



Northwest Indian Fisheries Commission

Water Quality Exchange: "Build Once, Use by Many"

EXCHANGE NETWORK SUCCESS STORY

Environmental Information



Need for the Exchange Network

"Place is an important part of treaty tribal fishing rights. Our rights are place-based. That means we 20 treaty Indian tribes in western Washington can only fish in the places we have always fished.... Good fishing or bad, we have our places. If the fishing is poor, it's poor. We can't pack up like sport fishermen and travel to where the fishing's better. We have to work to make it better from right where we're at."

Billy Frank Jr., Chairman of the Northwest Indian Fisheries Commission (NWIFC)

Place is at the core of NWIFC's mission to support its 20 member tribes, their fisheries and their other natural resources responsibilities.

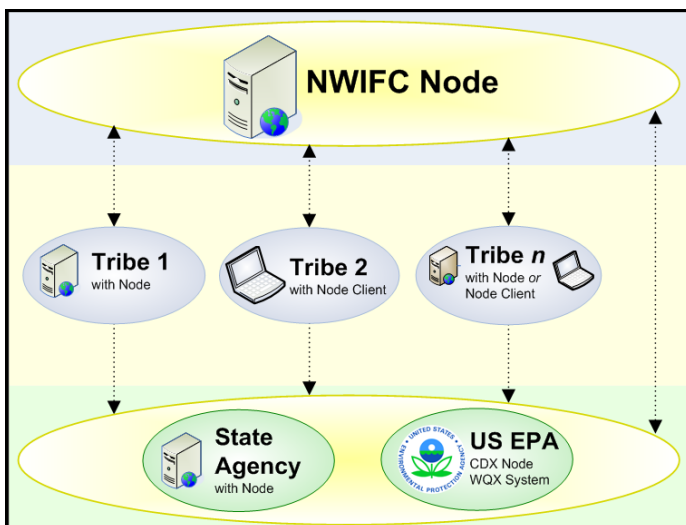
Member tribes collect water quality data to help them carry out these responsibilities. They store, manage, and analyze this data and share it with NWIFC, other tribes and partners for analysis on a regional scale. Federal grants require them to submit the data to EPA's Water Quality Exchange (WQX).

The Exchange Network Solution

Because the tribes have similar data management and data exchange needs, it made sense to develop common data management tools. A "build once, use by many" approach allowed each tribe to efficiently share data using Exchange Network technologies. It also created supporting data management systems to meet each tribe's needs.

Specifically, This project's outcomes included:

- NWIFC's development of the Tribal Water Quality Database that member tribes can use to store and manage data locally and to send data to the NWIFC node, EPA, or other partners
- Exchange Network Clients that member tribes use to submit and receive data from the NWIFC node



- NWIFC's installation of an Exchange Network Node using OpenNode 2 technology
- NWIFC's development of training and mentoring material for member tribes

Member tribes are now able to store and manage water quality data and to share it with EPA, NWIFC, and other partners. Tribes can also request and receive data from NWIFC and NWIFC can request and receive data from EPA.

SUMMARY

Need

- Water quality data management and analysis
- Regional analysis using data from many partners
- Means to submit of data to EPA

Solution

- A single node that communicates with twenty clients
- A water quality database for use by any member tribe
- Data management and exchange training and mentoring

Benefits

- Efficient data exchange technology
- Low cost
- Flexible implementation

"Our five senses combine in another sense that is important to all of us as human beings: a sense of place. It is a powerful sense, it takes time to develop and can be lost when folks move around a lot from place to place and job to job. I have been blessed with a strong sense of place for my home, the Nisqually River. I know my place, my home. It's where I feel the best."

Billy Frank Jr.

Important Features of the Tribal Water Quality Database:

- Individual tribal databases (at little to no cost)
- Structure consistent with EPA's WQX schema
- A common structure for all tribes allows for more cost effective tools and delivery of technical support
- Database gives each tribe the ability to:
 - Enter new and import existing (legacy) data
 - Validate key fields against EPA WQX specified domains
 - Update the EPA WQX domain lists for validation
 - Update database tools and structure
 - Export select data in XML format and structure compatible with EPA WQX
 - Download data from EPA WQX
 - Ability to load data from other sources (e.g., State agencies)

LEARN MORE

To learn more about the Northwest Indian Fisheries Commission's approach to sharing water quality data using the Exchange Network, please contact:

Bruce Jones

bjones@nwifc.org

www.nwifc.org

The Benefits

The benefits of the "build once, use by many" approach used in this project include:

- *Efficient data exchange technology.* Twenty tribes are able to exchange data with each other, with NWIFC, with EPA, and with other partners through a single NWIFC node.
- *Low cost.* The tribes' node clients are less expensive to install and simpler to operate than a node. The Tribal Water Quality Database is available to each tribe at little or no cost.
- *Flexible implementation.* The project's technology and software accommodates differences in data resources, data systems and technology among member tribes. It also provides a common approach for exchanging data among these systems.

"Improving and maintaining water quality is key to sustaining the Tribe's fisheries in South Puget Sound, WA. The Tribal Water Quality Database enhances our ability protect water resources through better data management and analysis tools. Additionally, the Node Client Application provides a seamless method for sharing data with EPA, NWIFC, and other Pacific Northwest Tribes"

*Levi Keesecker, Quantitative Services Manager
Natural Resources Department, Squaxin Island Tribe*

WATER QUALITY EXCHANGE:

Member Tribes of the Northwest Indian Fisheries Commission

