AIRNow Data Transfer Standards

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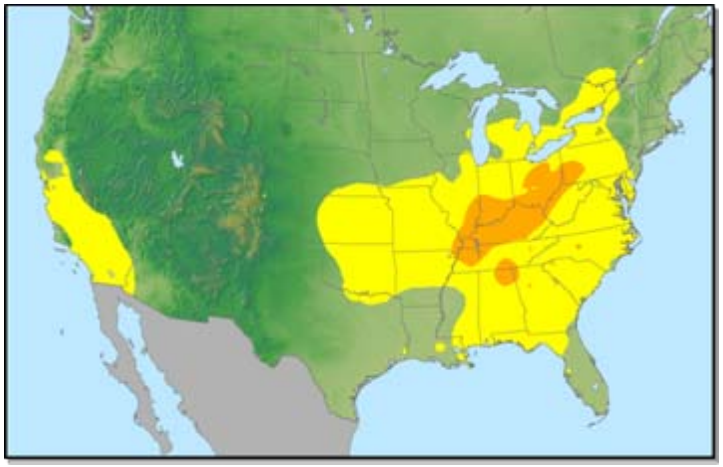
Outline

- Overview of AIRNow
- 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

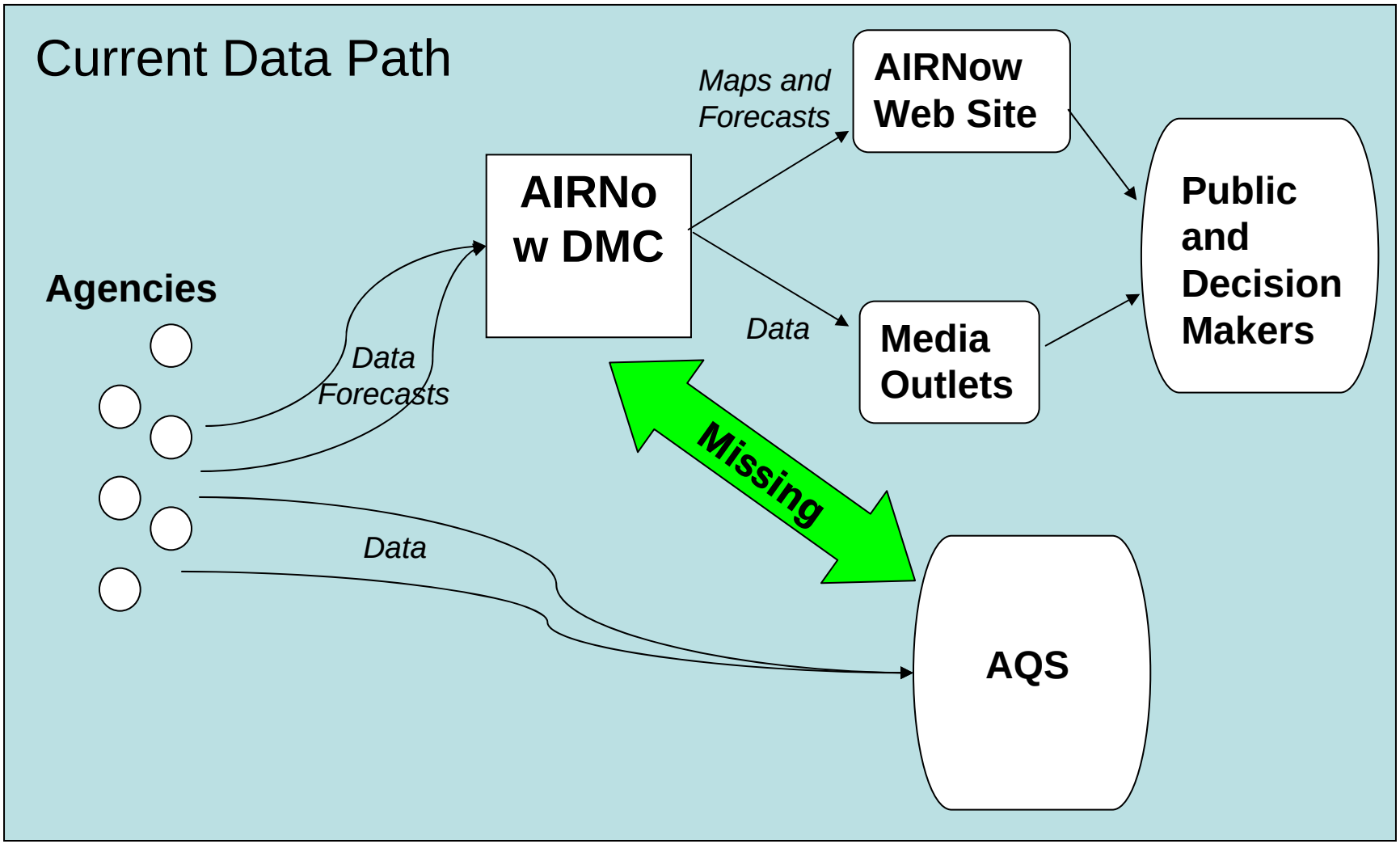


Overview of AIRNow (2 of 3)

- 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

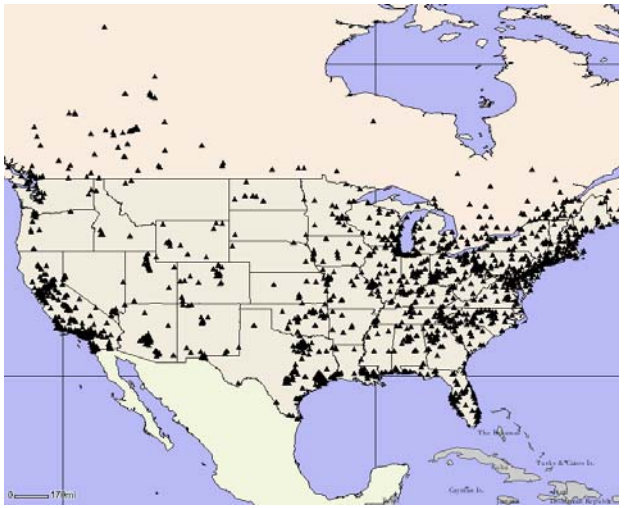
- Data
  - AIRNow data are considered preliminary and unofficial
  - Air quality agencies control what data is approved for public reporting
  - Raw data can be accessed through AIRNow-Tech

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
  - Difficult to use in mobile applications
  - Limited list of accepted parameters
  - No sub-hourly data
  - Applied only to North America



OBS Format (2 of 2)

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NUMSTEPS,24
AVG_TIME,60
UNITS,PPB
STATIONS,35
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Required for every data submittal. Makes creating a data encoder and parser difficult.

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
  - Backfill of AQS certified data into AIRNow when available
  - Bulk data updates
  - Support of international data exchange
  - Easy encoding and parsing of data (Excel)

AIRNOW INTERNATIONAL

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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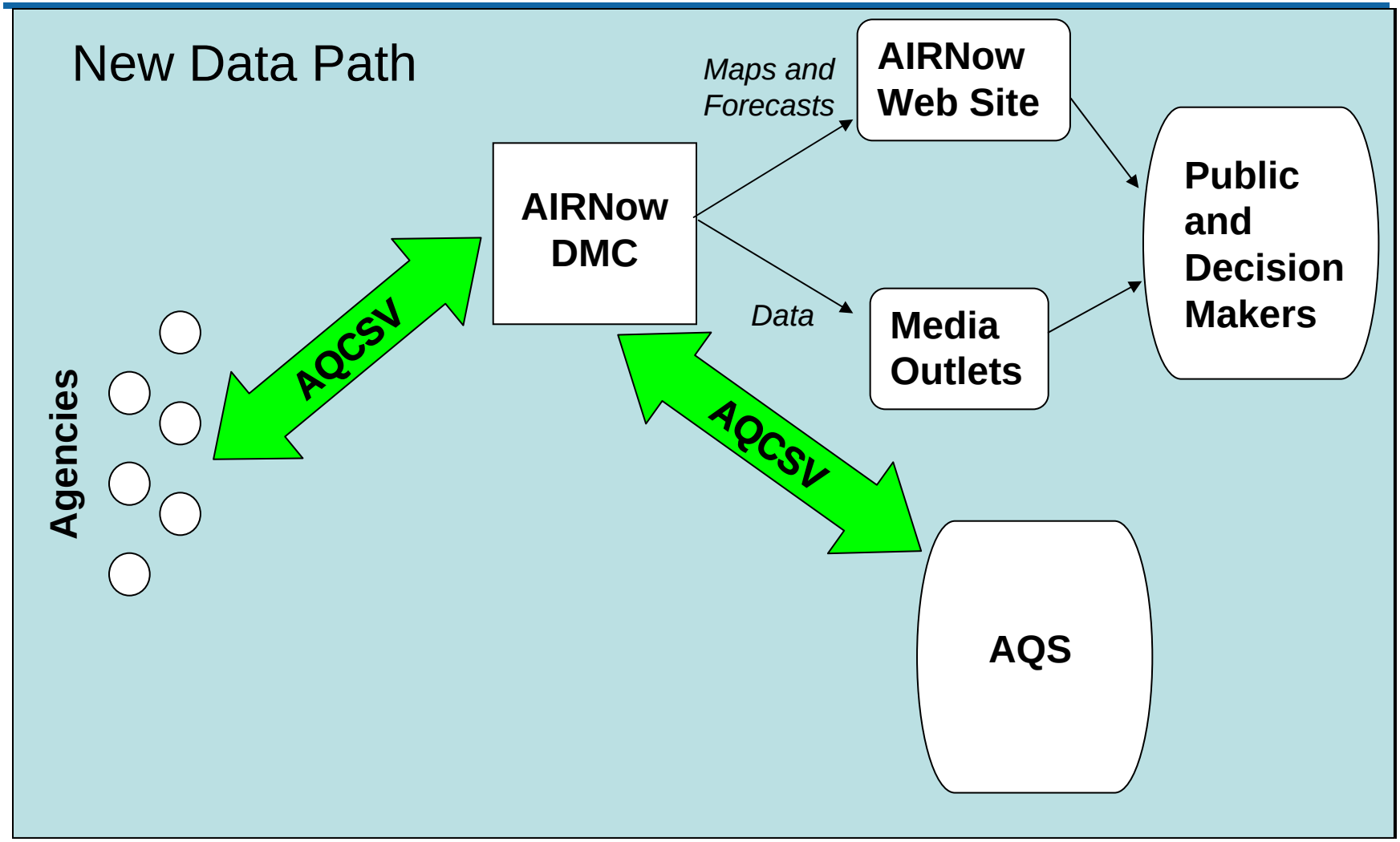
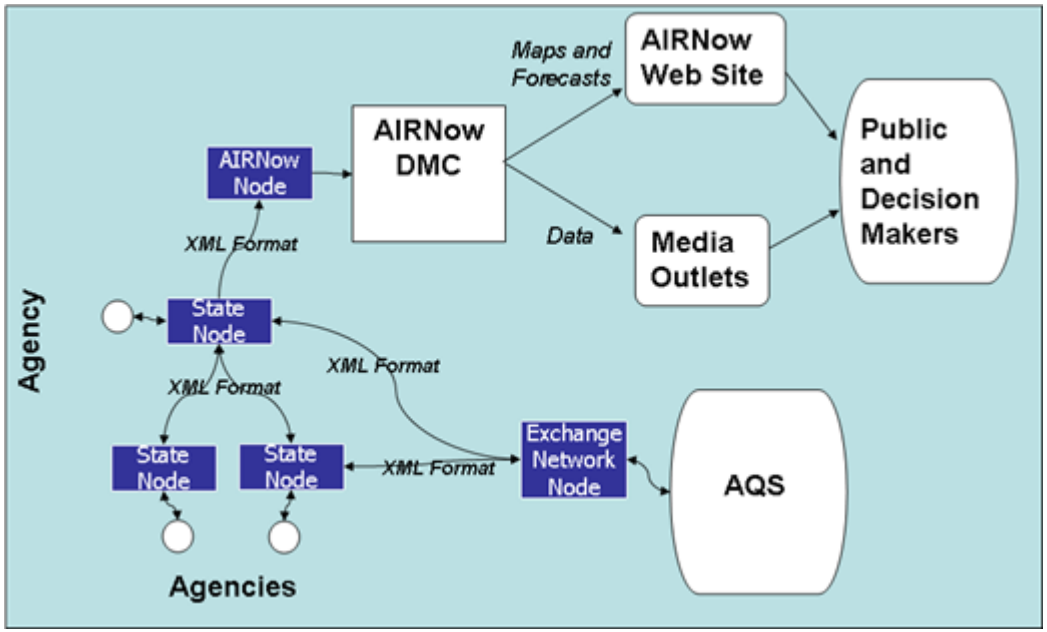
AQCSV Format (3 of 3)



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

More information: http://www.exchangenetwork.net/exchanges/air/aqde.htm

What does this mean for you?

- Better data
  - Backfilled with AQS data
  - Support for AQS parameters
- Easier data delivery
  - AQCSV
  - XML data exchange node
- Implementation schedule
  - Work with vendors to add support for AQCSV
  - Need to update your software
  - OBS will be phased out January 1, 2011

Contact Information

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