

Exchange Network Forum

Thursday, June 13, 2024

1:00 – 2:00 PM ET

Welcome

Matthew Kelly, EPA Office of Information Management (OIM), Office of Mission Support (OMS)

- Matthew Kelly welcomed participants to the meeting and noted that the format is designed to be an open meeting to encourage interaction between participants.
- The meeting materials, including the summaries from the Forum meetings are available on the [Exchange Network website](#).
- Matthew reviewed the agenda:
 - Environmental Information & Innovation (E2i) National Meeting
 - Meet Your EN Coordinator: Region 9
 - EN Project Demonstration by Big Valley Rancheria Band of Pomo Indians (Region 9)
 - Virtual Exchange Service (VES) 101
 - Open Forum

Environmental Information & Innovation (E2i) National Meeting

- The E2i National meeting will be in Kansas City, MO, September 17-19, 2024.
- Registration for the meeting is now open.
- The E2i meeting website is www.e2imeeting.net. The site includes meeting details such as:
 - A working draft agenda.
 - Registration and hotel information.
 - For state employees, information about travel expense reimbursement opportunities available through ECOS.
 - The Institute for Tribal Environmental Professionals (ITEP) and the Tribal Exchange Network Group (TXG) are awarding a limited number of travel scholarships to Tribal recipients.
- Sign up for Exchange Network email alerts for updates about the conference.
- For more information, contact Kurt Rakouskas at ECOS at krakouskas@ecos.org.

Meet Your EN Coordinator: Region 9

Wendy Fong and Brian Sheppard, EPA Region 9

- Wendy Fong and Brian introduced themselves:

- Wendy is an IT Specialist and has been with EPA for over 38 years and the Region 9 Regional Exchange Network Coordinator for over 4 years.
- Brian is an IT Specialist and has been with EPA for 11 months and worked in the RENC role for 6 months.
- Region 9 currently has 34 open grants and 191 total grants since 2002.
- States and Tribes have received nearly the same number of grants, with fewer going to territories and universities.
- The most popular project types for EN grants in Region 9 include capacity building for individual Tribes and open data projects which include Geospatial Information Systems, NPDES and WQX.

EN Project Demonstration by Big Valley Rancheria Band of Pomo Indians (Region 9)

Sarah Ryan and Alix Miguel, Big Valley Rancheria Band of Pomo Indians and Inigo Peng, FlowWest

- Sarah Ryan, the Environmental Director for the Big Valley Band of Pomo Indians, provided an overview of the project, including the issues experienced and the project goals.
 - Big Valley Rancheria is located on the shores of Clear Lake, the largest, natural freshwater lake in California.
 - Manual water quality data entry and quality control review is extremely time consuming, and the risk of human error is high due to data coming from a variety of sources.
 - In order to improve the data quality and create a more efficient data entry process, they developed the WQX Uploader.
- Inigo Peng, a Data Scientist with FlowWest, reviewed the WQX Uploader.
 - They standardized data formats, automated data processing and developed a user interface with R Shiny to facilitate processing and adoption of automation.
 - The WQX Uploader allows users to easily add and edit information and directly upload to WQX from the application.
 - Quality control is built into the application.
 - The WQX Uploader works directly with the WQX API.
 - The following GitHub repositories are available:
 - bvr-wqx-uploader repo: <https://github.com/FlowWest/bvr-wqx-uploader/releases/tag/v1.4>.
 - wxWeb repo: <https://github.com/FlowWest/wqxWeb>.
 - wxtools repo: <https://github.com/FlowWest/wqxtools>.
- Alix Miguel, the Water Resources Manager for the Big Valley Band of Pomo Indians, provided a demonstration of the tool, which can be viewed in the meeting recording.

Virtual Exchange Service (VES) 101

Joe Carioti, EPA Office of Information Management (OIM), Office of Mission Support (OMS)

- Joe presented an overview of the Virtual Exchange Service.

- VES was originally released in 2015 and is a centralized solution that replaces the need for Exchange Network partners to install and administer their own node.
- The goal of VES is to reduce burden on partners for sharing regulatory data with EPA.
- A node is an Exchange Network Partner's presence on the network. It enables the exchange of information with other partners on the network.
- VES can be used to pull data from a partner or to share data to the VES repository.
- Advantages of using VES include:
 - Common architecture: New features will be shared by all nodes.
 - Can inherit dataflow configurations from the shared node.
 - Services can be cataloged in the EN Discovery Service automatically.
 - Centralizes node maintenance upgrades, patching, etc.
- Disadvantages include:
 - Generic approach to dataflow implementation limits performance optimization for large payloads.
 - Non-standard connectivity makes troubleshooting extremely difficult.
- Next steps for VES include:
 - By October 2024, VES will undergo middleware refactoring, TLS 1.0 and 1.1 support removal and the creation of a test environment. These updates will bring VES into compliance with security mandates.
 - Additionally, VES is evaluating business moving forward to align with the Exchange Network modernization.
 - Currently, EPA is not accepting grant applications for VES.
- For more information, contact Joe Carioti at carioti.joe@epa.gov.

Open Forum

- Q: Does BVR upload their data from a personal computer, an internal BVR server, or a cloud server?
 - A: BVR uploads data from work computers on the Tribe's server.
- Q: Does BVR have a way to upload a sketch, not for upload to WQX but to have it available electronically for their own records?
 - A: We have files for pictures - site conditions and microscopy for our water data but not in our portal yet.
- Q: Nikolai Kettermann: I have made several requests over the last few years to standardize emails from SCS to administrators and have consistently hit a brick wall. Most recently with GMitchell. Who needs to see the request to properly evaluate the cost and feasibility?
 - A: The CDX team is currently investigating this request from Nikolai Kettermann and will follow up with them directly offline.
- Q: Can partners exchange across VES with non-EPA? Is EPA the only other end of the VES (states-EPA), or is VES partner send-receive agnostic?
 - A: It is possible, but it is a complicated use case. There would have to be a mechanism for distribution to go out to a parenting state. Something to consider is

what happens when the partner node is down. One data flow has a lot of state partners, and their nodes go down occasionally. We introduced a resubmit and download capability in place to solve this issue.

- Q: Will there be a redevelopment of the open node software?
 - A: In the event of a necessary update or deficiency, ECOS will work with its partners to assess necessary enhancements and/or development. ECOS will do its best to support open source solution(s) that partners can leverage within their enterprise solutions.
- Q: Regarding VES...will there be any efforts to optimize the payload issue? I would think that one of the most important things to utilize VES would be to allow the system to take in large data sets. WY DEQ was attempting to utilize VES for submitting CERS v2 compliant data, but we abandoned this effort due to our data set being too large. Now, we are having some ICIS-AIR VES issues with some of the various services (Get Air Program & Get Pollutant not submitting data when multiple data values are present).
 - A: There are significant challenges with large payloads, and there is no quick answer.