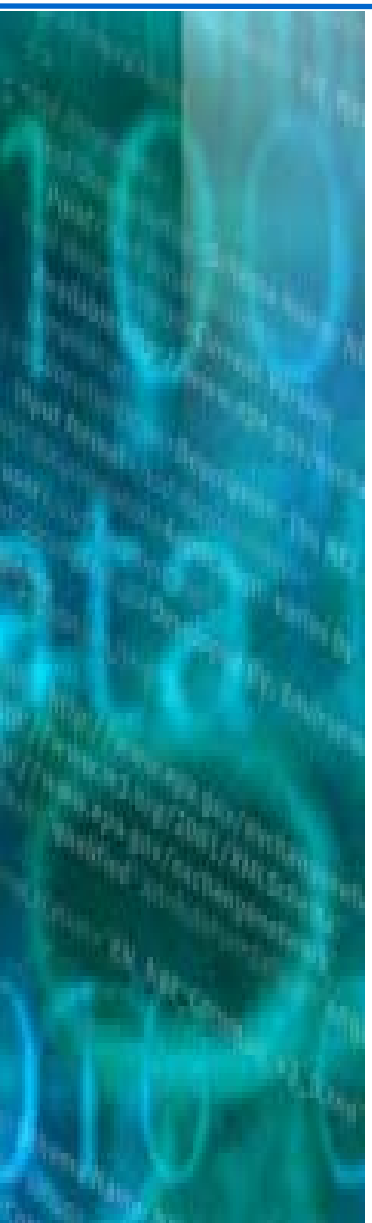
Environmental Information exchange Network



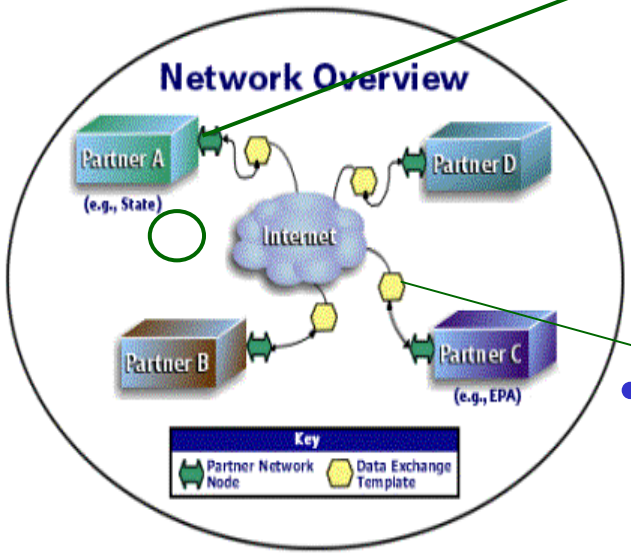
State/EPA Environmental Information Exchange Network – Overview

February 16, 2005

XML Community of Practice (XML CoP)

ECOS

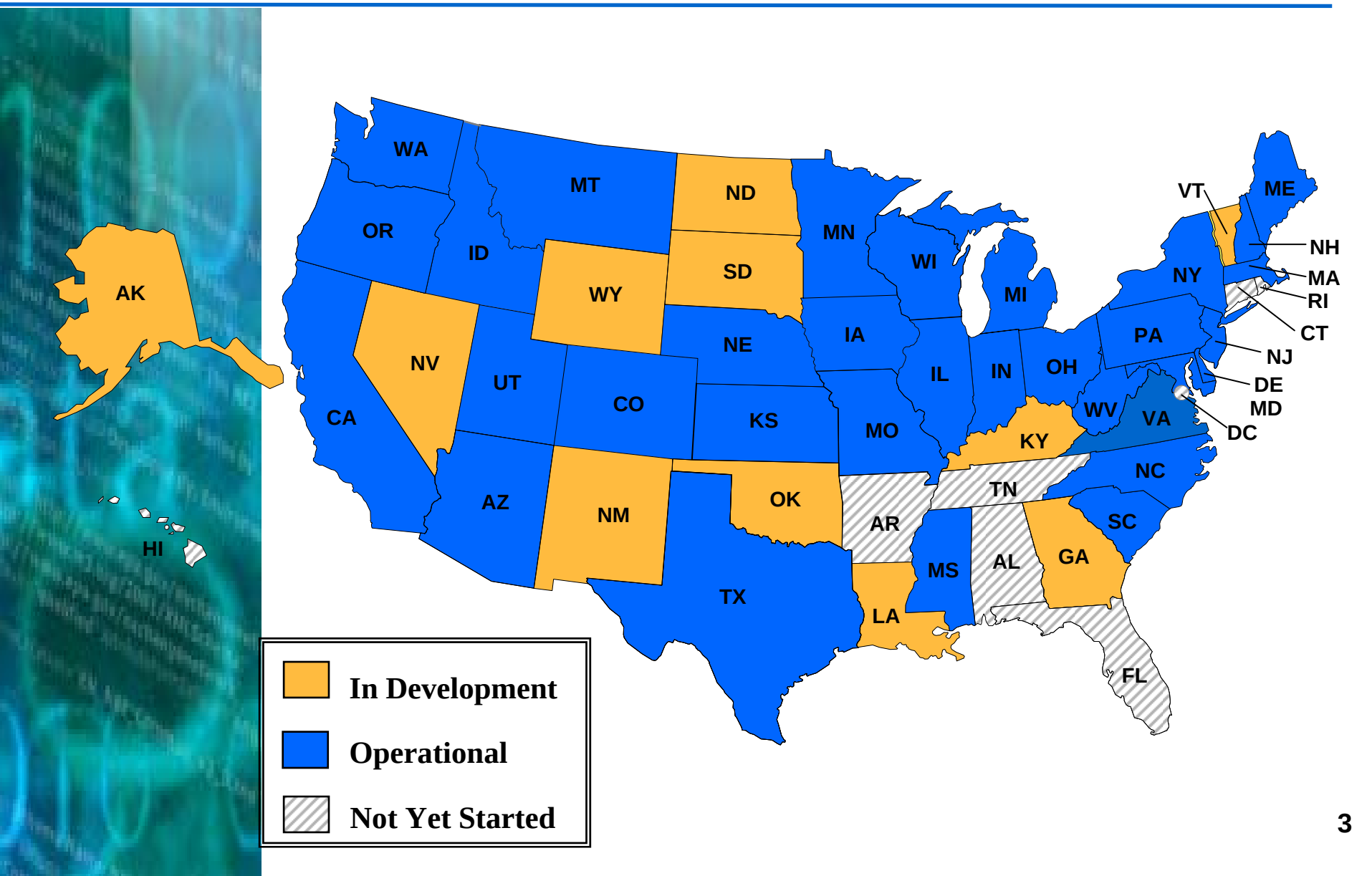
Exchange Network (EN) Core Components



- Nodes
  - Hardware and software used to exchange information on the Network
  - Transfer point on the Network
  - Specially configured web-server
- Data Exchange Templates
  - Describe format of data being exchanged
  - Consist of XML schema
  - **Incorporate Data Standards**
  - XML Schema for flows found in the Registry

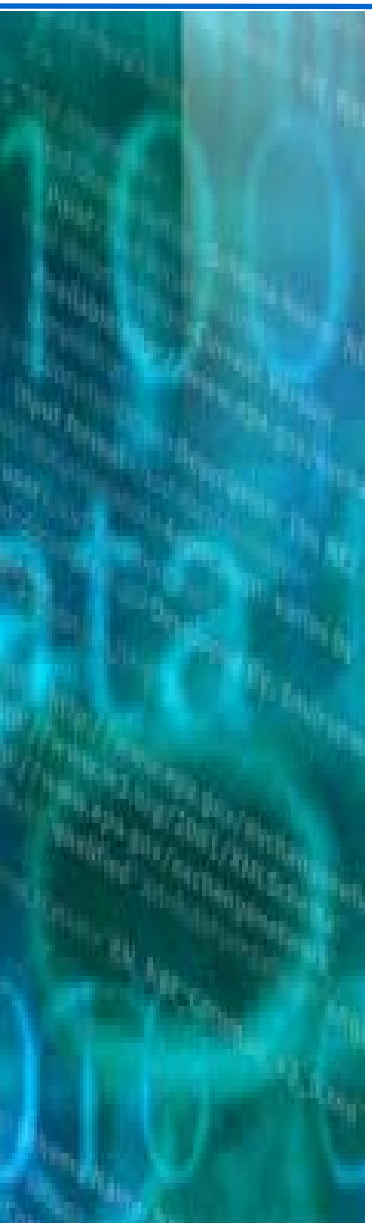
Environmental Information eXchange Network

Status of State Nodes - January 24, 2005



Environmental Information eXchange Network

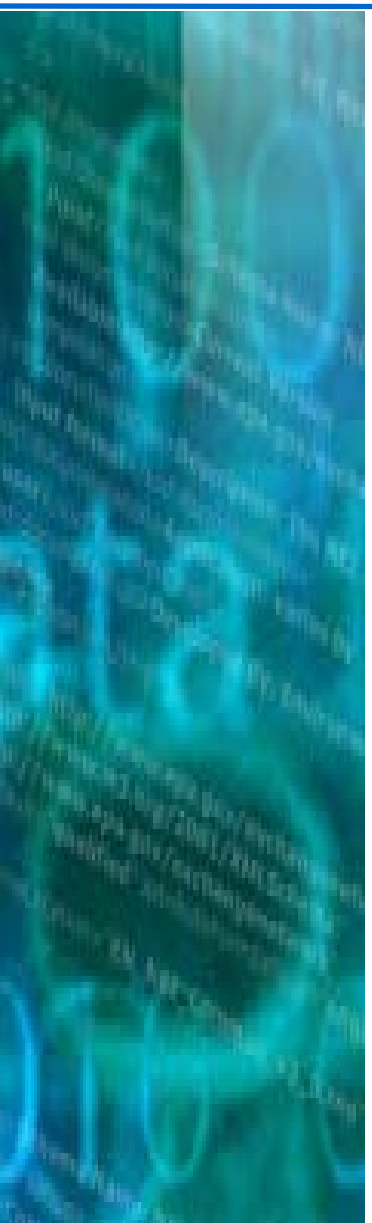
Data Flowing on the Exchange Network



- Facility Data from States to EPA
- Water monitoring data between states and EPA
- Air emissions data between states (state to state) and to EPA (state to EPA)
- Waste data between states (state to state) and EPA (state to EPA)

Environmental Information eXchange Network

Example of leveraging ....



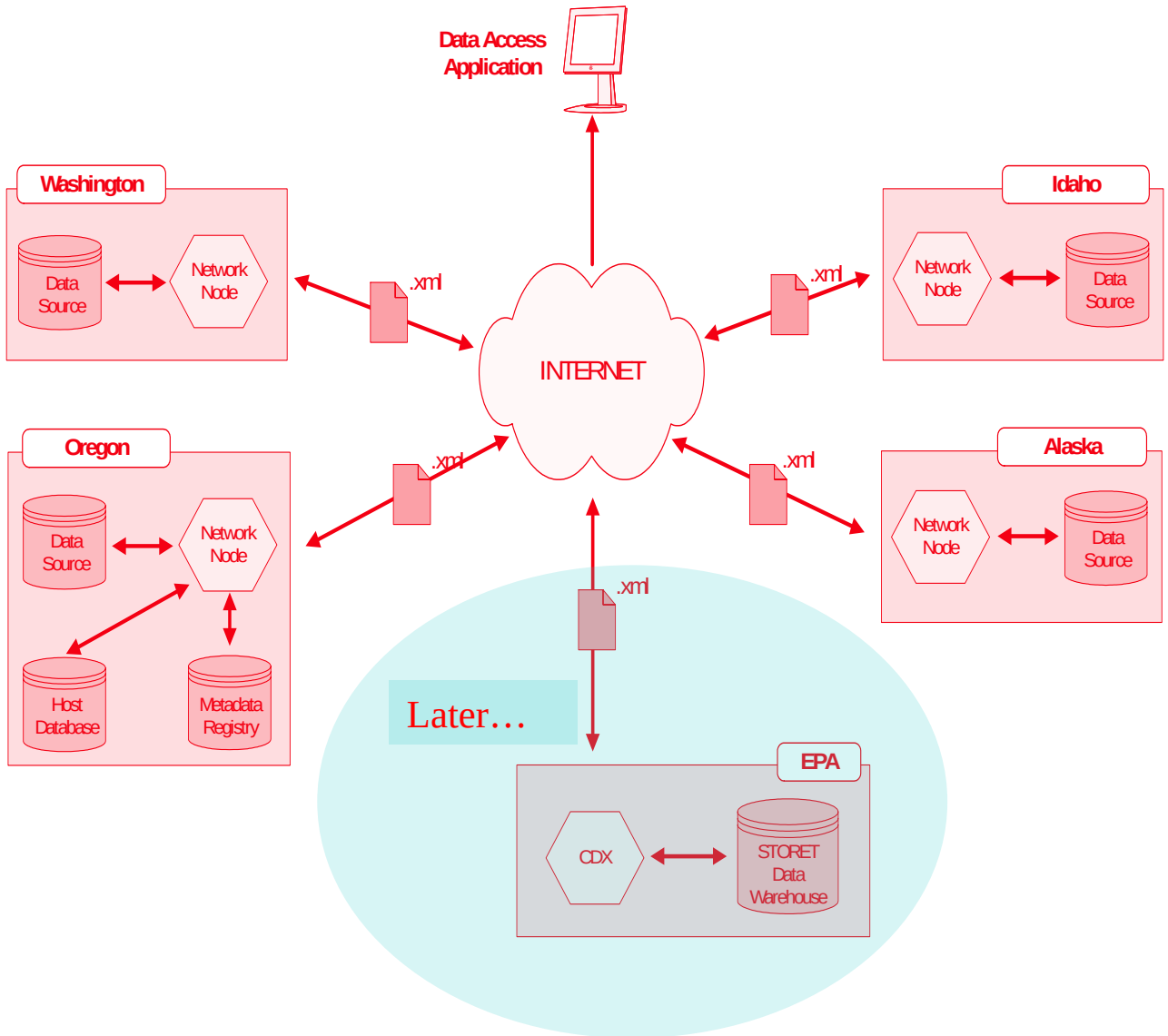
A Quick Case Study…..leveraging data published (web service) on Node

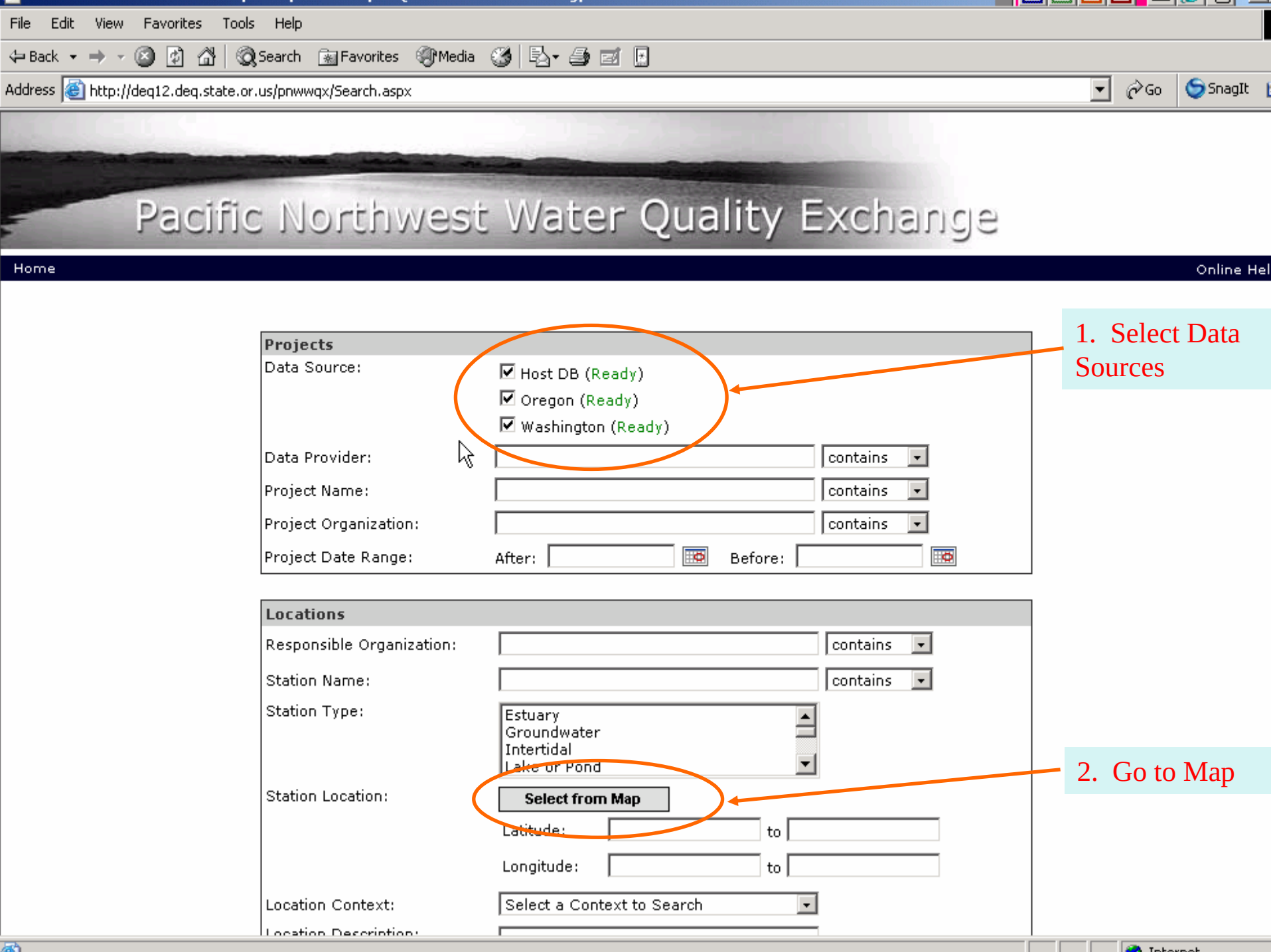
The Pacific Northwest Water Quality Exchange

- Washington Department of Ecology Partners with Oregon, Idaho, and Alaska to share water sampling results.
- Washington Dept of Health wants subset of that data related to fish tissue sampling.
- Reuse, Node and XML to easily provide this data

Environmental Information exchange Network

Exchange Data Flow Model

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Pacific Northwest Water Quality Exchange
Home
Online Hel
Projects
Data Source:
Host DB (Ready)
Oregon (Ready)
Washington (Ready)
Data Provider:
contains
Project Name:
contains
Project Organization:
contains
Project Date Range:
After:
Before:
Locations
Responsible Organization:
contains
Station Name:
contains
Station Type:
Estuary
Groundwater
Intertidal
Lake or Pond
Station Location:
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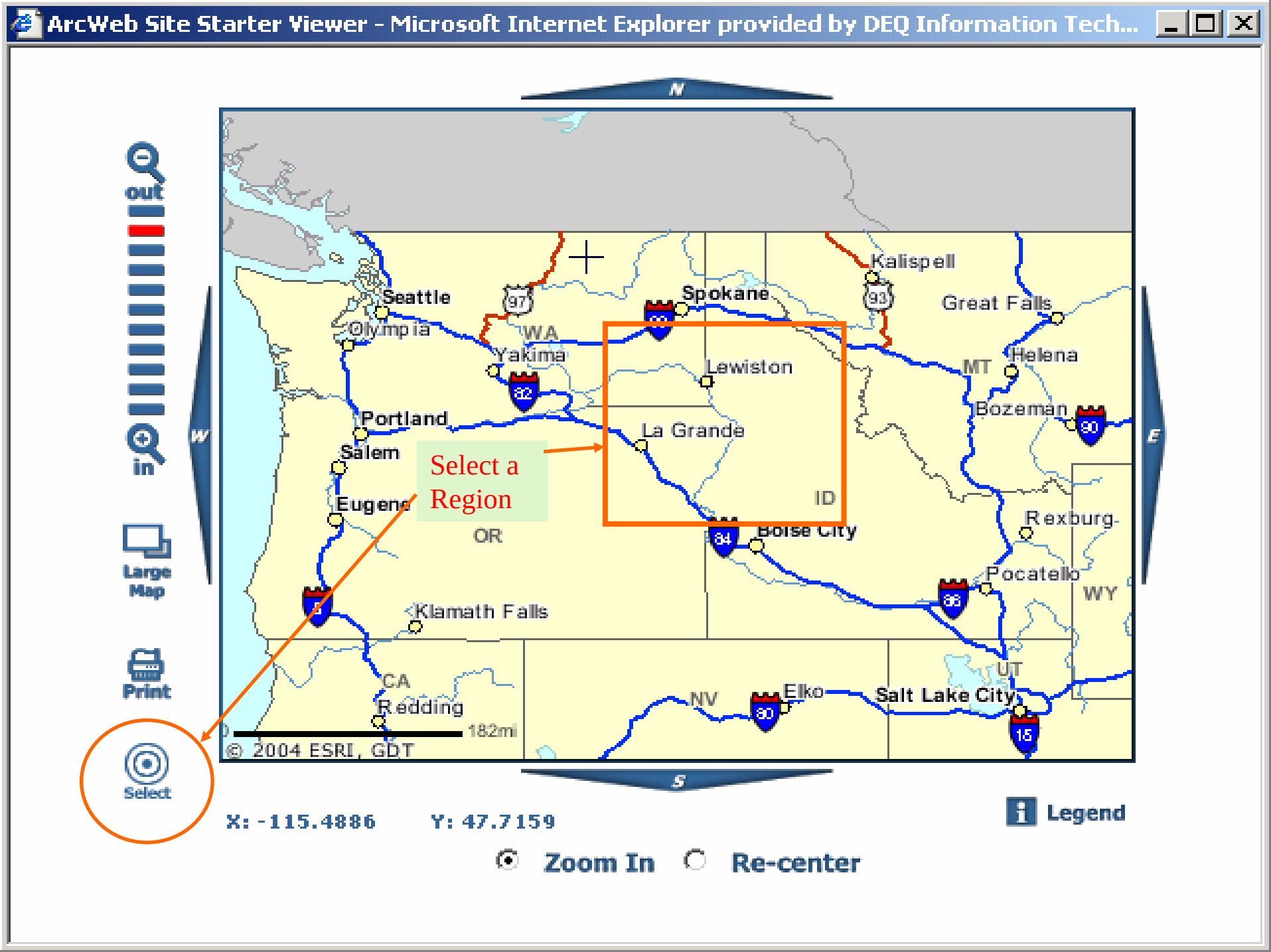
to
Longitude:
to
Location Context:
Select a Context to Search
1. Select Data Sources
2. Go to Map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Salem
Eugene
La Grande
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OR
Boise City
Rexburg
Pocatello
WY
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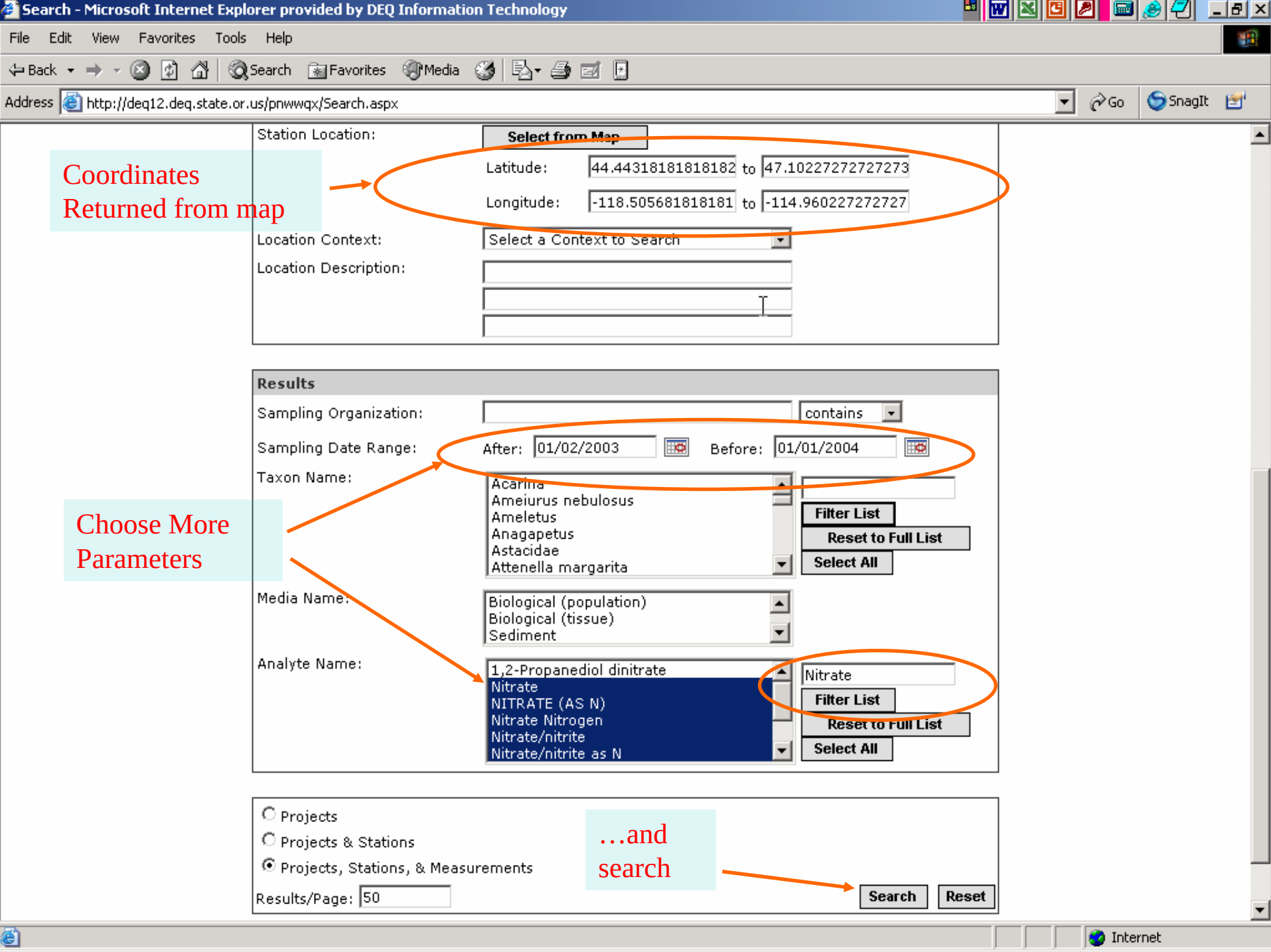
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Address http://deq12.deq.state.or.us/pnwwqx/Search.aspx
Go SnagIt
Coordinates Returned from map
Station Location:
Select from Map
Latitude: 44.44318181818182 to 47.10227272727273
Longitude: -118.505681818181 to -114.960227272727
Location Context: Select a Context to Search
Location Description:
Results
Sampling Organization: contains
Sampling Date Range: After: 01/02/2003 Before: 01/01/2004
Taxon Name:
Acarina
Ameiurus nebulosus
Ameletus
Anagapetus
Astacidae
Attenella margarita
Filter List
Reset to Full List
Select All
Choose More Parameters
Media Name:
Biological (population)
Biological (tissue)
Sediment
Analyte Name:
1,2-Propanediol dinitrate
Nitrate
NITRATE (AS N)
Nitrate Nitrogen
Nitrate/nitrite
Nitrate/nitrite as N
Nitrate
Filter List
Reset to Full List
Select All
Projects
Projects & Stations
Projects, Stations, & Measurements
Results/Page: 50
…and search
Search
Reset
Internet

Pacific Northwest Water Quality Exchange

Data Sources

Organization Identifier	Name	Contact	Telephone Number
Idaho-DEQ	Idaho Department of Environmental Quality	Jake Duplessie	208-373-0161
OregonDEQ	Oregon Department of Environmental Quality	Curtis Cude	503-229-6086
WADOE	Washington State Department of Ecology	Chris Neumiller / EIM Data Coordinator	360-407-6258

Projects (7) | **Locations (47)** | **Results (250)**

Refine Search | New Search

Previous Recordset | Next Recordset | Download Full Dataset

Page 1 of 1
|< < 1 > >|

Provider	Identifier	Project Organization	Project Name	Start Date	End Date
OregonDEQ	220	Oregon Department of Environmental Quality	WQ AmbNet - Powder Basin	8/18/1998	
OregonDEQ	221	Oregon Department of Environmental Quality	WQ AmbNet - Grande Ronde Basin	8/18/1998	
OregonDEQ	383	Oregon Department of Environmental Quality	WQ AmbNet - Grande Ronde LT NPS	6/22/1993	
WADOE	582513	Washington State Department of Ecology	Walla Walla Bacteria and pH TMDL	5/1/2002	7/15/2004
OregonDEQ	643	Oregon Department of Environmental Quality	WQ AmbNet - Snake River Basin	10/14/2003	
WADOE	6532702	Washington State Department of Ecology	Statewide River and Stream Ambient Monitoring	10/1/1988	3/21/2000
Idaho-DEQ	SDWIS/Idaho	State of Idaho, Department of Environmental Quality - Drinking Water Program	Safe Drinking Water Information System- For Idaho	1/1/1993	

Pacific Northwest Water Quality Exchange

Project Details

Back

Data Source:	Washington State Department of Ecology
Name:	Walla Walla Bacteria and pH TMDL
Identifier:	582513
Description:	Conduct bacteria and pH TMDLs on 303(d) listed waters along the Walla Walla and Touchet Rivers and Mill Creek.
Study Area Description:	
Start Date:	5/1/2002
End Date:	7/15/2004
Contact:	Joe Joy Washington State Department of Ecology State or Provincial P.O. Box 47600, Olympia, WA 98504-7600 (360)407-6486 jjoy461@ecy.wa.gov

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http://deq12.deq.state.or.us/pnwwqx/Results.aspx

Go SnagIt

Projects (7) | **Locations (47)** | **Results (250)**

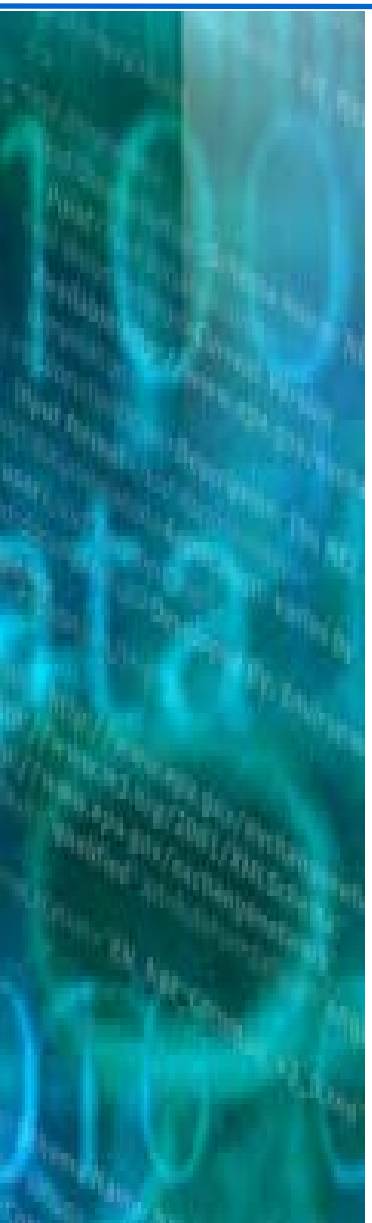
Refine Search | New Search

Previous Recordset | Next Recordset | Download Full Dataset

Page 1 of 1

Provider	Station Identifier	Station Name	Station Type	Well	Map Selected
OregonDEQ	10410	Wallowa River at Minam	Stream or River		☐
OregonDEQ	10719	Grande Ronde River at Hwy 82 (North Elgin)	Stream or River		☐
OregonDEQ	10720	Grande Ronde River at Hilgard Park	Stream or River		☐
OregonDEQ	10724	Powder River at Hwy 86 (E Of Baker City)	Stream or River		☐
WADOE	1120772	WALLA WALLA AT DETOUR RD	Stream or River		☐
OregonDEQ	11457	Minam River at Minam	Stream or River		☐
OregonDEQ	11490	Powder River @ Hwy.7 (In Baker City)	Stream or River		☐
OregonDEQ	11521	Grande Ronde River at Peach Lane (Island City)	Stream or River		☐
OregonDEQ	12055	Mccoy Creek at D/S End Of Middle Bio Reach	Stream or River		☐
OregonDEQ	12057	Meadow Creek at D/S End Of Lower Bio Reach	Stream or River		☐
OregonDEQ	12059	Dark Canyon Creek at D/S End Of Lower Bio Reach	Stream or River		☐
OregonDEQ	12182	Limberjim Cr at D/S End Of Upper Bio Reach	Stream or River		☐
OregonDEQ	12183	Limberjim Cr at D/S End Of Lower Bio Reach	Stream or River		☐
OregonDEQ	12997	Mccoy Creek New Channel Bio. Reach - D/S End	Stream or River		☐
WADOE	134640	SNAKE RIVER AT INTERSTATE BRIDGE	Stream or River		☐
WADOE	1411001	N Fork Touchet R at S Fork confluence	Stream or River		☐
WADOE	1483131	COLLEGE PLACE WASTEWATER TREATMENT PLANT	Source		☐
WADOE	2220772	YELLOWHAWK CREEK WEST	Stream or River		☐
WADOE	2311001	Mill Cr at Swegle Rd	Stream or River		☐
WADOE	2473861	Touchet R @ Dayton City Park	Stream or River		☐
OregonDEQ	29295	Mccoy Creek Lower Restored (T-1)	Stream or River		☐
WADOE	3120772	GARRISON CREEK	Stream or River		☐
WADOE	322011	Mill Cr @ Mission St	Stream or River		☐
WADOE	3311001	Mill Cr at Wallula Ave	Stream or River		☐

Environmental Information eXchange Network



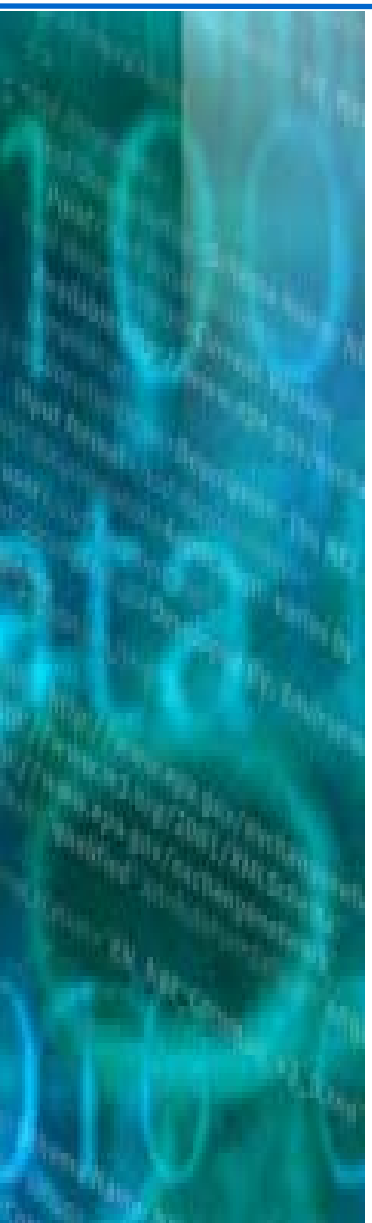
DOH EIEIO Application

Fish Tissue Contamination and Birth Defects Assessment Application

Leveraging information published for multiple purposes..how does WA DOH access and store WA DOE data…

Environmental Information eXchange Network

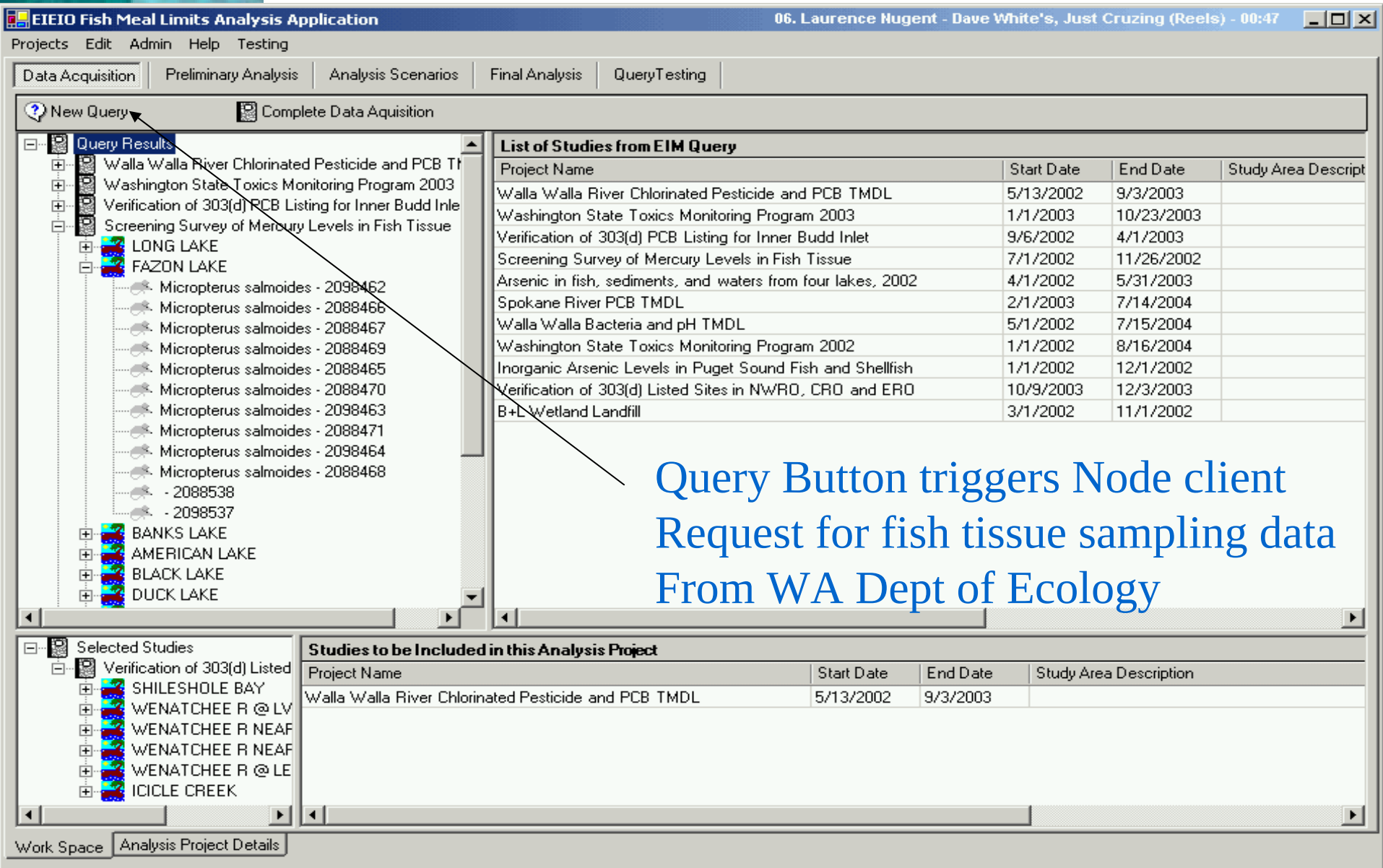
WA DOE and DOH…



- Version of WA DOE Node installed at DOH
- DOH allowed to use this to Query WA DOE Node for water sampling/fish tissue sampling projects and results published on the DOE Node
- DOH integrates this Node client (node that can call up the other Node with a simple command) into their application
- DOH can now query real time sampling from DOE and download into their application to look for trends.
- Illustration….

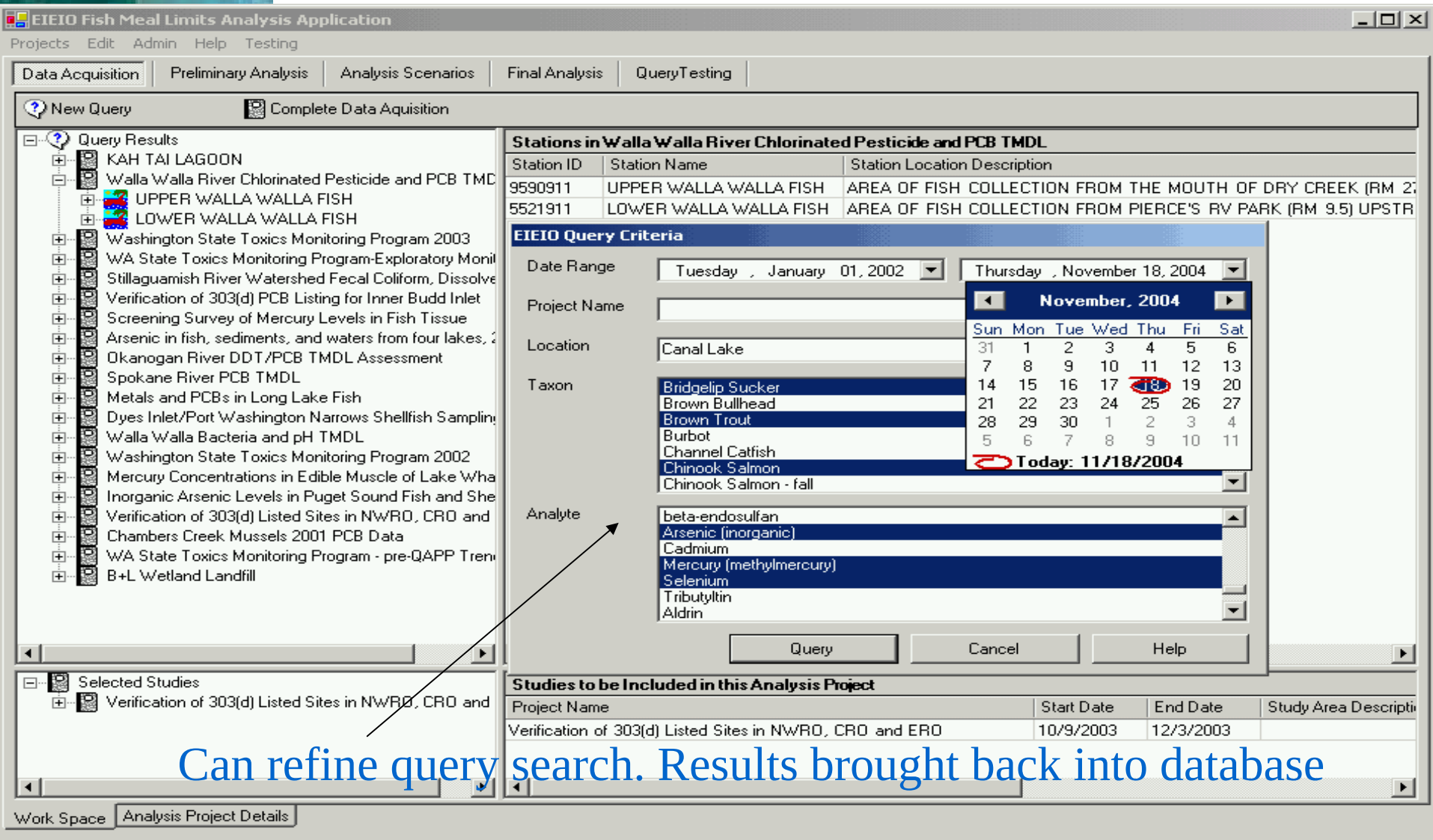
Environmental Information eXchange Network

DOH EIEIO Application – Screen Shot 1
Query Results – List of Studies



Query Button triggers Node client Request for fish tissue sampling data From WA Dept of Ecology

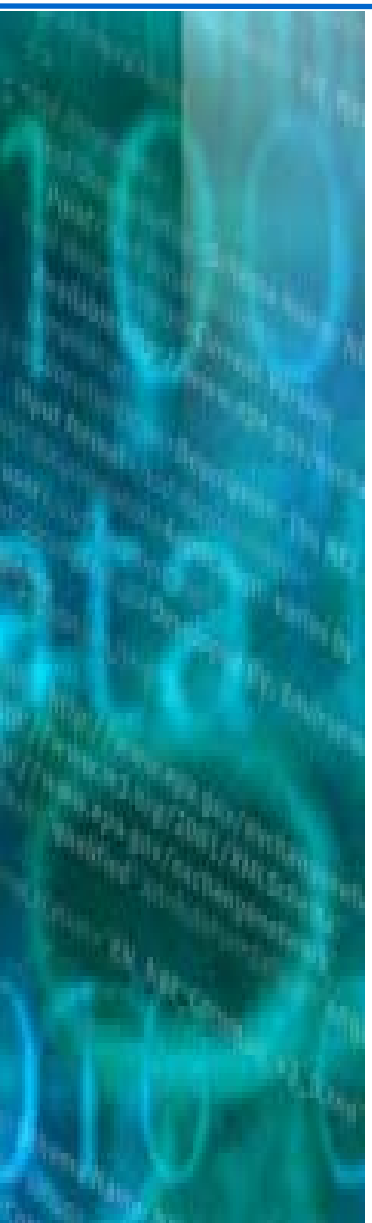
DOH EIEIO Application – Screen Shot 2
Query Results
Date Range, Location, Taxon, Analyte



Can refine query search. Results brought back into database

Environmental Information exchange Network

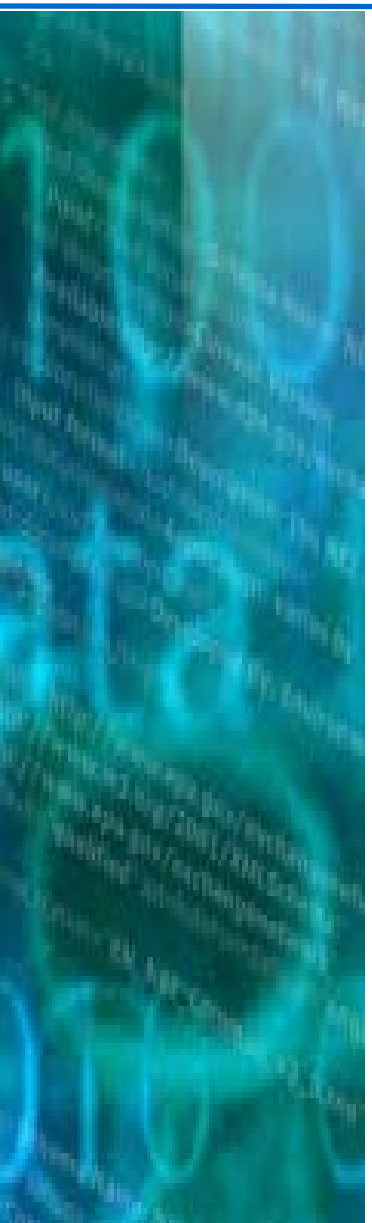
What is the end result?



- Using the Exchange Network……
  - Much better quality data being exchange
    - Data Standards embedded in XML Schema
    - Closely working with State/EPA Data Standards Council for new standard adoptions to incorporate
    - Machine to machine – no human data entry mistakes
  - More data can be exchanged among new partners
    - Infrastructure can be applied to new data exchange types
    - New State to state exchanges already occurring
  - More timely data
    - Data can be published and exchanged as soon as partners agree. Machines do the work!

Environmental Information Exchange Network

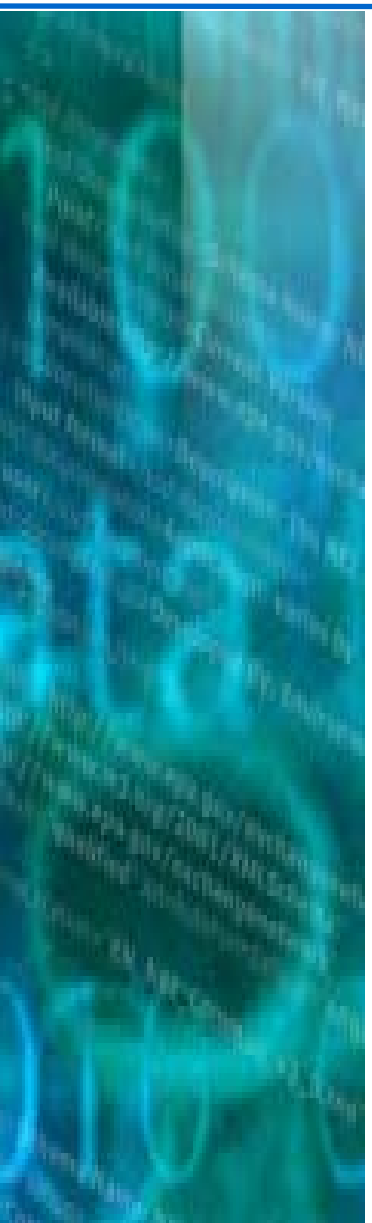
Reflections and Learning



- No longer dependent upon making sure systems can talk – web services are interoperable
- Provided an infrastructure and mechanism to support new data flows between existing and new partners!
- Publishing data in a secure place on the Exchange Network has proven far easier and sets a new paradigm for future data exchanges.

Environmental Information exchange Network

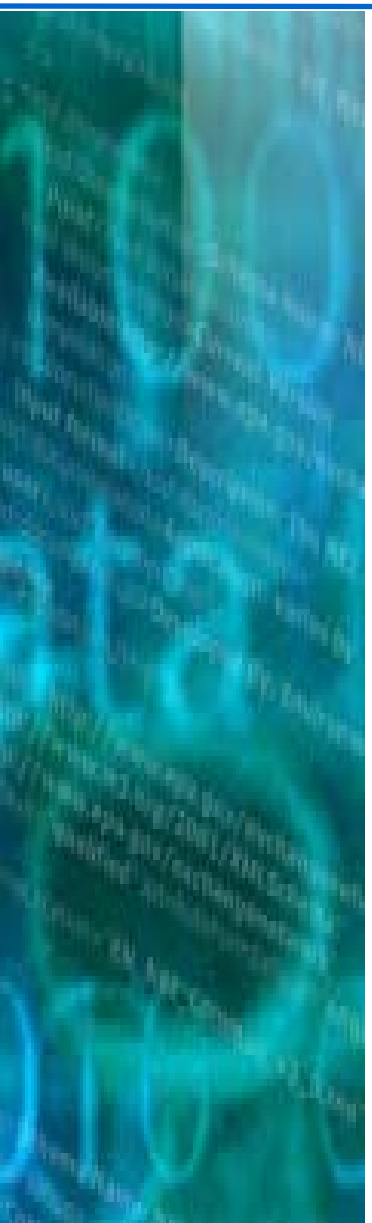
Other Exchanges Under Development – Partners are growing Fast!



- Pesticide-related illness surveillance data exchange
  - *California Environmental Protection Agency Office of Environmental Health Hazard Assessment and California Dept of Pesticide Regulation*
- Hazardous Materials data exchange
  - *California, Environmental Protection Agency's Unified Program Office working with certified local agencies who have authority for some inspections*
- Biodiversity Data exchange
  - *Delaware Department of Natural Resources and Environmental Control (DNREC), Washington Department of Ecology, and NatureServe (non-profit)*
- Watershed Data exchange
  - *Kentucky, Governor's Office for Technology, KY Dept of Environmental Protection, KY Office of Geographic Information, KY Commonwealth Office of Technology, USEPA Region IV, Open GIS Consortium*

Environmental Information eXchange Network

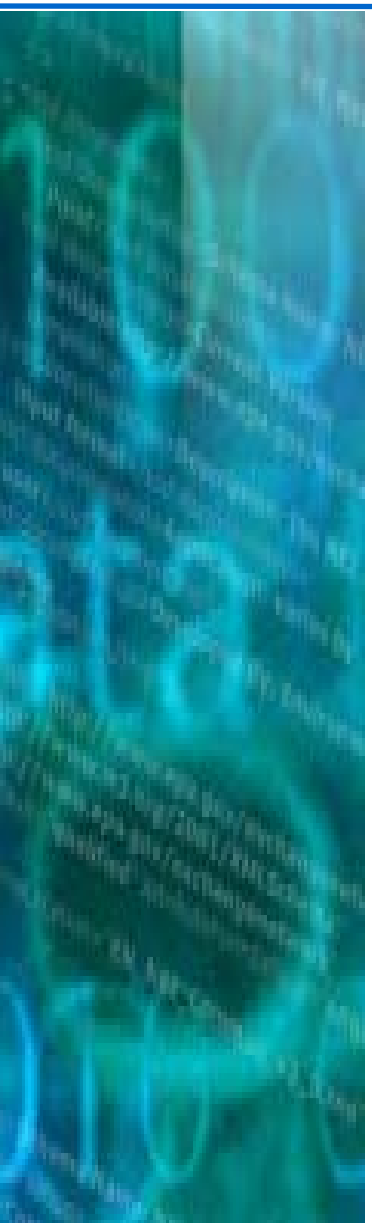
Other Exchanges Under Development



- Generic Homeland Security Exchange
  - *Michigan Department of Environmental Quality, Maine Department of Environmental Protection, New Jersey Department of Environmental Protection, New Hampshire Department of Environmental Services*
- Hydrographic Related Geospatial Data Exchange
  - *Minnesota Pollution Control Agency, Minnesota Department of Administration's Land Management Information Center through the Minnesota Governor's Council on Geographic Information Hydrographic Committee*
- *Research and Metadata Exchange*
  - *University of Minnesota*

Environmental Information exchange Network

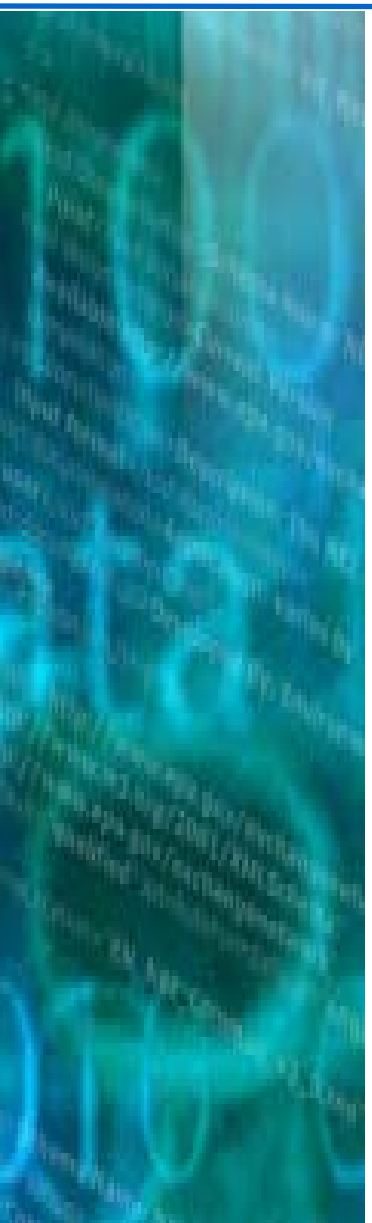
Other Exchanges Under Development



- Air Monitoring Data Exchange
  - New Jersey Department of Environmental Protection, New York Department of Environmental Conservation, Delaware Department of Natural Resources and Environmental Control
- Best Management Practice installation and implementation data exchange for the Chesapeake Bay
  - Pennsylvania Department of Environmental Protection, Maryland Department of Environment, Maryland Department of Natural Resources, Maryland Department of Agriculture, Virginia Department of Environmental Quality, Virginia Department of Conservation and Recreation, USEPA Chesapeake Bay Program Office
- Ambient Air Quality Exchange
  - Washington Department of Ecology (lead), pacific northwest states and tribes

Environmental Information eXchange Network

2005 and Beyond....



- Many new partners and projects underway
  - Suggestions for new data standards will most likely be found; open to adopting other standards already in place in other agencies.
- Looking at interoperability issues with other Networks
- More robust XML Registry or UDDI registry with validation routines is needed

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Environmental Information Exchange Network

the exchange network

Search

the network is powering up...it's a better way

resources contacts faqs calendar

- home
- network basics
- partner benefits
- build a node
- data flows
- develop schema
- network registry
- progress
- grants
- press room
- message board
- workgroups

welcome to the National Environmental Information Exchange Network website. The Exchange Network is a partnership between state environmental departments and the U.S. Environmental Protection Agency that is revolutionizing the exchange of environmental information. Partners on the Exchange Network share data efficiently and securely over the Internet. This new approach is providing real-time access to higher quality data while saving time, resources, and money for partner states, tribes, and territories.

news

State IT Profiles Available on ECOS Website
more details...

Node Mentoring Workshop February 28 - March 1
more details...

eDWR XML Schema-to-SDWIS/State Converter Available
more details...

See Michigan's eDMR Success Story
more details...

new to the network?

Visit our network basics section to learn more about the exchange network and how it can help your state save money and improve its environmental data.

building a node?

The build a node section contains guidance to help you through the implementation process.

ready to flow data?

The data flow section lists available data flows and provides resources to get you started.

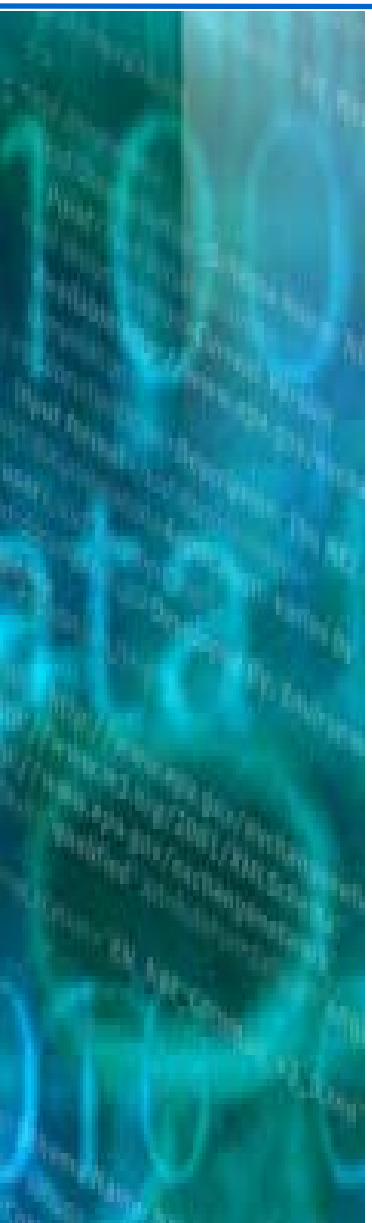
status of state nodes

A total of 31 states now have operational Nodes on the Exchange Network! Click the map for more details.

Internet

Environmental Information exchange Network

Contact



Molly O'Neill
ECOS
202-624-3507

Pat Garvey
U.S. EPA
202-566-1687

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