

# 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 Handler

The EN flow pathways are more automated than RCRA Translator

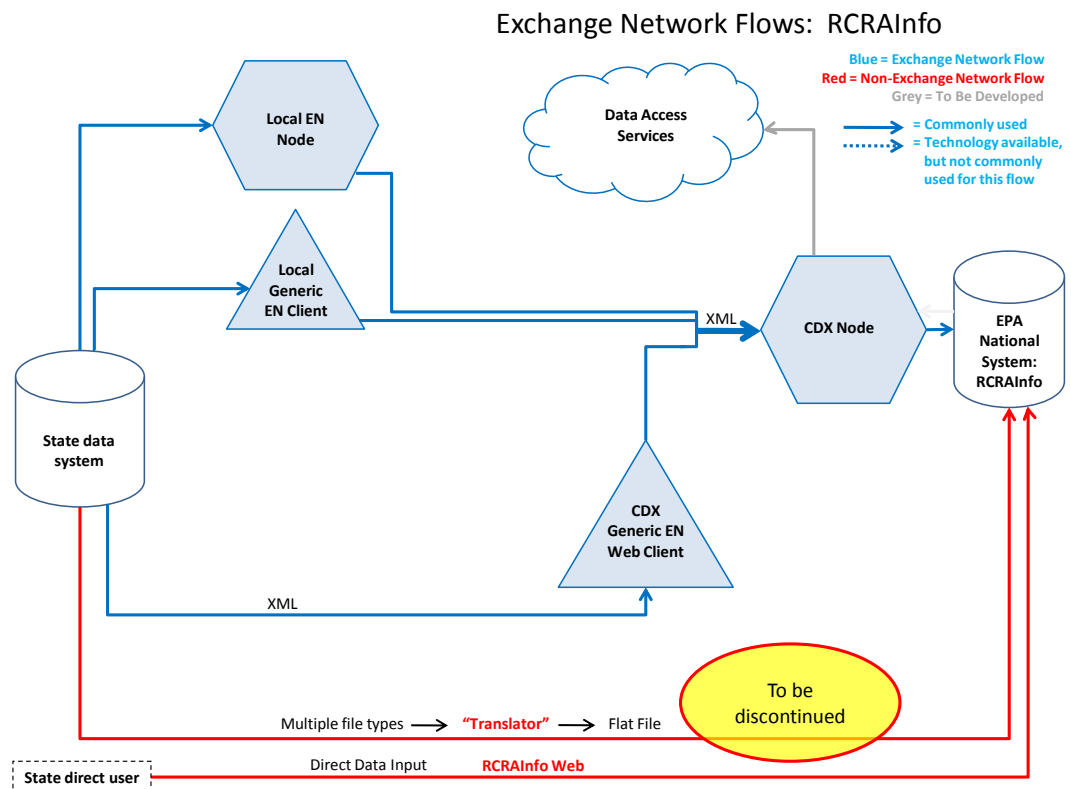
The EN allows partners to retrieve data from RCRAInfo in a more seamless manner

## 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 blue and non-EN options are shown in red. (Terms are explained in Attachment I).



### EXCHANGE NETWORK (EN) OPTIONS:

- Submit an XML file via a local EN Node, a local Generic EN Client, or a via the CDX generic EN web 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.

## 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 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. 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 and allows this flow to be fully automated and support error reporting. 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.

| Criteria:                                | Status             | Actions   | Primary Responsibility   | Completion Period  |
|--|--------------------|---|--|--|
| Automation Ready                         | On Track           | 1. Establish synching outbound data flows to allow for automation   | ORCR – primary; EN staff providing technical support as needed                   | Q4 2011  |
| Solutions for all partners               | On Track           | 2. Provide partners with technical assistance to use existing 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             | Done               |   |  |  |
| Accessible and stable flow documentation | Done               |   |  |  |
| Specifications for Data Access Services  | On Track           | 3. Implement Handler data access service to improve flow efficiency<br><br>4. Implement all RCRAInfo modules via a data access services | ORCR with EN staff support as needed<br><br>ORCR with EN staff support as needed | Q4 2010<br><br>Q4 2011   |
| Clear path to eliminate alternatives     | Attention Required | 5. Set a timetable for turning off flat-file Translator and accept only XML submissions via EN  | ORCR and NTG   | TBD per strategy developed by ORCR in collaboration with State programs. |

## Attachment 1: Terms

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**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

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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.