

Beach Notification Flow Implementation Guide

The Beach Notification flow covers beach closure and advisory notifications. (Beach water quality monitoring data is submitted through WQX.) Beach Act grant recipients are currently required to submit beach closure data once a year to EPA

BENEFITS

The EN provides the ability to automatically update public websites with beach closure data (services available for partners once they join the flow)

Partners will be able to meet potential future requirement for real-time beach notification submissions.

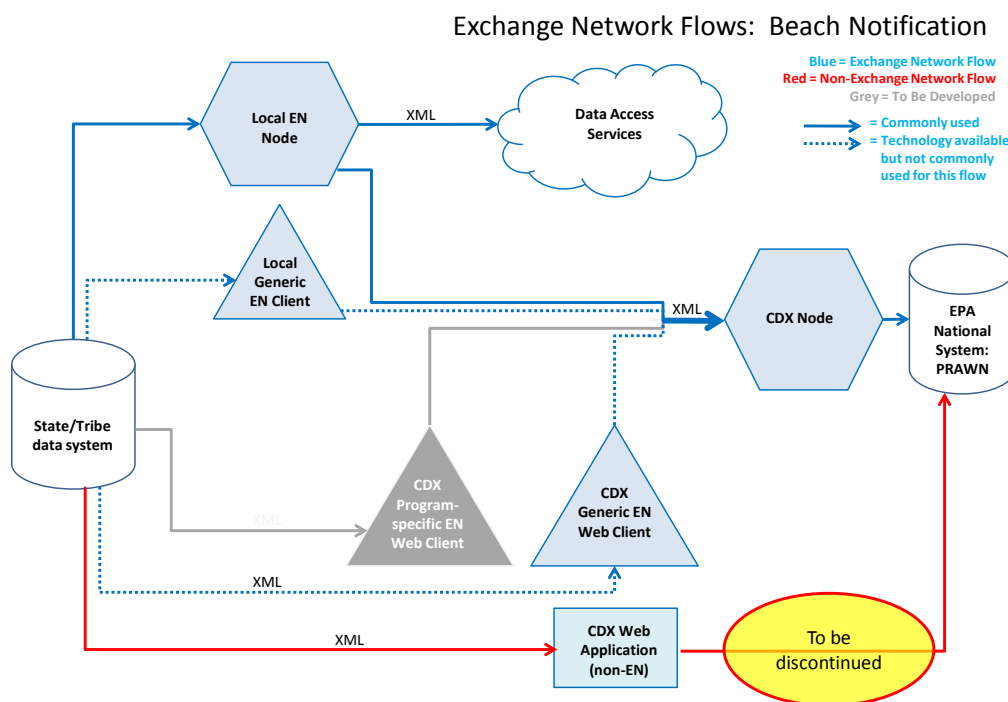
Implementation is straightforward: all partners already flow data in XML format

Practical Implementation Advice

- If partners already have an EN node or client, they should automate Beach Notification submissions.
- Agencies with responsibility for the Beach Notification flow that do not have an EN node or client should consider partnering with agencies or other organizations that do have a node—or they can implement currently available free node technology themselves.
- Partners that are currently sending Beach Notification data to CDX via the (non-EN) CDX web application and choose not to send it automatically via a node should switch over to a CDX program-specific EN web client once it is available (targeted for early 2011).

Beach Notification Data Flow Options

The graphic below shows the current options for flowing Beach Notification data. Exchange Network (EN) flow options are shown in blue and non-EN options are shown in red. (Terms are explained in Attachment I).



EXCHANGE NETWORK (EN) OPTIONS:

- Submit an XML file using a local EN Node—this is the most common Exchange Network method of flowing data
- Other EN submission methods are possible (e.g., directly via a local or CDX web client), but are not commonly implemented

NON-EXCHANGE NETWORK OPTIONS:

- Submit an XML file via the non-EN CDX Web Application--this is currently the most common pathway for submitting data to EPA. This option will be discontinued; partners should switch to the CDX program-specific EN web client when it is available or to other EN options for flowing data.

Summary of Current Practice

All beach notification data is currently reported in XML format regardless of whether users use the Exchange Network or not. Although a few partners have automated this flow through their nodes, most have not. Because beach notification submissions are required only once a year, the incentive to automate this flow is currently low. There is, however, high demand for beach closure information from the public. Furthermore, pending legislation to amend the Beach Act may require real-time data submissions. These two factors will provide a powerful incentive for partners to make their data available to nodes and enable widespread automation of this data flow.

Many partners responsible for beach notifications do not have access to a node because the node is administered by another agency. These partners are currently submitting their data through the legacy non-EN CDX web application. EPA is planning to develop a program-specific CDX EN web client that will enable all partners to transition seamlessly away from the legacy application and enable all closure data to be reported through the EN.

Beach Notification Flow Status and Milestones

To help transition partners to the Exchange Network, EPA will develop a CDX program-specific EN web client.

The table below shows institutional responsibilities and target completion dates for EPA activities.

Criteria:	Status	Actions	Primary Responsibility	Completion Period (FY)
Automation ready	Requires attention	1. Use guidance, training, and case studies of successful notification data flows to improve coordination.	OEI, OW	Q3 2011
Solutions for all partners	Requires attention	2. Develop and deploy CDX EN web client	EN staff	Q4 2010
		3. Outreach to legacy application user community	OW	Q4 2010
		4. Train legacy users	EN staff/OW	Q4 2010
		5. Test submissions by States	OW	Q1 2011
		6. Flow 2010 beach season data. (EPA provide technical assistance)	EN staff/OW	Q2 2011
Access to transaction status	Requires attention	7. Identify and evaluate further enhancements	EN staff/OW	Q3 2011
		8. Develop transaction messaging	EN staff	Q4 2011
Accessible and stable flow documentation	Done			
Specifications for Data Access Services	On Track	<i>Funds available. Currently developing requirements, cost, & schedules</i>	OW	Q4 2010
Clear path to eliminate alternatives	Requires attention	9. Develop schedule to eliminate legacy CDX non-EN web application	EN staff with input from OW	Q4 2011

Attachment 1: Terms

Node: A partner's point of presence on the EN consisting of a server (hardware and software) enabled with web services that allow partners to automatically provide and receive information via the Network and to publish data for use by other EN partners.

EN Client: A stand-alone application (i.e., software code) that lets partners submit data, request data, and receive results from an EN request. Clients differ from nodes in that they cannot respond to queries from other nodes and so cannot publish data. Clients also need more manual (vs. automated) steps, for example, to extract data and generate and review reports before submission.

CDX: EPA's Central Data Exchange. It serves as EPA's centralized electronic report receiving system. It receives data from partners and directs the data to EPA's program-specific National Systems (e.g., AQS, WQX, etc.).

CDX Node: CDX Node is EPA's node on the EN, allowing EPA to receive, send, and provide information via the Network. CDX Node can also publish EPA data for use by other EN partners.

CDX EN Web Clients:

- **Generic:** A client at CDX which receives XML-based data via standard web browsers for many different flows using Exchange Network protocols.
- **Program-Specific:** A client customized for a single National System with an intuitive user interface specific to the business process. Implemented at CDX, the client receives program-specific data in XML format via standard web browsers using Exchange Network protocols (e.g., for authorization and authentication, etc.)

CDX Web (non-EN) Application: A legacy CDX application that receives data (flat file or XML format) via standard web browsers. CDX Web applications are not consistent with EN protocols (e.g., they have a separate authentication and authorization service from the EN) and typically involve more manual steps than a node-to-node exchange of data.

Data Access Services: Using web services to make data available to Network users by querying nodes and returning environmental data in the form of XML documents. Published data can be accessed using a node or clients. Published data can be used in a number of ways, such as populating Web pages, synchronizing data between sites, viewing data in a Web service client, or building new sources of data into an integrated application.

Direct User: A partner entering data directly into a National Data System through a system-specific interface (manual entry).

EPA National Data System: Program-specific data systems at EPA that can receive and publish data via CDX.

Local Data System: A partner's database or series of databases in which environmental data is stored, managed, and manipulated.

XML: eXtensible Markup Language is a flexible language for creating common information formats and sharing both the format and content of data over the Internet and elsewhere. The electronic language that expresses and transports data standards and transaction sets. XML uses an extensible set of tags to describe the meaning of data.

Attachment 2: National System Flow “Ready to Use” Criteria

A focus of Exchange Network (EN) governance has been developing the National System Flows to help partners take advantage of the Network’s business value. Governance has identified six criteria for each flow to meet to make these flows “ready to use” by partners:

- Automation-ready flows. Support fully automated node-to-node flows.
- Access to transaction status. Support a fully automated process for reporting transaction status, processing results, and QA results from receipt by CDX through final processing in the National System.
- Accessible and stable flow documentation. Develop and make accessible stable documentation that describes all flow requirements. This includes a complete Flow Configuration Document (FCD) that is in compliance with EN procedures for version management.
- Solutions for all partners. Provide appropriately scaled EN solutions for partners of all sizes, needs, and capabilities. Some partners such as tribes and local clean air authorities may not need a fully functional node. A customized EN client or EN web client should be available to these users.
- Publishing interface. Provide a national standard set of query/solicit services defined in the FCD whether or not data are currently published. Implement a publishing interface where published data are critical to partner business processes (such as NPDES permit information for NetDMR).
- Clear path to eliminate alternatives. Have a clear path to eliminate legacy system alternatives to EN exchanges, including transition support for partners.