

Improving AIRNow's Linkage to AQS

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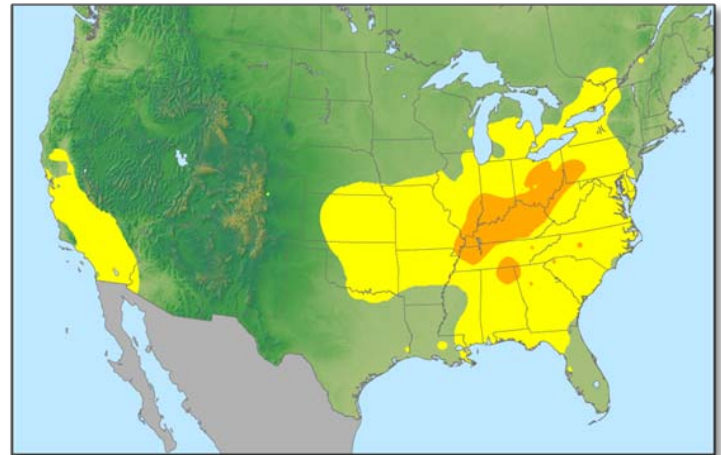
Outline

- Overview of AIRNow
- File formats
 - OBS format
 - AQCSV format
- Air quality data exchange node
- Schedule

Overview of AIRNow (1 of 3)

AIRNow provides a common framework for acquiring and distributing air quality information that

- Fosters community effort among federal, state, local, and tribal air quality agencies (130+)
- Collects, quality assures, and transfers real-time and forecasted air quality information to the public
- Communicates air quality via the Air Quality Index (AQI)
- Issues weather/air quality news stories
- Enables partnerships with national media
- Provides air quality education and outreach



Overview of AIRNow (2 of 3)

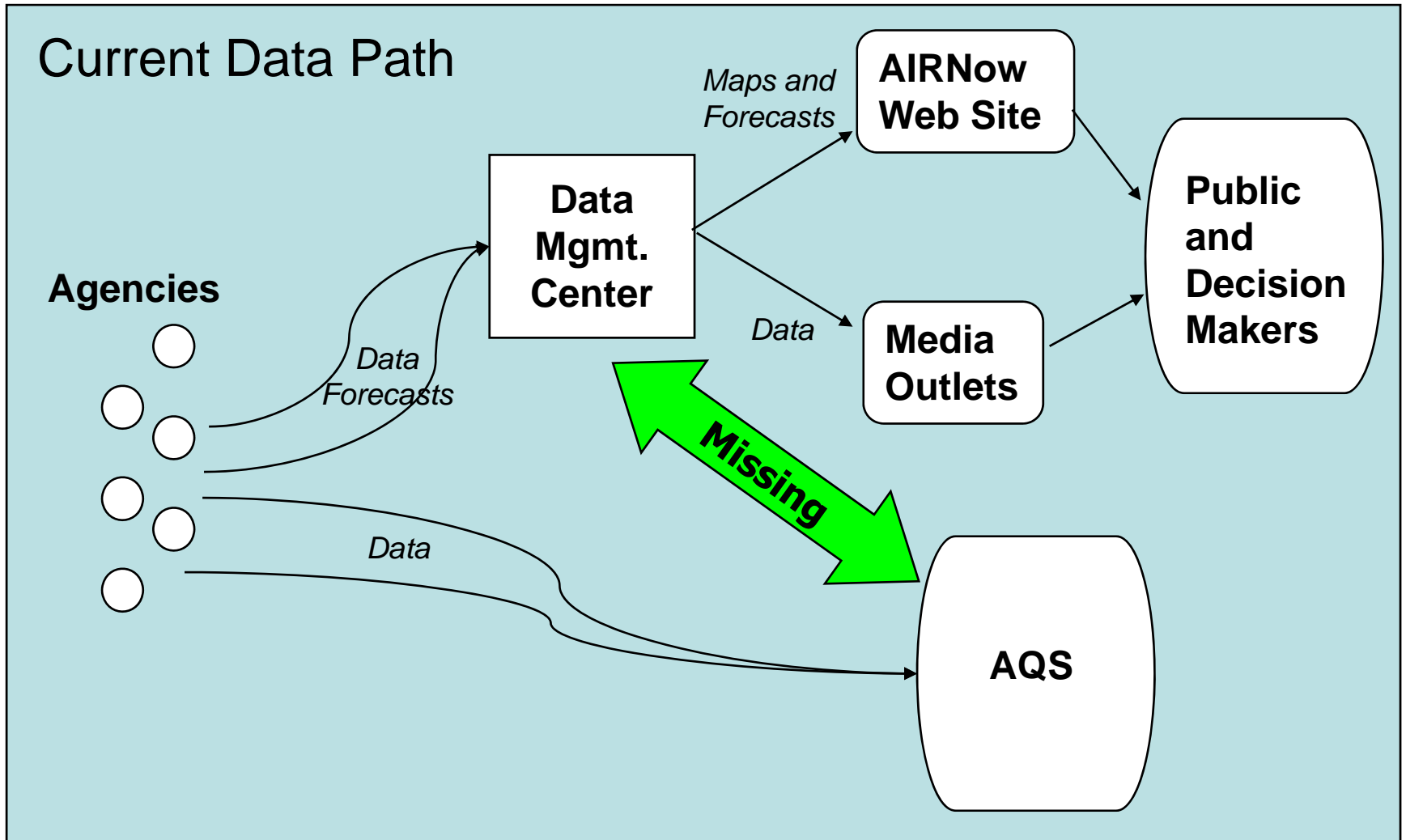
- Systems

- Centralization: one-stop data source for real-time/forecast data
- Quality control: automated and manual quality checks
- AQI conversion: consistency across the nation
- Mapping: quick mapping methods
- Distribution: data for public, media, researchers, systems

- Data

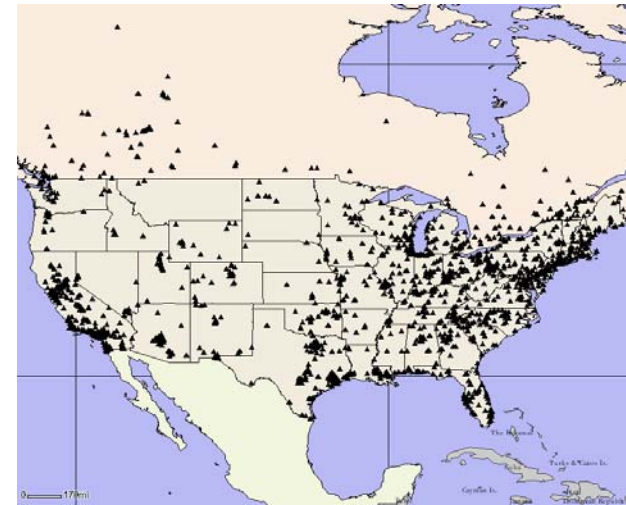
- AIRNow data are considered preliminary and unofficial
- Air quality agencies control what data is approved for public reporting
- Raw data can be accessed through AIRNow-Tech

Overview of AIRNow (3 of 3)



OBS Format (1 of 2)

- Legacy format for data ingest into AIRNow
- Why are we phasing it out?
 - Difficult to program
 - No native support for
 - Mobile monitors
 - Three-dimensional data
 - Limited list of accepted parameters
 - No sub-hourly data
 - Applied only to North America
 - Difficult to use in mobile applications



OBS Format (2 of 2)

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NUMSTEPS, 24
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UNITS, PPB
STATIONS, 35
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**Required for every data
submittal. Makes
creating a data encode
and parser difficult.**

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```

AQCSV Format (1 of 3)

- Supports
 - AQS standards (parameter codes, POC)
 - Any AQS parameters
 - Speciated/lab data
 - Mobile monitors data (changing location)
- Allows for
 - Ingest of AQS data into AIRNow – web service backfill will be xml aqcsv
 - Bulk data updates
 - Support of international data exchange
 - Easy encoding and parsing of data (Excel)



AQCSV Format (2 of 3)

- ISO Standards
 - Country Codes (840 = USA)
 - Date and Time
- AQS-Based
 - Parameter Codes
 - Units Codes
- Support for
 - AQS qualifier codes
 - Location information
 - Latitude and longitude
 - Elevation and GIS datum
 - Method codes
 - Measurement performance characteristics
 - Value and uncertainty

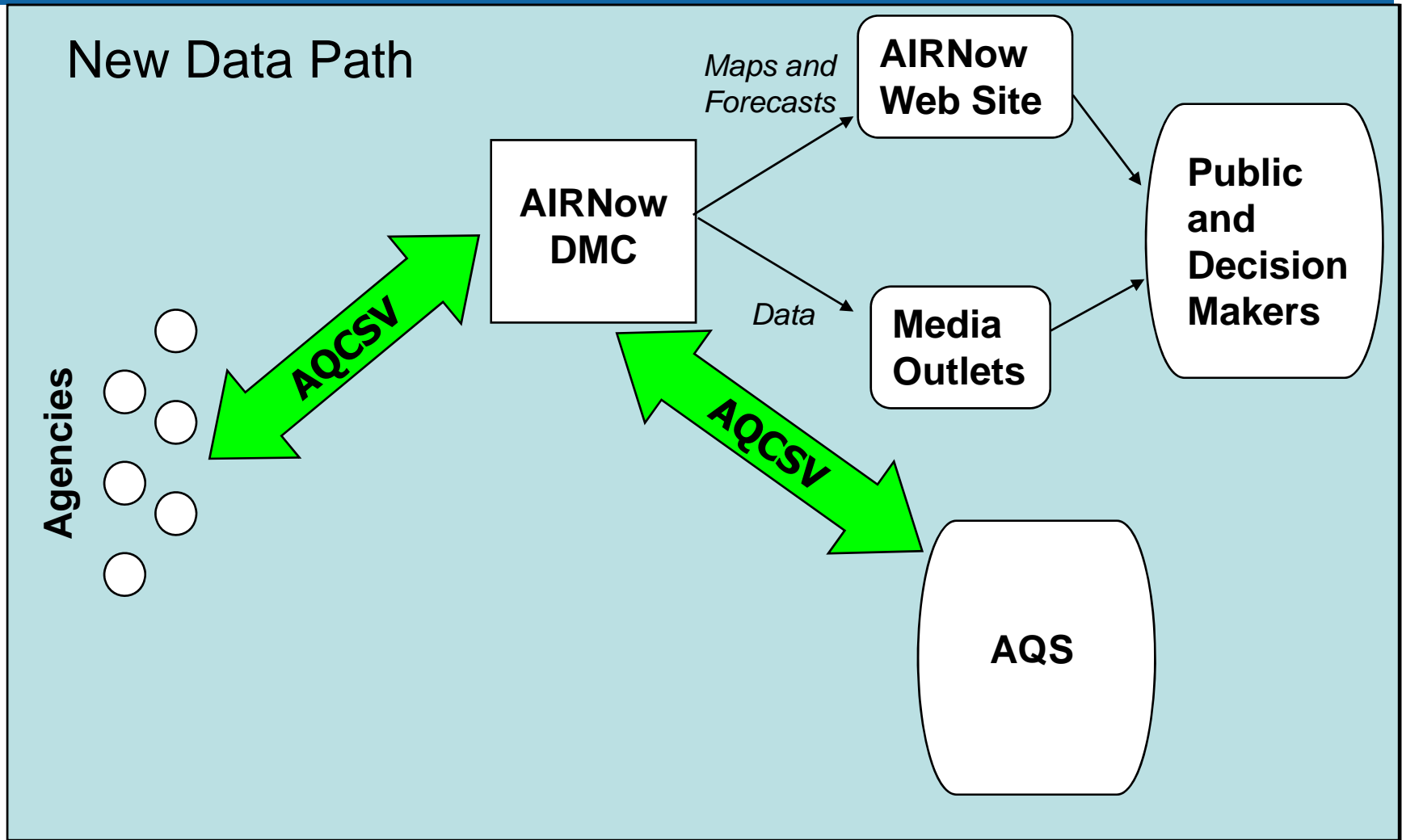
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AQCSV Format (3 of 3)



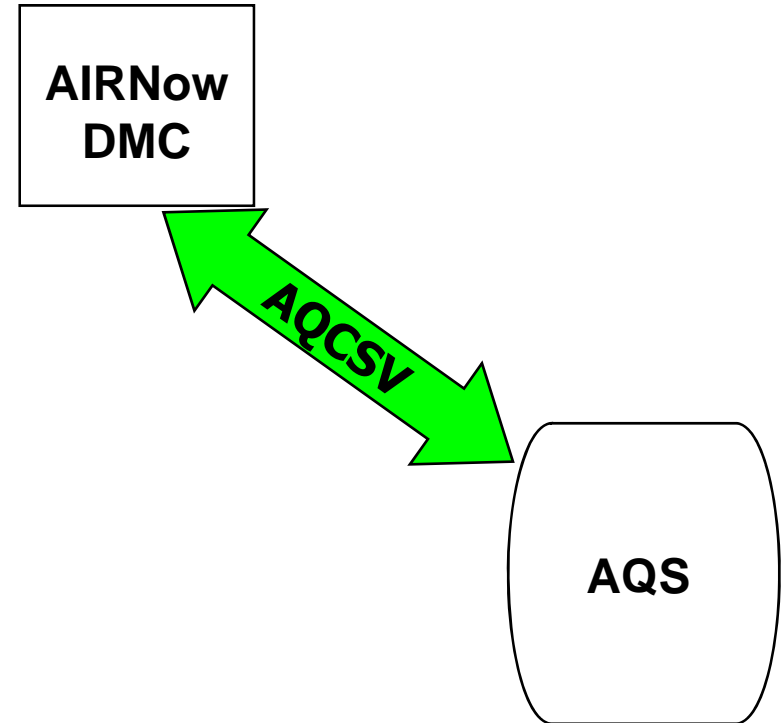
Status of AIRNow/AQS Data Exchange

The bad news:

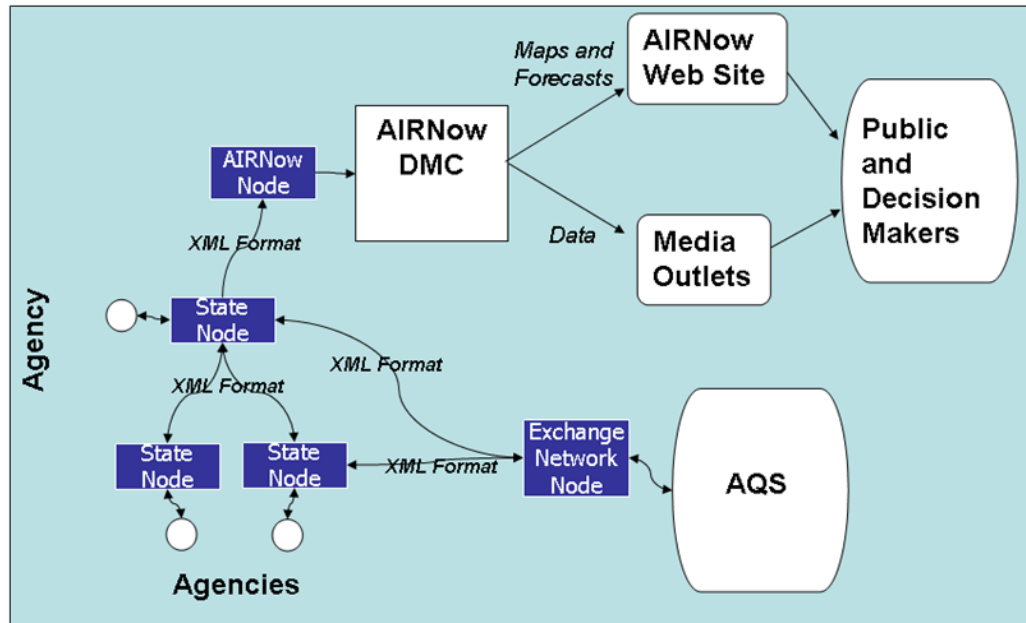
- Some difficulties have been encountered with matching sites between AIRNow and AQS
- Backfilling of AIRNow data with AQS data has been delayed until FY 2011

The good news:

- Web service is in place to send data from AIRNow to AQS.
- Reciprocal web service to send AQS data to AIRNow is on the way
- Usage of AQCSV in the future will prevent data mismatch issues



Data Exchange Node



- Uses the existing Exchange Network to transfer data among states, agencies, tribes, AQS, and AIRNow DMC
- Exchanges data between state and AIRNow DMC nodes using web services
- Allows simultaneous submittal to AIRNow and AQS
- Requires more programming effort

What does this mean for you?

- Better data
 - Backfilled with AQS data
 - Support for AQS parameters
- Easier data delivery
 - AQCSV
 - Possible XML data exchange node
- Implementation schedule
 - Work with vendors to add support for AQCSV
 - Need to update your software
 - OBS will be gradually phased out

Contact Information

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