

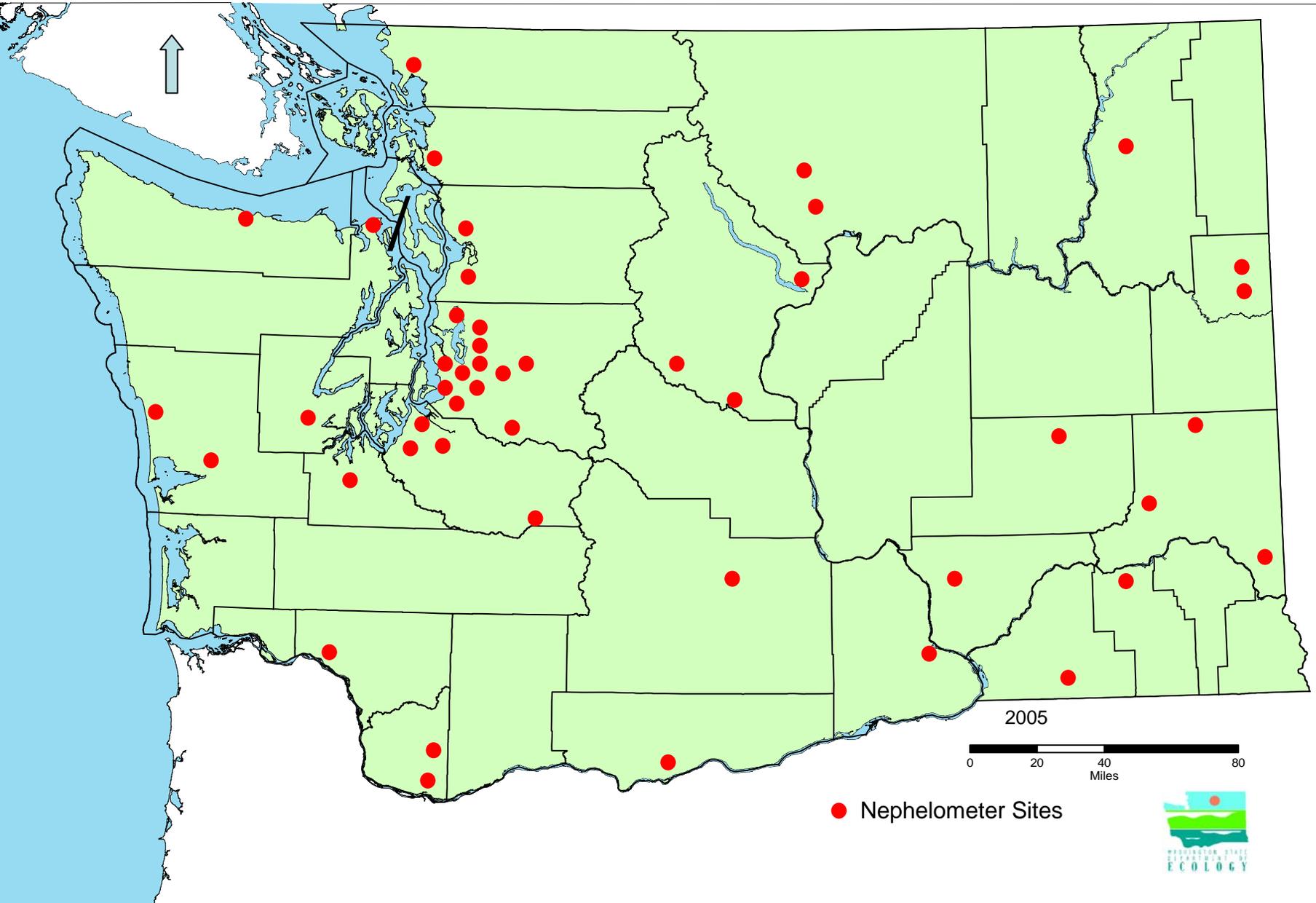
N-WADES

Northwest Air Data Exchange System

- EPA awarded grant to change the way we send data to EPA Air Quality System (AQS) (previously AIRS); improve data accessibility; and upgrade our current data acquisition systems
- Team has been formed; a consultant has been hired to guide us through the project of identifying needs and formulating the Request for Proposal that will go to potential vendors

- The expectation is that the vendor will be selected by September 2005; installation will be in 2006
- More partners will be involved in the data acquired by this network; more data will be available to anyone

Nephelometer Monitoring Sites



Data Loggers and Telemetry

- Data logger is connected to the nephelometer to store the data
- Data is transmitted (telemetered) to the central database in the Ecology building in Lacey

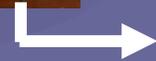
Nephelometer

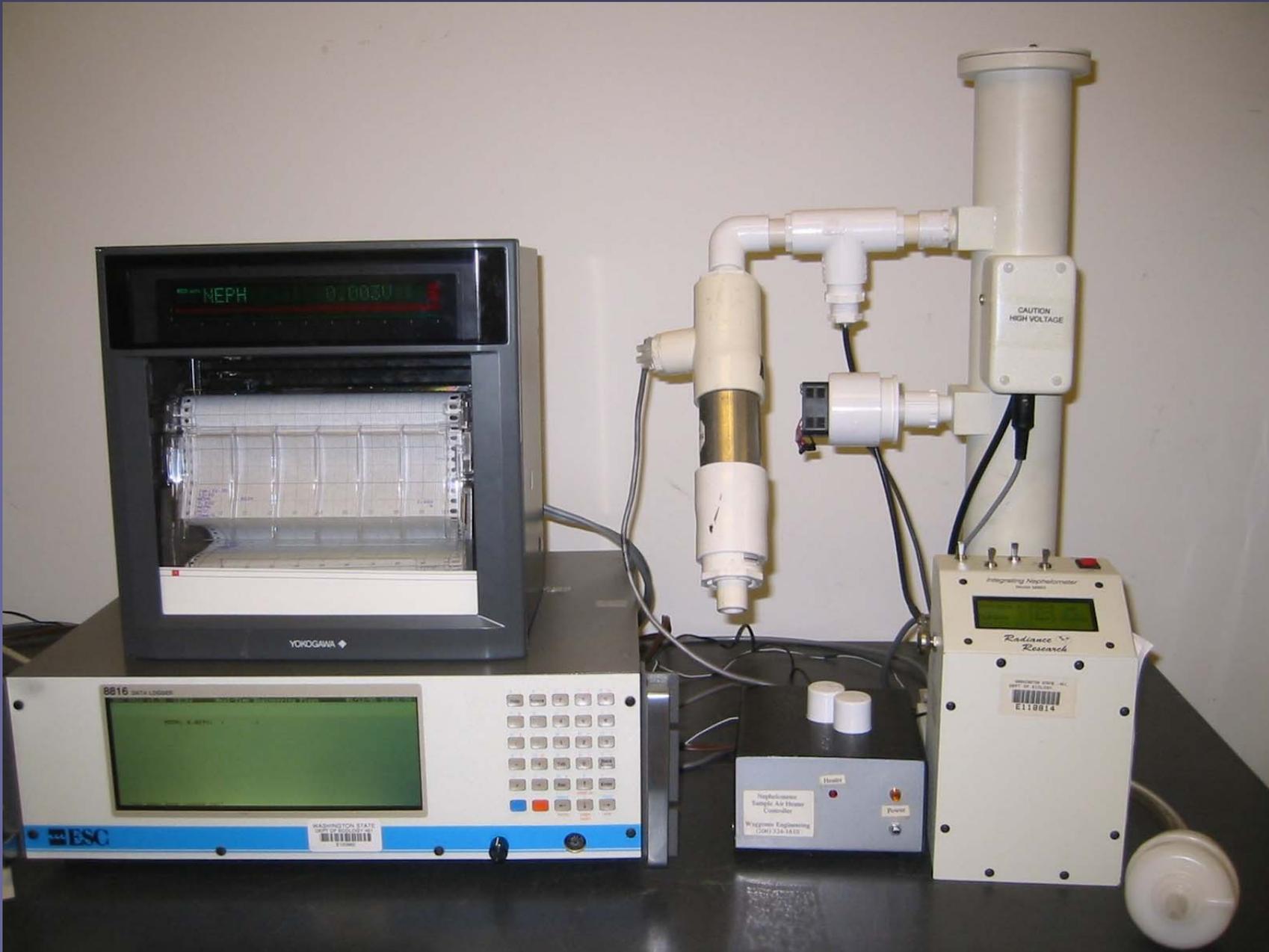


Data
Logger



Modem





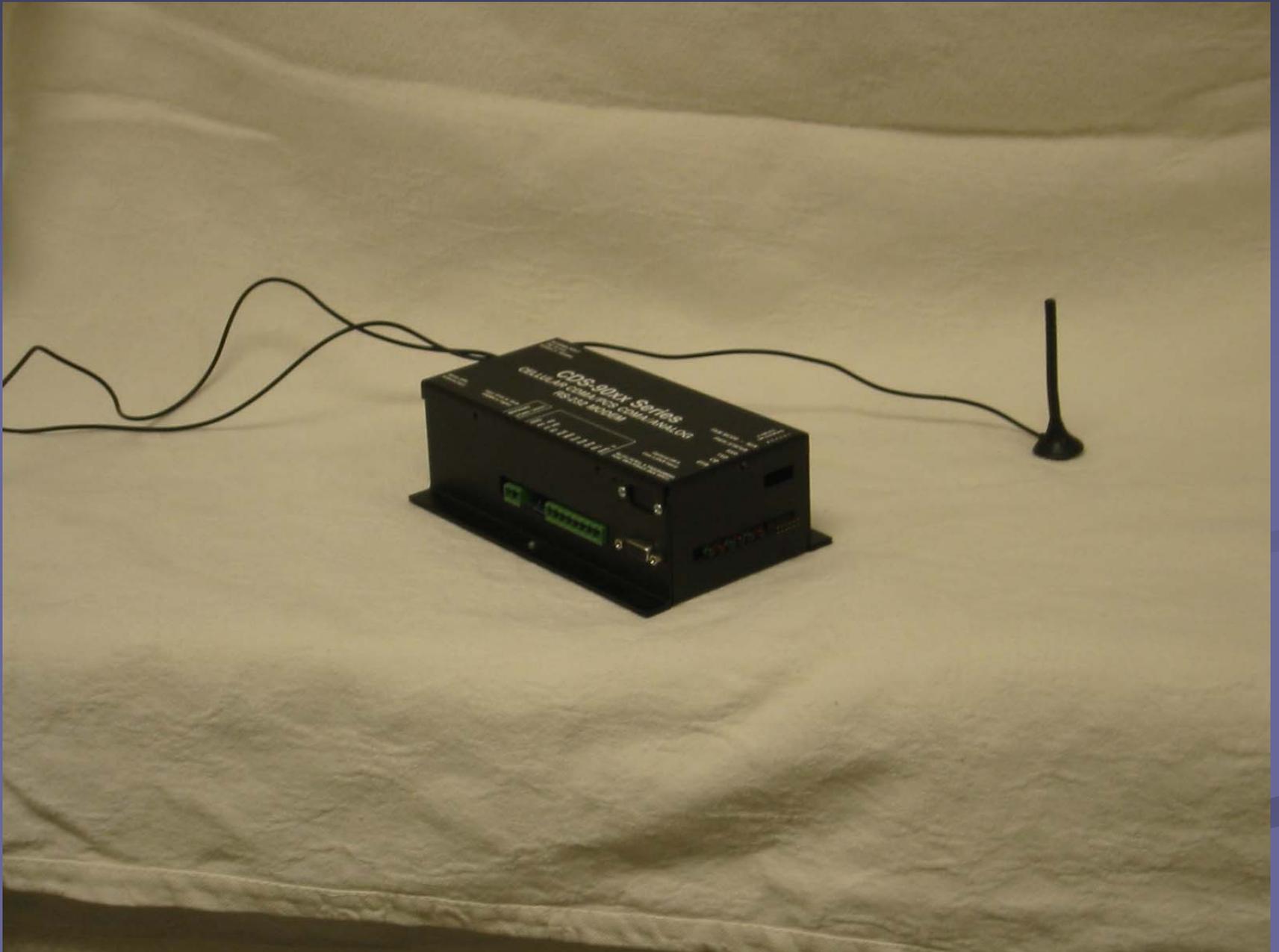


ESC ENVIRONMENTAL SYSTEMS CORP.
KNOXVILLE, TENNESSEE 37912

8800
DATA LOGGER

MIDDLEBURY STATE 461
DEPT. OF ECCLGYS
E108885

OPERATOR PORT







U.S. Robotics

56 Kbps Technology

HS AA CD SH RU SD DTR MR RTS CTS SYN ARQ
FAX

U.S. Robotics

Data Transmission

- At about 2 minutes after each hour, the central telemetry system in Lacey sends a request to each monitoring site for the previous hour of data. (The data logger compiles an hourly average.)
- At about 15 minutes after each hour, the central system sends a request to sites with 8816 data loggers for minute data from the previous hour.

- The data is stored in the central telemetry system and a copy of the data is sent to the Ecology web server. The web server updates at about 15 minutes after the hour.
- All of the nephelometer data is shown on the site operators' page (<https://fortress.wa.gov/ecy/aqp/Site>) on the graphs and on the 24x31 reports.

Nephelometer/Correlated PM_{2.5}

- Most of our nephelometer site data has been analyzed to create a correlation to PM_{2.5} . Jenny will speak later how the correlations were formulated.

- Those sites with a PM_{2.5} correlation are shown on the site operators' page

<https://fortress.wa.gov/ecy/aqp/Site/>

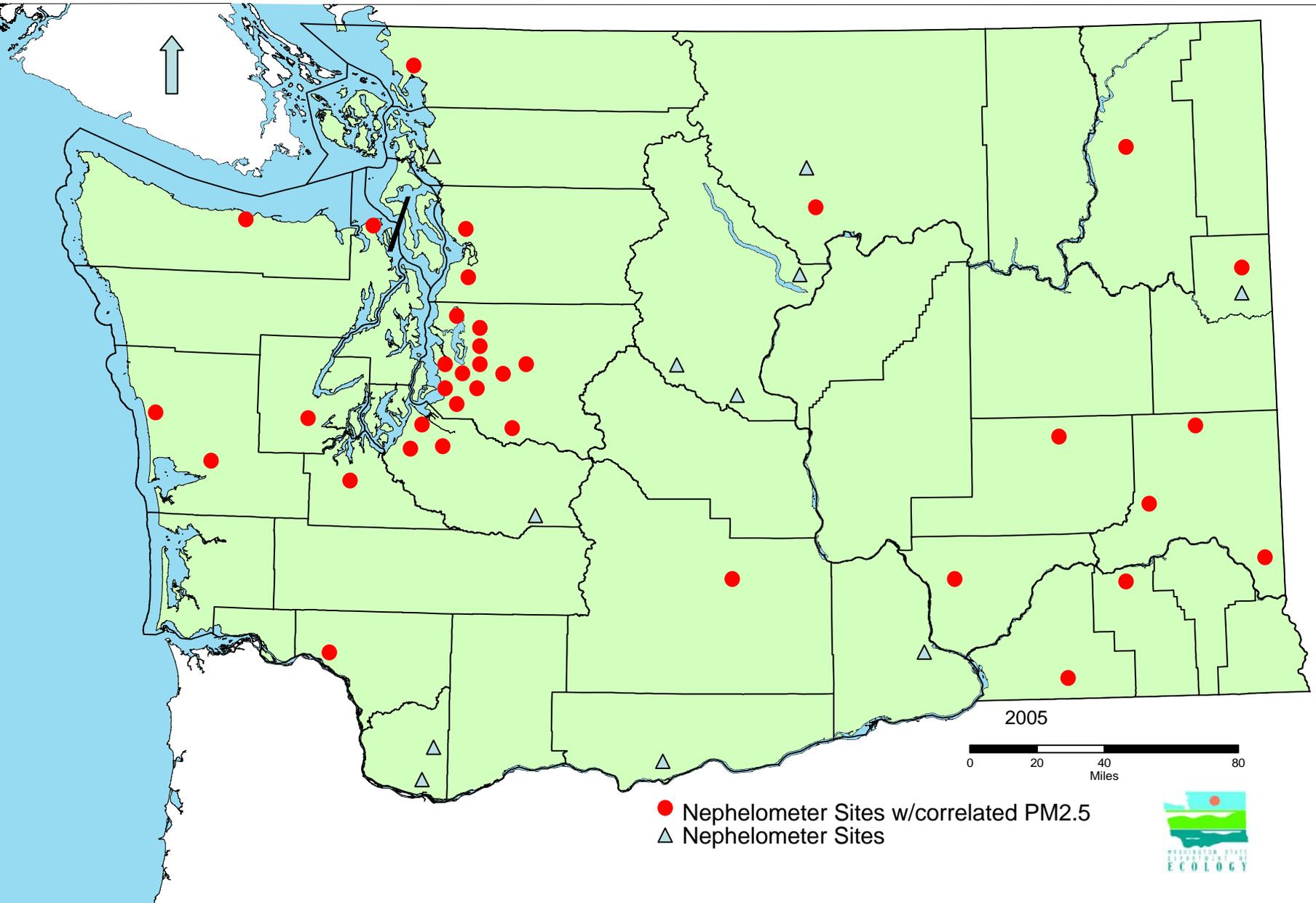
AND the public page as NPM2.5

<https://fortress.wa.gov/ecy/aqp/Public/aqn.shtml>

AIRNOW

- All of our hourly correlated nephelometer (as $PM_{2.5}$) data, plus TEOM ($PM_{2.5}$) data is sent to EPA's AIRNOW site at about 15 minutes after the hour.
- This data is displayed to the public at:
<http://www.epa.gov/airnow/>

Nephelometer Monitoring Sites



● Nephelometer Sites w/correlated PM2.5
△ Nephelometer Sites



And the Data Moves On

- The Quality Assurance Unit determines which data will pass their requirements. Edits are made to the database.
- Joan McMillen transmits the data to EPA's Air Quality System.

At the monitoring site, what could go wrong?

- Data logger problems:
 - Loses programming
 - Screen is unreadable

Call Joan Kiely 360-407-6839

You just checked your 24x31 report, and your site is missing data

- Call or email Joan Kiely 360-407-6839

iras461@ecy.wa.gov

- Could be several reasons: the telemetry system has not caught up data; the web server is not operating; phone line problem
- You left a channel on the data logger disabled; it can be enabled remotely.

Data Logger Operations

- Data loggers are available in here and in the lab for hands-on session at the end of today.
- Questions?