

## **SUMMARY OF STAPPA/ALAPCO SURVEY ON: DATA TRANSFER AND MANAGEMENT FOR AMBIENT AIR MONITORING PROGRAMS**

The following bullets provide general summary statements regarding responses received in response to the survey.

### General

- Twenty-four agencies responded to the survey.
  - 22 were state agencies
  - 2 were local agencies
- From those responding, there are a total of 1017 monitoring sites, which include 2601 continuous monitors
- 58% expect no changes in the number of monitoring sites in the future
  - 25% expect more sites
  - 13% expect less sites

### State of Current System

- 75% of the systems use phone dial-up/modem for data transfer
  - 21% of the systems incorporate wireless cell/digital phones
- 83% of the systems utilize ESC data loggers
- 96% (all but 1) utilize windows-based host computer platforms
- 54% import data electronically into their data base management system
- 33% of the systems are less than 2 years old
  - 29% are between 3 and 6 years old
  - 21% are between 7 and 10 years old
  - 17% are more than 10 years old
- Total capital costs estimated at \$5.3 million

Discussion: Most systems are reliant upon phone line dial up with modem and use window-based platforms. One company, ESC, has apparently penetrated the air quality market quite well. The age of IT systems varies: 33% are less than 2 years old, but 17% are more than 10 years old.

### Likes and Dislikes of Current Systems

(Ranking from best liked [5] to least liked [1])

- Correct date/time stamp [4.55]
- Data logger reliability [4.42]
- Configured to report to AirNow [4.32]
- Configured to report to AQS [4.23]
- Internal access to data [4.21]
- Automatic calibrations [4.14]

- Remote calibrations [4.13]
- Automated validation [3.27]
- External access to data [3.19]
- Remotely investigate instrument status [2.72]

Discussion: There are three functions which are not well liked in current systems: automated data validation, external access to data, and remote instrument status. These are areas that probably could benefit from system upgrades.

### Desirable Features to Have

- Digital capture of data
  - 25% already have this capability
  - 63% said this would be helpful or necessary to have
- Instrument status information
  - 33% already have this capability
  - 63% said this would be helpful or necessary to have
- Auto zero and span
  - 67% already have this capability
  - 21% said this would be helpful or necessary to have
- Remote zero and calibration
  - 67% already have this capability
  - 21% said this would be helpful or necessary to have
- Access to data collected at the site
  - 71% already have this capability
  - 25% said this would be helpful or necessary to have
- Electronic strip charts
  - 50% already have this capability
  - 29% said this would be helpful or necessary to have
  - 21% said this is not needed
- Automatic data validation
  - 38% already have this capability
  - 38% said this would be helpful or necessary to have
  - 13% said this is not needed
- Allow web queries from others
  - 33% already have this capability
  - 38% said this would be helpful or necessary to have
  - 25% said this is not needed
- Electronic log book
  - 29% already have this capability
  - 67% said this would be helpful or necessary to have

Discussion: Most systems can handle auto zero/span and remote calibrations. And surprisingly, half the systems have electronic strip charts, though almost half of those that didn't have them didn't see a need

for them. Twenty-five percent of the agencies do not see a need for having web-based queries. And although few agencies have instrument status and electronic log book functions, most of those that don't have these features would like to.

#### Barriers to Upgrading Current Systems

Ranking from "too difficult to overcome" [1] to "not a problem" [5]

- Cost [2.71]
- Current system is too new [3.24]
- Difficulty in transitioning to a new system [3.30]
- Oversight by another agency [3.59]
- Training [3.68]
- Not enough improvement [3.71]
- Compatibility [3.71]

Discussion: Cost is the main barrier. System age and difficulty in transitioning to a new system are also somewhat important barriers.

#### Benefits Derived from National or Multi-State Funding/Procurement Partnerships

Ranking from "definite benefits" [5] to "no benefit at all" [1]

- Automatic validation software [3.25]
- Telemetry system satellite time [3.13]
- Station hardware [3.04]
- Support for funding initiative [2.91]
- Central software [2.71]
- Remote servers [2.67]

Discussion: Most responses here are in the "middle of the road," with neither strong positive nor negative indications for multi-state or national procurement partnerships. Of those choices for partnered funding/procurement, automatic data validation software came out on top.

#### Standardization Factors for National or Multi-State Processes

Ranking from "definitely needed" [5] to "not needed at all" [1]

- Same format for data stream [4.08]
- Connectivity of monitors [3.00]
- Use of XML from host agency to external users [3.00]
- Use of XML from each station to central unit [2.83]

Discussion: Only a standardized format for data streams was strongly favored. Other standardized features were not deemed to be that necessary.

### AQS Related Topics

- Need for dedicated AQS Survey
  - 45% Yes
  - 55% No
  
- Who is the best person to answer such a survey
  - 67% Staff
  - 13% Staff and/or management
  - 13% Staff, management, or contractors
  - 4% Management only
  
- AQS as primary data base management system for agency
  - 50% Yes
  - 38% No
  - 12% Mixed
  
- Where is the main repository of data
  - 46% use AQS
  - 21% use locally-operated system
  - 17% use state-operated system
  - 17% use combination of AQS and state/local systems

Discussion: The need for a separate AQS survey was close to being evenly split, with a slight majority not favoring one. If one were to take place, agency staff, not management or contractors, would be preferred for answering such a survey. About half of the agencies surveyed use AQS as their main DBMS. The other half uses state, local, or a combination of systems.