

# Data Acquisition Upgrades Across the NESCAUM Region

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# Why go digital?

- Not just about data acquisition, but also data management
- Analog isn't even an option on some instruments
- Downloading internal instrument info and importing into database is resource intensive and not timely
- Decrease instrument down-time and large data gaps by improving response time
- Digital data acquired can then be housed in a database (SQL Server, Oracle) on central polling PC/server
- Report otherwise uncaptured data real-time (e.g. airnowtech)
- Networks/instruments are generating more and more data with less and less time/resources
- Increase automation (on-the-fly validation); decrease manual efforts
- **Automation, automation, automation. . .**

# Data Handling Challenges

- Instruments are “smarter” while data loggers have not kept pace
- New instruments mean new ways to communicate (i.e. new drivers/protocols); requires platform to be flexible enough and vendors (and us) to keep current
- Large sites (i.e. NCore) with many instruments require a central “logger” that can handle the various complex data streams
- Have to deal with/overcome your IT group
- Overcome limited resources (time & money)
- No off-the-shelf product currently available

# What are the NESCAUM states doing?

State	Historically Used:	Going digital?	Going digital with:	Notes
<b>Connecticut</b>	ESC	Yes	Envitech/DRDAS	Planned multiple site DRDAS installs and central polling to run in parallel with current ESC system.
<b>Maine</b>	ESC	Yes	Envitech/DRDAS ESC for OC/EC	Purchased 2 DRDAS site units; deployed 1.
<b>Massachusetts</b>	ESC	Interested, but not yet	-	
<b>New Hampshire</b>	ESC	Yes	Envitech/DRDAS Although not ruling out ESC loggers	Running DRDAS and ESC in parallel at one site.
<b>New Jersey</b>	ESC	Yes	Envitech/DRDAS	Complete network conversion to Envitech/DRDAS; all sites and central.
<b>New York</b>	ESC	Yes	Envitech/DRDAS	3 DRDAS site units and central polling. Running DRDAS and ESC central polling in parallel.
<b>Rhode Island</b>	ESC	Interested, but not yet	-	
<b>Vermont</b>	ESC	Yes	Converted ESC 8816	With Ecotech Trace-CO instrument

## DR-DAS/JJWilbur Co.

- JJWilbur Company is a rep organization and an independent system integrator. They are responsible for DR DAS/Envitech sales in New England and NY.
- They are using the EnvidasFW in some of their small systems projects and are learning the software. They have supported NH and have traveled to several NY sites to assist in implementation of the EnvidasFW software with equipment.
- They have an EnvidasFW they can use for training and have PCAnywhere so they can remote access to any EnvidasFW site in their area.
- They have a copy of the central system and will be installing this so they can provide training and support on these software's. Ideally will be setup to test communications with stations in their area so that they can check out a station when there are issues.
- DR-DAS has established spares and sales units at the Wilbur Co so that fast delivery and spares will be more readily available.

# Current/Near-term CT Plans

- Initial Site Installation - EnvidasFW
  - Thomaston site (Wood Smoke Study - EPA Air Toxics Grant)
  - Dell Precision RAID I Workstations
  - Will use DSL to push data
    - Trace-CO, SO<sub>2</sub>, NO<sub>y</sub>
    - FDMS, Aethalometer, Sunset OC/EC, Sulfate
    - PAHs, Met
- Next Sites to Install
  - Two probable NCore sites
    - Mohawk Mountain site in Cornwall, CT (aircard)
    - Criscuolo Park site in New Haven, CT (DSL)
- Central Polling - Envview2000
  - 3 servers:
    - SQL Server
    - Central Polling Software
    - IIS - web based access; FTP push to AIRNow, etc.

## Where we're at; where we need to go. . .

- Really just scratching the surface, still a long way to go. . .
- Data acquisition systems are catching up to current technologies, but they're not quite there
- States still required to throw a lot of resources (more time than money) to even start experimenting with new systems, let alone doing a complete system overhaul (see NJ)
- As more states pursue new systems, the vendors need to keep up relative to support (i.e. highly trained U.S.-based staff)
- States with limited resources will be inclined to sit back and continue on with current systems
- Need current SOPs and technical notes
- For this to be successful, it will require initiative by the States to pursue adequate data systems and push vendors; it's up to the vendors to respond.