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# RCRAInfo Flow Implementation Guide

RCRAInfo is EPA's information system for the hazardous waste program. It contains data on hazardous waste treatment, storage, and disposal. RCRAInfo consists of five modules: Handler; Permitting; Corrective Action; Compliance, Monitoring and Enforcement (CME); Geographic Information Systems (GIS) Module; Financial Assurance Module; and Biennial Waste Activity Reporting.

**BENEFITS**

The EN allows states to stop dual entry into their databases and RCRA Info

The EN flow pathways are more automated than RCRA Translator

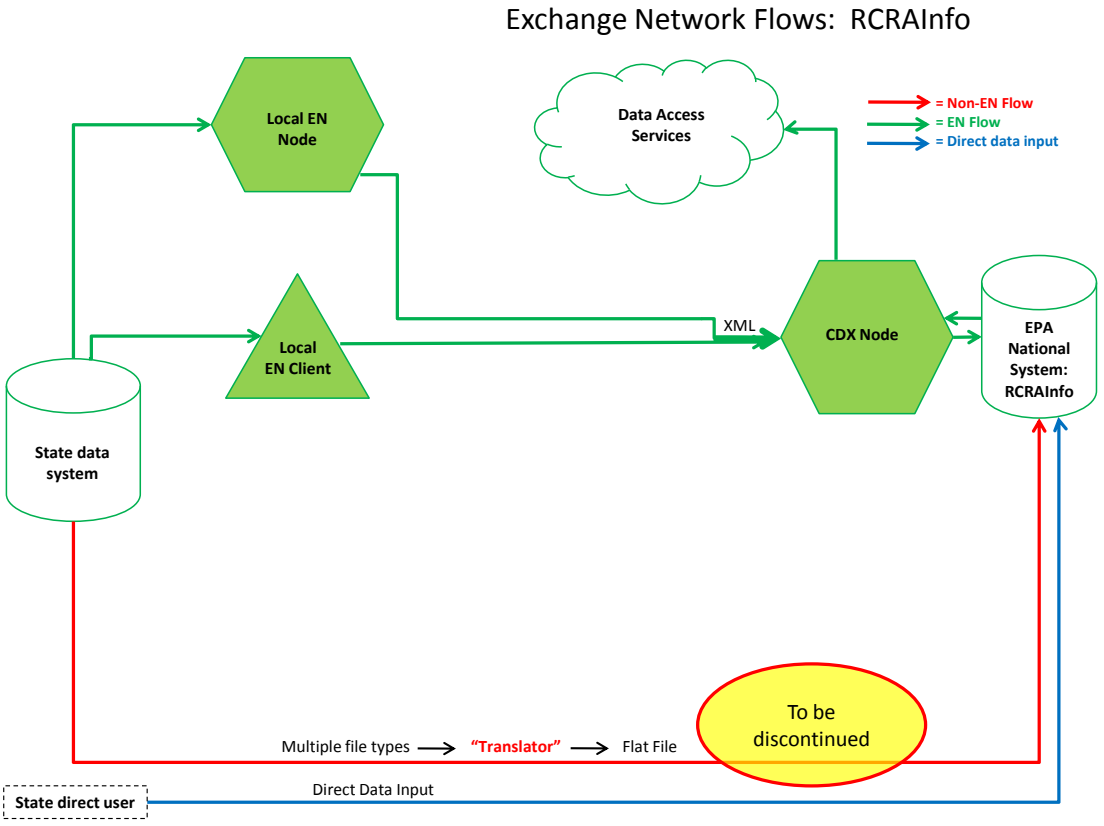
The EN allows partners to retrieve data from RCRAInfo in a more seamless manner

## Practical Implementation Advice

- All modules are ready to use, except biennial reporting. Unless a partner is a direct user (i.e., doesn't have its own data system) and intends to stay that way, partners should begin implementing the RCRA modules. Partners may want to start with Handler, which is the oldest and most stable module and which typically accounts for the largest volume of data.
- States already flowing data for one module (e.g. Handler) shouldn't consider themselves "done." They should look to implement other modules that make business sense.
- States doing flat file translation should seek an EN option in anticipation of EPA's elimination of support of the flat file data entry option.

## RCRAInfo Data Flow Options

The graphic below shows the current options for flowing data. Exchange Network (EN) flow options are shown in green and non-EN options are shown in red. (Terms are explained in Attachment 1).




**EXCHANGE NETWORK (EN) OPTIONS:**

- Submit an XML file via a local EN Node or a local EN Client.

**NON-EXCHANGE NETWORK OPTIONS:**

- Direct data input via RCRAInfo Web—this is the most common submission method.
- File submission via RCRA "Translator." This method is used by partners with their own RCRA data systems; it converts a range of file formats into flat files that are then submitted to RCRAInfo. It is regarded as error prone and subject to frequent changes and will be discontinued.

*More information on RCRAInfo is available here: http://www.exchangenetwork.net/data-exchange/rcrainfo/*

# Summary of Current Practice

Currently, there are a variety of options for submitting data to RCRAInfo. Some States with their own hazardous waste program information systems are currently using the Exchange Network. Other States with their own systems use the legacy Translator service or double enter data into their own system and RCRAinfo. States that do not have their own systems enter data directly into RCRAinfo, and the Network's bidirectional capabilities will enable these States to access their programmatic data via outbound services from EPA much more easily than using RCRAinfo's reporting features.

# RCRAInfo Flow Status and Milestones

With the release of RCRAInfo Version 5.0, the RCRAInfo flow supports all RCRAInfo modules (except biennial reporting) and allows this flow to be fully automated. All flow documentation is available.

The Office of Resource Conservation and Recovery's (ORCR) development of RCRAInfo's outbound (published) flows will be a key to the flow's success. ORCR is planning to define and implement these services for all modules.

ORCR will develop a timetable for turning off the RCRAInfo flat file Translator. This schedule will be dependent upon the States' ability to transition to an Exchange Network Flow. ORCR has begun discussion with the States on making this transition. ORCR and CDX will need to provide some partners with technical assistance as they move to the EN. Some partners will always continue to use the non-EN direct reporting pathway via the RCRAInfo Web.

The table below shows institutional responsibilities and target completion dates for EPA activities. (EPA general criteria for assessing the "readiness" of National System Flows is included as Attachment 2).

| Criteria: | Status | Actions | Primary Responsibility | Completion Period (CY) |
|---|---|---|---|---|
| Automation Ready | Complete | Establish synching outbound data flows to allow for automation | ORCR – primary; EN staff providing technical support as needed | |
| Solutions for all partners | On Track | Provide partners with technical assistance to use EN tools (e.g., transitioning States away from using flat file translation) | ORCR with EN staff support | TBD per strategy document being developed by ORCR with States |
| Access to transaction status | Complete | | | |
| Accessible and stable flow documentation | Complete | | | |
| Specifications for Data Access Services | Complete<br><br>Complete | Implement Handler data access service to improve flow efficiency (query services)<br><br>Implement all RCRAInfo modules via data access services (solicit services) | ORCR with EN staff support as needed | Query services are available for each module and a complete set of Solicit services is expected in Q3 2013 |
| Clear path to eliminate alternatives | Attention Required | Set a timetable for termination of translator (and thus not accept flat files) | ORCR and NTG | TBD per strategy developed by ORCR in collaboration with state programs |

# 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 EN 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.

**EN Services Center:** A website that allows EN users to easily send, get, and download information from other partners on the EN. The Services Center will serve as a replacement for manual submissions of information through CDX Web. It is an appropriate solution for those EN partners who do not require or are not yet ready for the automation and data publishing capabilities of an EN Node. The EN Services Center is available at https://enservices.epa.gov.

**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 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.

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

**XML**: e**X**tensible **M**arkup **L**anguage 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. Support fully automated node-to-node flows.
- 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. Other EN solutions should be available to these users.
- 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.
- Specifications for Data Access Services. 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.

*For more information on RCRA Info:*

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