

Exchange Network Overview & Update

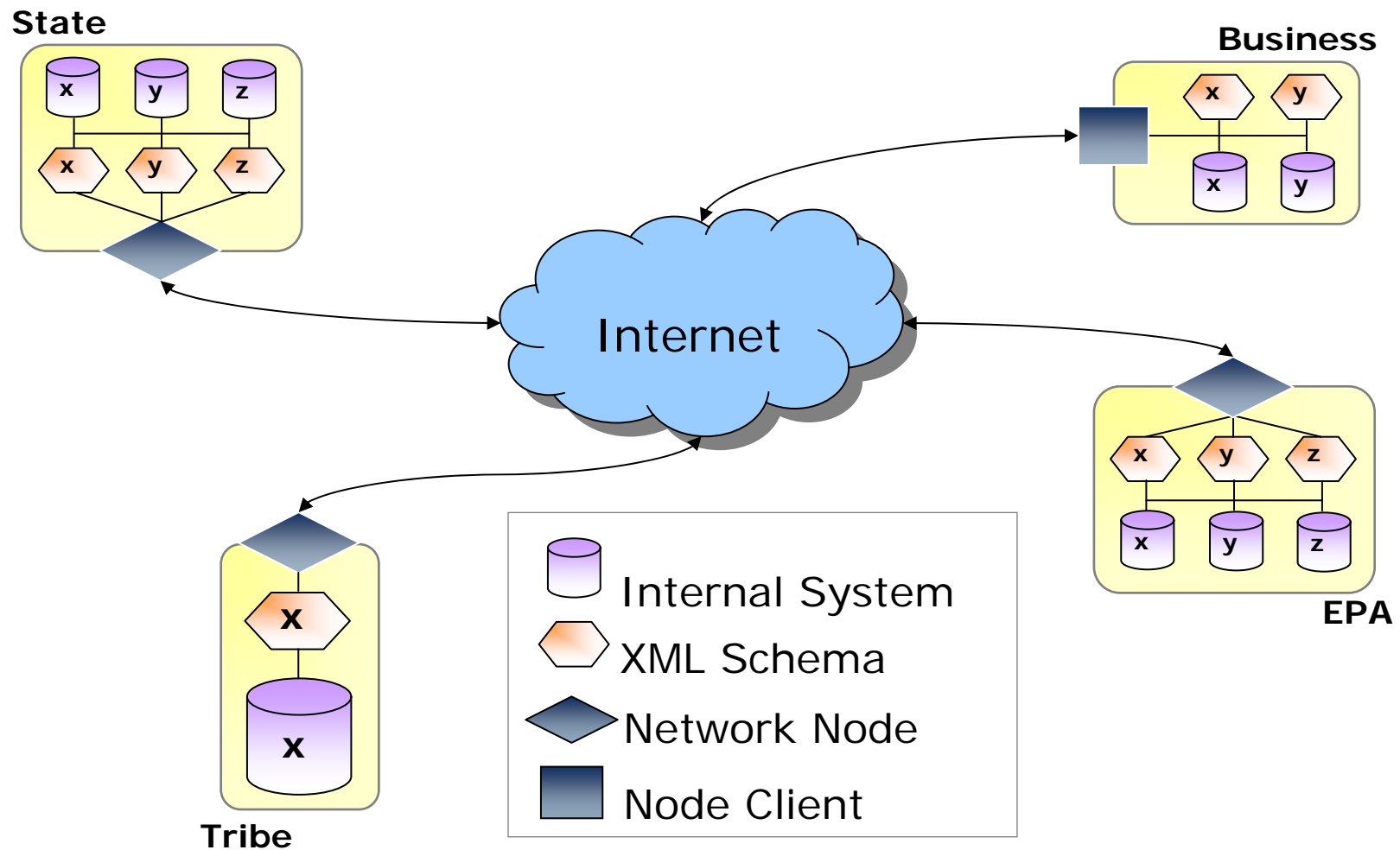
2006 AQS Conference
San Antonio, TX

June 8, 2006

What is the Exchange Network?

- An Internet and standards-based method for exchanging environmental information between partners.
- Major components
 - Nodes – web servers that act as data transfer points on the Network
 - Data Standards
 - XML – Universal language of the Network
 - Web Services – Automated services for pushing, pulling, publishing, and querying data

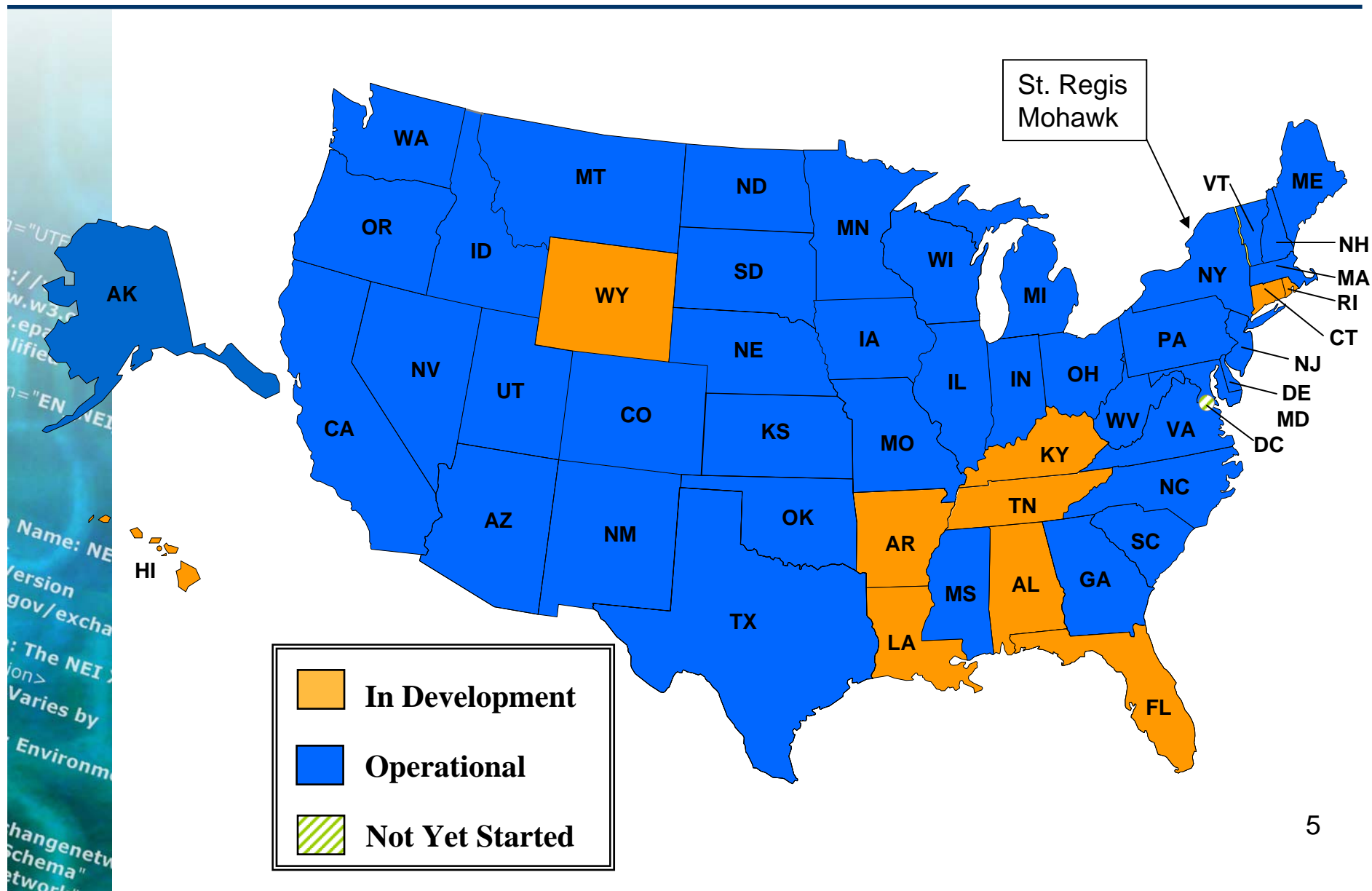
What is the Exchange Network?



How Does This Help?

- Automates submission and exchange of data at prescribed times
 - Reduces the cost of data exchange
- Enables timely and more accurate exchanges
 - Improves data quality
- Allows for secure publishing of data on the Node
 - Trusted partners can have access to your data and you can have access to their data
 - Allows new and efficient ways to combine environmental and human health related data
- Reduces reporting burdens
- No need for partners to change their data systems

Status of Network Nodes – June 2006



Exchanges' Implementation Progress

■ Traditional Exchanges from States to EPA

AFS - Air Permits/Compliance

AQS - Ambient Air Quality WI NY NJ DE AZ KS NC PA VA TR CA WA

NEI - Air Emissions Inventory NE DE MA TX NJ MS WI NM OR VA NC OK PA NV IL KS UT IA MN

PCS - Water Permits/Compliance MI VA IA DE OR WA WV

RCRAInfo - Hazardous Waste MS KY MA DE OR PA NH WA NJ WI MD MN KS MT AZ NC CA WV

SDWIS - Drinking Water Quality LA ME NY MD IL OK WI PA ND SD KS OH IA DE UT MO MT CO NE CA NJ NM GA MA

OWWQX - Water Quality MI OR TX

FRS - Facility Identification WA OR WV WI MS SC NH KS OH PA AZ CA CO DE ID IL IN MI NM NJ NE MO NC ND SD IA

● New Exchanges

Ambient Water Quality WA OR ID AK

Haz. Waste Shipments WA OR MI NJ MN MA

Drinking Water Quality NH NJ ME VT RI MI

Toxic Release Inventory VA IN SC MI KS DE OR PA OH MS WA CO UT MN WI IL

Beach Monitoring DE NH NJ GA CA NC OH MS WA

Ambient Air NJ NY OR WA DE

eDMR MI WI FL MS NJ

Health WA NY OR CA AZ MD

▲ Nodes

OR WA WV MI WI MS SC NH KS OH DE PA NE AZ ID IL IN LA ME MD MA MN HI CT AR RI FL
AL NV GA KY OK TX UT VT CA NJ NM NY MO CO MT VA WY NC ND SD IA AK TN

Last Update June 4, 2006

COLOR KEY
In Development
Operational

Exchanges' Implementation Progress

■ Traditional Exchanges from States to EPA

AFS - Air Permits/Compliance

AQS - Ambient Air Quality

WI

NEI - Air Emissions Inventory

NE DE MA TX NJ MS WI NM OR VA NC OK PA

PCS - Water Permits/Compliance

MI VA IA DE NJ MS OR WA WV

RCRAInfo - Hazardous Waste

MS KY MA DE OR PA NH WA NJ WI

SDWIS - Drinking Water Quality

LA ME NY MD IL NE OK WI PA

OWWQX - Water Quality

TX OK AL CT VA MT MN ME UT MD

FRS - Facility Identification

WA OR WV WI MS SC NH KS OH PA AZ CA CO DE ID IL IN MI NM NJ NE MO NC ND SD IA NY

● New Exchanges

Ambient Water Quality

WA OR ID AK

Haz. Waste Shipments

WA OR

Drinking Water Quality

NH NJ ME VT RI MI

Toxic Release Inventory

VA IN SC MI

Beach Monitoring

DE NH NJ GA CA NC

Institutional Controls

eDMR

MI WI FL

Health

WA NY

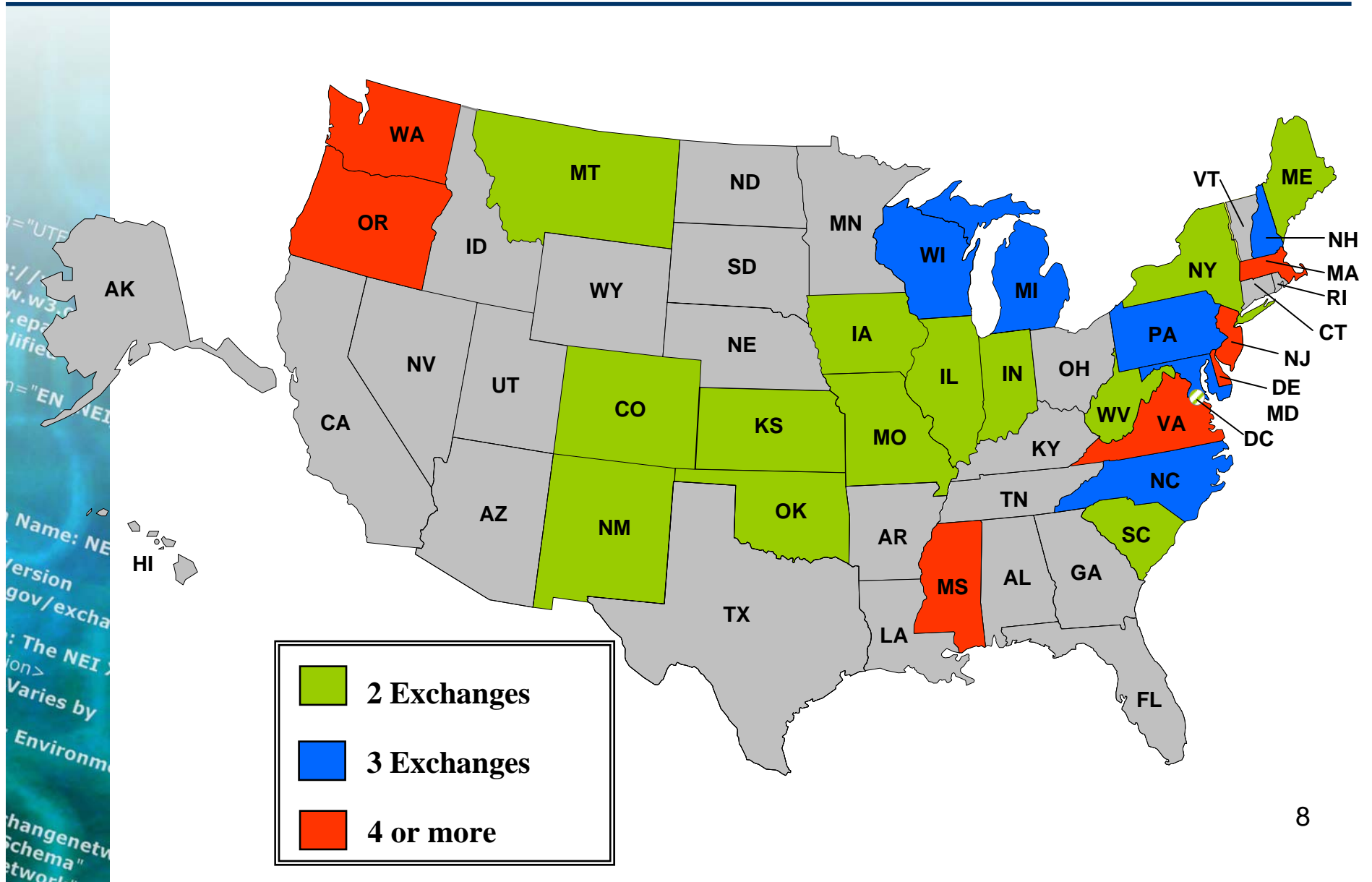
▲ Nodes

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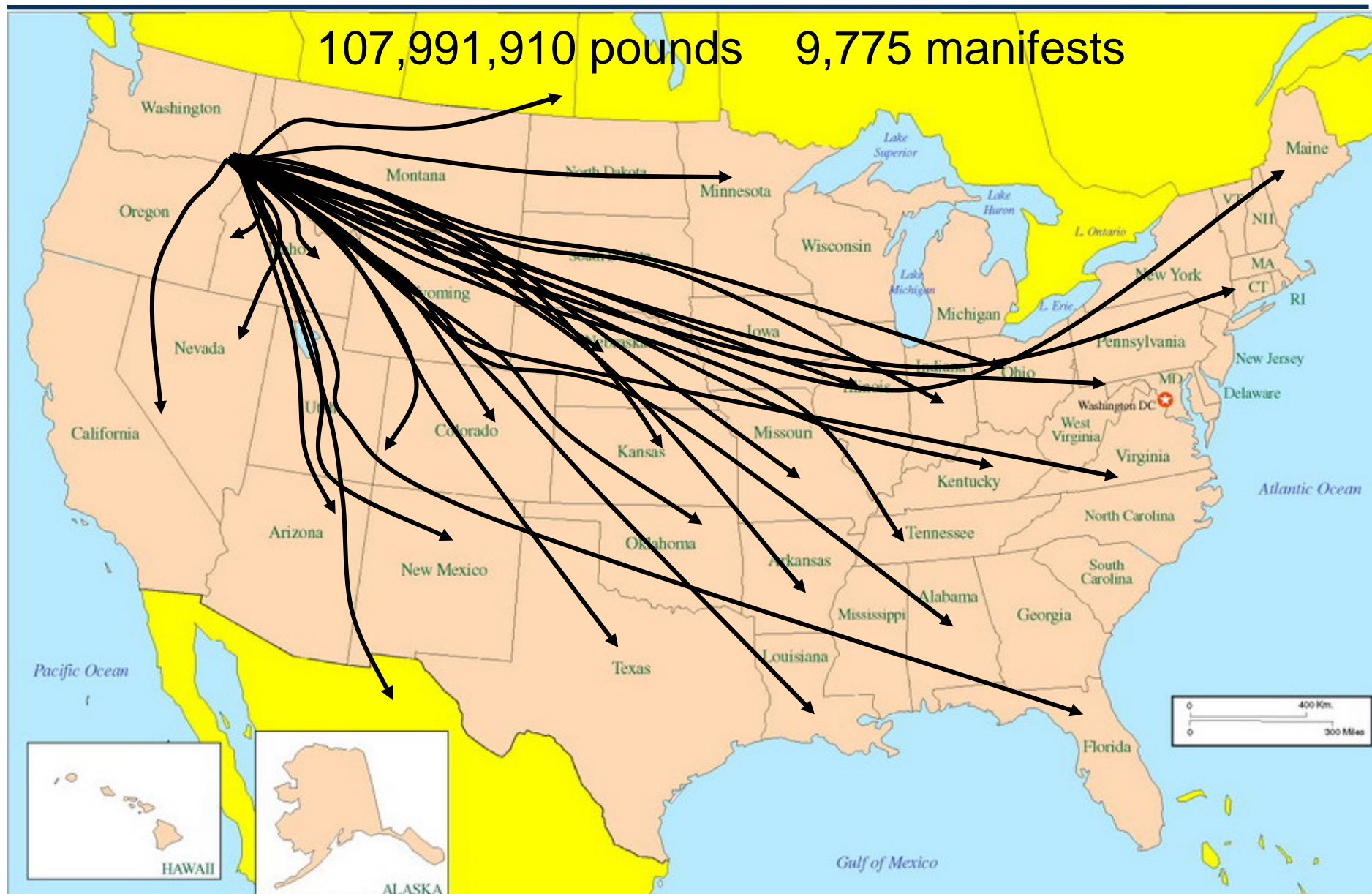
States with Multiple Data Exchanges



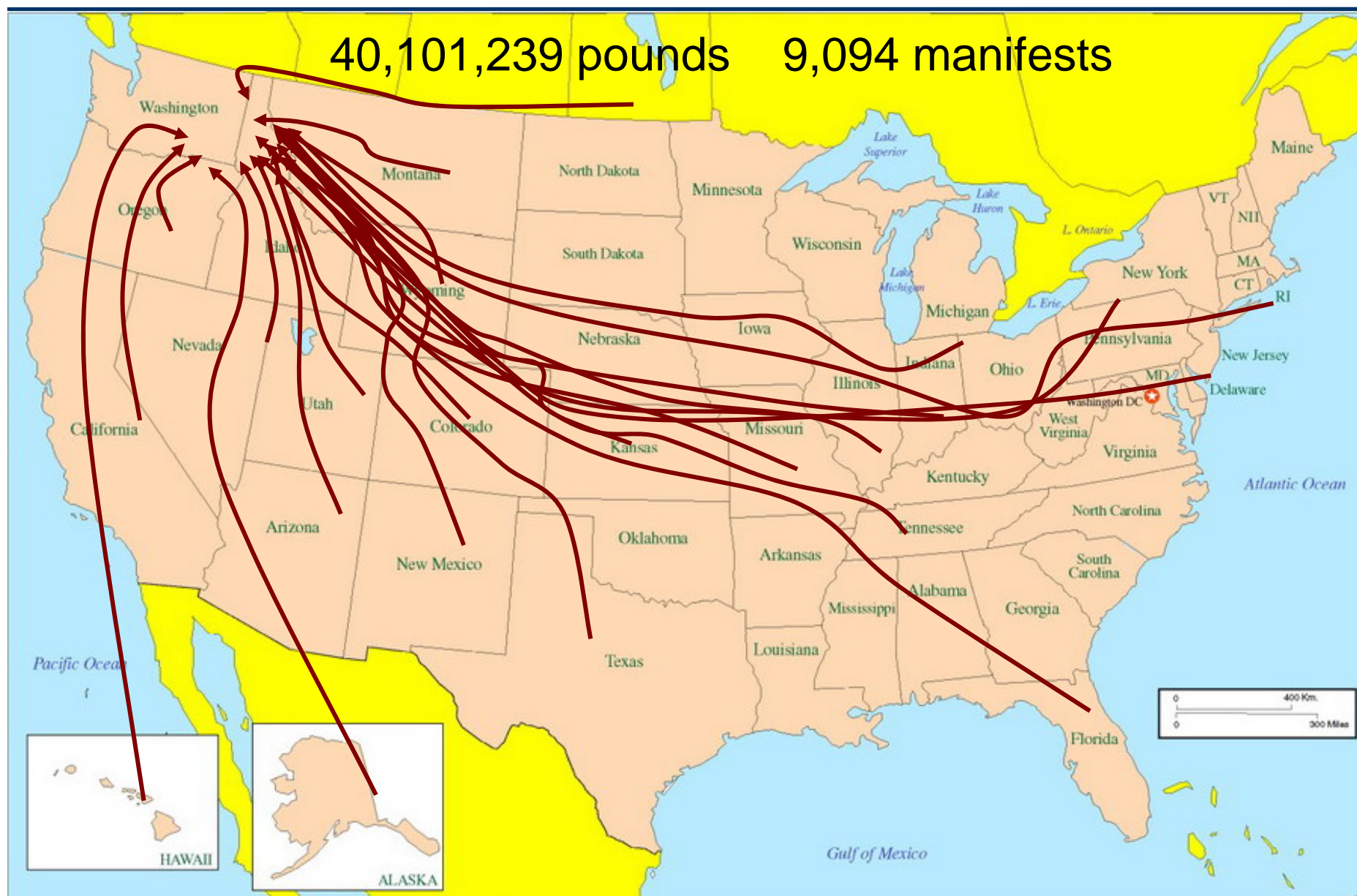
- Better data quality
- Better data access and integration
- Data is available on a more timely basis
- Reduced operating costs
- Reduced reporting burdens

- Resource Conservation and Recovery Act
 - Cradle to grave management of hazardous waste
- WA/OR Haz Waste Exchange
 - No easy means of tracking and reconciling interstate shipment data
 - Did you receive what I sent?

Manifested Hazardous Waste Leaving Washington in 2005



Manifested Hazardous Waste Entering Washington in 2005



- WA DOE and OR DEQ used their Network Nodes to help mitigate the problem
- Both agreed to “publish” their hazardous waste transporter data on their Nodes in a secure place
- Makes the data accessible to “authorized” parties
- Authorized each other to access and query the other’s hazardous waste data
- Built a simple web application to view the data for each state

- WA Department of Ecology collects fish tissue sampling data of interest to state Health officials
- DOE granted Node access to the Department of Health
- DOH application “consumes” fish tissue data in real time for analysis against birth defect data
- Very low cost and very short development time

- New Jersey partnered with Earth911 to make beach monitoring data readily available to the public
- System allows local coordinators to immediately upload sampling results into system via handheld PDAs
- Laboratories add sample results to data records via website
- System recommends action for agency officials (e.g. closures) from results
- Posting determinations are immediately available on NJDEP and Earth 911 websites.
- Citizens, lifeguards, other stakeholders receive immediate email alerts of closures/advisories via “opt-in”.
- Results are immediately available for BEACH Data Flow to EPA.

http://www.earth911.org - Check your Beach Water Quality - Microsoft Internet Explorer

Back Search Favorites

BEACH WATER QUALITY

Back to Beaches | Other Locations | Home

GLOSSARY

- WATER OPEN
- WATER CLOSED
- BEACH ACCESS POINT


LOCATIONS

New Jersey

South Monmouth County Monitoring Stations

- ▶ Main Station in Ocean Grove ■
- ▶ Broadway Station in Ocean Grove ■
- ▶ Ocean Park Station in Bradley Beach ■
- ▶ Evergreen South Station in Bradley Beach ■
- ▶ Sylvania Station in Avon ■
- ▶ 7th Street Station in Belmar ■
- ▶ 12th Street Station in Belmar ■
- ▶ 19th Street Station in Belmar ■
- ▶ 20th Street Station in Belmar ■
- ▶ Worthington Station in Spring Lake ■
- ▶ Newark Station in Spring Lake ■
- ▶ Essex Station in Spring Lake ■
- ▶ York Avenue Station in Spring Lake ■
- ▶ Brown South Station in Spring Lake ■
- ▶ Philadelphia Station in Sea Girt ■
- ▶ Neptune Station in Sea Girt ■
- ▶ East Main Station in Manasquan ■

South Monmouth County Monitoring Stations



Water quality monitoring at recreational bathing beaches has ended for the 2004 summer season. Lifeguards will be available at many beaches on weekends beginning Memorial Day weekend.

Receive an e-mail alert on **BEACH STATUS!**
[click here](#)

WATER=LIFE

South Monmouth County Monitoring Stations

Red Bank, NJ

Get the 10 day forecast

34°F
 Cloudy

Feels Like: 24°F
 Humidity: 70%
 Wind: WSW at 15 mph

Enter city/zip [GO!](#)

Severe Weather
 Airport Delays
 Sporting Events
 Police Reports

HOW TO KEEP BEACHES CLEAN

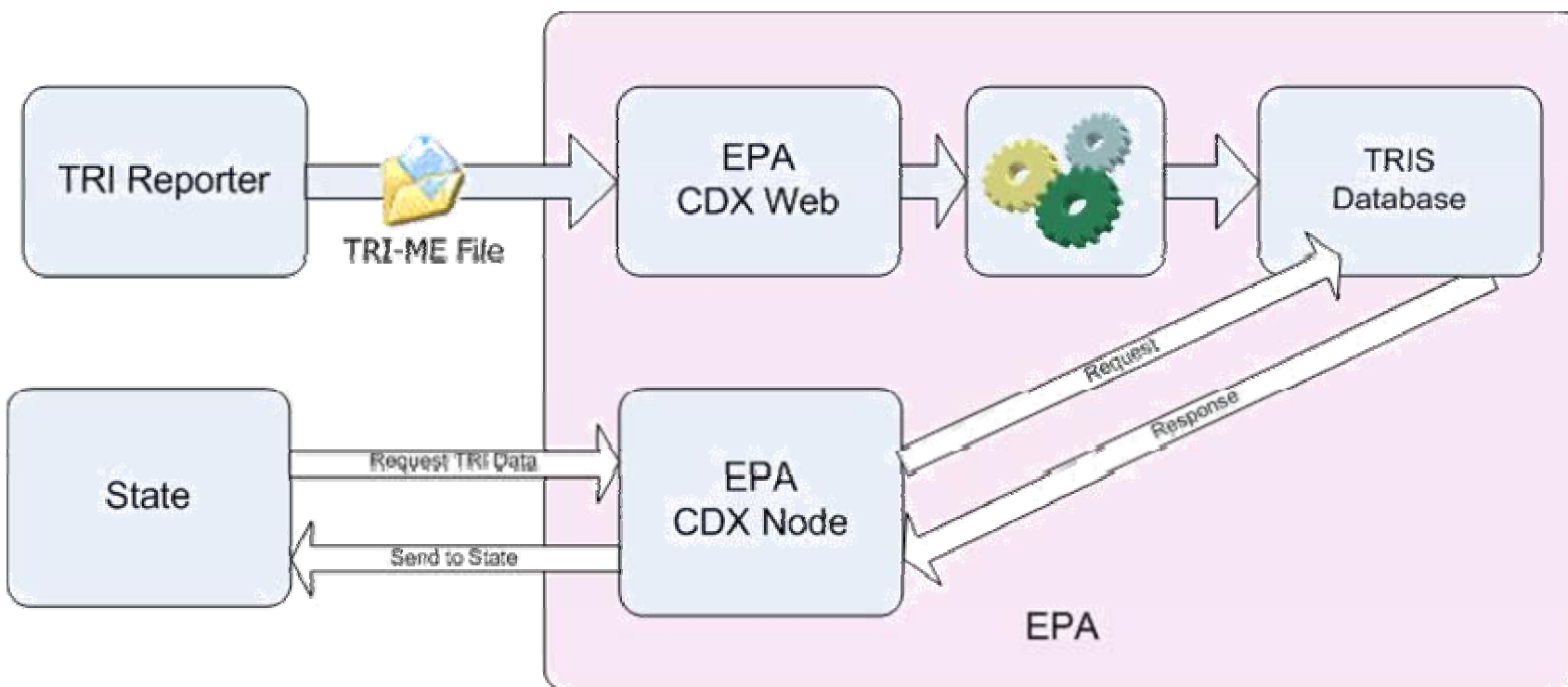
Beach Water Monitoring

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Reducing Costs

	Michigan	New Jersey	Pennsylvania	Washington
Data Exchanges Examined	AQS eDMR SDWIS TRI	AQS RCRA SDWIS	AQS eDMR RCRA SDWIS	AQS RCRA TRI
Annual Operational Cost Pre-EN	\$1,509,620	\$1,266,519	\$1,352,807	\$311,560
Total Annual Operational Cost Post-EN	\$758,933	\$672,789	\$710,181	\$272,294
Initial Capital Investment (\$)	\$1,095,940	\$845,233	\$1,002,390	\$139,422
Post-EN Annual Maintenance Cost (\$/year)	\$107,983	\$75,831	\$105,609	\$19,014
Post-EN Annual State Savings (\$/year)	\$642,704	\$535,192	\$537,017	\$20,252
ROI Summary				
Average ROI (5 year basis)	59%	61%	54%	15%
Payback period (years)	1.7	1.6	1.9	6.9

- Toxic Release Inventory program used the Network to satisfy double reporting requirements



- AQS data exchange is ready to begin producing many of these benefits
- AQS team released version 1.0 of XML schema in 2005
 - Allows for a Node to Node exchange of data from state or tribe to U.S. EPA
 - St. Regis Mohawk tribe first to implement
 - Still waiting for that first state

- Version 2.0 of the XML schema expected to be ready this summer?
- Built to accommodate both AQS data and a wider set of air quality data
 - 2.0 is more flexible and incorporates more data elements
 - Will accommodate near real time exchange of AirNow data
 - Flexibility allows exchanges with partners other than EPA
 - Publishing from the Node for public access
- Outbound flow of AQS data

- U.S. EPA grant program provides funding for Exchange Network projects
 - States, territories, and tribes are eligible
- Take advantage of the \$\$ while it's still available!!!
- For more info visit EPA's Network Grants page at:
<http://www.epa.gov/exchangenetwork/grants>
- Watch for 2007 Grant application information this summer

Exchange Network Website

<http://www.exchangenetwork.net>

Sign up for email alerts at:

http://www.exchangenetwork.net/mailing_list

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