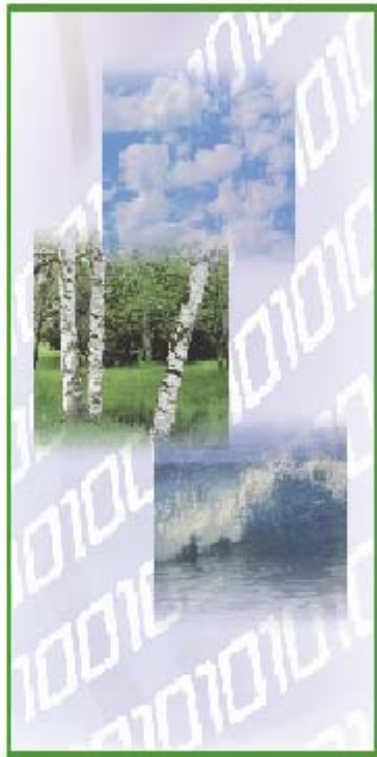




National Environmental Information Exchange Network



The Environmental Information Exchange Network (Exchange Network) is an Internet-based approach for exchanging environmental data among partners (e.g., EPA, states, tribes and territories). Built on the principles of applying data standards; providing secure, real-time access; and electronically collecting and storing accurate information, the Exchange Network enables participants to control and manage their own data while making it available to partners via requests over a secure Internet connection. By facilitating the efficient exchange of environmental information among interested parties at all levels of government, the Exchange Network has begun to transform the way information is shared.

Exchange Network Objectives

- Improved data quality
- Reduced burden and costs associated with accessing and reporting data
- Increased timeliness and accuracy of data
- Enhanced data access to support stronger environmental decisions

The information technologies featured on the Exchange Network allow EPA and its partners to save time and resources on environmental reporting and ensure timely, high-quality data exchanges. The Exchange Network also fosters new information exchanges among its partners by providing infrastructure and services.

Through utilizing the Exchange Network, partners are able to realize efficiencies in operations, as they leverage the technology infrastructure to better provide services and streamline federal reporting requirements. EPA benefits by having high-quality environmental data and access to the right information at the right time, while allowing the partners to provide closer data stewardship.

Examples of Exchange Network Projects

- **Yurok Tribe**- The Yurok Tribe Environmental Program (YTEP) diligently collects and analyzes over 500,000 water-related data points annually. The Yurok Indian Reservation sits astride the lowest 46 miles of the Klamath River, which is the center of Yurok culture,

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and the source for the Tribe's main subsistence resource: salmon. Water quality in the Klamath River is influenced by several industrial activities in the watershed, including hydroelectric power generation, mining, logging, and pesticide use, putting this subsistence resource at risk. In the past, the remote locations of monitoring equipment made tracking the performance of monitoring stations difficult. Retrieving the sample data was challenging, and quality assurance methods were costly and consumed much staff time. Once the Tribe had the water quality data in a central location, it was cumbersome to share the data with other partners. YTEP faced similar challenges with air quality sampling data.

Using funds from an Exchange Network Grant, YTEP set out to build an integrated data management system that would address its data and environmental management challenges. The result of this effort was the open-source Yurok Environmental Data Storage System (YEDSS) and an Exchange Network node client that could send water and air quality data from YEDSS to U.S. EPA and other partners. Utilizing the Exchange Network has provided many benefits for YTEP. It has improved the Tribe's capacity to identify watershed management issues quickly and share real-time information with users of the Klamath River. The Exchange Network has also enabled YTEP to streamline business practices and deploy its limited staff resources more efficiently. The multi-faceted functionality of YEDSS and its use of the Exchange Network allow the tribe to meet reporting requirements for both water and air data within the same system. This reduces the amount of resources needed from managing multiple reporting practices.

- **Water Quality Exchange (WQX)** - Access to comprehensive water quality information is indispensable for managing and protecting water resources. However, timely and accurate information can be difficult to come by since water monitoring data are collected by a wide range of organizations with different information systems that are often incompatible. The U.S. EPA Office of Water worked with a group of states to overcome this data access problem by developing the WQX. WQX allows states, tribes, and other partners to store their water quality information in any format or database they choose. The standards and simplicity of WQX are already paying enormous dividends. Current contributors to the STORET warehouse are working with EPA to transition away from using the distributed database in favor of the simpler WQX model. Most importantly, new contributors are joining the WQX fold and filling gaps where data was previously unavailable. For example, the state of Wisconsin has added 18,500 monitoring locations and over 1.6 million results since implementing WQX. Similarly, Texas added 8,500 new monitoring locations and over 3.5 million results. The Exchange Network and WQX are blowing the lid off of water quality information that has been trapped in disparate data systems. Timelier and more comprehensive information is now at the ready to help water quality managers and the public make better decisions about our environment.

For More Information

EPA's Exchange Network Web Site: <http://www.epa.gov/exchangenetwork/>

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