Fall 2014)



## Upper Air Considerations

- Currently planning to revise the upper air measurement requirement to only require mixing height
  - Plan to continue support of radar profilers via “flexible” PAMS
- EPA is conducting an evaluation of ceilometers as a method to obtain real-time mixing height data at PAMS sites
  - Setting up a ceilometer next to ORD radar profiler/RASS to do side by side comparisons
  - Potentially partnering with Sonoma as they are also performing an evaluation on west coast.



## Data Analysis Funds

- Updating VOCDat program for data validation and analysis
  - Working with Sonoma Tech
  - Considering an online version that would leverage Air Now Tech systems
  - Planning for system that will work with any air quality data (criteria pollutants, speciation data, etc.), not just PAMS data
- Updating PAMS Data Analysis workbook
- Planning to conduct training on new workbook and VOCDat
  - Conference
  - Webinars



## Network Design Changes

- Consensus on new network design approach has been reached
  - 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)
  - All sites required to collect hourly VOC data (likely via autoGC's)
  - All sites required to collect carbonyls
  - Add a “true NO2” requirement
  - Extend PAMS season to coincide with ozone season
  - Change requirement for upper air meteorology to requirement for measuring/reporting 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.
    - Should consider upwind/down wind “geographically”
- Regulation changes are needed to implement new network design requirements
  - Currently planning to propose changes with next O3 NAAQS review



# Questions?